Public Works (1895) Department.

RAILWAY BRANCH.

G.O., No. 432-33R

DATED 28th June

[Despatch Abstract.]

Nilgiri Railway. — Ordered that a Copy of the Govt Inspector's Inspection report on the line be forwarded to the Govt of India, and to certain officers for information.

Forwarding Copy of the Govt Inspector's Inspection Report on the —

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[P. W. D. 1000—11-8-96]

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FURTHER PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

II SPECTION REPORT—NILGIRI RAILWAY.

I made this inspection on the 14th and 15th May accompanied by the Engineer-in-Chief and the officers in charge of the different divisions.

General.—Since the date of the last inspection in May 1894, the very limited sum of two lakhs of rupees has been allotted for expenditure on works by the official liquidator. With such a small sum no great progress on works requiring a considerable expenditure can be expected. The Engineer-in-Chief has devoted the funds at his disposal mainly to such works as headings of tunnels and foundations of bridges and retaining walls, which, while requiring a less sum of money than big cuttings and embankments, take a long time to execute and require very careful supervision. Works which only needed a small expenditure to complete them have also been finished off. From a purely engineering point of view the dearth of funds has not been an unmixed evil since it has afforded opportunities to the Engineer-in-Chief and his staff to study the alignment and works in great detail, and many improvements and economies have been devised which would probably have been lost sight of in the ordinary course of construction.

The circumstances under which this railway has been and is being constructed are exceptional and it will be convenient, I think, to deal with it in five sections as under—

	MILES.
(1) Coonoor to Runnymede	3
(2) Runnymede to Hill Grove	3
(3) Hill Grove to Adderley	3
(4) Adderley to Kullar	3
(5) Kullar to Méttupálaiyam	4½

in order that a better idea may be given of the amount of work done and of that remaining, as well as the probable time required to complete the line.

The following remarks apply to the line generally.

2. *Earthwork.*—Wherever possible, the line has been carried in cutting except on the flat portion between Kullar and Méttupálaiyam. For a rack railway it is essential that the rails should be everywhere at their correct level, and this condition of things is difficult to secure in embankments, the soil being very difficult to consolidate, and where the slope of the ground is considerable it is almost impossible to make a secure and stable bank. The cuttings, with the exception of a few heavy slips which are mentioned in the report on the different sections, have stood pretty well and will not give any unusual trouble to maintain.

3. *Revetment walls*—have been avoided as much as possible, but on such side-long ground they are of necessity pretty numerous. The foundations which are taken down well into the solid consist of face walls of masonry in lime with a core composed of large boulders set in concrete; the superstructure is usually dry rubble. The following table shows the progress :—

Total estimated number.	Finished.	In progress.	Not commenced.
45	16	10	19

4. *Minor bridges.*—A large proportion of the revetment walls being at the heads of gorges, the culvert forms part of the wall. Omitting those which are combined with retaining walls, the projected number of minor bridges is 113, and progress has been as follows :—

Total estimated number.	Finished.	In progress.	Not commenced.
113	60	*Nil.*	53

5. *Major bridges.*—In order to utilize the money at command to the best advantage, the policy has been to get all bridges founded, leaving the superstructure till afterwards. The foundation being the most troublesome part of the work and that which takes the longest time, the progress has been much better in fact than it appears : stone is abundant and of good quality and it will take but a short time to complete the superstructure. The masonry is of excellent quality. Precautions will have to be taken in the case of high piers on the 12 per cent. grade to provide against the horizontal thrust due to the train travelling up the rack. The Engineer-in-Chief proposes to increase the resistance of the pier to overturning by building in rails into the masonry. The girders will rest on cast-iron bed plates with their top surface parallel to the grade, and will be securely anchored to the lower pier or abutment, and will be left free to slide on the upper. The progress has been as under :—

Name.	Chainage.	Spans. Number	Spans. Length	Height of abutments. Total.	Height of abutments. Executed.	Height of piers. Total.	Height of piers. Executed.	Remarks.
1. Kaitera	95	4	60	N. 12' / S. 12'	Comp. / Do.	(1)36' / (2)46' / (3)24'	25' / 11' / 24'	
2. Holical	120	1	40	N. 29' / S. 27'	19' / Comp.	.. / ..	.. / ..	
3. Runnymede ..	135	1 / 1	100 / 60	N. 16' / S. 18'	Do. / 12'	(1)20'	12'	
4. Coonoor	150	1	60	N. 30' / S. 24'	Comp. / Do.	..	..	Completed.
5.	188	1	60	N. 45' / S. 29'	30' / 15'	..	..	
6. Ben Hope ..	223	1	60	N. 16' / S. 19'	*Nil.* / 6'	..	..	
7.	277	1	60	N. 12' / S. 12'	Comp. / Do.	..	..	
8.	281	1	60	N. 70' / S. 60'	10' / 28'	..	..	
9.	303	1	40	N. 28' / S. 24'	4' / 4'	..	..	
10.	324	2	60	N. 32' / S. 29'	5' / 5'	(1)30'	8'	
11. Burliar	370	1 / 1	80 / 60	N. 8' / S. 2'	*Nil.* / *Nil.*	(1)45'	Comp.	
12.	406	3	60	N. 12' / S. 18'	.. / ..	(1)58' / (2)38'	18' / ..	Abutments and one pier not commenced.
13.	440	1	60	N. 45' / S. 45'	*Nil.* / *Nil.*	..	..	Not begun.
14.	466	1	60	N. 20' / S. 25'	.. / *Nil.*	..	..	Pier founded; abutment found in progress. Not begun.
15.	470	2	60	N. 30' / S. 35'	.. / ..	(1)46'	*Nil.*	
16.	474	1	60	N. 55' / S. 55'	5' / 6'	.. / ..	.. / ..	One abutment founded, execution of the other in progress.
17.	525	3	60	N. 28' / S. 20'	3' / 3'	55' / 51'	8' / 8'	
18.	545	2 / 2	60 / 40	N. 24' / S. 21'	16' / 13'	(1 28' / (2 46' / (3,36'	22' / 25' / 20'	
19. Kullar	565	3	60	N. 52' / S. 43'	15' / 18'	(1)48' / (2)46'	23' / 20'	
20.	585	1	60	N. 25' / S. 25'	Comp. / Do.	..	..	Completed.
21.	608	1	60	N. 28' / S. 29'	Do. / Do.	..	..	
22.	620	2	40	N. 23' / S. 28'	.. / ..	(1)32'	Comp.	Completed girders in position.
23. Bhavani ..	878	2 / 2	100 / 60	N. 32' / S. 10'	.. / ..	(1)30' / (2)42' / (3,25'	Do. / Do. / Do.	

6. *Tunnels.*—There are nine tunnels on the line, but they are mostly short, the longest being 317 feet. They are all in progress except those of which the headings are through. The following table shows the progress in each :—

Number.	Chainage.	Length in feet.	Feet of heading driven.	Widening completed in feet.	Probable lining required.	Remarks.
1	176	317	Complete.	100	About 100'	Work stopped.
2	221	203	165'	50	*Nil.*	Do.
3	236	75	75	Commenced.	*Nil.*	In progress.
4	288	100	About to start.	..	*Nil.*	..
5	294	120	100	*Nil.*	*Nil.*	In progress.
6	372	288	113	*Nil.*	*Nil.*	Do.
7	477	151	Complete.	30	60'	Do.
8	486	279	229	*Nil.*	100'	Do.
9	506	60	25	*Nil.*	*Nil.*	Do.

7. *Ballast.*—In consequence of the steep gradient it has been decided to build ballast walls throughout the ghât : there is a tendency particularly on the lower portion to use stones of too small a size for this work : it is essential that only large stones should be used, the interstices only being packed with small. The space between ballast wall and side of cutting should be everywhere paved with stones except on hard rock.

The ballast is of good quality and consists of 6" of bottom ballast broken to 4" cube and 6" of top ballast broken to $1\frac{1}{2}$" cube.

8. *Permanent-way.*—The whole of the rails, rack and fastenings and points and crossings are in stock, but $11\frac{1}{2}$ miles of wooden sleepers are still to be purchased. The rails have now reached chain 621, or $5\frac{1}{3}$ miles from Méttupálaiyam : the rack has also been fixed in position from Kullar station, chain 645, up to chain 621. This work has been very carefully executed ; on curves each rail is cut to the exact calculated length and is brought to the proper curve by a rail-bending machine. At changes of gradient vertical curves are introduced which give a very finished appearance and will enable the pinion to engage smoothly with the rack at changes of gradient.

9. *Stations and buildings.*—There are four intermediate stations : Runnymede, Hill Grove, Adderley, and Kullar. Station sites are all levelled and gang-huts have been built at each. At Hill Grove and Kullar the station houses are completed, and that at Adderley is in progress. At Coonoor the station site is levelled and the goods and passenger platforms are complete, but no buildings have been begun as yet.

10. *Plant and rolling-stock.*—The remarks in the previous report still apply except that an engine has been borrowed from the South Indian Railway to work trains out to Kullar.

Section I.—Coonoor to Runnymede—3 Miles.

11. The section is nearly completed : the following works still remain :—

Earthwork cutting at chain 68.—Three-quarters finished ; but a slip has occurred which will have to be cleared out, but is not, I think, likely to give serious trouble in future.

Cutting chain 94.—About seven-eighths finished ; here also a slip has occurred to which the same remarks apply.

Cutting chains 98—102.—This has been commented on in a note by the Senior Government Inspector in the last report. The cutting has been taken out to formation throughout its length, but has been partially filled up again by a slip which extends far up the hill side and for a distance along the cutting of five chains. The hill side above the cutting is composed of boulders and clay resting on a rock bed, which slopes at a very high angle and crops out at a great height above the cutting. The *detritus* is permeated by springs and it would be practically impossible to drain it. It has not been found possible to bring the line any further out and it is proposed to meet the difficulty by building a heavy retaining wall carried well below formation and amply provided with deep holes and where necessary to cover in with arching. This would have to be done in short lengths and will take time : with luck and dry weather, perhaps eight months.

SECTION V.—KULLAR TO METTUPALAIYAM—4¾ MILES.

Completed.

30. Photographs are attached of a few of the more important works taken in the course of the inspection.

31. With regard to the important question of cost, the works having been done by a contractor (the late Mr R. Woolley), it is impossible to say exactly what the expenditure has been, but it may be taken roughly at from 18 to 20 lakhs of rupees: the Engineer-in-Chief estimates that 14½ lakhs are still required to complete the line, making the total cost from 32½ to 34½ lakhs: this sum approximates very closely to the amount shown in the detailed estimate embodied in G.O. No. 1106 R., dated August 19th, 1893, which aggregated to Rs. 32,75,207.

32. As regards the time required to complete the works assuming that the necessary money is provided to push the work as much as possible, I think it could be finished in eighteen months and that it would not be wise to count on any earlier date for completion.

15th June 1895.

(Signed) F. D. FOWLER,
Government Inspector of Railways.

Note by Senior Government Inspector.

The report of the Government Inspector of Railways is satisfactory as regards the execution of the work. When funds are available, the work pointed out in paragraph 20 should be undertaken at once. Proposals to raise additional funds to complete the line are before the Government of India for their consideration.

17th June 1895.

(Signed) F. R. UPCOTT,
Senior Government Inspector.

28TH JUNE 1895, No. 432 R., PUBLIC WORKS.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Railway.

Read the following paper:—

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ORDER—dated 28th June 1895, No. 432 R., Public Works.

Ordered that a copy of the Inspection report be forwarded to the Government of India, and to the undermentioned officers for information:—

(1) The Engineer-in-Chief, Nilgiri Railway.
(2) „ Official Liquidator, „
(3) „ Agent and Manager, Madras Railway.
(4) „ Examiner of Railway Accounts.

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(True Extract.)

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Railway Branch.

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„ Official Liquidator, „
„ Agent and Manager, Madras Railway.
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Exd. T. K. Narayana Aiyangar.
Spare Copies

RAILWAY.

Govt. of {1895} Madras.

PUBLIC WORKS.

Dated June, 28th.

Read. *Encl.*

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Ed. T. K. Narayana Aiyangar.
Spare Copies

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Govt. of {1895} Madras.

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in order that a better idea may be given of the amount of work done and of that remaining, as well as the probable time required to complete the line.

The following remarks apply to the line generally.

2. *Earthwork.*—Wherever possible, the line has been carried in cutting except on the flat portion between Kullar and Méttupálaiyam. For a rack railway it is essential that the rails should be everywhere at their correct level, and this condition of things is difficult to secure in embankments, the soil being very difficult to consolidate, and where the slope of the ground is considerable it is almost impossible to make a secure and stable bank. The cuttings, with the exception of a few heavy slips which are mentioned in the report on the different sections, have stood pretty well and will not give any unusual trouble to maintain.

3. *Revetment walls*—have been avoided as much as possible, but on such side-long ground they are of necessity pretty numerous. The foundations which are taken down well into the solid consist of face walls of masonry in lime with a core composed of large boulders set in concrete; the superstructure is usually dry rubble. The following table shows the progress :—

Total estimated number.	Finished.	In progress.	Not commenced.
45	16	10	19

4. *Minor bridges.*—A large proportion of the revetment walls being at the heads of gorges, the culvert forms part of the wall. Omitting those which are combined with retaining walls, the projected number of minor bridges is 113, and progress has been as follows :—

Total estimated number.	Finished.	In progress.	Not commenced.
113	60	*Nil.*	53

5. *Major bridges.*—In order to utilize the money at command to the best advantage, the policy has been to get all bridges founded, leaving the superstructure till afterwards. The foundation being the most troublesome part of the work and that which takes the longest time, the progress has been much better in fact than it appears : stone is abundant and of good quality and it will take but a short time to complete the superstructure. The masonry is of excellent quality. Precautions will have to be taken in the case of high piers on the 12 per cent. grade to provide against the horizontal thrust due to the train travelling up the rack. The Engineer-in-Chief proposes to increase the resistance of the pier to overturning by building in rails into the masonry. The girders will rest on cast-iron bed plates with their top surface parallel to the grade, and will be securely anchored to the lower pier or abutment, and will be left free to slide on the upper. The progress has been as under :—

Name.	Chainage.	Spans. Number.	Spans. Length	Height of abutments. Total.	Height of abutments. Executed.	Height of piers. Total.	Height of piers. Executed.	Remarks.
1. Kaitera	93	4	60	N. 12′	Comp.	(1)36′	25′	
				S. 12′	Do.	(2)46′	11′	
2. Holicul	120	1	40	N. 29′	19′	(3)24′	24′	
				S. 27′	Comp.	..	..	
3. Runnymede ..	136	1	100	N. 16′	Do.	..	..	
		1	60	S. 18′	12′	(1)20′	12′	
4. Coonoor	150	1	60	N. 30′	Comp.	..	..	
				S. 24′	Do.	..	..	Completed.
5.	188	1	60	N. 46′	30′	..	..	
				S. 29′	15′	..	..	
6. Ben Hope ..	223	1	60	N. 16′	*Nil.*	..	..	
				S. 19′	6′	..	..	
7.	277	1	60	N. 12′	Comp.	..	..	
				S. 12′	Do.	..	..	
8.	281	1	60	N. 70′	10′	..	..	
				S. 60′	28′	..	..	
9.	303	1	40	N. 28′	4′	..	..	
				S. 24′	4′	..	..	
10.	324	2	60	N. 34′	6′	..	..	
				S. 29′	6′	(1)30′	8′	
11. Burliar	370	1	80	N. 8′	*Nil.*			
		1	60	S. 2′	*Nil.*	(1)45′	Comp.	
12.	406	3	60	N. 12′	..	(1)58′	18′	Abutments and one pier not commenced.
				S. 18′	..	(2)38′	..	
13.	440	1	60	N. 46′	*Nil.*	..	..	Not begun.
				S. 45′	*Nil*	..	..	Pier founded ; abutment found in progress.
14.	466	1	60	N. 28′	..	..	..	
				S. 25′	*Nil.*	..	..	Not begun.
15.	470	2	60	N. 30′	..	(1)46′	*Nil.*	
				S. 36′	..			
16.	474	1	60	N. 56′	5′	..	..	One abutment founded, execution of the other in progress.
				S. 56′	5′	..	..	
17.	525	3	60	N. 28′	3′	55′	3′	
				S. 20′	3′	51′	8′	
18.	545	2	60	N. 24′	16′	(1)36′	22′	
		2	40	S. 21′	13′	(2)46′	25′	
19. Kullar	563	3	60	N. 52′	15′	(3)36′	20′	
				S. 43′	15′	(1)48′	23′	
20.	585	1	60	N. 25′	Comp.	(2)46′	20′	
				S. 25′	Do.	..	..	
21.	608	1	60	N. 28′	Do.	..	..	Completed.
				S. 29′	Do.	..	..	
22.	620	2	40	N. 23′	..	..	..	
				S. 28′	..	(1)82′	Comp.	Completed girders in position.
23. Bhavani ..	878	2	100	N. 32′	..	(1)30′	Do.	
		2	60	S. 10′	..	(2)42′	Do.	
						(3)25′	Do.	

6. *Tunnels.*—There are nine tunnels on the line, but they are mostly short, the longest being 317 feet. They are all in progress except those of which the headings are through. The following table shows the progress in each :—

Number.	Chainage.	Length in feet.	Feet of heading driven.	Widening completed in feet.	Probable lining required.	Remarks.
1	176	317	Complete.	100	About 100′	Work stopped.
2	221	203	165′	50	*Nil.*	Do.
3	236	75	75	Commenced.	*Nil.*	In progress.
4	283	100	About to start.	..	*Nil.*	..
5	294	120	100	*Nil.*	*Nil.*	In progress.
6	372	288	112	*Nil.*	*Nil.*	Do.
7	417	151	Complete.	30	50′	Do.
8	456	279	229	*Nil.*	100′	Do.
9	508	60	25	*Nil.*	*Nil.*	Do.

7. *Ballast.*—In consequence of the steep gradient it has been decided to build ballast walls throughout the ghât : there is a tendency particularly on the lower portion to use stones of too small a size for this work : it is essential that only large stones should be used, the interstices only being packed with spall. The space between ballast wall and side of cutting should be everywhere paved with stones except on hard rock.

The ballast is of good quality and consists of 6″ of bottom ballast broken to 4″ cube and 6″ of top ballast broken to 1½″ cube.

8. *Permanent-way.*—The whole of the rails, rack and fastenings and points and crossings are in stock, but 11½ miles of wooden sleepers are still to be purchased. The rails have now reached chain 621, or 5¼ miles from Méttupálaiyam : the rack has also been fixed in position from Kullar station, chain 645, up to chain 621. This work has been very carefully executed ; on curves each rail is cut to the exact calculated length and is brought to the proper curve by a rail-bending machine. At changes of gradient vertical curves are introduced which give a very finished appearance and will enable the pinion to engage smoothly with the rack at changes of gradient.

9. *Stations and buildings.*—There are four intermediate stations : Runnymede, Hill Grove, Adderley, and Kullar. Station sites are all levelled and gang-huts have been built at each. At Hill Grove and Kullar the station houses are completed, and that at Adderley is in progress. At Coonoor the station site is levelled and the goods and passenger platforms are complete, but no buildings have been begun as yet.

10. *Plant and rolling-stock.*—The remarks in the previous report still apply except that an engine has been borrowed from the South Indian Railway to work trains out to Kullar.

Section I.—Coonoor to Runnymede—3 Miles.

11. The section is nearly completed : the following works still remain :—

Earthwork cutting at chain 68.—Three-quarters finished ; but a slip has occurred which will have to be cleared out, but is not, I think, likely to give serious trouble in future.

Cutting chain 94.—About seven-eighths finished ; here also a slip has occurred to which the same remarks apply.

Cutting chains 98—102.—This has been commented on in a note by the Senior Government Inspector in the last report. The cutting has been taken out to formation throughout its length, but has been partially filled up again by a slip which extends far up the hill side and for a distance along the cutting of five chains. The hill side above the cutting is composed of boulders and clay resting on a rock bed, which slopes at a very high angle and crops out at a great height above the cutting. The *detritus* is permeated by springs and it would be practically impossible to drain it. It has not been found possible to bring the line any further out and it is proposed to meet the difficulty by building a heavy retaining wall carried well below formation and amply provided with deep holes and where necessary to cover in with arching. This would have to be done in short lengths and will take time : with luck and dry weather, perhaps eight months.

SECTION V.—KULLAR TO METTUPALAIYAM—4¾ MILES.

Completed.

30. Photographs are attached of a few of the more important works taken in the course of the inspection.

31. With regard to the important question of cost, the works having been done by a contractor (the late Mr. R. Woolley), it is impossible to say exactly what the expenditure has been, but it may be taken roughly at from 18 to 20 lakhs of rupees: the Engineer-in-Chief estimates that 14½ lakhs are still required to complete the line, making the total cost from 32½ to 34½ lakhs: this sum approximates very closely to the amount shown in the detailed estimate embodied in G.O. No. 1106 R., dated August 19th, 1893, which aggregated to Rs. 32,75,207.

32. As regards the time required to complete the works assuming that the necessary money is provided to push the work as much as possible, I think it could be finished in eighteen months and that it would not be wise to count on any earlier date for completion.

15/6

Engr.

~~Indian Consulting Engineer~~
Senior Govt Inspector
~~Asst to Senior Consulting Engineer~~ —

The report of the Deputy Consulting Engineer is satisfactory as regards the execution of the work.

When funds are available the work specified as in para 20 should be undertaken at once.

Proposals to raise additional funds to complete the line are before the Govt. of India for their consideration.

F. Ribbentrop
~~Consulting Engineer~~
Senior Government Inspector

17 June 1895

(R) Form No. 3.

No. 432. Dated 26.6.95

PUBLIC WORKS DEPARTMENT,
RAILWAY BRANCH.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

READ the following

Report on inspection of the Nilgiri Railway — dated 15th June, 1895.

Ordered that a copy of the Inspection Report be forwarded to the Government of India and to the undermentioned officers for information.

(1) The Engineer-in-Chief Nil Ry
(2) " Official Liquidator Nil Ry
(3) " Agent & Manager Nil Ry
(4) " Examiner of Ry Accts

Dft. No 433. R. of 28th June 1895

Forwarded

To
The Engr-in-Chief Nil Ry
" Offl Liquidator Nil Ry
" Agent & Manager Nil Ry
" Examiner of Ry Accts

A.

№ 432/433 Rated 28.6.95

No. of G. O.	For what purpose.	When taken.	Name of the party by whom taken.

No. of G. O.	For what purpose.	When taken.	Name of the party by whom taken.

P. W. D.

No.

Memorandum of Papers removed from the Records of the Madras Government for reference.

Rv. No. 522 Rejected 3302/19/5/30

P. W. D.

No.

Memorandum of Papers removed from the Records of the Madras Government for reference.

No. of G. O.	For what purpose.	When taken.	Name of the party by whom taken.

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reference.

No. of G. O.	For what purpose.	When taken.	Name of the party by w taken.

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GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

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Madras-Ennore section of the Bezwada-Madras Railway.—Government of India letter sanctioning the increased provision of Rs. 7,750 for direction, audit and store establishments, made in the final issue of the capital revised and budget estimates of the — for 1894-95 and 1895-96, communicated to the Agent and Manager, Madras Railway.	5th July, No. 446 R.	...	.....
Madras Railway.—Ordered that the list of open capital sanctions, —, for the quarter ending 30th September 1895, be forwarded to the Government of India.	10th July, No. 454 R.	...	.....
Forwarded	10th July, No. 455 R.	...	.....
South Indian Railway.—Ordered that the list of sanctioned and unsanctioned works to accompany the capital budget estimate, —, for 1895-96, be forwarded to the Government of India.	25th July, No. 475 R.	...	.....
Forwarded	25th July, No. 476 R.	...	.....

1 Subjects.	2 Numbers and Dates of Proceedings.	3 Date of Report to Secretary of State for India.	4 Numbers and Dates of previous Proceedings.
Indian transactions of the Madras Railway.—Letter from the Examiner, Guaranteed Railway Accounts, forwarding the annual statement (Form XXII) of — for 1894–95, with a review of receipts and charges, recorded with remark.	1895. 29th July, No. 485 R.	...	.....
Establishment.—The scale of — for the Madras-Ennore section of the Bezwada Madras Railway detailed in schedule A of the final issue of the revised and budget estimates for 1894–95 and 1895–96, sanctioned.	29th July, No. 486 R.	...	.....
Institute at Arkonam.—Revised estimate of Rs. 5,784 for the —, Madras Railway, sanctioned.	30th July, No. 491 R.	...	.....
Causeway.—Government of India sanction to the estimate of Rs. 34,374 for lowering on to a — that portion of the Erode branch of the South Indian Railway between the 253rd and 254th miles, which has been seriously breached by floods, communicated to the Agent.	30th July, No. 492 R.	...	.....
Máyaraam-Muttupet Railway.—Government of India sanction to the further expenditure of Rs. 1,21,741 required to complete the —, communicated to the Agent, South Indian Railway, and the Examiner, Railway Accounts.	31st July, No. 493 R.	...	.....

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

TABULAR STATEMENT OF MISCELLANEOUS PROCEEDINGS AND MATTERS OF ROUTINE,

RAILWAY,

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Subjects.	Number and Date of Order.	Numbers and Dates of previous Orders.
Stores account of the South Indian Railway.—The resolution of the official meeting with regard to the adjustment of certain differences in the — for 1894–95, approved and the Government of India ordered to be addressed.	2nd July 1895, No. 436 R.	.....
The Government of India addressed	2nd do. do. No. 437 R.	.....
Establishment estimates.—Ordered that copies of the —, Madras Railway, for the half-year ending 31st December 1895, be forwarded to the Government of India.	2nd do. do. No. 438 R.	.....
Forwarded	2nd do. do. No. 439 R.	... ...
Sankarodi cheruvu tank.—The Manager, East Coast Railway, requested to arrange for the payment to the Public Works Department of Rs. 119–9–0 as cost of repairs to the railway affecting — in Vizagapatam district.	3rd do. do. No. 440 R.	.....
Book.—Sanction accorded to the local purchase of certain — for use of the office of the Consulting Engineer for Railways.	5th do. do. No. 441 R.	13th May 1895, No. 343 R.
Surveys.—Letter to the Government of India stating that the reports and estimates for the Madura-Pámban and Tinnevelly-Quilon Railway — will be submitted by the end of November next.	5th do. do. No. 443 R.	.....
Madras-Ennore section of the Bezwada-Madras Railway.—Government of India letter sanctioning the detailed estimate of the — working up to Rs. 6,00,000, communicated to the officers concerned.	5th do. do. No. 444 R.	25th May 1895, Nos. 370–71 R.
South Indian Railway Board's letter.—Letter to Government of India forwarding copies of — No. 153, dated 7th June 1895.	5th do. do. No. 445 R.	.....

Subjects.	Number and Date of Order.	Numbers and Dates of previous Orders.
Madura-Pámban Railway Survey.—Letter to Government of India requesting sanction to a re-appropriation of Rs. 10,000 for the — from the grant for the Shoranur-Cochin Railway Survey, and stating that no further re-appropriations can be made from other surveys under this Government.	5th July 1895, No. 447 R.	.....
Official Meeting, South Indian Railway.—The minutes of — (No. 3 of 1895), held on 3rd June 1895 at Trichinopoly, approved, and copies ordered to be forwarded to the Government of India.	6th do. do. No. 448 R.	.....
Forwarded	6th do. do. No. 449 R.	.....
Assistant Telegraph Engineer, Madras Railway.—Government of India letter stating that a further increase of the salary attached to the post of — does not seem necessary under present circumstances, communicated to the officers concerned.	6th do. do. No. 450 R.	15th May 1895, No. 351 R.
Mr. F. J. Waring, C.M.G.—Letter to the Colonial Secretary, Colombo, requesting to be furnished with programme of the proposed tour in India of —.	9th do. do. No. 451 R.	4th June 1895, No. 387 R.
New Oriental Bank Corporation.—Letter to the Government of India forwarding explanation from the Agent and Manager, Madras Railway, as to the circumstances under which certain remittances were made through the agency of the —, and the write-off recorded in minutes of meeting No. 11 of 1894 of the railway, owing to the Bank having suspended payment.	9th do. do. No. 452 R.	.....
Index of the Minutes of Official Meetings and Stores Committees, Madras Railway.—Letter to Government of India forwarding copies of — held during 1894.	10th do. do. No. 453 R.	.....
Standard dimensions.—Government of India circular forwarding a corrigendum slip to their circular prescribing the — to be observed on all metre-gauge railways in India, communicated to the Railway administrations.	10th do. do. No. 456 R.	.....
General Rules for working open lines of Railway.—Letter to the Government of India forwarding application from the Agent and Manager, His Highness the Nizam's Guaranteed State Railway, for the adoption of the — on the Bezwada extension of that railway.	11th do. do. No. 457 R.	.....
Nilgiri Railway.—Letter to the Government of India requesting the communication in due course of the orders of the Secretary of State on the subject of Messrs. Freshfield and Williams' proposals for completing the —.	12th do. do. No. 458 R.	.....
General Rules for working open lines of Railway.—Letter to the Government of India forwarding application from the Agent, South Indian Railway, for the adoption of the — on his line and on the railways worked in connection therewith by the Company.	12th do. do. No. 459 R.	.....

Subjects.	Number and Date of Order.	Numbers and Dates of previous Orders.
Land.—Notification for the acquisition of — required by the Madras Railway Company for station purposes at 186¼ miles, South-West line, in the Salem district, ordered to be published in the *Fort St. George Gazette.*	12th July 1895, No. 460 R.	.....
Brake vans.—Sanction accorded to the temporary increase from 172 to 176 of the authorized number of — shown in statement No. XII of the Capital and Revenue Accounts, Madras Railway, for half-year ended the 31st December 1894.	12th do. do. No. 461 R.	.....
Officers and subordinates.—Letter to the Government of India stating that certain — employed on the Madura-Pámban and Tinnevelly-Quilon Railway surveys will be available for transfer on dates specified.	12th do. do. No. 462 R.	.....
Land.—Notification for the acquisition of — required by the South Indian Railway for a trial station at Serndanoor in South Arcot district, ordered to be published in the *Fort St. George Gazette.*	13th do. do. No. 463 R.	.....
Acting Agent and the Acting Chief Engineer, South Indian Railway.—Letter to the Government of India requesting sanction to the proposals approved by the Board in the matter of the salaries to be drawn by the —, and to the rules in G.O. No. 573 R., dated 1st October 1880, relating to the pay to be drawn by an officer acting for another on a progressive salary, being made applicable to the South Indian Railway and to all Guaranteed Railways.	13th do. do. No. 464 R.	.....
Land.—Notification for the acquisition of — required by the East Coast Railway for the extension of the Vizagapatam Railway station, ordered to be published in the *Fort St. George Gazette.*	17th do. do. No. 465 R.	.....
Standard dimensions.—Government of India letter forwarding, with remarks, corrigendum slip to their circular prescribing schedules of — to be observed on all 5' 6" gauge railways in India, communicated to Railway Administrations.	17th do. do. No. 466 R.	.....
Land.—Notification for the acquisition of — required by the South Indian Railway for cutting a drain to protect a spring head at the Kallian river in the North Arcot district, ordered to be published in the *Fort St. George Gazette.*	22nd do. do. No. 467 R.	.....
Traffic prospects of the Madras-Bezwada Railway.—Letter to the Government of India asking that a copy of letter, No. 445 C., dated 20th May 1895, from the Director-General of Railways on the —, may be supplied for the information of His Excellency the Governor in Council.	23rd do. do. No. 468 R.	.....
Rules for the Inspection of Railways.—Government of India circular forwarding a corrigendum slip to their circular prescribing —, prior to opening for passenger traffic, communicated to officers concerned.	24th do. do. No. 469 R.	.....

Subjects.	Number and Date of Order.	Numbers and Dates of previous Orders.
Guntakal Station yard.—Letter to the Government of India forwarding a plan of — and requesting its return when no longer required.	24th July 1895, No. 470 R.	.....
Distances of stations on the Ennore section.—Letter to the Government of India reporting the — of the Bezwada-Madras Railway from the middle of the Royapuram platform.	24th do. do. No. 471 R.	.....
Accounts.—Statement showing the Capital — of the Indian Guaranteed Railways and the capital transactions in England in respect of certain State Railways on the 30th June 1895, from the Accountant-General, India office, communicated to Examiner of Guaranteed Railway Accounts.	25th do. do. No. 472 R.	.....
Official Meeting and Stores Committee, Madras Railway.—Minutes of the — (No. 5 of 1895), held on 30th May 1895, approved, and copies ordered to be forwarded to the Government of India.	25th do. do. No. 473 R.	.....
Forwarded	25th do. do. No. 474 R.	.....
Official Meeting and Stores Committee, Madras Railway.—Minutes of the — (No. 6 of 1895), held on 27th June 1895, approved, and copies ordered to be forwarded to the Government of India.	25th do. do. No. 477 R.	.....
Forwarded	25th do. do. No. 478 R.	.....
Returns.—Letter to the Government of India forwarding — of rolling-stock on the Madras and South Indian Railways fitted with continuous automatic vacuum brakes, and a statement of cases in which the continuous automatic brakes have failed or caused delay on the South Indian Railway.	25th do. do. No. 479 R.	.....
Madras-Ennore Section.—Letter to the Government of India forwarding an extract showing the terms on which the Madras Railway is prepared to work the — of the Bezwada-Madras Railway.	25th do. do. No. 480 R.	.....
Travelling allowance.—Government of India sanction to the grant of increased — to the officers and subordinates of the Arsikere-Mangalore survey working between Hassan in Mysore and Siradi in South Canara district, communicated to the officers concerned.	26th do. do. No. 481 R.	.....
Mr. C. J. Fox, late Temporary Surveyor, Arsikere-Mangalore Railway Survey.—The write off of Rs. 4-4-0 being the travelling allowance paid in excess of audit to —, sanctioned.	26th do. do. No. 482 R.	.....
Officers and Subordinates.—Forwarding to the Government of India copy of report of the — available for transfer from the Arsikere-Mangalore Railway Survey staff.	26th do. do. No. 483 R.	.....
Passenger fares on the Madras Railway.—Letter to the Government of India stating, with remarks, that a return showing the effect of the change of third class — made on 1st January 1895, will be supplied in due course.	26th do. do. No. 484 R.	.....

Subjects.	Number and Date of Order.	Numbers and Dates of previous Orders.
Sergeant A. G. Blakeborough, Supervisor.—Sanction accorded to the extension of the joining time of —, when transferred to Arsikere-Mangalore Railway Survey, by two days on full pay.	29th July 1895, No. 487 R.	.....
Land.—Notification for the acquisition of — required by the South Indian Railway for a brick-field at Kulikarai in Tanjore district, ordered to be published in the *Fort St. George Gazette.*	29th do. do. No. 488 R.	.....
Rate for the carriage of Revenue stores.—Letter to the Government of India forwarding copy of letters from the Agents, Madras and South Indian Railways, on the subject of reduction of —.	29th do. do. No. 489 R.	.....
Indian Arms Act XI of 1878.—Government of India endorsement forwarding notification of further amendments, in connection with the —, communicated to the Agents of the Madras, South Indian and His Highness the Nizam's Railways.	29th do. do. No. 490 R.	.....