

- (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. 3184-85	Press ~~Mis.~~
Dated 14-10-18-37	

Not to be folded or roughly handled

No. 277. Read the following Endorsement of the Acting Consulting Engineer for Railways, dated Madras, 1st October 1867, No. 266 :—

Read the following letter from the Agent and Manager of the Madras Railway Company, to the Acting Consulting Engineer for Railways, dated Madras, 17th September 1867, No. 324.

1. Adverting to a Memorandum from Colonel Anderson, endorsed on a printed copy of Order of Government, No. 2,261, dated the 26th July 1867, I have the

* No. 260, 11th September.

† No. 151, 12th August.

honor to forward copies of communications from the Traffic* Manager and Locomotive† Superintendent, as noted in the margin, submitting their views

with regard to the establishment which will be required for working the Ceylon Railway.

2. As Mr. Wright and Mr. Church have dealt with the matter very fully, I do not think it necessary to go into further details in this letter, and I trust that the information they have furnished, together with the experience which has already been gained in working over thirty-five miles of line between Colombo and Ambe-
pussa, will enable the Director General of the Ceylon Railway to arrive at a satisfactory decision as to the requisite staff for the conduct of that undertaking.

From the Traffic Manager, Madras Railway, to the Agent and Manager, Madras Railway, dated Madras, 11th September 1867, No. 260.

1. With reference to a request of the Consulting Engineer on the Order of Government No. 2,261, of the 26th July, it seems to me scarcely possible, with the information before us, to say what "would be a suitable scale of establishment for working the Ceylon Railway," for although the correspondence received with the above Order of Government enters into the approximate amount of work to be performed as fully perhaps as could well be done, yet there are so many local circumstances affecting the question to be considered, that any suggestions, based upon the working of Indian Railways, might tend rather to mislead than to assist the Ceylon Railway authorities in their endeavour to fix a staff for the working of that line.

2. *Station staff.*—The enclosed statement may, however, be of some use, as showing the cost of performing a certain amount of work at some of our stations, designated 1st, 2nd, and 3rd class Day and Night Stations, and 1st, 2nd, and 3rd class Day Stations, under very favorable circumstances, so far as climate is concerned.

3. *Guards.*—Guards of through trains perform a journey of 200 miles the first day, 200 miles the second day on the return journey, and rest the third day. Guards of local trains work daily except Sundays, and we find it necessary to employ about 20 per cent. extra hands to meet ordinary contingencies.

4. *Gatemen.*—At public road level crossings with single gates, one gateman is employed, and on portions of the line where night trains are run two gatemen. In the case of double gates, the number of men is doubled. No gatemen are employed at occupation or bye-roads, but the gates are looked after by the line watchmen.

5. *Experienced Railway men from England.*—With reference to the last paragraph of the Ceylon Railway Traffic Manager's letter, No A 1-151 of the 2nd May, no experienced Railway men from England, below the rank of an Assistant Traffic Manager, are employed in the Traffic department of this Railway, extending over 645 miles, and one of the officers holding that position is a Native, trained in this country. The appointment of subordinate servants from England on the opening of the line in 1856 was far from successful, and I would strongly recommend the Ceylon Railway authorities to avail themselves of the labor to be found in the island, in preference to indenting upon England for a class of men who seldom show any inclination to acquire a knowledge of the Native languages, and are not sufficiently considerate in their intercourse with the Natives.

*Proceedings of the Madras Government, Public Works Department,
14th October 1867.*

MADRAS

Statement showing the Monthly Tonnage of Goods, and number of Passengers, and the daily number of the Staff employed

Class of Station.	GOODS TRAFFIC.				PASSENGERS.		TRAINS.		Station Master.
	Outwards.		Inwards.		Number.		Number of day in and out.	Number of night in and out.	
	Tons.	Number of Consignments.	Tons.	Number of Consignments.	Outwards.	Inwards.			
1st Class.—Day and Night.	1,700	795	1,200	781	6,913	7,612	6	4	1
2nd Class.—Day and Night.	550	735	650	607	2,450	2,411	4	2	1
3rd Class.—Day and Night.	100	37	5	24	698	614	4	2	1
1st Class.—Day *	1,000	1,472	1,300	757	6,481	6,868	6	...	1
2nd Class.—Day †	300	360	360	237	3,751	3,658	6	...	1
3rd Class.—Day	50	18	20	21	856	818	12	...	1
1st Class.—Suburban	...	...	...	...	7,246	9,094	12	...	1
Terminal Mofussil Station with a large European population ‡	1,500	1,119	5,000	2,392	7,116	6,837	6	...	1
Madras Terminal Goods Station.	7,500	4,377	7,500	2,845	...	...	10	...	...

- * Head-quarters of a division over part of which Night Trains are run. Halting Station
† In Telegraph communication with Great Southern of India Railway.
‡ Head-quarters of Bangalore Branch over which Night Trains are run. Inwards Goods

MADRAS,
11th September 1867.

*Proceedings of the Madras Government, Public Works Department,
14th October 1867.*

RAILWAY.

of Trains in and out of certain Stations, together with the numerical strength and monthly cost at those Stations.

STAFF.												
Deputy Station Master.	Booking Clerks.	Ticket Collectors.	Parcels and Luggage Clerks.	Goods Clerks.	Tele-graph Signal-ers.	Head Porters.	Maistry Porters.	Porters and Grease-men.	Points-men.	Signal Peons.	Watch-men.	Total Monthly cost.
1	1	1	1	2	2	1	1	17	6	2	3	RS. 650
1	...	...	...	...	...	...	1	6	2	2	1	160
1	...	...	...	...	...	...	...	2	2	1	1	100
1	1	1	1	2	4	1	1	14	7	1	8	750
...	...	...	...	1	1	...	1	8	2	1	1	215
...	...	...	...	...	...	...	...	2	2	...	...	65
...	...	...	...	...	...	...	...	6	2	1	...	250
1	1	1	2	6	3	1	1	14	7	3	17	1,050
...	...	...	...	32	1	3	3	84	8	6	44	2,500

for through goods Traffic.

• Traffic unloaded by Contract.

(Signed) H. E. CHURCH,
Traffic Manager.

5

Proceedings of the Madras Government, Public Works Department,
14th October 1867.

From the Locomotive Superintendent, to the Agent and Manager, Madras Railway Company, dated
Perambore Works, 12th August 1867, No. 151.

1. With reference to the Order of Government No. 2,261, dated the 26th ultimo, forwarding the correspondence from the Railway authorities in Ceylon regarding the staff necessary for working the Ceylon Railway when the line is opened throughout from Colombo to Kandy, I beg to state that, as regards the requisite strength of the Locomotive Establishment, so much must necessarily depend upon the attendant circumstances of the particular line to be worked, and the amount of traffic to be conveyed over it, that it is almost impossible, unless fully acquainted with the details of the working, to give any reliable opinion upon the subject. Taking the maximum number of trains proposed to be worked at the busiest time as a basis for estimating the staff, viz., two passenger trains each way daily, one mixed and four goods trains, or seven trains in all, and allowing one Driver for each train each way, there will be fourteen Drivers actually at work as Train Enginemen, and allowing two Drivers for working the Banking Engines from Rambukan to Kadugannawa, a distance of twelve miles (which will give each Banksman an average of eighty-four miles daily), sixteen Drivers will be the total number of men actually at work daily. To meet ordinary contingencies add a proportion of 25 per cent. of the number of Drivers at work as spare, or four extra Enginemen, giving a total of twenty Drivers. This is a large staff considering that during a great part of the year it is estimated that ten trains only, or five each way, will be run, and in case of emergency it would not be too much, estimating the speed of *passenger* trains at twenty miles an hour, for the *Passenger Drivers* to run a double trip, viz., from Kandy to Colombo and back, or *vice versa*, but, to guard against a great run of traffic, or the contingencies arising from the *excessively* large proportion of men who appear to be invalidated at well at the commencement of operations on this line, viz., to get out from England a proportion of experienced and competent Firemen, who can take charge of, and work an engine when required. If this principle be adopted, I should say that eighteen Enginemen and eight experienced Firemen would be an ample staff for the Ceylon Railway. On this line I make use of Natives generally as in training for Engine Drivers. With engines burning coke and coal we allow two Firemen; with wood burning engines three Firemen. We allow three cleaners to every two engines at large stations, where fire-lighters are kept, and where we have only a single engine, two cleaners, one of whom lights up.

Fitters and Mechanics.

2. In the first instance, it is to be presumed that the engines and stock being new, no great amount of repairs will be necessary. I presume that there will be an Engine-shed and Workshop at Colombo and another at Kandy. Kandy would, I should say, be the most suitable place (as regards climate) both for European Drivers and European workmen, and would also be conveniently near to the Kadugannawa incline. If Kandy is made the head-quarters of the Locomotive Department, I should think that, in the first instance, all that would be necessary there is a staff as follows:—

- 1 Locomotive Foreman.
- 3 Fitters and Erectors.
- 1 Boiler Smith.
- 1 Turner or Lathesman.
- 1 Spring-maker, who should also be a good Smith.
- 1 Good Coach or Waggon builder.

This staff, with the aid of Native labor and that of the Apprentices at present in training, should, I think, be ample for head-quarters, whether they be at Kandy or Colombo. At the other terminus a good Engine Fitter to execute running repairs and act as Foreman there, with a sufficient Portuguese and Native staff, should be all that is necessary. Kadugannawa and Rambukan being, I understand, feverish places, it will, in my opinion, be undesirable to keep any repairing establishment there. There will, I suppose, be an Engine-shed at Kadugannawa, at which a spare engine might be kept in case of break-down, or for the purpose of being used alternately with

Proceedings of the Madras Government, Public Works Department,
14th October 1867.

the regular engines, but the distance being only ten miles from Kandy, there should be no difficulty in arranging for the proper maintenance of the bank engines.

3. There should be a careful and steady man stationed at each of the termini (Colombo and Kandy) as Wheel Tapper and Carriage Examiner. The class of men employed here are usually pensioners, who have received a previous training in the Carriage shops.

4. The Covenanted staff on this Railway, 644 miles of line open, is as follows:—

Workshops.	Locomotive Department.	1 Locomotive Superintendent. 1 Assistant to do. 1 Foreman of Erecting shop. 1 Foreman of Lathe shop. 4 Erectors and Fitters. 1 Wheel Tyring Smith. 2 Boiler Smiths.
	Carriage Department.	1 Foreman of Carriage shops. 1 Saw-setter in charge of Saw Mill.
Running sheds and out-stations.	Locomotive Department.	6 Foremen (promoted from <i>Covenanted Engine Drivers</i>). 14 Covenanted Engine Drivers (two of whom are employed off the open Line working for the Contractor). 5 Covenanted Firemen (<i>now driving Trains</i>). 51 Uncovenanted Engine Drivers and Pilotmen.

5. With the above staff, aided by trained European, East Indian, and Native labor, we are running upwards of 140,000 miles per month, and maintaining 106 Locomotive Engines and upwards of 2,800 vehicles, all of which latter (excepting three) were built in these shops, and the construction of rolling stock is still going on under the supervision of the abovementioned staff.

From the Agent of the Great Southern of India Railway, to the Consulting Engineer for Railways,
dated Negapatam, 27th September 1867, No. 2,409.

1. I have the honor to state, in reply to your request that I should furnish a statement of what I consider would be a suitable scale of establishments for working the Ceylon Railway, that I have never been over that Railway, nor do I know the country through which it runs. I hesitate therefore, looking to the information conveyed in the papers you send me, in drawing up a (supposed) suitable staff list.

2. In November last this Company had 79 miles of Railway open for public traffic, (over which ran daily two trains in each direction, and a material train up and down every other day,) in addition a material train was worked on alternate days over fifty other miles of line, upon which also a ballast train was continuously worked. The list of staff employed in transacting the business which we then had to work may perhaps be some guide to the Ceylon Railway authorities in considering the staff required for conducting the business they have to provide for on their 75 miles of line, I, therefore, give this information on the attached paper. I also send you a copy of the letters I have received from the Resident Engineer and the Locomotive Superintendent on this subject.

Proceedings of the Madras Government, Public Works Department.
14th October 1867.

From the Locomotive Superintendent, to the Agent and Manager, Madras Railway Company, dated Perambore Works, 12th August 1867, No. 151.

1. With reference to the Order of Government No. 2,261, dated the 26th ultimo, forwarding the correspondence from the Railway authorities in Ceylon regarding the staff necessary for working the Ceylon Railway when the line is opened throughout from Colombo to Kandy, I beg to state that, as regards the requisite strength of the Locomotive Establishment, so much must necessarily depend upon the attendant circumstances of the particular line to be worked, and the amount of traffic to be conveyed over it, that it is almost impossible, unless fully acquainted with the details of the working, to give any reliable opinion upon the subject. Taking the maximum number of trains proposed to be worked at the busiest time as a basis for estimating the staff, viz., two passenger trains each way daily, one mixed and four goods trains, or seven trains in all, and allowing one Driver for each train each way, there will be fourteen Drivers actually at work as Train Enginemen, and allowing two Drivers for working the Banking Engines from Rambukan to Kadugannawa, a distance of twelve miles (which will give each Banksman an average of eighty-four miles daily), sixteen Drivers will be the total number of men actually at work daily. To meet ordinary contingencies add a proportion of 25 per cent. of the number of Drivers at work as spare, or four extra Enginemen, giving a total of twenty Drivers. This is a large staff considering that during a great part of the year it is estimated that ten trains only, or five each way, will be run, and in case of emergency it would not be too much, estimating the speed of *passenger* trains at twenty miles an hour, for the *Passenger Drivers* to run a double trip, viz., from Kandy to Colombo and back, or *vice versa*, but, to guard against a great run of traffic, or the contingencies arising from the *excessively* large proportion of men who appear to be invalidated at times on the Ceylon Line, it would perhaps be prudent to adopt a system which I found to answer well at the commencement of operations on this line, viz., to get out from England a proportion of experienced and competent Firemen, who can take charge of, and work an engine when required. If this principle be adopted, I should say that eighteen Enginemen and eight experienced Firemen would be an ample staff for the Ceylon Railway. On this line I make use of Natives generally as Firemen, but I always keep a certain number of Europeans and East Indians (working as Firemen) in training for Engine Drivers. With engines burning coke and coal we allow two Firemen; with wood burning engines three Firemen. We allow three cleaners to every two engines at large stations, where fire-lighters are kept, and where we have only a single engine, two cleaners; one of whom lights up.

Fitters and Mechanics.

amount of repairs will be necessary. I presume that there will be an Engine-shed and Workshop at Colombo and another at Kandy. Kandy would, I should say, be the most suitable place (as regards climate) both for European Drivers and European workmen, and I would also be conveniently near to the Kadugannawa incline. If Kandy is made the head-quarters of the Locomotive Department, I should think that, in the first instance, all that would be necessary there is a staff as follows:—

- 1 Locomotive Foreman.
- 3 Fitters and Erectors.
- 1 Boiler Smith.
- 1 Turner or Lathesman.
- 1 Spring-maker, who should also be a good Smith.
- 1 Good Coach or Waggon builder.

This staff, with the aid of Native labor and that of the Apprentices at present in training, should, I think, be ample for head-quarters, whether they be at Kandy or Colombo. At the other terminus a good Engine Fitter to execute running repairs and act as Foreman there, with a sufficient Portuguese and Native staff, should be all that is necessary. Kadugannawa and Rambukan being, I understand, feverish places, it will, in my opinion, be undesirable to keep any repairing establishment there. There will, I suppose, be an Engine-shed at Kadugannawa, at which a spare engine might be kept in case of break-down, or for the purpose of being used alternately with

Proceedings of the Madras Government, Public Works Department,
14th October 1867.

the regular engines, but the distance being only ten miles from Kandy, there should be no difficulty in arranging for the proper maintenance of the bank engines.

3. There should be a careful and steady man stationed at each of the termini (Colombo and Kandy) as Wheel Tapper and Carriage Examiner. The class of men employed here are usually pensioners, who have received a previous training in the Carriage shops.

4. The Covenanted staff on this Railway, 644 miles of line open, is as follows:—

Workshops.	Locomotive Department.	1 Locomotive Superintendent. 1 Assistant to do. 1 Foreman of Erecting shop. 1 Foreman of Lathe shop. 4 Erectors and Fitters. 1 Wheel Tying Smith. 2 Boiler Smiths.
	Carriage Department.	1 Foreman of Carriage shops. 1 Saw-setter in charge of Saw Mill.
Running sheds and out-stations.	Locomotive Department.	6 Foremen (promoted from <i>Covenanted Engine Drivers</i>). 14 Covenanted Engine Drivers (two of whom are employed off the open Line working for the Contractor). 5 Covenanted Firemen (<i>now driving Trains</i>). 51 Uncovenanted Engine Drivers and Pilotmen.

5. With the above staff, aided by trained European, East Indian, and Native labor, we are running upwards of 140,000 miles per month, and maintaining 106 Locomotive Engines and upwards of 2,800 vehicles, all of which latter (excepting three) were built in these shops, and the construction of rolling stock is still going on under the supervision of the abovementioned staff.

From the Agent of the Great Southern of India Railway, to the Consulting Engineer for Railways, dated Negapatam, 27th September 1867, No. 2,409.

1. I have the honor to state, in reply to your request that I should furnish a statement of what I consider would be a suitable scale of establishments for working the Ceylon Railway, that I have never been over that Railway, nor do I know the country through which it runs. I hesitate therefore, looking to the information conveyed in the papers you send me, in drawing up a (supposed) suitable staff list.

2. In November last this Company had 79 miles of Railway open for public traffic, (over which ran daily two trains in each direction, and a material train up and down every other day,) in addition a material train was worked on alternate days over fifty other miles of line, upon which also a ballast train was continuously worked. The list of staff employed in transacting the business which we then had to work may perhaps be some guide to the Ceylon Railway authorities in considering the staff required for conducting the business they have to provide for on their 75 miles of line, I, therefore, give this information on the attached paper. I also send you a copy of the letters I have received from the Resident Engineer and the Locomotive Superintendent on this subject.

Proceedings of the Madras Government, Public Works Department.
14th October 1867.

From the Locomotive Superintendent, to the Agent and Manager, Madras Railway Company, dated
Perambore Works, 12th August 1867, No. 151.

1. With reference to the Order of Government No. 2,261, dated the 26th ultimo, forwarding the correspondence from the Railway authorities in Ceylon regarding the staff necessary for working the Ceylon Railway when the line is opened throughout from Colombo to Kandy, I beg to state that, as regards the requisite strength of the Locomotive Establishment, so much must necessarily depend upon the attendant circumstances of the particular line to be worked, and the amount of traffic to be conveyed over it, that it is almost impossible, unless fully acquainted with the details of the working, to give any reliable opinion upon the subject. Taking the maximum number of trains proposed to be worked at the busiest time as a basis for estimating the staff, viz., two passenger trains each way daily, one mixed and four goods trains, or seven trains in all, and allowing one Driver for each train each way, there will be fourteen Drivers actually at work as Train Enginemen, and allowing two Drivers for working the Banking Engines from Rambukan to Kadugannawa, a distance of twelve miles (which will give each Banksman an average of eighty-meet ordinary contingencies add a proportion of 25 per cent. of the number of Drivers at work as spare, or four extra Enginemen, giving a total of twenty Drivers. This is a large staff considering that during a great part of the year it is estimated that ten trains only, or five each way, will be run, and in case of emergency it would not be too much, estimating the speed of *passenger* trains at twenty miles an hour, for the *Passenger Drivers* to run a double trip, viz., from Kandy to Colombo and back, or *vice versa*, but, to guard against a great run of traffic, or the contingencies arising from the *excessively* large proportion of men who appear to be invalidated at times on the Ceylon Line, it would perhaps be prudent to adopt a system which I found to answer well at the commencement of operations on this line, viz., to get out from England a proportion of experienced and competent Firemen, who can take charge of, and work an engine when required. If this principle be adopted, I should say that eighteen Enginemen and eight experienced Firemen would be an ample staff for the Ceylon Railway. On this line I make use of Natives generally as Firemen, but I always keep a certain number of Europeans and East Indians (working as Firemen) in training for Engine Drivers. With engines burning coke and coal we allow two Firemen; with wood burning engines three Firemen. We allow three cleaners to every two engines at large stations, where fire-lighters are kept, and where we have only a single engine, two cleaners, one of whom lights up.

Fitters and Mechanics.

2. In the first instance, it is to be presumed that the engines and stock being new, no great amount of repairs will be necessary. I presume that there will be an Engine-shed and Workshop at Colombo and another at Kandy. Kandy would, I should say, be the most suitable place (as regards climate) both for European Drivers and European workmen, and would also be conveniently near to the Kadugannawa incline. If Kandy is made the head-quarters of the Locomotive Department, I should think that, in the first instance, all that would be necessary there is a staff as follows:—

- 1 Locomotive Foreman.
- 3 Fitters and Erectors.
- 1 Boiler Smith.
- 1 Turner or Lathesman.
- 1 Spring-maker, who should also be a good Smith.
- 1 Good Coach or Waggon builder.

This staff, with the aid of Native labor and that of the Apprentices at present in training, should, I think, be ample for head-quarters, whether they be at Kandy or Colombo. At the other terminus a good Engine Fitter to execute running repairs and act as Foreman there, with a sufficient Portuguese and Native staff, should be all that is necessary. Kadugannawa and Rambukan being, I understand, feverish places, it will, in my opinion, be undesirable to keep any repairing establishment there. There will, I suppose, be an Engine-shed at Kadugannawa, at which a spare engine might be kept in case of break-down, or for the purpose of being used alternately with

Proceedings of the Madras Government, Public Works Department,
14th October 1867.

the regular engines, but the distance being only ten miles from Kandy, there should be no difficulty in arranging for the proper maintenance of the bank engines.

3. There should be a careful and steady man stationed at each of the termini (Colombo and Kandy) as Wheel Tapper and Carriage Examiner. The class of men employed here are usually pensioners, who have received a previous training in the Carriage shops.

4. The Covenanted staff on this Railway, 644 miles of line open, is as follows:—

Workshops.	Locomotive Department.	1 Locomotive Superintendent. 1 Assistant to do. 1 Foreman of Erecting shop. 1 Foreman of Lathe shop. 4 Erectors and Fitters. 1 Wheel Tying Smith. 2 Boiler Smiths.
	Carriage Department.	1 Foreman of Carriage shops. 1 Saw-setter in charge of Saw Mill.
Running sheds and out-stations.	Locomotive Department.	6 Foremen (promoted from <i>Covenanted Engine Drivers</i>). 14 Covenanted Engine Drivers (two of whom are employed off the open Line working for the Contractor). 5 Covenanted Firemen (<i>now driving Trains</i>). 51 Uncovenanted Engine Drivers and Pilotmen.

5. With the above staff, aided by trained European, East Indian, and Native labor, we are running upwards of 140,000 miles per month, and maintaining 106 Locomotive Engines and upwards of 2,800 vehicles, all of which latter (excepting three) were built in these shops, and the construction of rolling stock is still going on under the supervision of the abovementioned staff.

From the Agent of the Great Southern of India Railway, to the Consulting Engineer for Railways,
dated Negapatam, 27th September 1867, No. 2,409.

1. I have the honor to state, in reply to your request that I should furnish a statement of what I consider would be a suitable scale of establishments for working the Ceylon Railway, that I have never been over that Railway, nor do I know the country through which it runs. I hesitate therefore, looking to the information conveyed in the papers you send me, in drawing up a (supposed) suitable staff list.

2. In November last this Company had 79 miles of Railway open for public traffic, (over which ran daily two trains in each direction, and a material train up and down every other day,) in addition a material train was worked on alternate days over fifty other miles of line, upon which also a ballast train was continuously worked. The list of staff employed in transacting the business which we then had to work may perhaps be some guide to the Ceylon Railway authorities in considering the staff required for conducting the business they have to provide for on their 75 miles of line, I, therefore, give this information on the attached paper. I also send you a copy of the letters I have received from the Resident Engineer and the Locomotive Superintendent on this subject.

Proceedings of the Madras Government, Public Works Department.
14th October 1867.

GREAT SOUTHERN OF INDIA RAILWAY.

Staff List.

Agent's Department. }
Accounts do. } Amalgamated.
General Stores do. }
Traffic do. }

Head of Department, European.
Assistant Traffic Manager, do.
Consulting Physician, do.
Chief Clerk, do.
Assistant Clerk, do.
Resident Apothecary, East Indian.
39 Clerks, East Indians and Natives.
28 Peons, Watchmen, &c., Natives.

Stations.	Staff.	Tonnage of Goods.	No. of Passengers booked.
Negapatam	6 Clerks, 1 Inspector, 4 Guards, 28 Porters, Pointsmen, &c.	6,611	6,109
Sickle	1 Clerk, 3 Porters	112	1,207
Keevalore	1 Clerk, 3 Porters	179	1,630
Trivalore	2 Clerks, 7 Porters	658	4,217
Kulikere	1 Clerk, 6 Porters	393	734
Kordachary	2 Clerks, 7 Porters	764	1,831
Nedamungalum	3 Clerks, 9 Porters	1,147	4,073
Ammappettah	1 Clerk, 3 Porters	44	692
Saliangungalum	2 Clerks, 8 Porters	302	978
Tanjore	7 Clerks, 13 Porters	2,273	6,555
Boodalore	2 Clerks, 6 Porters	46	964
Cottraputty	1 Clerk, 3 Porters	27	199
Trovembore	1 Clerk, 3 Porters	4	389
Trichinopoly	7 Clerks, 20 Porters	2,610	3,617
Electric Telegraph	5 Signallers, 5 Peons	On unopened line.	

Locomotive Department. }
Construction do. } Amalgamated.
Maintenance do. }

Resident Engineer and Locomotive Superintendent, European.

Office staff 29 Clerks, East Indians and Natives.

12 Peons, Watchmen, &c., Natives.

Locomotive staff.

Maintenance staff.

Construction staff.

Strength given in attached letter from Mr. Sheward.

Inspector, European.
4 Deputy Inspectors.
7 Peons, &c.
191 Platelayers, &c.
57 Line Watchmen.
5 Deputy Constables.

Natives.

5 Maistries, Natives.
8 Peons, &c., do.
Inspectors, do.

Daily laborers according to work to be executed.

- NEGAPATAM,

27th September 1867.

(Signed) W. S. BETTS,
Agent and Traffic Manager.

Proceedings of the Madras Government, Public Works Department,
14th October 1867.

From the Resident Engineer, to the Agent and Traffic Manager of the Great Southern of India Railway, dated Trichinopoly, 12th September 1867, No. 695.

1. Referring to your letter No. 4,341-3,615, of the 2nd August, forwarding me a paper showing the Proceedings of Government with regard to the necessary staff required to work the Ceylon Railway, I have to state that in the absence of more information as regards the line, I am unable to form any opinion as to what staff it will be necessary to keep to maintain it.

2. It is necessary to know the class of permanent way used, what kind of ballast is used, at what speed the trains are run on the more level portions of the line, and whether night trains are run.

3. On this line (i. e., the Eastern Section), which is nearly entirely on embankment, the cost for labor per mile is Rupees 30 per mensem, this includes Inspectors, Writers, Storekeepers, &c., the heaviest gradient being 1 in 240, and the sharpest curve 40 chains radius.

4. As regards the different class of labor in this country and Ceylon I will say nothing, as I never passed any length of time in the latter country.

5. I would suggest that the Ceylon Railway send an Engineer to visit this and the Madras Railway. They would then be better able to form an estimate of what their working staff would require to be.

From the Locomotive Superintendent, to the Agent and Traffic Manager Great Southern of India Railway, dated Negapatam, 23rd September 1867, No. 327.

With regard to the question put by the Madras Government relative to the Ceylon Railway, I really am unable to pass an opinion with so little information to base it upon. I will, therefore, give you the Locomotive and Carriage establishments of the Great Southern of India Railway, when the mileage was somewhat the same as that of the Ceylon Railway, which may possibly answer the purpose.

Staff employed by the Great Southern of India Railway on 31st October 1866, in the Locomotive and Carriage Department, to work 82 Miles of open Line from Negapatam to Trichinopoly.

- 1 Locomotive Superintendent, England.
- 1 Foreman, do. (Locomotive and Carriage Shop).
- 1 Native Foreman (Carriage Shop).
- 1 Smith Shop Foreman, England.
- 1 Native Foreman.
- 1 Night Foreman.
- 5 Engine Drivers, England.
- 3 Firemen, England.
- 15 Native Firemen.
- 20 Engine Cleaners.
- 2 Engine Fitters, England.
- 9 Native Fitters.
- 96 Blacksmiths and Strikers.
- 115 Carpenters, Natives.
- 9 Painters, do.
- 43 Sawyers, do.
- 117 Coolies.

Rolling Stock.

- 11 Locomotives.
- 5 Composite Carriages (1st and 2nd Class).
- 2 Second Class Carriages.
- 25 Third do. do.
- 4 Passenger Break Vans.
- 4 Goods do. do.
- 2 Horse Boxes.
- 1 Carriage Truck.
- 67 Covered Goods Trucks.
- 50 Ballast Waggon.
- 50 Open Goods Trucks.
- 4 Timber Trucks.

*Proceedings of the Madras Government, Public Works Department ,
14th October 1867*

Submitted to Government, with reference to G. O. No. 2,261, dated 26th July 1867.

(Signed) J. H. M. SHAW STEWART, Major, R. E.,
Acting Consulting Engineer for Railways.

No. 278.

ORDER THEREON, 14th October 1867, No. 3,184.

RAILWAY, No. 19.

Ordered that these papers be communicated to the Government of Ceylon.

(Here enter No. 3,185, dated 14th October 1867.)

(True Extract.)

(Signed) CHARLES A. ORR, Colonel, R. E.,
Secretary to Government.

To the Consulting Engineer for Railways.

Exd. S. T. Augustin.

PUBLIC WORKS DEPARTMENT,
FORT ST. GEORGE,
14th October 1867.

No. 3,185.

No. 279.
To

THE COLONIAL SECRETARY, COLOMBO.
SIR,

RAILWAY, No. 20.

I have the honor, under the orders of the Governor in Council, to forward, in compliance with the request contained in your letter of the 6th July 1867, No. 26, copies of the Proceedings of this Government of the 14th instant, No. 3,184, containing the views of the Railway authorities in this Presidency with regard to the establishment which will be required for working the Ceylon Railway.

I have the honor to be,
Sir,

Your most obedient servant,

(Signed) CHARLES A. ORR, Colonel, R. E.,
Secretary to Government.

Exd. S. T. Augustin.

No. 324

MADRAS RAILWAY COMPANY.

AGENT AND MANAGERS OFFICE.

Madras, 17th September 1867.

From

R. B. Edwin Esq.,

Agent and Manager of the M.R.C.

To

Major J. H. Shaw Stewart, R.E.
Acting Consulting Engineer for Railways.

SIR,

Referring to a memorandum from Colonel Anderson, endorsed on a printed Copy of Order of Government, No. 2261, dated the 26th July 1867, I have the honor to forward Copies of Communications from the Traffic Manager and Locomotive Superintendent, as noted in the margin, submitting their views with regard to the establishment which will be required for working the Ceylon Railway.

2. As Mr. Wright and Mr. Church have dealt with the matter very fully, I do not think it necessary to go into further details in this letter, and I trust that the information they have furnished, together with the experience which has already been gained in working over thirty five miles of line between Colombo and Ambepussa, will enable the Director General of the Ceylon Railway to

* to 260 - 11th Sept.

* to 161 - 12th Augt.

arrived at a satisfactory decision
as to the requisite staff for the
conduct of that undertaking.

I have the honor to be,
Sir
Your most obedient servant
Walter F. Scooper
for Agent & Manager.

15
Madras Railway,
Traffic Manager's Office,
Madras, 11th September 1867.

No. 260.

Dear Sir,

With reference to a request of the Consulting Engineer on the Orders of Government No. 2261 of the 26th July, it seems to me scarcely possible with the information before us to say what "would be a suitable scale of establishments for working the Coeylaw Railway", for although the correspondence received with the above Orders of Government enters into the approximate amount of work to be performed as fully perhaps as could well be done, yet there are so many local circumstances, affecting the question, to be considered, that any suggestions, based upon the working of Indian Railways, might tend rather to mislead than to assist the Coeylaw Railway authorities in their endeavours to fix a Staff for the working of that Line.

The enclosed Statement may however be of some use, as shewing the cost of performing a certain amount of work at some of our Stations designated 1st, 2^d, and 3^d Class Day and Night Stations, and 1st, 2^d, and 3^d Class Day Stations, under very favourable circumstances so far as climate is concerned.

Guards of Through Trains perform a journey of 200 miles the first day, 200 miles the second day on the return journey, and rest the third day. Guards of Local Trains work daily except Sundays, and we find it necessary to employ about 20 per cent extra hands to meet ordinary contingencies.

At Public Road Level Crossings with single Gates, one Gatekeeper is employed, and on portions of the Line where Night Trains are run two Gatekeepers. In the case of Double Gates, the number of men is doubled. No Gatekeepers are employed at occupation or

MADRAS RAILWAY.

From

The Agent and Manager.

To

The Consulting Engineer

for Railways

17/9/67

Dated 17th September 1867.
Recd. 1/10

No. 224.

M.

Attaching Copies of
Communications from the
Traffic Manager's Office
concerning this case with
reference to the establishment
which will be required for
working the Coeylaw Railway

Bye-roads, but the Gates are looked after by the
Line Watchmen.

With reference to the last para of the Ceylon
Railway Traffic Manager's letter of 11-151 of the 5th May, <sup>Experienced
Railway
men from
England</sup> no experienced Railway men from England, below the
Rank of an Assistant Traffic Manager, are employed
in the Traffic Department of this Railway, extending over
645 miles, and one of the Officers holding that position
is a native trained in this Country. The appointment
of subordinate servants from England on the opening
of the Line in 1856 was very successful, and
I would strongly recommend the Ceylon Railway
Authorities to avail themselves of the labor to be found
in the Island in preference to indenting upon England
for a class of men who seldom show any inclination
to acquire a knowledge of the Native languages, and
are not sufficiently considerate in their intercourse
with the Natives.

Yours faithfully,
H. E. Church,
Traffic Manager.

The Agent and Manager.

/ True Copy/
Walter F. Cooper
for Agent and Manager.

Compton

3-

19

19/08/01

Madrass Railway.

Statement showing the monthly tonnage of Goods, and number of Passengers, and the daily number of Trains in and out of certain Stations, together with the numerical strength and monthly cost of the Staff employed at those Stations.

21

Class of Station	Goods Traffic		Passengers		Trains		Staff														Total monthly cost.			
	Outwards		Inwards		Number		Number of Day & Night In & Out	Station Master	Supply Station Master	Working Clerk	Ticket Collector	Goods and Luggage Clerk	Goods Clerk	Signaller	Head Porter	Musby Porter	Porters and Goods men	Painters	Signal Men	Watchmen	Total	Rs	as	d
	Tons	Number of consignments	Tons	Number of consignments	Outwards	Inwards																		
1 st Class - Day & Night	1700	495	1200	481	6913	7612	6	4	1	1	1	1	2	2	1	1	17	6	2	3	650			
2 nd Class - Day & Night	550	733	650	607	2450	2411	4	2	1	1						1	6	2	2	1	160			
3 rd Class - Day & Night	100	37	5	24	698	644	4	2	1	1							2	2	1	1	100			
1 st Class - Day - A	1000	1472	1300	457	6481	6868	6	-	1	1	1	1	2	4	1	1	14	7	1	8	730			
2 nd Class - Day - B	300	360	360	237	3757	3658	6	-	1				1	1		1	8	2	1	1	215			
3 rd Class Day	50	18	20	21	856	818	12	-	1								2	2	-	-	65			
1 st Class - Suburban	-	-	-	-	7246	7094	12	-	1		1	1	1	1			6	2	1	-	250			
Terminal stations with large European Population	1500	1119	5000	2392	7116	6837	6	-	1	1	1	2	6	3	1	1	14	7	3	17	1050			
Madrass Terminal Goods Station	4500	11377	4500	2846	-	-	10	-	-	-	-	-	32	1	3	3	84	8	6	44	2500			

A. Head Quarters

B.

- A. Head Quarters of a Division over part of which eight trains are run. Halting Station for Through Goods Traffic.
 B. In Telegraph communication with Great Southern of India Railway.
 C. Head Quarters of Bangalore Branch over which eight trains are run. Inward & Goods Traffic unloaded by Contract.

Traffic Manager's Office,
 Madras, 11th September 1867.
 Comptroller

True Copy/
 Walter F. Cooper
 Agent and Manager.

H. C. Church
 Traffic Manager.

No 151.

Madras Railway Company.
Locomotive Superintendent's Office
Perambore Works, 12th August 1867

Dear Sir,

With reference to the Order of Government No 2261, dated the 26th ultimo, forwarding the correspondence from the Railway Authorities in Ceylon regarding the Staff necessary for working the Ceylon Railway when the Line is opened throughout from Colombo to Kandy, I beg to state that, as regards the requisite strength of the Locomotive Establishment, so much must necessarily depend upon the attendant circumstances of the particular Line to be worked and the amount of Traffic to be conveyed over it, that it is almost impossible, unless fully acquainted with the details of the Working, to give any reliable opinion upon the subject. Taking the maximum number of Trains proposed to be worked at the busiest time as a basis for estimating the Staff, namely 2 Passenger Trains each way daily, one mixed and 4 Goods Trains, or 7 Trains in all, and allowing one Driver for each Train each way, there will be 14 Drivers actually at work as Train Engineers, and allowing 2 Drivers for working the Banking Engines from Perambore to Kadugannawa, a distance of 12 miles, which will give each Banksmen an average of 84 miles daily, 16 Drivers will be the total number of men actually at work daily. To meet ordinary contingencies add a proportion of 25 per cent of the number of Drivers at work as spare, or 4 extra Engineers, giving a total of 20 Drivers. This is a large Staff considering that during a great part of the year it is estimated that 10 Trains only or 5 each way will be run, and in case of emergency it would not be too much, estimating the speed of Passenger Trains at 20 miles an hour, for the Passenger Drivers to run a double trip, namely from Kandy to Colombo

Copy to C. C. B.

and back or vice versa, but, to guard against a great ruin of Traffic or the contingencies arising from the excessively large proportion of men who appear to be invalidated at times on the Ceylon Line, it would perhaps be prudent to adopt a system which I found to answer well at the commencement of operations on this Line, namely to get out from England a proportion of experienced and competent Firemen who can take charge of, and work an engine when required. If this principle be adopted I should say that 18 Engine-men and 8 experienced Firemen would be ^{an} ample staff for the Ceylon Railway. On this Line I make use of Natives generally as Firemen, but I always keep a certain number of Europeans and East Indians (working as Firemen) in training for Engine Drivers. With Engines burning coke and coal we allow 2 Firemen; with Wood-burning Engines 3 Firemen. We allow 3 Cleaners to every 2 Engines at large Stations where Fire-lighters are kept, and where we have only a single Engine, 2 Cleaners, one of whom lights up.

2. In the first instance it is to be presumed Fitters and that the Engines and Stock being new, no great amount of repairs will be necessary. I presume that there will be an Engine shed and Workshop at Colombo and another at Kandy. Kandy would I should say be the most suitable place as regards climate both for European Drivers, and European workmen, and would also be conveniently near to the Hadugannawa incline. If Kandy is made the Head Quarters of the Locomotive Department, I should think that in the first instance all that would be necessary there is a staff as follows.

- 1 Locomotive Foreman
- 3 Fitters and Erectors
- 1 Boiler Smith
- 1 Turner or Fitterman
- 1 Spring-maker, who should also be a good smith
- 1 Good Coach or Wagon builder

5 This staff, with the aid of native labour and that of the Apprentices at present in training, should I think be ample for Head Quarters whether they be at Kandy or Colombo. At the other Terminus a good Engine Fitter to execute running repairs and act as Foreman there, with a sufficient Portuguese and Native staff, should be all that is necessary. Hadugannawa and Rambutan being, I understand, feverish places, it will, in my opinion, be undesirable to keep any repairing establishment there. There will I suppose be an Engine shed at Hadugannawa at which a spare Engine might be kept in case of break down or for the purpose of being used alternately with the regular Engines, but the distance being only 10 miles from Kandy there should be no difficulty in arranging for the proper maintenance of the Bank Engines.

3. There should be a careful and steady man stationed at each of the Termini / Colombo and Kandy / as Wheel Tapper and Carriage Examiner. The class of men employed here are usually pensioners who have received a previous training in the Carriage Shops.

4. The Proposed Staff on this Railway, ^{at the} of the Line open, is as follows.

Workshops	
Locomotive Department	1 Loco Superintendent
	1 Assistant to ———
	1 Foreman of Erecting Shop
	1 Foreman of Lathes Shop
	1 Erectors and Fitters
	1 Wheel Turning Smith
	2 Boiler Smiths
Carriage Shop	1 Foreman of Carriage Shops
	1 Saw-setter in charge of Saw Mill

an
of
W.
B.
Wright
Running shed
at Stations
Locomotive
Department

- 6 Foremen/promoted from Covenanted Engine Drivers
- 14 Covenanted Engine Drivers/2 of whom are employed off the open line working for the Contractor.
- 5 Covenanted Foremen/now driving Trains
- 51 Uncovenanted Engine Drivers & Pilotmen

5. With the above staff, aided by trained European, of East Indian and Native labour, we are running upwards of 140,000 miles per month and maintaining 106 Locomotive Engines and upwards of 2,800 Vehicles, all of which latter excepting 31 were built in these shops, and the construction of Rolling Stock is still going on under the supervision of the above mentioned staff.

Yours faithfully,
Signed W.B. Wright
Locomotive Superintendent

To
The Agent and Manager

True copy
Walter F. Scooper
for Agent and Manager

Comptroller

No. 2409

6
GREAT SOUTHERN OF INDIA RAILWAY.

AGENT'S OFFICE,

NEGAPATAM.

24th September

1867

From

THE AGENT

Great Southern of India Railway,

To

The Consulting Engineer for Railways
Madras.

SIR,

I have the honor to state in reply to your request that I should furnish a statement of what I consider would be a suitable scale of establishments for working the Ceylon Railway that I have never been over that Railway nor do I know the country thro' which it runs. I hesitate therefore looking to the information conveyed in the papers you send me, in drawing up a (supposed) suitable staff list.

In November last this Company has 79 miles of Railway open for public traffic (over which ran daily 2 trains in each direction and a material train up and down every other day) in addition a material train was worked on alternate days over 60 other miles of line, upon which also a ballast train was continuously worked. The list of staff employed in transacting the business which we then had to work may perhaps be some guide to the Ceylon Railway authorities in considering the staff required for conducting the business they have to provide for on their 75 miles of line. I therefore give this information on the attached paper

papers. I also send you a copy of the letters I have received from the Resident Engineer and the Locomotive Superintendent on this subject.

I have the honor to be
 Sir
 Your most Obedt Servt

William Betts
 Agent

From the Agent to the
 Negapatam
 18th Sept 1867
 To the Comd Engineer
 Negapatam
 dated 27 Sept 1867
 W. Betts
 1867
 To the Comd Engineer
 Negapatam
 dated 27 Sept 1867
 W. Betts
 1867

Great Southern of India Railway

Staff list

Agents Department } Amalgamated
 General Store
 Chief Clerk
 Head of Department } European
 Assistant Clerk
 Resident Engineer
 39 Clerks
 28 from British India
 11 from Native

Negapatam Station

6 Clerks
 1 Inspector
 14 Clerks
 20 Porters

112 1207
 112 1620
 112 1217
 112 1031
 112 1407
 112 1692
 112 978

Lucke
 Keenmore

1 Clerk
 3 Porters
 1 Clerk
 3 Porters

Trivandrum

2 Clerks
 7 Porters

Kulikeri

1 Clerk
 6 Porters

Koroching

2 Clerks
 7 Porters

Nedumangalam

2 Clerks
 9 Porters

Arindipettah

1 Clerk
 3 Porters

Chittimangalam

2 Clerks
 8 Porters

1867

of India in the latter country.
 It would suggest that the Ceylon
 Railway and the Engineer to visit the
 and the Madras Railway. They would then
 be better able to form an estimate of
 what their working staff would require
 to be.

Yours truly
 James B. C. H. Sheward
 Resident Engineer

N^o 324

Great Southern of India Railway
 Locomotive & Carriage Supt. Office
 Negapatam 23rd Sept 1867
 35

My dear Sir

With regard to the question put by
 the Madras Govt relative to the Ceylon
 Railway, I really am unable to pass an
 opinion with so little information to base it upon.
 I will therefore give you the locomotive and
 carriage establishments of the G. S. I. R. when
 the mileage was somewhat the same as that of
 the Ceylon Railway which may possibly answer
 the purpose.

Yours &c
 Signed/ E. G. Sheward.

Staff employed by the G. S. I. Railway
 on October 31st 1866 in the Locomotive and
 Carriage Departments to work 82 Miles of
 open line from Negapatam to Trichinopoly.

- 1 Locomotive Superintendent - England.
- 1 Foreman - do - (Loco & Carriage Shop)
- 1 Native Foreman (Carriage Shop)
- 1 Smith Shop Foreman - England.
- 1 Native Foreman
- 1 Night Foreman.
- 5 Engine Drivers - England.
- 3 Firemen - England.
- 15 Native Firemen
- 20 Engine Cleaners
- 2 Engine Fitters - England.
- 9 Native Fitters
- 90 Blacksmiths & Strikers

June 1867, Vol 20, copy

115 Carpenters - Natives.
 9 Painters - do
 43 Sawyers - do
 117 Cabbies.

Rolling Stock

11 Locomotives
 5 Composite Carriages (set + 2nd class)
 2 Second class carriages
 25 Third - do - do
 4 Passenger Break Vans.
 4 Goods - do - do
 2 Horse Boxes
 1 Carriage Truck
 67 Covered Goods Trucks
 80 Ballast Waggon.
 80 Open Goods Trucks

17/10/07

True Copy

William B. B.

Agent Traffic Manager

Sta 266-

37

Submitted to Government, with
 reference to G. O. No 2261 dated 26th
 July/07.

headings -
 1st October/07

Major

Acting Consulting Engineer
 for Railways.

To, The Secretary to Government
 Public Works Dept
 Port-Saint-George.

Pro. of Govt. for Engineers
1867
RAILWAY DEPARTMENT.

From
The Consgr. Engineer for Railways,
To
The Secretary to Government,
P. W. Dept.

Dated *1st* October 1867.
Received

No. 266.

Enclosures, No. 8.

*Submitting letters
from the Agents of the
Madras & Ceylon Rly.
expressing their views
with regard to the
Establishment which will
be required for
working the Ceylon Rly.*

nos. 3184-43185. 14th Oct/67

No. 277

e. 7th Oct/67 P. W. Dept.

Public Works Department.

e. 3184

PROCEEDINGS of the MADRAS GOVERNMENT.

Under date the *14th Oct/67*

Read the following

From The Consgr. Engrs for Railways (Here enter No. 266 dated *1st October 1867*)

Ordered that these
papers be communi-
cated to the Government
of Ceylon.

To The Consgr Engrs for
Railways.
21 Sep/67

e. 3185
To The Colonial
Secretary Colombo.

Sir - I have the honor,
under the orders of the
Governor in Council,
to forward, in compliance
with the request contained
in your letter of the 9th
July 1867, *no. 26* copies

42
367-2-166

P. W. 1867. Department.
Proc. of Govt. for October
No. 31819.3185.

PROCEEDINGS OF GOVERNMENT. *of Madras*

Dated 14th October 1867

Putting orders on papers
containing the views of the
Railway authorities in this
Presidency with regard to the
establishment which will be
required for the English
Railway.

Forwarding the Colonial
Secretary-Columbo with the
above papers.

No. 277-278-279

c. 7006/6702.92