

Public Works (1898) Department.

Print

RAILWAY BRANCH.

G.O., No. 942. *Ry.*

DATED 20th July 1898.

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[Despatch Abstract.]

*Additional waiting and goods shed
accommodation at Kadiri station,
S. I. Ry.*

*The estimate amounting to Rs 5,533
for the provision of —, sanctioned*
—

Indexed

BACK PAPERS.

FURTHER PAPERS.

RAILWAY.

Government {1898} of Madras.
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Regd.

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G.O., No. 942 Ry., 20th July 1898.

JULY.

Additional Waiting and Goods Shed Accommodation at Kadiri
Station, South Indian Railway

The estimate amounting to Rs. 5,533 for the provision of —, sanctioned.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Railway.

Read the following paper:—

From—The Agent, South Indian Railway.
 To—The Consulting Engineer for Railways.
 Dated—Trichinopoly, 23rd June 1898, No. 601.

Referring to the remarks in the Inspection Reports for the half-years ended 30th June and 31st December 1897 regarding the provision of additional waiting and goods shed accommodation at Kadiri station, I have the honour to forward, for sanction, an estimate, No. 2017, amounting to Rs. 5,533, chargeable in the proportions of Rs. 5,371 to Capital and Rs. 162 to Revenue for—

- (a) extending, by 20 feet, the third-class waiting shed;
- (b) converting the goods lay-bye into a through siding;
- (c) extending, by 98 feet, the goods-shed;

as indicated on the accompanying tracings of drawings Nos. 181/96, 600/97, 608/97.

The approval of the Board of Directors to the proposed expenditure was communicated in the Managing Director's letter, No. 198 of 5th November 1897.

ORDER—No. 942 Ry., dated 20th July 1898.

The estimate amounting to Rs. 5,533, chargeable in the proportion of Rs. 5,371 to Capital and Rs. 162 to Revenue, for the provision of additional waiting and goods shed accommodation at Kadiri station, as specified in the Agent's letter read above, is sanctioned.

2. This sanction has been registered as No. 10 Ry. of 1898-99.

(True Extract.)

FRANCIS J. E. SPRING,
 Joint Secretary.

To the Agent, South Indian Railway.
 „ Examiner, Guaranteed Railway Accounts.
 „ Consulting Engineer for Railways.

Ezd. T. K. Narayana Aiyangar.

RAILWAY.

Government (1897) of Madras.
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1897.

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G.O., No. 583 R., 21st August 1897.

AUGUST.

South Indian Railway

The Government Inspector's report of inspection of the — for the half-year ended the 30th June 1897, communicated to the Agent of that Railway for necessary action, and a copy of the Proceedings ordered to be forwarded to the Government of India.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Railway.

Read the following paper:—

Inspection report on the South Indian Railway for the half-year ended the 30th June 1897.

The inspection took place between the 6th and 16th July. I was accompanied throughout by the Chief Engineer; and by the Divisional Locomotive, Traffic, and Engineering officers over their respective divisions.

2. *Last Inspection Report.*—As less than four months have elapsed since I made the last inspection, a number of points raised in that report have not yet been attended to. The following paragraphs of the previous report may be considered as being repeated in this report:—Paragraphs 4, 6, 14, 15, 16, 17, 25, 28, 33, 35, 38, 40, 42, 45, 46, 48, 52, 53, 62, 63, 67, 70, 71, 75 (a), 76 (a) and 77.

3. The necessity for new works, recommended both in this report and in the paragraphs enumerated above of the last report, must of course be considered as subject to the recent orders of the Government of India asking that all expenditure, which can possibly be avoided, be postponed.

4. *Earth-work.*—The side walks on the Májavaram-Mutupet Railway are narrow and low in many places.

5. *Bridges, Culverts.*—*Paravanur Bridge*, 2×150 feet girders, mile 136.—One of the vertical tension links has become somewhat seriously laminated. It is being carefully watched and will be renewed if the lamination increases.

6. Some timbers on this bridge require renewal.

7. 1×30 feet girder, mile 156.—This new girder was inspected and passed for traffic. The girder is an old 40 feet cut down to 30 and is very nearly up to type engine strength including wind pressure and well over O-class engine strength.

8. 3×40 feet girder, at mile 220/1 (*Májavaram-Mutupet Railway*).—Road over this bridge is very rough.

9. *Kudamudi River*—mile 253 (*Erode Branch*).—The Madras Public Works Department have now agreed to extend their road bridge in conjunction with the extension of the railway bridge.

10. *Pálár bridge*, 13×150 feet, mile 194 (*Villupuram-Dharmavaram Section*).—The red oxide paint has perished although the bridge was painted only two years ago.

11. 1×30 feet girder, mile 220/2 (*Májavaram-Mutupet Railway*).—Rusting badly. This is one of the cracked abutment bridges and has recently been very strongly strutted.

12. *Level Crossings.*—The railway only maintains that portion of the level-crossing roads which lies within the railway fences and therefore are not responsible for the almost impassable condition of many of the approaches—particularly in the Trichinopoly and Tanjore districts.

13. At present both white and green lights are used on different parts of the line as allright signals on crossing gates. It would be as well to abolish white altogether as an allright signal.

14. Attention is again drawn to the great number of cases of cattle being run over on this railway. During the three months ended June 1897 there were 111 such accidents, of which 82 occurred on the fenced line. This result is doubtless due to the poor condition of the aloe fence and to the great number of unprotected level-crossings, the gates of which, although supposed to be self-closing, either do not act properly or are wilfully tied back by the villagers.

15. *Ballast.*—A great deal of ballasting work has been got through during the last few months on the Májavaram-Mutupet Railway—*vide* paragraph 4.

16. *Permanent-way.*—The steel sleepers which have been removed from the Villupuram-Dharmavaram section during the last few months were examined at various stations. Rusting is going on, though not to the extent which was at first feared. Only about 10 per cent. of those removed were really badly corroded.

17. The road was very rough between Vencatachellum and Manubolu stations, Nellore branch.

18. The Gudur diversion was in very good order. The Bezwada-Madras Railway hope to complete their re-girding operations within a couple of months and so enable the South Indian Railway to run their trains over the permanent line before the north-east monsoon is due.

19. The running was very good over the section between Tiruvannámalai and Villupuram and also between Villupuram and Madras.

20. The old creosoted pine sleepers of the Pondicherry Branch are now nearly completely worn out. Renewals are heavy and very necessary.

21. It has now been decided to renew the old 68 lb. broad gauge rails on the Negapatam and Erode branches with 52 lb. bull-headed rails specially designed to fit the 68 lb. chairs. The 50 lb. rail has now been laid to mile 420/0, leaving a gap of $5\frac{1}{4}$ miles only of 40 lb. road still to be replaced.

22. *Station Buildings.*—Four new trial stations which have been promised and for which the inhabitants are naturally impatient seem to have been needlessly delayed.

23. *Villupuram.*—A Native women's waiting room has been opened at this station and closed again, as it was found that it was used as a latrine. In my opinion the experiment has not had a fair chance. In external appearance the erection very much resembles the South Indian Railway pattern of latrine, there is neither a name-board signifying what the building is, nor is there an attendant in charge. At the same time I do not think waiting rooms for women are needed in this presidency.

24. *Negapatam.*—The foundations of the wall round this station yard have become undermined in places, owing to the roadways which skirt the wall on the outside not having been kept in repair and consequently have become worn away by the action of successive monsoons. I think it is the duty of the municipality to effect the necessary repairs without delay.

25. *Madras.*—The Tramway Company are now relaying the portion of their line contiguous to the Beach station. The South Indian Railway boundary is here defined by the municipal lamp-posts. The distance between the sunshade of the tram cars and the lamp posts will be 16 inches only. The Railway Company will be quite unable to give up any of their land, and if the 16 inches is not considered sufficient clearance, the Tramway Company will be well advised to consider the position of their centre line before proceeding further with the work.

26. *Signals, Station Yards, Points and Crossings.*—*Kadiri.*—A proposal to convert the lay-bye siding into a loop and to extend both the passengers and goods sheds is approved.

Since the inspection of the South Indian Railway was made by Mr. Scovell, I have been over practically the whole of the line myself in company with the Agent. In para. 2 of his report for 30th June 1897, Mr. Scovell complains that no attention had as yet been paid to the suggestions made in certain paragraphs in his report on his March inspection. I have talked over all these with the Agent and learn from him that the matters referred to in paragraphs 4, 6, 14, 15, 25, 33, 35, 38, 40, 45, 52, 53, 62, 67, 71, 75*a*, and 77 of the March report are all in process of being attended to. As regards the others I gather that the state of affairs is as follows: *Para. 16.*—Trial is about to be made of a piccottah style of gate as used on certain continental railways. *Para. 17.*—The question of fencing will be taken up comprehensively. The Kiloray thorn is said not to grow except in a certain limited area. *Para. 28.*—The construction of a trial station at Noyel, on the Erode branch, is hung up for want of funds. *Para. 42.*—This is a matter for the Madras Railway. *Para. 46.*—The erection of home bracket signals at the points is a large one and is deferred until funds become

available. *Para. 48.*—I think that the disc signals at the points all over the older parts of the line had better be abolished altogether; they are not found necessary elsewhere. The Cuddalore disc signals referred to by Mr. Scovell, if retained, ought to be treated as advised by him. *Para. 63.*—The cause of the slowness of the Madras-trains and to the insufficiency of crossing places on the single line. *Para. 70.*—Certain tricomposite carriages are intended to be provided. *Para. 76a.*—Tataparai has been selected as the site of the proposed cooly dépôt.

It came to my notice that mail trains do not stop at Tindivanam which is a sub-divisional head-quarters; this ought, if possible, to be remedied. At mile 86, the have been taken to open out the ground so as to let the new spans do a fair share of work. The running between Tanjore and Trichinopoly on my journey out and back was too rough for the mail train speeds; this part of the road should be got into decent running order as speedily as possible.

In his para. 27 Mr. Scovell refers to the points of a catch-siding at *Tirupati West*. There are other stations besides this which are situated on short bits of level on an otherwise continuous down grade; but the Railway authorities do not seem to have thought it necessary elsewhere to put in a catch-siding. The reason apparently is that only one mile farther on there is a station called *Tirupati East* where passenger trains stop and where there is no through siding. The idea of the catch-siding, so called, at Tirupati East, with its points weighted so as to trap a runaway train, is that such a train may not smash into a train standing at Tirupati East. But the remedy is rather a heroic one, for the so-called catch-siding is in reality an ordinary station lay-bye, and as a matter of fact stock is kept standing on it. There ought to be either a real catch-siding or none at all, and trains ought to be so braked as to be incapable of getting out of hand on the 1 in 100 grades. Otherwise—and this seems to be the preferable course—Tirupati East ought to be made a regular station and supplied with a through siding.

With reference to Mr. Scovell's para. 50. The height of the cow-catchers over the broad gauge rails is 2" and over the metre gauge rails 3". The cow-catchers of the engines intended to work the mixed gauge section between Gudur and Nellore ought to be raised 1½" and life-guards added to them. This must be done before I can permit them to run on the mixed gauge.

At Saidapet the entrance points at the north end of the station might, with great advantage, be moved so as to come south of the level crossing; and to make up for the shortened length of siding the south facing-points might be moved south up to the other level crossing.

The question of the great accumulation of stores on the South Indian Railway is, I see, being taken up in earnest by the Agent, and quite time too; the stock of engine boiler tubes, for instance, appeared to me to be a ten year stock, though the Locomotive Superintendent assured me that it was only enough for 18 months. The stock of certain sizes of bars too seems susceptible of great reduction.

MADRAS,
10th August 1897.

F. J. E. SPRING,
Senior Govt. Inspector of Railways, Madras.

APPENDIX I.

STATEMENT showing renewals of permanent-way (excluding the extraordinary renewals referred to in paragraph 21) during the half-year ended 30th June 1897.

South Indian Railway including the Villupuram-Dharmavaram section and branches—

817 rails, iron, 68 lb., have been replaced by 817 rails, iron, 68 lb.	
163 " " 41 lb. " " 163 " " 41 lb.	
39 " " 35 lb. " " 39 " " 41 lb.	
261 " steel, 41 lb. " " 261 " steel, 41 lb.	
10 " " 50 lb. " " 10 " " 50 lb.	
2,133 sleepers, pine " " 2,133 " sleepers, pingadu.	
3,889 " pingadu " " 3,889 " " "	
22 " teak " " { 8 " " teak.	
133 pairs of C.I. pots " " 133 pairs of C.I. pots.	
78 sleepers steel " " 78 sleepers steel.	
78 " Denham and Oppert's " 78 Denham and Oppert's.	

Pondicherry Railway.

24 rails, iron, 41 lb., have been replaced by 24 rails, iron, 41 lb.	
1,090 sleepers, pine " " 1,090 sleepers, pingadu.	

Máyavaram-Mutpet Railway.

635 rails, iron, 41 lb., have been replaced by 635 rails, iron, 41 lb.	
91 sleepers, pingadu " " 91 sleepers, pingadu.	

APPENDIX II.

STATEMENT showing the quantity of rolling stock fitted and piped for the vacuum brake.

Description.	Total on the line.	Fitted.	Piped.	Not fitted or piped.
Locomotives	203	20	NiZ.	183
Coaching stock	911	93	38	780
Goods stock	3,357	NiZ.	NiZ.	3,357

APPENDIX III.

TABLE showing proposed revised timing on the Villupuram-Dharmavaram-Nellore Section.

Read Down.				Stations.		Read Up.			
2:15	..	13:30	dep.	Villupuram ..	..	arr.	..	22:00	11:00
7:15	..	20:00	arr.	Vellore ..	..	dep.	..	16:00	4:15
7:30	14:20	21:30	dep.			arr.	8:40	15:45	4:00
2:20	7:55	14:45	22:00	Katpadi J.	..	dep.	8:15	15:15	22:20
8:10	15:15	22:20	dep.			arr.	8:00	14:50	21:45
10:40	17:45	0:20	arr.	Pakala J. ..	..	dep.	5:45	12:50	19:15
12:00	18:30	0:30	dep.			arr.	5:30	12:40	17:45
13:45	20:00	1:40	arr.	Tirupati ..	..	dep.	3:50	11:10	15:45
14:00	20:15	1:45	dep.			arr.	3:45	11:05	15:30
10:30	14:30	20:45	2:15	Renigunta J.	..	dep.	3:15	10:40	15:00
15:00	..	3:30	dep.			arr.	2:00	10:15	..
20:30	..	9:00	arr.	Nellore ..	..	dep.	20:30	5:00	..
Dharmavaram Branch.									
6:00	13:00	..	dep.	Pakala J. ..	..	arr.	..	11:30	18:00
11:00	17:30	..	arr.	Chinna Tip. ..	..	dep.	..	7:00	13:10
11:00	..	..	dep.			arr.	..	..	13:00
17:00	..	..	arr.	Dharmavaram J.	..	dep.	..	7:00	..

ORDER—No. 583 R., dated 21st August 1897.

Communicated to the Agent, South Indian Railway, for information and necessary action.

2. A copy of these Proceedings will be forwarded to the Government of India.

[Here enter No. 584 R., dated 21st August 1897.]

(True Extract.)

(Signed) F. J. E. SPRING,
Offg. Joint Secy. to Govt.,
Railway Branch.

To the Agent, South Indian Railway,
„ Local and Municipal Department,

Exd. T. K. Narayana Aiyangar.

RAILWAY.

Government {1898} of Madras. PUBLIC WORKS.

Recd.

Regd.

} 1898.

Enclosures

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G.O., No. 428 Ry., 18th March 1898.

MARCH.

Report of Inspection of the South Indian Railway (Including the Mayavaram-Mutupet and Pondicherry Railways)

The Government Inspector's — for the half-year ending the 31st December 1897, communicated to the Agent for information and necessary action; and copy of the proceedings forwarded to the Government of India.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Railway.

Read the following paper:—

SOUTH INDIAN RAILWAY (INCLUDING THE MAYAVARAM-MUTUPET AND PONDICHERRY RAILWAYS).

METRE GAUGE.

Total mileage open for traffic, 1,104 miles.

INSPECTION REPORT for the half-year ending 31st December 1897.

The inspection was carried out between the 24th January and 5th February. The Agent and heads of departments were present; the District officers accompanied the train over their respective divisions.

2. The road generally is in good running order; the Pakala-Dharmavaram section was perhaps the best. The Pondicherry branch was rather rough, also the main line between Madura and Virudupati, and the Erode branch between 328-29.

3. Banks and cuttings are in good order throughout.

4. BRIDGES AND CULVERTS.—The bridges generally are in excellent order, and there is a pleasing absence of packing and chips.

5. The revised calculations of girder stresses are nearly completed and the Chief Engineer will submit them very shortly.

6. An estimate amounting to Rs. 8,000 was prepared some time ago for removing the earth which now obstructs the waterway at Ginjee bridge (22 spans of 30 feet, mile 85-86) referred to in the last inspection report; the method proposed is to cut several narrow channels through it and to assist the scouring action of the water by making a temporary dam some distance upstream. As the money spent in lengthening the bridge is practically thrown away until the obstruction is removed, I think this work should be put in hand at once. The same remarks apply, though in less degree, to the bridge of four 100-feet, mile 84-85.

7. The longitudinal sleepers of the Vennar bridge, six 50-feet, at mile 214-15, should be replaced with cross-sleepers. The masonry of a one span 40-feet girder bridge at mile 214/10 is badly cracked all over and must be renewed. I understand that both these bridges will be taken in hand at once.

8. An estimate of Rs. 10,000 has been prepared for adding ten 30-feet girders to the existing bridge at mile 253, Erode branch, to carry off land flood water into the Cauvery, but it is useless to start this work until the Local Board lengthen their road bridge, which I understand they have agreed to do.

9. A 40-feet girder, mile 325/5, Gudur-Nellore section, is being altered from metre to broad gauge. The broad gauge girders are to be placed on a trestle alongside and moved into position as soon as the abutments have been altered to receive them and the metre gauge girders have been removed. Stop signals should be erected and all trains brought to a stand while the work on the abutments is in progress.

10. A laminated crack, 10 inches long, was noticed in December last in the outer link of the second bay of the bottom boom at the north end of bridge—one 120 feet, mile 131-32, Villupuram-Pakala section. This is the member that is theoretically weakest. Coverplates should be rivetted on to both sides of the tie. The bridge wants painting.

11. The following also require painting: main line, fifteen 100-feet, mile 124-25 (in places only). Fourteen 150-feet at mile 155-56 (vertical links of end bays). Villupuram-Pakala section, thirteen 150-feet at mile 194-95; nine 40-feet, mile 228. Pakala-Nellore section, three 120-feet, mile 254-55. Some of the rivets which connect the overhead bracing with the main girders are very defective in this bridge. The red oxide paint does not seem to last very well. I think tar thinned down sufficiently with kerosine oil is better and cheaper.

12. The longitudinal sleepers, fifteen 100-feet, mile 124-25, are kept in position by holding down bolts only: in the other bridges of this type there are chubs rivetted to the cross-girders; unless it is intended to cross-sleeper the bridge shortly, ties and transoms should be added.

13. The villagers ask that the waterway of a culvert at mile 33/18, Villupuram-Nellore section, may be increased to prevent the tank bund between the road and the railway from being breached. The request seems reasonable.

14. LEVEL CROSSINGS.—No action has been taken with regard to protection of level-crossing gates in the neighbourhood of Madras and Trichinopoly. All, or nearly all, of these gates are situated between the station and one or other distant signal. It would cost little to fit each gate with a detector, so that the distant signal could not be pulled off until the gates are closed to the road. This might be tried in the Madras district in the first instance and, if it works well, extended to all gates so situated over the whole line.

15. FENCING.—The Chief Engineer has recently introduced a system of rewards to be given to the gangs which have the best record for preventing cattle-trespass and for keeping up their fencing. It is hoped this may reduce the large number of cases of cattle run over. A regular programme for erecting annually so many miles of wire fence in the worst places should be worked to.

16. The wire fencing at Tuticorin should be renewed at once, and that at Cuddalore abolished.

17. BALLAST.—Is sufficient and of good quality, except on the Gudur-Nellore section which is being converted to broad gauge and where a lot more is required.

18. PERMANENT-WAY.—The old creosoted pine sleepers, Pondicherry branch, are being renewed as fast as new sleepers can be got; many of the pyngadu sleepers with which renewals have been made are in nearly as bad a condition as the creosoted pine.

19. A reserve of wooden sleepers should be kept up at a few central points for use in emergencies. I understand that there are practically no wooden sleepers in stock.

20. The renewals on the main line with 50 lb. rails and cast iron pots have now been completed.

21. STATIONS.—GENERAL.—Plans and estimates have been prepared for a number of works more or less urgently required. Among these are improvements to station yards and buildings at Egmore, Tanjore, Mayavaram, station yard at Trichinopoly, additions and alterations to workshops and station yard and buildings at Negapatam, removal of home signals from the platform to points at 42 stations, additional staff quarters rendered necessary by the new engine-running scheme. To these should be added a proper system of interlocked points and signals at all junction stations. At present Villupuram and Tiruvallūr are the only junctions interlocked, and that only at one end. Two other ordinary wayside stations—Vandalur and Guduvanchéri—are also interlocked. It is to be hoped that some at least of these works will be commenced in the present half-year. The notice boards at most stations require to be covered with tin. A sample barrier was erected at Trichinopoly outside the ticket window. The design seems suitable though rather too heavy, and is very much better than the cumbrous arrangements, which have been erected hitherto and which it is understood are to be removed. A type latrine has also been designed, which will be tried shortly and adopted if found satisfactory.

22. *Particular Stations—Egmore.*—It was arranged to place sliding gates in the arch between the verandah and the platform, and to block up with palisading the space between the verandah pillars so as to give separate entrance and exit for incoming and out-going passengers. *Perambair.*—Petitions have been received to convert this station, which has a thatched roof and sleeper walls, into a pucca station with a platform. I think it would probably save money in repairs if this and several other old construction stations were replaced by pucca buildings. *Villupuram.*—The native refreshment-room which was opened as a trial a short time ago has been decidedly popular. *Cuddalore Old Town.*—A drawing and estimate have been prepared for rodding the points of the cross-over road between main and beach lines as suggested in a previous report. *Killé.*—The temporary station-house might be replaced by a pucca building. *Kumbakonam.*—An extension of the third-class waiting shed is needed; the existing waiting-shed will be utilized for first and second class waiting rooms, parcels room, and booking office. Name boards are required over the doors of the different rooms. *Trichinopoly.*—A new kitchen has been built on the roof over the refreshment-room; the walls are faced for a height of 6 feet with white glazed Minton tiles, the same as at Chingleput. An institute was opened last November. The municipal water-supply had failed at the end of January, and I was informed it was not likely to be available again for another month. Several cases of cholera had occurred among the Company's employés which were attributed to their having recourse to old wells and tanks which had been thrown out of use since the new water-works were opened. *Dindigul.*—The ticket window is of an obsolete and inconvenient pattern. It is essential that there should be a projecting ledge outside the window, so that the passenger may easily gather up his change; many of the ticket windows were defective in this respect. *Ammayanayakanûr.*—The Traffic Department ask that the sides of the waiting-shed may be filled in to keep out the rain; this should, I think, be done. *Tinnevely.*—New matting is wanted in the waiting rooms. Good coir matting would be cheaper in the long run and look nicer than what is now used. *Villiyampakkam-Arkonam branch.*—The old station hut might be replaced by a pucca building as soon as new repairs are wanted. *Venkatagiri.*—The dead end should be joined into the loop to facilitate working. *Vellore.*—An engine-shed is to be transferred from Kátpádi where it is not required. *Kadiri.*—Extension of third-class waiting-shed, goods-shed and lay-bye are said to be required; the latter might be made with permanent-way from Chinna Tippasamudram which has far more siding room than it is ever to likely require. A new station is wanted at mile 222/11, Negapatam branch. *Kodumudi, Erode branch.*—A deputation asked when the new station at Nôyil would be commenced. The station seems likely to do a good business and should, I think, be built shortly. *Negapatam.*—The carriage turn-table at the wharf needs repair.

23. *SIGNALS AND STATION-YARDS.*—The signals throughout the line were in excellent working order. I understand that Dutton's system, as worked at Vandalur and Guduvanchéri, is to be used at the 42 stations where removal of home signals from platform to points has been sanctioned. Before putting the work in hand, it would be well to consider whether the home signals would not be better placed 150 feet to 200 feet outside the facing points instead of opposite to them, so that shunting operations may be carried out under the protection of the home signal: additional rodding would be required which would increase the cost.

24. At Villupuram the fast train No. 24 has to pass round the ordinary mail No. 8: the points leading to the loop are not more than 20 yards from the tail of the standing train and are not interlocked in any way with any signal, and the in-coming driver has no knowledge of how they are set. A bracket signal should be attached to the main distant, on its right-hand side coming in; both signals should be detected with these points, the left-hand signal referring to the main line and the right hand to the loop. The Pondicherry branch distant signal should be similarly detected with the facing point beyond the level-crossing, but this is not so urgent.

25. At Villupuram an estimate (Rs. 4,940) has been prepared for disconnecting the engine-shed from the loop on which branch line trains come in. By the proposed arrangement engines from the locomotive lines come on to the traffic lines at one point only, on the 5th line, where a *disc* signal will be erected to control them when coming on to main line. The fuel stacks will be removed from the main line to the sick siding and fifth line. These alterations will very much improve the yard.

26. *Máyavaram.*—It is suggested that where the cross-over from the main line runs into the Mutupet main line, the latter should be diverted to one side and run into the loops, and the old Mutupet main line be converted into a shunting neck for a suitable distance. Pending proper interlocking alluded to above, this would make the working of the station safer. A new siding might also be given at the other end of the yard on the station building side.

27. *Tanjore.*—The cross-over road with diamond crossings is very much worn and should be replaced as soon as possible, ordinary points and crossings being used.

28. *Trichinopoly.*—A design for remodelling this yard was got out and approved by the Consulting Engineer: the estimated cost was Rs. 20,500 exclusive of interlocking; nothing has been done as yet towards carrying it out except that the locomotive stop signal is interlocked with the main line distant. In the meantime, the entrance from the locomotive yard to the Erode line should be cut off. Points No. 36 should be taken out and left close to the line for re-insertion in case the other entrance gets blocked.

29. *Madura.*—The locomotive sidings should be trapped at both ends.

30. *Tuticorin.*—Estimates have been submitted for carrying out the improvements to points and signals suggested in previous reports.

31. *Tirupati West.*—The catch siding is still used as an ordinary siding; a number of vehicles were standing on it the day I passed through. A sand siding, as described in *Engineering* of December 4th, 1897, might well be tried here; the cost would not be more than Rs. 2,000.

32. *Mangalampeta.*—This station is at the foot of a long 1/100 grade; it has no catch siding. The same arrangement should be adopted as recommended for Tirupati West.

33. *Tiruvallûr.*—Traffic working is hampered for want of more siding space. This can be given as arranged with the Chief Engineer by straightening out the second line outside the island platform and moving a cross-over between the two lines inside the island platform further out.

34. *ROLLING-STOCK.*—Four trains have been fitted with Winter's electric communication, and all the engines; the work of fitting all trains should be completed in six months. Communication is made by means of a handle to be pulled down instead of a glass-covered knob to be pressed; a tell-tale *disc* is also fitted to each carriage, so that the carriage from which communication was made may readily be identified.

35. The question of break-down trains alluded to in the inspection report for half-year ending June 1896 was discussed by a special committee. I understand that it was decided to have an ambulance carriage at Trichinopoly and four wagons with cranes at different points of the system. A design for the ambulance carriage is being prepared, but nothing seems to have been done towards carrying out the other recommendations of the Committee. In the event of a bad accident the want of a properly organized system would be much felt (see also remarks under Permanent-way).

36. Twenty-five engines out of a total of 69 passenger O class engines, and 208 engines of all kinds, have been fitted with the vacuum brake; 101 coaches have been fitted out of a total of 911. The sanctioned estimate has not been fully worked up to. I understand that the Agent does not contemplate fitting the brake to suburban trains, but it should be remembered that the saving of time on the local service between Pallavaram and Madras was one of the considerations put forward when the first estimate was submitted (*vide* Agent's No. 543 of 1893) and recognized by Government when sanction was given (*vide* paragraph 3 of G.O., No. 2375 R). I think a better rate of progress in fitting the brake should be aimed at not only for saving time to suburban trains but in the interests of public safety.

37. *WORKSHOPS AND STORES.*—Large reductions of obsolete and surplus stores have been made during the half-year, but more may still be effected.

38. A project and estimate have been prepared for extending the shops at Negapatam. Additional accommodation will be given in the carriage painting shop, erecting shop, boiler shop and foundry; a new locomotive office will also be built. A pattern store is much needed.

39. **TRAFFIC.**—The new system of train-loads has been introduced, but up to date has resulted I understand in a good deal of late running. This will doubtless be rectified as the staff get accustomed to it.

40. Passengers from Colombo to Tuticorin suffer great inconvenience and unnecessary expense on landing at the pier. This is a matter that might be considered in the Public Works and Marine Departments. The main obstacle to passengers using this route is the 6-mile trip to the steamer in a small and inconvenient launch; but the abolition of the worries of pier tolls and luggage would do much to make the route more popular.

41. Two models were tried of an automatic line-clear apparatus, one similar to that used on the Madras Railway, the other arranged to engage with a rod attached to the foot-plate. The latter seems the neater contrivance of the two. A trial of it should be made on a portion of the main line.

42. The system of crossing trains seems capable of improvement. The train which arrives first is admitted to the platform, discharges and takes in passengers, backs out, and comes in again on the loop, where it waits till the second train is admitted to the platform or runs through. It would seem more expeditious and less dangerous to admit the second train on the loop as soon as the first has come to a stand, run it to the other end of the station and back it into the platform as soon as the first train moves out, or run it through, as the case may be. This cannot be done at present, because the switches are only made to be locked for main line, but I understand that it has been decided to alter them so as to remove this difficulty. There are doubtless other reasons why the existing system, which causes considerably greater delay to trains, is adhered to. It would be interesting to know them.

43. Winter's new block and ticket instrument which was introduced at stations between Tanjore and Mayavaram on the occasion of the great Mahamagam festival at Kumbakonam worked most satisfactorily, the exceedingly heavy traffic being worked in a manner that would have been impossible with the ordinary arrangements. The efficiency of the apparatus having been thus satisfactorily proved, it is hoped that it may now be introduced in the near future over the main line, and later over the whole system.

MADRAS,
24th February 1898.

F. D. FOWLER,
Government Inspector of Railways.

Remarks by Senior Government Inspector.

The Agent should report what action he proposes to take with reference to the several matters which have been brought to notice by Mr. Fowler as requiring attention.

The absence, brought to notice in paragraph 19, of any reserve of wooden sleepers is not satisfactory; I am aware that just now there is a tightness in the market, or a scarcity of the supply, of wooden sleepers. The use of a traffic siding at Tirupati West as a catch siding, referred to in paragraph 31, was noticed in the reports of last half-year. The whole question of the regulation of catch sidings in this circle of inspection is under consideration; the Madras Railway Company have submitted a valuable report on the subject, but the South Indian Railway Company have not yet reported. The matter should receive early attention. The system of regulating train loads by weights instead of by vehicles, referred to in paragraph 39, ought, I think, to result in an appreciable reduction of working expenses if the departments concerned will determine to give it a fair trial.

The improvement of the Tuticorin-Colombo service was, I understand, the principal object of the Company's Agent's recent visit to Calcutta. A report should be submitted on the subject referred to in paragraph 42. I agree with Mr. Fowler about the importance of the steady, if gradual, extension of the use of Winter's block and ticket instrument. Junction stations ought to be fitted with interlocking arrangements as opportunity and funds permit.

MADRAS,
28th February 1898.

FRANCIS J. E. SPRING,
Senior Govt. Inspector of Railways.

ORDER—No. 428 Ry., dated 18th March 1898.

Communicated to the Agent, South Indian Railway, for information and necessary action.

2. The difficulty referred to in paragraph 40 of the report will be considered in the Marine and Public Works Departments.

3. A copy of these Proceedings will be forwarded for the information of the Government of India.

[Here enter No. 429 Ry., dated 18th March 1898.]

(True Extract.)

FRANCIS J. E. SPRING,
Joint Secretary.

To the Agent, South Indian Railway.
" Consulting Engineer for Railways.
" Marine Department.
" Public Works Department, General Branch.
" Local and Municipal Department.

Extract from Board's letter to the Agent,
South Indian Ry: No. 198 of 5th Nov. 1897

Budget Estimate 1898-9

In your letter No. 553 you recommend
that the following works, estimated to cost
Rs 5000 each and upwards, should be
included in the Budget Estimate for the
year 1898-9.

Mogaralpath - trial station between Ruyapure and Chittoor	Rs 5,200
Kadiri - additional accommodation	6,000
Interlocking at 4 stations	12,400
	Rs 23,600

The Board approve of this list,
and they authorise the inclusion of these
works in the Budget for the next official
year.

No. 601

South Indian Railway Co., Ltd.,

AGENT'S OFFICE,

TRICHINOPOLY, 23rd June 1898.

From

The AGENT,

SOUTH INDIAN RAILWAY,

To

The CONSULTING ENGINEER FOR RAILWAYS,

MADRAS.



Sir,

Referring to the remarks in the Inspection Reports for the half years ended 30th June and 31st December 1897 regarding the provision of additional waiting and goods-shed accommodation at Kadiar Station, I have the honor to forward for same, an estimate, No. 2017 amounting to Rs 5,533 chargeable in the proportions of Rs 5,371 to Capital and Rs 162 to Revenue for:—

- (a) extending, by 20 feet, the third class waiting shed.
- (b) converting the goods lay-by into a through siding
- (c) extending, by 98 feet, the goods-shed.

indicated on the accompanying tracings of drawings No. 181/96, as indicated on the accompanying tracings of drawings No. 181/96, 600/97, 608/97.

The approval of the Board of Directors to the proposed expenditure was communicated in the Managing Director's letter No. 198 of 5th November 1897.

I have the honor to be
Sir

Your most obedient Servant

A. S. G. Mulvey,

Captain R. E.

Agent

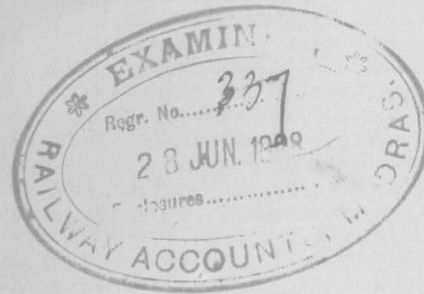
4 Enclosures by book post.

9.10

Form No. 33.

OFFICE OF THE CONSULTING ENGINEER FOR RAILWAYS,

Madras, 27th June 1898.



No. 1861

OFFICE NOTE.

Letter from the Agent, South Indian Railway, No. 601, dated 23rd June 1898, forwarded to the Examiner of Railway Accounts for favour of check as to allocation and budget provision.

942R

Intimate sent to DC

Mt 27
for E. R.
27/6/98

Put up for inspection
CTM

28/6/98

R. Recommended for Sanction
CTM 7/16/98

Drift sent
M1

EXAMINER'S REPLY.

The estimate is correct as to allocation, and requires the sanction of the Local Govt. C. R. Trichy has certified as to funds.

Edwards

28.6.98}

C. R.
28/6

From
The Agent,
South Indian Railway,
Trichinopoly,
Madras.
To
The Consulting Engineer for
Railways,
Madras.
Dated
Received
No.
189
ENCLOSURE.

Form No. 1.

Papers to be read in Proceedings:—

Again G.O., dated

189 , No.

Again G.O., dated

189 , No.

Current No. 2765

of 1898, dated

24.6.98, from

the Agent S.I. Ry.

,, 189 , "

,, "

,, 189 , "

,, "

28

ORDER.

No. 942. Dated 20/7/98.

The estimate amounting to Rs. 5,533 chargeable in the proportion of Rs. 5,371 to Capital, & Rs. 162 to Revenue, for the provision of additional waiting & goods shed accommodation at Kadiri station, as specified in the Agent's letter read above, is sanctioned.

2. This sanction has been registered as No. 10. Ry of 1898-99.

Agent S.I. Ry S. Dupla in Dist 20/7/98
 Secy: G.O. Ry Accts
 Carg. Secy for Ry.

JM
 R
 20/7/98

Despatched on 27/7/98

3 Copies only