

Public Works (1893) Department.

RAILWAY BRANCH.

G.O., No. 546-7R

DATED 14th March

[Despatch Abstract.]

Inspection report. — Orders on the — of the South Indian Railway (including the Villu-
buram Dharmamaram section and
Vellore branch,) for the half year ended 31st
December 1892.

Forwarding Copy of Proceedings on the — of
the S. I. R. (including the V. D. section & Vellore
branch,) for the half year ended 31st Decr 1892.

BACK PAPERS.

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FURTHER PAPERS.

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

**REPORT ON THE INSPECTION OF THE SOUTH INDIAN RAILWAY,
INCLUDING THE VILLUPURAM-DHARMAVARAM SECTION
AND NELLORE BRANCH, FOR THE HALF-YEAR ENDED 31ST
DECEMBER 1892.**

The inspection of the main line was made in company with the Chief Engineer and Resident Engineers of divisions between the 31st January and 8th February, both dates inclusive, and that of the remainder between the 24th and 28th February, both dates inclusive.

2. **Earthwork.**—The earthwork throughout is in thoroughly good order. Owing to the failure of the monsoons, there was no damage from floods during the half-year. The two river diversions between Trichinopoly junction and Manapárai are being watched, but beyond repairs which are required to a few of the groins, there is nothing to be noted. It was proposed to ensure the safety of the bank at 103/12, where it is threatened by the Mullatar channel, by constructing a head-sluiice, but it is not now considered necessary to do this, as with proper pitching there should be no danger of erosion.

3. At 376/10 G, the bank is threatened by two small channels, and it is thought desirable to put in a small opening.

4. Some slight protection is required to the bank at 343/16 G and 344/14 G, where channels have been diverted.

5. At 276/6 N, a ten feet girder is about to be put in owing to the bank interfering with drainage from the low hills west of the line to the Yerpel tank.

6. A culvert has been asked for where the bank crosses a tank at 290/12 N and the case is being inquired into.

7. The toe of the bank at 329/10 N requires pitching for about half a mile, as it is being eroded by the wash of a tank.

8. **Bridges.**—The condition of the bridges is generally good, and the deficient rivets noticed in the last report have been replaced. Some of the bridges require painting, and it is understood that this is being done by degrees. The rails on all bridges on the main line are laid on longitudinal timbers. When these are worn out it is intended to replace them by transverse sleepers. All the overhead bracings infringe the revised standard dimensions, being within 14 feet 6 inches from rail level, while some are less than 12 feet above it. In consideration of the occurrence reported in the case of the Gadilam bridge, it is a question whether steps should not be taken to raise them all to the prescribed height.

9. *Bridge at 547 A.*—The cracks in the wing walls do not appear to have opened further, but the foundations will be opened out when the tank dries.

10. *Bridge at 102/2.*—The cracked abutments of the 25-foot girder show no signs of further settlement. The foundations might be examined now that the tank is dry.

11. *Pálár bridge, mile 43.*—Nine spans have been repainted, but the work has been badly done and will probably soon require to be done again. The remaining 9 spans which are tarred are to be painted.

12. *Karanguli bridge, 49/2*.—Some of the longitudinal timbers are much cracked and worn.

13. *Gadilam bridge*, 124.—In December last it was found that one of the overhead cross braces of the end new girder had been struck and badly wrenched, but by what could not be ascertained. The height of the underpart of the bracing is 12' 1" above rail level and the revised standard dimensions prescribe the height for loading gauges as 11' 1" above rail level. At Negapatam, however, one load was found measuring 12' 7" and another at Maniyáchi measuring 12' 2½" above rail level.

14. The 2-foot culvert at 36/2A has been taken out and the bank filled in.

15. The rail-top culvert to replace the cracked 3-foot arch at 70/5A is practically finished and will be ready for opening in a few days.

16. *Bridge of five 50-foot spans at 387/8.*—New permanent-way and longitudinal timbers are being put in.

17. *Villupuram-Dharmavaram section.—Pálar bridge mile 194/4.*—The piers are being protected by stone pitching 6 feet in depth. Eight piers are finished and two in progress.

18. *Patalaputtu bridge, nine 40-foot girders, mile 227.*—One of the two centre piers has been protected with pitching. The pier caps are still to be put on.

19. *Bridges of two 40-foot girders, mile 267/3, and one 20-foot girder, mile 278/5,* require ballast walls.

20. *Yettal bridge, mile 279/4, four double 64-foot girders.*—The hand-rail and planks of the footway are too far apart for safety, and orders were issued by the Chief Engineer to move the inner plank to the outside.

21. *Bridges at miles 308/11, 311/1 and 370/8,* of five, five and two 60-foot girders respectively require attention. Several holding-down bolts of the longitudinal timbers are missing.

22. *Bridges at miles 347/13 and 348/12,* of six and four 60-foot girders respectively have all their vertical cross bracings buckled, those of the first named being badly so. It will be necessary to cut and re-fit all of them, as at present they are of no use whatever.

23. *Nellore Branch—Bridge at 241/8, three 20-foot girders.*—The girders have been moved in order to get a longer bearing. A few of the cross girders require rivets.

24. *Permanent-way.*—The permanent-way is generally in excellent order, the running being good throughout.

25. During the past half-year 8.01 miles have been relaid with 50 lb. rails and pot sleepers, bringing the total length of 50 lb. road to 377.88 miles. The estimates for the half year provided for the relaying of 28 miles with 50 lb. rails, but owing to the non-receipt of materials this could not be worked up to. The estimates however now provided for the relaying of 26 miles in the first quarter of 1893.

26. The insertion of three pingadu sleepers per rail length on the old 40 lb. road is in progress, and up to date 114 miles have been so strengthened, leaving a balance of 14 miles to be done.

27. Of the Villupuram-Dharmavaram section the portion north of Váyálpad is not quite up to the standard of the rest of the line, but is now receiving special attention.

28. On the Nellore Branch the Denham-Olpherts sleepers are said to give trouble, and breakages are frequent. The adjustment of the tie-rod, which is capable of giving three gauges, requires to be thoroughly understood by the gangs or a slack road is the probable result. This point is receiving attention.

29. The usual statement of renewals of rails and sleepers is appended.

ENGINEERING DEPARTMENT.

STATEMENT showing the renewals of rails for half-year ending 31st December 1892.

RAILS DISPLACED.																								
Iron.										Steel.														
60 lb.					40-3 lb.					60 lb.					41 lb.					56 lb.				
24'	21'	18'	Cut.	24'	21'	18'	Cut.	24'	21'	18'	Cut.	24'	21'	18'	Cut.	24'	21'	18'	Cut.					
1	3	4	6	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Main Line.																								
July 1892	..	..	..	416	65	3	96'	..	..	..	..	..	..	..	..	..	..	..	..	..				
August	..	..	..	263	116	14	..	..	..	..	..	..	..	..	..	..	..	..	..	..				
September	..	..	..	178	42	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..				
October	..	..	..	108	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..				
November	..	..	..	710	183	12	766'	..	..	..	..	..	..	..	..	..	..	..	..	..				
December	..	..	..	2,444	793	62	3,625'	..	..	..	..	..	..	..	..	..	..	..	..	..				
Total	..	217	6	..	4,118	1,304	86	4,377'	..	..	..	..	..	2	..	1	16'	..	..	..				
Sidings.																								
July 1892	..	..	..	42	34	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..				
August	..	..	..	16	12	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..				
September	..	..	..	26	30	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..				
October	..	..	..	10	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..				
November	..	..	..	31	17	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..				
December	..	..	..	18	20	7	..	..	..	..	..	..	..	..	..	..	..	..	..	..				
Total	..	65	12	..	143	119	16	..	..	..	..	..	..	..	..	..	..	..	..	..				
Grand Total	..	272	18	..	4,261	1,323	101	4,377'	..	..	..	..	..	3	..	1	16'	..	..	..				

RAILS REPLACED.

Bidding.

SLIPPING REPLACED.

Bidding.

30. **Ballast.**—The line is everywhere fully ballasted except in places on the northern half of the Villupuram-Guntakal Railway, which will before long, however, be brought up to full section.

31. **Fencing.**—The fencing is generally in good condition, though weak in places. Wire fencing will be required for certain lengths between miles 419 and 424, both inclusive.

32. **Watering arrangements.**—Before commencing the sinking of the proposed well in the Cooum river for the new supply of Egmore station, it is proposed that the water should be experimented on by the Locomotive Department to determine its suitability for their purposes. As the cost of the piping will be heavy, it is certainly advisable to place the suitability of the water beyond any doubt.

33. At Trichinopoly, the well in the bed of the Kodumurti river has been sunk to a depth of 15 feet, and the loan of 3-inch pipes has been obtained from the Municipal water-supply scheme. These will not be required for laying for some time to come and will be returned by the Railway Company after June, when it is anticipated that there will be no further calls on this temporary supply. The completion of the joint water-supply scheme cannot be looked for for two years, and there is every sign of an unusually dry season this year and of the ordinary sources of supply proving deficient.

34. At Koilpati the additional tank house has been started, and the steam pump is working.

35. At Tatapárai the well at the north points gives good water, but, owing to its small size, not a very large supply. It is proposed to enlarge the well.

36. At mile 251/6 it is proposed to erect staging over the well in the Koriar river bed to provide against scarcity.

37. At Kátpádi arrangements are being made to obtain the water-supply from the Madras Railway, the old tank being dispensed with and water led straight from the Madras Railway pipe to the water columns.

38. **Stations and Buildings.**—The stations throughout were found clean and neatly kept. Under the revised standard dimensions, at stations where no platforms are provided, the ground on which passengers get into or out of trains should be raised to rail level. At a few stations this is not strictly conformed to, and could probably be carried out at small expense. It was also noticed that the ends of one or two platforms were not ramped owing to lay-byes being brought up to them. Where this is the case the end of the platform ought, I think, to be fenced.

39. **Beach Station, Madras.**—The boundary separating the Harbour land from the Railway Company's property is now settled and has been marked out by the Harbour Trust Board. A site might now be fixed for a new station structure. The most convenient position would be between the lines and the road, but the width is insufficient. This could be remedied, however, by removing the line nearest the road and relaying it on the further side, when sufficient width would be available within standard dimensions for an open waiting shed and small booking office, which is all that seems to be required.

40. **Egmore.**—The improvements referred to in last half-year's report in the exit arrangements have been carried out and appear satisfactory. A lean-to roof has been added to the carriage repairing shed, and guttering has been fixed to the covered way on the passenger platform. A dispensary and apothecary's quarters are to be built as soon as the necessary land has been handed over. Land has recently been acquired for staff quarters on the north side of the yard.

41. **Chetput.**—The through siding and platform have been extended.

42. **Saidápet.**—A goods shed has been removed from Pallávaram and erected here. New level crossing gates, the four leaves of which open simultaneously, are being fixed at the north end of the station.

43. **Vandalúr.**—The through siding has been lengthened.

44. **Gúduráncéri.**—A second water-column is said to be required.

45. **Chingleput.**—A quarter for the Permanent-way Inspector has been provided in half of a block belonging to the Locomotive Department, so that the construction of a new bungalow is unnecessary. A new mortuary is in progress for the Local Fund, the land occupied by the old one having been acquired for railway purposes. Extra land is said to be required for the Madagu brickfield.

46. **Conjeevaram.**—The cracks in the station building are being watched, but no further developments have been observed. The arch which was most badly cracked has been filled in with honey-comb work. One of the verandah brassumers has sagged badly.

47. **Pallúr.**—A sweeper's hut has been built.

48. **North Kolstúr.**—A station-house and stationmaster's quarters have been built and one half of the corrugated iron goods shed has been transferred to Padálam.

49. **Padálam.**—A stationmaster's house is completed and the station building nearly so. The thatched building formerly occupied by the stationmaster is unsightly and should be removed. The platform is finished, and the passenger approach road only requires metalling.

50. **Madurántakam.**—The home signal levers have been fenced in.

51. **Acharapákam.**—The north water column is to be shifted, as at present an engine while watering does not stand over the ash-pit. The goods shed is said to be too small.

52. **Tindivanam.**—The pump has been moved from the old to the new well and covered with a shed. The platform has been lengthened.

53. **Mailam.**—The through siding has been lengthened and a platform built.

54. **Villupuram.**—Two double blocks of quarters for Native drivers and European fitters have been completed, and a dispensary and apothecary's quarters are up to roof level. A temporary fuel stage has been erected. The additional bay to the engine-shed will probably have to stand over for want of funds. The Locomotive department are said to require a repair line and shed for tools, and also additional sidings near the engine shed. The latter requirement might be temporarily met by extending the turn table lay-bye and linking it in with a siding on the other side of the small nullah which runs across the yard. This could be done at small cost and would obviate the block which often occurs between the engine shed and turn table. Additions have been made to the station building to accommodate the Villupuram-Guntakal State Railway, and other alterations in station arrangements are in progress.

55. **Panruti.**—The south distant signal is still obscured by palm trees, and the arm cannot be clearly seen from the lever. In the goods shed the southern half of the floor, which is paved with brick, is very much worn and might be replaced by stone paving similar to the other half. If this is done, it might be advantageous to use the Madras Railway remedy of arsenic and carbonate of soda as a preventive against white-ants whose attacks are complained of. The home signal levers are awkwardly placed in the platform and should either be fenced or moved behind the platform fence.

56. **Nellikuppam.**—A passengers' waiting shed is wanted.

57. **Cuddalore New Town.**—Additional third-class waiting accommodation is said to be required, the average number of passengers being about 800 daily. The station compound contains some large shady trees, and though these are, of course, no protection in wet weather, the need does not appear to be a very urgent one. Extra latrine accommodation is asked for in the compound. The home signal levers are to be moved back clear of the platform which they at present obstruct.

58. **Cuddalore Old Town.**—An additional third-class waiting shed has been built at the south end of the station-house, and the through siding has been lengthened. Alterations to the latrine of the running bungalow are waiting for iron-work, as also is the construction of a coal stage. It is proposed to provide a dispensary and apothecary's quarters; the building at present used belongs to the Locomotive department and may at any time be required by it. The home signal is partially obscured to pointsmen at the distant signal levers by branches of some fine trees overhanging the platform. As these throw a grateful shade, it is proposed to shift the signal to the space between tracks, where it would just conform to standard dimensions. The reconstruction of

the slaughter-house is nearly finished, but the sanitary condition of the railway property is seriously affected by the neighbourhood of two public latrines between the site of the old slaughter-house and the railway hospital, and an open drain running along the hospital wall, all of which are in a dangerous and offensive state. The municipality should be strongly urged, to keep the latrines in a sanitary condition and arrange for the proper regulation and cleansing of the drain.

59. *Alapakkam*.—The through siding has been lengthened.

60. *Porto Novo*.—The through siding has been lengthened. The south distant signal is at the north end of the Vellar bridge and is only 1,100 feet from the facing points; the full distance of 1,275 would place it on the bridge. It is in a good position, in that it can be seen from a long distance, but the south end of the bridge is equally good, and would give more than the full distance.

61. *Kille*.—The through siding and platform have been lengthened and the platform fenced.

62. *Chidambaram, Coleroon and Shiyáli*.—The through sidings at these stations have been lengthened.

63. *Máyavaram*.—A new engine turn-table is in progress and a new well at the north end of the yard. The earthwork for the lines in connection with the junction with the Májavaram-Mutupet Railway is mostly filled in.

64. *Kallálam and Tiruvadamarudúr*.—The through sidings have been lengthened at these stations.

65. *Kumbakonam*.—The re-arrangement of rooms has not yet been settled, but it is thought that if one bay of the third-class waiting shed is taken up for a station-master's office, the remainder will be sufficient for the amount of passenger traffic. When a refreshment room is provided at Tanjore, the one here will not be required and would be suitable for a first and second class waiting room. The passenger platform on the south side of the station-house has been widened, and the front verandah columns of the latter are to be removed and a light iron cover as brackets substituted. Extra room is said to be needed on the compound for passengers and vehicles and might be afforded by throwing open the enclosure which was formerly cultivated as a garden. The Traffic department have asked for a further extension of the gravel and laterite siding so to hold 30 instead of only 22 wagons as at present. This, if carried out, should be done in such a way as not to interfere with the compound of the Permanent-way Inspector's house, which is prettily laid out.

66. *Tille*.—The passenger platform has been raised to 1 foot above rail level.

67. *Tanjore*.—The scheme for alterations and improvements in the arrangement of the station is still under consideration, and no definite proposals have yet come forward. Meanwhile it is proposed to make the refreshment room and tank, which have recently been sanctioned, temporary structures only. A steam pump and shed are to be provided in connection with the tank. The floor of the third-class waiting shed is some 3 feet above the ground level outside the station and is to be surrounded by a fence.

68. The stationmaster is reported to allow natives into the ladies' waiting-room, which is consequently in a very dirty state. The attention of the Traffic department should be drawn to this, as there is some reason to believe that the same thing occurs at other stations.

69. Sanction has been accorded to the construction of a ballast siding about 4 miles in length in the direction of Vallam for the supply of laterite for the main line, the Májavaram-Mutupet Railway, and for the public.

70. *Niddamangalam*.—There is no waiting accommodation here for first and second class passengers. As there is a fair amount of traffic to Mannárgudi, a Missionary station a few miles distant, some sort of waiting room seems to be required.

71. *Koradáchéri*.—The ladies' room has been enlarged and an additional third-class waiting shed is in hand. The old stationmaster's house has been demolished.

72. *Tiruvallúr*.—A passenger shed is being erected on the island platform, and the earthwork and sidings for the Májavaram-Mutupet Railway junction are nearly completed. Two ash-pits and a water column are finished at the west end of the station.

73. *Negapatam*.—The latrine for workmen in the south-west corner of the compound is waiting for a drain leading to the river. Sanction was given last year to sinking a 30-foot well near the General Stores, but it has almost been decided to abandon the idea, as brackish water might be met with and the need of the well has lately been less felt. Should it again arise, the general scheme for the water-supply of the town could probably be relied on. A drain has been made round the General Stores building. The new weigh-bridge has been drained.

74. The Railway Company have again been asked to consider the question of laying a siding along the Government wharf and also of constructing a wall between their own jetty and that at the northern end of their boundary. The Marine department allege that the silting up of the river adjacent to the South Indian Railway land is caused by the dropping of coal landed there by barges and threaten to proceed against the Company under the Indian Ports Act. They would however, I believe, have considerable difficulty in substantiating the charge. Coal is certainly landed here, but the dropping of coal into the river is not considered to be the cause of the silting up, which is probably due to the river not being subject, as it was formerly, to freshes coming down from above which scoured out the bottom. The additional wharf accommodation, moreover, is not required by the railway. The siding might, perhaps, be extended as suggested at small expense, though it is open to question whether it would repay the outlay. Some difficulty would be met with in turning an easy enough curve from the present siding by the coal stacks; the siding along the bank is at present connected with it only by a wagon turn table.

75. Attention may here be drawn to the state of Negapatam harbour, which is very unsatisfactory, the bar being impassable to loaded vessels except at the highest tides. The barges landing five new engines for the Railway Company, which arrived while the inspection party were at Negapatam, grounded on the bar and were not got off for several days, while the remainder of the shipment had to go round to Madras.

76. *Budalúr*.—A new ash-pit is being put in and the two water columns will be shifted outwards from their present positions. The north points will be moved close up to the new ash-pit and the sidings re-arranged. The platform has been extended.

77. *Tiruvavumbúr*.—A third-class waiting shed has been built.

78. *Trichinopoly Junction*.—The erection of pandals in front of some of the quarters has been completed, and a Permanent-way Inspector's bungalow has been built. Quarters for one driver and seven cleaners are in progress, and a dispensary and apothecary's quarters are nearly finished. The carriage shelter abutting against the pillars of the roof over the station lines is nearly finished. The passenger platform is to be extended on the north-east side. A quarry siding has been sanctioned, but the land has not yet been handed over. A small plot of waste land has also been applied for near the workshops, but has not yet been handed over.

79. *Trichinopoly Fort*.—The goods shed platform has been widened, and the porch of the station building has been converted into a spacious third-class waiting shed.

80. *Lálápet*.—The platform and through siding have been extended.

81. *Karúr*.—The platform and through siding have been lengthened and the water column moved out to the end of the station.

82. *Púgalur*.—A 6-foot well is being sunk for the use of the station staff.

83. *Erode*.—It is proposed to build an apothecary's quarters and dispensary.

84. *Manapáral*.—The through siding and platform have been extended. A new well has been sunk for locomotive purposes, and an additional water column is nearly ready.

85. *Vaiyampati*.—A well for locomotive purposes has been sunk.

86. *Ayyalúr*.—A new station well has been sunk to a depth of 25 feet.

87. *Vadamadura*.—The through siding has been lengthened.

88. *Dinúigul*.—An extension of the through siding is to be made.

89. *Ammayanáyakanúr*.—The through siding has been lengthened.

90. *Sholavandán*.—The approach road has been widened.

91. *Madura*.—A Permanent-way Inspector's store-room, office and quarters have been built, and an apothecary's quarters and dispensary have been commenced. A recreation room for the staff is nearly finished. The raising of the tank house and watering arrangements will shortly be started.

92. *Tirunangalam*.—An 18-inch drain at the north end of the station is being replaced by a double 4-foot rail top culvert. The temporary bridge was inspected and passed.

93. *Sátūr*.—The lengthening of the through siding and construction of a siding for Messrs. Dymes and Co. have been carried out. The railway land has been fenced in. The lay-by requires a buffer stop.

94. *Koilpati*.—An additional tank house is in progress, and an alteration to the ballast siding is nearly finished.

95. *Kumárapuram*.—A stationmaster's house is to be built. The existing temporary station-house is sufficient for the traffic at present.

96. *Kadamlūr*.—The new well, one mile from the station, is finished and the pump fixed. An additional water column is to be provided. The through siding is being extended.

97. *Tinnevely*.—A siding into Messrs. Parry and Co.'s works is nearly finished.

98. *Tatapárai*.—The well near the north points gives good water and is to be enlarged.

99. *Tuticorin*.—A Permanent-way Inspector's house and a new weigh-bridge and office have been completed. The turn table has been drained.

100. *Villupuram-Dharmavaram section and Nellore branch*.—*Magaiyur*.—The permanent station building is nearly finished, as also is the stationmaster's house. The goods platform which is at present temporary might be given a permanent wall. A feeder road is under construction by the Local Fund Board.

101. *Tirukoilūr*.—The lay-by and loading bank are to be extended. The passenger shed is said to be too small.

102. *Tandurai*.—A Permanent-way Inspector's office and stores are up to roof-level.

103. *Tiruvannāmai*.—The 3rd-class booking office requires a barrier.

104. *Kannamangalam*.—A goods approach road has been made.

105. *Vellore*.—The weigh-bridge and office are finished, and a bungalow, office and stores for Permanent-way Inspector are nearly up to roof-level. An additional bay of the goods shed is being enclosed. The new locomotive well is finished, but iron work for the tank-house is awaited. The supply from the well is said to be plentiful and the water good. The bund of the Kusbah channel is being shifted at the expense of the Municipality, the work being carried out by the Railway Company.

106. *Kátpád*.—Everything at this junction has been completed except the watering arrangements. A coal-stage is to be erected here instead of at Chittoor.

107. *Chittoor*.—The Permanent-way Inspector's bungalow is up to roof-level, and the office and stores are finished. Another bay of the goods shed is being enclosed.

108. *Pákala*.—All the sanctioned works are finished except the officers' staff quarters, the latrine for locomotive workmen, and the hut for the driver of the steam-pump. A recreation room will shortly be commenced.

109. *Panapukam*.—The fencing on the west side of the station compound remains to be done. The north distant signal is slightly obscured by a tree which will be cut down.

110. *Chundragiri*.—A goods shed is being erected.

111. *Tirupati, West*.—A claim to right of way through the north-east corner of the station compound has been raised and appears to have some foundation. The public make use of the approach road passing under the 20-feet girder at 262/13. It is proposed to relinquish a small portion of land which includes the disputed length of road. The goods approach road is in a bad state and is to be repaired.

112. *Kálahasti*.—A bay of the 3rd-class passenger shed is being converted into a 1st and 2nd class waiting room.

113. *Venkatagiri*.—A well 6 feet in diameter, for the use of the station staff is being sunk; the existing well is being deepened and steined.

114. *Nellore*.—The menials' quarters are disfigured by untidy mats, &c., and partition walls would be an improvement. The staff quarters have no latrines. The paucity of quarters for the locomotive staff noticed in last report is no longer felt, some of the staff having been moved to Pákala.

115. *Damalcheruvu*.—The compound fencing is being erected.

116. *Mangalampeta*.—The pump house and watering arrangements are finished. The compound fencing is being put up.

117. *Pulicherla*.—A catch-siding is to be put in at the northern end of the station. The fencing of the compound is in progress.

118. *Pílér*.—The watering arrangements have been completed, and the goods shed is finished. The south distant signal lever and cabin is to be moved to the top of the cutting slope to enable the pointsmen to see the semaphore. Water for drinking purposes is brought from Kalikiri, the Pílér water being held accountable for the unhealthiness of the place.

119. *Váyalpád*.—An additional bay of the goods shed has been enclosed, and the tank-house has been completed.

120. *Chinna Tippa Samudram*.—The Permanent-way Inspector's bungalow, office and stores are up to roof-level, and a temporary refreshment room and cook-house have been built. An additional bay of the goods shed is being enclosed.

121. *Kurabalakóla*.—A standpipe has been erected and a lay-by completed. The goods loading bank is in progress.

122. *Tummanangutta*.—The platform fencing has been erected.

123. *Battulapuram*.—The loading bank is under construction.

124. *Lalcheru*.—Trial station. A temporary station-house and platform have been constructed. Signals have not yet been provided.

125. *Kadiri*.—The Permanent-way Inspector's office and stores are nearly ready for the roof, and porters' and telegraph linesmen's quarters are finished. Two bays of the goods shed are to be enclosed, and the pump is to be covered with a shed.

126. *Kalasamudram*.—The platform fencing has been erected.

127. *Molaka Vémala*.—The fencing of the platform and compound is finished. The goods approach road is in progress.

128. *Mudigubba*.—The station compound has been fenced.

129. *Muktápuram*.—The platform and compound fencing has been erected.

130. *Chinnékuntapalli*.—The latrine is not yet finished.

131. *Dharmavaram*.—The European drivers' quarters, telegraph linesmen's quarters, and temporary quarters for guards are finished, as also is the engine shed. The additions to the station building have been completed. The recreation room is above ground level, but is not being continued as it is likely that it may not be required. The overbridge has not been commenced yet.

132. *Signals*.—The erection of home signals is being carried on throughout the line, those stations being first supplied which are situated on curves. The signals are all in good working order, though some were observed to droop slightly, and the home signal lamp at Tuticorin is not wind proof.

133. *Rolling-stock*.—The engines are, as usual, beautifully kept. Endeavours are being made to improve the running of the rolling-stock by the adoption of a more suitable pattern of brass in the axle-boxes, the bad running of most of the stock being partly attributed to the imperfection of the existing pattern. As soon as some of the 100 new bogie vehicles and 50 third-class carriages under construction are finished, it is hoped that a system of frequent periodical examination and repair of vehicles will become possible and the standard of the rolling-stock considerably raised. Of the 80 third-class bogie carriages sanctioned, ten are now under construction and two of the

20 bogie composites, but the frames have not yet arrived from England. Of the 50 third-class carriages being built by the Madras Railway Company, ten are expected to be finished shortly. Of the 20 new engines sanctioned, five are nearly erected, and five more have lately arrived. Automatic vacuum break gear has been indented for for 100 vehicles.

134. Some cases of trains parting occurred last year owing to loose couplings, which appear to have been due to the old Cuddapah-Nellore stock standing lower than the other vehicles through the wearing down of a wooden packing piece. This packing piece, which is fitted between the bearing spring and the top of the axle-box, becomes worn by pressure and jarring, or is burnt by the axle running hot till the floor of the wagon drops, when the coupling hook is unable to fall right home. Unless some other material can be substituted for wood, this class of vehicle should be frequently examined and the packing pieces renewed before they are badly worn down.

135. A statement of renewals and repairs for the last three half-years is appended, from which it will be seen that the number of vehicles which passed through the shops was much greater in the last than in previous half-years—

COMPARATIVE statement of the renewals and repairs of rolling-stock, South Indian Railway, during the last three half-years.

	NUMBERS RENEWED AND REPAIRED DURING		
	Second half of 1891.	First half of 1892.	Second half of 1892.
Passenger vehicles	129	119	195
Covered goods wagons	90	45	264
High-sided wagons	79	69	155
Other vehicles	24	24	94
Total	322	257	708

136. **Workshops.**—The question of the further extension of the Locomotive shops at Negapatam was again brought forward, and, though there is no doubt that the extra length of open line added to the system during the past year has thrown a large amount of additional work on the department, it is doubtful if any further sanctions can be looked for at present, the funds available being required for more pressing needs. Two plots of land south of the shops have recently been acquired, but it is unfortunate that they should be awkwardly separated by a wedge of land occupied by the Salt police lines which are mud-built thatched huts. It is very desirable that the railway should, if possible, obtain possession of this plot. Attempts have been made to negotiate for the acquisition of a portion of the town on the north side, including the Wesleyan Mission and other private properties, but the cost of these is likely to be so high as to be prohibitive. The railway colony is without any school or recreation room, which, considering the large number of employes, is a hardship and it is reported that considerable discontent is felt on the subject. Land for building purposes in Negapatam is very difficult to obtain, almost every available site being occupied.

137. The Locomotive Superintendent is anxious to obtain possession of the present General Stores building and sheds for use as a boiler shop and brass and copper foundries, which are said to be the most necessary extensions. The building is inadequate in size and awkwardly arranged for its present purpose, while it is inconveniently situated for a boiler shop, being close to the Locomotive erecting shop. The scheme would, however, involve heavy outlay on a new General Stores building.

138. A new erecting shed for carriages and wagons is in progress, and nearly all the iron work is finished. An extension has been added to the wheel-tyre shop, but is not yet supplied with furnaces. An examining pit has been sunk in the centre of the erecting shop and the space between the tool and smiths' shops has been roofed in and is a useful addition. The upper side windows of the locomotive erecting shop and of the shed over the carriage repair lines are not yet fixed, and some points and crossings have yet to be put in at the end of the latter shed. A wagon turntable is said to be

required at the end of the fitters' shop to enable coal to be unloaded close to the stationary engine boilers. The raising of the compound wall on the east side has been deferred until the enlargement of the time office is settled. It is proposed to move this further forward into the yard in front of the wall.

139. **Trial stations.**—It is proposed to open trial stations at Sennimalai, mile 330/3, Erode branch, and Venkateshapuram, mile 104, Villupuram-Dharmavaram section. The sites selected for both appear suitable, and sanction should be accorded when applied for.

140. **Level crossings.**—Are generally in good order, though at several places it was noticed that the ramps were not brought quite up to the level of the top of the guard rails. A new crossing has been put in at mile 156 G, and another is in progress at mile 110/12 G.

141. At the Chintadripettah crossing near the Victoria Hall, Beach line, the road traffic is very considerable, and the closing of the gates causes frequent blocks. A foot over-bridge would greatly relieve the congestion and remove the danger to which foot-passengers are at present liable.

142. The road crossing, mile 320 G, where the line passes close to the village of Balasamudram, should have a gate-keeper.

143. The gateman at mile 273/13 N, on the other hand, might be dispensed with, as the crossing is in the middle of a long straight and is little used.

144. **Miscellaneous.**—Some culverts on the Beach line near the High Court which cross municipal drains are used by the public, as also are the drains themselves, as latrines. The Municipality might be asked to take steps to prevent this.

145. The medical authorities have applied for the rendition of a small plot of land at the south-west corner of the General Hospital compound. There is no objection to a portion of it being handed over, but sufficient should be retained to provide for the line being doubled at a future time.

146. **Máyavaram-Mutupet Railway.**—Advantage was taken of the temporary rails laid from Májavaram and Tiruválúr to examine the progress made in the construction of this railway. The work is still seriously hampered by the difficulty in obtaining labour, and firewood for making bricks and burning clay for concrete, stone not being procurable near the line. Less than 500 coolies are employed over the whole line, and progress is therefore very slow. Rails are laid temporarily for $2\frac{1}{2}$ miles out of Májavaram, and from Tiruválúr 2 miles northwards towards Májavaram, and $2\frac{1}{2}$ miles in the direction of Mutupet. Efforts are being made to push the earthwork on from Májavaram and get rails laid to the sites of brick-fields about 10 miles out. A quantity of old sleepers have been procured for use as firewood, and the first batch of bricks made with them seem very satisfactory, being sound and well burnt. Assistance in the way of labour has been promised from Pudukóta, and, as soon as the crops are got in, it is hoped the work will make rapid progress, the earthwork being easy throughout.

147. **Dharmavaram-Hindupur Railway.**—The progress made in the construction of this line during the past half-year has been very rapid, and the line will be well advanced for opening on the 1st April next, when it is to be taken over by the Southern Mahratta Railway Company. The road is in good running order, the slopes neatly dressed, and the banks and ballast of full section. On the bank through the Kotnoor tank near Hindupur the ballast has been spread to considerably more than full section to allow for possible settlement. All except two of the bridges are finished and were run over, the exceptions being one of four 40-foot spans and one of two 40-foot spans between Hindupur and Malugur, but these should be ready for the passage of trains in a fortnight's time. The stations are all well advanced, and with the exception of a few comparatively unimportant details will be complete on 1st April.

148. **General.**—The Dharmavaram-Guntakal section was handed over to the Southern Mahratta Railway Company on 1st January 1893.

149. The Engineering Department of the South Indian Railway is said to be handicapped by the inferior standard of Permanent-way Inspectors and the Chief Engineer complains of the difficulty of obtaining men of proper qualifications and experience. Under the circumstances, the condition of the way and works is highly creditable to Divisional Engineers.

150. The rolling-stock should soon show an improvement, and it is hoped that within a few months a complete new train may be put on the line fitted with the automatic vacuum brake.

151. With its excellent road and an improved rolling-stock, the present reputation and unpopularity of the railway ought soon to be a thing of the past.

MADRAS,
7th March 1893.

(Signed) R. E. TOMLIN, Lieut., R.E.,
Deputy Consulting Engineer for Railways.

14TH MARCH 1893, No. 546 R., PUBLIC WORKS.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Railway.

Read the following paper:—

Report of inspection of the South Indian Railway (including the Villupuram-Dharmavaram section and the Nellore branch) for the half-year ended 31st December 1892.

No. 136.

Endorsement by the Consulting Engineer for Railways, dated Madras, 8th Mar. 1893.

Submitted for the information of Government.

2. It is requested that 35 copies of the report, together with a similar number of copies of the orders of Government passed thereon, may be forwarded to the Government of India.

ORDER—dated 14th March 1893, No. 546 R., Public Works.

The Agent's attention will be drawn to paras. 3, 4, 7, 10, 12, 13, 19, 21, 23, 27, 31, 38, 49, 55, 58, 68, 93, 100, 114, 133, 134, 140, 142, 143 and 149.

2. The Agent will be requested to report on paras. 39, 54, 56, 57, 60, 70, 111, 136 and 141.

3. The Consulting Engineer for Railways will report at once on the advisability of raising the overhead bracings of bridges to the standard height above rail level.

4. Paras. 58 and 144 will be referred to the Local and Municipal Department.

5. Paras. 74 and 75 will be referred to the Marine Department.

6. Para. 135.—The increased numbers of vehicles repaired and renewed during the half-year is noted as satisfactory.

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

[Here enter No. 547 R., Public Works, dated 14th March 1893.]

(True Extract.)

(Signed) F. R. UPCOTT,
Joint Secy. to Govt., P.W.D.,
Railway Branch.

To the Consulting Engineer for Railways.
" Local and Municipal Department.
" Marine Department.

ENDORSEMENT—dated 14th March 1893, No. 547 R., Public Works.

Forwarded.

(By Order.)

Joint Secretary to Govt., P.W.D.,
Railway Branch.

Exd. A. D. Xavier.
Spare Copies

RAILWAY.

Gobt. of {1893} Madras.
PUBLIC WORKS.

Dated March, 14th.

Recd.

Encl.

G.O., 14th Mar. 1893, Nos. 546,
547 R.

MARCH.

Inspection Report

Forwarding copy of Proceedings on the —
of the South Indian Railway (including the
Villupuram-Dharmavaram section and Nel-
lore branch) for the half-year ended 31st
December 1892.

REPORT ON THE INSPECTION OF THE SOUTH INDIAN RAILWAY,
INCLUDING THE VILLUPURAM-DHARMAVARAM SECTION
AND NELLORE BRANCH, FOR THE HALF-YEAR ENDED
31st DECEMBER 1892.

The inspection of the main line was made in company with the Chief Engineer and Resident Engineers of division, between the 31st January and 8th February, both dates inclusive, and that of the remainder between the 24th and 28th February, both dates inclusive.

2. **Earthwork.**—The earthwork throughout is in thoroughly good order. Owing to the failure of the monsoons, there was no damage from floods during the half-year. The two river diversions between Trichinopoly junction and Manapárai are being watched, but beyond repairs which are required to a few of the groins, there is nothing to be noted. It was proposed to ensure the safety of the bank at 103/12, where it is threatened by the Mullatar channel, by constructing a head-sluice, but it is not now considered necessary to do this, as with proper pitching there should be no danger of erosion.

3. At 376/10 G, the bank is threatened by two small channels, and it is thought desirable to put in a small opening.

4. Some slight protection is required to the bank at 343/16 G and 344/14 G, where channels have been diverted.

5. At 276/6 Na ten feet girder is about to be put in owing to the bank interfering with drainage from the low hills west of the line to the Yerpud tank.

6. A culvert has been asked for where the bank crosses a tank at 290/12 N and the case is being inquired into.

7. The toe of the bank at 329/10 N requires pitching for about half a mile, as it is being eroded by the wash of a tank.

8. **Bridges.**—The condition of the bridges is generally good, and the deficient rivets noticed in last report have been replaced. Some of the bridges require painting, and it is understood that this is being done by degrees. The rails on all bridges are laid on longitudinal timbers. When these are worn out it is intended to replace them by transverse sleepers. All the overhead bracings infringe the revised standard dimensions, being within 14 feet 6 inches from rail level, while some are less than 12 feet above it. In consideration of the occurrence reported in the case of the Gadilam bridge, it is a question whether steps should not be taken to raise them all to the prescribed height.

9. **Bridge at 54/7 A.**—The cracks in the wing walls do not appear to have opened further, but the foundations will be opened out when the tank dries.

10. **Bridge at 102/2.**—The cracked abutments of the 25-feet girder show no signs of further settlement. The foundations might be examined now that the tank is dry.

11. **Pálar bridge, mile 43.**—Nine spans have been repainted, but the work has been badly done and will probably soon require to be done again. The remaining 9 spans which are tarred are to be painted.

12. **Karanguli bridge, 49/2.**—Some of the longitudinal timbers are much cracked and worn.

13. **Gadilam bridge, 124.**—In December last it was found that one of the cross braces of the end new girder had been struck and badly wrenched, but by what could not be ascertained. The height of the underpart of the bracing is 12' 1" above rail level and the revised standard dimensions prescribe the height for loading gauges as 11' 1" above rail level. At Negapatam, however, one load was found measuring 12' 7" and another at Maniyáchi measuring 12' 2½" above rail level.

15. The rail-top culvert to replace the cracked 3-feet arch at 70/5A is practically finished and will be ready for opening in a few days.

16. Bridge of fire 50-feet spans at 387/8.—New permanent-way and longitudinal timbers are being put in.

44. Villupuram-Dharmavaram section—Pálar bridge, mile 194/4.—The piers are being protected by stone pitching 6 feet in depth. Eight piers are finished and two in progress.

18. *Patalaputtu bridge*, nine 40-foot girders, mile 227.—One of the two centre piers has been protected with pitching. The pier caps are still to be put on.

17. Bridges of two 40-foot girders, mile 267/3, and one 20-foot girder, mile 278/5, require ballast walls.

20. *Ycttal bridge, mile 279/4, four double 61-foot girders.*—The hand-rail and planks of the footway are too far apart for safety, and orders were issued by the Chief Engineer to move the inner plank to the outside.

2c. Bridges at miles 303/11, 311/1 and 370/8, of five, five and two 60-foot girders respectively require attention. Several holding-down bolts of the longitudinal timbers are missing.

12. Bridges at miles 347/13 and 348/12, of six and four 60-foot girders respectively have all their vertical cross bracings buckled, those of the first named being badly so. It will be necessary to cut and re-fit all of them, as at present they are of no use whatever.

15 *Nellore Branch*—*Bridge at 241/8, three 20-foot girders.*—The girders have been moved in order to get a longer bearing. A few of the cross girders require rivets.

24. Permanent-way.—The permanent-way is generally in excellent order, the running being good throughout.

25 During the past half-year 8.01 miles have been relaid with 50 lb. rails and pot sleepers, bringing the total length of 50 lb. road to 377.88 miles. *The Director for*

26 The insertion of three pingadu sleepers per rail length on the old 40 lb. road is in progress, and up to date 114 miles have been so strengthened, leaving a balance of 14 miles to be done.

27. Of the Villupuram-Dharmavaram section the portion north of Váyálpad is not quite up to the standard of the rest of the line, but is now receiving special attention.

29 On the Nellore Branch the Durham-sleepers are said to give trouble, and breakages are frequent. The adjustment of the tie-rod, which is capable of giving three gauges, requires to be thoroughly understood by the gangs or a slack road is the probable result. This point is receiving attention.

The usual statement of renewals of rails and sleepers is appended.

[illegible]

1945-46

3. *unfaded*

3

1. The first part of the document is a list of names and their corresponding dates. The names are listed in a column on the left, and the dates are listed in a column on the right. The names are: John Doe, Jane Smith, Bob Johnson, Alice Brown, and Charlie White. The dates are: 1990, 1991, 1992, 1993, and 1994.

4. input

Statement showing the renewals of rails for half-year ending 31st December 1892—*cont.*

RAILS REPLACED.																									
Iron.											Steel.														
60 lb.											41 lb.											66 lb.			
40-3 lb.				60 lb.							41 lb.				66 lb.										
34'	31'	18'	Cut.	34'	31'	21'	18'	Cut.	30'	27'	21'	21'	18'	Cut.	31'	29'	40'	41'	24'	21'	18'	Cut.			
Main Line.																									
July 1893	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..			
August	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..			
September	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..			
October	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..			
November	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..			
December	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..			
Total	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..			
Siding.																									
July 1892	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..			
August	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..			
September	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..			
October	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..			
November	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..			
December	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..			
Total	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..			
Grand Total	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..			

Theravangam

7. 11. 1902

5- 11/11/02

STATEMENT showing the renewals of sleepers for the half-year ending 31st December 1892.

		SLEEPERS REPLACED.									
		SLEEPERS REPLACED.									
		Crea. 6'	Crea. 9'	Pyn-gads.	Teak of sizes.	Pot 63 lb. pairs.	Pot 60 lb. pairs.	Pot 40 lb. pairs.	Transverse steel sleepers.	D. and O. sleepers.	
Main Line.											
July 1892	..	2,757	..	31	..	6 1/2	0 1/2	1	..	..	52
August "	..	1,097	..	..	..	6 1/2	3	3	..	..	27
September "	..	2,465	..	6	..	1 1/2	0 1/2	..	..	..	28
October "	..	1,782	..	1	2	0 1/2	67	..	..	..	27
November "	..	4,612	..	1	..	17	..	3	..	..	34
December "	..	15,947	..	13	6	4 1/2	..	..	..	..	14
Total	..	28,640	..	62	8	35 1/2	61	6	6	..	192
Sidings.											
July 1892	..	226	..	12	..	..	..	..	..	..	..
August "	..	481	..	36	7	..	..	..	..	..	..
September "	..	618	..	15	..	..	..	..	..	..	..
October "	..	392	..	27	..	..	..	..	..	..	..
November "	..	643	..	28	..	1	..	..	..	..	..
December "	..	201	..	16	..	..	..	1	..	..	..
Total	..	2,649	..	123	8	1 1/2	..	1	..	..	..
Grand Total	..	31,289	..	176	16	37	61	7	6	..	192

30. **Ballast.**—The line is everywhere fully ballasted except in places on the northern half of the Villupuram-Guntakal Railway, which will before long, however, be brought up to full section.

31. **Fencing.**—The fencing is generally in good condition, though weak in places. Wire fencing will be required for certain lengths between miles 419 and 424, both inclusive.

32. **Watering arrangements.**—Before commencing the sinking of the proposed well in the Cooum river for the new supply of Egmore station, it is proposed that the water should be experimented on by the Locomotive Department to determine its suitability for their purposes. As the expense of the piping will be costly, it is certainly advisable to place the suitability of the water beyond any doubt.

33. At Trichinopoly, the well in the bed of the Kodumurti river has been sunk to a depth of 15 feet, and the loan of 3-inch pipes has been obtained from the Municipal water-supply scheme. These will not be required for laying for some time to come and will be returned by the Railway Company after June, when it is anticipated that there will be no further calls on this temporary supply. The completion of the joint water-supply scheme cannot be looked for for two years, and there is every sign of an unusually dry season this year and of the ordinary sources of supply proving deficient.

34. At Koilputi the additional tank house has been started, and the steam pump is working.

35. At Tataparai the well at the north points gives good water, but, owing to its small size, not a very large supply. It is proposed to enlarge the well.

36. At mile 25½ it is proposed to erect staging over the well in the Koriar river bed to provide against scarcity.

37. At Kátpádi arrangements are being made to obtain the water-supply from the Madras Railway, the old tank being dispensed with and water led straight from the Madras Railway pipe to the water columns.

38. **Stations and Buildings.**—The stations throughout were found clean and neatly kept. Under the revised standard dimensions, at stations where no platforms are provided, the ground on which passengers get into or out of trains should be raised to rail level. At a few stations this is not strictly conformed to, and could probably be carried out at small expense. It was also noticed that the ends of one or two platforms were not ramped owing to lay-byes being brought up to them. Where this is the case the end of the platform ought, I think, to be fenced.

39. **Beach Station, Madras.**—The boundary separating the Harbour land from the Railway Company's property is now settled and has been marked out by the Harbour Trust Board. A site might now be fixed for a new station structure. The most convenient position would be between the lines and the road, but the width is insufficient. This could be remedied, however, by removing the line nearest the road and relaying it on the further side, when sufficient width would be available within standard dimensions for an open waiting shed and small booking office, which is all that seems to be required.

40. **Egmore.**—The improvements referred to in last half-year's report in the exit arrangements have been carried out and appear satisfactory. A lean-to roof has been added to the carriage repairing shed, and guttering has been fixed to the covered way on the passenger platform. A dispensary and apothecary's quarters are to be built as soon as the necessary land has been handed over. Land has recently been acquired for staff quarters on the north side of the yard.

41. **Chelput.**—The through siding and platform have been extended.

42. **Saidápet.**—A goods shed has been removed from Pallavaram and erected here. New level crossing gates, the four leaves of which open simultaneously, are being fixed at the north end of the station.

43. **Vandalúr.**—The through siding has been lengthened.

44. **Gáthuráncéri.**—A second water-column is said to be required.

45. **Chingleput.**—A quarter for the Permanent-way Inspector has been provided in half of a block belonging to the Locomotive Department, so that the construction of

7
a new bungalow is unnecessary. A new mortuary is in progress for the Local Fund, the land occupied by the old one having been acquired for railway purposes. Extra land is said to be required for the Madagu brickfield.

46. *Conjeevaram*.—The cracks in the station building are being watched, but no further developments have been observed. The arch which was most badly cracked has been filled in with honey-comb work. One of the verandah bressummers has sagged badly.

47. *Pallur*.—A sweeper's hut has been built.

48. *North Kolatur*.—A station-house and stationmaster's quarters have been built and half the corrugated iron goods shed has been transferred to Padalam.

49. *Padalam*.—A stationmaster's house is completed and the station building nearly so. The thatched building formerly occupied by the stationmaster is unsightly and should be removed. The platform is finished, and the passenger approach road only requires metalling.

50. *Madurantakam*.—The home signal levers have been fenced in.

51. *Acharapakam*.—The north water column is to be shifted, as at present an engine while watering does not stand over the ash-pit. The goods shed is said to be too small.

52. *Tindivanam*.—The pump has been moved from the old to the new well and covered with a shed. The platform has been lengthened.

53. *Mallam*.—The through siding has been lengthened and a platform built.

54. *Villupuram*.—Two double blocks of quarters for Native drivers and European fitters have been completed, and a dispensary and apothecary's quarters are up to roof level. A temporary fuel stage has been erected. The additional bay to the engine-shed will probably have to stand over for want of funds. The Locomotive department are said to require a repair line and shed for tools, and also additional sidings near the engine shed. The latter requirement might be temporarily met by extending the turn table lay-by and linking it in with a siding on the other side of the small nullah which runs across the yard. This could be done at small cost and would obviate the block which often occurs between the engine shed and turn table. Additions have been made to the station building to accommodate the Villupuram-Guntakal State Railway, and other alterations in station arrangements are in progress.

55. *Panruti*.—The south distant signal is still obscured by palm trees, and the arm cannot be clearly seen from the lever. In the goods shed the southern half of the floor, which is paved with brick, is very much worn and might be replaced by stone paving similar to the other half. If this is done, it might be advantageous to use the Madras Railway remedy of arsenic and carbonate of soda as a preventive against white-ants whose attacks are complained of. The home signal levers are awkwardly placed in the platform and should either be fenced or moved behind the platform fence.

56. *Nellikuppam*.—A passengers' waiting shed is wanted.

57. *Cuddalore New Town*.—Additional third-class waiting accommodation is said to be required, the average number of passengers being about 800 daily. The station compound contains some large shady trees, and though these are, of course, no protection in wet weather, the need does not appear to be a very urgent one. Extra latrine accommodation is asked for in the compound. The home signal levers are to be moved back clear of the platform which they at present obstruct.

58. *Cuddalore Old Town*.—An additional third-class waiting shed has been built at the south end of the station-house, and the through siding has been lengthened. Alterations to the latrine of the running bungalow are waiting for iron-work, as also is the construction of a coal stage. It is proposed to provide a dispensary and apothecary's quarters; the building at present used belongs to the Locomotive department and may at any time be required by it. The home signal is partially obscured to pointsmen at the distant signal levers by branches of some fine trees overhanging the platform. As these throw a grateful shade, it is proposed to shift the signal to the space between tracks, where it would just conform to standard dimensions. The reconstruction of the slaughter-house is nearly finished, but the sanitary condition of the railway property is very seriously affected by the neighbourhood of two public latrines between

56-47/12
8
the site of the old slaughter-house and the railway hospital, and an open drain running along the hospital wall, all of which are in a poisonous and offensive state. The municipality should be strongly urged to keep the latrines in a sanitary condition and arrange for the proper regulation and cleansing of the drain.

59. *Alapattam*.—The through siding has been lengthened.

60. *Porto Novo*.—The through siding has been lengthened. The south distant signal is at the north end of the Vellar bridge and is only 1,100 feet from the facing points; the full distance of 1,275 would place it on the bridge. It is in a good position in that it can be seen from a long distance, but the south end of the bridge is equally good, and would give more than the full distance.

61. *Kille*.—The through siding and platform have been lengthened and the platform fenced.

62. *Chidambaram, Coleroon and Shiydli*.—The through sidings at these stations have been lengthened.

63. *Máyavaram*.—A new engine turn-table is in progress and a new well at the north end of the yard. The earthwork for the lines in connection with the junction with the MÁYAVARAM-MUTUPET Railway is mostly filled in.

64. *Kattalam and Tiruvadamardur*.—The through sidings have been lengthened at these stations.

65. *Kumbakonam*.—The re-arrangement of rooms has not yet been settled, but it is thought that if one bay of the third-class waiting shed is taken up for a station-master's office, the remainder will be sufficient for the amount of passenger traffic. When a refreshment room is provided at Tanjore, the one here will not be required and would be suitable for a first and second class waiting room. The passenger platform on the south side of the station-house has been widened, and the front verandah columns of the latter are to be removed and a light iron cover on brackets substituted. Extra room is said to be needed in the compound for passengers and vehicles and might be afforded by throwing open the enclosure which was formerly cultivated as a garden. The Traffic department have asked for a further extension of the gravel and laterite siding so to hold 30 instead of only 22 wagons as at present. This, if carried out, should be done in such a way as not to interfere with the compound of the Permanent-way Inspector's house, which is prettily laid out.

66. *Titte*.—The passenger platform has been raised to 1 foot above rail level.

67. *Tanjore*.—The scheme for alterations and improvements in the arrangement of the station is still under consideration, and no definite proposals have yet come forward. Meanwhile it is proposed to make the refreshment room and tank, which have recently been sanctioned, temporary structures only. A steam pump and shed are to be provided in connection with the tank. The floor of the third-class waiting shed is some 3 feet above the ground level outside the station and is to be surrounded by a fence.

68. The stationmaster is reported to allow natives into the ladies' waiting-room, which is consequently in a very dirty state. The attention of the Traffic department should be drawn to this, as there is some reason to believe that the same thing occurs at other stations.

69. Sanction has been accorded to the construction of a ballast siding about 4 miles in length in the direction of Vallam for the supply of laterite for the main line, the MÁYAVARAM-MUTUPET Railway, and for the public.

70. *Nidamangalam*.—There is no waiting accommodation here for first and second class passengers. As there is a fair amount of traffic to Mannargudi, a Missionary station a few miles distant, some sort of waiting room seems to be required.

71. *Koradicheri*.—The ladies' room has been enlarged and an additional third-class waiting shed is in hand. The old stationmaster's house has been demolished.

72. *Tiruvallur*.—A passenger shed is being erected on the island platform, and the earthwork and sidings for the MÁYAVARAM-MUTUPET Railway junction are nearly completed. Two ash-pits and a water column are finished at the west end of the station.

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9
Negapatam.—The latrine for workmen in the south-west corner of the compound is waiting for a drain leading to the river. Sanction was given last year to sinking a 30-foot well near the General Stores, but it has almost been decided to abandon the idea, as brackish water might be met with and the need of the well has lately been less felt. Should it again arise, the general scheme for the water-supply of the town could probably be relied on. A drain has been made round the General Stores building. The new weigh-bridge has been drained.

74 The Railway Company have again been asked to consider the question of laying a siding along the Government wharf and also of constructing a wall between their own jetty and that at the northern end of their boundary. The Marine department allege that the silting up of the river adjacent to the South Indian Railway land is caused by the dropping of coal landed there by barges and threaten to proceed against the Company under the Indian Ports Act. They would however, I believe, have considerable difficulty in substantiating the charge. Coal is certainly landed here, but the dropping of coal into the river is not the cause of the silting up, which is due to the river not being subject, as it was formerly, to freshes coming down from above which scoured out the bottom. The additional wharf accommodation, moreover, is not required by the railway. The siding might, however, be extended as suggested at small expense, though it is open to question whether it would repay the outlay. Some difficulty would be met with in turning an easy enough curve from the present siding by the coal stacks; the siding along the bank is at present connected with it only by a wagon turn table.

75 Attention may here be drawn to the state of Negapatam harbour, which is very unsatisfactory, the bar being impassable to loaded vessels except at the highest tides. The barges carrying five new engines for the Railway Company, which arrived while the inspection party were at Negapatam, grounded on the bar and were not got off for several days, while the remainder of the shipment had to go round to Madras.

76 Budalur.—A new ash-pit is being put in and the two water columns will be shifted outwards from their present positions. The north points will be moved close up to the new ash-pit and the sidings re-arranged. The platform has been extended.

77 Tiruverumbur.—A third-class waiting shed has been built.

78 Trichinopoly Junction.—The erection of pandals in front of some of the quarters has been completed, and a Permanent-way Inspector's bungalow has been built. Quarters for one driver and seven cleaners are in progress, and a dispensary and apothecary's quarters are nearly finished. The carriage shelter abutting against the pillars of the roof over the station lines is nearly finished. The passenger platform is to be extended on the north-east side. A quarry siding has been sanctioned, but the land has not yet been handed over. A small plot of waste land has also been applied for near the workshops, but has not yet been handed over.

79 Trichinopoly Fort.—The goods shed platform has been widened, and the porch of the station building has been converted into a spacious third-class waiting shed.

80 Lalapet.—The platform and through siding have been extended.

81 Karur.—The platform and through siding have been lengthened and the water column moved out to the end of the station.

82 Pugalur.—A 6-foot well is being sunk for the use of the station staff.

83 Erode.—It is proposed to build an apothecary's quarters and dispensary.

84 Manapalai.—The through siding and platform have been extended. A new well has been sunk for locomotive purposes, and an additional water column is nearly ready.

85 Vaidampati.—A well for locomotive purposes has been sunk.

86 Ayyalur.—A new station well has been sunk to a depth of 25 feet.

87 Vadamadura.—The through siding has been lengthened.

88 Dindigul.—An extension of the through siding is to be made.

89 Ammayandyakanur.—The through siding has been lengthened.

90 Sholavandan.—The approach road has been widened.

91 *Madura*.—A Permanent-way Inspector's store-room, office and quarters have been built, and an apothecary's quarters and dispensary have been commenced. A recreation room for the staff is nearly finished. The raising of the tank house and watering arrangements will shortly be started.

92 *Tirumangalam*.—An 18-inch drain at the north end of the station is being replaced by a double 4-foot rail top culvert. The temporary bridge was inspected and passed.

93 *Sátūr*.—The lengthening of the through siding and construction of a siding for Messrs. Dymes and Co. have been carried out. The railway land has been fenced in. The lay-bye requires a buffer stop.

94 *Koilpati*.—An additional tank house is in progress, and an alteration to the ballast siding is nearly finished.

95 *Kumārapuram*.—A stationmaster's house is to be built. The existing temporary station-house is sufficient for the traffic at present.

96 *Kadambūr*.—The new well, one mile from the station, is finished and the pump fixed. An additional water column is to be provided. The through siding is being extended.

97 *Tinnevely*.—A siding into Messrs. Parry and Co.'s works is nearly finished.

98 *Tatapárai*.—The well near the north points gives good water and is to be enlarged.

99 *Tuticorin*.—A Permanent-way Inspector's house and a new weigh-bridge and office have been completed. The turn table has been drained.

100 *Villupuram-Dharmaram Section and Nellore Branch, Magaiyur*.—The permanent station building is nearly finished, as also is the stationmaster's house. The goods platform which is at present temporary might be given a permanent wall. A feeder road is under construction by the Local Fund Board.

101 *Tirukoilūr*.—The lay-bye and loading bank are to be extended. The passenger shed is said to be too small.

102 *Tandarai*.—A Permanent-way Inspector's office and stores are up to roof-level.

103 *Tiruvannámalai*.—The 3rd-class booking office requires a barrier.

104 *Kannamangalam*.—A goods approach road has been made.

105 *Vellore*.—The weigh-bridge and office are finished, and a bungalow, office and stores for Permanent-way Inspector are nearly up to roof-level. An additional bay of the goods shed is being enclosed. The new locomotive well is finished, but iron work for the tank-house is awaited. The supply from the well is said to be plentiful and the water good. The bund of the kusbah channel is being shifted at the expense of the Municipality, the work being carried out by the Railway Company.

106 *Kátpádi*.—Everything at this junction has been completed except the watering arrangements. A coal-stage is to be erected here instead of at Chittoor.

107 *Chittoor*.—The Permanent-way Inspector's bungalow is up to roof-level, and the office and stores are finished. Another bay of the goods shed is being enclosed.

108 *Pákala*.—All the sanctioned works are finished except the officers' staff quarters, the latrine for locomotive workmen, and the hut for the driver of the steam-pump. A recreation room will shortly be commenced.

109 *Panapakam*.—The fencing on the west side of the station compound remains to be done. The north distant signal is slightly obscured by a tree which will be cut down.

110 *Chandragiri*.—A goods shed is being erected.

111 *Tirupati West*.—A claim to right of way through the north-east corner of the station compound has been raised and appears to have some foundation. The public make use of the approach road passing under the 20-feet girder at 262/13. It is proposed to relinquish a small portion of land which includes the disputed bit of road. The goods approach road is ...

- The goods approach road is in a bad state and is to be repaired.
- 112 *Kalahasti*.—A bay of the 3rd-class passenger shed is being converted into a 1st and 2nd class waiting room.
- 113 *Venkatagiri*.—A well 6 feet in diameter, for the use of the station staff is being sunk; the existing well is being deepened and steined.
- 114 *Nellore*.—The menials' quarters are disfigured by untidy mats, &c., and partition walls would be an improvement. The staff quarters have no latrines. The paucity of quarters for the locomotive staff noticed in last report is no longer felt, some of the staff having been moved to Pakala.
- 115 *Damalcheruvu*.—The compound fencing is being erected.
- 116 *Mangalampeta*.—The pump house and watering arrangements are finished. The compound fencing is being put up.
- 117 *Pulicherla*.—A catch-siding is to be put in at the northern end of the station. The fencing of the compound is in progress.
- 118 *Pilér*.—The watering arrangements have been completed, and the goods shed is finished. The south distant signal lever and cabin is to be moved to the top of the cutting slope to enable the pointsmen to see the semaphore. Water for drinking purposes is brought from Kalikiri, the Pilér water being held accountable for the unhealthiness of the place.
- 119 *Váyalpád*.—An additional bay of the goods shed has been enclosed, and the tank-house has been completed.
- 120 *Chinna Tippa Samudram*.—The Permanent-way Inspector's bungalow, office and stores are up to roof-level, and a temporary refreshment room and cook-house have been built. An additional bay of the goods shed is being enclosed.
- 121 *Kurabalakóla*.—A standpipe has been erected and a lay-bye completed. The goods loading bank is in progress.
- 122 *Tummanangutta*.—The platform fencing has been erected.
- 123 *Battulápuram*.—The loading bank is under construction.
- 124 *Lalcheru*.—Trial station. A temporary station-house and platform have been constructed. Signals have not yet been provided.
- 125 *Kadiri*.—The Permanent-way Inspector's office and stores are nearly ready for the roof, and porters' and telegraph linesmen's quarters are finished. Two bays of the goods shed are to be enclosed, and the pump is to be covered with a shed.
- 126 *Kálasamudram*.—The platform fencing has been erected.
- 127 *Molaka Vémala*.—The fencing of the platform and compound is finished. The goods approach road is in progress.
- 128 *Mudigubba*.—The station compound has been fenced.
- 129 *Muktápuram*.—The platform and compound fencing has been erected.
- 130 *Chinná-kuntapalli*.—The latrine is not yet finished.
- 131 *Dharmavaram*.—The European drivers' quarters, telegraph linesmen's quarters, and temporary quarters for guards are finished, as also is the engine shed. The additions to the station building have been completed. The recreation room is above ground level, but is not being continued as it is likely that it may not be required. The overbridge has not been commenced yet.
- 132 *Signals*.—The erection of home signals is being carried on throughout the line, those stations being first supplied which are situated on curves. The signals are all in good working order, though some were observed to droop slightly, and the home signal lamp at Tuticorin is not wind proof.
- 133 *Rolling-stock*.—The engines are, as usual, beautifully kept. Endeavours are being made to improve the running of the rolling-stock by the adoption of a more suitable pattern of brass in the axle-boxes, the bad running of most of the stock being partly attributed to the imperfection of the existing pattern. As soon as some of the 100 new bogie vehicles and 50 third-class carriages under construction are finished, it is hoped that a system of frequent periodical examination and repair of vehicles will

become possible and the standard of the rolling-stock considerably raised. Of the 80 third-class bogie carriages sanctioned, ten are now under construction and two of the 20 bogie composites, but the frames have not yet arrived from England. Of the 50 third-class carriages being built by the Madras Railway Company, ten are expected to be finished shortly. Of the 20 new engines sanctioned, five are nearly erected, and five more have lately arrived. Automatic vacuum break gear has been indented for for 100 vehicles.

134. Some cases of trains parting occurred last year owing to loose couplings, which appear to have been due to the old Cuddapah-Nellore stock standing lower than the other vehicles through the wearing down of a wooden packing piece. This packing piece, which is fitted between the bearing spring and the top of the axle-box, becomes worn by pressure and jarring, or burnt by the axle running hot till the floor of the wagon drops, when the coupling hook is unable to fall right home. Unless some other material can be substituted for wood, this class of vehicle should be frequently examined and the packing pieces renewed before they are badly worn down.

135. A statement of renewals and repairs for the last three half-years is appended, from which it will be seen that the number of vehicles which passed through the shops was much greater in the last than in previous half-years—

COMPARATIVE statement of the renewals and repairs of rolling-stock, South Indian Railways, during the last three half-years.

	NUMBERS RENEWED AND REPAIRED DURING		
	Second half of 1891.	First half of 1892.	Second half of 1892.
Passenger vehicles	128	119	195
Covered goods wagons	80	45	354
High-sided wagons	79	69	185
Other vehicles	24	33	94
Total	322	366	798

136. Workshops.—The question of the further extension of the Locomotive shops at Negapatam was again brought forward, and, though there is no doubt that the extra length of open line added to the system during the past year has thrown a large amount of additional work on the department, it is doubtful if any further sanctions can be looked for at present, the funds available being required for more pressing needs. Two plots of land south of the shops have recently been acquired, but it is unfortunate that they should be awkwardly separated by a wedge of land occupied by the Salt police lines which are mud-built thatched huts. It is very desirable that the railway should, if possible, obtain possession of this plot. Attempts have been made to negotiate for the acquisition of a portion of the town on the north side, including the Wesleyan Mission and other private properties, but the cost of these is likely to be so high as to be prohibitive. The railway colony is without any school or recreation room, which, considering the large number of employes, is a hardship and it is reported that considerable discontent is felt on the subject. Land for building purposes in Negapatam is very difficult to obtain, almost every available site being occupied.

137. The Locomotive Superintendent is anxious to obtain possession of the present General Stores building and sheds for use as a boiler shop and brass and copper foundries, which are said to be the most necessary extensions. The building is inadequate in size and awkwardly arranged for its present purpose, while it is conveniently situated for a boiler shop, being close to the Locomotive erecting shop. The scheme would, however, involve heavy outlay on a new General Stores building.

138. A new erecting shed for carriages and wagons is in progress, and nearly all the iron work is finished. An extension has been added to the wheel-tire shop, but is not yet supplied with furnaces. An examining pit has been sunk in the centre of the erecting shop and the space between the tool and smiths' shops has been roofed in and

is a useful addition. The upper side windows of the locomotive erecting shop and of the shed over the carriage repair lines are not yet fixed, and some points and crossings have yet to be put in at the end of the latter shed. A wagon turn table is said to be required at the end of the fitters' shop to enable coal to be unloaded close to the stationary engine boilers. The raising of the compound wall on the east side has been deferred until the enlargement of the time office is settled. It is proposed to move this further forward into the yard in front of the wall.

134 Trial stations.—It is proposed to open trial stations at Sennimalai, mile 330/3, Erode branch, and Venkateshapuram, mile 104, Villupuram-Dharmavaram section. The sites selected for both appear suitable, and sanction should be accorded when applied for.

140 Level crossings are generally in good order, though at several places it was noticed that the ramps were not brought quite up to the level of the top of the guard rails. A new crossing has been put in at mile 156 G, and another is in progress at mile 110/12 G. *141* At the Chintalapetta crossing near the Victoria Hall, Beach line, the road traffic is very considerable, and the closing of the gates causes frequent blocks. A foot over-bridge would greatly relieve the congestion and remove the danger to which foot-passengers are at present liable.

142 The road crossing, mile 320 G, where the line passes close to the village of Balasamudram, should have a gate-keeper.

143 The gateman at mile 273/13 N, on the other hand, might be dispensed with, as the crossing is in the middle of a long straight and is little used.

144 Miscellaneous.—Some culverts on the Beach line near the High Court which cross municipal drains are used by the public, as also are the drains themselves, as latrines. The Municipality might be asked to take steps to prevent this.

145 The medical authorities have applied for the rendition of a small plot of land at the south-west corner of the General Hospital compound. There is no objection to a portion of it being handed over, but sufficient should be retained to provide for the line being doubled at a future time.

146 Mayavaram-Mutpet Railway.—Advantage was taken of the temporary rails laid from Mayavaram and Tiruválúr to examine the progress made in the construction of this railway. The work is still seriously hampered by the difficulty in obtaining labour, and firewood for making bricks and burning clay for concrete, stone not being procurable near the line. Less than 500 coolies are employed over the whole line, and progress is therefore very slow. Rails are laid temporarily for $2\frac{1}{2}$ miles out of Mayavaram, and from Tiruválúr 2 miles northwards towards Mayavaram, and $2\frac{1}{2}$ miles in the direction of Mutpet. Efforts are being made to push the earthwork on from Mayavaram and get rails laid to the sites of brick-fields about 10 miles out. A quantity of old sleepers have been procured for use as firewood, and the first batch of bricks made with them seem very satisfactory, being sound and well burnt. Assistance in the way of labour has been promised from Pudukóta, and, as soon as the crops are got in, it is hoped the work will make rapid progress, the earthwork being easy throughout.

147 Dharmavaram-Hindupur Railway.—The progress made in the construction of this line during the past half-year has been very rapid, and the line will be well advanced for opening on the 1st April next, when it is to be taken over by the Southern Mahratta Railway Company. The road is in good running order, the slopes neatly dressed, and the banks and ballast of full section. On the bank through the Kotnoor tank near Hindupur the ballast has been spread to considerably more than full section to allow for possible settlement. All except two of the bridges are finished and were run over, the exceptions being one of four 40-foot spans and one of two 40-foot spans between Hindupur and Malugur, but these should be ready for the passage of trains in a fortnight's time. The stations are all well advanced, and with the exception of a few comparatively unimportant details will be complete on 1st April.

General.—The Dharmavaram-Guntakal section was handed over to the Southern Mahratta Railway Company on 1st January 1893.

The Engineering Department of the South Indian Railway is said to be handicapped by the inferior standard of Permanent-way Inspectors and the Chief Engineer complains

545-4712

Very important

14

of the difficulty of obtaining men of proper qualifications and experience. Under the circumstances, the condition of the way and works is highly creditable to Divisional Engineers.

5. The rolling-stock should soon show an improvement, and it is hoped that within a few months a complete new train may be put on the line fitted with the automatic vacuum brake.

15. With its excellent road and an improved rolling-stock, the present reputation and unpopularity of the railway ought soon to be a thing of the past.

Madras.
7th March 1893.

Re. Tomlin's Ltr
Secretary
Office of Cus. & Ex. for R.R.

14

PUBLIC WORKS DEPARTMENT.

OFFICE OF CONSULTING ENGINEER FOR RAILWAYS,

Madras, 9th March 1903.

S.P.
Report of Inspection of the S. G. Ry.,
(including the Villupuram - Tharmararam
Section and the Kallar Branch), for
the half year ended 31st December 1892.

No. 1361

Endorsed by the Comr. Engrs. for Railways.

SUBMITTED.

for the information of Government.

2. It is requested that 35 copies
of the report, together with a
similar number of copies of the
orders of Government passed
thereon, may be forwarded
to the Government of India.

Subject.

Petitioner

At: O. E.,
for Comr. Engrs. for Ry.

on 8/1
22/3/03

P. W. CURRENT No. 222

From

THE CONSULTING ENGINEER

FOR RAILWAYS,

Madras,

No. 136

Dated 8th March 1892
Received

No. of ENCLOSURES.

Subject.

Submitting, for information,
the Report of inspection of the
S. P. Ry. (including V. D. Section
Kallakurichi) for the S. G.
ended 31st December 1892.

A No. 546 R, 8/14-3-93
PUBLIC WORKS DEPARTMENT,
RAILWAY BRANCH.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

Read the following

Endorsement from
the Comptroller Genl. } N.E. No. 136 of 8th March.

33

The Agent's attention
will be drawn to pages 3, 4
7, 10, 12, 13, 19, 21, 23, 27, 31
38, 49, 55, 58, 68, 93, 100, 114
133, 134, 140, 142, 143 and 145

2. The Agent will be requested to report on pages 39, 54, 56, 57, 60, 70, 111, 136 and 141.

3. The Consulting Engineer, at once, will report on the advisability of raising the overhead beams of bridges to the standard height above rail level.

4. Pages 58 and 144 will be referred to the Local and Municipal Authorities.

The cause is very liberally
decided in favour of the
is it that it never
came to light before.
I suppose that the Com. must
be told to take care that no
load is more than 11.5
12.5 or 12.5 loads are not
dangerous.

ferred to the Insane
Department

~~1.1.11~~
A

Page 135... The increased
numbers of vehicles repaired
and renewed during the
4 years is noted as satis-
factory.

A copy of these Prop.
is be forwarded for the
information of the Com. of
Ins.

No 547 R 7/14 March 1893

A

No. 546-7 R 7/14-3-93

Forwarded

M ⁵/₃

F.R. ⁵/₃

D.R.

A

No 546-7 R 7/14-3-93

To The Comptroller
Local & Municipal
Insane Dept
2.16/11

1893 .

Public Works Department.

No. 546H

Dated March 14, 1893

Despatched

Received

SUBJECT.

Inspection report

=

Orders on the
of the S. I. Railway
including the
Mupuram Shanavaram
section and Bellme
branch,) for the
year ended
at Dec 2 1892

warding copy of
proceedings on the

S. I. R. (including the V. S. section
and Bellme branch,)
for the year ended 31.12.92

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