Public Works (~~190~~ 1898) Department.

Railway Branch.

G.O., No. 968-69 Ry

DATED 28th July ~~190~~ 1898.

Includes.

G.O. No. 1117-18 Ry dt 10 - 12 - 97
do 167-68 Ry dt 31 - 1 - 98
do 650-51 Ry dt 28 - 4 - 98
do 774 Ry dt 4 - 6 - 98
do 869 Ry dt 27 - 6 - 98.

[Despatch Abstract.]

Note. No spare copies of this G.O. should be sent to the Agent S.I.R to whom a M/S copy of the order only was despatched on the 28th July 1898.

Madura Pamban Railway.

Passing orders on the subject of the best alignment for the ——

Madura Pamban Railway.

The Government of India addressed on the subject of the best alignment for —— and the method of financing ——

P. W. 9.
[illegible]

Indexed

BACK PAPERS

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RAILWAY.

Government (1898) of Madras.

PUBLIC WORKS.

Recd. } 1898. *Enclosures*
Regd. } *Spare copies*

G.O., Nos. 968, 969 Ry., 28th July 1898.

JULY.

Madura-Pamban Railway

The Government of India addressed on the subject of the best alignment for, and the method of financing, the —.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Railway.

Read the following paper :—

From—The Secretary to the Government of India, Public Works Department.
To—The Joint Secretary to the Government of Madras, P.W.D., Ry. Branch.
Dated—Simla, 22nd October 1897, No. 1746 R.C.

No. 530 R., dated 5th August 1897.
,, 532 R., ,, 5th ,, ,,
,, 533 R., ,, 5th ,, ,,

I am directed to acknowledge the receipt of your letters marginally quoted, on the subject of the proposals of the South Indian Railway Company, for the construction and working of the following proposed railways :—

(1) Madura-Pamban, 100 miles in length and estimated to cost Rs. 42 lakhs.
(2) Tinnevelly-Quilon—
British section, 45 miles, Rs. 24 to 25 lakhs.
Travancore section, 58 miles, Rs. 76 lakhs.
(3) Palghat-Dindigul, 115 miles in length and estimated to cost Rs. 85 lakhs.

2. The proposals of the Board of the South Indian Railway Company contemplate the undertaking *en bloc* of the three lines, Madura-Pamban, Palghat-Dindigul and the British portion of the Tinnevelly-Quilon as integral parts of that Company's system. The Board are also willing to construct the Travancore section of the Tinnevelly-Quilon Railway at actual cost and work it on behalf of the Travancore Durbar for 50 per cent. of the gross receipts, provided that the cost of maintenance for the first two years after opening is charged to capital.

3. In your letter No. 530 R., dated 5th August 1897, you say with regard to the Madura-Pamban line that His Excellency the Governor in Council does not lose sight of the disadvantages attaching to the proposal made by the South Indian Railway Company for financing this extension, *viz.*, that if it is to form an integral part of the South Indian Railway, it must wait for a place in the general programme for all India, but you urge that if it is possible to give it a very early place in that programme, it may be borne in mind that the Government of Madras would much prefer that it should be so constructed rather than be entrusted to a Branch Line Company.

4. As regards the British section of the Tinnevelly-Quilon Railway, the same preference is expressed in your letter No. 532 R., dated 5th August 1897 ; *viz.*, that, unless the exigencies of the general programme make it impossible to allow the South Indian Railway Company to construct it until after the expiry of say another two years, it will for all reasons be far preferable to adopt this method of financing the scheme; but that if the general exigencies should cause considerable delay in the commencement of the work, the Government of Madras would then urge that the South Indian Railway Company be given every encouragement to form a subsidiary company for its construction and working under the rebate terms of Public Works Department Resolution No. 514 R.C., dated 17th April 1896.

As to the Travancore section, you suggest that there would presumably be no opposition on the part of the Travancore Durbar, who had already accepted the proposal of the Government of India to underwrite the proposed guarantee by the Government of India in so far as it applies to the Native State Section, to similarly underwrite a corresponding British guarantee offered to a Branch Line Company owning the British section of the Railway.

5. Lastly, as regards the Palghat-Dindigul line, the Government of Madras recommend, for the reasons advanced in your letter No. 533 R., dated 5th August 1897, that the offer of the South Indian Railway Company in so far as it concerns this project should be refused for the present, but without prejudice to the re-opening of the question of its construction hereafter.

6. I am now to inform you that these proposals of the South Indian Railway Company, and the views of the Government of Madras thereon, have been carefully considered by the Government of India, together with the recommendations of the Railway Conference which has just concluded its sittings at Simla under the Presidency of His Excellency the Viceroy.

7. I am to say that while the Government of India are fully aware of the advantages offered by the proposals of the South Indian Railway Company, which are supported by the Government of Madras, for constructing the branch lines connected with the South Indian Railway in British territory as integral parts of that Railway, His Excellency the Governor-General in Council desires to again impress on the Government of Madras and upon the South Indian Railway Company that, having regard to the existing engagements of the Government of India which have received the approval of Her Majesty's Secretary of State, there is no prospect whatever of all the lines referred to in this correspondence being included in the ordinary programme of railway construction for the next two years.

8. It was after a full consideration of the proposals that had previously been made for the construction and working of the Tinnevelly-Quilon Railway, which are virtually identical with those now put forward by the South Indian Railway Company, and of the limitations of the ordinary Railway programme, that the Government of India addressed the Government of Madras in their letter No. 1304 R.C., dated 2nd September 1896, on the subject of this railway, and explained the arrangements which appeared to His Excellency the Governor-General in Council to be best calculated to secure the early construction of the line under conditions which would be most equitable to all the parties interested.

I am now to say that after further consideration of the present views of the Government of Madras, the Government of India adhere to the opinion already formed that the proposals made in their letter of the 2nd September 1896, No. 1304 R.C., although not offering any direct advantages in respect of the division of surplus profits, were not inequitable to the South Indian Railway Company, and were such as His Excellency the Governor-General in Council had hoped that the Government of Madras would support in the reasonable interests of the Travancore Durbar, which interests would appear to have been overlooked in the proposals now made by the Board of the South Indian Railway Company and recommended by the Local Government.

9. As regards the Madura-Pamban Railway, with letter No. 1958 R.C., dated 22nd December 1896, the Government of Madras were furnished with a copy of a despatch (No. 95 Ry., dated 15th October 1896) from the Secretary of State intimating that the provisional concession granted to Messrs. Wallace Brothers for the construction of this Railway had lapsed, and you were informed that the orders of the Secretary of State were not understood to restrict the undertaking of this line to the direct agency of the South Indian Railway Company with funds to be supplied by the State. These funds the Government of Madras were reminded were limited and it was indicated that there was little chance of any being available for this railway until after 1899, but that it might be carried out at an earlier date upon branch line terms by a Company subsidiary to the South Indian Railway Company.

With a subsequent letter, No. 552 R.C., dated 5th April 1897, the Government of Madras were furnished, for favour of opinion, with an application from Messrs. Best & Co., Madras, for a concession for the construction of this line upon branch line terms. The Government of Madras replied in your letter No. 277 R., dated 22nd April 1897, that as there was no chance of funds being available before the end of 1898–99, nor of the South Indian Railway Company being authorised to issue State guaranteed debentures, they were strongly of opinion that the best course would be for the South Indian Railway Company to promote the formation of a subsidiary Branch Company for the construction and working of the Madura-Pamban line on terms acceptable to both Companies and to Government, without the intervention of Messrs. Best & Co., or any particular firm of promoters.

You were informed in letter No. 837 R.C., dated 20th May 1897, that the Government of India had no objection to the Board of the South Indian Railway Company being invited to consider the above proposal of the Government of Madras, as alternative to Messrs. Best & Co's. application; but you were at the same time reminded that if the proposed subsidiary company had any direct financial connection with the South Indian Railway Company, except through the rebate clause of the branch line terms, the scheme would have to wait for a place in the railway programme for all India.

Simultaneously with the receipt of your letter No. 530 R., dated 5th August 1897, conveying the offer of the Board of the South Indian Railway Company to undertake this and the other lines *en bloc* as integral parts of the South Indian Railway, intimation was received from Messrs. Best & Co. that they had been informed by the Board of the South Indian Railway Company of their willingness to join that firm in their scheme for the formation of an independent subsidiary Company for the construction and working of the Madura-Pamban Railway on branch line terms, and that the Board had also communicated this information to the Secretary of State.

10. With the foregoing explanatory remarks, I am to communicate the decision of the Government of India upon the collective proposals submitted by the Board of the South Indian Railway Company in their telegram of July 1897 to their Agent (a copy of which was received with the latter's letter No. 753, dated 22nd July 1897), for dealing *en bloc* with the three lines.—

Palghat-Dindigul. | Madura-Pamban. | Tinnevelly-Quilon.

11. *Palghat-Dindigul.*—The Government of India, while disposed to favour the construction of a metre gauge rather than a standard gauge railway through that district, are unable at present to pass any orders in regard to this scheme which requires careful consideration in many aspects and in the light of information not yet available.

12. *Madura-Pamban.*—As already explained and reiterated in paragraph 9 above, unless the South Indian Railway Company definitely accept some such [illegible]gement as that proposed by Messrs. Best & Co., the construction of this line, in the [illegible]diate or even near future, is entirely out of the question and it must therefore wa[illegible] a place in the general programme for all India, which so far as can be foreseen may [illegible] be found for many years to come, a result which the Government of India would view with much regret.

13. *Tinnevelly-Quilon.*—As also explained in the foregoing paragraph 8 the Government of India still prefer the arrangements previously proposed by them that the Tinnevelly-Quilon Railway should be constructed upon the branch line terms. As, however, those arrangements do not appear to meet with the approval of the Board of the South Indian Railway Company, and as their alternative proposal for the construction of the British portion of this line as an integral part of the South Indian Railway, even though that course may involve some delay in commencing the work, has the support of the Government of Madras, I am to say that, recognizing the necessity for meeting the legitimate wishes of the Travancore Durbar for the development of their country, and with the desire to meet so far as possible the views of the Government of Madras and of the South Indian Railway Company, the Government of India are willing to see this line untertaken on the following modified conditions, provided that the Travancore Durbar assent to them and that the South Indian Railway Company also accept them.

The Government of India are prepared to recommend to the Secretary of State that the South Indian Railway Company should raise the whole of the money required for the construction of the entire line from Tinnevelly to Quilon at $2\frac{1}{2}$ per cent. in sterling under the guarantee of the Government of India, the Travancore Durbar underwriting that guarantee to the extent of the cost of the line in their own territory, and that the South Indian Railway Company should construct the whole line including the rolling-stock at cost price and then work it on completion as a portion of their existing system at the same rate of working expenses as obtains on their whole line including the branch railway and other branches which may hereafter be added to it, the cost of maintenance for two years after opening being debited to capital.

Any surplus profits obtained by working the branch on the above conditions would, after deducting the share payable to the South Indian Railway Company, be divided as originally proposed between the Government of India and the Travancore Durbar in proportion to the lengths of the sections of the line in their respective territories. Under these arrangements assuming that, including rolling-stock and maintenance for two years, the British section will cost Rs. $28\frac{1}{2}$ lakhs for 45 miles, the Travancore section Rs. $83\frac{1}{2}$ lakhs for $58\frac{1}{2}$ miles, the capital will be raised by the South Indian Railway Company at $2\frac{1}{2}$ per cent. and the working expenses of the South Indian Railway will remain nearly stationary, the results to the Government of India, the Travancore State, and the South Indian Railway, may be expected to show a loss in the third year after the opening of the line, as explained in Case I below, to be superseded a few years later according to the moderate estimate contained in Case II, by surplus profits divisible between all parties :—

	Per mile per week.	
	Case I.	Case II.
	RS.	RS.
Estimated gross earnings, Travancore State section ...	50	100
Do. do. British	115	175
Do. gross receipts of the whole branch line ...	4,21,000	7,14,000
Do. net do. do. ...	1,85,000	3,14,000
Deduct interest charges	2,80,000	2,90,000
Estimated surplus profit of the whole branch line ...	— 95,000	+ 24,000
Do. share, Travancore State	— 71,000	+ 11,000
Do. do. Government of India	— 20,000	+ 9,000
Do. do. South Indian Railway about $\frac{1}{6}$ surplus or deficit	— 4,000	+ 4,000

These results, which are worked out on the supposition, that Rs. 4 lakhs of extra capital for the rolling-stock will be required in Case II, and that the South Indian Railway will share the net deficit as against Government and the total surplus profit in the usual proportions, show that the possibility of the South Indian Railway incurring serious loss will be very small indeed whilst the liabilities incurred by the Travancore Durbar will not be unduly burdensome to that State which will still obtain a large share of the high traffic returns expected from the British section of the line.

It will also be noticed that in the calculations no account is taken of the incremental traffic brought into the main line of the South Indian Railway the earnings from which it has not been found possible to estimate.

14. I am also to say that the Government of India in agreeing to the modified conditions proposed in the last paragraph for the Tinnevelly-Quilon Branch wish it to be clearly understood that the arrangements made for the construction of this and the Madura-Pamban Railway must stand or fall together; they are not disposed to consider any proposals for the construction of the latter which do not contemplate that the former should also be put in hand almost simultaneously.

15. The Government of India regard themselves as pledged by the proposals made in their letter, No. 1304 R.C., dated 2nd September 1896, and accepted by the Travancore Durbar, to use their best endeavours to carry the scheme for the construction of the Tinnevelly-Quilon Railway through at as early a date as possible, upon terms that will not be inequitable either to the South Indian Railway Company or to the Durbar, and they are therefore prepared, with a view to ensure this, to admit the cost of the British portion of the scheme within their general programme of railway construction, and will endeavour to find the funds for it within the next two years. It must, however, be understood that the concessions now made are final and the largest that the Government of India are prepared to make, and I am to express the hope of His Excellency the Governor-General in Council that they will meet with the support of His Excellency the Governor of Madras in Council, and will also be acceptable to the Travancore Durbar and to the South Indian Railway Company.

16. In conclusion, I am to request that the further views of the Government of Madras, the Travancore Durbar, and the South Indian Railway Company, may be communicated to the Government of India as soon as possible.

Order—No. 1117 R., dated 10th December 1897.

The Government of India will be addressed with regard to the Madura-Pamban Railway.

From—The Joint Secretary to the Government of Madras, P.W. Dept., Ry. Branch.
To—The Secretary to the Government of India, Public Works Department.
Dated—Madras, 10th December 1897, No. 1118 R.

I am directed to acknowledge the receipt of your letter, No. 1746 R.C., dated the 22nd October 1897, and with reference to those parts of it relating to the Madura-Pamban Railway to communicate the following remarks.

2. In my letter, No. 1034 R., dated the 25th November 1897, I explained the reasons which have induced this Government to defer for the moment their acceptance or refusal of the terms proposed in paragraph 13 of your letter under reply for the financing of the Tinnevelly-Quilon Railway. A perusal of these reasons will sufficiently explain why it is not possible to agree to that line being put in hand almost simultaneously with the Madura-Pamban as stipulated in paragraph 14 of your letter under reply. If the Travancore Durbar should be so ill-advised as to hold out in their determination not to adopt the southern route, a full season of survey work must be carried out before any construction work can be begun on the hill section of the northern route; and as the present season is rather far advanced, and as no arrangements of any sort have been made, it seems as if work could scarcely be begun, on the hill section at least, before the end of the rains of 1899. If on the other hand the Durbar should happily agree to the adoption of the southern route, the country to be traversed is so comparatively easy, that very little delay need occur before work is begun. There is reason to hope that this question of the selection of route may shortly be settled. But meanwhile no useful object is served in deferring action for the financing of the Madura-Pamban line pending the settlement of the route of the Tinnevelly-Quilon line with which it has no geographical or traffic connection.

3. As regards the proposed method of financing the Madura-Pamban line, I am directed to say that while still adhering to the opinion already expressed in my letter, No. 530 R., of the 5th August 1897, viz., that it would be far preferable, were it possible, that this important link in the through route between India and Ceylon should form an integral part of the South Indian Railway, His Excellency the Governor in Council recognizes the limitations imposed by present financial conditions, and will no longer oppose the intervention of a Branch Line Company for the raising of the necessary capital; and this the more readily inasmuch as a careful perusal of the Secretary of State's agreements about the Ahmedabad-Parantej Railway, with that Company and with the Bombay, Baroda and Central India Company, respectively, seems to make it plain that the non-intervention of the capital-raising Company in the management of the working of their property by the working Company can be sufficiently safeguarded.

4. The Agent, South Indian Railway Company, will now be asked whether his Board consent to endeavour to at once make arrangement with a Branch Line Company for the raising of the capital required for the Madura-Pamban line on the basis of the rebate clauses of the branch line terms. The Agent's reply, when received, shall at once be communicated to the Government of India.

From—The Consulting Engineer for Railways, Madras.
To—The Agent, South Indian Railway.
Dated—10th December 1897, No. 3777.

I have the honour to acknowledge the receipt of your letter, No. 753, dated the 22nd July 1897, submitting an important proposal from your Board of Directors that the South Indian Railway Company should undertake *en bloc* the construction and working of the Madura-Pamban, Tinnevelly-Quilon, and Palghat-Dindigul Railways.

2. These proposals were forwarded to the Government of India early in August with the comments of the Government of Madras, and were duly considered at the Railway Conference which was held this year in Simla. The reply of the Government of India, No. 1746 R.C., dated the 22nd October 1897, has now been received, and I have the honour, under the orders of Government, to forward a copy of it for your and your Board's information.

3. All consideration of the Palghat-Dindigul line must for the present be laid aside. Enough is not known as yet as to what would be the most suitable agency for its construction and working or as to the most favourable alignment. It is hoped that inquiries now on foot may lead to a settlement of all doubts on these important points.

4. Certain paragraphs of the Government of India's letter contain proposals for the financing and terms of working of the Tinnevelly-Quilon Railway. But I must inform you that the old question of the superior advantages of the southern route over the northern has lately again been re-opened, and that there appears some prospect of the former being agreed to by the Durbar. Should this hope be justified I need scarcely say that the whole question of the financing of the Travancore line will assume a different aspect, and will be very much easier of solution. Meanwhile I shall be glad to be furnished with any opinion which you and your officers may be in a position to give expression to, as regards the relative advantages of the two routes, the southern route being for the present supposed to end on the extensive backwater navigation system.

5. It now remains to deal with the Government of India's decision in regard to the method of financing the Madura-Pamban line, and in this connection I invite your careful perusal of the pair of agreements about the Ahmedabad-Parantej line, between the Secretary of State, and that Company, and the Bombay Baroda and Central India Company, respectively. It seems to me that under some such terms of agreement as those referred to, which will be found in the Director-General of Railways' Administration report for the year 1895-96, Part II, it will be possible to ensure the non-interference of a Branch Line Company with the working of the branch by the parent line. Such being the case, the intervention of such a Company, even as a link in so important a chain of through communication as that connecting India with Ceylon, becomes of less account than would be the case had they power of interference in details, and the more so if the Branch Line Company are, in their Board of Direction, intimately connected with the parent Company.

6. I am informed now by the Government of Madras, and am instructed to convey the information to you for communication to your Board, that His Excellency the Governor in Council will be prepared to support any suitable arrangement which your Board may come to, on the basis of the Ahmedabad-Parantej terms, for the raising of the capital required for the Madura-Pamban line through the agency of a Branch Line Company.

7. I shall be glad to receive as early as possible an expression of your Board's views in regard to these the latest proposals for the financing of the Madura-Pamban line. Further action in regard to the Tinnevelly-Quilon line must for the present be deferred, and all idea of doing anything just at present to promote the Dindigul-Palghat line will have to be definitely set aside.

Extract from letter from—The Agent, South Indian Railway.
To—The Board of Directors.
Dated—15th December 1897, No. 564.

Railway Extensions.

With reference to the paragraph under this heading in my letter, No. 545, dated 3rd August 1897, I have placed in the packet copies of letter, No. 3777, dated 10th December 1897, from the Consulting Engineer for Railways, and of letter, No. 1746 R. C., dated 22nd October 1897, from the Government of India. Reading these two letters together it will be seen that, pending settlement of the route to be adopted for the Tinnevelly-Quilon Railway, the Board is not asked to decide on the modified propositions formulated by the Government of India in paragraph 13 of its letter above referred to. In the meantime, however, the Government of Madras is desirous of receiving the Board's views on its proposals for so financing the Madura-Pamban Railway as to prevent the working agency being unduly interfered with by the Subsidiary Company. The situation of this line as a link in the through connection between India and Ceylon renders it very necessary that it should be controlled by the same authorities as control the South Indian Railway. As pointed out by the Consulting Engineer the insertion of the following clause extracted from the Contract, dated 13th March 1896, between the Secretary of State and the Ahmedabad-Parantej Railway Company (Limited) should efficiently guard the interests of the through route:—

> "21. All the business connected with the management and maintenance of the said railway and conducting traffic thereon, including police and telegraphs and telegraphic appliances, shall in all respects, as far as practicable, be carried on in the same manner and subject to the same regulations and control by the Secretary of State as the like business on the Rajputana-Malwa Railway, and the Company shall not interfere or be concerned with such business."

Non-interference would be further assured by a close connection between the Working and Subsidiary Companies, a policy which, I hope, may commend itself to the Board.

From—The Secretary to the Government of India, Public Works Department.
To—The Joint Secretary to the Government of Madras, P.W.Dept., Ry. Branch.
Dated—Calcutta, 17th January 1898, No. 90 R.C.

I am directed to acknowledge the receipt of your letter, No. 1118 R., dated 10th December 1897, on the subject of the financing by a Branch Line Company, under the auspices of the South Indian Railway, upon the rebate terms of Government of India Resolution, No. 514 R.C., dated 17th April 1896, of the proposed Madura-Pamban Railway independently of the scheme for the construction of the proposed Tinnevelly-Quilon Railway.

2. In reply I am to say that the Government of India will await the views of the Board of the South Indian Railway Company on the proposed financing of the Madura-Pamban Railway by a Branch Line Company, but that they are of opinion that before work is commenced on this line the South Indian Railway Company should give an undertaking to construct a railway from Tinnevelly to the neighbourhood of either Quilon or Trivandrum, or other suitable terminus, either by the northern or southern route as may be decided by the Government of India, whenever called upon to do so, upon the terms and conditions stated in paragraph 13 of Public Works Department letter, No. 1746 R.C., dated 22nd October 1897.

Order—No. 167 R., dated 31st January 1898.

The terms for the construction and working of the Tinnevelly-Travancore Railway have long formed the subject of correspondence by this Government with the Travancore Durbar through the Resident, and with the South Indian Railway Company through their Agent. The correspondence with the Travancore Durbar culminated in the acceptance by the Durbar, as communicated in letter from the Resident, No. 3105, of the 12th October 1896, of the terms offered in Government of India letter, No. 1304 R.C., dated the 2nd September 1896. To validate this acceptance, however, it was essential that the concurrence of the third party, viz., of the South Indian Railway Company, should be secured; but this concurrence it has not so far been found possible to obtain. Negotiations have however progressed, and in connection with the Company's desire to obtain a concession for another branch railway in which they are interested, certain new terms have been put forward by the Government of India and these are now communicated *verbatim* (as per margin) to the Resident.

Extract from Government of India letter, No. 1746 R.C., dated 22nd October 1897.

* * * *

"The Government of India . . . . . .
. . . . found possible to estimate."

* * * *

2. The Resident will understand that the acceptance by the Durbar of these new terms, which are very much more favourable than those already accepted by them, and which are only rendered possible by the greater facility with which at the present time money can be raised by Railway Companies on the security of a State guarantee, can lead to practical action only in the event of their acceptance also by the South Indian Railway Company whose Agent has been asked to communicate his Board's decision if possible by telegraph.

3. The Resident is also informed that in offering the above conditions for the acceptance of the Railway Company the Government of India define the Travancore line as "a railway from Tinnevelly to the neighbourhood of either Quilon or Trivandrum or other suitable terminus either by the northern or southern route as may be decided by the Government of India." As regards this question of choice of routes this Government will be glad to receive an early expression of the wishes of the Travancore Durbar.

4. The Government of India will also be addressed.

From—The Joint Secretary to the Government of Madras, P.W. Dept., Ry. Branch.
To—The Secretary to the Government of India, Public Works Department.
Dated—Madras, 31st January 1898, No. 168 R.

I am directed to acknowledge the receipt of your letter, No. 90 R. C., dated the 17th January 1898, in which you communicate the opinion of the Government of India that before work is commenced on the Madura-Pamban line an undertaking should be obtained from the South Indian Railway Company to construct and to work a railway from Tinnevelly to a suitable terminus in Travancore, to be later selected, whenever called upon to do so, upon the terms and conditions stated in paragraph 13 of your letter, No. 1746 R. C., of the 22nd October 1897.

2. In reply I am desired to inform you that the conditions have been laid before the Travancore Durbar, and the South Indian Railway Company, for consideration and acceptance, and that the result shall in due course be communicated to the Government of India.

3. I am instructed to say that the Government of India's suggestion that the opportunity of the South Indian Railway Company's desire to obtain the working of the Madura-Pamban line should be availed of in order to secure their acceptance of fair terms for the working of the less promising Tinnevelly-Quilon line, has the entire approval and concurrence of His Excellency the Governor in Council.

4. The question of route for access to Travancore is still under the Durbar's consideration, and when a decision has been arrived at the Government of India shall be duly informed.

From—The Consulting Engineer for Railways, Madras.
To—The Agent, South Indian Railway Company.
Dated—31st January 1898, No. 302.

In continuation of my letter, No. 3777, dated the 10th December 1897, and with reference to the paragraph headed "Railway extension" in your letter to your Board of Directors, No. 564, dated the 15th December 1897, I have the honour to inform you that Government has decided that before work can be allowed to begin on the Madura-Pamban Railway your Company must give an undertaking to construct a railway, whenever called upon to do so, from Tinnevelly to the neighbourhood of either Quilon or Trivandrum or other suitable terminus, either by the northern or the southern route as Government may decide, upon the following terms and conditions, as expressed by the Government of India.

"The Government of India are prepared to recommend to the Secretary of State that the South Indian Railway Company should raise the whole of the money required for the construction of the entire line from Tinnevelly to Quilon at $2\frac{1}{2}$ per cent. in sterling under the guarantee of the Government of India, the Travancore Durbar underwriting that guarantee to the extent of the cost of the line in their own territory, and that the South Indian Railway Company should construct the whole line including the rolling-stock at cost price and then work it on completion as a portion of their existing system at the same rate of working expenses as obtains on their whole line including the branch Railway and other branches which may hereafter be added to it, the cost of maintenance for two years after opening being debited to capital.

"Any surplus profits obtained by working the branch on the above conditions would, after deducting the share payable to the South Indian Railway Company, be divided as originally proposed between the Government of India and the Travancore Durbar in proportion to the lengths of the sections of the line in their respective territories. Under these arrangements assuming that, including rolling-stock and maintenance for two years, the British section will cost Rs. $28\frac{1}{2}$ lakhs for 45 miles, the Travancore section Rs. $83\frac{1}{2}$ lakhs for $58\frac{1}{2}$ miles, the capital will be raised by the South Indian Railway Company at $2\frac{1}{2}$ per cent. and the working expenses of the South Indian Railway will remain nearly stationary, the results to the Government of India, the Travancore State, and the South Indian Railway, may be expected to show a loss in the third year after the opening of the line, as explained in Case I below, to be superseded a few years later according to the moderate estimate contained in Case II, by surplus profits divisible between all parties:—

	Per mile per week.	
	Case I.	Case II.
	RS.	RS.
Estimated gross earnings, Travancore State section.	50	100
Do. do. British	115	175
Do. gross receipts of the whole branch line.	4,21,000	7,14,000
Do. net do. do.	1,85,000	3,14,000
Deduct interest charges	2,80,000	2,90,000
Estimated surplus profit of the whole branch line...	— 95,000	+ 24,000
Do. share, Travancore State	— 71,000	+ 11,000
Do. share, Government of India	— 20,000	+ 9,000
Do. share, South Indian Railway about $\frac{1}{6}$ surplus or deficit	— 4,000	+ 4,000

"These results, which are worked out on the supposition, that Rs. 4 lakhs of extra capital for the rolling-stock will be required in Case II, and that the South Indian Railway will share the net deficit as against Government and the total surplus profit in the usual proportions, show that the possibility of the South Indian Railway incurring serious loss will be very small indeed whilst the liabilities incurred by the Travancore Durbar will not be unduly burdensome to that State which will still obtain a large share of the high traffic returns expected from the British section of the line.

"It will also be noticed that in the calculations no account is taken of the incremental traffic brought into the main line of the South Indian Railway the earnings from which it has not been found possible to estimate."

2. I have the honour to request that I may be favoured with a very early expression of your Board's views in regard to this proposal. It would be very desirable that, if they accept it, they should telegraph to that effect, in order that by the time of the receipt of their reply to your No. 564 of the 15th December 1897, I may be in a position to acquaint Government with the conclusions arrived at.

Extract from letter from—The Agent, South Indian Railway.
To—The Board of Directors.
Dated—2nd February 1898, No. 571.

Madura-Pamban and Tinnevelly-Quilon Railways.

Adverting to the paragraph under this heading in my letter, No. 564, of 15th December 1897, I forward among the enclosures to this letter a copy of letter, No. 302, dated 31st January 1898, from the Consulting Engineer for Railways to the Government of Madras, in which he asks to be favoured with an early expression (by telegram if possible) of the Board's views in regard to the proposals of the Government of India as expressed in paragraph 13 of their letter No. 1746 R.C., dated 22nd October 1897, of which a copy was sent to you with my letter above quoted.

Extract from letter from—The Board of Directors.
To- The Agent, South Indian Railway
Dated—11th February 1898, No. 204.

Your letters, No. 545, of 3rd August 1897, and No. 564, of 15th December 1897, together with the letter, dated 10th December, from the Consulting Engineer for Railways, and Government of India letter No. 1746 R.C., of 22nd October 1897, have been considered by the Board.

It is observed that the Board are requested not to decide on the modified propositions formulated by the Government of India in paragraph 13 of their letter above quoted, pending the settlement of the route to be adopted for the proposed extension into Travancore territory. In the anticipation that some decision has already been, or may soon be, arrived at with regard to this route, and with the view of placing the Board in a position to deal with the matter without delay, you are desired to give your own views fully upon the whole subject.

In reply to the question of the Madras Government, and assuming the Madura-Pamban line to be constructed by a subsidiary company, it is not thought that there will be any difficulty in financing the company upon such lines as will prevent the working agency being unduly interfered with by the subsidiary company, and a clause similar to that (No. 21) in the Ahmedabad-Parantej Contract will probably be sufficient to meet the object in view.

Extract from letter from—The Agent, South Indian Railway.
To—The Board of Directors.
Dated—9th March 1898, No. 576.

Madura-Pamban and Tinnevelly-Quilon Railways.—In continuation of the paragraph under this heading in my letter, No. 571, dated 2nd February 1898, and with reference to your telegram of 3rd March 1898, "Board's 204 Seedsman (send without delay) report extensions," I beg to offer the following remarks on the proposals embodied in paragraphs 12, 13, 14 and 15 of letter No. 1746 R.C., dated 22nd October 1897, from the Government of India.

Madura-Pamban Railway.—There are, I believe, no serious obstacles to the acceptance of the proposals of the Government of India in respect to this branch, though it is to be regretted that its construction as an integral portion of the South Indian Railway undertaking is discouraged.

Tinnevelly-Quilon Railway.—As regards the proposals for working this line, it will be observed that any insufficiency of net earnings to meet the guaranteed interest will in the first place be divided between the Imperial and Travancore Governments proportionately to the cost of the lengths of line in their respective territories, and, in the second place, that the South Indian Railway is required to bear such share of the deficit chargeable to the Government of India as is represented by the ratio of the Company's capital to that of the Government of India in the South Indian Railway. In other words, the Company is asked to assist in paying interest on the Tinnevelly-Quilon Railway capital due to itself under a Government guarantee from its share of the surplus profits of the Undertaking. This contribution, however, is never likely to be large and is therefore comparatively of small financial importance. The proposals of the Government of India for the division of surplus profits, should they be ever realized, are favourable to the Company, which takes its share before the division is made between the Imperial and Travancore Governments. The Government of India mentions in its proposals that no account has been taken of the value of the extra traffic produced on the parent line by the Tinnevelly-Quilon Railway, but I have to point out that the loss, which may arise from the insufficiency of the percentage payment for working to cover actual working expenses, has also been neglected. Government has doubtless assumed that 55 per cent. of the gross earnings of a line should fairly meet the expenditure on working it, and in most cases the assumption would be accurate. The Tinnevelly-Quilon Railway being an administrative rather than a traffic line, I do not think this assumption will prove correct for many years to come, if ever. In my letter to you, No. 528, dated 7th April 1897, I estimated that it would cost Rs. 80 per mile per week to work the line, and on this assumption the Chief Auditor has prepared the accompanying statements, (based on the actual figures for the half-year ended 30th June 1897) to show the effect to the Company of working the Tinnevelly-Quilon Railway on the terms now offered by the Government of India. Briefly the following results are anticipated :—

Gross earnings of the Tinnevelly-Quilon Railway—
Per mile per week Rs. 78. Half-yearly ; loss to Company ... Rs. 28,212
" " " 94. " " ... " 23,393
" " " 132. " " ... " 8,088

The first and third cases correspond to cases I and II of the tabular statement embodied in paragraph 13 of Government of India letter No. 1746 R.C., dated 22nd October 1897, and case II is that anticipated by me in my letters Nos. 497 and 528, dated 1st September 1896 and 7th April 1897, respectively. The incremental traffic from the Tinnevelly-Quilon Railway will be a set-off against this loss, but it is quite impossible to frame any forecast of what this reduction is likely to be. To compensate for a loss to the Company of Rs. 25,000 per half-year the gross value of the derived traffic must be about Rs. 2,80,000 half-yearly or, say, one-sixteenth of the whole gross receipts of the undertaking, and I think it may be confidently assumed that the incremental traffic will not have this value. It might be possible by the most rigid economy to reduce working expenses below Rs. 80 per mile per week, but as each rupee per mile per week only represents about Rs. 500 per half-year to the company, it is obvious that a very considerable reduction would be necessary to bring the Company's loss to a reasonable figure. It must also be remembered that the Tinnevelly-Quilon Railway cannot be worked without increasing our outlay on "stores" and other suspense balances. To meet this further loss no compensation is suggested by Government, and I therefore specially refer to the point as the Board desired it should not be lost sight of when dealing with Working Agreements.

Though the terms now offered by the Government of India are decidedly more liberal than those formulated previously, they bear much heavier on Government and the Company than on the Travancore State. Taking everything into consideration, I cannot see how the Company could fail to lose heavily by accepting the proposals now under consideration, and were it not that the Tinnevelly-Quilon Railway is to be considered as financially connected with the Madura-Pamban line, no other course would seem open but to decline the terms now offered. The complexion of affairs, however, will be very materially changed if the latter railway is worked by a Company closely connected with the South Indian Railway Company, and though perhaps a somewhat over-sanguine view has been taken of the traffic prospects of the Madura-Pamban line, I am inclined to think that the derived traffic from it and the Tinnevelly-Quilon Railway taken together would secure the Company against loss. This opinion is of course pure surmise on my part, as no data in respect to this derived traffic can be obtained, and will, I hope, be accepted with the hesitation with which it is tendered. Should the Board agree to the terms of the Government of India, I would suggest that a clause should be inserted in the Agreement to secure for the Provident Institution the calculation of its additional contribution on the net earnings of these worked lines as well as on those of the Undertaking.

I have placed in the packet a copy of a letter, dated 5th February 1898, from the Chief Auditor, together with printed copies of its four accompanying statements.

From—The Secretary to the Government of India, Public Works Department.
To—The Joint Secretary to the Government of Madras, P.W. Dept., Ry. Branch.
Dated—Simla, 1st April 1898, No. 17 R.P.

With reference to your letter, No. 168 R., dated the 31st January 1898, I am directed to enquire what progress has been made in the negotiations for the constr tion of the proposed Madura-Pamban and Tinnevelly-Quilon Railways.

Telegram from—The Joint Secy. to the Govt. of Madras, P.W. Dept., Ry. Branch.
To—The Secretary to the Government of India, Public Works Department.
Dated—11th April 1898, No. 1 A.

Your 17 R.P., April 1st. Agent, South Indian, has received wire from Board. Begins. Accept Government proposals but hope Pamban may be integral part of undertaking. Message ends. Negotiations with Travancore Durbar now nearly completed. Will reply fully when copy received of Board's letter to Agent and when Travancore's official proposals made.

Read the following :—

G.O., No. 650 Ry., dated 28th April 1898.

From—The Agent, South Indian Railway.
To—The Consulting Engineer for Railways, Madras.
Dated—26th April 1898, No. 371.

With reference to your telegram No. 15 C., of the 21st April 1898, I have the honour to forward herewith two copies of the Managing Director's letter, No. 209, dated 7th April 1898, containing the acceptance, by the Board of Directors of the South Indian Railway Company, of the modified proposals of Government regarding the Madura-Pamban and Tinnevelly-Quilon Extensions, and beg to invite attention to the concluding paragraph thereof.

ENCLOSURE.

From—The Managing Director, South Indian Railway Company, Ld.
To—The Agent, South Indian Railway.
Dated—London, 7th April 1898, No. 209.

In reply to Board's letter No. 204, dated 11th February 1898, and to their telegram of 3rd March 1898—

"Board's 204, send without delay report extensions,"

the Board have now had before them your views, as expressed in your No. 576 of 9th March 1898, upon the proposals of the Government of India contained in their letter No. 1746 R.C., of 22nd October 1897.

2. After full consideration of the whole subject the Board have decided to accept the modified proposals of the Government, formulated in that letter, as regards the Madura-Pamban and Tinnevelly-Quilon Extensions. These are shortly—

(*a*) That the Company should construct the Tinnevelly-Quilon Railway, including rolling stock, at cost price, the money required being raised under a sterling guarantee of the Government of India at the rate of 2½ per cent. per annum.

(*b*) That the Company should work the line as a portion of their existing system at the same rate of working expenses as obtains on their whole line, including the branch railway and other branches which may hereafter be added to it.

The Board consider that the contract should contain a clause to the effect that in the event of its hereafter being proved by the officers of the South Indian Railway Company, to the satisfaction of the Government, that there is an actual loss on working the branch at that rate, the rate shall be raised to such a point as may be calculated to cover working expenses.

(*c*) That the cost of maintenance of the line for two years after opening shall be debited to Capital.

(*d*) The net deficit as against Government, and the total surplus profit, to be divided between the Government and the Company in the usual proportions as stated—excluding, for the purposes of such division, the Capital provided for this branch. The proposal as to the Travancore Government underwriting a proportion of the guarantee affects the Government of India and the Travancore State only, and, therefore, need not be imported into any Agreement between the Government and the Company.

(*e*) That the Company should assist the formation of an independent subsidiary Company for providing funds for the construction of the Madura-Pamban Extension, which would be worked by the South Indian Railway Company upon branch line terms.

3. While accepting, as stated, the proposals of the Government of India, the Board think it desirable to place on record that the Southern route into Travancore would be looked upon by them with more favour than the Northern route *viâ* Shencotta. They are still of opinion that, whether looked upon in the light of comparative cost of construction, or of probable revenue, or of advantage to the State of Travancore, the suggested route *viâ* Nagercoil to Trivandrum is the superior of the two. The Board's acceptance of the proposals, as regards the Northern route, may be taken to apply to the Southern route, if adopted.

4. With reference to the Madura-Pamban Branch, there can be no doubt, as a glance at the map will show, that a considerable portion of its revenue will be derived from traffic diverted from the South Indian Company's existing Madura-Tuticorin line, upon which a reduction in earning power must be looked for after the Pamban line is opened. It would appear, therefore, to be only equitable that any compensating advantage which may accrue from the construction of the branch should belong to the South Indian Company, and not become the property of the separate Company, as will be the case under the proposals of the Government.

The extension will, as it seems to the Board, be a portion of the Company's main line, and will, in effect, be the neck of the bottle to which the system in general will contribute traffic, and more especially will this be the case should the Indo-Ceylon Railway be constructed, when the Madura-Pamban Section would form an important link in the line of through communication between the two countries.

The necessity for the line is admitted on all sides, and it would be with regret that the Directors would see it pass into the hands of another Company, however intimately that Company might be connected with the South Indian Railway. They would greatly prefer that it should be constructed as an integral part of the Undertaking, with money raised in a way similar to that proposed for the Travancore Railway, and they still hope that the Government, on further consideration, may be able to agree to the adoption of this course.

While expressing these views, and fully assured that the branch would be more cheaply financed and constructed by the direct agency of the South Indian Company, the Board accept the proposals of the Government for the construction of the line now by a branch line company as preferable to an indefinite postponement of the work.

5. With regard to both branches, the Board agree with your suggestion, but they do not propose it as a condition, that a clause should be inserted in the Agreement to secure for the Provident Institution the calculation of its additional contribution on the net earnings. It is also desirable, as you further suggest, that, if the Government of India see fit, each line should bear some share of the interest upon stores, of which, of necessity, larger quantities would be kept in stock, and so the stores balances increased.

6. You will be good enough to lose no time in placing before Government this acceptance of their proposals, with the expression of the Board's earnest hope that the matter will, without delay, be brought before the Secretary of State in Council, with a view to the early preparation of the necessary contracts.

Order—No. 650 Ry., dated 28th April 1898.

The Government of India will be addressed.

From—The Joint Secretary to the Government of Madras, P.W. Dept., Ry. Branch.
To—The Secretary to the Government of India, Public Works Department.
Dated—Madras, 28th April 1898, No. 651 Ry.

I am instructed to forward, in continuation of my telegram No. 1-A., dated the 11th April 1898, a copy of a letter from the Board of Directors of the South Indian Railway Company to their Agent, No. 209, dated the 7th April 1898.

2. This Government is in daily expectation of receiving definite proposals from the Travancore Durbar, and these, when received, shall, in due course, be forwarded to the Government of India with such comments as His Excellency the Governor in Council may have to offer.

From—The Agent, South Indian Railway.
To—The Consulting Engineer for Railways, Madras.
Dated—7th May 1898, No. 442.

Referring to G.O., No. 624 R., dated 6th September 1897, sanctioning a traffic survey being made of the proposed Trichinopoly-Thondi, and Madura-Pamban Railways, I have the honour to forward herewith twelve copies of the report* made on each line by Assistant Traffic Manager, Mr. S. J. Mercer.

* Separately printed.

F. J. E. S.

From—The Agent, South Indian Railway.
To—The Consulting Engineer for Railways, Madras.
Dated—24th May 1898, No. 506.

With reference to our conversation on May 20th 1898, regarding the alignment of the proposed Madura-Pamban Railway, I have the honour to request that the Government may be moved to reconsider its decision in favour of a route passing through the town of Sivaganga and traversing the north bank of the Vaigai between Madura and Paramagudi and to sanction instead the adoption of Mr. Geoghegan's alignment between Madura and Paramagudi, Mr. Shadbolt's between Paramagudi and Toni Torai, and a branch line from Mutanantal to Sivaganga. My reasons for making this request are briefly:—(*a*) To protect the Madura-Pamban Railway against diversion of the Indo-Ceylon traffic east of Manamadura. (*b*) To avoid unnecessary mileage on Indo-Ceylon traffic passing through Madura station. (*c*) To give railway facilities on both sides of the Vaigai to the country east of Madura.

2. In support of these statements, I would explain that the Madura-Pamban Railway will be deprived of Indo-Ceylon traffic if any connection is made between it and an extension through Devakottai from the north. The further east such connection is made the more serious will be the loss in traffic, and I fear that with the contingency of a junction at or to the east of Paramagudi there may be a difficulty in forming a subsidiary company to finance the Madura-Pamban Railway. It is therefore desirable to locate the junction as near Madura as can be arranged for without unduly prejudicing local interests. Although at this early stage I quite recognise the impossibility of definitely ensuring the future adoption of this stipulation, a programme can be devised which should result in the future junction being made at the selected station. With this object, I suggest that Sivaganga should be the terminus of a short branch line taking off the Madura-Pamban Railway at Mutanantal or at a station immediately adjacent. The fixation of the junction will be further aided by keeping the Madura-Pamban Railway entirely on the south bank of the Vaigai, so that any connection other than that, viz., Sivaganga, will necessitate a second bridge over the Vaigai.

3. There is no need to enlarge on the advantage of working traffic over the shorter mileage possible by the avoidance of Sivaganga as a main line station, but it is perhaps advisable to offer a few remarks on the desirability of serving both sides of the Vaigai. From the information at my disposal it appears that the local traffic to be expected from the northern route is about equal to that anticipated from the southern alignment, but that this equality entirely depends on the importance of Sivaganga as a trade centre. The suggested project of a southern route and a branch to this town should, therefore, tap the maximum traffic which can be reached without increasing the mileage of the extension.

4. I do not anticipate that the scheme I have advanced will prove appreciably more costly in construction than the northern route surveyed by Mr. Shadbolt. With both alignments the Vaigai must be crossed, and I have no reason to suppose that a bridge at Mutanantal or Manamadura will be more costly than one at Paramagudi. In both cases the length of the lines to be made will be about the same, but it is not improbable that land will prove more expensive on the southern than on the northern side of the Vaigai.

5. I have not so far touched on the difficulties which obtain with a northern entry into the South Indian Railway station yard at Madura, because at the expense of re-bridging the Vaigai east of this town a southern junction could be combined with a northern alignment of the line to Pamban. Whether this alternative to Mr. Shadbolt's proposals for a junction north of the Vaigai would be adopted, depends on the comparative cost of the two schemes, but as the southern arrangement would render working simpler and safer, it would most likely be preferred even at a moderate increase of expenditure. If, however, the southern alignment of the railway be permitted, a cheap as well as a satisfactory junction can be obtained. I enclose, for your information, a plan of the present Madura yard, and in connection with it, would point out that it is hemmed in on both sides by expensive land difficult of acquisition. At the south of the station land can be obtained, and any difficulty in connection with the public road met by diverting it or taking it across the yard on an overbridge. it will be noticed from the tracing now sent of the northern and southern surveyed alignments of the Madura-Pamban Railway, that immediately to the north of the Vaigai the main line traverses an extensive tank. Any junction therefore in the immediate neighbourhood of the bridge must be restricted to a small signalling and interlocking block station. If anything on a more extensive scale is required, the junction must be made on the high ground beyond the tank and about a mile and a half from Madura.

6. Pending decision on the alignment of the Madura-Pamban Railway, no designs have been drawn up of the junction arrangements at Madura, and as other matters are depending on a settlement of the latter, I hope it may be possible to issue early orders on the subject.

From—The Joint Secretary to Government of Madras, P.W. Dept., Ry. Branch.
To—The Secretary to the Government of India, Public Works Department.
Dated—Ootacamund, 4th June 1898, No. 774 Ry.

With reference to the correspondence on the subject of the Madura-Pamban Railway, ending with my letter No. 651 Ry., dated the 28th April 1898, with which was enclosed a copy of the Board of Directors', South Indian Railway letter No. 209, dated the 7th April 1898, I now am directed to forward for the information of the Government of India, a copy of a report on the traffic prospects of the line by Mr. S. J. Mercer, a Traffic officer of the South Indian Railway.

2. Mr. Mercer's report re-opens the question of route, viz., whether it would be best to start from the south end of Madura station and follow the south bank of the Vaigai river to the coast, a distance of 91 miles, or to follow the route through Sivaganga adopted by Mr. Shadbolt, to the same point on the coast, a distance of 100 miles. This question of choice of route has already been carefully thought out by this Government, but it is understood that, as a consequence of the projected extension southwards of the Mayavaram-Mutupet Railway, and the possibility of a through connection, probably to Sivaganga, being sooner or later demanded in the interests of through traffic with Ceylon, the Agent, South Indian Railway Company, is in correspondence with his Board on the subject of how, when this inevitable connection comes, his main line may not be hopelessly short-circuited. I am therefore desired to say that you shall be separately addressed on the subject of the choice of routes when this Government shall have completed some enquiries which are now in hand.

3. All that it is thought necessary to say, has already been said, in regard to the superior advantages of an arrangement whereby the Madura Pamban line should be an integral part of the South Indian Railway rather than that it should be owned by a separate Company however intimately connected with the parent Company. But you were informed in paragraph 3 of my letter, No. 1118 Railway, dated the 10th December 1897, that, fully recognising the reasons which prohibit the adoption of the desired method of financing the extension, His Excellency in Council accepts the Government of India's decision that the intervention of a branch line Company must be utilized.

4. A perusal of the South Indian Railway Company's letter to their Agent, No. 209, dated the 7th April 1898, will show that, while still expressing a hope that the financing of the Pamban extension may yet be directly entrusted to them, the Board have accepted the proposals of Government for its being financed by a branch line Company rather than that it should be indefinitely postponed.

5. As no further obstacle appears now to stand in the way of the South Indian Railway Company being encouraged to enter into the necessary negotiations with promoters for the financing of the extension on branch line terms, I am directed to express a hope that they may at once be permitted to do so, and that meanwhile, as was done in the case of the Calicut-Cannanore, it may be found possible to authorize them to arrange at once the many preliminaries which, as soon as the question of route is settled, must be put in hand if work is to go on energetically in the coming working season, and that a small allotment, of which an estimate can be submitted if desired, may be advanced for the purpose.

NOTE BY THE CONSULTING ENGINEER FOR RAILWAYS, MADRAS.

Madura-Pamban Railway.

The question of choice of its route.

In his letter No. 506, dated the 24th May 1898, the Agent, South Indian Railway, re-opens the question, which, when Mr. Shadbolt was sent to survey the line, was settled by order of Government, namely, whether, starting from Madura, the alignment ought, for the first few miles, to run north or south of the Vaigai river.

2. Mr. Shadbolt's alignment starts from a point on the South Indian Railway north of the Vaigai bridge near Madura, and passing thence by a long 10-mile detour, through Sivaganga and Manamadura, crosses the Vaigai at Paramagudi, and after that follows the south bank of the Vaigai to Ramnad and Toni Torai. Total length 100 miles.

3. The Agent, South Indian Railway, now proposes that the line should start from the south end of Madura station, and should adhere to the south bank of the Vaigai throughout its entire course to Ramnad and Toni Torai, a total length of 90 miles. He also proposes that the town of Sivaganga should be accommodated by means of a branch railway from Mutanantal to Sivaganga, 10 miles long, with a bridge over the Vaigai. Thus the Agent's proposals are that the same length of railway should be made as in Mr. Shadbolt's scheme, viz., 100 miles, but that through traffic between Madura and the sea should in perpetuity have 10 miles *less* of railway to traverse.

4. The route now recommended by the Agent, South Indian Railway, was surveyed in 1886 by Mr. Geoghegan, who showed that the population of the principal towns served by the north Vaigai route was about 17 per cent. greater than that of the principal towns served by the south Vaigai route. Four towns containing about 20,000 people were shown as common to both routes; but while the south route could show an extra town of 3,000 inhabitants, the north route was able to show two towns aggregating 8,000 inhabitants. Thus the census was about 5,000 in favour of the north route and there was the advantage that the town of Sivaganga, which, by the way, is only one-twelfth the size of Madura, would thereby be served.

5. I can find no record of a comparison having been made between the interest on the cost of 10 extra miles of railway, say Rs. 15,000 per annum, and the probable profits to be derived from carrying the traffic ascribable to 5,000 extra people. Neither can I find any record of a comparison of the benefits proposed to be conferred on these 5,000 potential customers with the handicapping effect of 10 miles extra haulage on every ton of goods and every passenger carried between the sea and Madura in perpetuity.

6. Captain Shelley gives three reasons for his proposal. The first (*a*) involves very complicated considerations, and assumes the possibility of contingencies which may perhaps never be realized, and which anyhow in all probability are in the distant future. His second reason (*b*) is a distinctly tangible one, and it is one which not only is of interest to the through traffic of the future between Ceylon and South India, but is also of local interest. His third reason (*c*) is one of considerable local importance.

7. The following are his three reasons for proposing that the Madura-Pamban line should start from the south end of Madura station and follow the south bank of the Vaigai through Ramnad to Toni Torai, with a 10-mile branch from Mutanantal to Sivaganga:—

(*a*) To protect the Madura-Pamban Railway against diversion of the Indo-Ceylon traffic east of Manamadura.
(*b*) To avoid unnecessary mileage on Indo-Ceylon traffic passing *viâ* Madura.
(*c*) To give railway facilities on both sides of the Vaigai between Madura and Paramagudi.

8. The Agent's first reason (*a*) involves complicated issues contingent upon all sorts of possibilities which may never come to anything, and I think that at this very early stage it would be unwise to decide the question of the best alignment for the local railway between Madura and Pamban upon the basis of any such remote and indefinite considerations. These considerations, however, have been carefully gone into here, and memoranda have been placed in the record which, when the time comes, if ever it comes, for considering them, will doubtless receive the attention to which they are entitled.

9. His second reason (*b*) amounts to this, that to take a long circuit of 10 extra miles, for the sake of serving the fairly important village of Sivaganga, seems scarcely worth while when it is considered that the result to all the through traffic will be that it will be hampered in perpetuity with the charge for 10 extra miles of haulage—in other words, that it will pay forever one-ninth more than it would otherwise have to pay. The advantage of putting a minor town like Sivaganga on a branch instead of on the main line is that the branch can be cheaply worked by a mixed train daily, any old engine and rolling stock being used. Captain Shelley proposes to give Sivaganga a great deal more than it may fairly expect, because all over India there are towns of seven or eight thousand inhabitants within ten miles of a railway which it is never proposed to serve by a branch. But the object of his proposal is (amongst others) that the branch, by bridging the Vaigai, will bring a lot of country north of that river in touch with the railway which, but for the branch, would be cut off therefrom.

10. This brings us to his third reason (*c*), that the south Vaigai line will, by means of the Sivaganga branch, give railway facilities at both sides of the river. For if the main line were taken away in a curve to Sivaganga direct from Madura, the parts situated south of the river between Madura and Paramagudi would be quite cut off from the railway.

11. In his fifth paragraph the Agent refers to the advantages, from a railway working point of view, of coming in at the south end of the present Madura station instead of to a separate junction north of the river. There is no doubt that the latter would be a most cumbersome and expensive arrangement in perpetuity, and that the plan of bringing in the Pamban branch at the south end of the Madura junction is, for junction working reasons, and apart from the general alignment issues, the right one.

12. Attention is invited to Appendix C, pages 45–46, of the Traffic Survey of the Madura-Pamban country, recently made in very great detail by a traffic officer of the South Indian Railway Company. In this survey Mr. Mercer shows that the population of the towns and villages which may be considered as being in touch with the railway on the south route is very considerably in excess of that on the north route, between the two points Madura and Paramagudi common to both. He shows a population on the north route of 23,000 and on the south route of 50,000. Mr. Mercer has given the census figures of about 140 villages, so that he has had opportunity of going very much more carefully into the matter than Mr. Geoghegan did twelve years ago.

Order—No. 869 Ry., dated 27th June 1898.

Copies of the papers read above will be forwarded to Mr. J. Twigg, Collector of Tanjore, for an expression of his personal opinion as to the relative merits, from the point of view of the interests of the district as well as of trade between Madura, Ramnad, and Toni Torai, of the two routes referred to, for the Madura-Pamban Railway, viz., that to the north of and that south of the Vaigai river.

2. Mr. Twigg's reply should reach Government within one month of the date of this order.

From—The Collector, Tanjore.
To—The Joint Secretary to Government, P.W. Dept., Railway Branch.
Dated—13th July 1898, No. $\frac{3052}{\text{Rev.}}$

As desired in G.O., No. 869 Ry., dated 27th June 1898, I have the honour to give my opinion as to the relative merits of the routes north and south of the Vaigai for the Madura-Pamban Railway as follows:—

2. It appears to me that the interests of the district will be best served by the adoption of the southern route with a branch at Mutanandal to Sivaganga.

3. In the first place, the country south of the river is far worse off for roads and in greater need of opening up than the country to the north where the difficulties with regard to road material are not so great. The Vaigai is now a much more formidable obstacle to communication than it was before the opening of the Periyar works, and if the railway takes the northern route, I fear that any improvement in communication on the south will be very slow. On the other hand, with the railway running on the south bank, and carrying gravel at favourable rates, the construction of feeder roads would be stimulated; and this, I think, gives the only chance of opening up that blank tract of country lying between the Madura-Ramnad road on the north and the Madura-Tiruchuli-Kamuti road on the south.

4. Sivaganga would be sufficiently served by a branch line from Mutanandal, and the bridge, which should be made available for cart traffic and linked up with the roads north and south of the river, would be more useful at Mutanandal than at Paramagudi where the northern route would place it.

5. The through traffic from Toni Torai and probably Ramnad would be better served by the line I was anxious to see made for protective purposes turning northwards from Paramagudi through Devicotta to join the Mayavaram-Mutupet extension; but the Agent, South Indian Railway, explains to me that such a line is out of the question, and indeed has frankly stated in his letter, No. 506, dated 24th May 1898, that the mere prospect of it would probably be fatal to the Madura-Pamban line, as, between the two alternative routes, for this last line, the southern offers the advantage of a shorter run for through traffic.

6. There is, I think, little to choose between the country north and south of the Vaigai in respect of capabilities for supplying passenger and goods traffic, but I should be disposed on the whole to give the preference to the south as Mr. Mercer does.

7. I believe the southern route will be best for railway interests, and am decidedly of opinion that it will be best in the interests of the district.

Order—No. 968 Ry., dated 28th July 1898.

The Government of India will be addressed.

2. The Agent, South Indian Railway Company, will be informed with reference to his letter to the Consulting Engineer, No. 506, dated 24th May 1898, that the adoption of the South Vaigai route with a branch to Sivaganga has been recommended to the Government of India.

3. The Agent should without delay make proposals for, and submit an estimate of the cost of, staking out the South Vaigai route and the branch from Mutanandal to Sivaganga, in order that, if money should be allotted, it may be practicable to start work at the earliest possible moment.

4. With reference to his proposals for prejudicing the short-circuiting question by coming to an early and authoritative decision in regard to the alignment of the Pattukota and Mayavaram-Mutupet Railways, the Agent will be informed that this Government declines at this early stage to commit itself to any definite course of action.

[Here enter No. 969 Ry., dated 28th July 1898.]

(True Extract.)

Francis J. E. Spring,
Joint Secretary.

To the Agent, South Indian Railway.
,, Consulting Engineer for Railways.
,, Revenue Department.
,, Local and Municipal Department.

From—The Joint Secretary to the Government of Madras, P.W. Dept., Ry. Branch.
To—The Secretary to the Government of India, Public Works Department.
Dated—28th July 1898, No. 969 Ry.

With reference to the correspondence ending with my letter, No. 774 Ry., dated the 4th June 1898, on the subject of the Madura-Pamban Railway, and with special reference to paragraph 2 of that letter, I am now directed to communicate to the Government of India the conclusions arrived at by His Excellency the Governor in Council on the subject of the best alignment for the projected railway.

2. As the Government of India are aware, two routes have been under consideration; one route (*a*) starts from a point on the South Indian Railway main line, north of the Vaigai river, a mile or so to the north of Madura station, and thence passing through Sivaganga by a detour involving some 9 miles extra length, until the river Vaigai is crossed, follows the south bank of that river to its terminus on the sea; the other route (*b*) leaves Madura station at its south end, and continues at the south side of the Vaigai river to the sea terminus. This latter route is some 9 miles shorter for all through traffic than the former.

3. In endeavouring to arrive at a decision as to which of these two routes possesses superior advantages, this Government has had to consider, 1st, the interests of the through traffic with Ceylon, interests which undoubtedly demand the adoption of the South Vaigai route on account of its shorter length; 2nd, the interests of local development; and 3rd, whether or not it would be either possible or desirable, in deciding on the location of the Madura-Pamban Railway, to influence in one way or the other the solution of that important problem of the future, the threatened short circuiting of the South Indian Railway by the extension of the Mayavaram-Mutupet Railway southwards to a junction with the Madura-Pamban.

4. This last consideration has formed the subject of careful enquiry on the part of this Government, which, in common with the Agent, South Indian Railway Company, recognises that it probably is inevitable that at some future time a connecting link should be made between the southern end of the Tanjore District Board's lines and some point on the Madura-Pamban Railway which will deprive a considerable mileage of the South Indian Railway of much of its present traffic. The Agent, South Indian Railway Company, hoped to neutralise a part of the effect of this inevitable short circuiting of the future by having it authoritatively laid down at this early stage, 1st, that the proposed Pudukota line should join the South Indian Railway at Tanjore instead of at Trichinopoly; and 2nd, that no connection of the Mayavaram-Mutupet and Pudukota lines with the Madura-Pamban lines should be allowed east of a certain point, Mutanandal, whence a short branch would be made, crossing the Vaigai, to Sivaganga. The Agent wished that at this early stage conditions should be influenced in favour of his scheme, by bringing the Sivaganga branch into existence, so that when the, perhaps inevitable, extension of the Mayavaram-Mutupet and Pudukota lines to the southwards takes place hereafter, the existence of the Sivaganga branch may render contact with the Madura-Pamban line east of Mutanandal very improbable.

5. After a careful consideration of all that has been advanced in favour of a policy of scheming far in advance to ward off from the South Indian Railway some part of the effects of the threatened short circuiting, His Excellency the Governor in Council has come to the conclusion that the right course to adopt is to inform the Agent, South Indian Railway Company, that no guarantee can be given in regard to the proposed prevention of short circuiting, and that the alignment of the Madura-Pamban Railway must be decided on with sole reference to local conditions of the present time and of the near future, so far as a judgment in regard to them can be arrived at.

6. This Government is now of opinion that it is demanded in the interests not only of through traffic but also of local development, not to mention convenience and economy of railway working, that the South Vaigai route should be adopted in lieu of that surveyed by Mr. Shadbolt. But it seems certain that for the full local utilization of the Madura-Pamban Railway the districts north of the Vaigai river must be brought from the first into touch with the railway by the construction of the 8 or 9 mile branch to Sivaganga crossing the Vaigai at Mutanandal. It is therefore strongly recommended that the branch in question be constructed simultaneously with the main line.

7. Although the Government of India have said in paragraph 12 of their letter No. 1746 R.C., dated the 22nd October 1897, that the agency of a subsidiary company is essential for the financing of the Madura-Pamban Railway if its construction is not to be deferred indefinitely, His Excellency in Council ventures still to hope that means may yet be found for bringing it within the programme of State financed lines with a view to the avoidance of the administrative difficulties which are inseparable from the introduction of alien ownership in an important through route.

8. I am therefore instructed to say that His Excellency the Governor in Council hopes that the Conference shortly to sit in Simla may find it possible to permit the South Indian Railway Company to directly finance the Madura-Pamban Railway on the South Vaigai alignment, with the branch from Mutanandal to Sivaganga; and that, pending the completion of the arrangements for financing it, the Government of India may find it possible to make an allotment of funds sufficient to allow of the very early prosecution of work as soon as the cessation of the north-east monsoon permits work to be begun. The Agent, South Indian Railway, has been called on for an estimate for the staking out of the South Vaigai alignment, and on its receipt the Government of India will be asked to sanction whatever small expenditure may be necessary for the purpose.

Proof for approval of ER

Recd: 22/8/98

No. 968 Ry., 28th July 1898.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

FW

31/8/98

Railway.

Read the following paper:—

From—The Secretary to the Government of India, Public Works Department.
To—The Joint Secretary to the Government of Madras, P.W.D., Ry. Branch.
Dated—Simla, 22nd October 1897, No. 1746 R.C.

I am directed to acknowledge the receipt of your letters marginally quoted, on the subject of the proposals of the South Indian Railway Company, for the construction and working of the following proposed railways:—

No. 530 R., dated 5th August 1897.
" 532 R., " 5th " "
" 533 R., " 5th " "

(1) Madura-Pamban, 100 miles in length and estimated to cost Rs. 42 lakhs.
(2) Tinnevelly-Quilon—
British section, 45 miles, Rs. 24 to 25 lakhs.
Travancore section, 58 miles, Rs. 76 lakhs.
(3) Palghat-Dindigul, 115 miles in length and estimated to cost Rs. 85 lakhs.

2. The proposals of the Board of the South Indian Railway Company contemplate the undertaking *en bloc* of the three lines, Madura-Pamban, Palghat-Dindigul and the British portion of the Tinnevelly-Quilon, as integral parts of that Company's system. The Board are also willing to construct the Travancore section of the Tinnevelly-Quilon Railway at actual cost and work it on behalf of the Travancore Durbar for 50 per cent. of the gross receipts, provided that the cost of maintenance for the first two years after opening is charged to capital.

3. In your letter No. 530 R., dated 5th August 1897, you say with regard to the Madura-Pamban line that His Excellency the Governor in Council does not lose sight of the disadvantages attaching to the proposal made by the South Indian Railway Company for financing this extension, *viz.*, that if it is to form an integral part of the South Indian Railway, it must wait for a place in the general programme for all India, but you urge that if it is possible to give it a very early place in that programme, it may be borne in mind that the Government of Madras would much prefer that it should be so constructed rather than be entrusted to a Branch Line Company.

4. As regards the British section of the Tinnevelly-Quilon Railway, the same preference is expressed in your letter No. 532 R., dated 5th August 1897; *viz.*, that, unless the exigencies of the general programme make it impossible to allow the South Indian Railway Company to construct it until after the expiry of, say, another two years, it will for all reasons be far preferable to adopt this method of financing the scheme, but that if the general exigencies should cause considerable delay in the commencement of the work, the Government of Madras would then urge that the South Indian Railway Company be given every encouragement to form a subsidiary company for its construction and working under the rebate terms of Public Works Department Resolution No. 514 R.C., dated 17th April 1896.

As to the Travancore section, you suggest that there would presumably be no opposition on the part of the Travancore Durbar, who had already accepted the proposal of the Government of India to underwrite the proposed guarantee by the Government of India in so far as it applies to the Native State Section, to similarly underwrite a corresponding British guarantee offered to a Branch Line Company owning the British section of the Railway.

5. Lastly, as regards the Palghat-Dindigul line, the Government of Madras recommend, for the reasons advanced in your letter No. 533 R., dated 5th August 1897, that the offer of the South Indian Railway Company in so far as it concerns

this project should be refused for the present, but without prejudice to the re-opening of the question of its construction hereafter.

6. I am now to inform you that these proposals of the South Indian Railway Company and the views of the Government of Madras thereon, have been carefully considered by the Government of India together with the recommendations of the Railway Conference which has just concluded its sittings at Simla under the Presidency of His Excellency the Viceroy.

7. I am to say that while the Government of India are fully aware of the advantages offered by the proposals of the South Indian Railway Company, which are supported by the Government of Madras, for constructing the branch lines connected with the South Indian Railway in British territory as integral parts of that Railway, His Excellency the Governor-General in Council desires to again impress on the Government of Madras and upon the South Indian Railway Company that, having regard to the existing engagements of the Government of India which have received the approval of Her Majesty's Secretary of State, there is no prospect whatever of all the lines referred to in this correspondence being included in the ordinary programme of railway construction for the next two years.

8. It was after a full consideration of the proposals that had previously been made for the construction and working of the Tinnevelly-Quilon Railway, which are virtually identical with those now put forward by the South Indian Railway Company, and of the limitations of the ordinary Railway programme, that the Government of India addressed the Government of Madras in their letter No. 1304 R.C., dated 2nd September 1896, on the subject of this railway, and explained the arrangements which appeared to His Excellency the Governor-General in Council to be best calculated to secure the early construction of the line under conditions which would be most equitable to all the parties interested.

I am now to say that after further consideration of the present views of the Government of Madras, the Government of India adhere to the opinion already formed that the proposals made in their letter of the 2nd September 1896, No. 1304 R.C., although not offering any direct advantages in respect of the division of surplus profits, were not inequitable to the South Indian Railway Company, and were such as His Excellency the Governor-General in Council had hoped that the Government of Madras would support in the reasonable interests of the Travancore Durbar, which interests would appear to have been overlooked in the proposals now made by the Board of the South Indian Railway Company and recommended by the Local Government.

9. As regards the Madura-Pamban Railway, with letter No. 1958 R.C., dated 22nd December 1896, the Government of Madras were furnished with a copy of a despatch (No. 95 Ry., dated 15th October 1896) from the Secretary of State intimating that the provisional concession granted to Messrs. Wallace Brothers for the construction of this Railway had lapsed, and you were informed that the orders of the Secretary of State were not understood to restrict the undertaking of this line to the direct agency of the South Indian Railway Company with funds to be supplied by the State. These funds the Government of Madras were reminded were limited and it was indicated that there was little chance of any being available for this railway until after 1899, but that it might be carried out at an earlier date upon branch line terms by a Company subsidiary to the South Indian Railway Company.

With a subsequent letter No. 552 R.C., dated 5th April 1897, the Government of Madras were furnished, for favour of opinion, with an application from Messrs. Best & Co., Madras, for a concession for the construction of this line upon branch line terms. The Government of Madras replied in your letter No. 277 R., dated 22nd April 1897, that as there was no chance of funds being available before the end of 1898-99, nor of the South Indian Railway Company being authorised to issue State guaranteed debentures, they were strongly of opinion that the best course would be for the South Indian Railway Company to promote the formation of a subsidiary branch company for the construction and working of the Madura-Pamban line on terms acceptable to both Companies and to Government, without the intervention of Messrs. Best & Co., or any particular firm of promoters.

You were informed in letter No. 837 R.C., dated 20th May 1897, that the Government of India had no objection to the Board of the South Indian Railway Company being invited to consider the above proposal of the Government of Madras, as

* I have already ordered that whenever matters [illegible] correction should leave here to make these. This is not the way. G.H.

alternative to Messrs. Best & Co's. application, but you were at the same time reminded that if the proposed subsidiary company had any direct financial connection with the South Indian Railway Company, except through the rebate clause of the branch line terms, the scheme would have to wait for a place in the railway programme for all India.

Simultaneously with the receipt of your letter No. 530 R., dated 5th August 1897, conveying the offer of the Board of the South Indian Railway Company to undertake this and the other lines *en bloc* as integral parts of the South Indian Railway, intimation was received from Messrs. Best & Co. that they had been informed by the Board of the South Indian Railway Company of their willingness to join that firm in their scheme for the formation of an independent subsidiary company for the construction and working of the Madura-Pamban Railway on branch line terms, and that the Board had also communicated this information to the Secretary of State.

10. With the foregoing explanatory remarks, I am to communicate the decision of the Government of India upon the collective proposals submitted by the Board of the South Indian Railway Company in their telegram of July 1897 to their Agent (a copy of which was received with the latter's letter No. 753, dated 22nd July 1897), for dealing *en bloc* with the three lines.—

Palghat-Dindigul. | Madura-Pamban. | Tinnevelly-Quilon.

11. *Palghat-Dindigul.*—The Government of India, while disposed to favour the construction of a metre gauge rather than a standard gauge railway through that district, are unable at present to pass any orders in regard to this scheme which requires careful consideration in many aspects and in the light of information not yet available.

12. *Madura-Pamban.*—As already explained and reiterated in paragraph 9 above, unless the South Indian Railway Company definitely accept some such arrangement as that proposed by Messrs. Best & Co., the construction of this line in the immediate, or even near future, is entirely out of the question and it must therefore wait for a place in the general programme for all India, which so far as can be foreseen may not be found for many years to come, a result which the Government of India would view with much regret.

13. *Tinnevelly-Quilon.*—As also explained in the foregoing paragraph 8 the Government of India still prefer the arrangements previously proposed by them that the Tinnevelly-Quilon Railway should be constructed upon the branch line terms. As, however, those arrangements do not appear to meet with the approval of the Board of the South Indian Railway Company, and as their alternative proposal for the construction of the British portion of this line as an integral part of the South Indian Railway, even though that course may involve some delay in commencing the work, has the support of the Government of Madras, I am to say that, recognizing the necessity for meeting the legitimate wishes of the Travancore Durbar for the development of their country, and with the desire to meet so far as possible the views of the Government of Madras and of the South Indian Railway Company, the Government of India are willing to see this line untertaken on the following modified conditions, provided that the Travancore Durbar assent to them and that the South Indian Railway Company also accept them.

The Government of India are prepared to recommend to the Secretary of State that the South Indian Railway Company should raise the whole of the money required for the construction of the entire line from Tinnevelly to Quilon at $2\frac{1}{2}$ per cent. in sterling under the guarantee of the Government of India, the Travancore Durbar underwriting that guarantee to the extent of the cost of the line in their own territory, and that the South Indian Railway Company should construct the whole line including the rolling-stock at cost price and then work it on completion as a portion of their existing system at the same rate of working expenses as obtains on their whole line including the branch Railway and other branches which may hereafter be added to it, the cost of maintenance for two years after opening being debited to capital.

Any surplus profits obtained by working the branch on the above conditions would, after deducting the share payable to the South Indian Railway Company, be divided as originally proposed between the Government of India and the Travancore Durbar in proportion to the lengths of the sections of the line in their respective territories. Under these arrangements assuming that, including rolling-stock and

Dy, This is not the way to make this [illegible] [illegible]

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maintenance for two years, the British section will cost Rs. 28½ lakhs for 45 miles, the Travancore section Rs. 83½ lakhs for 58½ miles, the capital will be raised by the South Indian Railway Company at 2½ per cent. and the working expenses of the South Indian Railway will remain nearly stationary, the results to the Government of India, the Travancore State, and the South Indian Railway, may be expected to show a loss in the third year after the opening of the line, as explained in case I below, to be superseded a few years later according to the moderate estimate contained in case II, by surplus profits divisible between all parties :—

	Per mile per week.	
	Case I.	Case II.
	RS.	RS.
Estimated gross earnings Travancore State section ...	50	100
Do. do. British	115	175
Do. gross receipts of the whole branch line ...	4,21,000	7,14,000
Do. net do. do. ...	1,85,000	3,14,000
Deduct interest charges	2,80,000	2,90,000
Estimated surplus profit of the whole branch line ...	— 95,000	+ 24,000
Do. share, Travancore State	— 71,000	+ 11,000
Do. do. Government of India	— 20,000	+ 19,000
Do. do. South Indian Railway about ⅙ surplus or deficit	— 4,000	+ 4,000

These results, which are worked out on the supposition, that Rs. 4 lakhs of extra capital for the rolling-stock will be required in case II, and that the South Indian Railway will share the net deficit as against Government and the total surplus profit in the usual proportions show that the possibility of the South Indian Railway incurring serious loss will be very small indeed, whilst the liabilities incurred by the Travancore Durbar will not be unduly burdensome to that State which will still obtain a large share of the high traffic returns expected from the British section of the line.

It will also be noticed that in the calculations no account is taken of the incremental traffic brought into the main line of the South Indian Railway the earnings from which it has not been found possible to estimate.

14. I am also to say that the Government of India in agreeing to the modified conditions proposed in the last paragraph for the Tinnevelly-Quilon Branch wish it to be clearly understood that the arrangements made for the construction of this and the Madura-Pamban Railway must stand or fall together; they are not disposed to consider any proposals for the construction of the latter which do not contemplate that the former should also be put in hand almost simultaneously.

15. The Government of India regard themselves as pledged by the proposals made in their letter No. 1304 R.C., dated 2nd September 1896, and accepted by the Travancore Durbar, to use their best endeavours to carry the scheme for the construction of the Tinnevelly-Quilon Railway through at ~~an~~ early a date as possible, upon terms that will not be inequitable either to the South Indian Railway Company or to the Durbar, and they are therefore prepared, with a view to ensure this, to admit the cost of the British portion of the scheme within their general programme of railway construction, and will endeavour to find the funds for it within the next two years. It must, however, be understood that the concessions now made are final and the largest that the Government of India are prepared to make, and I am to express the hope of His Excellency the Governor-General in Council that they will meet with the support of His Excellency the Governor of Madras in Council, and will also be acceptable to the Travancore Durbar and to the South Indian Railway Company.

16. In conclusion I am to request that the further views of the Government of Madras, the Travancore Durbar and the South Indian Railway Company may be communicated to the Government of India as soon as possible.

Order—No. 1117 Ry., dated 10th December 1897.

The Government of India will be addressed with regard to the Madura-Pamban Railway.

From—The Joint Secretary to the Govt. of Madras, P.W. Dept., Ry. Branch.
To—The Secretary to the Government of India, P.W. Department.
Dated—Madras, 10th December 1897, No. 1118 R.

I am directed to acknowledge the receipt of your letter, No. 1746 R.C., dated the 22nd October 1897, and with reference to those parts of it relating to the Madura-Pamban Railway to communicate the following remarks.

2. In my letter, No. 1034 R., dated the 25th November 1897, I explained the reasons which have induced this Government to defer for the moment their acceptance or refusal of the terms proposed in paragraph 13 of your letter under reply for the financing of the Tinnevelly-Quilon Railway. A perusal of these reasons will sufficiently explain why it is not possible to agree to that line being put in hand almost simultaneously with the Madura-Pamban as stipulated in paragraph 14 of your letter under reply. If the Travancore Darbar should be so ill-advised as to hold out in their determination not to adopt the southern route, a full season of survey work must be carried out before any construction work can be begun on the hill section of the northern route; and as the present season is rather far advanced, and as no arrangements of any sort have been made, it seems as if work could scarcely be begun, on the hill section at least, before the end of the rains of 1899. If, on the other hand, the Darbar should happily agree to the adoption of the southern route, the country to be traversed is so comparatively easy, that very little delay need occur before work is begun. There is reason to hope that this question of the selection of route may shortly be settled. But meanwhile no useful object is served in deferring action for the financing of the Madura-Pamban line pending the settlement of the route of the Tinnevelly-Quilon line with which it has no geographical or traffic connection.

3. As regards the proposed method of financing the Madura-Pamban line, I am directed to say that while still adhering to the opinion already expressed in my letter, No. 530 R., of the 5th August 1897, viz., that it would be far preferable, were it possible, that this important link in the through route between India and Ceylon should form an integral part of the South Indian Railway, His Excellency the Governor in Council recognizes the limitations imposed by present financial conditions, and will no longer oppose the intervention of a Branch Line Company for the raising of the necessary capital; and this the more readily inasmuch as a careful perusal of the Secretary of State's agreements about the Ahmedabad-Parantej Railway, with that Company and with the Bombay, Baroda and Central India Company, respectively, seems to make it plain that the non-intervention of the capital-raising Company in the management of the working of their property by the working Company can be sufficiently safeguarded.

4. The Agent, South Indian Railway Company, will now be asked whether his Board consent to endeavour to at once make arrangement with a Branch Line Company for the raising of the capital required for the Madura-Pamban line on the basis of the rebate clauses of the branch line terms. The Agent's reply, when received, shall at once be communicated to the Government of India.

Consulting Engineer for Railways, Madras.
From—The ~~Joint Secretary to the~~ Govt. ~~of Madras, P.W.D., Ry. Branch~~.
To—The Agent, South Indian Railway.
Dated—10th December 1897, No. 3777.

I have the honour to acknowledge the receipt of your letter, No. 753, dated the 22nd July 1897, submitting an important proposal from your Board of Directors that the South Indian Railway Company should undertake *en block* the construction and working of the Madura-Pamban, Tinnevelly-Quilon, and Palghat-Dindigul Railways.

2. These proposals were forwarded to the Government of India early in August with the comments of the Government of Madras, and were duly considered at the Railway Conference which was held this year in Simla. The reply of the Government of India, No. 1746 R.C., dated the 22nd October 1897, has now been received, and I have the honour, under the orders of ~~the~~ Government ~~of Madras~~, to forward a copy of it for you and your Board's information.

3. All consideration of the Palghat-Dindigul line must for the present be laid aside. Enough is not known as yet as to what would be the most suitable agency for its construction and working or as to the most favourable alignment. It is hoped that inquiries now on foot may lead to a settlement of all doubts on these important points.

4. Certain paragraphs of the Government of India's letter contain proposals for the financing and terms of working of the Tinnevelly-Quilon Railway. But I must inform you that the old question of the superior advantages of the southern route over the northern has lately again been re-opened, and that there appears some prospect of the former being agreed to by the Durbar. Should this hope be justified I need scarcely say that the whole question of the financing of the Travancore line will assume a different aspect, and will be very much easier of solution. Meanwhile I shall be glad to be furnished with any opinion which you and your officers may be in a position to give expression to, as regards the relative advantages of the two routes, the southern route being for the present supposed to end ~~at Kolachel~~ on the extensive backwater navigation system.

5. It now remains to deal with the Government of India's decision in regard to the method of financing the Madura-Pamban line, and in this connection I invite your careful perusal of the pair of agreements about the Ahmedabad-Parantej line between the Secretary of State and that Company and the Bombay, Baroda and Central India Company, respectively. It seems to me that under some such terms of agreement as those referred to, which will be found in the Director-General of Railways Administration report for the year 1895-96, Part II, it will be possible to ensure the non-interference of Branch Line Company with the working of the branch by the parent line. Such being the case, the intervention of such a Company, even as a link in so important a chain of through communication as that connecting India with Ceylon, becomes of less account than would be the case had they power of interference in details, and the more so if the Branch Line Company are, in their Board of Direction, intimately connected with the parent Company.

6. I am informed now by the Government of Madras, and am instructed to convey the information to you for communication to your Board, that His Excellency the Governor in Council will be prepared to support any suitable arrangement which your Board may come to, on the basis of the Ahmedabad-Parantej terms, for the raising of the capital required for the Madura-Pamban line through the agency of a Branch Line Company.

7. I shall be glad to receive as early as possible an expression of your Board's views in regard to these the latest proposals for the financing of the Madura-Pamban line. Further action in regard to the Tinnevelly-Quilon line must for the present be deferred, and all idea of doing anything just at present to promote the Dindigul-Palghat line will have to be definitely set aside.

Public Works Department

From—The Secy. to the Government of India, ~~P.W. Dept., Railway Construction~~
To—The Joint Secretary to the Government of Madras, P.W.Dept., Ry. Branch.
Dated—Calcutta, the 17th January 1898, No. 90 R. C.

I am directed to acknowledge the receipt of your letter, No. 1118 R., dated 10th December 1897, on the subject of the financing by a Branch Line Company, under the auspices of the South Indian Railway, upon the rebate terms of Government of India Resolution, No. 514 R. C., dated 17th April 1896, of the proposed Madura-Pamban Railway independently of the scheme for the construction of the proposed Tinnevelly-Quilon Railway.

2. In reply I am to say that the Government of India will await the views of the Board of the South Indian Railway Company on the proposed financing of the Madura-Pamban Railway by a Branch Line Company, but that they are of opinion that before work is commenced on this line the South Indian Railway Company should give an undertaking to construct a railway from Tinnevelly to the neighbourhood of either Quilon or Trivandrum, or other suitable terminus, either by the northern or southern route as may be decided by the Government of India, whenever called upon to do so, upon the terms and conditions stated in paragraph 13 of Public Works Department letter, No. 1746 R.C., dated 22nd October 1897.

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A Goondar

Order—No. 167 R., dated 31st January 1898.

The terms for the construction and working of the Tinnevelly-Travancore Railway have long formed the subject of correspondence by this Government with the Travancore Darbar through the Resident, and with the South Indian Railway Company through their Agent. The correspondence with the Travancore Darbar culminated in the acceptance by the Darbar, as communicated in letter from the Resident, No. 3105, of the 12th October 1896, of the terms offered in Government of India letter, No. 1304 R. C., dated the 2nd September 1896. To validate this acceptance, however, it was essential that the concurrence of the third party, viz., of the South Indian Railway Company, should be secured; but this concurrence it has not so far been found possible to obtain. Negotiations have however progressed and in connection with the Company's desire to obtain a concession for another branch railway in which they are interested, certain new terms have been put forward by the Government of India and these are now communicated *verbatim* (as per margin) to the Resident.

Extract from Government of India letter, No. 1746 R. C., dated 22nd October 1897.

* * *

"The Government of India . . . . found possible to estimate."

* * * *

2. The Resident will understand that the acceptance by the Darbar of these new terms, which are very much more favourable than those already accepted by them, and which are only rendered possible by the greater facility with which at the present time money can be raised by Railway Companies on the security of a State guarantee, can lead to practical action only in the event of their acceptance also by the South Indian Railway Company whose Agent has been asked to communicate his Board's decision if possible by telegraph.

3. The Resident is also informed that in offering the above conditions for the acceptance of the Railway Company the Government of India define the Travancore line as "a railway from Tinnevelly to the neighbourhood of either Quilon or Trivandrum or other suitable terminus either by the northern or southern route as may be decided by the Government of India." As regards this question of choice of routes this Government will be glad to receive an early expression of the wishes of the Travancore Darbar.

4. The Government of India will also be addressed.

From—The Joint Secretary to the Govt. of Madras, P.W. Dept., Ry. Branch.
To—The Secretary to the Government of India, P.W. Dept.
Dated—Madras, the 31st January 1898, No. 168 R.

to be printed in full

I am directed to acknowledge the receipt of your letter, No. 90 R. C., dated the 17th January 1898, in which you communicate the opinion of the Government of India that before work is commenced on the Madura-Pamban line an undertaking should be obtained from the South Indian Railway Company to construct and to work a railway from Tinnevelly to a suitable terminus in Travancore, to be later selected whenever called upon to do so, upon the terms and conditions stated in paragraph 13 of your letter, No. 1746 R. C., of the 22nd October 1897.

2. In reply I am desired to inform you that the conditions have been laid before the Travancore Darbar and the South Indian Railway Company for consideration and acceptance, and that the result shall in due course be communicated to the Government of India.

3. I am instructed to say that the Government of India's suggestion that the opportunity of the South Indian Railway Company's desire to obtain the working of the Madura-Pamban line should be availed of in order to secure their acceptance of fair terms for the working of the less promising Tinnevelly-Quilon line, has the entire approval and concurrence of His Excellency the Governor in Council.

4. The question of route for access to Travancore is still under the Darbar's consideration, and when a decision has been arrived at the Government of India shall be duly informed.

Press
Print this in the form adopted for other headings.

Extract from Agent's letter ~~to~~ Board of Directors, South Indian Railway Company, ~~dated 15th December 1897, No. 564.~~

Railway Extensions.

With reference to the paragraph under this heading in my letter, No. 545, dated 3rd August 1897, I have placed in the packet copies of letter, No. 3777, dated 10th December 1897, from the Consulting Engineer for Railways, and of letter, No. 1746 R. C., dated 22nd October 1897, from the Government of India. Reading these two letters together it will be seen that pending settlement of the route to be adopted for the Tinnevelly-Quilon Railway, the Board is not asked to decide on the modified propositions formulated by the Government of India in paragraph 13 of its letter above referred to. In the meantime, however, the Government of Madras is desirous of receiving the Board's views on its proposals for so financing the Madura-Pamban Railway as to prevent the working agency being unduly interfered with by the Subsidiary Company. The situation of this line as a link in the through connection between India and Ceylon renders it very necessary that it should be controlled by the same authorities as control the South Indian Railway. As pointed out by the Consulting Engineer the insistence of the following clause extracted from the Contract, dated 13th March 1896, between the Secretary of State and the Ahmedabad-Parantej Railway Company (Limited) should efficiently guard the interests of the through route.

> "21. All the business connected with the management and maintenance of the said railway and conducting traffic thereon, including police and telegraphs and telegraphic appliances, shall in all respects, as far as practicable, be carried on in the same manner and subject to the same regulations and control by the Secretary of State as the like business on the Rajputana-Malwa Railway, and the Company shall not interfere or be concerned with such business."

Non-interference would be further assured by a close connection between the Working and Subsidiary Companies, a policy which, I hope, may commend itself to the Board.

From—The Consulting Engineer for Railways, Madras.
To—The Agent, South Indian Railway Company.
Dated—31st January 1898, No. 302.

In continuation of my letter, No. 3777, dated the 10th December 1897, and with reference to the paragraph headed "Railway extension" in your letter to your Board of Directors, No. 564, dated the 15th December 1897, I have the honour to inform you that Government has decided that before work can be allowed to begin on the Madura-Pamban Railway your Company must give an undertaking to construct a railway, whenever called upon to do so, from Tinnevelly to the neighbourhood of either Quilon or Trivandrum or other suitable terminus, either by the northern or the southern route as Government may decide, upon the following terms and conditions, as expressed by the Government of India.

"The Government of India are prepared to recommend to the Secretary of State that the South Indian Railway Company should raise the whole of the money required for the construction of the entire line from Tinnevelly to Quilon at $2\frac{1}{2}$ per cent. in sterling under the guarantee of the Government of India, the Travancore Darbar underwriting that guarantee to the extent of the cost of the line in their own territory, and that the South Indian Railway Company should construct the whole line including the rolling-stock at cost price and then work it on completion as a portion of their existing system at the same rate of working expenses as obtains on their whole line including the branch Railway and other branches which may hereafter be added to it, the cost of maintenance for two years after opening being debited to capital.

"Any surplus profits obtained by working the branch on the above conditions would, after deducting the share payable to the South Indian Railway Company, be divided as originally proposed between the Government of India and the Travancore Darbar in proportion to the lengths of the sections of the line in their respective territories. Under these arrangements assuming that, including rolling-stock and maintenance for two years, the British section will cost Rs. 28½ lakhs for 45 miles, the Travancore section Rs. 83½ lakhs for 68½ miles, the capital will be raised by the South Indian Railway Company at 2½ per cent. and the working expenses of the South Indian Railway will remain nearly stationary, the results to the Government of India, the Travancore State and the South Indian Railway may be expected to show a loss in the third year after the opening of the line, as explained in Case I below, to be superseded a few years later according to the moderate estimate contained in Case II, by surplus profits divisible between all parties:—

/w

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	Per mile per week.	
	Case I.	Case II.
	RS.	RS.
Estimated gross earnings, Travancore State section.	50	100
Do. do. British	115	175
Do. gross receipts of the whole branch line.	4,21,000	7,14,000
Do. net do. do.	1,85,000	3,14,000
Deduct interest charges	2,80,000	2,90,000
Estimated surplus profit of the whole branch line...	— 95,000	+ 24,000
Do. share, Travancore State	— 71,000	+ 11,000
Do. share, Government of India	— 20,000	+ 9,000
Do. share, South Indian Railway about ⅙ surplus or deficit	— 4,000	+ 4,000

"These results, which are worked out on the supposition, that Rs. 4 lakhs of extra capital for the rolling-stock will be required in Case II, and that the South Indian Railway will share the net deficit as against Government and the total surplus profit in the usual proportions, show that the possibility of the South Indian Railway incurring serious loss will be very small indeed whilst the liabilities incurred by the Travancore Darbar will not be unduly burdensome to that State which will still obtain a large share of the high traffic returns expected from the British section of the line.

/w

"It will also be noticed that in the calculations no account is taken of the incremental traffic brought into the main line of the South Indian Railway the earnings from which it has not been found possible to estimate."

/ff

2. I have the honour to request that I may be favoured with a very early expression of your Board's views in regard to this proposal. It would be very desirable that, if they accept it, they should telegraph to that effect, in order that by the time of the receipt of their reply to your No. 564 of the 15th December 1897, I may be in a position to acquaint Government with the conclusions arrived at.

Para Heading in usual form

Extract from Agent's letter to the Board, South Indian Railway, dated 2nd February 1898, No. 571.

Madura-Pamban and Tinnevelly-Quilon Railways.

stet

Adverting to the paragraph under this heading in my letter, No. 564, of 15th December 1897, I forward among the enclosures to this letter a copy of letter, No. 302, dated 31st January 1898, from the Consulting Engineer for Railways to the Government of Madras, in which he asks to be favoured with an early expression (by telegram if possible) of the Board's views in regard to the proposals of the Government of India as expressed in paragraph 13 of their letter No. 1746 R.C., dated 22nd October 1897, of which a copy was sent to you with my letter above quoted.

Extract from Board's letter to the Agent, South Indian Railway, dated 11th February 1898, No. 204.

~~*Railway Extensions.*~~

~~Await receipt of expected communication from the Resident in Travancore and Cochin about the Darbar's preference. 9th March 1898. F.J.E.S.~~

Your letters, No. 545, of 3rd August 1897, and No. 564, of 15th December 1897, together with the letter, dated 10th December, from the Consulting Engineer for Railways, and Government of India letter, No. 1746 R.C., of 22nd October 1897, have been considered by the Board.

It is observed that the Board are requested not to decide on the modified propositions formulated by the Government of India in paragraph 13 of their letter above quoted, pending the settlement of the route to be adopted for the proposed extension into Travancore territory. In the anticipation that some decision has already been, or may soon be, arrived at with regard to this route, and, with the view of placing the Board in a position to deal with the matter without delay, you are desired to give your own views fully upon the whole subject.

In reply to the question of the Madras Government, and assuming the Madura-Pamban line to be constructed by a subsidiary company, it is not thought that there will be any difficulty in financing the company upon such lines as will prevent the working agency being unduly interfered with by the subsidiary company, and a clause similar to that (No. 21) in the Ahmedabad-~~Prantej~~ Contract will probably be sufficient to meet the object in view.

Parantej

Press Heading.

Extract from Agent's letter to Board, South Indian Railway, dated 9th March 1898, No. 576,

~~*Railway Extensions.*~~

Madura-Pamban and Tinnevelly-Quilon Railways.—In continuation of the paragraph under this heading in my letter, No. 571, dated 2nd February 1898, and with reference to your telegram of 3rd March 1898, "Board's 204 seedsman (send without delay) report extensions," I beg to offer the following remarks on the proposals embodied in paragraphs 12, 13, 14 and 15 of letter No. 1746 R.C., dated 22nd October 1897, from the Government of India.

Madura-Pamban Railway.—There are, I believe, no serious obstacles to the acceptance of the proposals of the Government of India in respect to this branch, though it is to be regretted that its construction as an integral portion of the South Indian Railway undertaking is discouraged.

Tinnevelly-Quilon Railway.—As regards the proposals for working this line, it will be observed that any insufficiency of net earnings to meet the guaranteed interest will in the first place be divided between the Imperial and Travancore Governments proportionately to the cost of the lengths of line in their respective territories, and, in the second place, that the South Indian Railway is required to bear such share of the deficit chargeable to the Government of India as is represented by the ratio of the company's capital to that of the Government of India in the South Indian Railway. In other words, the company is asked to assist in paying interest on the Tinnevelly-Quilon Railway capital due to itself under a Government guarantee from its share of the surplus profits of the undertaking. This contribution, however, is never likely to be large and is therefore comparatively of small financial importance. The proposals of the Government of India for the division of surplus profits, should they be ever realized, are favourable to the company, which takes its share before the division is made between the Imperial and Travancore Governments. The Government of India mentions in its proposals that no account has been taken of the value of the extra traffic produced on the parent line by the Tinnevelly-Quilon Railway, but I have to point out that the loss, which may arise from the insufficiency of the percentage payment for working to cover actual working expenses, has also been neglected. Government has doubtless assumed that 55 per cent. of the gross earnings of a line should fairly meet the expenditure on working it, and in most cases the assumption would be accurate. The Tinnevelly-Quilon Railway being an administrative rather than a traffic line, I do not think this assumption will prove correct for many years to come, if ever. In my letter to you, No. 528, dated 7th April 1897, I estimated that it would cost Rs. 80 per mile per week to work the line, and on this assumption the Chief Auditor has prepared the accompanying statements, (based on the actual figures for the half-year ended 30th June 1897) to show the effect to the company of working the Tinnevelly-Quilon Railway on the terms now offered by the Government of India. Briefly

Press Print this as in attached slip

Gross Earnings of the Tinnevelly-Quilon Railway per mile per week Rs 78. Half yearly loss to Company Rs 28,212.
" " " " " 94 " " " 23,393.
" " " " " 132 " " " 8,088.

The embodied in paragraph 13 of Government of India letter No. 1746 R.C., dated 22nd October 1897, and case II is that anticipated by me in my letters Nos. 497 and 528, dated 1st September 1896 and 7th April 1897, respectively. The incremental traffic from the Tinnevelly-Quilon Railway will be a set-off against this loss, but it is quite impossible to frame any forecast of what this reduction is likely to be. To compensate for a loss to the company of Rs. 25,000 per half-year the gross value of the derived traffic must be about Rs. 2,80,000 half-yearly or, say, one-sixteenth of the whole gross receipts of the undertaking, and I think it may be confidently assumed that the incremental traffic will not have this value. It might be possible by the most rigid economy to reduce working expenses below Rs. 80 per mile per week, but as each rupee per mile per week only represents about Rs. 500 per half-year to the company, it is obvious that a very considerable reduction would be necessary to bring the company's loss to a reasonable figure. It must also be remembered that the Tinnevelly-Quilon Railway cannot be worked without increasing our outlay on "stores" and other suspense balances. To meet this further loss no compensation is suggested by Government, and I therefore specially refer to the point as the Board desired it should not be lost sight of when dealing with working agreements.

Though the terms now offered by the Government of India are decidedly more liberal than those formulated previously, they bear much heavier on Government and the company than on the Travancore State. Taking everything into consideration, I cannot see how the company could fail to lose heavily by accepting the proposals now under consideration, and were it not that the Tinnevelly-Quilon Railway is to be considered as financially connected with the Madura-Pamban line, no other course would seem open but to decline the terms now offered. The complexion of affairs, however, will be very materially changed if the latter railway is worked by a company closely connected with the South Indian Railway Company, and though perhaps a somewhat over-sanguine view has been taken of the traffic prospects of the Madura-Pamban line, I am inclined to think that the derived traffic from it and the Tinnevelly-Quilon Railway taken together would secure the company against loss. This opinion is of course pure surmise on my part, as no data in respect to this derived traffic can be obtained, and will, I hope, be accepted with the hesitation with which it is tendered. Should the Board agree to the terms of the Government of India, I would suggest that a clause should be inserted in the agreement to secure for the Provident Institution the calculation of its additional contribution on the net earnings of these worked lines as well as on those of the undertaking.

I have placed in the packet a copy of a letter, dated 5th February 1898, from the Chief Auditor, together with printed copies of its four accompanying statements.

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written full

From—The ~~Offg. Under~~ Secretary to the Govt. of India, P.W. Dept., ~~Ry. Projects.~~
To—The Joint Secretary to the Government of Madras, P.W. Dept., Ry. Branch.
Dated—Simla, 1st April 1898, No. 17 R.P.

With reference to your letter, No. 168 R., dated the 31st January 1898, I am directed to enquire what progress has been made in the negotiations for the construction of the proposed Madura-Pamban and Tinnevelly-Quilon Railways.

Read the following:—
G. O. No. 650 Ry, dated 28th April 1898

Telegram from—The Joint Secy. to the Govt. of Madras, P.W. Dept., Ry. Branch.
To—The Secretary to the Government of India, P.W. Dept.
Dated—11th April 1898, No. 1 A.

print in full

Your 17 R.P., April 1st. Agent, South Indian, has received wire from Board. Begins. Accept Government proposals but hope Pamban may be integral part of undertaking. Message ends. Negotiations with Travancore Darbar now nearly completed. Will reply fully when copy received of Board's letter to Agent and when Travancore's official proposals made.

w/

Print in full

From—The Agent, South Indian Railway.
To—The Joint Secretary to Government, P.W. Dept., Ry. Branch.
Dated—26th April 1898, No. 371.

With reference to your telegram No. 15 C., of the 21st April 1898, I have the honour to forward herewith two copies of the Managing Director's letter, No. 209, dated 7th April 1898, containing the acceptance, by the Board of Directors of the South Indian Railway Company, of the modified proposals of Government regarding the Madura-Pamban and Tinnevelly-Quilon Extensions, and beg to invite attention to the concluding paragraph thereof.

Enclosure.

From—The Managing Director, South Indian Railway Company, Ld.
To—The Agent, South Indian Railway.
Dated—London, 7th April 1898, No. 209.

In reply to Board's letter No. 204, dated 11th February 1898, and to their telegram of 3rd March 1898—

"Board's 204, send without delay report extensions,"

the Board have now had before them your views, as expressed in your No. 576 of 9th March 1898, upon the proposals of the Government of India contained in their letter No. 1746 R.C., of 22nd October 1897.

2. After full consideration of the whole subject the Board have decided to accept the modified proposals of the Government, formulated in that letter, as regards the Madura-Pamban and Tinnevelly-Quilon Extensions. These are shortly—

C/ (a) That the company should construct the Tinnevelly-Quilon Railway, including rolling stock, at cost price, the money required being raised under a sterling guarantee of the Government of India at the rate of 2½ per cent. per annum.

C/ (b) That the company should work the line as a portion of their existing system at the same rate of working expenses as obtains on their whole line, including the branch railway and other branches which may hereafter be added to it.

The Board consider that the contract should contain a clause to the effect that in the event of its hereafter being proved by the officers of the South Indian Railway Company, to the satisfaction of the Government, that there is an actual loss on working the branch at that rate, the rate shall be raised to such a point as may be calculated to cover working expenses.

(c) That the cost of maintenance of the line for two years after opening shall be debited to Capital.

the Company

(d) The net deficit as against Government, and the total surplus profit, to be divided between the Government and in the usual proportions as stated excluding, for the purposes of such division, the Capital provided for this branch. The proposal as to the Travancore Government underwriting a proportion of the guarantee affects the Government of India and the Travancore State only, and, therefore, need not be imported into any agreement between the Government and the company.

A/-

C/-

C/ (e) That the company should assist the formation of an independent subsidiary company for providing funds for the construction of the Madura-Pamban Extension, which would be worked by the South Indian Railway Company upon branch line terms.

3. While accepting, as stated, the proposals of the Government of India, the Board think it desirable to place on record that the Southern route into Travancore would be looked upon by them with more favour than the Northern route *viâ* Shencotta. They are still of opinion that,

whether looked upon in the light of comparative cost of construction, or of probable revenue, or of advantage to the State of Travancore, the suggested route *viâ* Nagercoil to Trivandrum is the superior of the two. The Board's acceptance of the proposals, as regards the Northern route, may be taken to apply to the Southern route, if adopted.

4. With reference to the Madura-Pamban Branch, there can be no doubt, as a glance at the map will show, that a considerable portion of its revenue will be derived from traffic diverted from the South Indian Company's existing Madura-Tuticorin line, upon which a reduction in earning power must be looked for after the Pamban line is opened. It would appear, therefore, to be only equitable that any compensating advantage which may accrue from the construction of the branch should belong to the South Indian Company, and not become the property of the separate company, as will be the case under the proposals of the Government.

bottle

The extension will, as it seems to the Board, be a portion of the company's main line, and will, in effect, be the neck of the ~~hottle~~ to which the system in general will contribute traffic, and more especially will this be the case should the Indo-Ceylon Railway be constructed, when the Madura-Pamban Section would form an important link in the line of through communication between the two countries.

The necessity for the line is admitted on all sides, and it would be with regret that the Directors would see it pass into the hands of another company, however intimately that company might be connected with the South Indian Railway. They would greatly prefer that it should be constructed as an integral part of the undertaking, with money raised in a way similar to that proposed for the Travancore Railway, and they still hope that the Government, on further consideration, may be able to agree to the adoption of this course.

While expressing these views, and fully assured that the branch would be more cheaply financed and constructed by the direct agency of the South Indian Company, the Board accept the proposals of the Government for the construction of the line now by a branch line company as preferable to an indefinite postponement of the work.

5. With regard to both branches, the Board agree with your suggestion, but they do not propose it as a condition, that a clause should be inserted in the agreement to secure for the Provident Institution the calculation of its additional contribution on the net earnings. It is also desirable, as you further suggest, that, if the Government of India see fit, each line should bear some share of the interest upon stores, of which, of necessity, larger quantities would be kept in stock, and so the stores balances increased.

6. You will be good enough to lose no time in placing before Government this acceptance of their proposals, with the expression of the Board's earnest hope that the matter will, without delay, be brought before the Secretary of State in Council, with a view to the early preparation of the necessary contracts.

Order—No. 650 Ry., dated 28th April 1898.

The Government of India will be addressed.

From—The Joint Secretary to the Govt. of Madras, P.W. Dept., Railway Branch.
To—The Secretary to the Government of India, P.W. Dept.
Dated—Madras, 28th April 1898, No. 651 Ry.

I am instructed to forward, in continuation of my telegram No. 1-A., dated the 11th April 1898, a copy of a letter from the Board of Directors of the South Indian Railway Company to their Agent, No. 209, dated the 7th April 1898.

2. This Government is in daily expectation of receiving definite proposals from the Travancore Darbar, and these, when received, shall, in due course, be forwarded to the Government of India with such comments as His Excellency the Governor in Council may have to offer.

From—The Agent, South Indian Railway.
Dated—7th May 1898, No. 442.

Referring to G.O., No. 624 R., dated 6th September 1897, sanctioning a traffic survey being made of the proposed Trichinopoly-Thondi, and Madura-Pamban Railways, I have the honour to forward herewith twelve copies of the report* made on each line by Assistant Traffic Manager, Mr. S. J. Mercer.

F. J. E. S.

To—The Consulting Engineer for Railways, Madras.

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* Separately printed.

To— The Consulting Engineer for Railways.

15

No. 968 Ry., 28th July 1898.

Letter—from the Agent, South Indian Railway.
Dated—24th May 1898, No. 506.

S/- With reference to our conversation on May 20th, 1898, regarding the alignment of the proposed Madura-Pamban Railway, I have the honour to request that the Government may be moved to reconsider its decision in favour of a route passing through the town of Sivaganga and traversing the north bank of the Vaigai between Madura and Paramagudi and to sanction, instead of the adoption of Mr. Geoghegan's alignment between Madura and Paramagudi, Mr. Shadbolt's between Paramagudi and Toni Torai, and a branch line from Mutanantal to Sivaganga. My reasons for making this request are, briefly,—

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S/-

S/- :

- (a) To protect the Madura-Pamban Railway against diversion of the Indo-Ceylon traffic east of Manamadura.
- (b) To avoid unnecessary mileage on Indo-Ceylon traffic passing through Madura station.
- (c) To give railway facilities on both sides of the Vaigai to the country east of Madura.

2. In support of these statements, I would explain that the Madura-Pamban Railway will be deprived of Indo-Ceylon traffic if any connection is made between it and an extension through Devakottai from the north. The further east such connection is made, the more serious will be the loss in traffic, and I fear that with the contingency of a junction at or to the east of Paramagudi there may be a difficulty in forming a subsidiary company to finance the Madura-Pamban Railway. It is therefore desirable to locate the junction as near Madura as can be arranged for without unduly prejudicing local interests. Although at this early stage I quite recognise the impossibility of definitely ensuring the future adoption of this stipulation, a programme can be devised which should result in the future junction being made at the selected station. With this object I suggest that Sivaganga should be the terminus of a short branch line taking off the Madura-Pamban Railway at Mutanantal or at a station immediately adjacent. The fixation of the junction will be further aided by keeping the Madura-Pamban Railway entirely on the south bank of the Vaigai, so that any connection other than that, viz., Sivaganga, will necessitate a second bridge over the Vaigai.

S/-

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3. There is no need to enlarge on the advantage of working traffic over the shorter mileage possible by the avoidance of Sivaganga as a main line station, but it is perhaps advisable to offer a few remarks on the desirability of serving both sides of the Vaigai. From the information at my disposal it appears that the local traffic to be expected from the northern route is about equal to that anticipated from the southern alignment, but that this equality entirely depends on the inportance of Sivaganga as a trade centre. The suggested project of a southern route and a branch to this town should, therefore, tap the maximum traffic which can be reached without increasing the mileage of the extension.

4. I do not anticipate that the scheme I have advanced will prove appreciably more costly in construction than the northern route surveyed by Mr. Shadbolt. With both alignments the Vaigai must be crossed, and I have no reason to suppose that a bridge at Mutanantal or Manamadura will be more costly than one at Paramagudi. In both cases the length of the lines to be made will be about the same, but it is not improbable that land will prove more expensive on the southern than on the northern side of the Vaigai.

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5. I have not so far touched on the difficulties which obtain with a northern entry into the South Indian Railway station yard at Madura, because at the expense of re-bridging the Vaigai east of this town a southern junction could be combined with a northern alignment of the line to Pamban. Whether this alternative to Mr. Shadbolt's proposals for a junction north of the Vaigai would be adopted, depends on the comparative cost of the two schemes, but as the southern arrangement would render working simpler and safer, it would most likely be preferred even at a moderate increase of expenditure. If, however, the southern alignment of the railway be permitted, a cheap as well as a satisfactory junction can be obtained. I enclose, for your information, a plan of the present Madura yard, and in connection with it, would point out

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that it is hemmed in on both sides by expensive land difficult of acquisition. At the south of the station land can be obtained, and any difficulty in connection with the public road met by diverting it or taking it across the yard on an overbridge. It will be noticed from the tracing now sent of the northern and southern surveyed alignments of the Madura-Pamban Railway, that immediately to the north of the Vaigai the main line traverses an extensive tank. Any junction, therefore, in the immediate neighbourhood of the bridge must be restricted to a small signalling and interlocking block station. If anything on a more extensive scale is required, the junction must be made on the high ground beyond the tank and about a mile and a half from Madura.

6. Pending decision on the alignment of the Madura-Pamban Railway, no designs have been drawn up of the junction arrangements at Madura, and as other matters are depending on a settlement of the latter, I hope it may be possible to issue early orders on the subject.

From—The Joint Secretary to Government of Madras, P.W. Dept., Ry. Branch.
To—The Secretary to the Government of India, Public Works Department, Simla.
Dated—Ootacamund, 4th June 1898, No. 774 Ry.

With reference to the correspondence on the subject of the Madura-Pamban Railway, ending with my letter No. 651 Ry., dated the 28th April 1898, with which was enclosed a copy of the Board of Directors' (South Indian Railway) letter, No. 209, dated the 7th April 1898, I now am directed to forward, for the information of the Government of India, a copy of a report on the traffic prospects of the line by Mr. S. J. Mercer, a Traffic officer of the South Indian Railway.

2. Mr. Mercer's report re-opens the question of route, viz., whether it would be best to start from the south end of Madura station and follow the south bank of the Vaigai river to the coast, a distance of 91 miles, or to follow the route through Sivaganga adopted by Mr. Shadbolt, to the same point on the coast, a distance of 100 miles. This question of choice of route has already been carefully thought out by this Government, but it is understood that, as a consequence of the projected extension southwards of the Mayavaram-Mutupet Railway, and the possibility of a through connection, probably to Sivaganga, being sooner or later demanded in the interests of through traffic with Ceylon, the Agent, South Indian Railway Company, is in correspondence with his Board on the subject of how, when this inevitable connection comes, his main line may not be hopelessly short-circuited. I am therefore desired to say that you shall be separately addressed on the subject of the choice of routes when this Government shall have completed some enquiries which are now in hand.

3. All that it is thought necessary to say has already been said in regard to the superior advantages of an arrangement whereby the Madura-Pamban line should be an integral part of the South Indian Railway rather than that it should be owned by a separate company however intimately connected with the parent company. But you were informed in paragraph 3 of my letter, No. 1118, Railway, dated the 10th December 1897, that fully recognising the reasons which prohibit the adoption of the desired method of financing the extension, His Excellency in Council accepts the Government of India's decision that the intervention of a branch line company must be utilized.

4. A perusal of the South Indian Railway Company's letter to their Agent, No. 209, dated the 7th April 1898, will show that, while still expressing a hope that the financing of the Pamban extension may still be directly entrusted to them, the Board have accepted the proposals of Government for its being financed by a branch line company rather than that it should be indefinitely postponed.

5. As no further obstacle appears now to stand in the way of the South Indian Railway Company being encouraged to enter into the necessary negotiations with promoters for the financing of the extension on branch line terms, I am directed to express a hope that they may at once be permitted to do so, and that meanwhile, as was done in the case of the Calicut-Cannanore, it may be found possible to authorize them to arrange at once the many preliminaries which, as soon as the question of route is settled, must be put in hand if work is to go on energetically in the coming working season, and that a small allotment, of which an estimate can be submitted if desired, may be advanced for the purpose.

No. 968 Ry., 28th July 1898.

Note by the Consulting Engineer for Railways, Madras.

Madura-Pamban Railway (the question of choice of its route). T/-

In his letter, No. 506, dated the 24th May 1898, the Agent, South Indian Railway, re-opens the question, which, when Mr. Shadbolt was sent to survey the line, was settled by order of Government, namely, whether, starting from Madura, the alignment ought, for the first few miles, to run north or south of the Vaigai river. 8/-

2. Mr. Shadbolt's alignment starts from a point on the South Indian Railway north of the Vaigai bridge near Madura, and passing thence by a long 10-mile detour, through Sivaganga and Manamadura, crosses the Vaigai at Paramagudi, and after that follows the south bank of the Vaigai to Ramnad and Toni Torai. Total length 100 miles.

3. The Agent, South Indian Railway, now proposes that the line should start from the south end of Madura station, and should adhere to the south bank of the Vaigai throughout its entire course to Ramnad and Toni Torai, a total length of 90 miles. He also proposes that the town of Sivaganga should be accommodated by means of a branch railway from Mutanantal to Sivaganga, 10 miles long, with a bridge over the Vaigai. Thus the Agent's proposals are that the same length of railway should be made as in Mr. Shadbolt's scheme, viz., 100 miles, but that through traffic between Madura and the sea should in perpetuity have 10 miles *less* of railway to traverse.

4. The route now recommended by the Agent, South Indian Railway, was surveyed in 1886 by Mr. Geoghegan, who showed that the population of the principal towns served by the north Vaigai route was about 17 per cent. greater than that of the principal towns served by the south Vaigai route. Four towns containing about 20,000 people were shown as common to both routes, but while the south route could show an extra town of 3,000 inhabitants, the north route was able to show two towns aggregating 8,000 inhabitants. Thus the census was about 5,000 in favour of the north route and there was the advantage that the town of Sivaganga, which, by the way, is only one-twelfth the size of Madura, would thereby be served. i/-

5. I can find no record of a comparison having been made between the interest on the cost of 10 extra miles of railway, say Rs. 15,000 per annum, and the probable profits to be derived from carrying the traffic ascribable to 5,000 extra people. Neither can I find any record of a comparison of the benefits proposed to be conferred on these 5,000 potential customers with the handicapping effect of 10 miles extra haulage on every ton of goods and every passenger carried between the sea and Madura in perpetuity.

6. Captain Shelly gives three reasons for his proposal. The first (*a*) involves very complicated considerations, and assumes the possibility of contingencies which may perhaps never be realized, and which anyhow in all probability are in the distant future. His second reason (*b*) is a distinctly tangible one, and it is one which not only is of interest to the through traffic of the future between Ceylon and South India, but is also of local interest. His third reason (*c*) is one of considerable local importance. 8/-

7. The following are his three reasons for proposing that the Madura-Pamban line should start from the south end of Madura station and follow the south bank of the Vaigai through Ramnad to Toni Torai, with a 10-mile branch from Mutanantal to Sivaganga:—

- (*a*) To protect the Madura-Pamban Railway against diversion of the Indo-Ceylon traffic east of Manamadura.
- (*b*) To avoid unnecessary mileage on Indo-Ceylon traffic passing *viâ* Madura.
- (*c*) To give railway facilities on both sides of the Vaigai between Madura and Paramagudi.

8. The Agent's first reason (*a*) involves complicated issues contingent upon all sorts of possibilities which may never come to anything, and I think that at this very early stage it would be unwise to decide the question of the best alignment for the local railway between Madura and Pamban upon the basis of any such remote and indefinite considerations. These considerations, however, have been carefully gone into here, and memoranda have been placed in the record which, when the time comes, if ever it comes, for considering them, will doubtless receive the attention to which they are entitled.

9. His second reason (*b*) amounts to this that to take a long circuit of 10 extra miles, for the sake of serving the fairly important village of Sivaganga, seems scarcely worth while when it is considered that the result to all the through traffic will be that it will be hampered in perpetuity with the charge for 10 extra miles of haulage in other words that it will pay for ever one-ninth more than it would otherwise have to pay. The advantage of putting a minor town like Sivaganga on a branch instead of on the main line is that the branch can be cheaply worked by a mixed train daily, any old engine and rolling stock being used. Captain Shelley proposes to give Sivaganga a great deal more than it may fairly expect, because all over India there are towns of seven or eight thousand inhabitants within ten miles of a railway which it is never proposed to serve by a branch. But the object of his proposal is (amongst others) that the branch, by bridging the Vaigai, will bring a lot of country north of that river in touch with the railway which, but for the branch, would be cut off therefrom.

—do—

10. This brings us to his third reason (*c*), that the south Vaigai line will, by means of the Sivaganga branch, give railway facilities at both sides of the river. For if the main line were taken away in a curve to Sivaganga direct from Madura, the parts situated south of the river between Madura and Paramagudi would be quite cut off from the railway.

11. In his fifth paragraph the Agent refers to the advantages, from a railway working point of view, of coming in at the south end of the present Madura station instead of to a separate junction north of the river. There is no doubt that the latter would be a most cumbersome and expensive arrangement in perpetuity, and that the plan of bringing in the Pamban branch at the south end of the Madura junction is, for junction working reasons, and apart from the general alignment issues, the right one.

—do—

—do—

12. Attention is invited to Appendix C, pages 45–46, of the Traffic Survey of the Madura-Pamban country, recently made in very great detail by a traffic officer of the South Indian Railway Company. In this survey Mr. Mercer shows that the population of the towns and villages which may be considered as being in touch with the railway on the south route is very considerably in excess of that on the north route, between the two points Madura and Paramagudi common to both. He shows a population on the north route of 23,000 and on the south route of 50,000. Mr. Mercer has given the census figures of about 140 villages, so that he has had opportunity of going very much more carefully into the matter than Mr. Geoghegan did twelve years ago.

8/-

Order—No. 869 Ry., dated 27th June 1898.

Copies of the papers read above will be forwarded to Mr. J. Twigg, Collector of Tanjore, for an expression of his personal opinion as to the relative merits, from the point of view of the interests of the district as well as of trade between Madura, Ramnad and Toni Torai, of the two routes referred to for the Madura-Pamban Railway, viz., that to the north of and that south of the Vaigai river.

2. Mr. Twigg's reply should reach Government within one month of the date of this order.

No. 968 Ry., 28th July 1898.

D A R [illegible]

From—The Collector, Tanjore.
To—The Joint Secretary to Government, P.W. Dept., Railway Branch.
Dated—13th July 1898., No. 3057/Rev

As desired in G.O., No. 869 Ry., dated 27th June 1898, I have the honour to give my opinion as to the relative merits of the routes north and south of the Vaigai for the Madura-Pamban Railway as follows.

2. It appears to me that the interests of the district will be best served by the adoption of the southern route with a branch at Mutanandal to Sivaganga.

3. In the first place, the country south of the river is far worse off for roads and in greater need of opening up than the country to the north where the difficulties with regard to road material are not so great. The Vaigai is now a much more formidable obstacle to communication than it was before the opening of the Periyar works, and if the railway takes the northern route, I fear that any improvement in communication on the south will be very slow. On the other hand, with the railway running on the south bank, and carrying gravel at favourable rates, the construction of feeder roads would be stimulated; and this, I think, gives the only chance of opening up that blank tract of country lying between the Madura-Ramnad road on the north and the Madura-Tiruchuli-Kamuti road on the south.

4. Sivaganga would be sufficiently served by a branch line from Mutanandal, and the bridge, which should be made available for cart traffic and linked up with the roads north and south of the river, would be more useful at Mutanandal than at Paramagudi where the northern route would place it.

5. The through traffic from Toni Torai and probably Ramnad would be better served by the line I was anxious to see made for protective purposes turning northwards from Paramagudi through Devicotta to join the Mayavaram-Mutupet extension; but the Agent, South Indian Railway, explains to me that such a line is out of the question, and indeed has frankly stated in his letter, No. 506, dated 24th May 1898, that the mere prospect of it would probably be fatal to the Madura-Pamban line. As between the two alternative routes for this last line, the southern offers the advantage of a shorter run for through traffic.

6. There is, I think, little to choose between the country north and south of the Vaigai in respect of capabilities for supplying passenger and goods traffic, but I should be disposed on the whole to give the preference to the south as Mr. Mercer does.

7. I believe the southern route will be best for railway interests, and am decidedly of opinion that it will be best in the interests of the district.

Order—No. 968 Ry., dated 28th July 1898.

The Government of India will be addressed.

2. The Agent, South Indian Railway Company, will be informed with reference to his letter to the Consulting Engineer, No. 506, dated 24th May 1898, that the adoption of the South Vaigai route with a branch to Sivaganga has been recommended to the Government of India.

3. The Agent should without delay make proposals for, and submit an estimate of the cost of, staking out the South Vaigai route and the branch from Mutanandal to Sivaganga, in order that, if money should be allotted, it may be practicable to start work at the earliest possible moment.

4. With reference to his proposals for prejudicing the short circuiting question by coming to an early and authoritative decision in regard to the alignment of the Pattukota and Mayavaram-Mutupet Railways, the Agent will be informed that this Government declines at this early stage to commit itself to any definite course of action.

[Here enter No. 969 Ry., dated 28th July 1898.]

(True Extract.)

Under Secretary.

To the Agent, South Indian Railway.
" Consulting Engineer for Railways, } after papers are printed up to date.
" Revenue Department, }
" Local and Municipal Department, }

Exd. C. Parthsarathy.

No. 969 Ry., 28th July 1898.

PUBLIC WORKS DEPARTMENT.

Railway.

Letter—from

Francis J. E. Spring, Esq., C.I.E.,
Joint Secretary to the Government of Madras,
Public Works Department,
Railway Branch.

To

The SECRETARY to the GOVERNMENT of INDIA,
Public Works Department.

Sir,

With reference to the correspondence ending with my letter, No. 774 Ry., dated the 4th June 1898, on the subject of the Madura-Pamban Railway, and with special reference to paragraph 2 of that letter, I am now directed to communicate to the Government of India the conclusion arrived at by His Excellency the Governor in Council on the subject of the best alignment for the projected railway.

2. As the Government of India are aware, two routes have been under consideration; one route (*a*) starts from a point on the South Indian Railway main line, north of the Vaigai river, a mile or so to the north of Madura station, and thence passing through Sivaganga by a detour involving some 9 miles extra length, until the river Vaigai is crossed, follows the south bank of that river to its terminus on the sea; the other route (*b*) leaves Madura station at its south end, and continues at the south side of the Vaigai river to the sea terminus. This latter route is some 9 miles shorter for all through traffic than the former.

3. In endeavouring to arrive at a decision as to which of these two routes possesses superior advantages, this Government has had to consider, 1st, the interests of the through traffic with Ceylon, interests which undoubtedly demand the adoption of the South Vaigai route on account of its shorter length; 2nd, the interests of local development; and 3rd, whether or not it would be either possible or desirable, in deciding on the location of the Madura-Pamban Railway, to influence in one way or the other the solution of that important problem of the future, the threatened short circuiting of the South Indian Railway by the extension of the Mayavaram-Mutupet Railway southwards to a junction with the Madura-Pamban.

4. This last consideration has formed the subject of careful enquiry on the part of this Government, which, in common with the Agent, South Indian Railway Company, recognizes that it probably is inevitable that at some future time a connecting link should be made between the southern end of the Tanjore District Board's lines and some point on the Madura-Pamban Railway which will deprive a considerable mileage of the South Indian Railway of much of its present traffic. The Agent, South Indian Railway Company, hoped to neutralize a part of the effect of this inevitable short circuiting of the future by having it authoritatively laid down at this early stage, 1st, that the proposed Pudukota line should join the South Indian Railway at Tanjore instead of at Trichinopoly; and 2nd, that no connection of the Mayavaram-Mutupet and Pudukota lines with the Madura-Pamban lines should be allowed east of a certain point, Mutanandal, whence a short branch would be made, crossing the

Vaigai, to Sivaganga. The Agent wished that at this early stage conditions should be influenced in favour of his scheme, by bringing the Sivaganga branch into existence, so that when the, perhaps inevitable, extension of the Mayavaram-Mutupet and Pudukota lines to the southwards takes place hereafter, the existence of the Sivaganga branch may render contact with the Madura-Pamban line east of Mutanandal very improbable.

5. After a careful consideration of all that has been advanced in favour of a policy of scheming far in advance to ward off from the South Indian Railway some part of the effects of the threatened short circuiting, His Excellency the Governor in Council has come to the conclusion that the right course to adopt is to inform the Agent, South Indian Railway Company, that no guarantee can be given in regard to the proposed prevention of short circuiting, and that the alignment of the Madura-Pamban Railway must be decided on with sole reference to local conditions of the present time and of the near future, so far as a judgment in regard to them can be arrived at.

6. This Government is now of opinion that it is demanded in the interests not only of through traffic but also of local development, not to mention convenience and economy of railway working, that the South Vaigai route should be adopted in lieu of that surveyed by Mr. Shadbolt. But it seems certain that for the full local utilization of the Madura-Pamban Railway, the districts north of the Vaigai river must be brought from the first into touch with the railway by the construction of the 8 or 9 mile branch to Sivaganga crossing the Vaigai at Mutanandal. It is therefore strongly recommended that the branch in question be constructed simultaneously with the main line.

7. Although the Government of India have said in paragraph 12 of their letter, No. 1746 R.C., dated the 22nd October 1897, that the agency of a subsidiary company is essential for the financing of the Madura-Pamban Railway if its construction is not to be deferred indefinitely, His Excellency in Council ventures still to hope that means may yet be found for bringing it within the programme of State financed lines with a view to the avoidance of the administrative difficulties which are inseparable from the introduction of alien ownership in an important through route.

8. I am, therefore, instructed to say that His Excellency the Governor in Council hopes that the conference shortly to sit in Simla may find it possible to permit the South Indian Railway Company to directly finance the Madura-Pamban Railway on the South Vaigai alignment, with the branch from Mutanandal to Sivaganga; and that, pending the completion of the arrangements for financing it, the Government of India may find it possible to make an allotment of funds sufficient to allow of the very early prosecution of work as soon as the cessation of the north-east monsoon permits work to be begun. The Agent, South Indian Railway, has been called on for an estimate for the staking out of the South Vaigai alignment, and on its receipt the Government of India will be asked to sanction whatever small expenditure may be necessary for the purpose.

I have the honour to be,
Sir,
Your most obedient servant,
Joint Secretary.

OOTACAMUND,
28th July 1898.

Exd. C. Parthasarathy.

VP

G.O. 1117-18 / 10-12-97

Serial No. 72

No. 1746 R.C.

GOVERNMENT OF INDIA.

PUBLIC WORKS DEPARTMENT.

RAILWAY CONSTRUCTION.

1 P

To

THE JOINT SECRETARY TO THE GOVT. OF MADRAS,
P. W. D., RAILWAY BRANCH.

Simla, the 22nd October 1897.

SIR,

No. 530 R., dated 5th August 1897.
No. 532 R., dated 5th August 1897.
No. 533 R., dated 5th August 1897.

I am directed to acknowledge the receipt of your letters marginally quoted, on the subject of the proposals of the South Indian Railway Company, for the construction and working of the following proposed railways—

(1) Madura-Paumban, 100 miles in length and estimated to cost Rs. 42 lakhs.

(2) Tinnevelly-Quilon:—

British section, 45 miles, Rs. 24 to 25 lakhs.
Travancore section, 58 miles, Rs. 76 lakhs.

(3) Palghat-Dindigul, 115 miles in length and estimated to cost Rs. 85 lakhs.

2. The proposals of the Board of the South Indian Railway Company contemplate the undertaking *en bloc* of the three lines, Madura-Paumban, Palghat-Dindigul and the British portion of the Tinnevelly-Quilon as integral parts of that Company's system. The Board are also willing to construct the Travancore section of the Tinnevelly-Quilon Railway at actual cost and work it on behalf of the Travancore Durbar for 50 per cent. of the gross receipts, provided that the cost of maintenance for the first two years after opening is charged to capital.

3. In your letter No. 530 R., dated 5th August 1897, you say with regard to the Madura-Paumban line that His Excellency the Governor in Council does not lose sight of the disadvantages attaching to the proposal made by the South Indian Railway Company for financing this extension, *viz.*, that if it is to form an integral part of the South Indian Railway, it must wait for a place in the general programme for all India, but you urge that if it is possible to give it a very early place in that programme, it may be borne in mind that the Government of Madras would much prefer that it should be so constructed rather than be entrusted to a Branch Line Company.

4. As regards the British Section of the Tinnevelly-Quilon Railway, the same preference is expressed in your letter No. 532 R., dated 5th August 1897; *viz.*, that, unless the exigencies of the general programme make it impossible to allow the South Indian Railway Company to construct it until after the expiry of say another two years, it will for all reasons be far preferable to adopt this method of financing the scheme, but that if the general exigencies should cause

considerable delay in the commencement of the work, the Government of Madras would then urge that the South Indian Railway Company be given every encouragement to form a Subsidiary Company for its construction and working under the rebate terms of Public Works Department Resolution No. 514 R. C., dated 17th April 1896.

As to the Travancore Section, you suggest that there would presumably be no opposition on the part of the Travancore Durbar, who had already accepted the proposal of the Government of India to underwrite the proposed guarantee by the Government of India in so far as it applies to the Native State Section, to similarly underwrite a corresponding British guarantee offered to a Branch Line Company owning the British Section of the Railway.

5. Lastly, as regards the Palghat-Dindigul Line, the Government of Madras recommend, for the reasons advanced in your letter No. 583 R., dated 5th August 1897, that the offer of the South Indian Railway Company in so far as it concerns this project should be refused for the present, but without prejudice to the reopening of the question of its construction hereafter.

6. I am now to inform you that these proposals of the South Indian Railway Company and the views of the Government of Madras thereon, have been carefully considered by the Government of India together with the recommendations of the Railway Conference which has just concluded its sittings at Simla under the Presidency of His Excellency the Viceroy.

7. I am to say that while the Government of India are fully aware of the advantages offered by the proposals of the South Indian Railway Company, which are supported by the Government of Madras, for constructing the Branch Lines connected with the South Indian Railway in British territory as integral parts of that Railway, His Excellency the Governor General in Council desires to again impress on the Government of Madras and upon the South Indian Railway Company that, having regard to the existing engagements of the Government of India which have received the approval of Her Majesty's Secretary of State, there is no prospect whatever of all the lines referred to in this correspondence being included in the ordinary programme of railway construction for the next two years.

8. It was after a full consideration of the proposals that had previously been made for the construction and working of the Tinnevelly-Quilon Railway, which are virtually identical with those now put forward by the South Indian Railway Company, and of the limitations of the ordinary Railway programme, that the Government of India addressed the Government of Madras in their letter No. 1304 R. C., dated 2nd September 1896, on the subject of this railway, and explained the arrangements which appeared to His Excellency the Governor General in Council to be best calculated to secure the early construction of the line under conditions which would be most equitable to all the parties interested.

I am now to say that after further consideration of the present views of the Government of Madras, the Government of India adhere to the opinion already formed that the proposals made in their letter of the 2nd September 1896, No. 1304 R. C., although not offering any direct advantages in respect of the division of surplus profits, were not inequitable to the South Indian Railway Company, and were such as His Excellency the Governor General in Council had hoped that the Government of Madras would support in the reasonable interests of the Travancore Durbar, which interests would appear to have been overlooked in the proposals now made by the Board of the South Indian Railway Company and recommended by the Local Government.

9. As regards the Madura-Paumban Railway, with letter No. 1958 R. C., dated 22nd December 1896, the Government of Madras were furnished with a copy of a Despatch (No. 95 Ry., dated 15th October 1896) from the Secretary of State intimating that the provisional concession granted to Messrs. Wallace Brothers for the construction of this Railway had lapsed, and you were informed that the orders of the Secretary of State were not understood to restrict the undertaking of this line to the direct agency of the South Indian Railway Company

with funds to be supplied by the State. These funds the Government of Madras were reminded were limited and it was indicated that there was little chance of any being available for this railway until after 1899, but that it might be carried out at an earlier date upon branch line terms by a Company subsidiary to the South Indian Railway Company.

With a subsequent letter, No. 552 R. C., dated 5th April 1897, the Government of Madras were furnished, for favour of opinion, with an application from Messrs. Best & Co., Madras, for a concession for the construction of this line upon branch line terms. The Government of Madras replied in your letter No. 277 R., dated 22nd April 1897, that as there was no chance of funds being available before the end of 1898-99, nor of the South Indian Railway Company being authorised to issue State guaranteed debentures, they were strongly of opinion that the best course would be for the South Indian Railway Company to promote the formation of a subsidiary branch company for the construction and working of the Madura-Paumban Line on terms acceptable to both Companies and to Government, without the intervention of Messrs. Best & Co., or any particular firm of promoters.

You were informed in letter No. 837 R. C., dated 20th May 1897, that the Government of India had no objection to the Board of the South Indian Railway Company being invited to consider the above proposal of the Government of Madras, as alternative to Messrs. Best & Co.'s application, but you were at the same time reminded that if the proposed subsidiary company had any direct financial connection with the South Indian Railway Company, except through the rebate clause of the branch line terms, the scheme would have to wait for a place in the railway programme for all India.

Simultaneously with the receipt of your letter No. 530 R., dated 5th August 1897, conveying the offer of the Board of the South Indian Railway Company to undertake this and the other lines *en bloc* as integral parts of the South Indian Railway, intimation was received from Messrs. Best & Co. that they had been informed by the Board of the South Indian Railway Company of their willingness to join that firm in their scheme for the formation of an independent subsidiary company for the construction and working of the Madura-Paumban Railway on branch line terms, and that the Board had also communicated this information to the Secretary of State.

10. With the foregoing explanatory remarks, I am to communicate the decision of the Government of India upon the collective proposals submitted by the Board of the South Indian Railway Company in their telegram of July 1897 to their Agent (a copy of which was received with the latter's letter No. 753, dated 22nd July 1897), for dealing *en bloc* with the three lines—

Palghat-Dindigul.

Madura-Paumban.

Tinnevelly-Quilon.

11. *Palghat-Dindigul.* The Government of India, while disposed to favour the construction of a metre gauge rather than a standard gauge railway through that district, are unable at present to pass any orders in regard to this scheme which requires careful consideration in many aspects and in the light of information not yet available.

12. *Madura-Paumban.* As already explained and reiterated in paragraph 9 above, unless the South Indian Railway Company definitely accept some such arrangement as that proposed by Messrs. Best & Co., the construction of this line in the immediate, or even near future, is entirely out of the question and it must therefore wait for a place in the general programme for all India, which so far as can be foreseen may not be found for many years to come, a result which the Government of India would view with much regret.

13. *Tinnevelly-Quilon.* As also explained in the foregoing paragraph 8 the Government of India still prefer the arrangements previously proposed by them that the Tinnevelly-Quilon Railway, should be constructed upon the Branch line terms. As, however, those arrangements do not appear

to meet with the approval of the Board of the South Indian Railway Company, and as their alternative proposal for the construction of the British portion of this line as an integral part of the South Indian Railway, even though that course may involve some delay in commencing the work, has the support of the Government of Madras, I am to say that, recognizing the necessity for meeting the legitimate wishes of the Travancore Durbar for the development of their country, and with the desire to meet so far as possible the views of the Government of Madras and of the South Indian Railway Company, the Government of India are willing to see this line undertaken on the following modified conditions, provided that the Travancore Durbar assent to them and that the South Indian Railway Company also accept them.

A

The Government of India are prepared to recommend to the Secretary of State that the South Indian Railway Company should raise the whole of the money required for the construction of the entire line from Tinnevelly to Quilon at 2½ per cent. in sterling under the guarantee of the Government of India, the Travancore Durbar underwriting that guarantee to the extent of the cost of the line in their own territory, and that the South Indian Railway Company should construct the whole line including the rolling-stock at cost price and then work it on completion as a portion of their existing system at the same rate of working expenses as obtains on their whole line including the branch Railway and other branches which may hereafter be added to it, the cost of maintenance for two years after opening being debited to capital.

Any surplus profits obtained by working the branch on the above conditions would, after deducting the share payable to the South Indian Railway Company, be divided as originally proposed between the Government of India and the Travancore Durbar in proportion to the lengths of the sections of the line in their respective territories. Under these arrangements assuming that, including rolling-stock and maintenance for 2 years, the British section will cost Rs. 28½ lakhs for 45 miles, the Travancore section Rs. 83½ lakhs for 58½ miles, the capital will be raised by the South Indian Railway Company at 2½ per cent. and the working expenses of the South Indian Railway will remain nearly stationary, the results to the Government of India, the Travancore State and the South Indian Railway may be expected to show a loss in the third year after the opening of the line, as explained in Case I below, to be superseded a few years later according to the moderate estimate contained in Case II, by surplus profits divisible between all parties :—

	Case I.	Case II.
	Per mile per week.	Per mile per week.
	Rs.	Rs.
Estimated gross earnings Travancore State section ..	50	100
Ditto ditto British ...	115	175
Estimated gross receipts of the whole branch line...	4,21,000	7,14,000
Ditto net ditto ditto ...	1,85,000	3,14,000
Deduct interest charges	2,80,000	2,90,000
Estimated surplus profit of the whole branch line ...	—95,000	+24,000
Ditto share Travancore State	—71,000	+11,000
Ditto share Government of India	—20,000	+9,000
Ditto share South Indian Railway about $\frac{1}{6}$ surplus or deficit.	—4,000	+4,000

These results, which are worked out on the supposition, that Rs. 4 lakhs of extra capital for the rolling stock will be required in Case II, and that the

South Indian Railway will share the net deficit as against Government and the total surplus profit in the usual proportions, show that the possibility of the South Indian Railway incurring serious loss will be very small indeed whilst the liabilities incurred by the Travancore Durbar will not be unduly burdensome to that State which will still obtain a large share of the high traffic returns expected from the British section of the line.

It will also be noticed that in the calculations no account is taken of the incremental traffic brought into the main line of the South Indian Railway the earnings from which it has not been found possible to estimate.

B

14. I am also to say that the Government of India in agreeing to the modified conditions proposed in the last paragraph for the Tinnevelly-Quilon Branch wish it to be clearly understood that the arrangements made for the construction of this and the Madura-Paumban Railway must stand or fall together; they are not disposed to consider any proposals for the construction of the latter which do not contemplate that the former should also be put in hand almost simultaneously.

15. The Government of India regard themselves as pledged by the proposals made in their letter No. 1304 R. C., dated 2nd September 1896, and accepted by the Travancore Durbar, to use their best endeavours to carry the scheme for the construction of the Tinnevelly-Quilon Railway through at an early a date as possible, upon terms that will not be inequitable either to the South Indian Railway Company or to the Durbar, and they are therefore prepared, with a view to ensure this, to admit the cost of the British portion of the scheme within their general programme of railway construction, and will endeavour to find the funds for it within the next two years. It must, however, be understood that the concessions now made are final and the largest that the Government of India are prepared to make, and I am to express the hope of His Excellency the Governor General in Council that they will meet with the support of His Excellency the Governor of Madras in Council, and will also be acceptable to the Travancore Durbar and to the South Indian Railway Company.

16. In conclusion I am to request that the further views of the Government of Madras, the Travancore Durbar and the South Indian Railway Company may be communicated to the Government of India as soon as possible.

I have the honour to be,

SIR,

Your most obedient Servant,

T. GRACEY, Colonel, R.E.,

Offg. Secretary.

Documents accompanying.

Nil.

G. C. Press, Simla.—No 1021 P. W. D.—23-10-97—81.

(R.) Form No. 3.

Bf 4P

No. 1117. R dated 10/12/97

P. W. DEPARTMENT.

Ry: Branch

No. 73

PROCEEDINGS OF THE MADRAS GOVERNMENT.

READ the following

Letter from the Govt. of India P. W. Dept. } H. E. No. 1746 R.C. of 22d Octr 97

The Government of India will be addressed with regard to the Madura - Pamban Railway. -

19/11/97

H. E. No. 1118 R d, 10/12/97

58

8

SERIAL No. 74

Form No. 12.

18

No. 1118. R

Government of Madras.

PUBLIC WORKS DEPARTMENT,
RAILWAY BRANCH.

To

THE SECY. TO THE GOVT. OF INDIA,
P. W. DEPARTMENT.
Calcutta

Madras the 10th Decr 1897.

SIR,

I am directed to acknowledge the receipt of your letter No. 1746. R.C. dated the 22d Oct. 97. and with reference to those parts of it relating to the Madura Paumben Ry. to communicate the following remarks.

page 6 of G.O. 781 Ry. d 6-6-98 A relates to the T.Q. Ry

21.11.97

?

2. In my letter No. 1034 R ~~of this date~~ dated the 25 Novr. 97 I explained the reasons which have induced this Government to defer for the moment their acceptance or refusal of the terms proposed in para 13 of your letter under reply for the financing of the Tinnevelly Quilon Ry. A perusal of these reasons will sufficiently explain why it is not possible to agree to that line being put in hand almost simultaneously with the Madura Paumben as stipulated in para 14 of your letter under reply. If the Travancore

A.R.
see above. This is the letter whose [illegible] is wanted
7/10
10/12

10/12/97

Durbar should be so ill advised as to hold out in their determination not to adopt the Southern route, a full season of survey work must be carried out before any construction work can be begun on the hill section of the Northern route; and as the present season is ~~[illegible]~~ rather far advanced ~~[illegible]~~ and as no arrangement of any sort have been made, it seems as if work could scarcely be begun, on the hill section at least, before the end of the rains of 1899. If on the other hand the Durbar should happily agree to the adoption of the Southern route, the country to be traversed is so comparatively easy, that very little delay need occur before work is begun, ~~[illegible] for the present [illegible] for [illegible] years to come, there will be no necessity for extending the Railway beyond Koilpatti the Southern terminus of the completed and extensive system of [illegible] from [illegible] through [illegible]~~. There is reason to hope that this question of the selection of route may shortly be settled. But ~~[illegible]~~ meanwhile no useful object is served in deferring action ~~[illegible]~~ for the financing of the Madura Pamban line pending the settlement of the route of the Tinnevelly Quilon line with which it has no geographical or traffic connection.

3.— As regards the proposed method of financing the Madura Pamban line, I am directed to say that while still adhering to the opinion already expressed in my letter No. 530.R. of the 5th Aug. 97, viz that it would be far preferable, when it possible, that this important link in the through route between India and Ceylon should form an integral part of the South Indian Railway, His Excellency the Governor in Council recognises the limitations imposed by present financial conditions, and ~~[illegible]~~ will no longer oppose the intervention of a Branch line Company for the raising of the necessary capital; and this the more readily inasmuch as a careful perusal of the Secretary of State's Agreements about the Ahmedabad Prantij Ry., with that Company and with the B B & C.I. C. respectively, seems to make it plain that the non-interference of the capital raising Company in the management of the working of their property by the working Company can be sufficiently safeguarded.

× last letter of first printed collection

4.— The Agent S.I.Ry.C. will now be asked whether his Board consent to endeavour to at once make arrangement with a Branch line Company for the raising of the Capital required for the Madura Pamban line on the basis of the rebate clauses of the branch line terms. The Agents reply, when received, shall at once be communicated to the Govt of India.

Flag D

I have &

F.A.S.

19/11/97

Documents accomp:

-nil-

Despatched on 11/12/97

Form No. 10.

Railway Department.

OFFICE OF THE CONSULTING ENGINEER FOR RAILWAYS,

Madras, 10-12- 1897.

SERIAL No.

To

Agent. S. I. R.

No. 3777 Reply No. , dated

Reminders.

In reply to the Hon. President's comment below, about which I have been speaking to him since they were written. I note here that the phraseology is perfectly correct. The Jt. Sec. writes for the Govt. of Madras. But the Con. Engr. does not so write, and must not seem to do this. He also ought not to say "this Government". He does all and interim correspondence with Agents as Con. Engr. and only addresses them for Govt. when they are finally settled and an order passed.

FMS 10/12/97

Mr Spring constantly writes of the "Govt. of Madras" as if it were some foreign body. He forgets that he is writing for that Govt.

HD

I dont quite understand in what capacity this is supposed to be written — Is it the Const. Engr. or the Jt. Sec. who is writing? In either case the phraseology is in places peculiar — For instance, in para 6 "have informed by the Govt. of Madras" as if it were some foreign body —

HD 3/12/97

SIR,

× page 21 of printed collection

I have the honour to acknowledge the × receipt of your letter No. 753. dated the 22nd July 97 submitting an important proposal from your Board of Directors that the S. I. R. Co. should undertake *en bloc* the construction and working of the Madura–Pamban, Tinnevelly–Quilon and Palghat–Dindigul Railways.

2.— These proposals were forwarded to the Govt. of India early in August, with the comments of ~~[illegible]~~ the Govt. of Madras; and were duly considered at the Railway Conference which was held this year in Simla. The reply of the Govt. of India, No. 1746 R.C. dated the 22nd Oct 97, has now been received, and I have the honour, under the orders of the Govt. of Madras, to forward a copy of it for your and your Board's information.

3. All consideration of the Palghat Dindigul line must for the present be laid aside. Enough is not known – yet as to what would be the most suitable agency for its construction and working or as to the most favourable alignment. It is hoped that enquiries now afoot may lead to a settlement of all doubts on these important points.

4. Certain paragraphs of the Govt of India's letter contain proposals for the financing and terms of working of the ~~[illegible]~~ Trivandrum–Quilon Ry. But I must inform you that the old question of the superior advantages of the Southern Route over the Northern has lately again been reopened, and that there appears some prospect of the former being agreed to by the Durbar. Should this hope be justified I need scarcely say that the whole question of the financing of the Travancore line will assume a different aspect and will be very much easier of solution. Meanwhile I shall be glad to be furnished with any opinion which you and your officers may be in a position to give expression to, as regards the relative advantages of the two routes, the Southern route being for the present supposed to end at ~~[illegible]~~ Kolachel on the extensive backwater navigation system.

5. It now remains to deal with the Govt. of India decision in regard to the method of financing the Madura Paumben line. And in this connection I invite your careful perusal of the pair of agreements about the Ahmedabad Prantij line between the Secretary of State and that Company and the B.B & C.I.C. respectively. It seems to me that under some such terms of agreement as those referred to, which will be found in the Director General of Ry Administration Report for the year 1895-96 Part II, it will be possible to ensure the non-interference of Branch line Company with the working of the Branch by the parent line. Such being the case the introduction of such a Company, even as a link in so important a chain of through communication as that connecting India with Ceylon, becomes of less account than would be the case had they power of interference in detail, and the more so if the Branch line Company are, in their Board of Direction, intimately connected with the parent Company.

6.– I am informed now by the Govt of Madras ~~[illegible]~~ and am instructed to convey the information to you for communication to your Board, that H.E. the Governor in Council ~~[illegible]~~ will be prepared to support ~~[illegible]~~ any suitable arrangement which your Board may come to, on the basis of the Ahmedabad Prantij terms, for the raising of the capital required for the Madura Paumben line through the agency of a Branch line Company.

What this means I don't know – this Govt. has not raised any opposition, so far as I know
BL

7.– I shall be glad to receive as early as possible an expression of your Board's views in regard to these the latest proposals for the financing of the Madura Paumben line. Further action in regard to the ~~[illegible]~~ Trivandrum Quilon line must for the present be deferred, and all idea of doing anything just at present to promote the Dindigul–Palghat line will have to be definitely set aside.

I have &c FHS 19/4/97

Despatched on 10/12/97

10/12/97

Extract from Agent, S.I. Ry. letter to Board No. 564 dy 15-12-1897.

RAILWAY EXTENSIONS.

With reference to the paragraph under this heading in my letter No. 545 dated 3rd August, 1897, I have placed in the packet copies of letter No. 3777 dated 10th December, 1897, from the Consulting Engineer for Railways, and of letter No. 1746 R. C., dated 22nd October, 1897, from the Government of India. Reading these two letters together it will be seen that pending settlement of the route to be adopted for the Tinnevelly-Quilon Railway, the Board is not asked to decide on the modified propositions formulated by the Government of India in para 13 of its letter above referred to. In the meantime however, the Government of Madras is desirous of receiving the Board's views on its proposals for so financing the Madura-Pamban Railway as to prevent the working agency being unduly interfered with by the Subsidiary Company. The situation of this line as a link in the through connection between India and Ceylon renders it very necessary that it should be controlled by the same authorities as control the South Indian Railway. As pointed out by the Consulting Engineer the insistence of the following clause extracted from the Contract dated 13th March, 1896, between the Secretary of State and the Ahmedabad-Parantej Railway Company Limited should efficiently guard the interests of the through route.

> "21. All the business connected with the management and maintenance of the said railway and conducting traffic thereon, including police and telegraphs and telegraphic appliances, shall in all respects as far as practicable, be carried on in the same manner and subject to the same regulations and control by the Secretary of State as the like business on the Rajputana-Malwa Railway, and the Company shall not interfere or be concerned with such business."

Non-interference would be further assured by a close connection between the working and subsidiary companies, a policy which, I hope, may commend itself to the Board.

SERIAL
No. 77

Public Works (1898) Department.

Railway Branch

CURRENT No. 113

From the Govt. of India

Order

No. 90 R-C

Dated 17th January 1898
Received 24th } January 1898
Registered ~ }
Enclosures
Spare copies

SUBJECT.

Madura Paumban Ry. stating that the Govt. of India will await the views of the Board of the S-I. Ry Coy on the proposed financing of the ——— by a Branch line Coy and that the S-I. R Coy should give an undertaking to construct a railway from Tinnevelly to the neighbourhood of either Quilon or Trivandrum or other suitable terminus.

BACK PAPERS.

No.	Date.

FURTHER PAPERS.

No.	Date.

All communications should be addressed to the Secretary.

9 P

Go. 167-8
31-1-98

No. 90 R.C.

GOVERNMENT OF INDIA.

PUBLIC WORKS DEPARTMENT.

RAILWAY CONSTRUCTION.

JOINT SECRETARY TO GOVT. OF MADRAS RYS.
RECEIVED
24 JAN 1898

To

The Joint Secretary to the Government of Madras,
Public Works Department, Railway Branch.

Calcutta, the 17th January 1898.

Sir,

R.

Flag A

Flag D

I am directed to acknowledge the receipt of your letter No.1118 R., dated 10th December 1897, on the subject of the financing by a Branch Line Company, under the auspices of the South Indian Railway, upon the rebate terms of Government of India Resolution No.514 R.C., dated 17th April 1896, of the proposed Madras-Paumban Railway independently of the scheme for the construction of the proposed Tinnevelly-Quilon Railway.

2. In reply I am to say that the Government of India will await the views of the Board of the South Indian Railway Company on the proposed financing of the Mad~~ras~~ura-Paumban Railway by a Branch Lind Company, but that they are of opinion that before work is commenced on this Line the South Indian Railway Company should give an undertaking to construct a railway from Tinnevelly to the neighbourhood of either Quilon or Trivandrum, or other suitable terminus either by the northern or southern route as may be decided by the Government of India whenever called upon to do so upon the terms and conditions stated in paragraph 13 of Public Works

Department

Flag C

Department letter No.1746 R.C.,dated 22nd October 1897.

I have the honour to be,

Sir,

Your most obedient servant,

Pucey

Colonel R.E.,

Secretary.

Documents accompanying:-

Nil.

A.S.P.

S.A.

P. W. D. Current No. 113

No. 78

Madura-Pamban + Tinnevelly-Quilon } Railway proposals

H. E. The Governor

The Hon. Sir H. Bliss K.C.I.E.

The Hon. Mr. Grose C.I.S.

× Flag A

Government of India's letter No. 90-R.C. dated the 17th Jan. 98 (Current No. 113. P.W.D. R.) is a reply to our letter 1118-R. dated the 10th Dec. 97. in which we deprecated their trying to force us to tie up the Madura Pamban and the Tinnevelly Quilon together in such a way that the former could not be begun until the latter is arranged for. In that letter we explained that there is some hope of the Travancore Durbar agreeing to adopt the Southern route, and moreover whether they did so agree or not, further survey of the Northern route would be needed, which would cause delay. We said that meanwhile we withdrew our objection to the utilisation of Branch Line Agency for the financing of the Madura Pamban on the understanding that contracts could be so worded that non-interference of the money-supplying Company with the working Company could be secured.

× Flag B

Meanwhile the Agent S.I.R. Co. is in correspondence with his Board. See extract from his letter No. 564. dated 15-12-97. and the Govt. of India tell us that they await an expression of the Board's views.

They say however that they are of opinion that before work on the Madura Pamban is begun the S.I.R. Co. should give an undertaking to construct a railway from Tinnevelly to the neighbourhood of either Quilon or Trivandrum, or other suitable

H.E. & Hons
26.1.98
R 27/1/98

terminus either of the northern or southern route, as may be decided by the Government of India, whenever called upon to do so upon the terms and conditions stated in para 13 of India P.W.D. letter No. 1746 R.C. dated the 22nd Oct. 1897.

These terms and conditions are as follows. The Govt. of India are prepared (with the Secretary of State's consent) to enable the S.I.Ry.Co. to raise the whole of the money required for the Tinnevelly-Travancore railway in the form of "State Guaranteed Debentures", at 2½ per cent in sterling under the guarantee of the Govt. of India: the Travancore Durbar underwriting that guarantee to the extent of the cost of the line within their own territory. Then that the S.I.Ry.Co. should construct the whole line, including rolling stock, at cost price. Then that on completion they should work it as an integral part of their entire system, at the same rate of working expenses to gross earnings as prevails throughout their system. But for the first two years after opening the cost of maintenance to be debitable to capital. "Surplus profits" to be then divided between the Government of India and the Travancore Durbar in proportion to mileage in their respective territories.

I now seek orders as to the action to be taken 1st as regards the S.I.Ry.Co. and 2nd as regards the Travancore Durbar.

The Cons. Engr. ought I think now to address the Company's Agent, in continuation of his letter No. 3777. dated the 10th Dec. 97. and say that it is the desire of the Govt. of India that before work is commenced on the Madura Paumben line the S.I.Ry.Co. should agree to construct and to work the Tinnevelly-Travancore

S.A.

+ Key C

+ Key D

Appd.
A.S.H.

+ Key C

+ Key E

Appd.
A.S.H.

See my note on this draft
KS
28/1/98

Appd.
A.S.H.
27.1.98

line upon the terms and conditions set forth above whenever called upon to do so. I put up a draft of such a letter for the approval of H.E. and Hon. Member.

We have delayed communicating the proposals made in the Govt. of India's No. 1746 R.C. dated the 22nd Oct. 97 to the Travancore Durbar pending the result of a reconsideration by them of the question of the adoption of the Southern route in lieu of the Northern. But with this latest letter of the Govt. of India's before us I do not think that we would be any longer justified in keeping them in the dark about these the latest proposals. I think therefore that we ought to communicate with them in the terms of the accompanying ~~[illegible]~~ G.O. which I have drafted for the approval of H.E. and Hon. Member.

I have also put up a ~~[illegible]~~ draft of a formal letter to the Govt. of India for approval.

F.R.S.
26/1/98

The Hon. Sir H. Bliss asks my opinion as to the reasonableness of the proposal that the S.I.Ry.Co. should work the T.Q.Ry. for the percentage of working expenses to gross earnings which prevail throughout its entire system.

The terms would not, for the first two years, be fair ones were maintenance expenses, that is the cost of keeping up the road, included. But the

Govt. of India's proposal is that this particular class of expense (perhaps 15 to 20 per cent of ~~[illegible]~~ earnings) should during the first two years of working be charged to capital. It is in the Company's own power, as the builders of the line, to bring their road to such a state of completion, before the end of the two years, that the cost of maintenance may not exceed that of the same item on the main line (now 12 per cent). The proportion of working expenses to gross earnings on the S.I.Ry. has of late been steadily falling, and is now about 52. The Hon. Member will recollect (Flag K) that when offering to work the three lines, Madura-Pamban, Tinnevelly-Quilon, and Podanur-Dindigul, the S.I.R. Co. offered to work the British portion of the T.Q. line as an integral part of their system, and to work the Travancore portion at 50 per cent provided first two years maintenance is charged to capital.

Thus though we are not at present offering them the Podanur-Dindigul line we are practically taking them at their word as regards the terms for working the T.Q. line. I anticipate no objection on their part to accepting this offer.

It may be as well to explain that apart from the item of maintenance the items which go to make up working expenses of a railway vary pretty fairly with earnings, so that so long as a railway safeguards itself about maintenance it ought not to make too poor a mouth about probable earnings if they are at least 50 or 60 rupees per mile per week.

F.R.S.

28/1/98

Very well

29/1/98

SERIAL No. 79

P.W. DEPARTMENT
Ry: Branch

vol

Rf

No. 167 R dated 31/1/98

PROCEEDINGS OF THE MADRAS GOVERNMENT.

READ the following.

Letter from the Govt. of India P.W. Deptt. — } H.E. No 90 R.C. d/ 17th Jany: 1898.

A.S.H.
27.1.98

28/1/98

29/1/98

Flag F

Flag G

The terms for the construction and working of the Tinnevelly-Travancore Railway have long formed the subject of correspondence by this Government with the Travancore Durbar through the Resident & with the S.I. Ry Company through their Agent. The correspondence with the Travancore Durbar culminated in the acceptance by the Durbar, as communicated in letter from the Resident No. 3105 of the 12th October 1896 of the terms offered in Govt. of India letter No: 1304 R.C. dated the 2nd September 1896. To validate this acceptance however it was essential that the concurrence of the third party viz of the S.I. Ry. Company should be secured; but this concurrence

P. W. 40
1000—26-11-97.

it has not so far been found possible to obtain. – Negociations have however progressed and in connection with the Company's desire to obtain a concession for another branch railway in which they are interested, certain new terms have been put forward by the Govt. of India and these are now communicated verbatim (as per margin) to the Resident. –

Extract from Govt. of India letter
No. 1746 R.C. of 22d Octr 1897.

× × ×

"The Govt. of India .....

..... found possible to estimate".

× × ×

x 7 Reg C

2. The Resident will understand that the acceptance by the Durbar of these new terms which are very much more favourable than those already accepted by them and which are only rendered possible by the greater facility with which at the present time money can be raised by Railway Companies on the security of a State guarantee, can lead to practical action only in the event of their acceptance also by the S. I. R. Co: whose Agent has been asked to communicate his Board's decision if possible by telegraph.

3. The Resident is also informed that in offering the above conditions for the acceptance of the Railway Company the Govt. of India define the Travancore line as "a railway from Tinnevelly to the neighbourhood of either Quilon or Trivandrum or other suitable terminus either by the northern or southern route as may be decided by the Government of India". – As regards this question of choice of routes this Government will be glad to receive an early expression of the wishes of the Travancore Durbar.

4. The Govt. of India will also be addressed.

31/1/98

H.S. No. 168 R dated 26/1/98
31/1/98

To
The Resident in Travancore & Cochin
thro' the Political Dept.
– " – Cons. Engr. for Rys.

No. 168R

SERIAL No. 80

From The Joint Secretary to the Govt. of Madras
P.W. Dept. Railway Branch

To. The Secretary to the Govt. of
India. P.W. Dept.

Dated Madras, the 31st Jany 1898.

Sir

I am directed to acknowledge the receipt of your letter No. 90. R.C. dated the 17th Jan. 98. in which you communicate the opinion of the Govt. of India that before work is commenced on the Madura Paumben line an undertaking should be obtained from the S.I.R. Co. to construct and to work a railway from Tinnevelly to a suitable terminus in Travancore, to be later selected, whenever called upon to do so, upon the terms and conditions stated in para 13. of your letter No. 1746. R.C. of the 22nd Oct. 97.

2.-- In reply I am desired to inform you that the conditions have been laid before the Travancore Durbar and the South Indian Railway Company for consideration and acceptance, and that the result shall in due course be communicated to the Govt. of India.

3.- I am instructed to say that the Govt. of

Z.S.H.
27.1.98

J.G.
28/1/98

B.S.
29/1/98

× Fly C

India's suggestion that the opportunity of the S. I. Ry. Co's. desire to obtain the working of the Madura Paumben line should be availed of in order to secure their acceptance of fair terms for the working of the line from Tinnevelly Quilon line, has the entire approval and concurrence of H. E. the Governor in Council.

4.- The question of route for access to Travancore is still under the Darbar's consideration and when a decision has been arrived at the Govt. of India shall be duly informed.

I have &c

F.L.S.
27/1/98

31/1/98

As to this, I should like the Con. Engr's opinion as to whether the terms proposed for the working of the Tin - Quilon line are fair in themselves. It seems to me possible that the working of that line may be so expensive that the S. I. R. may lose by working it at the same proportion of the gross receipts as they work their whole undertaking at

W.S.
28/1/98

A.H.
27.1.98

J.G.
28/1/98

W.S.
29/1/98

No. 302 of 31-1-98.

SER.
No. 81

From
The Consulting Engineer for Railways
Madras.

To
The Agent. S. I. R. C.

Dated.

Sir

In continuation of my letter No. 3777. dated the 10th Dec. 97. and with reference to the paragraph headed "Railway Extension" in your letter to your Board of Directors No. 564. dated the 15th Dec. 97. I have the honour to inform you that Government has decided that before work can be allowed to begin on the Madura Paumben Railway your Company must give an undertaking to construct a railway, whenever called upon to do so, from Tinnevelly to the neighbourhood of either Quilon or Trivandrum or other suitable terminus either of the Northern or the Southern Route as Government may decide. upon the following terms and conditions, as expressed by the Govt. of India.

2.- [Here quote from Govt. of India's letter No. 1746. R.C. dated the 22nd Oct. 97. para 13. beginning at place marked A. "The Govt. of India are prepared" &. and ending at place marked B. end of para 13.]

P.T.O.

3/. — I have the honour to request that I may be favoured with a very early expression of your Board's views in regard to this proposal. It would be very desirable that, if they accept it, they should telegraph to that effect, in order that by the time of the receipt of this reply to your No. 564 of the 15th Dec. 97 I may be in a position to acquaint Government with the conclusion arrived at.

I have &

F.W.S.

27/1/98

31.1.98

Extract from Agent's letter to the Board, S. I. Ry
No: 571 dated 2.2.98

15

Madura–Pamban and Tinnevelly–Quilon, Railways. Adverting to the paragraph under this heading in my letter No. 564 of 15th December, 1897, I forward among the enclosures to this letter a copy of letter No. 302 dated 31st January, 1898, from the Consulting Engineer for Railways to the Government of Madras, in which he asks to be favored with an early expression (by telegram if possible) of the Board's views in regard to the proposals of the Government of India as expressed in paragraph 13 of their letter No. 1746 R. C., dated 22nd October, 1897, of which a copy was sent to you with my letter above quoted.

Extract from Board's letter to the Agent, South Indian Railway, No 204 of 11-2-98.

Railway Extensions

C

Your letters 545 of 3^d August, 1897, and 564 of 15^th December, 1897, together with the letter dated 10^th December from the Consulting Engineers for Railways, and Government of India letter 1746 R.C of 22^nd October 1897, have been considered by the Board.

Await receipt of expected communication from the Resident in Travancore & Cochin about the Durbar's preference.
F.J.S.
9/3/98

It is observed that the Board are requested not to decide on the modified propositions formulated by the Government of India in paragraph 13 of their letter above quoted, pending the settlement of the route to be adopted for the proposed extension into Travancore territory. In the anticipation that some decision has, already been, or may soon be, arrived at with regard to this route, and, with the view of placing the Board in a position to deal with the matter without delay, you are desired to give your own views fully upon the whole subject.

In reply to the question of the Madras Government, and assuming the Madura-Pamban line to be constructed by a Subsidiary Company, it is not thought that there will be any difficulty in financing the Company upon such lines as will prevent the working agency being unduly interfered with by the Subsidiary Company, and a clause similar to that (No 21) in the Ahmedabad-Prantej contract will probably be sufficient to meet the object in view.

Regs P+D

Madura Pamban Ry

17 P

Extract from Agent's letter to Board, S. I. Ry, No 576 dated 9. 3. 98.

Railway Extensions.

Madura-Pamban and Tinnevelly-Quilon Railways

In continuation of the paragraph under this heading in my letter No 571 dated 2nd February, 1898, and with reference to your telegram of 3rd March, 1898 "Boards 204 seedsman (send without delay) report extensions," I beg to offer the following remarks on the proposals embodied in paras 12, 13, 14, and 15 of letter No 1746 R.C dated 22nd October, 1897, from the Government of India.

Madura-Pamban Railway. There are I believe no serious obstacles to the acceptance of the proposals of the Government of India in respect to this branch, though it is to be regretted that its construction as an integral portion of the South Indian Railway Undertaking is discouraged.

Tinnevelly-Quilon Railway. As regards the proposals for working this line, it will be observed that any insufficiency of net earnings to meet the guaranteed interest will in the first place be divided between the Imperial and Travancore Governments proportionately to the cost of the lengths of line in their respective territories, and in the second place, that the South Indian Railway is required to bear such share of the deficit chargeable to the Government of India as is represented by the ratio of the Company's Capital to that of the Government of India in the South Indian Railway. In other words the Company is asked to assist in paying interest on the Tinnevelly-Quilon Railway Capital due to itself under a Government guarantee from its share of the surplus profits of the Undertaking. This contribution, however, is never likely to be large and is therefore comparatively of small financial importance. The proposals of the Government of India for the division of surplus profits, should they be ever realized, are favourable to the Company, which takes its share before the division is made between the Imperial and Travancore Governments. The Government of India mentions in its proposals that no account has been taken of the value of the extra traffic produced on the parent line

by the Tinnevelly-Quilon Railway, but I have to point out that the loss, which may arise from the insufficiency of the percentage payment for working to cover actual working expenses, has also been neglected. Government has doubtless assumed that 55 per cent of the gross earnings of a line should fairly meet the expenditure on working it, and in most cases the assumption would be accurate. The Tinnevelly-Quilon Railway being an administrative rather than a traffic line, I do not think this assumption will prove correct for many years to come, if ever. In my letter to you, No 528 dated 7th April 1897, I estimated that it would cost Rs 80 per mile per week to work the line, and on this assumption the Chief Auditor has prepared the accompanying statements, (based on the actual figures for the half year ended 30th June, 1897), to show the effect to the Company of working the Tinnevelly-Quilon Railway on the terms now offered by the Government of India. Briefly the following results are anticipated :—

Gross Earnings of the Tinnevelly-Quilon Railway per mile per week	Rs 78	Half yearly loss to Company	Rs	28,212
" "	" 94	" "	"	23,393
" "	" 132	" "	"	8,088.

The first and third cases correspond to cases I and II of the tabular statement embodied in para 13 of Government of India letter No 1746 R.C dated 22nd October 1897, and case two is that anticipated by me in my letters Nos 497 and 528 dated 1st September 1896 and 7th April 1897, respectively. The incremental traffic from the Tinnevelly-Quilon Railway will be a set off against this loss, but it is quite impossible to frame any forecast of what this reduction is likely to be. To compensate for a loss to the Company of Rs 25,000 per half year the gross value of the derived traffic must be about Rs 2,80,000 half yearly or say one sixteenth of the whole gross receipts of the Undertaking, and I think it may be confidently assumed that the incremental traffic will not have this value. It might be possible by the most rigid economy to reduce working expenses below Rs 85 per mile per week, but as each rupee per mile per week only represents about Rs 500 per half year to the Company, it is obvious that a very considerable reduction would be necessary to bring the Company's loss to a reasonable figure. It must also be remembered that the Tinnevelly-Quilon Railway cannot be worked without increasing our outlay on "Stores" and other suspense balances. To meet this further loss no compensation is suggested by Government, and I therefore specially refer to the point as the Board desired it should not be lost sight of when dealing with Working Agreements.

Though the terms now offered by the Government of India are decidedly more liberal than those formulated previously, they bear much heavier on Government and the Company than on the Travancore State. Taking every thing into consideration, I cannot see how the Company could fail to lose heavily by accepting the proposals now under consideration, and were it not that the Tinnevelly-Quilon Railway is to be considered as financially connected with the Madura-Pamban line, no other course would seem open but to decline the terms now offered. The complexion of affairs however will be very materially changed if the latter railway is worked by a Company closely connected with the South Indian Railway Company, and though perhaps a somewhat over-sanguine view has been taken of the traffic prospects of the Madura-Pamban line, I am inclined to think that the derived traffic from it and the Tinnevelly Quilon Railway taken together would secure the Company against loss. This opinion is of course pure surmise on my part, as no data in respect to this derived traffic can be obtained, and will, I hope, be accepted with the hesitation with which it is tendered. Should the Board agree to the terms of the Government of India, I would suggest that a clause should be inserted in the Agreement to secure for the Provident Institution the calculation of its additional contribution on the net earnings of these worked lines as well as on those of the Undertaking.

I have placed in the packet a copy of a letter dated 5th February 1898, from the Chief Auditor, together with printed copies of its four accompanying statements.

Public Works (1898) Department.

Railway

CURRENT No. 496.

SERIAL
No. 90

98005

From The Govt. of India.

Order

No. 17 R.P.

Dated 1st April, 1898

Received
Registered } 7. 4. 98

Enclosures

Spare copies

SUBJECT.

Madura - Paumban & Tinnevelly - Quilon Rys.

Enquiring what progress has been made in the negotiations for the construction of the proposed ——.

BACK PAPERS.

No.	Date.

FURTHER PAPERS.

No.	Date.

---

21 P

*No.*17 R.P.

All communications should be addressed to the Secretary.

GOVERNMENT OF INDIA.

PUBLIC WORKS DEPARTMENT.

RAILWAY PROJECTS.

To

The Joint Secretary to the Government of Madras,
Public Works Department, Railway Branch.

Simla, the 1st April 1898.

JOINT SECRETARY TO GOVT. OF MADRAS RYS.
REC'D
7 APR. 1898

Sr 80

Sir,

With reference to your letter No.168 R., dated the 31st January 1898, I am directed to enquire what progress has been made in the negotiations for the construction of the proposed Madura-Paumban and Tinnevelly-Quilon Railways.

I have the honour to be,
Sir,
Your most obedient servant.

Capt. R.E.
Offg. Under Secretary

to R.

Documents accompanying.
Nil.

R.D.

S.D.S.

BACK PAPERS. FURTHER

M. P. Ca

22 P

TELEGRAM ~~Urgent~~ ~~Ordinary,~~ Deferred

SERIAL No. 91

From

R.

To

Works
Simla

1 A. Your 17 R.P. April
1st. Agent South Indian
has received wire from
Board begins accept
Government proposals but
hope Paumben may be
integral part of undertaki
Message ends. Negociatio
with Travancore Durbar
now nearly completed.
Will reply fully when
copy received of Board's
letter to Agent, and
when Travancore's offici
proposals made.

F.W.

11/4/98

patched on 11-4-98

Enclosure
to S. No 91

P.W.
746 7
1898

South Indian Railway Company, Limited,
55, Gracechurch Street,

No. 209.

London, 7th April, 1898.

SIR,

RAILWAY EXTENSIONS.

In reply to Board's letter No. 204, 11th February, 1898, and to their telegram of 3rd March, 1898—

> "Board's 204, send without delay report extensions,"

the Board have now had before them your views, as expressed in your No. 576 of 9th March, 1898, upon the proposals of the Government of India, contained in their letter No. 1,746 R.C. of 22nd October, 1897.

2. After full consideration of the whole subject the Board have decided to accept the modified proposals of the Government, formulated in that letter, as regards the Madura-Pamban and Tinnevelly-Quilon Extensions. These are shortly—

(*a*) That the Company should construct the Tinnevelly-Quilon Railway, including rolling stock, at cost price, the money required being raised under a sterling guarantee of the Government of India at the rate of 2½ per cent. per annum.

(*b*) That the Company should work the line as a portion of their existing system at the same rate of working expenses as obtains on their whole line, including the Branch Railway and other Branches which may hereafter be added to it.

Captain A. D. G. Shelley, R.E.,
Agent,
South Indian Railway Company, Limited,
Trichinopoly.

~~No. 209 d/ 7/4/98~~

The Board consider that the contract should contain a clause to the effect that in the event of its hereafter being proved by the officers of the South Indian Railway Company, to the satisfaction of the Government, that there is an actual loss on working the branch at that rate, the rate shall be raised to such a point as may be calculated to cover working expenses.

(*c*) That the cost of maintenance of the line for two years after opening shall be debited to capital.

(*d*) The net deficit as against Government, and the total surplus profit, to be divided between the Government and the Company in the usual proportions as stated—excluding, for the purposes of such division, the capital provided for this branch. The proposal as to the Travancore Government underwriting a proportion of the guarantee affects the Government of India and the Travancore State only, and, therefore, need not be imported into any Agreement between the Government and the Company.

(*e*) That the Company should assist the formation of an independent subsidiary Company for providing funds for the construction of the Madura-Pamban Extension, which would be worked by the South Indian Railway Company upon Branch Line terms.

3. While accepting, as stated, the proposals of the Government of India, the Board think it desirable to place on record that the Southern route into Travancore would be looked upon by them with more favour than the Northern route *viâ* Shencotta. They are still of opinion that, whether looked upon in the light of comparative cost of construction, or of probable revenue, or of advantage to the State of Travancore, the suggested route *viâ* Nagercoil to Trivandrum is the superior of the two. The Board's acceptance of the proposals, as regards the Northern route, may be taken to apply to the Southern route, if adopted.

4. With reference to the Madura-Pamban Branch, there can be no doubt, as a glance at the map will show, that a considerable portion of its revenue will be derived from traffic diverted from the South Indian Company's existing Madura-Tuticorin Line, upon which a reduction in earning power must be looked for after the Pamban Line is opened. It would appear, therefore, to be only equitable that any compensating advantage which may accrue from the construction of the Branch should belong to the South Indian Company, and not become the property of the separate Company, as will be the case under the proposals of the Government.

The extension will, as it seems to the Board, be a portion of the Company's main line, and will, in effect, be the neck of the bottle to which the system in general will contribute traffic, and more especially will this be the case should the Indo-Ceylon Railway be constructed, when the Madura-Pamban section would form an important link in the line of through communication between the two countries.

The necessity for the line is admitted on all sides, and it would be with regret that the Directors would see it pass into the hands of another Company, however intimately that Company might be connected with the South Indian Railway. They would greatly prefer that it should be constructed as an integral part of the Undertaking, with money raised in a way similar to that proposed for the Travancore Railway, and they still hope that the Government, on further consideration, may be able to agree to the adoption of this course.

15. [illegible] 98

No 209 d/ 1/4/98

While expressing these views, and fully assured that the Branch would be more cheaply financed and constructed by the direct agency of the South Indian Company, the Board accept the proposals of the Government for the construction of the line now by a Branch Line Company as preferable to an indefinite postponement of the work.

5. With regard to both branches, the Board agree with your suggestion, but they do not propose it as a condition, that a clause should be inserted in the Agreement to secure for the Provident Institution the calculation of its additional contribution on the net earnings. It is also desirable, as you further suggest, that, if the Government of India see fit, each line should bear some share of the interest upon stores, of which, of necessity, larger quantities would be kept in stock and so the stores balances increased.

6. You will be good enough to lose no time in placing before Government this acceptance of their proposals, with the expression of the Board's earnest hope that the matter will, without delay, be brought before the Secretary of State in Council, with a view to the early preparation of the necessary contracts.

I am, Sir,
Your obedient Servant,
HENRY W. NOTMAN,
Managing Director.

ER-CN-2069
2.5.98

No. 371 Print

South Indian Railway Co., Ld.,
AGENT'S OFFICE,
TRICHINOPOLY, 26th April 1898.

From
The AGENT,
SOUTH INDIAN RAILWAY,

30 P

SERIAL No. 91

To
The CONSULTING ENGINEER FOR RAILWAYS,
~~MADRAS.~~ Ootacamund

Conference & spoken with ER

Sir,

With reference to your telegram No. 15C of the 21st April 1898, I have the honor to forward herewith two copies of the Managing Director's letter No. 209 dated 7th April 1898 containing the acceptance by the Board of Directors of the South Indian Railway Company of the modified proposals of Government regarding the Madura-Pamban, and Tinnevelly Quilon Extensions, and beg to invite attention to the concluding paragraph thereof.

I have the honor to be
Sir
Your most obedient Servant
R.B.G. Shelley
Captain, R.E.,
Agent.

2 Enclosures

From
The Agent,
South Indian Railway,
Trichinopoly.

To
The Consulting Engineer for
Railways,
Madras.

Dated } 189
Received }

No.

Enclosure.

Form No. 1.

PUBLIC WORKS DEPARTMENT,

Railway Branch.

SERIAL
No. 93

Papers to be read in Proceedings:—

Again G.O., dated 189 , No.
Again G.O., dated 189 , No.
Current No. of 189 , dated , from
" " " 189 , " , "
" " " 189 , " , "

33 P

Letter from the Agent, S.I.Ry No. 371 dated 26/4/98 with Enclosures

ORDER. No. 650 Ry dated 28/4/98.

The Govt. of India will be addressed.

H.G. No. 651 Ry dated 28/4/98

FW
28/4/98

Further Letter to the Govt. of India No. 691 Ry dated 5/5/98

ging:-
letter 98.4.9
No. 209 d 11/4/98

R. Form No. 12.

SERIAL
No. 94

No. 651. Ry

18
Print

Government of Madras.

PUBLIC WORKS DEPARTMENT,
RAILWAY BRANCH.

To

The Secy. to the Govt. of India,
P. W. Department.
Simla

34 P

Ooty, the 28th April 1898.

Sir,

I am instructed to forward, in continuation of my telegram No. 1-A. dated the 11th April 98. a copy of a letter from the Board of Directors of the South Indian Ry. Co. to their Agent. No. 209. dated the 7th April. 98.

2.- This Govt. is in daily expectation of receiving definite proposals from the Travancore Durbar, and these when received shall in due course be forwarded to the Govt of India with such comment as H. E. the Governor in Council may have to offer.

I have &

FKS.
28/4/98

Documents accompanying:-

A Copy of S. I. R. Bd's letter No. 209 d/ 7/4/1898

28.4.98

Enclosure to S.r. 93.

HENRY DAVIES, Esq.,
Acting Traffic Manager,
South Indian Railway,
Trichinopoly.

Dear Sir,

MADURA-PAMBAN RAILWAY.

After travelling over the route of the proposed Trichinopoly-Thondi Railway, I crossed over by sea to Pamban, went to Rameswaram and returned to Madura *viâ* Ramnad, Paramakudi, Manamadura, Sivagunga and Tirupuvanam, with the view of estimating the traffic prospects of the proposed Madura-Pamban Railway.

This line is always referred to as the Madura-Pamban, but unless it is carried over the Pamban Pass it will not touch Pamban, Pamban being on the other side of the Strait on the Island of Rameswaram. Toni Torai is a village at the extremity of the mainland, and the line is staked out from there to Madura.

I. Description of country traversed.

From Toni Torai to nearly as far as Ramnad the line passes through sandy country. It is not absolutely bare however. There is dry cultivation here and there, ragi and kumboo being grown. There are also palmyra trees in large numbers and some cocoanut trees. Until the River Vaigai is reached, no paddy is grown. As soon however as this occurs, which is the other side of Ramnad, rice is grown all the way to Madura.

Both sides of the River Vaigai are cultivated, though the cultivation on the south bank is greater than that on the north. The quantity of dry grain grown is not considerable and is for the most part consumed locally, paddy being chiefly available for trade.

The people in the district through which the line runs are agriculturists. They attend the Madura and Manamadura "Chittrai" and the Ramnad "Navarathri" in large numbers. These are the only festivals which have any attraction for them. The Cauvery bathing, Chidambaram, Tiruvannamalai, and Srirungam festivals, which are regularly attended by Brahmins and others, are not attended by these people at all.

The villages that one sees are the usual description of Indian villages,—huts made of mud covered with kadjans. Houses like those seen at Devakottai, Karaikudi and other Nattukottai Chetty towns are unknown, and after coming from those places, where one sees large temples in every village of importance, one is struck with the absence of temples.

II. Feeder Roads.

There are practically no feeder roads. The main road from Madura to Ramnad is in fair condition; the road from Ramnad to Toni Torai is a cart track through sand.

When I was at Ramnad it was not possible to go to Devipatnam owing to a bridge having been washed away, and I was given to understand that there was no road to such an important place as Kilakarai.

III. The relative advantages of the routes north and south of the River Vaigai.

After having examined both sides of the River Vaigai, it seems to me that from a traffic point of view it would be better if the line followed the south bank all the way from Ramnad to Madura, as it is on the south bank I make out there is the greater population, the more important towns and villages and the larger quantity of goods available for traffic. This will be seen from Appendix C to this Report. The chief reason for taking the line along the north bank is that it would pass through Sivagunga. But Sivagunga can just as well be reached by a branch from Manamadura.

Should the line be taken along the north bank it has never been contemplated, as far as I am aware, to take it any *further north* than Sivagunga, so that if the Trichinopoly-Thondi Railway is not constructed, Devakottai, Karaikudi, Kanathukathan and the Chetty towns, which are without doubt the most important places in the Ramnad and Sivagunga Zemindaries, would be no nearer a Railway station than if a branch were made to Sivagunga. If the Trichinopoly-Thondi Railway is constructed, it would naturally attract traffic for many miles south of it, *i.e.*, from the north of the River Vaigai, which appears to me an additional reason for taking the Madura-Pamban line along the south bank.

I think it only right to mention that the general opinion I heard expressed was that it would be cheaper to construct a line along the north bank than along the south. More of the land on the south being under cultivation would naturally make land more expensive there. Owing to the Periyar project there is much more water in the River Vaigai, and it is there for a much longer period in the year than has ever been known before. There are more channels for the purpose of irrigation on the south bank than the north, which would mean more culverts. There is building material on the north bank, but not on the south. These however are all Engineering questions, with regard to which I am not called upon or competent to give any opinion.

IV. The route the proposed line should take.

Assuming the south bank is followed all the way, the route the proposed line should take would be from Toni Torai through Uchipuli, Ramnad, Pogalur, Paramakudi, Partibennur, Manamadura, and Tirupuvanam to Madura.

The best place for the Sivagunga branch to take off the main line would I think be at Manamadura, where the river is about 720 feet wide.

Should the Pilgrim traffic turn out to be large, it may be found advisable to construct branch lines to Devipatnam and Kilakarai, as in order to make the Rameswaram pilgrimage complete, pilgrims are expected to go first to Devipatnam, then to Mandapam, Pamban, Rameswaram and Thanikoti; and on their return journey, before going to Ramnad to complete the pilgrimage, to bathe at Kilakarai and visit Tirupullani, a sacred place close by.

V. Important Towns and Villages on the proposed route with their positions and population.

The following is a list of important towns and villages on the proposed route with their position and population. In this list all towns and villages of 1,000 persons or more within 5 miles on either side of the River Vaigai, have been included, as well as some of the important towns at a greater distance than 5 miles.

Mandapam	... ...	2,000.
Vadalai	... ...	1,200.
Irumeni	... ...	1,000.
Kiddakottai	... ...	1,200.

These places are in the narrow promontory before the Vaigai is reached.

Towns NORTH. of route				Towns SOUTH. of route			
	POSITION.				POSITION.		
NAME OF TOWN OR VILLAGE.	Miles from line.	Miles from Toni Torai.	Population.	NAME OF TOWN OR VILLAGE.	Miles from line.	Miles from Toni Torai.	Population.
⊙ Attangarai ...	3 N.	14	1,400	Perunkolam ⊙ ...	1 S.	15	1,000
⊙ Alagangulam ...	3 N.	16	2,000	Pudumadai ⊙ ...	3 S.	12	2,000
⊙ Tiruvallur ...	3 N.	25	1,000	Periapatnam ⊙ ..	5 S.	16	2,500
⊙ Devipatnam ...	10 N.	34×	4,000	Valudur ⊙ ...	1 S.	15	1,000
Kenkondan ? S ...	3 N.	34	1,020	Regunadapuram ⊙ ...	5 S.	16	1,300
? Nainarkoil ...	6 N.	44	1,085	Kottakottai ⊙ ...	5 S.	20	1,200
Emmaneswaram ...	1 N.	47	5,000	Sakkaraikottai ⊙ ...	2 S.	24	3,800
Salagramau ...	10 N.	45	2,460	Kilakarai ⊙ ...	10	34×	12,400
Elangudi ...	7 N.	47	5,240	Tirupullani ⊙ ...	10	32×	2,300
Nattur ...	4 N.	54	2,100	Ramnad ...	On line	24	13,600
Tiruvallor ...	8 N.	54	2,100	Pogalur ...	On line	34	1,500
Manamadura ...	On line	61	1,800	Ariakudi ...	...	35	1,000
Vembatur ...	4 N.	72	1,832	Kamangottai ...	4 N.	34	1,300 ?
Periakottai ...	7 N.	75	1,391	Madukkallattur ...	10 S.	50	3,170 ?
Kanur-Kallurani ...	2½ N.	76	2,086	Abiramam ...	8 S.	57	6,600
Sivagunga ...	On line	72	8,809	Paramakudi ...	On line	47	10,000
Arasanur ...	5 N.	83	1,208	Kavanur ...	3 S.	46	1,080
Thamarakki ...	8 N.	87	1,695	Pamboor ...	5 S.	46	1,080
Kilathari ...	8 N.	87	1,533	Malayakudi ...	4 S.	47	1,180
Mudikandan ...	7 N.	81	1,020	Kattuparamakudi ...	On line	48	1,350
Edaikattur ...	½ N.	79	2,306	Kamuthakudi ...	5 S.	50	1,350
Poovandi ...	4 N.	80	1,500	Perangarai ...	7 S.	53	1,350
Kunnatur ...	4 N.	80	1,264	Partibennur ...	On line	54	3,360
Sekkudi ...	½ N.	83	1,186	Manamadura ...	On line	61	2,400
Vandiyur ...	1 N.	89	1,438	Rajakembiram ...	...	66	1,484
Anayur ...	3 N.	89	1,023	Moganur ...	5 S.	67	1,478
				Tirupachetty ...	On line	74	2,143
				Kilarangiam ...	4 S.	76	1,030
				Paramanur ...	4 S.	76	1,840
				Tirupuvanam ...	On line	79	5,460
				Manalur ...	...	84	1,100
				Kondikai ...	3 S.	84	1,990
				Araniyapuram ...	2 S.	90	3,543
				Anappanarai ...	1 S.	91	3,412

× i.e. via Ramnad. The direct distance is less H.S.

But the Hon Member has mistaken the meaning of the table. It does not purport to be a comparison of the N. & S. Routes. It is merely a statement of towns situate North or South of the South route, towns north being in the left column and south in the right column. F.W.L. 21/5

This table is on the face of it wrong. In any case, Ramnad will be on the line, yet it is credited to the Southern route only; and inasmuch as the line from Toni-torai to Ramnad will [illegible] in any case, the places marked [illegible] near the line, whether [illegible] or the Southern route is taken — [illegible] [illegible] while 3 [illegible] in the absence of a good map [illegible] upon it.

H.S. 16/5/98

VI. The principal commodities of traffic that would be dealt with.

The principal commodities of traffic that would be dealt with are paddy, salt, cocoanuts, dried fish, palmyra rafters, fibre and jaggery, plantains, betel-leaves, chillies, tamarind, turmeric and coriander seeds. Of course there would be the usual imports, such as brass and copper ware, piece-goods, oils, sugar and sundries, which are usually procured from large towns. A small quantity of cotton is shown under Sivagunga exports, and this would be available for traffic. Cotton is grown near Kamuti, but this would probably continue to find its way to Virudupati as at present.

VII. The names of the towns and villages that should be adopted for the Railway stations and the distances between them.

The following would I think be the best:—

NAME OF TOWN OR VILLAGE.	Distance from Toni Torai.	Distance between stations.
1. Toni-Torai	—	...
2. Mandapam	2	2
3. Uchipuli	10	8
4. Kosavankudi	18	8
5. Ramnad	24	6
6. Pogalur	34	10
7. Manjur	38	4
8. Paramakudi	47	9
9. Partibennur	54	7
10. Manamadura	61	7
11. Sivagunga	72	11
12. Tirupachetty	74	13
13. Tirupuvanam	79	5
14. Silamon	85	6
15. Madura	91	6

VIII. Wet and dry land under cultivation.

The area of wet and dry land under cultivation was available at some villages and not at others. For practical purposes however I think it may be safely assumed that four-fifths of the cultivation is wet, the remainder being dry.

IX. The advisability or otherwise of crossing over Palks Strait to Rameswaram, particularly in respect to the construction of Railway wharves in deep water.

I had the advantage of meeting Captain Batt, the Port Officer at Pamban, and this question has been carefully considered. The conclusion come to is that it would be advisable to construct the line to Toni Torai only in the first instance, and wait and see whether the traffic would justify the construction of a bridge over the Pamban Pass. The width of the Pass from Toni Torai to Gibbs' monument on the Island of Rameswaram, is 1¼ miles, of which the channel is about 200 feet. There is always more or less tide running through, and during the strength of the Monsoons it sometimes runs from 6 to 7 miles an hour.

There is no doubt that it would be a great convenience to the pilgrims if the line were taken over the Pass and carried on to Rameswaram (8 miles) and further extended to Thanikoti (26 miles from Pamban), where all pilgrims must go to bathe. I cannot however see that the return in traffic would warrant the outlay.

It happens that Government has recently decided to construct two inexpensive jetties at Pamban (Rs. 10,000 each). Before sanction was accorded some idea was required as to the probable return in the shape of traffic. Statistics were therefore carefully kept and the following figures were given me at Pamban as the average for 3 years (1894-95, 95-96 and 96-97).

Goods other than cotton bale or iron	7,065	Tons.
Wrought or cast-iron weighing from 5 cwts. to 1 ton	13½	,,
Other iron	¾	,,
Other articles weighing ½ ton or upwards ...	508	,,
Elephants	7	
Ponies	95	
Bullocks	17	
Cows and calves	26	
Sheep	2,736	
Passengers (2 children taken as 1 adult) ...	107,219	

These figures represent the whole of the exports and imports of Pamban.

It is not possible to make wharves in deep water for steamers to lie alongside either at Toni Torai, Pamban, Rameswaram, or Thanikoti. There is not sufficient depth of water at the two former places, and on account of the strong current and the low sandy shore, which is continually shifting and reforming, it would not be safe for vessels to approach Rameswaram or Thanikoti. Supposing breakwaters were constructed, one would be practically useless for 6 months in the year; and when the line was carried over Adams Bridge there would be no further use for either, and the outlay, which would be enormous, would be thrown away.

All goods and passengers for Colombo would have to be shipped from the Kundigal Harbour, and it is thought the best arrangement would be to construct two jetties at Toni Torai running out into the sea about 150 or 200 feet, one to be used in the North-East Monsoon, and the other during the South-West. These jetties would be similar to those the Government are constructing on the opposite side of the Pass at Pamban. They would accommodate boats of 10 or 12 tons burthen at any state of the tide; when the Pass is bridged they would be no longer required, but would still be used by local passengers not travelling by Railway. The supply of boats at Pamban is unlimited.

It is not absolutely necessary to have the two jetties at Toni Torai at the commencement; more especially if the Rameswaram pilgrims are not to be considered after they have left the Railway. One would perhaps suffice on the south side. This could be used in either Monsoon, as it would be out of the current and not situated like the two jetties at Pamban, which are indispensable.

As all goods for Colombo would have to be shipped from the south side of the Kundigal Harbour, there would be no necessity for vessels to go through the channel, and they could load down to a deeper draught.

From what is written above it will be seen that in deciding whether the line should be taken over the Pamban Pass, Goods traffic need not be considered so *long as the rail is not taken over Adams Bridge and continued to Colombo.*

The requirements of Pamban, Rameswaram and Thanikoti in the way of goods, are insignificant and need not be taken into consideration. The question then remains "Would the Passenger traffic to Rameswaram and Thanikoti warrant it?

In my opinion it would not.

107,000 passengers are shewn above. Out of these, 47,000 were coolies to and from Ceylon, who would have no object in crossing to Pamban if the line were constructed, but would arrive at and embark from Toni Torai. This leaves 60,000 pilgrims. There is no doubt that a great impetus will be given to the Pilgrim traffic on the opening of the line. Suppose this number were trebled, and the bridge charged as for 10 miles (which passengers would cheerfully pay), this would give Rs. 18,750 per annum. This is equivalent to 5 per cent. on Rs. 375,000, a sum utterly inadequate, I should think, to construct a bridge a mile and a quarter long over the Pamban Pass.

Similarly I doubt whether the Pilgrim traffic alone would warrant the laying of the line from Pamban to Thanikoti, leaving aside the question of bridging the Pass. It would have to be at least four times as much as it is now to pay 4 per cent. if the figures given me at Pamban are correct.

X. The best junction arrangements at Madura.

This question has, I believe, been already discussed, and the conclusion come to was that it would best suit the present station arrangements to have the junction at the south end. If the line follows the south bank, as I think it should, the junction could be easily arranged. The Madura-Pamban line would run into the station parallel with the present Main line from about the other side of the distant signal. By lengthening the present platform in the direction of the Goods shed, and putting in a cross-over, the trains of the two lines could be dealt with on the present platform; or, if this is not considered advisable, another platform could be constructed opposite the present one to the west, with an overbridge or sub-way from one to the other. Main line trains could be dealt with there, the present platform being reserved for Madura-Pamban trains.

Should the line be brought in along the north, there are two forms of junction possible, as pointed out by Mr. Shadbolt in his report. Of the two I should prefer the one by which the Madura-Pamban trains are brought in to the present station. Another station at Madura North seems unnecessary, the present station and staff being quite sufficient to deal with the traffic of both lines.

I made enquiries when at Madura, and do not anticipate there will be any difficulty in getting land. The land on the south bank would be a little more expensive than that on the north. The following figures were given me by the Tahsildar:—

Wet lands, South Bank	...	Rs. 500 per acre.
Do. North "	...	" 400 " "
Dry lands ...	...	" 50 " "
Cocoanut Topes ...	...	" 350 " "

plus Rs. 5 for each cocoanut tree.

XI. Traffic Prospects.

Coaching.—The greater part of the earnings of this line will be derived from Coaching traffic. I make out the Coaching earnings will be about five times as much as the Goods. Taking the number of passengers who actually travel now as registered at Pamban, we get:—

Pilgrims to Rameswaram 60,000 = Rs. 60,000.
Coolies to Ceylon 47,000 = " 47,000.

For the Madura and Manamadura "Chittrai" and the Ramnad "Navarathri," I estimate that at least 60,000 persons will travel and probably an average of 50 miles. This would give Rs. 32,000.

Fairs are held weekly at Ramnad, Pogalur, Paramakudi, Manamadura and Sivagunga, which would probably give another Rs. 10,000 annually.

The ordinary Passenger traffic would, I make out, come to over Rs. 3,00,000 annually. Details shewing how this figure is arrived at are given in Appendix A.

This makes the total estimated Coaching earnings Rs. 4,50,000. In arriving at this, nothing has been allowed for increased traffic owing to the opening of the line. The Pilgrim traffic to Rameswaram would certainly be considerably increased, and I think another Rs. 50,000 might safely be put down for this, which would make the total Coaching earnings Rs. 5,00,000. This is equivalent to about Rs. 94 per mile per week.

Goods.—From the figures given in Appendix B, I estimate that the exports will amount to about 50,000 tons, and imports to about 35,000, giving a return in freight amounting to about Rs. 75,000. But this is only local traffic, and allows nothing for through traffic for Ceylon, which will probably find its way over this route after the line is opened. Rs. 25,000 annually might I think safely be estimated for this traffic, which would bring the Goods earnings up to Rs. 1,00,000.

This would make the gross earnings for both Coaching and Goods Rs. 6,00,000, equivalent to about Rs. 113 per mile per week.

XII. Interest on Capital.

Assuming the cost of constructing the line to be Rs. 43,86,000 (102 miles at Rs. 43,000 per mile, the higher figure estimated by the Consulting Engineer, Madras,) and allowing 60 per cent. of gross earnings for working expenses, there remains Rs. 2,40,000 as nett earnings, equivalent to over 5 per cent. per annum.

TRICHINOPOLY,
December 4th, 1897.

Yours faithfully,
S. J. MERCER,
Assistant Traffic Manager,
South Indian Railway.

APPENDIX A.

MADURA-PAMBAN RAILWAY.

COACHING TRAFFIC.

TONI TORAI—2 miles from Pamban.

Name of Town or Village.	Position.		Population.	Ordinary Traffic.			Fairs and Festivals.		
	Miles from line.	Miles from Pamban.		No. of persons daily.	Where to.	No. of miles.	No of persons yearly.	Where to.	No. of miles.
Pamban ...	...	...	3,000						
Toni Torai ...	On line	2	150		Nil.			Nil.	

Figures registered at Pamban; yearly average of 3 years:—

Emigrants	38,560
Other passengers	8,428
Pilgrims to and from other ports than Mandapam	30,231
To and from Mandapam ...	30,000
Total ...	107,219

MANDAPAM—3 miles from Pamban.

Name of Town or Village.	Position.		Population.	Ordinary Traffic.			Fairs and Festivals.		
	Miles from line.	Miles from Pamban.		No. of persons daily.	Where to.	No. of miles.	No. of persons yearly.	Where to.	No. of miles.
Mandapam ...	On line	3	2,000	Nil.	...	...	...	...	...
Vadalai ...	1 S.	6	1,200	5	Rameswaram ...	3	...	..	...
Marakkapatnam ...	1 S.	5	200	5	Mandapam ...	..	...	...	...

APPENDIX A—*continued.*

UCHIPULI—12 miles from Pamban.

Name of Town or Village.	Position.		Population.	Ordinary Traffic.			Fairs and Festivals.		
	Miles from line.	Miles from Pamban.		No. of persons daily.	Where to.	No. of miles.	No. of persons yearly.	Where to.	No. of miles.
Perappan Valasai.	1 N.	11	500	5	Rameswaram...	10	40	Madura Chittrai ...	81
Irumeni ...	½ N.	11	1,000	3	Ramnad ...	14	...	Nil.	...
Kunjavalasai ..	½ S.	6	200	3	Mandapam ...	8	...	Nil.	...
Uchipuli ...	On line	12	750	2	Ramnad ...	14	...	Nil.	...
Palkolam ...	1½ N.	8	650	5	Rameswaram...	10	1,000	Attend Mosque here annually from	15
Sembadiyarkolam.	1 S.	15½	280	2	Ramnad ...	14	10	Madura Chittrai ..	81
Emmanamkondam...	½ S.	14	350	1	do. ...	14	...	Nil.	..
Nagachi ...	1 N.	14½	500	4	do. ...	14	50	Madura Chittrai ...	81
Athangarai ...	3 N.	15½	1,400	7	do. ...	14	40	do. ...	81
Perunkolam ...	1 S.	17	1,000	5	do. ...	14	40	do. ...	81
Periapatnam ...	5 S.	18	2,500	5	do. ...	14	600	Attend Roman Catholic festival here from	15
Puthumadan ...	3 S.	14	2,000	2	Rameswaram...	10	10	Madura Chittrai ...	81
Tamaraikulam ...	2 S.	18	600	Nil.	...	...	50	do. ...	81
Rettavoorny ...	3 S.	18	700	1	Ramnad ...	14	10	do. ...	81
Kumberam ...	2 S.	14½	350	1	do. ...	14	10	do. ...	81
Velleriodai ...	4 S.	20	280	1	do. ...	14	2	do. ...	81
Karan ...	5 S.	20	400	1	do. ...	14	10	do. ...	81
Manangudi ...	2 S.	18½	500	1	do. ...	14	10	do. ...	81
Nainamarkam ...	5 S,	18½	350	1	do. ...	14	10	do. ...	81

APPENDIX A—*continued.*

KOSAVANKUDI—20 miles from Pamban.

Name of Town or Village.	Position.		Population.	Ordinary Traffic.			Fairs and Festivals.		
	Miles from line.	Miles from Pamban.		No. of persons daily.	Where to.	No. of miles.	No. of persons yearly.	Where to.	No. of miles.
Valudur ...	1 S.	17	1,000	2 2	Ramnad ... Rameswarm ...	6 18	40	Madura Chittrai ...	73
Alagangulam ...	3 N.	17½	2,000	10	Ramnad ...	6	100	do. ...	73
Puduvalasai ...	4 N.	19	750	3	do. ...	6	5	do. ...	73
Kosavankudi ...	¼ N.	20	550	4	do. ...	6	30	do. ...	73
Madakottur ...	1 N.	20	900	2	do. ...	6	30	do. ...	73
Valantherawai ...	1 S.	19	811	2	do. ...	6	10	do. ...	73
Regunathapuram..	5 S.	17½	1,300	5	do. ...	6	40	do. ...	73
Perandi ...	2 N.	18½	500	1	do. ...	6	10	do. ...	73
Thiruvuthayal .. Kaloovoorny ...	1½ N.	19	600	2	do. ...	6	30	do. ...	73
Kiddakottai ...	2 S.	10	1,126	8	do. ...	6	50	do. ..	73

APPENDIX A—*continued.*

RAMNAD—26 miles from Pamban.

Name of Town or Village.	Position.		Population.	Ordinary Traffic.			Fairs and Festivals.		
	Miles from line.	Miles from Pamban.		No. of persons daily.	Where to.	No. of miles.	No. of persons yearly.	Where to.	No. of miles.
Kothakottai ...	5 S.	22	1,200	...	...	...	50	Madura Chittrai ...	67
Peravoor ...	2 N.	26	650	...	...	...	50	do. ..	67
Pullangudi ...	4 N.	26	400	1	Paramakudi ...	23	30	do. ...	67
Tiruvaloor ...	3 N.	27	1,000	1	do. ...	23	100	do. ...	67
Karandal ...	3 N.	27	500	1	do. ...	23	40	do. ...	67
Sakkarakottai ...	2 S.	26	3,800	5	do. ...	23	200	do. ...	67
Devipatnam ...	10 E.	36	4,000	20 10 10	Pamban ... Ramnad ... Paramakudi ...	26 5 23	100	do. ...	67
Kilakarai ...	10 W.	36	12,396	20	Ramnad ...	5	200	do. ...	67
Tirupullani ...	8 W.	34	2,300	10	do. ...	5			
Ramnad ...	On line	26	13,600	10 10 5 40 10	Paramakudi ... Manamadura... Rameswaram... Paramakudi ... Pamban ...	23 37 26 23 26	100 100 50 100 500 200 300	Madura Chittrai ... Rameswaram... Sreerungam .. Tirupati ... Madura .. Sreerungam ... Cauvery ...	67 26 67 67 67 67 67
Kavanur ...	4 N.	28	800	5 2	Paramakudi ... Madura ...	23 67	30	Madura Chittrai ...	67
Ramnad fair every Friday. Navarathri festival yearly.							1,000 5,000	Weekly Fair ... Navarathri ...	20 50
Puttendal ...	2 S.	27	210	1 1	Paramakudi ... Madura ...	23 67	10	Madura Chittrai.	67
Chittur ...	1 N.	30	210	1 1	Paramakudi ... Madura ...	23 67	...	...	...
Ekkakudi ...	4 S.	31	800	1 1	Paramakudi ... Madura ...	23 67	40	Madura Chittrai ...	67
Vairavanendal ..	3 N.	31	450	1 1	Paramakudi ... Madura ...	23 67	100	Nagur *viâ* Madura..	67
Karkudi ...	3 N.	31	280	1 1	Paramakudi ... Madura ...	23 67	20	Madura Chittrai.	67
Settanendal ...	1 S.	31	200	1 1	Paramakudi ... do. ..	23 23	10 5	do. .. do. ...	67 67
Viravanur ...	4 N.	31	500	1 1 1	Madura ... Paramakudi ... Madura ...	67 23 67	... 50	... do. ...	... 67
				173			8,385		

APPENDIX A—*continued.*

POGALUR—36 miles from Pamban.

Name of Town or Village.	Position.		Population.	Ordinary Traffic.			Fairs and Festivals.		
	Miles from line.	Miles from Pamban.		No. of persons daily.	Where to.	No. of miles.	No. of persons yearly.	Where to.	No. of miles.
Landai ...	1 S.	31	170	1	Paramakudi ...	13	3	Madura Chittrai.	57
Karunkolum ...	½ S.	32	350	1	Paramakudi ...	13	15	do. ...	57
Ettiyal ...	On line	33	360	1 1 1	Ramnad ... Paramakudi ... Madura ...	10 13 57	40	do. ...	57
Sevour ...	4 N.	32	500	2 2	Paramakudi ... Ramnad ...	13 10	50	do. ...	57
Anikkudi ...	1 S.	33	170	2 2	Paramakudi ... Ramnad ...	13 10	5	do. ...	57
Chuttramkudi ...	2 S.	33	480	1 1	Ramnad ... Paramakudi ...	10 13	30	do. ...	57
Alangulam ...	3 S.	33	264	1 1	Ramnad ... Paramakudi ...	10 13	20	do. ..	57
Mallal ...	4 S.	34	460	5 5 1	Ramnad ... Paramakudi ... Madura ...	10 13 57	30	do. ...	57
Urathur ...	4 S.	33	160	1 1	Ramnad ... Paramakudi ...	10 13	20	do. ...	57
Malangudi ...	3 S.	33	520	1 1	Ramnad ... Paramakudi ...	10 13	20	do. ...	57
Theayanur ...	½ S.	34	320	1 1	Ramnad ... Paramakudi ...	10 13	30	do. ...	57
Semanur ...	2 S.	33	520	7 7 1	Paramakudi ... Ramnad ... Madura ...	13 10 57	30	do. ...	57
Kenkondan ...	3 N.	36	1,020	4 10 10	Madura ... Ramnad ... Paramakudi ...	57 10 13	60	do. ...	57
Nagachiperi ...	3½ N.	35	500	1 1 1	Ramnad ... Paramakudi .. Madura ...	10 13 57	30	do. ...	57
Pandiyur ...	4 N.	36	500	1 1 1	Ramnad ... Paramakudi ... Madura ...	10 13 57	30	do. ...	57
Menanthi ...	2½ N.	36	600	2 2 1	Ramnad ... Paramakudi ... Madura ...	10 13 57	60	do. ...	57
Carried over...	...	...	...	84			473		

APPENDIX A—*continued.*

POGALUR—36 miles from Pamban—*continued.*

Name of Town or Village.	Position.		Population.	Ordinary Traffic.			Fairs and Festivals.		
	Miles from line.	Miles from Pamban.		No. of persons daily.	Where to.	No. of miles.	No. of persons yearly.	Where to.	No. of miles.
Brought over...	...	...	...	84			473		
Pogalur ...	On line	36	1,500	10 10 1	Ramnad ... Paramakudi ... Madura ...	10 13 57	100 30 500	Madura Chittrai ... Chidambaram .. Attend Fair here every Friday within.	57 57 6
Muthuvayal ...	2 N.	37	650	5 5 1	Ramnad ... Paramakudi ... Madura ...	10 13 57	30	Madura Chittrai ...	57
Kamankottai ...	4 N.	38	1,300	10 10 1	Ramnad ... Paramakudi ... Madura ...	10 13 57	100	do. ...	57
Kolikottai ...	4 N.	38	250	1 1	Ramnad ... Paramakudi ...	10 13	10	do. ...	57
Kolanur ...	4½ N.	38	260	1 1	Ramnad ... Paramakudi ...	10 13	10	do. ...	57
Valasai ...	4½ N.	39	500	1 1	Ramnad ... Paramakudi ...	10 13	20	do. ...	57
Meiyanendal ...	4½ N.	39	170	1 1	Ramnad ... Paramakudi ...	10 13	10	do. ...	57
Serahikottai ...	5 N.	40	730	1 1 1	Paramakudi ... Ramnad ... Madura ...	13 10 57	50 50	Madura ... Mayavaram and Chidambaram ...	57 57
Kalliyadiyundul...	5 N.	42	360	1 1 1	Paramakudi ... Ramnad ... Madura ..	13 10 57	35 35	Madura ... Sreerungam ...	57 57
Puthur ...	1 S.	37	700	1 1	Paramakudi ... Ramnad ...	13 10	30	Madura ...	57
Ariakudi ...	1 S.	37	1,000	1 1 1	Ramnad .. Paramakudi ... Madura ...	10 13 57	150	do. ...	57
Kilembal ...	2 S.	39	400	1 1 1	Ramnad ... Paramakudi ... Madura ...	10 13 57	30	do. ...	57
Kilakottai ...	½ S.	40	350	1	Paramakudi ...	13	10	do. ...	57
				160			1,673		

APPENDIX A—*continued.*

MANJUR—40 miles from Pamban.

Name of Town or Village.	Position.		Population.	Ordinary Traffic.			Fairs and Festivals.		
	Miles from line.	Miles from Pamban.		No. of persons daily.	Where to.	No. of miles.	No. of persons yearly.	Where to.	No. of miles.
Karuttanendal ...	3 N.	40	300	1 1	Ramnad ... Paramakudi ...	14 9	10	Madura Chittrai	53
Pullattur ...	2 N.	41	350	1 1 1	Ramnad ... Paramakudi ... Madura ...	14 9 53	20	do. ...	53
Vananganendal ...	1½ N.	41	180	1	Paramakudi ...	9	15	do. ...	53
Pottithatti ...	1½ S.	43	330	1 1	Paramakudi ... Ramnad ...	9 14	20	do. ...	53
Thulukakarungalam.	2 S.	41	270	1	Paramakudi ...	9	15 20	do. ... Nagore ...	53 53
Pandivilasai ...	1 S.	41	350	1 1	Paramakudi ... Ramnad ...	9 14	10	Madura Chittrai	53
Manjur ...	1½ S.	40	800	5 5 2	Paramakudi ... Ramnad .. Madura ...	9 14 53	50 30	Madura Chittrai Nagore ...	53 53
Kilayur ...	4 S.	45	750	10 20	Madura ... Ramnad ...	53 14	100 100	Madura ... Ramnad ...	53 14
Nimmany ...	¼ N.	45	550	4 4	Madura ... Ramnad ...	53 14	30 30	Madura ... Ramnad ...	53 14
				61			450		

APPENDIX A—*continued.*

PARAMAKUDI—49 miles from Pamban.

Name of Town or Village.	Position.		Population.	Ordinary Traffic.			Fairs and Festivals.		
	Miles from line.	Miles from Pamban.		No. of persons daily.	Where to.	No. of miles.	No. of persons yearly.	Where to.	No. of miles.
Pagavandi ...	2 N.	45	630	5 10 2	Ramnad ... Madura ... Rangoon *viâ* Madura	23 44 44	50 50	Madura Chittrai Ramnad ...	44 23
Vallam ...	3 N.	45	893	1 2 1	Ramnad ... Madura ... Rangoon *viâ* Madura	23 44 44	50 50	Madura .. Ramnad ..	44 23
Kilakudi ...	2 N.	45	407	5 5	Madura ... Ramnad ...	44 23	20 20	Madura Chittrai Ramnad ...	44 23
Arianendal ...	On line.	46	600	4 3	Madura ... Ramnad ...	44 23	200 40	Madura Chittrai Ramnad Navarathri	44 23
Nainarkoil ...	6 N.	46	1,085	10 7	Madura ... Ramnad ...	44 23	50 70	Madura ... Ramnad ...	44 23
Car festival during May, 15,000 attend from Paramakudi, Ramnad and adjacent villages—(Road from Paramakudi). Navarathri festival, 3,000 attend from same places.							50 5,000 1,000	Sreerungum	44 20 20
Valasaiputhur ...	5 N.	46	300	2 6	Madura ... Ramnad ..	44 23	100	Madura Chittrai	44
Urapuli ...	1½ N.	47	870	4 5	Madura ... Ramnad ...	44 23	50 50	do. ... Ramnad ..	44 23
Vendoni ...	1 S.	48	894	5 4	Madura ... Ramnad ...	44 23	200	Madura ...	44
Venketangurichi.	3 S.	48	850	5 7 1	Madura .. Ramnad ... Rangoon .	44 23 44	50 60	Madura ... Ramnad ...	44 23
Kanjaiendal ...	5 S.	48	330	5 5	Madura ... Ramnad ...	44 23	50 100	Ramnad ... Madura ...	23 44
Paramakudi ...	On line	49	10,000	20 28 18	Ramnad ... Madura ... Sivagunga ...	23 44 29	2,000 500 1,000	Madura Chittrai Sreerangam and Tiruvannamalai Ramnad ...	44 44 23
Fair every Thursday, 2,000 attend. Festival in April, 3,000 attend from adjacent villages within 10 miles.							10,000 1,000	Radius ... do. ...	10 10
Karanur ...	3 S.	48	1,080	5 7	Madura ... Ramnad ...	44 23	200 50	Madura ... Ramnad ...	44 23
Pamboor ...	5 S.	48	1,080	7 10	Madura ... Ramnad ...	44 23	200 100	Madura ... Ramnad ...	44 23
Perambacheri ...	3 N.	49	350	5	Manamadura ...	18	50 30	Madura ... Ramnad ...	44 23
Emmaneswaram ...	On bank	49	5,000	10 20 10 5	Ramnad ... Madura ... Manamadura ... Tirupuvanam ...	23 44 18 36	50 100 500	Nagore .. Sreerungam ... Madura Chittrai	44 44 44

APPENDIX A—*continued.*

PARAMAKUDI—49 miles from Pamban—*continued.*

Name of Town or Village.	Position.		Population.	Ordinary Traffic.			Fairs and Festivals.		
	Miles from line.	Miles from Pamban.		No. of persons daily.	Where to.	No. of miles.	No. of persons yearly.	Where to.	No. of miles.
Saligramam ...	10 N.	46	2,460	7 10	Madura ... Ramnad ...	44 23	400 200	Madura ... Ramnad ...	44 23
Elayangudi ...	7 N.	49	5,240	50 50	do. ... Madura ...	23 44	600 1,000	Nagore ... Rangoon ...	44 44
Fair every Saturday, 300 attend from adjacent villages.									
Alamadurai ...	5 N.	49	540	5 5	Madura ... Ramnad ...	44 23	50	Madura Chittrai.	44
Anjalnadangulam.	5 N.	49	440	4 4	Madura ... Ramnad ...	44 23	100	do. ...	44
Malayakudi ...	4 S.	49	1,180	7 5	Madura ... Ramnad ...	44 23	300	do. ...	44
Vilattur ...	5 S.	47	670	5 4	Madura ... Ramnad ...	44 23	100 50	Madura ... Ramnad ...	44 23
Tholur ...	5 S.	49	500	5 4	Madura ... Ramnad ...	44 23	100	Rangoon or Madura	44
Kattuparamakudi.	On line	50	1,350	5 2	Madura ... Ramnad ...	44 23	400 200	Madura ... Ramnad ...	44 23
Thelichathanullur.	On line	51	460	10 5	Madura ... Ramnad ...	44 23	200 20	Madura ... Ramnad ...	44 23
Muneavandi ...	5 N.	52	800	2 4 4	Madura ... Manamadura ... Sivagunga ...	44 15 26	100	Madura Chittrai..	44
Katchathanullur...	On line	52	450	2 5	Madura ... Sivagunga ...	44 26	50 50	Madura ... Ramnad ...	44 23
Nettur ...	4 W.	56	2,100	4 10 10	Madura ... Sivagunga ... Manamadura...	44 26 15	200	Madura ...	44
Fair every Monday, 300 attend.									
Tiruvallor ...	9 N.	...	...	5 5	Sivagunga ... Manumadura...	26 15	300 50	Nagore ... Madura ...	44 44
				482			16,560		

APPENDIX A—*continued.*

PARTIBENNUR—56 miles from Pamban.

Name of Town or Village.	Position.		Population.	Ordinary Traffic.			Fairs and Festivals.		
	Miles from line.	Miles from Pamban.		No. of persons daily.	Where to.	No. of miles.	No. of persons yearly.	Where to.	No. of miles.
Abiramam ...	14 from Paramakudi.	50	6,600	20 20 5	Madura ... Paramakudi ... Ramnad ...	37 8 30	300 500 50	Madura ... Nagore ... Ramnad ...	37 37 30
Fair every Monday, 500 attend.									
Kamuthakudi ...	5 S.	52	1,350	10 5 5	Madura ... Ramnad ... Sivagunga ...	37 30 18	300 150	Madura ... Ramnad ...	37 30
Pothuvakudi ...	5 S.	52	370	5 3	Madura ... Ramnad ...	37 30	50 50	Madura ... Ramnad ...	37 30
Vengaloor ...	5 S.	53	350	7 5	Madura ... Ramnad ...	37 30	100	Nagore ...	37
Perangarai ...	7 S.	55	1,350	5 7 4	Mamadura ... Madura ... Paramakudi ...	7 37 8	50 50 ...	Madura ... Ramnad	37 30 ...
Partibennur ...	On line	56	3,360	10 10	Madura ... Paramakudi ...	37 8	200 100 100	Madura ... Nagore ... Ramnad ...	37 37 30
Fair every Saturday, 500 attend.							2,500	Radius ...	10
Bramanakurichi ...	½ S.	56	330	4 5	Manamadura... Paramakudi ...	7 8	10	Madura Chittrai	37
				130			2,010		

APPENDIX A—*continued.*

MANAMADURA—63 miles from Pamban.

Name of Town or Village.	Position.		Population.	Ordinary Traffic.			Fairs and Fetivals.		
	Miles from line.	Miles from Pamban.		No. of persons daily.	Where to.	No. of miles.	No. of persons yearly	Where to.	No. of miles.
Santhanur Karaikudi...	On line	60	330	3 4	Paramakudi ... Sivagunga ...	15 11	20 5	Madura Chittrai . Manamadura.	30
Thennavarayan Pudukota .	On line	57	422	8 7	do. ... Paramakudi ...	11 14	20	Madura Chittrai .	30
Anadikottai ...	3 S.	62	268	4	Sivagunga ...	11	3	do. ...	30
Kila Pasalai ...	1 S.	63	826	5 5	do. ... Madura ...	11 30	5	do. ...	30
Mela Pasalai ...	3 S.	68	350	2	Sivagunga ...	11	5	do. ...	30
Anavasal ...	4 S.	68	504	Nil.	Nil. ...	...	5	do. ...	30
Kilamalakudi ...	2 S.	66	231	Nil.	Nil. ..	...	5	do. ...	30
Manamadura ...	On line	63	4,200	70 20 10	Madura ... Paramakudi ... Sivagunga ...	30 14 11	500 200 200 300 1,000 500	do. ... Tirupuvanam... Sivagunga ... Paramakudi .. Nainarkoil ... Ramnad ...	30 18 10 15 15 38
Market every Thursday, 500 attend.							2,500	Radius of (50 weekly).	20
Rajakembiram ...	On line	67½	1,484	5 5	Sivagunga ... Madura ...	11 30	50	Madura Chittrai .	30
Kurungakottai ...	On line	68	330	2	Madura ...	30	5	do. ...	30
Moganur ...	5 S.	69	1,478	5 5	Paramakudi ... Madura ...	14 30	50	do. ...	30
				160			5,368		

APPENDIX A—*continued*.

SIVAGUNGA—74 miles from Pamban.

NAME OF TOWN OR VILLAGE.	POSITION.			ORDINARY TRAFFIC.			FAIRS AND FESTIVALS.		
	Miles from line.	Miles from Pamban.	Population.	No. of persons daily.	Where to.	No. of miles.	No. of persons yearly.	Where to.	No. of miles.
Vembatur ...	4 N.	74	1,832	7 5 3	Manamadura ... Sivagunga ... Madura ...	11 ... 20	50	Madura Chittrai..	20
Periakottai ...	7 N.	77	1,391	3 2	Manamadura ... Madura ...	11 20	40	do. ...	20
Kanur Kallurani ...	2½ N.	78	2,086	7	do. ...	20	50	do. ...	20
Mulaikulam ...	4 N.	79	294	Nil.	Nil. ...	...	5	do. ...	20
Kandany ...	8 N.	73	300	Nil.	Nil. ...	...	5	do. ...	20
Vainiangudi ...	10 N.	...	480	Nil.	Nil. ...	...	5	do. ...	20
Pananjur ...	8 N.	79	345	2	Madura ...	20	7	do. ...	20
Paramattur ...	4 N.	...	639	2	do. ...	20	10	do. ...	20
Sivagunga ...	On line	74	8,809				150 30	do. ... Chidambaram and Srirangam.	20 20
Tahsildar's Statistics. Passengers out of Sivagunga over 10 miles, 57,546. Do. do. under 10 miles, 10,923.									15
Passengers into Sivagunga from over 10 miles, 61,592. Do. do. from under 10 miles, 11,918.									15
Market every Wednesday 1,000 attend.							5,000	From radius of 7 miles.	7
Ayasanur ...	5 N.	85	1,208	2	Madura ...	20	10	Madura Chittrai ..	20
Sembur ...	N.	86	262	2	Madura ...	20	7	do. ...	20
Papakkudi ...	N.	87	433	2	Madura ...	20	7	do. ...	20
Elandankudi ...	N.	80	304	2	Madura ...	20	10	do. ...	20
Thamarakky ...	18 N.	89	1,695	5	Madura ...	20	20	do. ...	20
Kilatharai ...	N.	89	1,533	3	Madura ...	20	20	do. ...	20
Mudikandam ...	N.	82	1,020	2	Madura ...	20	10	do. ...	20
				44			5,436		

APPENDIX A—*continued*.

TIRUPACHETTY—76 miles from Pamban.

NAME OF TOWN OR VILLAGE.	POSITION.			ORDINARY TRAFFIC.			FAIRS AND FESTIVALS.		
	Miles from line.	Miles from Pamban.	Population.	No. of persons daily.	Where to.	No. of miles.	No. of persons yearly.	Where to.	No. of miles.
Kathikolam ...	4 S.	68	818	7 3	Manamadura... Sivagunga ...	13 24	5 5	Madura Chittrai.. Manamadura...	17 13
Kottanur ...	5 S.	69	759	7 3	Manamadura... Sivagunga ...	13 24	5 5	Madura ... Manamadura...	17 13
Manadu ..	2½ S.	73	546	5 2	Madura ... Sivagunga ...	17 24	10 5	Madura ... Manamadura...	17 13
Muthunandal ...	On line	71	504	3 2	Manamadura... Sivaganga ...	13 24	7 3	Madura ... Manamadura...	17 13
Sembaraynandal ..	On line	74	343	3	Manamadura...	13	3 2	Madura ... Manamadura...	17 13
Malavaraynandal ..	1 N.	75	640	5 5 5	Manamadura... Sivagunga ... Madura ...	13 24 17	7 3	Madura Chittrai.. Manamadura...	17 13
Valiakuruchi ...	1 S.	75	827	3 3 4	Manamadura... Sivagunga ... Madura ...	13 24 17	10	Madura ...	17
Thanjakur ...	3 S.	76	520	5 2	Manamadura... Sivagunga ...	13 24	3 2	Madura ... Manamadura...	17 13
Kuvalavali ...	4 S.	76	508	3 2 2	Manamadura... Sivagunga ... Madura ...	13 24 17	3 2	Madura .. Manamadura...	17 13
Tirupachetty ...	On line	76	2,143	5 7 5	Madura ... Manamadura... Sivagunga ...	17 13 24	50 15	Madura ... Manamadura...	17 13
Vilankulam ...	1½ S.	77½	595	3 2	Manamadura... Sivagunga ...	13 24	7 3	Madura ... Manamadura..	17 13
Seikalathur ...	1 N.	77	255	3 2	Madura ... Sivagunga ..	17 24	3 2	Madura ... Manamadura...	17 13
Edaikattur ...	½ N.	71	2,306	10 7 3	Sivagunga ... Manamadura... Madura ...	24 13 17	20 2	Madura ... Sreerangam ...	17 17
Roman Catholic festival during April, 2,000 attend from radius—10 miles.									
Sirukudi ...	1½ N.	72	358	4 3	Manamadura... Sivagunga ...	13 24	3 2	Madura ... Manamadura...	17 13
Papankulam ...	2 N.	73	305	4 3	Sivagunga ... Manamadura...	24 13	3 2	Madura ... Manamadura...	17 13
Pathinathamkottai	1 N.	73	723	2 3 3	Madura ... Sivagunga ... Manamadura...	17 24 13	7	Madura ...	17
Carried over...				143			199		

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the south bank of the Vagai river to

APPENDIX A—*continued.*

TIRUPACHETTY—76 miles from Pamban—*continued.*

Name of Town or Village.	Position.		Population.	Ordinary Traffic.			Fairs and Festivals.		
	Miles from line.	Miles from Pamban.		No. of persons daily.	Where to.	No. of miles.	No. of persons yearly.	Where to.	No. of miles.
Brought forward..				143			199		
Tudainatham ...	1 N.	78½	501	3 2	Manamadura... Sivagunga ...	13 24	7 3	Madura ... Manamadura...	17 13
Kilasarykulam ...	4 S.	76	370	5 3	Tirupuvanam .. Madura ...	5 17	20 20	Madura ... Tirupuvanam..	17 5
Melasarykulam ...	3 S.	78	440	5 5	Madura ... Tirupuvanam ..	17 5	20 20	Madura ... Tirupuvanam...	17 5
Kilarangiam ...	4 S.	78	1,030	10 10	Tirupuvanam .. Madura ...	5 17	300 300	Madura ... Tirupuvanam...	17 5
Papangulam ...	3 S.	78	280	4 2	Tirupuvanam... Madura ...	5 17	30 30	Madura ... Tirupuvanam,...	17 5
				192			949		

APPENDIX A—*continued.*

TIRUPUVANAM—81 miles from Pamban.

Name of Town or Village.	Position.		Population.	Ordinary Traffic.			Fairs and Festivals.		
	Miles from line.	Miles from Pamban.		No. of persons daily.	Where to.	No. of miles.	No. of persons yearly.	Where to.	No. of miles.
Enadi ...	2 N.	76	900	...	...	...	50	Madura ...	12
Kanaikangudi ...	1 N.	77	500	6 4	Tirupuvanam .. Madura ...	... 12	40	do. ...	12
Paramanur ...	4 S.	78	1,840	3 7	Manamadura... Madura ...	18 12	300	do. ...	12
Ladanandal ...	On bank.	79	640	6	do. ...	12	150	do. ...	12
Alianagaram ...	3 S.	79	760	5 5	Manamadura... Madura ...	18 12	200	do. ..	12
Kuliandur ...	3 S.	79	360	5	do. ...	12	100	do. ...	12
Vaniarandal ...	2 S.	80	370	3	do. ...	12	40	do. ...	12
Muthuvanthidal ...	3 S.	79	550	5	do. ...	12	100	do. .	12
Sellapanandal ...	On bank.	81	390	3	do. ..	12	100	do. ...	12
Ambalathudi ...	5 S.	81	460	4 4 4	do. ... Manamadura... Paramakudi ...	12 18 32	150	do. ...	12
Madapuran ...	On bank	82	540	6	Madura ...	12	100	do. ...	12
Tirupuvanam ...	On line	82	5,460	30 20 20	do. ... Manamadura... Paramakudi ...	12 18 32	2,000 1,500	do. ... Radius ...	12 5
Market every Tuesday, 300 attend.									
Poovandi ...	4 N.	82	1,500	20	Madura ..	12	500	Madura ...	12
Kannathur ...	4 N.	82	1,264	10	do. ...	12	40	do. ...	12
Varachiyur ...	5 N.	82	504	5	do. ...	12	15	do. ..	12
Karseri ...	½ N.	81	274	5	do. ...	12	10	do. ...	12
Kalimangalam ...	2 N.	81	546	5	do. ...	12	15	do. ...	12
Thattankulam ...	On bank.	82	280	2	do. ...	12	100	do. ...	12
Angadimangalam .	¼ N.	84	664	5	do. ...	12	20	do. ...	12
Ananjaiyur ...	1 N.	84	372	5	do. ...	12	10	do. ...	12
Kalukerkadi ...	2 S.	84	680	10	do. ...	12	30	do. ..	12
Vellur ...	3 S.	84	600	5	do. ...	12	100	do. ...	12
Rajakur ...	4½ N.	84	495	5	do. ...	12	15	do. ...	12
				211			5,685		

APPENDIX A—*continued.*

SILAMON—87 miles from Pamban.

Name of Town or Village.	Position.		Population.	Ordinary Traffic.			Fairs and Festivals.		
	Miles from line.	Miles from Pamban.		No. of persons daily.	Where to.	No. of miles.	No. of persons yearly.	Where to.	No. of miles.
Sekkudi ...	½ N.	85	1,186	10 10	Madura ... Tirupuvanam ..	6 6	30	Madura ...	6
Pattam ...	5 S.	85	260	6	Madura ...	6	20	do. ...	6
Manalur ...	S.	86	1,100	10 5	Madura ... Tirupuvanam ..	6 6	500	do. ...	6
Kondikai ...	3 S.	86	1,990	5 15	Manamadura... Madura ...	24 6	300	do. ...	6
Kulikudi ...	2 N.	86	273	5	Madura ...	6	50	do. ...	6
Car festival here in June, 150 attend within radius of 5 miles.									
Elamanur ...	3 N.	86	286	5	Madura ...	6	10	do. ...	6
Thirumukkar ...	4 N.	87	450	10	Madura ...	6	15	do. ...	6
Puliankulam ...	S.	88	387	10	Madura ...	6	10	do. ...	6
Silamon ...	On line	87	972	10 10	Madura ... Tirupuvanam ..	6 6	30	do. ...	6
Killadi ..	1 S.	88	340	4 2	Madura ... Tirupuvanam ..	6 6	100	do. ...	6
Sakkyamangalam	N.	89	856	15 10	Madura ... Tirupuvanam ..	6 6	30	do. ...	6
Uthangudi ...	5 N.	89	545	10	Madura ...	6	15	do. ...	6
Perungudi ..	5 S.	89	991	15	do. ...	6	30	do. ...	6
Viraganur ...	S.	90	942	15	do. ...	6	30	do. ...	6
Pauayur ...	3 S.	90	996	15	do. ...	6	30	do. ...	6
Chinthamani ...	3 S.	90	791	12	do. ...	6	25	do. ...	6
Sathathatti ...	4 S.	90	460	8	do. ...	6	200	do. ...	6
				217			1,425		

APPENDIX A—*continued.*

MADURA—93 miles from Pamban.

Name of Town or Village.	Position.		Population.	Ordinary Traffic.			Fairs and Festivals.		
	Miles from line.	Miles from Pamban.		No. of persons daily.	Where to.	No. of miles.	No. of persons yearly.	Where to.	No. of miles.
Vandiyur ...	On Bank	91	1,438	25	Madura ...	...	50	Madura ...	...
Aundikottaram ...	¾ N.	91	398	10	do. ...	...	10	do. ...	...
Anayur ...	3 N.	91	1,023	20	do. ...	...	30	do. ..	...
Tiruppalai ...	3 N.	91	466	10	do. ...	...	15	do. ..	...
Saminatham ...	3 S.	91	584	10	do. ...	...	20	do. ...	...
Melamadai ...	½ N.	91½	453	10	do. ...	...	15	do. ...	...
Aiyenpapakudi ...	2½ S.	91½	891	15	do. ...	...	50	do. ...	...
Avaniyapuram ...	2 S.	92	3,543	50	do. ...	...	50	do. ...	...
Manageri ...	½ N.	92½	652	10	do. ...	...	20	do. ...	...
Thalakulam ...	N.	92½	492	10	do. ...	...	15	do. ...	...
Annappanadi ...	1 S.	93	3,412	50	do. ...	...	150	do. ...	...
Villupuram ..	1 S.	93	936	20	do. ...	...	100	do. ...	...
Iravathanallur ...	1 S.	93	931	15	do. ...	...	50	do. ...	...

APPENDIX A—*concluded.*

ABSTRACT TABLE.

Stations.	Ordinary Traffic.				Fairs and Festivals.			
	Daily.				Yearly.			
	Pass.	Amount.			Pass.	Amount.		
		Rs.	A.	P.		Rs.	A.	P.
Toni Torai	130	46,009	0	0	60,231	58,976	0	0
Mandapam	5	57	0	0	...	...	...	...
Uchipuli	50	4,752	0	0	1,840	924	0	0
Kosavankudi	41	1,754	0	0	345	532	0	0
Ramnad	173	29,430	0	0	8,385	8,890	0	0
Pogalur	160	20,016	0	0	1,673	1,478	0	0
Maujur	61	11,112	0	0	450	398	0	0
Paramakudi	482	119,010	0	0	27,660	12,590	0	0
Partibenuur	130	24,220	0	0	4,510	1,776	0	0
Manamadura	160	26,720	0	0	5,368	2,366	0	0
Sivagunga	126	15,238	0	0	6,436	1,280	0	0
Tirupachetty	192	21,934	0	0	2,949	650	0	0
Tirupuvanam	211	24,450	0	0	20,685	2,686	0	0
Silamon	217	10,582	0	0	1,575	193	0	0
Total ...	2,138	3,55,284	0	0	142,007	92,739	0	0

APPENDIX B.

MADURA-PAMBAN RAILWAY.

GOODS TRAFFIC.

TONI TORAI—2 miles from Pamban.

Name of Town or Village.	Position.		Goods available for trade.		Probable distance carried.	Imports.	Weight in Tons.	Probable distance carried.
	Miles from line	Miles from Pamban.	Description.	Weight in Tons.				
Toni Torai ...	On line	2	Nil ...	...	...	Nil.	...	...
Pamban ...	...	...	...	...	...	Sundries ...	500	94
Rameswaram ...	...	8	...	...	...	Rice ... Sundries ...	30 150	8 8

EXPORTS.

Dried fish and cocoanuts sent to Colombo.

MANDAPAM—3 miles from Pamban.

Name of Town or Village.	Position.		Goods available for trade.		Probable distance carried.	Imports.	Weight in Tons.	Probable distance carried.
	Miles from line.	Miles from Pamban.	Description.	Weight in Tons.				
Mandapam ...	On line	3	Nil.	...	...	Rice ... Sundries ...	100 50	26 26
Vadalai ...	1 S.	6	Nil.	...	...	Rice ... Sundries ... Salt ...	40 30 30	26 26 26
Marakkapatnam ..	1 S.	5	...	...	...	Salt ...	10	26
							260	

APPENDIX B—*continued*.

UCHIPULI—12 miles from Pamban.

Name of Town or Village.	Position.		Goods available for trade.			Imports.	Weight in Tons.	Probable distance carried.
	Miles from line.	Miles from Pamban.	Description.	Weight in Tons.	Probable distance carried.			
Perappanvalasai...	1 N.	11	Nil. ...	...	...	Nil. ...	...	...
Irumeni ...	½ N.	11	Tobacco ...	15	15	Dried fish ...	20	11
						Sundries ...	50	15
Kunjavilasai ...	½ S.	6	...	...	...	Salt ...	10	11
Uchipuli ...	On line	12	Nil. ...	...	...	Sundries ...	25	15
Sembadiyarkolum.	1 S.	15½	Firewood ...	25	15	Salt ...	10	15
						Sundries ...	12	15
Emmanamkondam	½ S.	14	Cocoanuts ...	10	15	Salt ...	20	15
			Plantains ...	50	15	Sundries ...	30	15
Nagachi ...	1 N.	14½	Grains ...	200	15	Salt ...	20	15
			Cocoanuts ...	25	15	Sundries ...	15	15
Attangarai ...	3 N.	15½	do. ...	60	15	Salt ...	40	15
			Dried fish ...	250	15	Sundries ...	150	15
			Plantains ...	100	15			
Perunkulam ...	1 S.	17	Nil. ...	...	...	Salt ...	20	15
						Sundries ...	25	15
Periapatnam ...	5 S.	18	Dried fish ...	20	15	Salt ...	20	15
			Cocoanuts ...	20	15	Sundries ...	75	15
			Plantains ...	50	15			
Puthumadum ...	3 S.	14	Betel leaves ...	100	15	Dried fish ...	10	11
						Salt ...	40	15
						Sundries ...	100	15
Tamaraikulam ...	2 S.	18	Paddy ...	100	15	Salt ...	10	15
			Dry grains ...	150	15	Sundries ...	50	15
Rettavoorny ...	3 S.	18	Grains ...	40	15	Salt ...	10	15
			Palmyrah Jaggery.	40	15	Sundries ...	18	15
Kumberam ...	2 S.	14½	Nil. ...	...	...	Salt ...	10	15
						Sundries ...	15	15
Velleriodai ...	4 S.	20	Nil. ..	...	...	Salt ...	5	15
						Sundries ...	5	15
Karan ...	5 S.	20	Nil. ...	...	...	Salt ...	5	15
						Sundries ...	10	15
Manangudi ...	2 S.	18½	Nil. ...	...	...	Salt ...	10	15
						Sundries ...	18	15
Nainamarkam ...	5 S.	18½	G. Seeds ...	10	15	do. ...	12	15
						Salt ..	5	15
				1,265			875	

APPENDIX B—*continued*.

KOSAVANKUDI—20 miles from Pamban.

Name of Town or Village.	Position.		Goods available for trade.			Imports.	Weight in Tons.	Probable distance carried.
	Miles from line.	Miles from Pamban.	Description.	Weight in Tons	Probable distance carried.			
Valudur ...	1 S.	17	Grains ...	100	6	Salt ...	6	6
						Sundries ...	25	6
Alagankolum ...	3 N.	17½	Tobacco ...	50	6			
			Cocoanuts ...	60	6	Salt ...	40	6
			Plantains ...	150	6	Sundries ...	125	6
			Dried fish ...	20	6			
Puduvalasai ..	4 N.	19	Grains ...	20	6	Salt ...	20	6
						Sundries ...	85	6
Kosavankudi ...	¼ N.	20	G. Seeds ...	40	6	do. ...	17	6
						Salt ...	6	6
Madakottur ...	1 N.	20	do. ...	20	6	Sundries ...	25	6
						Salt ...	10	6
Valantheravai ...	1 S.	19	do. ...	100	6	do. ...	10	6
						Sundries ...	20	6
Regunathapuram .	5 S.	17½	Grains ...	150	6	Salt ...	30	6
						Sundries ...	125	6
Perandi ...	2 N.	18½	Nil. ...	...	...	Salt ...	5	6
						Sundries ...	10	6
Thiruvoothyal Kaloovoorny	1½ N.	19	Grains ...	100	6	Salt ...	5	6
			G. Seeds ...	40	6	Sundries ...	12	6
Kiddakottai ...	2 S.	10	Nil. ...	...	...	Nil.	...	...
				850			576	

APPENDIX B—*continued.*

RAMNAD—26 miles from Pamban.

Name of Town or Village.	Position.		Goods available for trade.		Probable distance carried.	Imports.	Weight in Tons.	Probable distance carried.
	Miles from line.	Miles from Pamban.	Description.	Weight in Tons.				
Kothakottai ...	5 S.	22	G. Seeds ...	40	Nil.	Nil. ...	...	...
Peravoor ...	2 N.	26	Paddy ...	130	...	Nil. ...	...	...
Pullangudi ...	4 N.	26	do. ... Dry grains ...	110 100	... ...	Sundries ...	12	...
Tiruvaloor ...	3 N.	27	Paddy ... Dry grains ... Betel leaves ...	200 50 400	... ...	Sundries ...	25	...
Karandal ...	3 N.	27	Paddy ... Dry grains ...	300 ...	... ...	Sundries ...	12	...
Sakkarakottai ...	2 S.	26	do. ... Firewood ...	800 1000	... ...	Sundries ...	75	...
Soorankottai ...	1 N.	27	Paddy ... Dry grains ...	60 120	... ...	Sundries ...	25	...
Devipatnam ...	...	...	Exports ...	560	20	Imports ...	870	20
Kilakarai ...	...	...	do. ...	5,500	20	Imports ...	1,500	20
Tirupullani ...	8 W.	34	Dry grains ...	110	...			
Ramnad ...	On line	26	...	...	...			
Exports. South			Above 10 miles ... ... Below 10 miles	1,000 600	15 5	South.. Above 10 miles Below 10 miles	1,600 1,000	20 5
Exports. North			Above 10 miles ... ... Below 10 miles	1,600 140	15 5	North . Above 10 miles Below 10 miles	2,240 1,000	40 5
Morekolum ...	...	...	Salt ...	1,500	40			

APPENDIX B—*continued.*

RAMNAD—26 miles from Pamban—*continued.*

Name of Town or Village.	Position.		Goods available for trade.		Probable distance carried.	Imports.	Weight in Tons.	Probable distance carried.
	Miles from line.	Miles from Pamban.	Description.	Weight in Tons.				
Kavanur ...	4 N.	28	Paddy ... Dry grains ...	111 222	...	Sundries ...	15	...
Puttendal ...	2 S.	27	Paddy ...	70	...	do. ...	5	...
Chittur ...	1 N.	30	do. ...	182	...	do. ...	5	...
Ekkakudi ...	4 S.	31	Cloth ..	37	...	do. ...	25	...
Vairavanendal ...	3 N.	31	Paddy ...	204	...	do. ...	15	23
Karkudi ...	3 N.	31	do. ... Dry grains ...	122 37	... ...	do. ...	5	23
Settanendal ...	1 S.	31	Nil. ...	...	...	do. ...	8	...
Viravanur ...	4 N.	31	Paddy ... Dry grains ...	104 118	... ...	do. ...	25	...

APPENDIX B—*continued.*

POGALUR—36 miles from Pamban.

Name of Town or Village.	Position.		Goods available for trade.			Imports.		
	Miles from line.	Miles from Pamban.	Description.	Weight in Tons.	Probable distance carried.		Weight in Tons.	Probable distance carried.
Landai ...	1 S.	31	Paddy ...	130	10	Sundries ...	5	10
Karunkolam ...	½ S.	32	Nil. ...	...	...	do. ...	10	10
Ettiyal ...	On line	33	Nil. ...	...	...	do. ...	15	10
Sevour ...	4 N.	32	Paddy ... Dry grains ...	259 70	10 10	do. ...	25	10
Anikkudi ...	1 S.	33	Nil. ...	...	..	do. ...	10	10
Chatramkudi ...	2 S.	33	Paddy ...	111	10	do. ...	25	10
Alangulam ...	3 S.	33	do. ...	133	10	do. ...	10	10
Mallal ...	4 S.	34	do. ...	260	10	do. ...	25	10
Urattur ...	4 S.	33	Nil. ...	...	...	do. ...	15	10
Malangudi ...	3 S.	33	Paddy ...	204	13	do. ...	25	10
Theayanur ...	½ S.	34	do. ...	204	10	do. ...	15	10
Semanur ...	2 S.	34	do. ... Dry grains ... Palmyrah roots. Plantains ...	296 55 50 400	13 10 10 10	do. ...	25	10
Kenkondan ...	3 N.	36	Paddy ... G. Oil ... Dry grains ... Chillies ... P. Jaggery ... Sweet Potatoes.	104 ... Nil. 150 75 250	10 ... Nil. 10 10 10	Sundries	25 25	58 13
Nagachiperi ...	3½ N.	35	Paddy ... Dry grains ...	148 155	10 13	Sundries ...	25	10
Pandiyur ...	4 N.	36	Paddy ... Dry grains ... Chillies ...	296 17 50	10 13 10	do. ...	25	13
Menanthi ...	2½ N.	36	Plantains ... Chillies ...	150 150	10 13	do. ...	30	10
Pogalur ...	On line	36	Paddy ... do. ...	83 83	13 10	do. ...	100	13
Muthuvayal ...	2 N.	37	Nil. ...	..	...	do. ...	25	10
Kamankottai ...	4 N.	38	Paddy ... Dry grains ... Chillies ... Betel leaves	45 75 75 75 75 75	13 13 10 13 10 13	do. ...	50	10

APPENDIX B—*continued.*

POGALUR—36 miles from Pamban—*continued.*

Name of Town or Village.	Position.		Goods available for trade.			Imports.		
	Miles from line.	Miles from Pamban.	Description.	Weight in Tons.	Probable distance carried.		Weight in Tons.	Probable distance carried.
Kalikottai ...	4 N.	38	Paddy ... Dry grains ...	93 38	13 13	Sundries ...	10	13
Kolanur ...	4½ N.	38	Chillies ... Sweet Potatoes. Plantains .. 	25 25 25 25 25 25	10 13 10 13 10 13	Sundries ...	10	10
Valasai ...	4½ N.	39	Plantains ... Chillies ... Sweet Potatoes. Turmeric ... 	50 50 125 125 125 125 25 25	13 10 13 10 13 10 13 10			
Meiyanendal ...	4½ N.	39	Plantains ... Chillies ... Turmeric ... Sweet Potatoes	150 150 100 100	13 13 13 13	Sundries ...	5	10
Serahikottai ...	5 N.	40	Paddy ... Dry grains ... Plantains ... Chillies ... Turmeric ... Sweet Potatoes	74 111 250 250 150 150	13 13 10 10 10 10	Sundries ...	25	13
Kalliyadiyundul...	5 N.	42	Paddy ... Dry grains ... Chillies ... Plantains ... Turmeric ... Sweet Potatoes 	74 74 75 75 50 50 50 50 50 50	13 13 10 13 10 13 10 13 13 10	Sundries ...	Nil.	Nil.
Puthur ...	1 S.	37	Paddy ... Dry grains ...	200 300	10 10	Sundries ...	25	10
Ariakudi ...	1 S.	37	Paddy ... Dry grains ...	100 200	10 10	do. ...	50	10
Kilembal ..	2 S.	39	Paddy ... Dry grains ..	20 15	10 10	do. ...	15	13
Kilakottai ...	½ S.	40	Paddy ...	60	10	do. ...	15	13
				2,978			135	

APPENDIX B—*continued.*

MANJUR—40 miles from Pamban.

Name of Town or Village.	Position.		Goods available for trade.			Imports.		
	Miles from line.	Miles from Pamban.	Description.	Weight in Tons.	Probable distance carried.		Weight in Tons.	Probable distance carried.
Karuttanendal	3 N.	40	Paddy Dry grains	100 100	14 14	Sundries	15	9
Pullattur	2 N.	41	Paddy	Nil.	Nil.	do.	15	9
Vananganendal	1½ N.	41	Nil.	...	...	do.	10	9
Pottithatti	1½ S.	43	Nil.	...	..	do.	15	9
Thuluka Karungulam	2 S.	41	Paddy Dry grains	60 100	9 9	do.	15	9
Pandivilasai	1 S.	41	Paddy	50	9	do.	15	9
Manjur	1½ S.	40	Paddy Dry grains	300 200	9 9	do.	50	60
Kilayur	4 S.	45	Paddy Dry grains	200 100	9 9	do.	40	9
Nimmany	¼ N.	45	Paddy	20	9	do.	15	9
				1,230			190	

APPENDIX B—*continued.*

PARAMAKUDI—49 miles from Pamban.

Name of Town or Village.	Position.		Goods available for trade.			Imports.		
	Miles from line.	Miles from Pamban.	Description.	Weight in Tons.	Probable distance carried.		Weight in Tons.	Probable distance carried.
Pagavandi	2 N.	45	Paddy Chillies	50 10	... ...	Sundries	20	...
Vallam	3 N.	45	Paddy Dry grains Chillies	150 20 5	... ...	do.	30	...
Kilakudi	2 N.	45	Paddy	120	...	do.	15	...
Arianendal	On line	46	Paddy Dry grains	600 200	51 51	do.	25	51
Nainarkoil	6 N.	46	Nil.	...	...	do.	200	51
Valasai Puthur	5 N.	46	Paddy Dry grains	50 20	... ...	do.	15	...
Urapuli	1½ N.	47	Paddy	40	...	do.	15	...
Vendoni	1 S.	48	Paddy Dry grains	300 350	23 23	do.	15	...
Venketanguruchi	3 S.	48	Paddy Dry grains	200 50	23 23	do.	25	...
Kanjaiendal	5 S.	48	Paddy	100	...	do.	10	...
Paramakudi	On line	49	Exports	1,000	51	Imports	7,000	30
Kavanur	3 S.	48	Paddy Dry grains Coriander Groundnuts Chillies	100 60 50 50 25	30 30 30 30 30	Sundries	25	...
Pamboor	5 S.	48	Paddy Dry grains Mangoes	40 30 25	23 23 23	do.	25	...
Perambacheri	3 N.	49	Paddy	200	...	do.	10	...
Emmaneswaram	On bank.	49	Paddy Groundnuts Cloth	800 250 ...	... ...	do.	40	51
Saligramam	10 N.	46	Paddy Sugar-cane Vegetables Chillies	700 100 100 25	23 23 23 23	do.	50	...
Elayangudi	7 N.	49	Paddy Betel leaves	700 120	23 51	do. Oil	300 125	51 51
Alamadurai	5 N.	49	Nil.	...	...	Nil.	...	...

APPENDIX B—*continued.*

PARAMAKUDI—49 miles from Pamban—*continued.*

Name of Town or Village.	Position.		Goods available for trade.			Imports.		
	Miles from line.	Miles from Pamban.	Description.	Weight in Tons.	Probable distance carried.		Weight in Tons.	Probable distance carried.
Anjalnadangulam	5 N.	49	Paddy	100	...	Sundries	300	51
			Dry grains	...	...			
Malayakudi	4 S.	49	Paddy	260	23	do.	25	...
			G. Seeds	20	23			
			Dry grains	40	23			
			Coriander	20	23			
Vilattur	5 S.	49	Paddy	140	23	do.	25	...
			Dry grains	120	23			
			Coriander	10	23			
			Chillies	5	23			
			Groundnuts	10	23			
Tholur	5 S.	49	Paddy	150	23	do.	25	...
			Dry grains	150	23			
			Coriander	10	23			
			Chillies	10	23			
			Groundnuts	10	23			
Kattuparamakudi	Online	50	Paddy	250	...	Sundries	25	...
			Dry grains	15	...			
			Betel leaves	125	23			
Thelichathanullur	On line	51	Paddy	150	...	do.	15	...
			Dry grains	10	...			
Muneavandi	5 N.	52	Paddy	100	...	do.	25	...
			Dry grains	120	...			
			Plantains	750	...			
			Chillies	10	...			
Katchathanullur	Online	52	Paddy	120	...	do.	15	...
Nettur	4 W.	56	Paddy	1,000	18	do.	250	51
Tiruvallor	9 N.	...	Paddy	600	29	do.	100	18
			Dry grains	100	29			
				3,350			430	

APPENDIX B—*continued.*

PARTIBENNUR—56 miles from Pamban.

Name of Town or Village.	Position.		Goods available for trade.			Imports.		
	Miles from line	Miles from Pamban.	Description.	Weight in Tons.	Probable distance carried.		Weight in Tons.	Probable distance carried.
Abiramam	14 Paramakudi.	50	Paddy	600	7	Sundries	100	38
			Dry grains	120	7	Salt	100	30
Kamuthakudi	5 S.	52	Paddy	100	7	Sundries	45	7
			Chillies	50	7	Salt	25	7
Pothuvakudi	5 S.	52	Paddy	40	7	Sundries	15	7
						Salt	25	7
Vengaloor	5 S.	53	Paddy	200	8	Sundries	15	8
			Dry grains	10	8	Salt	10	8
			Chillies	10	8			
Perangarai	7 S.	55	Paddy	100	8	Sundries	45	7
			Dry grains	20	8	Salt	15	7
Partibennur	On line	56	Paddy	700	8	Sundries	100	38
			Plantains	100	8	Salt	50	30
			Cotton	60	8			
Bramanakurichi	½ S.	56	Paddy	100	7	Sundries	10	7
						Salt	5	7
				2,210			560	

APPENDIX B—*continued.*

MANAMADURA—63 miles from Pamban.

Name of Town or Village.	Position.		Goods available for trade.			Imports.		
	Miles from line.	Miles from Pamban.	Description.	Weight in Tons.	Probable distance carried.		Weight in Tons.	Probable distance carried.
Santhanur Karaikudi.	On line	60	Paddy ...	20	...	Sundries ...	15	...
Thennavarayen Puddukota.	On line	57	Paddy ...	100	...	do. ...	15	...
Anadikottai ...	3 S.	62	Nil. ...	...	...	do. ...	10	...
Kila Pasalai ...	1 S.	63	Paddy ...	100	18	do. ...	25	...
Mela Pasalai ...	3 S.	68	Nil. ...	...	...	do. ...	15	...
Annavasal ...	4 S.	68	Paddy ...	60	...	do. ...	15	...
Kilamalakudi ...	2. S	66	Nil. ...	...	...	do. ...	10	...
Manamadura ...	...	...	Paddy ... Dry grains ... Cotton ... Chillies ... Sundries ...	400 80 10 10 40	30 30 30 30 30	do. ...	200	30
Rajakembiram ...	On line	67½	Paddy ...	100	...	do. ...	30	...
Karungakottai ...	On line	68	Paddy ...	Nil.	Nil.	do. ...	15	...
Moganur ...	5 S.	69	......	Nil.	Nil.	do. ...	30	...

APPENDIX B—*continued.*

SIVAGUNGA—74 miles from Pamban.

Name of Town or Village.	Position.		Goods available for trade.			Imports.		
	Miles from line.	Miles from Pamban.	Description.	Weight in Tons.	Probable distance carried.		Weight in Tons.	Probable distance carried.
Vembatur ...	4 N.	74	Paddy ...	20	...	Sundries ...	35	...
Periakottai ...	7 N.	77	do. ...	50	...	do. ...	25	...
Kanurkalloorany..	2½ N.	78	do. ...	160	...	do. ...	50	...
Mulaikolum ...	4 N.	79	do. ...	20	...	do. ...	10	...
Kandany ...	8 W.	73	do. ...	Nil.	...	do. ...	10	...
Vaniankudi ...	10 N.	...	Nil. ...	...	...	do. ...	10	...
Pananjur ...	8 N.	...	Paddy ...	50	...	do. ...	10	...
Paramattur ...	4 N.	...	Nil. ...	...	...	do. ...	10	...
Sivagunga ...	...	...	Exports— Over 10 miles. Below 10 miles.	 9,500 400	 20 5	Imports— Over 10 miles ... Below 10 miles ...	 18,000 2,300	 20 5
Avasanur ...	5 N.	84	Nil. ...	...	...	Sundries ...	25	...
Sembur ...	N.	85½	Nil. ...	...	...	do. ..	10	...
Papakudi ...	N.	85½	Nil. ...	...	...	do. ...	10	...
Elandankudi ...	N.	80	Paddy ...	50	41	do. ...	10	...
Thamarakky ...	18 N.	88	do. ...	450	41	do. ...	35	...
Kilatharai ...	N.	88	do. ...	400	41	do. ...	35	...
Mudikandam ...	N.	85	Nil. ...	...	...	do. ...	25	...

APPENDIX B—*continued.*

TIRUPACHETTY—76 miles from Pamban.

NAME OF TOWN OR VILLAGE.	POSITION.		GOODS AVAILABLE FOR TRADE.		Probable distance carried.	IMPORTS.	Weight in Tons.	Probable distance carried.
	Miles from line.	Miles from Pamban.	Description.	Weight in Tons.				
Kathikolum ...	4 S.	68	Paddy ...	60	11	Sundries ...	20	11
Kottanur ...	5 S.	69	do. ...	60	11	do. ...	20	11
Munadu ...	2½ S.	73	do. ...	40	11	do. ...	15	11
Muttanendal ...	On line	71	do. ...	100	11	do. ..	15	11
Sembaraynandal..	On line	74	do. ...	20	11	do. ...	10	11
Malavarayanandal ...	1 N.	75	do. ...	10	11	do. ...	10	11
Valiakuruchi ...	1 S.	75	do. ...	Nil.	Nil.	do. ..	20	11
Thanjakur ...	3 S.	76	do. ...	40	11	do. ...	10	11
Kuvalavali ...	4 S.	76	do. ...	50	11	do. ...	15	11
Tirupachetty ...	On line	76	do. ... Dry grains ...	100 15	11 11	do. ...	50	19
Vilankolum ...	1½ S.	77½	Nil. ...	...	...	do. ...	15	19
Seikalathur ...	1 N.	77	Paddy ...	20	11	do. ...	5	11
Edaikattur ...	½ N.	71	do. ...	120	19	do. ...	50	11
Sirukudi ...	1½ N.	72	do. ...	20	11	do. ...	10	19
Papankolam ...	2 N.	73	do. ...	20	11	do. ...	10	19
Pathinathamkottai ...	1 N.	73	Nil. ...	...	...	do. ...	15	11
Tudainatham ...	1 N.	78½	Nil. ...	...	...	do. ...	10	11
Kilasarykolum ...	4 S.	76	Paddy ...	Nil.	Nil.	do. ...	20	19
Melasarykolum ...	3 S.	78	do. ...	Nil.	Nil.	do. ...	20	19
Kilarangiam ...	4 S.	78	do. ...	350	19	do. ...	40	19
Papangulum ...	3 S.	78	do. ...	30	19	do. ...	15	19
				650			95	

APPENDIX B—*continued.*

TIRUPUVANAM—81 miles from Pamban.

NAME OF TOWN OR VILLAGE.	POSITION.		GOODS AVAILABLE FOR TRADE.		Probable distance carried.	IMPORTS.	Weight in Tons.	Probable distance carried.
	Miles from line.	Miles from Pamban.	Description.	Weight in Tons.				
Enadi ...	2 N.	76	Paddy ...	350	18	Sundries ...	30	18
Kunakangudi ...	1 N.	77	do. ...	120	18	do. ...	20	18
Peramanur ...	4 S.	78	do. ...	1,500	18	do. ...	70	18
Ladanendal ...	Bk.	79	Nil. ...	...	...	do. ...	20	18
Allinagaram ...	3 S.	79	Paddy ...	40	18	do. ...	30	18
Koliandur ...	3 S.	79	do. ...	150	18	do. ...	20	18
Vaniarendal ...	2 S.	80	do. ...	20	18	do. ...	20	18
Muthuvaithidal ...	3 S.	79	Nil. ...	...	...	do. ...	20	18
Sellapanendal ...	Bk.	81	Paddy ...	130	18	do. ...	20	18
Ambalathudi ...	5 S.	81	Nil. ...	...	...	do. ...	20	18
Madapuram ...	Bk.	82	Paddy ...	500	18	do. ...	20	18
Tirupuvanam ...	Bk.	81	Nil. ...	...	...	do. ...	400	18
Poovundi ...	4 N.	82	Paddy ...	120	18	do. ...	60	18
Kunnathur ...	4 N.	82	do. ...	750	18	do. ...	50	18
Varichiyur ...	5 N.	82	do. ...	350	18	do. ...	25	18
Karseri ...	½ N.	81	do. ...	250	18	do. ...	20	18
Kalimangalam ...	2 N.	81	do. ...	250	18	do. ...	20	18
Thattankolam ...	Bk.	82	do. ...	Nil.	Nil.	do. ...	10	18
Angadimangalam ...	½ N.	84	do. ...	600	18	do. ...	30	18
Ananjayur ...	1 N.	84	do. ...	300	18	do. ...	20	18
Kalukerkadi ...	2 S.	84	Nil. ...	...	...	do. ...	25	18
Vellur ...	3 S.	84	Paddy ...	400	18	do. ...	20	18
Rajakkur ...	4½ N.	84	do. ...	200	18	do. ...	20	18
				6,030			990	

APPENDIX B—*continued.*

SILAMON—87 miles from Pamban.

NAME OF TOWN OR VILLAGE.	POSITION.		GOODS AVAILABLE FOR TRADE.		Probable distance carried.	IMPORTS.	Weight in Tons.	Probable distance carried.
	Miles from line.	Miles from Pamban.	Description.	Weight in Tons.				
Sekkudi	½ N.	85	Nil.	Nil.	...	Sundries	50	6
Pattam	5 S.	85	Paddy	30	6	do.	10	6
Manalur	Bk.	86	do.	120	6	do.	40	6
Kondikai	3 S.	86	do.	1,000	6	do.	80	6
Kulikudi	2 N.	86	do.	120	6	do.	15	6
Elamanur	3 N.	86	do.	120	6	do.	15	6
Thirumukkur	4 N.	87	do.	60	6	do.	20	6
Puliankolam	Bk.	88	do.	150	6	do.	20	6
Silamon	On line	87	do.	200	6	do.	40	6
Killadi	1 S.	88	do.	40	6	do.	20	6
Sakkyamangalam	Bk.	89	do.	500	6	do.	40	6
Uthangudi	5 N.	89	do.	180	6	do.	20	6
Perungudi	5 S.	89	do.	1,000	6	do.	40	6
Viraganur	Bk.	90	do.	150	6	do.	40	6
Panayur	3 S.	90	do.	130	6	do.	40	6
Chinthamani	3 S.	90	do.	300	6	do.	30	6
Saththatti	4 S.	90	do.	120	6	do.	20	6
				4,220			540	

APPENDIX B—*continued.*

MADURA—93 miles from Pamban.

NAME OF TOWN OR VILLAGE.	POSITION.		GOODS AVAILABLE FOR TRADE.		Probable distance carried.	IMPORTS.	Weight in Tons.	Probable distance carried.
	Miles from line.	Miles from Pamban.	Description.	Weight in Tons.				
Vandiyur	Bk.	91	Paddy	200	...	Sundries	60	...
Audikottaram	¾ N.	91	do.	60	...	do.	20	...
Anayur	3 N.	91	do.	140	...	do.	40	...
Tiruppalai	3 N.	91	do.	120	..	do.	20	...
Saminatham	3 S.	91	do.	200	...	do.	25	...
Melamadai	½ N.	91½	do.	60	...	do.	20	...
Aiyenpapakudi	2½ S.	91½	do.	1,200	...	do.	40	...
Avaniyapuram	2 S.	92	do.	2,400	..	do.	140	...
Managheri	½ N.	92½	do.	60	...	do.	25	...
Thalakulam	1½ N.	92½	do.	25	...	do.	20	...
Anuppanadi	1 S.	93	do.	350	...	do.	120	...
Villupuram	1 S.	93	Nil.	Nil.	Nil.	do.	40	...
Iravathanullur	1 S.	93	Paddy	50	...	do.	40	...

APPENDIX B—*concluded*.

ABSTRACT TABLE.

Name of Station.	Exports.				Name of Station.	Imports.			
	Tons.	Amount.				Tons.	Amount.		
		Rs.	A.	P.			Rs.	A.	P.
Toni Torai... ...	...	...			Toni Torai ...	680	2,265	0	0
Mandapam ...	...	...			Mandapam ...	260	320	0	0
Uchipuli	1,265	900	0	0	Uchipuli	875	600	0	0
Kosavankudi ...	850	240	0	0	Kosavankudi ..	576	162	0	0
Ramnad	10,900	10,504	0	0	Ramnad	8,230	8,410	0	0
Pogalur	7,762	4,020	0	0	Pogalur	1,115	610	0	0
Manjur	1,230	570	0	0	Manjur	190	200	0	0
Paramakudi ..	7,605	9,050	0	0	Paramakudi ...	8,340	12,910	0	0
Partibennur ...	2,210	790	0	0	Partibennur ...	560	640	0	0
Manamadura ...	640	845	0	0	Manamadura ...	200	280	0	0
Sivagunga ...	5,850	6,225	0	0	Sivagunga ...	10,150	8,710	0	0
Tirupachetty ...	1,055	740	0	0	Tirupachetty ...	395	270	0	0
Tirupuvanam ...	6,030	5,090	0	0	Tirupuvanam ...	990	870	0	0
Silamon	4,220	1,190	0	0	Silamon... ...	540	150	0	0
	49,617	40,164	0	0		33,101	36,397	0	0

Tons.	Rs.
49,617	40,164
33,101	36,397
82,718	76,561

APPENDIX C.

TOWNS AND VILLAGES NORTH AND SOUTH OF THE RIVER VAGAI FROM MADURA TO RAMNAD.

North.				South.			
Name of Village.	Population.	Goods.		Name of Village.	Population.	Goods.	
		Exports.	Imports.			Exports.	Imports.
Vandiyur ...	1,438	200	60	Saminatham ...	584	200	25
Aundikuttaram ...	398	60	20	Iyenpapakudi ...	891	1,200	40
Aniyur ...	1,023	140	40	Avaniyapuram ...	3,543	2,400	140
Tirupalai .	466	120	20	Annapanari ...	3,412	350	120
Malamadai ..	453	60	20	Villupuram ..	936	...	40
Managiri ...	652	60	25	Iravathanallur ...	931	50	40
Thalakulam ..	492	25	20				
Madura station ...	4,922	665	205	**Madura station** ...	10,297	4,200	405
Sekkudi ..	1,186	...	50	Pattam ..	260	30	10
Kulikudi ...	273	120	15	Manalur ...	1,100	120	40
Elamanur ...	286	120	15	Kondikai ...	1,990	1,000	80
Thirumukkur ...	450	60	20	Puliyankulam ...	387	150	20
Sakkyamangalam ..	856	500	40	Silamon ...	972	200	40
Uthangudi ...	545	180	20	Killadi ...	340	40	20
				Perungudi ...	991	1,000	40
				Veraganur ...	942	150	40
				Panayur ...	996	130	40
				Chinthamani ...	791	300	30
				Sathathatti ...	460	120	20
Sakkyamangalam station ...	3,596	980	160	**Silamon station** ...	9,229	3,240	380
Enadi ..	900	350	30	Paramanur ...	1,840	1,500	70
Kanaikankudi ...	500	120	20	Ladinandal ...	640	...	20
Mandapuram ...	540	500	20	Alianagram ...	760	40	30
Puvandi ...	1,500	120	60	Kuliandur ...	360	150	20
Kunnathur ...	1,264	750	50	Vaniyarandal ...	370	20	20
Varachiyur ...	504	350	25	Muttivanthydal ...	550	...	20
Kasiri ...	274	250	20	Sullapanadal ...	390	130	20
Kalimangalam ...	546	250	20	Ambalathudi ...	460	...	20
Angadimangalam ...	664	600	40	Tirupuvanam ...	5,460	...	400
Ananjiyur ...	372	300	20	Sattankulam ...	280	...	10
Rajakkur ...	495	200	20	Kalukakudi ...	680	...	25
				Vellur ..	600	400	20
Tirupuvanam station ...	7,559	3,790	315	**Tirupuvanam station** ...	12,390	2,240	675
Melavarayanendal ...	640	10	10	Kattikulam ...	818	60	20
Edaikattur ..	2,306	120	50	Kottanur ...	759	60	20
Serakudi ...	358	20	10	Manadu ...	546	40	15
Papankulam ...	305	20	10	Muttanandle ...	504	100	15
Pathinattankottai ...	723	...	15	Sembarayanendal ...	343	20	10
				Valayakuruchi ...	827	...	20
				Thanjakur ...	520	40	10
				Kuvalavari ...	508	50	15
				Tirupachetty ...	2,143	115	50
				Velankulam ...	595	...	15
				Saikalatur ...	255	20	5
				Tudianattam ...	501	...	10
				Kilasaraikulam ...	370	...	20
				Melasarikulam ...	440	...	20
				Kelarangiam ...	1,030	350	40
				Papankulam ...	280	30	15
Paramattur station ...	4,332	170	95	**Tirupachetty station** ...	10,439	785	300

APPENDIX C—*continued.*

Towns and Villages North and South of the River Vagai from Madura to Ramnad—continued.

NORTH.				SOUTH.			
NAME OF VILLAGE.	Population.	GOODS.		NAME OF VILLAGE.	Population.	GOODS.	
		Exports.	Imports.			Exports.	Imports.
Vembattur	1,832	20	35				
Periakottai	1,391	50	25				
Killukalurani	2,086	160	50				
Puliakulam	294	20	10				
Kangany	300	...	10				
Vaniyangudi	480	...	10				
Pananjur	345	50	10				
Paramattur	639	...	10				
Sivagunga	8,809	9,900	20,300				
Avasanur	1,208	...	25				
Sembur	262	...	10				
Papakudi	433	...	10				
Elandankudi	304	50	10				
Tamarakki	1,695	450	35				
Kilathory	1,533	400	35				
Udikandam	1,020	...	25				
Sivagunga station	22,631	11,100	20,610				
Santhanur Karaikudi	330	20	15	Andikottai	268	...	10
Tanavarayan	422	100	15	Kilapasalai	826	100	25
Manamadura	1,800	540	200	Melapasalai	350	...	15
				Anavasal	504	60	15
				Kilamalakudi	231	...	10
				Manamadura	2,400	540	200
				Rajakembiran	1,484	100	30
				Kirangakotai	330	...	15
				Muganur	1,478	...	30
Manamadura station	2,552	660	230	**Manamadura station**	7,871	800	350
				Abiraman	6,600	720	200
				Kamuthakudi	1,350	150	70
				Puthuvakudi	370	40	40
				Vengalur	350	220	25
				Pirangarai	1,350	120	60
				Partibennur	3,360	860	150
				Bramanakurichi	330	100	15
				Partibennur station	13,710	2,210	560
Pagavandi	630	60	20	Ariyanandal	600	800	25
Vallam	893	175	30	Urupulli	870	40	15
Kilakudi	407	120	15	Vendoni	894	650	15
Nainarkoil	1,085	..	200	Venkatankurichi	850	250	25
Valasaiputtur	300	70	15	Kanjiendal	330	100	10
Perambacheri	350	200	10	Paramakudi	10,000	1,000	7,000
Emmanesweram	5,000	1,050	40	Kavanur	1,080	285	25
Saligramam	2,460	925	50	Amboor	1,080	95	25
Elyangudi	5,240	820	40	Malayakudi	1,180	340	25
Alamadura	540	...	...	Villattur	670	285	25
Anjalnadangulam	440	100	300	Tholoor	500	330	25
Maniyavandal	800	980	25	Kattuparamakudi	1,350	390	25
Katchathanallur	450	120	15	Thelichattanallur	460	160	15
Nethoor	2,100	1,000	250				
Tiruvalloor	500	700	100				
Paramakudi station	21,195	6,320	1,110	**Paramakudi station**	19,864	4,725	7,255

APPENDIX C—*concluded.*

Towns and Villages North and South of the River Vagai from Madura to Ramnad—concluded.

NORTH.				SOUTH.			
NAME OF VILLAGE.	Population.	GOODS.		NAME OF VILLAGE.	Population.	GOODS.	
		Exports.	Imports.			Exports.	Imports.
Karuttanandal	300	200	15	Palattur	350	...	15
				Vananganendal	180	...	10
				Pattithatti	330	...	15
				Tholookakarangulam	270	160	15
				Pandaivilasai	350	50	15
				Manjur	800	500	60
				Kilaiyur	750	300	40
				Nimanny	550	20	15
Manjur station	300	200	15	**Manjur station**	3,580	1,030	185
Kenkandon	1,020	580	50	Landai	170	130	5
Nagachiperi	500	293	25	Karankulam	350	...	10
Pandiyur	500	363	25	Ettiyal	360	...	15
Serahikuttai	730	980	25	Sevour	500	329	25
Kaliyadiandle	360	600	...	Anikudi	170	...	10
				Chattangudi	480	110	25
				Alangulam	264	130	10
				Mallal	460	260	25
				Urattur	160	...	15
				Malangudi	520	204	25
				Theyanur	320	204	15
				Semanur	520	346	475
				Menanthi	600	300	30
				Pogalur	1,500	170	100
				Muthuvayal	650	...	25
				Kamaukottai	1,300	420	50
				Kulikottai	250	130	10
				Kulanoor	260	150	10
				Valasai	500	650	...
				Marienandal	170	500	10
				Puthoor	700	500	25
				Ariyakkudi	1,000	300	50
				Kilembal	400	35	15
				Kilakottai	350	60	15
Ettiyal station	3,110	2,816	125	**Pogalur station**	11,954	4,928	995
Peruvoor	650	130	...	Kattaikottai	1,200	40	...
Pulingudi	400	210	12	Sakkaraikottai	3,800	1,800	75
Tiruvaloor	1,000	650	25	Kilaikarai	12.396	5,500	1,500
Karandel	500	300	12	Tirupulani	2,300	110	...
Devipatnam	4,000	560	870	Ramnad	13.600	4,600	7,460
Kavanur	800	330	15	Pattandal	210	70	5
				Chittur	210	132	5
				Ekkiakudi	800	37	25
				Vairavanandal	450	200	15
				Kakkudi	280	150	23
				Sachanandal	200	...	8
				Viravanur	500	220	25
Ramnad station	7,350	2,180	934	**Ramnad station**	35,946	12,899	9,141

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No. 442

South Indian Railway Co., Ld.,
AGENT'S OFFICE,
TRICHINOPOLY, 7th May 1898.

C. No. 2210
Recd. 9.5.98

CONSULTING ENGINEER
RECD. No. 93
9 - MAY 1898
MADRAS.

TP005

From

The AGENT,
SOUTH INDIAN RAILWAY,

To

The CONSULTING ENGINEER FOR RAILWAYS,
MADRAS.

Sir,

5No 70(a)

Referring to Government Order No. 624 R dated 6th September 1897 sanctioning a Traffic Survey being made of the proposed Trichinopoly-Thondi, and Madura-Pamban Railways, I have the honor to forward herewith twelve copies of the Reports made on each line by Assistant Traffic Manager Mr. S. J. Mercer.

I have the honor to be
Sir
Your most obedient Servant

A. C. G. Shelley
Capt R.E.
Agent

24 Enclosures, by Ry parcel

1 copy retained in Madras

R. Form No. 12.

Madura-Paumban Ry

31 P

18/

No. 774

SERIAL No. 98

Government of Madras.

PUBLIC WORKS DEPARTMENT,

RAILWAY BRANCH.

H. E. The Governor -

The Hon. Sir H. Bliss K.C.I.E.

" " Mr. J. Grose C.I.E.

To

THE SECY. TO THE GOVT. OF INDIA,

P. W. DEPARTMENT.

Simla

Ooty, the 4th June 1898.

SIR,

A.A.H. 14.5.98

JG 18/5/98

With reference to the correspondence on the subject of the Madura-Paumban Railway, ending with my letter No. 651 Ry., dated the 28th April 1898, with which was enclosed a copy of the Board of Director's, South Indian Railway, letter No. 209, dated the 7th April 1898, I now am directed to forward for the information of the Government of India, a copy of a report on the Traffic prospects of the line by Mr. S. J. Mercer, a Traffic Officer of the South Indian Railway. ~~This~~

SN 92

SN 92

2.- Mr. Mercer's report reopens the question of route, viz., whether it would be best to start from the south end of Madura Station and follow the south bank of the Vagai river to

A (page 1)

I ask H. E.'s and Hon Members reconsideration of this draft. Capt Shelley has been here and has shown me a letter addressed to his Board in which he makes proposals for preventing the serious consequences of the short circuiting to which a long mileage of his line will be subjected if ever the Avadyarkoil line is extended to meet the Madura Paumban. He also fears that so long as the ~~[illegible]~~ risk of this contingency overhangs, it will be difficult or impossible to raise the capital for the Madura Paumban. Part of the solution is that the connection to the north if ever made shall be made at Sivaganga, and in that case it would be as well that from the first Sivaganga should [illegible] a branch and not [illegible] turn over to last page of draft.

[illegible] 14/5

From

THE AGENT,

South Indian Railway,

Trichino

To

THE CONSULTING ENGINEER FOR RAILWAYS,

Madra

Dated

Received 189

No.

ENCLOSURE.

Coast, a distance of 91 miles, or to follow the route through Shivaganga adopted by Mr. Shadbolt, to the same point on the coast, a distance of 100 miles. ~~It is fully recognized that the longer route will cost~~ perhaps five lakhs more than the shorter, and that it has the additional disadvantage of a back shunt into Madura from a separate junction north of the river, and also that all through traffic is subject to the charge for the increased length of haulage.

This question of choice of route has already been carefully thought out by this Government, but it is understood that, as a consequence of the projected extension southwards of the Mayavaram-Mutupet Railway, and the possibility of a through connection, probably to Sivaganga, being sooner or later demanded in the interests of through traffic with Ceylon, the Agent, S. I. Ry. Co. is in correspondence with his Board on the subject of how, when this inevitable connection comes his main line may not be hopelessly short-circuited. I am therefore desired to say that you shall be separately addressed on the subject of the choice of routes when this Government shall have completed some enquiries which are now in hand.

2. But the question of route has been already thought out after full discussion, and this Government is not prepared to reopen it: for it is recognized that the proposed extension of the South Indian Railway from Madura to the Paumban straits will for all time serve the purpose of a local development line rather than of a through route for fast traffic: for if ever hereafter the suggested connection with Ceylon should become a fait accompli, it will be found difficult to resist the pressure

which will be brought to bear, with a view to the through journey from Ceylon to the north being shortened by linking up Avadyarkovil with some point on the Madura-Paumban Line, possibly Sivagunga. Meanwhile, pending such development, the north Vaigai route, surveyed by Mr. Shadbolt, undoubtedly serves a richer and more populous country, and is for that reason preferred by this Government.

I don't see how we can say this without some explanation of the fact that our statement is opposed to Mr. Mercer's. It is true that Mr. Mercer is grossly inaccurate (vide notes on his p. 3), but how can India know this unless we point it out?

KS

No. See my notes on page 3 of Mr. Mercer's report. The Hon Member has mistaken the significance of the tabular statement.

FM
21/5/98

~~3. This Government has already said all~~

3. All that it is thought necessary to say has already been said, in regard to the superior advantages of an arrangement whereby the Madura-Paumban Line should be an integral part of the South Indian Railway rather than that it should be owned by a separate Company however intimately connected with the parent Company. But you were informed in para 3 of my letter No. 1118 Railway, dated the 10th December 1897, that, fully recognizing the reasons which prohibit the adoption of the desired method of financing the extension, H. E. in Council accepts the

SN 74

Government of India's decision that the intervention of a Branch Line Company must be utilized.

4. A perusal of the South Indian Railway Company's letter to their Agent, No. 209, dated the 7th April 1898 will show that, while still expressing a hope that the financing of the Paumban extension may still be directly entrusted to them, the Board have accepted the proposals of Government for its being financed by a Branch Line Company rather than that it should be indefinitely postponed.

5. As no further obstacle appears now to stand in the way of the South Indian Railway Company being encouraged to enter into the necessary negociations with Promoters for the financing of the extension on Branch Line terms, I am directed to express a hope that they may at once be permitted to do so, and that meanwhile, as was done in the case of the Calicut-Cannanore, it may be found possible to authorise them to arrange at once the many preliminaries which (as soon as the question of route is settled) must be put in hand if work is to go on energetically in the coming working season, and that a small allotment, of which an estimate can be submitted if desired, ~~[illegible]~~ may be advanced for the purpose.

FRS R.

13/5/98

Documents accompanying.

Copy of Mr. Mercer's report on traffic prospects of M. P. Ry (with 2 spare copies)

Despatched on 4/6/98

I don't follow para 2(d) of this. Something seems to have been omitted.

16/5/98

Para 2(d) refers to the Tinnevelly Quilon Ry. only: not to the Madura Paumben which is the subject of this draft. I do not quite see the Hon. Member's difficulty. The paragraph reads to me quite logical and clear. Perhaps it might have been better worded. "That the net deficit as against Government, or the total surplus profit shall be shared between Govt &c &c." I may explain that on the S.I.R. "surplus profits" are divided between Govt and the Company in proportion to their respective shares of the Capital. The Company's capital is 140 lakhs. Government Capital is total Capital, minus (Company's capital + old debentures)

The Govt. of India's proposal about the T.Q. line differs from ~~[illegible]~~ the arrangement in force on the main S.I.R. in this, that "surplus profit" are proposed to be divided not only when they are positive, but when they are negative (hence "net deficit"), and the calculation is to be made in just the same way as on the old line, except that the items within the bracket, after the minus above, will be (Company's Capital + old debentures + new debentures)

FRS

21/5/98

Note continued from page 1

on the main line, because this arrangement first gives the main line & Madura Paumben the advantage in slightly shorter mileage which prevents short circuiting in favour of the Mayavaram Mutupet and its extension.

I am not yet convinced by Capt. Shelley's reasoning, but it seems at least fair that he should have an opportunity of having his say, and I have asked him to do so at once.

Meanwhile, as the discussion about route, if H.E. and Hon Members permit it to be reopened, may involve some time spent in correspondence between the Con. Engr. and the Agent, S.I.R., and as I am anxious that the Govt. of India should be kept supplied with full information as fast as available, and that they should comply with the request contained in the last paragraph of this letter, I shall be glad of permission to alter this draft as proposed in pencil, at para. 2.

I shall lay Capt Shelley's arguments before H.E. & Hon Members, and shall have cleared up the point which Sir H. Bliss has raised on page 3 of Mr Mercer's report, I hope in a week or two.

FRS

21/5/98

I accept the proposed amendment of paras. 1 and 2.

A.G.A. 23.5.98

I have no objection

28/5/98

1/6/98

2/6/98

SERIAL
No. 95

No. 506

South Indian Railway Co., Ld.
AGENT'S OFFICE,
TRICHINOPOLY, 24th May 1898.

ERC No. 2768
13-6-98

From

THE AGENT.
SOUTH INDIAN RAILWAY,

To

THE CONSULTING ENGINEER
FOR RAILWAYS,
~~MADRAS.~~
Ootacamund.

Sir,

With reference to our conversation on May 20th, 1898 regarding the alignment of the proposed Madura Pamban Railway, I have the honor to request that the Government may be moved to reconsider its decision in favor of a route passing through the town of Sivagunga and traversing the North bank of the Vaigai between Madura and Paramagudi and to sanction instead of the adoption of Mr. Geogehan's alignment between Madura and Paramagudi, Mr. Shadbolt's between Paramagudi and Toni Torai, and a branch line from Mutanantal to Sivagunga. My reasons for making this request are briefly:—

(a) To protect the Madura Pamban Railway against diversion of the Indo-Ceylon traffic east of Manamadura.

(b) To avoid unnecessary mileage on Indo-Ceylon traffic passing through Madura station.

(c) To give railway facilities on both sides of the Vaigai to the country east of Madura.

2. In support of these statements, I would explain that the Madura-Pamban Railway will be deprived of Indo-Ceylon traffic if any connection is made between it and an extension through Devakottai from the North. The further east such connection is made the more serious will

will be the loss in traffic, and I fear that with the contingency of a junction at or to the east of Paramagudi there may be a difficulty in forming a subsidiary Company to finance the Madura Pamban Railway. It is therefore desirable to locate the junction as near Madura as can be arranged for without unduly prejudicing local interests. Although at this early stage I quite recognize the impossibility of definitely ensuring the future adoption of this stipulation, a programme can be devised which should result in the future junction being made at the selected station. With this object I suggest that Sivagunga should be the terminus of a short branch line taking off the Madura-Pamban Railway at Mutanantal or at a station immediately adjacent. The fixation of the junction will be further aided by keeping the Madura-Pamban Railway entirely on the South bank of the Vaigai, so that any connection other than that via Sivagunga will necessitate a second bridge over the Vaigai.

3. There is no need to enlarge on the advantage of working traffic over the shorter mileage possible by the avoidance of Sivagunga as a main line station, but it is perhaps advisable to offer a few remarks on the desirability of serving both sides of the Vaigai. From the information at my disposal it appears that the local traffic to be expected from the northern route is about equal to that anticipated from the southern alignment, but that this equality entirely depends on the importance of Sivagunga as a trade centre. The suggested project of a Southern route and a branch to this town should therefore tap the maximum traffic which can be reached without increasing the mileage of the extension.

4. I do not anticipate that the scheme I have advanced

will

will prove appreciably more costly in construction than the Northern route surveyed by Mr Shadbolt. With both alignments the Vaigai must be crossed and I have no reason to suppose that a bridge at Mutanantal or Manamadura will be more costly than one at Paramakudi. In both cases the length of the lines to be made will be about the same, but it is not improbable that land will prove more expensive on the Southern than on the Northern side of the Vaigai.

5. I have not so far touched on the difficulties which obtain with a Northern entry into the South Indian Railway station yard at Madura, because at the expense of re-bridging the Vaigai east of this town a Southern junction could be combined with a Northern alignment of the line to Pamban. Whether this alternative to Mr Shadbolt's proposals for a junction north of the Vaigai would be adopted, depends on the comparative cost of the two schemes, but as the Southern arrangement would render working simpler and safer it would most likely be preferred even at a moderate increase of expenditure. If however the Southern alignment of the railway be permitted, a cheap as well as a satisfactory junction can be obtained. I enclose for your information a plan of the present Madura yard, and in connection with it, would point out that it is hemmed in on both sides by expensive land difficult of acquisition. At the South of the station land can be obtained, and any difficulty in connection with the public road met by diverting it or taking it across the yard on an overbridge. It will be noticed from the tracing now sent of the Northern and Southern surveyed alignments of the Madura Pamban Railway, that immediately to the north of the Vaigai the main line traverses an extensive tank. Any junction therefore in the immediate neighbourhood of the bridge must be restricted to a small signalling and interlocking block station. If

anything

Cannanore, it may be found possible to

anything on a more extensive scale is required the junction must be made on the high ground beyond the tank and about a mile and a half from Madura.

6. Pending decision on the alignment of the Madura-Pamban Railway, no designs have been drawn up of the junction arrangements at Madura and as other matters are depending on a settlement of the latter I hope it may be possible to issue early orders on the subject.

I have the honour to be
Sir
Your most obedient Servant

A.W.G. Shelley
Capt R.E.
Agent

2 Enclosures by book post

NRI

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

Enclosure to Agent's letter No 537 of 31-5-98

Print

South Indian Railway.

:o:

Extract from the Agent's Letter No. 586, dated Trichinopoly, the 18th May, 1898, to the Managing Director.

MADURA-PAMBAN, TRICHINOPOLY-TONDI, AND MUTUPET-AVADAIYARKOVIL EXTENSIONS.

To serve the area enclosed between the sea and the lines of railway connecting Tuticorin with Mutupet and passing through Trichinopoly, Tanjore, and Tiruvallur, the three following extensions have been proposed :—

(a). Mutupet to Avadaiyarkovil.

(b). Trichinopoly via Pudukottai to Tondi.

(c). Madura to Pamban.

2. The routes of the two latter lines have recently been traversed by Assistant Traffic Manager Mr. S. J. Mercer whose reports with memoranda by myself accompany this letter. The traffic prospects of the Mutupet-Avadaiyarkovil extension have not been reported on by an Officer of this Company, but I now submit a note in which I have endeavoured to collect all the information on record.

3. In addition to separate consideration, these three projects, which may not only affect mutual interests but the welfare of the South Indian Railway also, require careful study in respect to their possible collective effect. The Government of India has pointed out that these three railways will interfere with each others traffic and is of opinion that all of them are not required for opening out the comparatively small tract of country they are intended to serve. No doubt this will be the case unless the routes to be followed by these lines are carefully and finally determined before construction is permitted. It is true that the extension to Avadaiyarkovil and the Madura-Pamban Railway must be regarded in the light of approved projects, but it seems to me that an equitable solution of this somewhat intricate problem can still be arrived at. The Madras Government has notified that there is no present intention of extending the Mayavaram-Mutupet Railway beyond Avadaiyarkovil but declines to pledge itself to such extension never being made. The eventuality of railway connection between Avadaiyarkovil and some point on the Madura-Pamban Branch cannot therefore be ignored with safety, and in my opinion an extension which could command not only the whole of the Indo-Ceylon traffic but also the entire carrying trade passing between South Indian Railway stations south of Samayanallur and north of Kuttalam will sooner or later be strongly advocated. In the interests both of the Government of India and of this Company it is very desirable that such a colossal diversion of traffic should be guarded against, and as before stated I think this can be done in a manner fair to all parties by a judicious determination of the route to be followed by each of the three new proposed lines. The capital sunk in existing railways should not be depreciated by the transfer of traffic to shorter competing lines unless the shortening of route is so considerable as to produce a compensating increase of traffic over the whole system, or unless by opening up new country extra traffic equivalent to the loss produced can be secured.

4. In this note I assume that traffic will travel over the shortest railway route, and I have adopted Mr. Shadbolt's alignment of the Madura-Pamban Railway with Sivagunga on the *main* line, although I am in favour of this line being served by a *branch*.

5. The three new railways as projected being separated from each other except by the connection through the parent line can only act as feeders to the latter. As before remarked, however, this separation can hardly be maintained for long, and the consequences of possible connections must therefore be examined at an early stage if the adoption of the most beneficial general scheme is to be possible. Consideration of the question will be much simplified by reducing the number of alternative lines in accordance with the following assumptions:—

(*a*). *Mutupet-Avadaiyarkovil extension.* That this line will be lengthened five or six miles in order to serve Arantangi, and that its ultimate connection with the railway through Pudukottai will be at Devakottai, an important town of 11,000 inhabitants. The short increase of five or six miles is important in the interests of the South Indian Railway, and the serving of Arantangi is desirable for local considerations. On this point the Collector of Tanjore writes:—"It would be well to consider if the line ought not to make a slight detour and run to Avadaiyarkovil via Arantangi. This would make it five or six miles longer, but Arantangi is an important centre of trade, and in its immediate neighbourhood are good gravel and stone quarries which would supply excellent material for railway construction and maintenance." The short increase in the length of the line which is required for the prevention of competition can hardly be objected to by the Tanjore District Board as it states in connection with this project. "The Board desires to use the fund only for the development of the district. It does not desire competing or highly remunerative lines." A glance at the map will show that no other town but Devakottai can be the junction between the extensions from Avadaiyarkovil and Pudukottai, the distance between Devakottai and Avadaiyarkovil being only 18 miles.

(*b*). *Trichinopoly-Tondi Railway.* That the junction with the South Indian Railway must either be at Trichinopoly or Tanjore, that the Pudukottai-Devakottai section will be constructed, and that the Devakottai-Tondi section will either not be made, or if made, will not form a portion of any of the competitive routes. The traffic on the Trichinopoly-Pudukottai length will probably be slightly below that of the Tanjore-Pudukottai section, and the choice of route will depend on how the interests of the main line will be affected by the alternative connections. The Pudukottai-Devakottai section offers every prospect of being highly remunerative, and undoubtedly should be made. The Devakottai-Tondi length will have poor traffic, and even this little depends on the attraction of coolies from the Pamban route. An extension from Tondi to Ramnad would attract no local traffic and would depend for its success on the amount of traffic diverted from the Madura-Pamban Railway. This would hardly be permitted by Government.

(*c*). *Madura-Pamban Railway.* That no junction will be made east of Ramnad which town will therefore command the Indo-Ceylon traffic carried via Pamban.

The foregoing assumptions limit consideration to the following alternative connections:—

(*a*). From Devakottai

(i). Devakottai to Madura direct, 48 miles.

(ii). Devakottai to Sivagunga, 25 miles, making the through distance to Madura 53 miles.

(iii). Devakottai to Ramnad direct, 38 miles.

(*b*). From Pudukottai

(i). Pudukottai to Trichinopoly, 31 miles.

(ii). Pudukottai to Tanjore 35 miles, of which 4½ miles have already been made under the name of the Tanjore-Pillayarpatti siding.

6. The direct Devakottai-Madura connection would be of small general utility to the public and by failing to serve Sivagunga would imperfectly meet local requirements. It is to be noticed that if the Mutupet-Avadaiyarkovil extension be shortened by avoiding Arantangi, this line would secure all traffic passing between Ramnad, or stations south of Samayanallur and stations north of Kuttalam. The South Indian Railway would in consequence lose 171 miles of lead on a large volume of traffic, a result hardly justifiable on the grounds of shortening the distance between Madura and Mayavaram by six miles. The direct Madura-Devakottai connection gives the following shortest routes:—

Madura and Ramnad to Trichinopoly via the South Indian Railway main line.
Madura and Ramnad to Tanjore via Devakottai and Pudukottai.
Madura and Ramnad to Mayavaram via Devakottai and Tanjore.

7. The connection between Madura and Devakottai by Sivagunga would at the expense of 5 miles extra length over the direct route, serve local interests in a much more satisfactory manner, and only shorten by 28 miles the lead of Ceylon traffic over the Madura-Pamban Railway for that portion going to or from stations north of Trichinopoly. The shortest routes obtaining with this connection are:—

Madura to Trichinopoly via the South Indian Railway main line.
Madura to Tanjore via the South Indian Railway main line.
Madura to Mayavaram via the South Indian Railway main line.
Ramnad to Trichinopoly via Devakottai and Pudukottai.
Ramnad to Tanjore via Devakottai and Pudukottai.
Ramnad to Mayavaram via Devakottai, Pudukottai and Tanjore.

8. The direct connection between Devakottai and Ramnad would tap the Madura-Pamban Railway 24 miles from its Eastern terminus on the mainland, and would consequently deprive it of 76 miles of lead on all Ceylon traffic between Ramnad and stations North of Vaiyampati. The line would in all probability not serve much in the way of local requirements and would be difficult and expensive to construct. The following shortest routes would result from it being made:—

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Madura	to	Trichinopoly	via the South Indian Railway main line.
Madura	to	Tanjore	via the South Indian Railway main line.
Madura	to	Mayavaram	via the South Indian Railway main line.
Ramnad	to	Trichinopoly	via Devakottai and Pudukottai.
Ramnad	to	Tanjore	via Devakottai and Pudukottai.
Ramnad	to	Mayavaram	via Devakottai, Pudukottai and Tanjore.

9. From competitive considerations the Pudukottai-Tanjore connection is to be preferred to that between Pudukottai and Trichinopoly on the grounds that traffic is not diverted from the main line stations South of Tiruverambur, and that all traffic between Ceylon and stations North and East of Trichinopoly joins or leaves the main line at Tanjore instead of at Mayavaram. The diversion of traffic from the main line is therefore comparatively small, but at the same time the distance between Tanjore and Ramnad will be shortened by 55 miles, a decrease in the length of the Ceylon route which should be of great use in meeting sea competition.

10. From the foregoing considerations I recommend the adoption of the following programme of railway extensions :—

(*a*). The line from Madura to Pamban to be put in hand as soon as can be conveniently arranged for.

(*b*). Sivagunga to be served by a branch from the Madura-Pamban Railway.

(*c*). A line from Tanjore to Devakottai to be constructed in place of the proposed Trichinopoly-Tondi Railway.

(*d*). The Mutupet-Avadaiyarkovil extension to be accepted provided it passes through Arantangi.

(*e*). No other connection to be allowed between Avadaiyarkovil and the Madura-Pamban Railway but the line via Devakottai and Si[illegible]gunga, and the Devakottai-Avadaiyarkovil section of this connection to be postponed until after the opening of the Tanjore-Sivagunga route.

11. It would simplify matters if the same subsidiary company that finances the Madura-Pamban Railway and the Sivagunga Branch could also take up the Tanjore-Sivagunga connection. Multiplication of statistical returns, and financial work, is much to be deprecated but cannot be avoided if lines for several different owners have to be managed. I shall be glad to receive instructions as to the course of action which the Board desire taken in connection with these three railways, as unless some definite policy is laid down and accepted by Government the danger of the South Indian Railway being injured is always present. I have placed in the packet a statement of the mileages by the various competitive routes, and a sketch map of the country, which information I hope may be of use in disposing of this reference.

ACCOMPANIMENTS.

(*a*). Memorandum on the Madura-Pamban Railway.
(*b*). do. on the Trichinopoly-Tondi Railway.
(*c*). do. on the Mutupet-Avadaiyarkovil Extension.
(*d*). Map to accompany the above.
(*e*). List of distances.
(*f*). Mr. S. J. Mercer's Report on the Madura-Pamban Railway.
(*g*). Do. Report on the Trichinopoly-Tondi Railway.

Note on the Madura-Pamban Railway.

In submitting Mr. S. J. Mercer's report on the Traffic Survey of the Madura-Pamban Railway there is no need for me to re-capitulate the early history of the project already given in Mr. Shadbolt's report but there are two points which it seems desirable to put prominently before the Board and which will have to be settled in the near future.

2. As the Board is aware two surveys of the line have been made, one by Mr. H. T. Geoghegan in 1886-87, the second by Mr. E. I. Shadbolt in 1895. In the earlier survey the alignment adopted took off from the South Indian Railway at the south end of Madura station, and after skirting the town, hugged the south bank of the Vaigai to Ramnad. The route adopted by Mr. Shadbolt left the South Indian Railway to the north of the Vaigai and after being lengthened some ten miles to serve Sivagunga crossed to the south side of the river near Paramakudi. There has always been considerable divergence of opinion respecting the advantages of the two routes, but from considerations of local traffic the balance would appear to be in favor of the northern alignment. Mr. Mercer, it will be noticed, recommends the adoption of the southern alignment and I believe Mr. Spalding shares the same view. It has recently been laid down as an axiom that the town of Sivagunga must be served by the proposed line, and it is doubtless this assumption which has turned the scale of opinion in favor of the northern route. While fully admitting the local importance of Sivagunga I consider that the advantage of serving it on the main line is more than neutralized by the consequent disadvantages. In the first place a junction at the North of Madura will be inconvenient for working, and will probably necessitate considerable expenditure, while a southern junction would be far easier to work and be cheaper to construct. In the next place I much question the advisability of adding ten miles to the through route *via* Madura between India and Ceylon for the purpose of serving a comparatively small town of 8,000 inhabitants. If Sivagunga must have railway connection it would be no more expensive to serve it by a branch, than by the main, line. Whichever route is adopted serving Sivagunga involves the bridging of the Vaigai or the provision of expensive station arrangements and the construction of ten miles of line. Neglecting Sivagunga the local traffic prospects seem better on the southern than on the northern side, and I am therefore in favor of the southern route being adopted.

3. The second point for consideration is whether the terminus should be at Toni Torai on the mainland or at Thanikoti on the island of Rameswaram. Mr. Mercer considers that the expense of crossing Pamban Strait would not be justified by the traffic. This question is one for subsequent decision as the data now available are insufficient. Mr. Shadbolt estimates the cost of crossing to Rameswaram at Rs. 13,50,000, while Mr. Waring the Chief Engineer of Ceylon quotes the much lower figure of Rs. 4,50,000. To pay 5 per cent on the amount estimated by Mr. Waring, net earnings of Rs. 22,500 per annum would be required. From Mr. Mercer's report I gather that he considers gross receipts exceeding Rs. 18,750 could not reasonably be expected from traffic over the bridge even if the fare for crossing it were fixed at the equivalent of that of ten miles. He seems however to have ignored the fact that any increase in the number of pilgrims using the bridge and consequent on its construction would result probably in increased receipts due to the mileage of the whole branch.

4. Mr. Mercer estimates that the line will pay 5 per cent with working expenses at 60 per cent of the gross earnings, and I think this result can reasonably be expected. Of course the value of the line would be very seriously depreciated if the Mayavaram-Mutupet Railway be extended to meet it near Ramnad but as the effect of such connection has been discussed elsewhere there is no need for further remarks here.

AGENT'S OFFICE,
TRICHINOPOLY,
18th May, 1898.

A. D. G. SHELLEY,
CAPTAIN, R. E.,
Agent,
SOUTH INDIAN RAILWAY.

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Note on the Trichinopoly-Tondi Railway.

This project is a development of the scheme initiated in 1886 by the Dewan of Pudukottai for a metre gauge line between Pudukottai and Trichinopoly. The idea seems to have been dropped on the death of the late Rajah of Pudukottai until 1895 when the present Dewan resuscitated the project in the extended form of a line from either Tanjore or Trichinopoly through Pudukottai to Sivagunga which he assumed would be a station on the Madura-Pamban Railway. Eventually this project was modified into the present proposal for a connection between Trichinopoly and the port of Tondi *via* Pudukottai and Devakottai. The line will be about 82 miles in length and, from a rough estimate prepared by the Chief Engineer, is anticipated to cost Rs. 43,16,227 or nearly Rs. 53,000 per mile. At the instance of the Government of Madras, the Board has agreed to meet from Revenue the cost of the Survey estimated at Rs. 18,000 of that portion of the line outside the state of Pudukottai. In response to an enquiry by the Madras Government as to whether the Directors would be prepared to assist in forming a Company on the terms embodied in Government of India Resolution No. 514 dated 17th April, 1896, the Board postponed giving a definite reply until in possession of further particulars promised by me. In conformity with these decisions, I have submitted to Government an estimate amounting to Rs. 29,369 divisible between the Pudukottai State and this Company in the proportion of Rs. 13,822 and Rs. 15,547 respectively for the proposed Survey, and I now submit a report by Mr. S. J. Mercer on the Traffic prospects of the line, which will, I hope, give sufficient information to enable the Board to dispose of the further reference.

2. The estimate for the survey was favorably considered by the Madras Government but the Government of India suggested that in view of the effect which the Trichinopoly-Tondi Railway is likely to have on the traffic of the Mutupet-Avadaiyarkovil extension, and the Madura-Pamban branch, the whole matter should be reconsidered. The Imperial Government pointed out that these three railways will interfere with each other's traffic, that all of them are not required for opening out the comparatively small tract of country they are intended to serve, and that by advocating simultaneously too many competing schemes the risk occurred of the whole of them being indefinitely postponed. Since making these observations the Government of India has agreed to recommend to the Secretary of State that the Tanjore District Board should be permitted to undertake the extension of the Mayavaram-Mutupet Railway to Avadaiyarkovil, funds being provided from the railway cess fund of Tanjore supplemented by the issue of debentures on the security of the Mayavaram-Mutupet Railway and of the railway cess. The Government would therefore, appear to be committed to the policy of supporting the extension to Avadaiyarkovil and as the adverse competitive action of this line can be largely neutralized by making a railway from Tanjore *via* Pudukottai and Devakottai to Sivagunga, I think the position may be freely accepted. I have explained in my letter No. 586 dated May 18th 1898 to the Managing Director, the reasons for preferring Tanjore to Trichinopoly as the junction station with the main line. These reasons are mainly the protection of the South Indian Railway from unnecessary diversion of traffic, but in addition it is probable that the local traffic will be heavier between Tanjore and Pudukottai than

between Trichinopoly and Pudukottai, and also the Tanjore-Pillayarpatti siding 4½ miles in length can be utilized. From Mr. Mercer's report it will be seen that the Devakottai-Tondi section is not promising from a traffic point of view, and that the commercial activity of Tondi is not nearly as great as was anticipated. There seems therefore, no reason for constructing this section. The whole Pudukottai-Tondi Railway will, according to Mr. Mercer's report, give the very fair financial return of 4 per cent on the expended capital. Good as this result is, there is strong presumption that a line from Tanjore to Sivagunga will be even more remunerative so that irrespective of competitive considerations, I think the Board would do well to assist in forming a subsidiary Company for the financing of the line.

3. As regards working terms I would suggest that the railway be worked for 55 per cent of its gross earnings, rolling-stock being provided by the Branch Company. It would be advisable also to obtain some contribution to cover the cost of stores, buildings, &c., maintained in excess of the parent line's requirements on account of the extra mileage worked, and when the net earnings amount to more than 3 per cent on the Capital in the line I think the Provident Fund should receive the usual assistance under the rules.

AGENT'S OFFICE,
TRICHINOPOLY,
18th May, 1898.

A. D. G. SHELLEY,
CAPTAIN, R. E.,
Agent,
SOUTH INDIAN RAILWAY.

Enc. No. 3 to F. R's. C. No. 2576 of 1898
Letter No. 537 d/ 31. 5. 98
From = A

Note on the Mutupet-Avadaiyarkovil Extension.

This project was decided upon at a meeting of the Tanjore District Board held on 25th July, 1896, and accordingly an application was made to Government for permission to construct a line from Mutupet to Avadaiyarkovil (North bank of the Vellar river) passing through Adirampatnam, Pattukkottai, Kalagam, Sithathikadu, Arasankulam and Perungadu. The length of the proposed line is 45 miles and the cost of the survey and of construction is to be met partly by funds due to the accumulation of the railway cess levied in this district, and partly by debentures raised on the security of the Mayavaram-Mutupet Railway and of the Railway cess. There is therefore no question to be considered in connection with the financing of the project. As regards the traffic prospects of the line both the Collector of Tanjore and the District Board consider them favourable. I can however obtain no information of a precise nature as to the probable amount of the annual gross receipts, but I think it may be reasonably assumed that they will be less than those of the Mayavaram-Mutupet Railway. The projected line traverses fertile though sandy country which it is anticipated may be suitable for the cultivation of ground-nuts. The land is mostly dry, but in the southern portions of the area served, there are a very large number of small tanks of which many are rain-fed, and under which rice of a very superior quality is grown. The largest towns met with are Adirampatnam of 10,000 and Pattukkottai of 5,000 inhabitants, but the general population is stated to be 277 to the square mile. The District Board anticipate that the line will carry all the pilgrim traffic to Rameswaram as by it the journey "can be made right handed." This expectation will hardly be realized if a line is made from Tanjore to Devakottai. It is also hoped a large number of passengers will be obtained from Devakottai and from the Ramnad and Sivagunga Zemindaries. When the survey is made it will be possible to obtain reliable data in respect to the earning power of the line, and until such information is available it is impossible to formulate the terms on which the extension can be worked.

2. The section of 9¼ miles between Mutupet and Adirampatnam has already been surveyed and estimated to cost Rs. 4,62,614 and the Local Government has therefore suggested to the District Board that it should at once apply for permission to proceed with the construction of this length and to put the South Indian Railway in funds for the purpose. So far I have received no communication from the District Board on the subject, but when active measures are initiated it will I think be advisable to stipulate for certain modifications of the terms under which the Mayavaram-Mutupet Railway was made and is worked. In the first place the expenditure on ballast for two years after working should be a capital charge, and in the second, provision should be made for the branch line paying a contribution to cover interest on the proportionate cost of the South Indian Railway stores, stores buildings, workshops, &c. maintained for the branch line, and to the Provident Fund.

3. The competitive possibilities of this extension have been dealt with in my letter to the Managing Director, No. 586, dated 18th May, 1898, and no further comment is therefore necessary in this note.

AGENT'S OFFICE,
TRICHINOPOLY,
18th May, 1898.

A. D. G. SHELLEY,
CAPTAIN, R. E.,
Agent,
South Indian Railway.

Enc. No. 4 to E. R's C. No. 2576 of 1898
Letter No. 537 D/ 31. 5. 98
From A

Accompaniment to Note on Railway Extensions.

In the statement below are tabulated the distances between various competitive stations by various routes.

No. of Route.	ROUTES.	Miles.
	From Ramnad to Mayavaram.	
1	Ramnad, Devakottai, Avadaiyarkovil, Tiruvallur, Mayavaram	161
2	Ramnad, Devakottai, Pudukottai, Tanjore, Mayavaram	157
3	Ramnad, Devakottai, Pudukottai, Trichinopoly, Mayavaram	184
4	Ramnad, Sivagunga, Devakottai, Avadaiyarkovil, Tiruvallur, Mayavaram ...	196
5	Ramnad, Sivagunga, Devakottai, Pudukottai, Tanjore, Mayavaram ...	192
6	Ramnad, Sivagunga, Devakottai, Pudukottai, Trichinopoly, Mayavaram ...	219
7	Ramnad, Sivagunga, Madura, Trichinopoly, Tanjore, Mayavaram	247
8	Ramnad, Sivagunga, Madura, Devakottai, Avadaiyarkovil, Tiruvallur, Mayavaram	247
9	Ramnad, Sivagunga, Madura, Devakottai, Tanjore, Mayavaram	243
10	Ramnad, Sivagunga, Madura, Devakottai, Trichinopoly, Tanjore, Mayavaram...	270
	From Devakottai to Mayavaram.	
11	Devakottai, Avadaiyarkovil, Tiruvallur, Mayavaram	123
12	Devakottai, Pudukottai, Tanjore, Mayavaram	119
13	Devakottai, Pudukottai, Trichinopoly, Tanjore, Mayavaram	146
14	Devakottai, Madura, Trichinopoly, Tanjore, Mayavaram	219
15	Devakottai, Sivagunga, Madura, Trichinopoly, Tanjore, Mayavaram ...	224
	From Madura to Mayavaram.	
16	Madura, Sivagunga, Devakottai, Avadaiyarkovil, Tiruvallur, Mayavaram ...	176
17	Madura, Sivagunga, Devakottai, Pudukottai, Tanjore, Mayavaram... ...	172
18	Madura, Sivagunga, Devakottai, Pudukottai, Trichinopoly, Tanjore, Mayavaram	199
19	Madura, Devakottai, Avadaiyarkovil, Tiruvallur, Mayavaram	171
20	Madura, Devakottai, Pudukottai, Tanjore, Mayavaram...	167
21	Madura, Devakottai, Pudukottai, Trichinopoly, Tanjore, Mayavaram ...	194
22	Madura, Trichinopoly, Tanjore, Mayavaram	171
	From Trichinopoly to Madura.	
23	Trichinopoly, Madura	96
24	Trichinopoly, Devakottai, Madura	119
25	Trichinopoly, Devakottai, Sivagunga, Madura	124
26	Trichinopoly, Tanjore, Pudukottai, Devakottai, Sivagunga, Madura ...	159
27	Trichinopoly, Tanjore, Pudukottai, Devakottai, Madura	154

No. of Route.	ROUTES.	Miles.
	From Tanjore to Madura.	
28	Tanjore, Trichinopoly, Madura...	127
29	Tanjore, Trichinopoly, Devakottai, Madura	150
30	Tanjore, Trichinopoly, Devakottai, Sivagunga, Madura	155
31	Tanjore, Pudukottai, Devakottai, Madura	123
32	Tanjore, Pudukottai, Devakottai, Sivagunga, Madura	128
	Trichinopoly to Ramnad.	
33	Trichinopoly, Madura, Sivagunga, Ramnad...	172
34	Trichinopoly, Devakottai, Ramnad	109
35	Trichinopoly, Devakottai, Sivagunga, Ramnad	144
36	Trichinopoly, Tanjore, Devakottai, Ramnad	144
37	Trichinopoly, Tanjore, Devakottai, Sivagunga, Ramnad	179
38	Trichinopoly, Devakottai, Madura, Sivagunga, Ramnad	195
	Tanjore to Ramnad.	
39	Tanjore, Trichinopoly, Madura, Sivagunga, Ramnad	203
40	Tanjore, Devakottai, Ramnad	113
41	Tanjore, Devakottai, Sivagunga, Ramnad	148
42	Tanjore, Trichinopoly, Devakottai, Ramnad...	140
43	Tanjore, Trichinopoly, Devakottai, Sivagunga, Ramnad	175

A. D. G. SHELLEY,
Captain, R. E.,
Agent,
South Indian Railway.

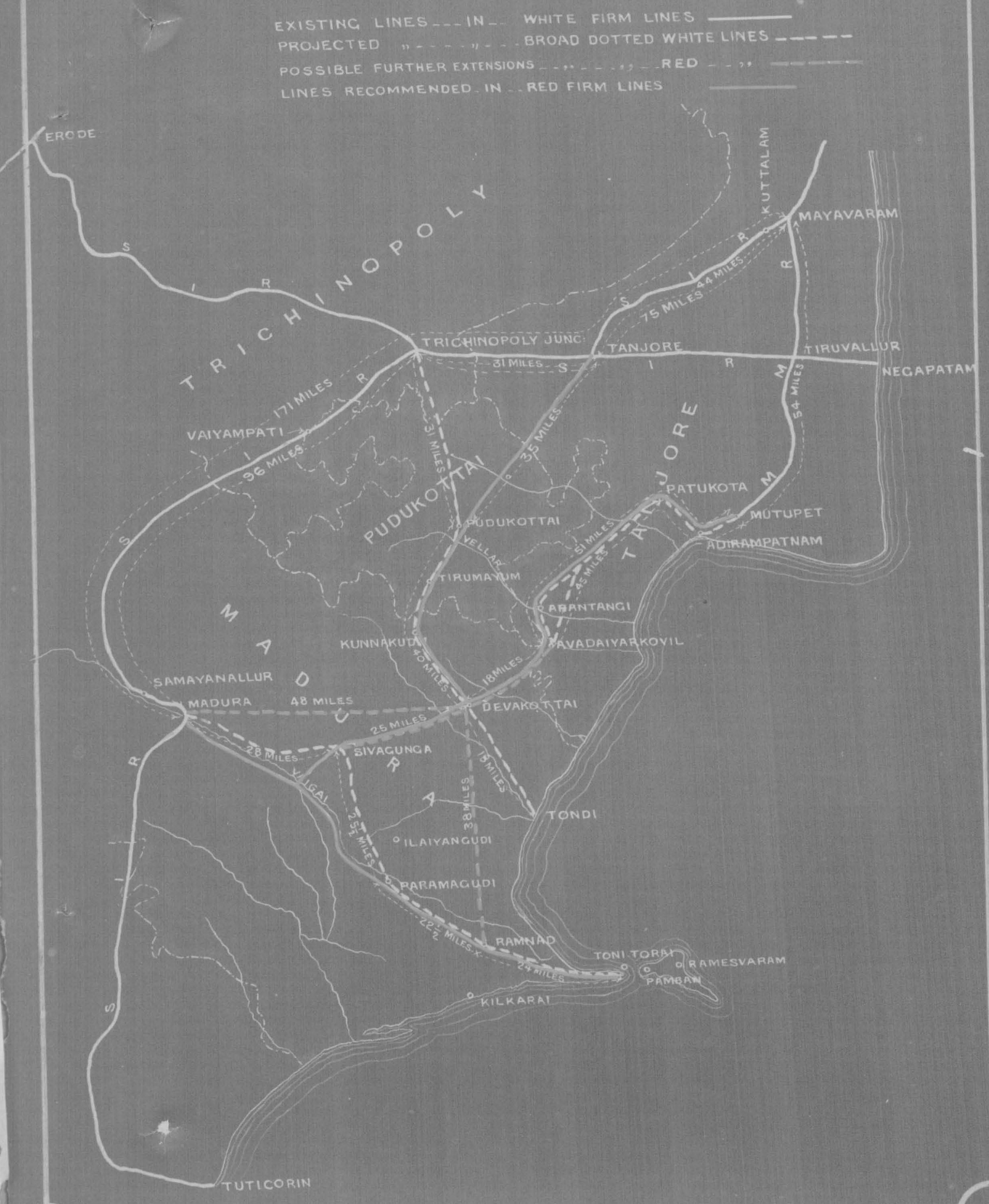
Agent's Office,
Trichinopoly,
18th May, 1898.

Encl. No. 6 to E. Pro. C No. 2576 of 1898
Letter No. 537 d/ 31. 5. 98
From A

S. I. R

MAP SHEWING PROPOSED RAILWAY EXTENSIONS IN THE TANJORE AND MADURA DISTRICTS AND PUDUKOTTAI TERRITORY

SCALE 1 INCH = 20 MILES



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No. 537

South Indian Railway Co., Ld.,
AGENT'S OFFICE,
TRICHINOPOLY, 31st May 1898.

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From
The AGENT,
SOUTH INDIAN RAILWAY,

CONSULTING ENGINEER FOR RAILWAYS
RECEIVED
1 JUN 1898
MADRAS.

To
The CONSULTING ENGINEER FOR RAILWAYS,
MADRAS.

SERIAL
No. 97

Sir,

asking for 38 [illegible] copies

In reply to your letter No. 1548 dated 27th May 1898. I regret to inform you that I am unable to send you any copies of my letter No. 586 of 18th May 1898 to the Managing Director.

As however I presume that you have asked for these copies in connection with the paragraph therein regarding Railway Extensions, I have the pleasure to forward you herewith three extracts of the paragraph in question together with copies of my memoranda, List of distances, and map, referred to in the extract.

I have the honor to be
Sir
Your most obedient Servant
A. C. G. Shelley
Captn R.E.
Agent

Resubmit on return of case from circulation FM

FM 11/5

7/5

18 Enclosures ~~by~~
~~book post~~

File FM
18/6

From
THE AGENT,
South Indian Railway,
Trichinopo

To
THE CONSULTING ENGINEER FOR
RAILWAYS,
Madra

Dated }
Received } 189

No.

ENCLOSURE.

SERIAL
No. 99

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NOTE BY THE CONSULTING ENGINEER

FOR RAILWAYS, MADRAS.

MADURA - PAUMBEN RAILWAY.

The question of choice of its route.

In his letter No. 506, dated the 24th May 1898, the Agent, South Indian Railway, reopens the question, which, when Mr. Shadbolt was sent to survey the line, was settled by order of Government, namely, whether, starting from Madura, the alignment ought, for the first few miles, to run north or south of the Vaigai river.

2. Mr. Shadbolt's alignment starts from a point on the South Indian Railway north of the Vaigai bridge near Madura, and passing thence by a long 10 mile detour, through Shivaganga and Manamadura, crosses the Vaigai at Paramagudi, and after that follows the south bank of the Vaigai to Ramnad and Toni Torai. Total length 100 miles.

3. The Agent, South Indian Railway, now

proposes that the line should start from the south end of Madura Station, and should adhere to the south bank of the Vaigai throughout its entire course to Ramnad and Toni Torai, a total length of 90 miles. He also proposes that the town of Shivaganga should be accommodated by means of a branch Railway from Mutanantal to Shivaganga, 10 miles long, with a bridge over the Vaigai. Thus the Agents' proposals are that the same length of Railway should be made as in Mr. Shadbolt's scheme, viz. 100 miles, but that through traffic between Madura and the sea should in perpetuity have ten miles less of Railway to traverse.

4. The route now recommended by the Agent, South Indian Railway, was surveyed in 1886 by Mr. Geoghegan, who showed that the population of the principal towns served by the north Vaigai route was about 17 per cent greater than that of the principal towns served by the South Vaigai route. Four towns containing about 20,000 people were shown as common to both routes, but while the south route could show an extra town of 3000 inhabitants the north 8000 inhabitants. Thus the census was about 5000 in favour of the north route and there was the advantage that the town of Shivaganga, which by the way is only $\frac{1}{12}$th the size of Madura, would thereby be served.

5. I can find no record of a comparison having been made between the interest on the cost of 10 extra miles of Railway, say Rs. 15,000 per annum, and the probable profits to be derived from carrying the traffic ascribable to 5000 extra people. Neither can I find any record of a comparison of the benefits proposed to be conferred on these 5000 potential customers with the handicapping effect of 10 miles extra haulage on every ton of goods and every passenger carried between the sea and Madura in perpetuity.

6. Captain Shelley gives three reasons for his proposal. The first (a) involves very complicated considerations, and assumes the possibility of contingencies which may perhaps never be realized, and which anyhow in all probability are in the distant future.

His second reason (b) is a distinctly tangible one, and it is one which not only is of interest to the through traffic of the future between Ceylon and South India , but is also of local interest. His third reason (c) is one of considerable local importance.

7. The following are his three reasons for proposing that the Madura-Paumben line should start from the south end of Madura station and follow the south bank of the Vaigai through Ramnad to Toni Torai, with a 10 mile branch from Mutanantal to Shivaganga.

(a) To protect the Madura-Paumben Railway against diversion of the Indo-Ceylon traffic east of Manamadura.

(b) To avoid unnecessary mileage on Indo-Ceylon traffic passing via Madura.

(c) To give Railway facilities on both sides of the Vaigai between Madura and Paramagudi.

8. The Agents first reason (a), involves complicated issues contingent upon all sorts

of possibilities which may never come to anything, and I think that at this very early stage it would be unwise to decide the question of the best alignment for the local Railway between Madura and Paumben upon the basis of any such remote and indefinite considerations. These considerations however have been carefully gone into here, and memoranda have been placed in the record which, when the time comes, if ever it comes, for considering them, will doubtless receive the attention to which they are entitled.

9. His second reason (b) amounts to this, that to take a long circuit of 10 extra miles, for the sake of serving the fairly important village of Shivaganga, seems scarcely worth while when it is considered that the result to all the through traffic will be that it will be hampered in perpetuity with the charge for 10 extra miles of haulage:- in other words that it will pay forever one ninth more than it would otherwise have to pay. The advantage of

putting a minor town like Shivaganga on a branch instead of on the main line is that the branch can be cheaply worked by a mixed train daily, any old engine and rolling stock being used. Captain Shelley proposes to give Shivaganga a great deal more than it may fairly expect, because all over India there are towns of seven or eight thousand inhabitants within ten miles of a Railway which it is never proposed to serve by a branch. But the object of his proposal is (amongst others) that the branch, by bridging the Vaigai, will bring a lot of country north of that river in touch with the railway which but for the branch would be cut off therefrom.

10. This brings us to his third reason (c), that the South Vaigai line will, by means of the Shivaganga branch, give Railway facilities at both sides of the river. For if the main line were taken away in a curve to Shivaganga direct from Madura, the parts situated south of the river between Madura and Paramagudi would be quite cut off from the Railway.

11. In his fifth paragraph the Agent refers to the advantages, from a Railway working point of view, of coming in at the south end of the present Madura station instead of to a separate junction north of the river. There is no doubt that the latter would be a most cumbersome and expensive arrangement in perpetuity, and that the plan of bringing in the Paumben branch at the south end of the Madura junction is, for junction working reasons, and apart from the general alignment issues, the right one.

12. Attention is invited to Appendix C, pages 45 - 46, of the traffic survey of the Madura-Paumben country recently made in very great detail by a Traffic Officer of the South Indian Railway Company. In this Survey Mr. Mercer shows that the population of the towns and villages which may be considered as being in touch with the Railway on the south route is very considerably in excess of that on the north route, between the two points Madura

and Paramagudi common to both. He shows a population on the north route of 23,000 and on the south route of 50,000. Mr. Mercer has given the census figures of about 140 villages so that he has had opportunity of going very much more carefully into the matter than Mr. Geoghegan did 12 years ago.

F.W.S.

Consulting Engineer.

18/6/98

SERIAL
No. 96

~~H. E. The Governor~~

(1). The Hon. Sir. H. Bliss KCIS

(2) " " Mr. J. Grose C.I.S.

Please see my Note on the linked file.

A.W.
3.6.98

not now linked see Flag X.

F.M. 10/6/98

Agent's, South Indian Railway, forecast about Railway routes likely to be formidable competitors with his own main line and with the Madura-Paumben Railway, between Mayavaram and Paumben.

I invite a perusal of the Agent's, South Indian Railway, letter to his Board, No. 586, dated the 18th May 1898. In this letter he deals with the question of the great risk hanging over them of being seriously short-circuited when the public insist, as he admits that they will sooner or later insist, on the shortening of the through route between Ceylon and Madras.

2. I shall not for the moment deal with the question of the two alternative routes, called northern and southern, of the Madura-Paumben Railway, but will refer solely to the large question of probable competition in the future, with the South Indian Railway and with the Madura-Paumben, and will show how it may, as the Agent suggests, be prevented from occurring.

Hms
3/6/98

3. The past history of the question is as follows. In G. O. 305 L, Mis. February 18th 1895, the Public Works Department were asked when reporting on the financial prospect of the suggested extension of the Tanjore District Board Line from Mutupet to Adirampatam to discuss at the same time the expediency of a connection being made with the Madura-Paumben. Mr. Upcott noted on this reference, dated 27th February 1895, and His Excellency Lord Wenlock noted as follows. "I suppose there is no doubt that a direct line from Ramnad to Mayavaram via the coast would deflect a certain amount of traffic that would otherwise go on to the South Indian Railway. But this view of the case would block all short cuts, and the time will come when these will have to be made, in the interests of the general public, even if they divert traffic from the old existing lines. A saving of 100 miles is a great benefit to the public, though undoubtedly it may be a loss to the Railway."

4. In Board of Revenue's Proceedings No. 2331 Mis., dated 7th May 1895, the Collector of Tanjore's opinion is recorded that a coast line to connect Mutupet with Ramnad would get no local traffic worth speaking of, and that the proper route for the connection of the Mayavaram-Mutupet Railway with the Madura-Paumben Railway is via Pattukkottai and through the Pudukota State.

5. The Board of Revenue's Resolution 6221 Mis., dated 18th November 1895, gives cover to a report by the Head Assistant ~~Commissioner~~ Collector of Madura, in which are discussed the several proposals for connecting the Mayavaram-Mutupet and the Madura-Paumben Railways. He reviews the 3 following routes. (a) through Adirampatnam-Arantangi-Karaikudi to Shivaganga. This may be called the Western route, (b) through Adirampatnam-Avadaiyarkovil-Devakottai-Tiruveyambatur-Elayangudi to join the Madura-Paumben Railway a few miles west of Paramagudi. This may be called the middle route, (c) along the coast via Tondi to Ramnad. This which may be called the coast route is the one referred to in para 3 of this Note.

6. The Head Assistant Collector reports that the Western route (a) runs through a dry and poor country. He at once rejects the coast route (c). He prefers the middle route to any. All this took place in 1895, and since then it has been decided that the extension of the Mayavaram-Mutupet line to the south is to follow route (b), the middle route, as far as Avadaiyarkovil. The South Indian Railway Agent's proposals are that if ever the line is continued further south than Avadaiyarkovil, it should go to Devikottai. Thus far therefore all agree with the Head Assistant ~~Commissioner~~ Collector of Madura of 1895 in prefering the middle route, and it is only on the short link from Devikottai to Shivaganga, a link common to both the lines which the Agent foresees will be made, that the advice of the Civil Authorities of 1895 is proposed to be rejected. One sound reason for proposing to join at Shivaganga instead of at Paramagudi is that the length from Devikottai to the former place is only 25 miles of new line as against 33 miles to the latter.

7. As regards the Agent's proposals referred to in para 17, viz: to add length to the section between Devakottai and Avadyarkovil, in order to ensure the Sivaganga Devakottai-Pudukota-Tanjore line being slightly the shorter of the two, I find in Board of Revenue's Proceedings No. 1018 Mis., 4th March 1896, that the Collector of Tanjore records his opinion that if the Mayavaram-Mutupet Railway is extended to Avadyarkovil it ought to wind about so as to touch Adirampatnam and Pattukottai, so that the increase of length which the Agent aims at is in accordance with local opinion.

8. When the Agent, South Indian Railway, learnt through the newspapers of all this correspondence, he wrote strongly deprecating the utilisation of District Boards for starting large competitive systems. This is in his No. 334 dated 20th April 1896. In our reply to this remonstrance No. 48/0 dated 27th May 1896, we told him that if the Avadyarkovil extension is ever carried out, a further extension will doubtless

follow in time, to join the Madura-Paumben line at either Paramagudi or Shivaganga. But we assured him that he might rely on the interests of the South Indian Railway Company's line being duly weighed when the time came.

9. Later on, in reply to a further remonstrance from the Agent, No. 1012, dated 2nd November 1896, we said that though Government cannot undertake to say that an extension beyond Avadyarkovil will not at any future time be permitted, it does not, as at present advised, view such a project with favour. This was our letter No. 537 R., dated 5th April 1898.

10. The above is the history of past correspondence on the subject. Meanwhile we have got India to withdraw their objection to the Tanjore Board making further extensions. Hence the recent letter of the Agent to his Board which is the subject of this Note.

11. If the shortest route, drawn with a ruler, were insisted on by the public, it would pass from Avadyarkovil through Tondi to Ramnad. But it is agreed, I think, on all sides, that there are no local interests of any importance which would be served by such a route: and though it would be 3 or 4 miles shorter than a line from Ramnad to Avadyarkovil through Devakottai, it must not be in any way countenanced. It might be as well I think to put this on record at once. The Honourable Sir H. Bliss is I believe familiar with the unprofitable character of this sea coast route.

Hs

Devikottai ought certainly to be reached by rail somehow. It is an important place as the headquarters of the Nattukottai Chetties whose mercantile connections stretch all over the East from Calcutta to Singapore, or further

Hs

12. Next, the most dangerous competitor would be a line from Ramnad to Avadyar-kovil via Devakottai. This would absolutely ensure that all through traffic, from Ceylon to the north and vice versa, not only must avoid 171 miles of the South Indian Railway but also must avoid 76 miles of the Madura-Paumben line. The Agent very reasonably argues that it would be very unfair to his line to subject it to such competition, all for the benefit of the Tanjore District Board line and its extensions in the Madura

District (by whomsoever owned and worked). He also argues that the risk, or threat, of any such competition would be fatal to the chances of promoting the Madura-Paumben Company.

13. A reference to the sketch map which illustrates this Note will show that a short cut to the north from Ramnad would be 35 miles shorter than a line to the north through Shivaganga, and 90 miles shorter than the all round route via Madura and Trichinopoly. It will always be a very important question, whenever the traffic with Ceylon assumes sufficient importance, whether, in the interests of that traffic, (that is of such part of it as passes from or to places north of Mayavaram) its route ought not to be very considerably shortened.

14. Its route, as I have said, can be shortened either by 90 miles if the short cut is taken off from Ramnad, or by 55 miles if it is taken off from Shivaganga. When the time comes, the pressure of public

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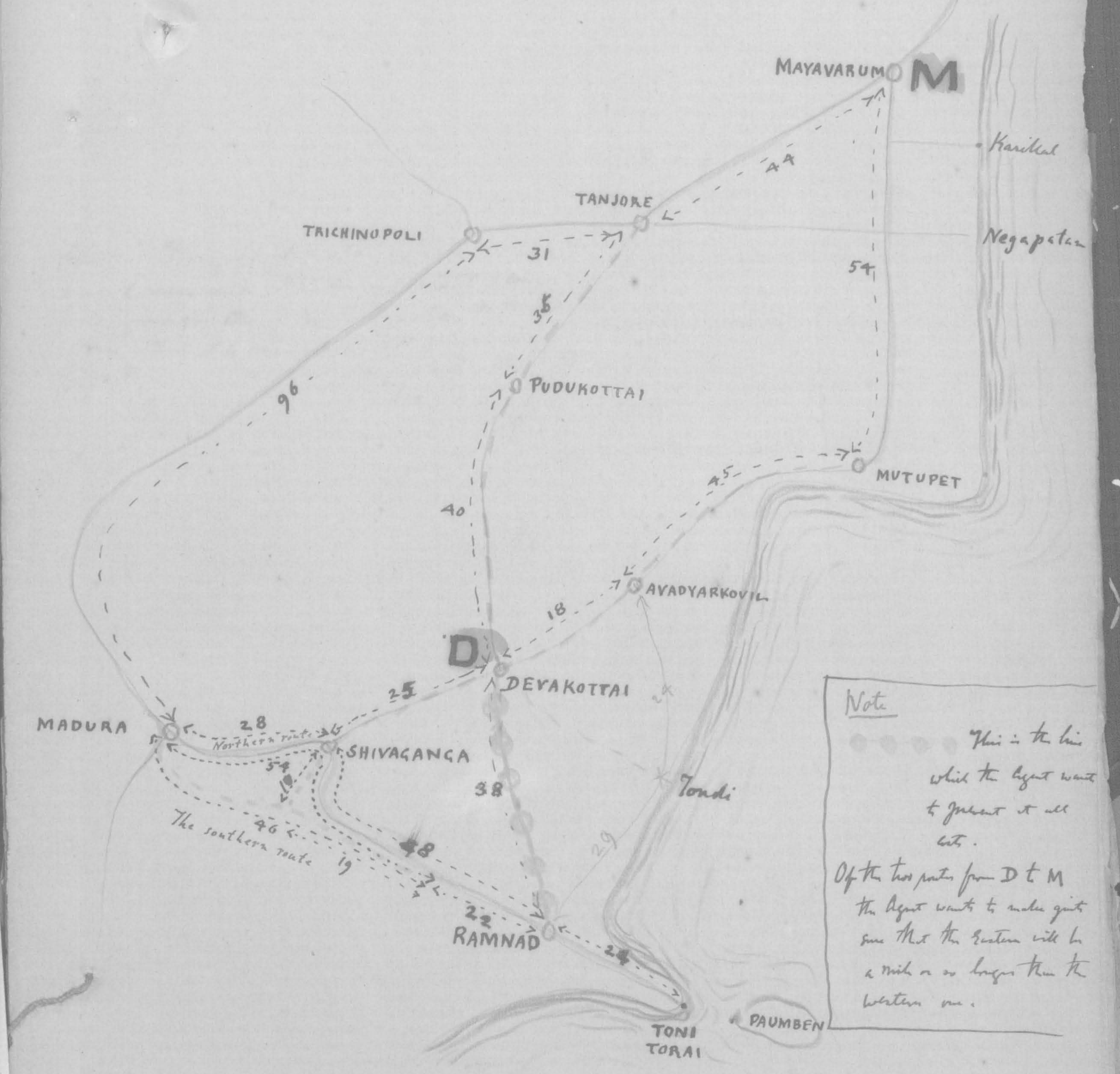
Sketch Map

Showing network of lines, actual and projected
Which affect the S. I. Ry. between Mayavaram
and the sea, near Paumben.



Note

This is the line which the Agent wants to prevent at all costs.

Of the two routes from D to M the Agent wants to make quite sure that the Eastern will be a mile or so longer than the western one.

Toni Torai to Mayavaram, via Madura and Trichi.	271	miles		263 by southern route.
" " " " " Shivaganga and Puddukottai	216	"	Practically equal say 215	219
" " " " " ~~Ramnad~~ Shivaganga Devikottai & Mutupet	214	"		~~equal~~ 217
" " " " " Ramnad " "	179	"	Practically equal say 180	
" " " " " Ramnad Devikottai Tanjore	181	"		

opinion will be very strong to make one or other of these short cuts.

15. The Agent's proposal amounts to this that the inevitable should be anticipated, and that it should be agreed, so far as it is possible beforehand to agree about such a matter, that, of the above two short cuts, that one should be taken which will be the less disadvantageous to the South Indian Railways interests, and which will be the less minatory to the interests of the Madura-Paumben Company yet to be formed.

16. But even if a decision be authoritatively given in this sense (and it by no means follows that such a decision will be allowed to hold good in years to come, when it can be shown that a still further shortening of the through journey by 35 miles is feasible) the Agent's difficulty will not be finally met, because from Shivaganga northward two routes are possible, both being of approximately equal length, viz: through Devakottai to

Tanjore, and through Devakottai to Avadyarkovil (I am assuming that the Mutupet - Avadyarkovil extension will doubtless now be made by the Tanjore District Board).

17. Now if the latter is allowed to come first into existence the result will be that while the case of the Madura-Paumben Company will be considerably better than if the short cut struck off from Ramnad, inasmuch as through traffic would still adhere to 72 miles of it instead of leaving it at the 24th mile, still the case of the South Indian Company would be as bad as ever, its 171 miles being still deserted by all through traffic.

18. The Agent's plan for getting over the trouble though perhaps the best that could be proposed is still not very satisfactory to the South Indian Railway. He proposes that the suggested line through the Pudukota State should be made, only that instead of connecting with the South Indian Railway at Trichinopoly as proposed, it should connect at Tanjore. The object of this is that the route may not exceed in length the Mutupet route, in order that the South Indian Railway Authorities may be able to secure the through traffic by a route which will at least pass over the 44 miles of their main line between Tanjore and Mayavaram, leaving the deserted section only 127 miles in length instead of 171. This seems the best that can be done for the South Indian Railway Company. It is inevitable that they should lose some of the through traffic if ever the short cut is made, but the Agent prefers that his Company and the Madura-Paumben Company between them should lose it from 155 miles of their combined line rather than from 247 miles.

19. I must not omit to notice that the substitution of Tanjore in place of Trichinopoly as the northern junction for the short cut has this special advantage that it will enable the South Indian Railway to retain on their main line all the traffic with Ceylon which takes place with the District served by the Erode branch.

20. The Agent argues reasonably enough that the Tanjore District Board have all along professed to be anxious only for local development, and that therefore they cannot complain if they are prevented from deriving advantage from an unexpected windfall in the form of a stream of through traffic which they never originally professed to count on.

21. I asked the Agent about the loss of the through Ceylon traffic over the 98 miles between Madura and Tuticorin. He says that his Company quite understand that they must lose it, because Toni-Torai is a place where steamers for Ceylon can lie within a mile or two of the shore instead of six miles as at Tuticorin, and as the sea journey from Colombo to Toni-Torai is only about an hour longer than that from Colombo to Tuticorin the steamer route is certain to be changed.

22. The question now is whether anything practical can be done, and if so what, to stave off the future danger of the through Ceylon traffic being driven away from 76 miles of the Madura-Paumben and from 171 miles of the South Indian Railway by a short cut taking off from Ramnad.

23. The Agent's suggestion is that the Pudukota Rajah, or a Company, be encouraged to start the projected Pudukota Railway, but from Tanjore southwards instead of from Trichinopoly, and that Shivaganga be put on a 10 mile branch instead of on the main Madura-Paumben, so that the Vaigai river, bridged on that branch, may be a sort of outwork against aggression anywhere else than via Shivaganga. He argues that it will then follow, sooner or later, that these two branches will be connected, via Devakottai, and that thus the short cut with Ceylon will be secured. Not it is true a very good short cut, as it will reduce the distance by only 55 miles instead of 90, and is thus not nearly so good a short cut as that via Ramnad. But it has the advantage over the other of passing through a rich well cultivated country, which in itself is capable of supporting

And it will avoid a country which ~~[illegible]~~ consists almost more of tanks than of dry land
HS

a Railway.

24. The Agent therefore says , let us anticipate the danger of the Ramnad short cut by making part of the Shivaganga Devakottai Pudukota Tanjore short cut, at both ends, trusting to a demand being made for the filling up of this particular short gap whenever the through traffic insists upon a shorter route. It is true that, even with this short cut which, if any, the Agent demands shall be rendered safe for adoption, 127 miles of the South Indian Railway will lose its through traffic between Ceylon and parts north of Tanjore. But a very considerable part of the existing trade between India and Ceylon comes at present to and from the parts served by these 127 miles, and a good deal more of it comes from the Erode side, so the loss to the Company will not be very serious.

25. But he explains that even if we do this viz: put Shivaganga on a branch, and decide that if the Pudukota line be made it must start from Tanjore instead of from Trichinopoly, there is still a danger of all the through traffic leaving the Shivaganga-Tanjore line for the Mayavaram-Mutupet, because the two routes via Shivaganga, the Western one which the Agent advocates, via Pudukottai and the Eastern one via the Mayavaram-Mutupet Railway are very nearly of the same length, the advantage, by three or four miles, being with the latter.

26. This advantage he proposes to negative by asking that it be arranged that the proposed extension from Mutupet to Avadyarkovil may go round, as proposed by the Tanjore District Board themselves, a bit of a circuit via Arantangi, thus providing the slight extra length necessary to ensure that the through traffic will not adopt this route, and leaving with the Tanjore District Board all the advantages which they profess to be seeking, viz local development.

27. Thus the Agent's demands are practically three:—

(a) That Shivaganga be placed on a branch instead of on the main line.

(b) That the extension of the Tanjore District Board line to Avadyarkovil which seems now to be nearing inception be made to make a detour through Arantangi and Pattukottai, as proposed by the District Board themselves.

(c) That it be definitely recognized once for all that if ever the Pudukota line is made it must start from Tanjore instead of from Trichinopoly.

And through Pattukottai also, I think
K.S.

28. As regards (a) I propose to deal with it in detail in a separate Note. As regards (b), the South Indian Railway Company have the right to refuse to work the proposed extension. As regards (c) 4½ miles of the line out from Tanjore are already made in the form of a ballast siding. If as suggested by the Agent the Madura-Paumben Company co-operate with the Pudukota Rajah to make his line, it is certain to be arranged to start it from Tanjore instead of from Trichinopoly in the Madura-Paumben interest.

29. This Government therefore need take no action in regard to (c). The South Indian Railway Company in coordination with the Rajah of Pudukota and with the Madura-Paumben Company may be trusted to safeguard their own interests. As regards (b), as soon as the Tanjore District Board shall have allocated money for the survey we need only take them at their word, and in instructing the South Indian Railway Company, say that the line should be so arranged as to serve the towns mentioned by the District Board.

30. As regards (a) I have noted separately. I certainly think that there are strong arguments for locating Shivaganga on a branch instead of on the main line, through if this view of the short-circuiting question had not been propounded by the Agent, South Indian Railway, I would have acquiesced in the decision already arrived at to locate Shivaganga on the main line of the Madura-Paumben Railway.

F.J.E.S.

R. 25/5/98

Agent S. I. Ry's letter No. 566 of 24.5.98

~~H. E. The Governor~~

(1) The Hon. Sir H. Bliss KCIE

~~(2) Mr J. [illegible]~~

& circulate
The Hon'ble Mr. A. T. Arundel

Capt. Shelley's proposals, ~~commented upon~~ by Mr. Spring in this and the linked file, are doubtless, from the point of view of the S. I. R., desirable ones. But, before accepting them I should like to be satisfied that they will serve also the interests of the general public. The Madras, the Tanjore and the Madura publics are, I suppose, the bodies most interested. I think the Madras Chamber of Commerce and the Collectors of Tanjore and Madura should be consulted. It would perhaps hardly do to put before those bodies Captain Shelley's proposals in their naked selfishness. But, Mr. Spring would I suppose be able to present those proposals in decent clothing.

* See end of Note. [illegible] 17/6/98

R 17/6
H.L.C. (2)
16/6/98

A.G.H.
3.6.98

I am afraid we shall not do much good

Madura Paumben Ry.

The question of route, whether Sivaganga is to be on the main line or on a branch.

As explained in my long note dated 25/5/98 the Agent S. I. Ry. is anxious about the decision as to whether Sivaganga is to be served on a branch or on the main line of the Madura Paumben Ry. because he foresees the inevitable demand for a short cut for the through Ceylon traffic, and is anxious that such short cut should be so arranged that (a) the Tanjore-Mayavaram section at least of his main line may not lose the through traffic, and (2) that at least some considerable mileage of the Madura Paumben line may count on getting it. These ends he proposes to bring about by getting the link connecting Devakottai to Ramnad condemned once for all, (marked thus on the sketch); and by putting Sivaganga on a branch instead of on the main Madura Paumben line; and by arranging so that the Mutupet-Arantangi extension of the District Board railway may twist about a little, from time to time, as proposed by the Board, so that when the inevitable short cut comes, the short cut which emerges on his main line at Tanjore may have a slight advantage in length over the short cut which emerges on his main line at Mayavaram. (Both short cuts having the 25 mile Shivaganga Devakottai section plus the 10 mile Shivaganga branch in common.

All that has been gone into in the long Note dated 25-5-98. Now I have received a letter from the Agent S.I.Ry. No 506. dated 24-5-98. in reference to what he was saying to me on the subject when here the other day.

I feel quite satisfied about one thing that, even if Sivaganga is to be on the main Madura Paumben Ry., it is not technically a good arrangement that the M.P. line should diverge from the S.I.Ry. at a point outside Madura on the north of the Vaigai. For working reasons the branch ought to leave the main line at Madura Station, and at the south end of it. The Agent gives reasons for this, about land, &c.. A good deal more land will be required at Madura when the branch to Paumben is made, and no land is obtainable on reasonable terms at the crowded north end of the station, whereas it is easily obtainable at the south end.

A junction at a point a couple of

Consulting the Chamber of Commerce. The Chamber seems to me to know surprisingly little of the condition & requirements of the Country outside the City of Madras itself and to seldom take broad views. As to the Clubs of Tanjore & Madura, they should be able to judge what is best for their districts, but this is hardly what we now want to know. The question is given the fact that the S.I.R. is Govt. property worth about 7 millions sterling, how can we best lay out the line which will eventually connect India & Ceylon so as to prevent injury to the S.I.R., while at the same time giving the public as great facilities as possible. I think the proposal to lay the Madura-Paumben line along the south of the Vaigai & to put Sivaganga on a branch is a reasonable answer to the above question & that we might say so at once.

RS
10/6/98

I agree that the line south of the Vaigai with a branch from Sivaganga is *prima facie* the best; but there is no hurry & we may just as well get other opinions. I therefore think that ~~two~~ references proposed by H.E. should be made.

6-6-98

I never considered the question in the aspect which it has now assumed. All I thought of before was the best route from Madura to Ramnad only.

RS

miles out to the north of the main would be a junction in name only: all trains would have to work in to Madura Station. and it would be better, shorter and cheaper to run in at the south end once for all.

But that involves putting Sivaganga on a short branch if it is to be served at all. But this is the very thing that the Agent wants for the reasons given in my long Note. The Agent is working the short 14 mile branch to Karikal and says he does not object to working so short a branch, especially as it is so likely later on to become part of the threatened short cut which he cannot stave off.

It is not a question of omitting to serve Sivaganga, an omission which the Hon. Sir H. Bliss would object to. It is a question of whether, *with the same mileage of line*, to serve Sivaganga on the main line or on a branch. I don't suppose the H.M. cares how it is served so long as it *is* served. and it seems to me that the Agent S.I.Ry. is looking perhaps very far ahead. & has good reasons for putting it on a branch.

I therefore recommend that we tell the Govt. of India that this Govt.

for reasons to be briefly entered into would desire that the Madura Paumben Ry. should leave Madura Station by the south, and keep to the south side of the Vaigai river, and that Sivaganga should be served on a branch.

My draft to India about the Madura Paumben line is still in circulation. If the suggested alteration in that draft are approved it may issue, and the letter above suggested can follow.

F.H.S.

27/5/98

* This was again brought before Council to-day Friday 17th June 98 and I was instructed that the Madras Chamber of Commerce need not be consulted, but that the Collector of Madura should be consulted about whether the South Vaigai route with branch to Sivaganga would suffice for local requirements.

F.H.S.

17/5/98

Note. Sir H. Bliss' D.O. overleaf seems to explain the cause of my confusion of ideas on the subject of the decision come at in Council. Mr Twigg appears to have been chosen because he has recently been Collector of Madras and Collector of Tanjore. I had not known of this.

F.H.S.

21/6/98

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A pin

Note. for H.E. The Governor's orders

A perusal of Sir H. Bliss' d.o. overleaf will show that Your Excellency correctly recollected what was ordered in Council. (Please see my footnote below on the left).

Our conversation of yesterday leads me to ask whether Your Excellency would now wish that order to be carried out, or would wish to ascertain whether Council would agree to revise it on the lines of my final paragraph in the Note below.

When I wrote the memo opposite I was under the impression that the decision come to in Council was that the question of the detailed alignment of the Madura Paumben (north or South Vaigai) was the question to be immediately referred for opinion to the Collector of Madura, in order that this Govt. view on this point might be laid without delay before the Simla conference, and that the large question of possible ~~[illegible]~~ competitive routes might be dealt with at leisure, the Collector of Tanjore, Mr Twigg being consulted.

2.– But H.E. the Governor has since told me that his recollection of what was decided on was different, and that "the order finally given in Council on Friday the 10th June 98 was that all the proposals of the Agent S.I.Ry., as set forth in Mr Spring's Note, typed, of 25-5-98, para 27, be submitted for the report of Mr Twigg, Collector of Tanjore, and that he should be told to reply within a month".

3.– H.E. expressed a wish that I should ascertain personally from Sir H. Bliss what ~~[illegible]~~ his recollection of the order is. I append Sir H. Bliss' reply below.

4.– But during our conversation, to day 20-6-98 H.E. expressed the opinion that it would be wisest to tell the Agent S.I.Ry. that the question of route for the Madura Paumben railway must be settled on its own merits and that Government declines to commit itself in advance to any line of policy in regard to the short-circuiting question.

5.– The reasons for adopting this course seem to be 1st that the Tanjore District Board seem likely, without any compulsion or any prompting from outside, to bend this line about, allowing local trains, as desired by the S.I.R.C. 2nd that Govt. cannot well bring pressure to bear on the Pudukottai State to make its projected railway to Tanjore instead of to Trichinopoly. 3rd that it is best that whatever happens hereafter neither the S.I.R.C. ~~nor~~ the Madura Paumben Branch line Co. may have it to

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My impression is that the Order finally given in Council on Friday the 10th Inst. was that all the proposals of the Agent S.I.R., as set forth in Mr Spring's typed note of 25.5.98, para 27, be submitted for the report of Mr Twigg, Collector of Tanjore, & that he should be told to reply within a month.

H.W.B.

20.6.98

GOVERNMENT OF MADRAS

June 20, 1898

My dear Spring

My recollection of what was decided is that you were to ask Twigg's opinion only, he being Collr. of Tanjore & having just left Madura, & the Chamber of Commerce not being thought worth consulting –

As to your coming to me,

say that they did not enter into negociations for the M.P.Ry. with their eyes fully open.

6.- In para 27 of my Note dated 25-5-98, I recited the S.I.Ry. Co's Agent's recommendations. In paras 28-29 I said what was practically to the following effect. "Government need take no action now about the suggested alignment of the Mayavaram Mutupet railway extension, because the District Board may be trusted to locate it to the best advantage in their own interest as a local line, and they have no idea at present of its ever becoming a through line. Again Government need take no notice just now of the Agent's S.I.Ry. suggestion about the Rajah of Pudukottai's proposed railway, that is about its being terminated at Tanjore or at Trichinopoly. We may await proposals". Then as regards the detailed alignment of the Madura Paumben line I advised "that the south Vaigai route should be followed, with a branch to Shivaganga".

7.- I very much doubt whether it is really worth while to make the branch to Shivaganga. To make it would have the advantages 1st of allaying the presumed fears of the Madura Paumben and South Indian Ry. Companies, and of putting some villages north of the Vaigai in touch with the railway. But whether this latter is worth the expense of a five or six lakh branch with all its extravagance of working is doubtful. For the sake however of allaying the nervousness of the two Companies, of this device for slightly prejudicing the dreaded short circuiting question in their favour, it might perhaps be worth while to go to the expense of the Shivaganga branch.

See draft G.O. consulting Mr. Trigg. 7M

(?) 7M

8.- There is a risk worth noticing in, just now, making public property of this question that has been raised by the Agent S.I.Ry. about the threatened short circuiting. This risk is, that, if it dawns upon the minds of the Local Board that the cheap little local railway which they designed specially for local development and to serve local towns, is seriously talked of by Government as being likely to become part of an important through route, they may reconsider their proposed alignment and propose to run as straight as a ruler from Mutupet towards Ramnad.

9.- What I personally would like to

do now would be as follows. (1 and 2 are in addition to the course ordered in Council, and are based on my conversation of to-day with H.E. No 3 is in accordance with orders in Council, but I suggest the G.O. instead of one.)

1st. Write to the Government of India* to

A.S.H say that, for reasons of population, shortness of mileage (90 instead of 100), and convenience of working with Madura, this Govt. prefers the South Vaigai route for the Madura Pamban Railway, whether with or without a branch to Sivaganga, a question which it is not necessary to settle for the present pending the completion of enquiries in regard to certain proposals of the Agent S.I.Ry. which have for their object the minimising of the risk of short-circuiting his main line and a part of the Madura Pamban.

2nd. Write to the Agent S.I.Ry. and tell him

A.S.H that this Govt. selects the South Vaigai route G.Q. (as above). But that we must decline to give any assurance that short circuiting will not in future take place. But that as a fact nothing of this sort seems just now to be in immediate prospect.

3rd. Take the opinion of Mr. Twigg, Collector of ~~Tanjore and lately the Collector of Madura~~ † ~~[illegible]~~, about the S.I.Ry's proposal, as stated in my 27th para of Note dated 25-5-98. But say that the correspondence must be considered as confidential. Then that a confidential note on the short circuiting question based upon all the information and advice available be left on the record, for reference hereafter if ever reference [illegible] necessary.

F.V.S.
20/6/98

* ~~If thought necessary after consulting [illegible] Collector of Madura the proposals of the Con. Engr's Note dated.~~ FVS ~~Flagged~~

* After consulting Mr. Twigg, late Collector of Madura and now of Tanjore, see para G.O. and Con. Engr's Note flagged H. below. and if he advises the adoption of the South Vaigai route.

I accept proposals (1) and (2). As to (3), it would be wise to ask Mr. Twigg, who is Chairman of the Dist Bd., to regard this reference and enquiry as confidential. He must consult his Board, before he can give an answer and opinion. If the S.I.R. are informed as suggested in (2), I am quite willing to let (3) slide.

A.S.H
22.6.98

The letter to the Agent S.I.R. as proposed in (2) should go at the same time as the letter to the G. of I. proposed in (1).

A.S.H 22.6.98

† As per G.O. drafted below. Flag
I ask H.E.'s orders as to whether for the reasons referred to in para 8. above, this G.O. had not best be confidential.

PUBLIC WORKS DEPARTMENT,

RAILWAY BRANCH.

Form No. 2

Papers to be read in Proceedings:—

Read. Note by the Consulting Engineer for Railways, Madras, dated 25-5-98.

Again G.O., dated 189 , No.

Again G.O., dated 189 , No.

Current No. of 189 , dated , from

" " " 189 , " , "

" " " 189 , " , "

ORDER. Confidential (?) 7/11

Cancelled by order in Council
Not to issue
FVS
27/6/98

Mr. J. Twigg, Collector of Tanjore, is requested to favour Government with an expression of his personal opinion on the large question of railway policy affecting the Tanjore and Madura Districts which has been raised by the Agent, South Indian Railway, and which is reviewed in the Consulting Engineer's Note read above dated 25th May 1898 of which a copy is attached.

2. It seems to be agreed on all hands th any future extension of the Mayavaram-Mutu-pet Railway, southwards into the Madura District, must aim at Devakottai. But opinions differ as to the route from that place southwards, viz, whether it ought t aim at Ramnad or at Sivaganga, or at an intermediate point, e.g. Paramagudi.

3. The objection to any point other tha Sivaganga being made the objective is th serious short-circuiting and loss of ear-ings to which such a route would subjec the South Indian Railway of which the St is about four-fifths owner. And it is w a view to minimizing the risk of this

As now would be as follows. (1 and 2 are in addition to the case ordered in Council, and are based on my conversation of to-day with H.S.

loss that the Agent has put forward the three propositions paraphrased in para 27 of the Consulting Engineer's Note, dated 25th May 1898.

4. Mr. Twigg's opinion is sought in regard to this question of the most suitable junction point of any future extension of the Mayavaram-Mutupet Railway beyond Devikottai, with the Madura-Paumben Railway. It must however be clearly understood that there is at present no intention of making such a connection, but Government considers it advisable to place its views upon record in order that they may be available for reference if the proposal should ever hereafter be seriously put forward.

5. Mr. Twigg's opinion is also asked for in regard to the Agent's, South Indian Railway, proposal that if ever a line running northwards from Devikottai or the neighbourhood through Pudukotta should be made, its junction with the South Indian Railway should not be at Trichinopoly, as originally proposed but at Tanjore. This is an integral part of the Agent's proposals for partially safeguarding the Madura-Paumben and South Indian Railways from the effects of short circuiting.

6. The local question of the proper route or the Madura-Paumben Railway viz north or outh of the Vaigai, forms the subject of a eparate Order. But Mr. Twigg's personal opinion s sought in regard to the question of whether branch to Sivaganga is or is not immediately cessary in local interests, if the South Vaigai ute be adopted. It will be seen that this nch is an integral part of the Agent's, th Indian Railway, proposals for prejudicing short-circuiting question.

7. Government desire to be in possession of Mr. Twigg's reply within a month of the date of this Order.

F.J.E.S.

R.

21/6/98

anch is an in

uth Indian Railway,

short-circuiting q

Madura-Pamban Ry.

Pw. DEPARTMENT.

[43/509] The question of choice of route

Cons. Engr's C. No. 2768

SUBJECT.

HIS EXCELLENCY THE GOVERNOR. ✓

THE HON'BLE SIR HENRY BLISS, K.C.I.E.

THE HON'BLE MR. A.T. ARUNDEL. GROSE, C.I.E.

FOR ORDERS.

This gives my view of the matter, after reconsideration. It should be circulated.

A.E.H. 23.6.98

Hon. Members will find the notes which led up to this commencing at the place marked (A) just below.

FKS 24/6/98

I agree with H.E.

HB 24/6/98

I also agree. Mr. Twigg's reply will of course be circulated on receipt.

ATA 25.6.98

I would omit the passage underlined in red ink.

A.E.H.

I read H.E.'s orders to be as follows. And as this final version differs from that arrived at in Council I understand that H.E. would wish me to continue the circulation. So I paraphrase H.E.'s orders, as I understand them, as follows. If correct ~~will~~ will H.E. kindly initial and then the file can circulate if H.E. thinks necessary.

(1) Send the draft G.O. flag H. to Mr Twigg.

(2d) On receipt of Mr Twigg's reply address India conveying the decision arrived at by Govt. after reading Mr Twigg's report, as to the local question of North Vaigai or South Vaigai route for the M.P.Ry. and the necessity or otherwise for a branch to Sivaganga.

(3d) Inform Agent S.I.Ry. of the decision arrived at about the alignment of the M.P.Ry. and say that as regards the short-circuiting question Govt. must decline to commit itself one way or the other, and that all that can be said is that the interests of

H.E. 23/6 R 24/6 H.B. 24/6 R 25/6

the S.I.Ry. should be duly weighed when the time arrives, if it ever does arrive, for considering the short circuiting question. We may tell him that as a fact nothing of the sort seems in immediate prospect.

(4) If the above is done the reference to Mr Twigg about the short circuiting question may be allowed to slide.

(5) The letter to India and that to S.I.Ry. should both go after a reply has been received from Mr Twigg to the G.O. flagged H.

FKs
23/6/98

Issue the G.O. flagged H. Sharp.

FM
27/6/98

Form No. 1.

PUBLIC WORKS DEPARTMENT,
RAILWAY BRANCH.

SERIAL
No. 100

Papers to be read in Proceedings:—

Again G.O., dated 189 , No.
Again G.O., dated 189 , No.
E. R's. Current No. 2210 (flag M) of 1898, dated 9-5-98, from the Agent, S. I. Ry
" " " 2768 (flag W) " 1898, " 13-6-98, " " " "
" " " 189 , " , "

Note by the Consulting Engineer for Railways, dated 18th June 1898.

ORDER. No. 869. Ry dated 27/6/98

A.14
22.6.98

Copies of the papers read above will be forwarded to Mr. J. Twigg, Collector of Tanjore, for an expression of his personal opinion as to the relative merits, from the point of view of the interests of the District as well as of trade between Madura, Ramnad, and Toni Torai, of the two routes referred to, for the Madura-Paumben Railway, viz, that to the North of and that South of the Vaigai river.

2. Mr. Twigg's reply should reach Government within one month of the date of this order

FKs
R.
21/6/98

To,
J. Twigg Esq. Collector of Tanjore.
The Agent, South Indian Ry.
" Consulting Engineer for Rys.

Despatched on 27.6.98

Public Works (189) Department.

Railway Branch. Madras.

CURRENT No. 849

JOINT SECRETARY TO GOVT. OF MADRAS RYS.
RECEIVED
14 JUL. 1898

Order

Ooty

From The Ag Collector of Tanjore.

No. 3052/Rev of 98

Dated 13th July 1898

Received 14-7-98

DESPATCHED
13 JUL 1898

Enclosures nil

Spare copies

SUBJECT.

Giving an expression of his opinion as to the relative merits of the routes North & South of the Vaigai for the Madura-Pamban Railway.

BACK PAPERS.

G.O.	No.	Department.	Date.

FURTHER PAPERS.

G.O.	No.	Department.	Date.

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39 P

TANJORE, COLLECTOR'S OFFICE,
No. Camp, 13 July 1898.

From
T. Twigg Esquire,
Ag: Collector,
TANJORE,

To
The Secretary to Government,
Public Works Department, Railway Branch,
MADRAS.

Sir,

As desired in G.O. 869. Railway, dated 27 June 1898, I have the honour to give my opinion as to the relative merits of the routes North and South of the Vaigai for the Madura–Pamban railway as follows:—

2 It appears to me that the interests of the District will be best served by the adoption of the Southern route with a branch at Mutanandal to Sivaganga.

3 In the first place, the Country South of the river is far worse off for roads and

BACK PAPERS. FURTHER PAPERS.

and in greater need of opening up than the country to the north where the difficulties with regard to road material are not so great. The Vaigai is now a much more formidable obstacle to communication than it was before the opening of the Periyar works. and if the railway takes the northern route, I fear that any improvement in communication on the South will be very slow. On the other hand, with the railway running on the South bank, and carrying gravel at favourable rates, the construction of feeder roads would be stimulated; and this, I think, gives the only chance of opening up that blank tract of country lying between the Madura-Ramnad road on the north and the Madura-Tiruchuli-Kamuti road on the South.

4. Sivaganga

Sivaganga would be sufficiently served by a branch line from Mutanendal, and the bridge, which should be made available for cart traffic and linked up with the roads north and South of the river, would be more useful at Mutanendal than at Paramagudi where the northern route would place it.

Note this

WP

5 The through traffic from Toni Torai and probably Ramnad would be better served by the line I was anxious to see made for protective purposes turning northwards from Paramagudi through Devicotta to join the Mayavaram-Muttupet extension; but the Agent, South Indian Railway, explains to me that such a line is out of the question, and indeed has frankly stated in his letter No. 506 dated 24th May 1898 that the mere prospect of it would probably be

fatal

fatal to the Madura-Pamban line. As between the two alternative routes for this last line, the Southern offers the advantage of a shorter run for through traffic.

6. There is, I think, little to choose between the country north and south of the Vaigai in respect of capabilities for supplying passenger and goods traffic, but I should be disposed on the whole to give the preference to the South as Mr. Mercer does.

7. I believe the Southern route will be best for railway interests, and am decidedly of opinion that it will be best in the interests of the District.

I have the honour to be,
Sir,
Your most obedient Servant

Acting Collector

Fm

RS

P.W.C. No. 849
14.7.98

G.O. 968-9 Ry & 28.7.98

H.E. and circulate.

Madura Paumben Railway

1.- Mr Twigg's reply to G.O. 869 dated 27th June 98. has now been received. and I circulate it for H.E.'s and Hon Members' perusal and orders.

2.- Mr Twigg's opinion is that the interests of the District will be served best by the adoption of the South-Vaigai route with a branch to Sivaganga.

3.- First I may mention that I have heard privately from Simla from Mr Upcott that he hopes to be able to put the Madura-Paumben line into the "3 years programme", so that it will not be necessary to make use of a Subsidising Company for its financing. This will be a great thing. We ought I think to make it safe by again, when writing to India on this occasion, emphasizing the importance of its being made an integral part of the S.I.Ry.

4.- If it is so arranged, and if we are to have no outside Company, we can the more easily leave the question of a branch or no branch to Sivaganga an open one for the present. Were an outside Company to be introduced the branch question would of course have to be settled beforehand.

The Hon. Sir H. Bliss

In compliance with the standing order under the Council Act of 1861. I return the draft to the Hon Member before issue.

F.H.S.
28/7/98

A.M.N.

H.A.

Hould) 28/7/98

R/28/7/98.

H.E. & Hons
19/7/98

R/23/7/98
f

P.W.C No. 849 d/ 14.7.98

5.– The reasons for making the branch now are 1st that its existence will slightly prejudice the future great short-circuiting question in favour of the S.I.Ry. for the reasons already gone into in previous notes in great detail, and 2nd that for the reasons given by Mr. Twigg the branch will greatly help local interests. It will doubtless also bring much traffic to the main line which otherwise would miss it.

6.– The reasons against the branch, and I think it probable that they will weigh greatly with the Govt. of India, are 1st its cost, and the fact that the seven or eight lakhs might be better spent on light feeders elsewhere, and 2nd the cost of working so uneconomically short a branch.

I would think the Govt. of India may be left to find it for itself these objections. I wd. not suggest them.
A.S.H. 27.7.98

7.– I myself am in favour of telling the Govt. of India the reasons for and against the branch, and saying that we think it likely that it will be wanted later on, and that if a branch line Company is to be introduced we must specify that the branch must be given because it is unlikely that unless it is given the ~~S.I.Ry. Co.~~ money will be raised, for the S.I.Ry. Co. having in view the great risk of future short circuiting, unless the short cut passes through Shivaganga, Devikottai, Pudukota and Tanjore, will be certain to warn the promoters of the subsidising Company of the risk they incur unless the Shivaganga branch is made safe in advance.

I am of this opinion
A.S.H.

8.– But we might go on to tell the Govt. of India that if the agency of a Branch line Co. is not availed of we are content to let the question of the branch to Shivaganga await the verdict of traffic development.

Very well.
A.S.H.

9.– We might give in general language our reasons for preferring the South-Vaigai route, viz facility of working out from South end of Madura Station instead of from a separate junction to the north of it, local population, shorter through route, &c.. and we might conclude by asking them for the present to sanction a 90 mile railway from the South end of Madura station to Toni Torai.

Yes.
A.S.H.

10.– Then we must address the S.I.Ry. as already ordered, telling him what we have recommended to the Govt. of India, and saying that as regards the short circuiting question this Govt. declines to commit itself one way or the other.

F.V.S. 19/7/98

Yes.
A.S.H. 27.7.98

I agree with H.E.
[illegible] 27/7/98

Hewell 28/7/98
R/28/7/98
H.E. & Hons 19/7/98
R/28/7/98

[illegible]g that

the route south of the Vigai with a branch to Sivagunga will be the best. But it is now proposed to have the southern route *without* a branch to Sivagunga. As there is no bridge across the Vigai Sivagunga will therefore be cut off from the railway. Under these circumstances I am disposed to think that the northern route with its larger local traffic would be preferable.

AA
23.7.98.

To H.E. the Governor for perusal of the Hon Mr Arundel's remarks and for final orders. I have endeavoured in the draft below to go as far towards meeting the Hon Mr Arundel's wishes as seems consistent with H.E.'s and the other Hon Member's brief comment on my note which perhaps did not put things as clearly as I have put them in the draft.

I also put up a draft to S.I.R.

FKS
25/7/98

On further consideration, I go with the Hon Mr Arundel in thinking that if we are to have the southern route, we should also have the Shivaganga Branch. I would therefore omit from the draft any suggestion that this Branch is not needed or may be deferred.

A.G.H
27.7.98

Very well
AH
28/7/98

Issue 28/8
JW

P.W.C No 849 dt 14.7.98

Madura Paumben Railway

G.O. No. 968 Ry
Dated 28th July 1898.

A.T.

His Excellency the Governor.

Read.
G.O. No 650-51 Ry dt 28.4.98.
Letter to the Govt of India No 774 Ry dt 4.6.98.
G.O. No 869 Ry dt 27.6.98.
Letter from the Collector of Tanjore, No 3052/Rev dt 13.7.98.

WP

Order thereon. No. 968 Ry dt 28/7/98

1.- The Govt. of India will be addressed.

2.- The Agent S.I.R.C. will be informed with reference to his letter to the Con. Eng. No. 506 dated 24th May 98. that the adoption of the South Vaigai route with a branch to Sivaganga has been recommended to the Govt of India, ~~and that the recommendation regarding the proposed Sivaganga branch has been~~ ~~that if the Madura Paumben line must be financed by a Branch line Company the Shivaganga branch be made an integral part of it; but that if, on the other hand the Madura Paumben line be financed either directly by the State or through the direct agency of the S.I.R.C. the decision as to whether the Sivaganga branch shall be made immediately, as preferred by this Govt., or shall await the verdict of traffic development, shall be left to the Govt of India for decision.~~

W

I would modify this so far as to make the recommendation of the Shivaganga Branch unconditional. Otherwise I concur in the G.O.

A.G.H
27.7.98

3.- The Agent should without delay make proposals for, and submit an estimate of the cost of, staking out the South Vaigai route and the branch from Manamadura to Sivaganga, in order that if money should be allotted, it may be ~~[illegible]~~ practicable to start work at the earliest possible moment.

P.T.O.

4.– With reference to his proposal for prejudicing the short circuiting question by coming to an early and authoritative decision in regard to the alignment of the Pattukota and Mayavaram–Muthupet Railways, the Agent will be informed that this Government declines at this early stage to commit itself to any definite course of action.

F.R.S.
25/7/98

To Agent. S.I.R. Despd 28/7/98
Ch. Eng
Rev. Dept
L & M. Dept } after papers are printed up to date.

Despd with 6 F.R.S.
Spare copies sent on 24/9/98

No. 969 Ry, d 28.7.98

R. FORM No. 12.

No. 969 Ry

Ap

4 P.C.M.

Government of Madras.

PUBLIC WORKS DEPARTMENT,
RAILWAY BRANCH.

To
THE SECY. TO THE GOVT. OF INDIA,
P. W. DEPARTMENT.
Simla

Ooty the 28th July 1898.

SIR,

With reference to the correspondence ending with my letter No. 774-P Ry. dated the 4th June 98 on the subject of the Madura Paumben Ry. and with special reference to para 2 of that letter, I am now directed to communicate to the Govt. of India the conclusion arrived at by H.E. the Governor in Council on the subject of the best alignment for the projected Railway.

2.– As the Govt. of India are aware two routes have been under consideration; ~~[illegible]~~ one route (a) starts from a point on the S.I.R. main line, north of the Vaigai river, a mile or so to the north of Madura station, and thence passing through Sivaganga by a detour ~~[illegible]~~ involving some 9 miles extra length, until the river Vaigai is crossed, ~~[illegible]~~ ~~[illegible]~~ follows the south bank of that river to its terminus on the sea:– the other route (b) leaves

Madura station at its south end, and continuing at the South side of the Vaigai river to the sea terminus. This latter route is some 9 miles shorter for all through traffic than the former.

3.— In endeavouring to arrive at a decision as to which of these two routes possesses superior advantages this Government has had to consider 1st the interests of the through traffic with Ceylon, interests which undoubtedly demand the adoption of the south Vaigai route on account of its shorter length; 2nd the interests of local development; and 3rd whether or not it would be either possible or desirable, in deciding on the location of the Madura Pamban Ry., to influence in one way or the other the solution of that important problem of the future, the threatened short circuiting of the S.I.Ry. by the extension of the Mayavaram Mutupet Ry. southwards to a junction with the Madura Pamban.

4. This last consideration has formed the subject of careful enquiry on the part of this Government which, in common with the Agent S.I.R. Co. ~~this Government~~ recognises that it probably is inevitable that at some future time a connecting link should be ~~constructed~~ made between the Southern end of the Tanjore District Board's line and some point on the Madura Pamban Ry. which will deprive a considerable mileage of the S.I.Ry. of much of its present traffic. The Agent S.I.R. Co. hoped to neutralise a part of the effect of this inevitable short circuiting of the future by having it

authoritatively laid down at this early stage 1st that the proposed Pudukota line should join the S.I.R. at Tanjore instead of at Trichinopoly, and 2nd that no connection of the Mayavaram Muttupet and Pudukota lines with the Madura Paumben line should be allowed east of a certain point, Mutanandal, whence a short branch would be made, crossing the Vaigai, to Sivaganga. The Agent wished ~~[illegible]~~ that at this early stage condition should be influenced in favour of his scheme, by bringing the Sivaganga branch into existence: 2nd That when ~~[illegible]~~ the, perhaps inevitable, extension of the Mayavaram-Muttupet and Pudukota line to the southwards taken place, hereafter, the existence of the Sivaganga branch may render contact with the Madura Paumben line east of Mutanandal very ~~likely~~ improbable.

5.- After a careful consideration of all that ~~had~~ has been advanced in favour of a policy of scheming far in advance to ward off ~~[illegible]~~ from the S.I.R. some part of the effects of the threatened short circuiting. H.E. the Governor in Council has come to the conclusion that the right course to adopt is to inform the Agent S.I.R. to. that no guarantee can be given in regard to the proposed prevention of short circuiting, and that the alignment of the Madura Paumben Railway must be decided on with sole reference to local conditions of the present time and of the near future so far as ~~they can be judged of~~ a judgment in regard to them can be arrived at.

6.- This Government is now of opinion that it is demanded in the interests not only of through traffic but also of local development (not to mention convenience and economy of railway working) that the South Vaigai route should be adopted in lieu of that surveyed by Mr Strudholt. But it seems certain that for the full local utilisation of the Madura Paumben Ry. the districts north of the Vaigai river ~~[illegible]~~ must ~~[illegible]~~ be brought first into touch with the Railway by the construction of the 8 or 9 mile branch to Sivaganga crossing the Vaigai at Mutanendal. ~~and this question~~ It is therefore ~~Government~~ strongly recommended that the branch in question be constructed simultaneously with the main line. ~~remains for consideration whether that branch should be made simultaneously with the main Madura Paumben Ry. or be allowed to await the verdict of traffic development.~~

The making of this branch should, I would think, be simultaneous.
ASH
27.7.98

7 ~~8~~.– Although the Govt. of India have said ~~that~~ in para 12 of their letter No. 1746-R.C. dated the 22nd Oct. 97. that the agency of a subsidising company is essential for the financing of ~~this line~~ the Madura Paumben Ry. if its construction is not to be deferred indefinitely, ~~[illegible]~~ H.E. in Council venture still to hope that means may yet be found for bringing it within the programme of State financed lines ~~[illegible]~~ with a view to the avoidance of the administrative difficulties which are ~~[illegible]~~ ~~difficulties any at have to be encountered which are~~ inseparable from the introduction of alien ownership in an important through route.

8.– Should it be inevitable that the Madura Paumben railway must be financed by a Branch line Company alien from the S.I.R.C. it seems to H.E. in Council to be quite essential that the Sivaganga branch should now form part of the programme, as in the absence of the partial security against the threatened short circuiting which this branch will afford, it may not be easy to induce ~~[illegible]~~ promoters to come forward.

Perhaps this para might be left out. Also, para 9 ~~[illegible]~~
27.7.98

~~9. [illegible] Should, on the other hand, the Govt. of India [illegible] happily find themselves in a position to finance the Madura Pamban Ry. either directly or by means of State Guaranteed Debentures raised by the S.I.R.C. this Government, though welcoming the Shivaganga branch in the interests of local development, and believing that it will eventually be needed in the interests of traffic, would be willing to see its construction deferred for the present until it seems to be certainly demanded or likely to be in itself remunerative.~~

~~[illegible]~~ 8 ~~In conclusion~~ I am, therefore, instructed to say that H.E. the Governor in Council hopes that the Conference shortly to sit in Simla may find it possible to permit the S.I.R.C. to directly finance the Madura Pamban Ry. on the South Vaigai alignment, with ~~preferably~~ ~~with, if possible, without~~ the branch from Manamadura to Sivaganga; and that, pending the completion of the arrangements for financing it, the Govt. of India ~~that [illegible] if the intervention of a separate Branch Line Company is~~ may find it possible to make an allotment of funds sufficient to allow of the very early ~~inevitable the Govt. hope that the alignment to be approved for~~ prosecution of works as soon as the cessation of the N.E. monsoon permits work to be begun ~~makes it possible to begin~~. ~~may be the South Vaigai alignment with, necessarily, the Sivaganga branch.~~ The Agent S.I.R. has been called on for an estimate for the staking out of the South Vaigai alignment, and on its receipt the Govt of India will be asked to ~~sanction the expenditure~~. ~~for permission to~~ sanction whatever small expenditure may be necessary for the purpose.

I have &c

F. [illegible]

25/7/98

Documents accomp: -nil-

Despatched on 28/7/98

35 Copies of this letter were [illegible] on the 23/9/98 in Off. & despd on the 24/9/98

Print

G.O. 968-69 Ry d 28-7-98.

Print the following papers in full.

1. Letter from the Govt of India No. 1746 RC, dated 22-10-97.
2. G.O. 1117~~48~~R d 10-12-97.
3. Letter to India No. 1118 R d 10.12.97.
4. " Agent S.I.R No. 3777 d 16.12.97.
5. " from the Govt of India No. 90 RC d 17.1.98.
6. G.O. 167-8 R d 31-1-98.
7. Extract from Agent S.I.Ry's letter to Board No. 564 d 15.12.97.
8. Letter to the Agent S.I.Ry No 302 d 31.1.98.
9. Ext from Agent's letter to Board No 571 dated 2-2-98.
10. Ext from Bd's letter to Agent. No 204 d 11-2-98.
Ext from Agent's letter to Bd. No: 576 d 9.3.98.
Ext from the Govt of India No. 17 RP d 1.4.98.
11. Letter ~~from~~ to " No. 1A d 11-4-98.
12. Telegram to " .
13. G.O. 650-1 Ry d 28-4-98.
14. Letter from Agent S.I.Ry No. 442 d 7.5.98.
15. " " 506 d 24.5.98.
16. " to the G of India No. 774 Ry d 4-6-98.
17. Note by the Consg Engr for Rys d. 18-6-98.
18. G.O. 869 Ry d 27-6-98.
19. Letter from the Collr of Tanjore No. 3052/Rev d 13-7-98.
20. G.O. No 968-69 Ry d 28-7-98.
21.

Please send proof urgent

14-8-98