Public Works (1899) Department.

RAILWAY BRANCH.

G.O., No. 1452. Ry

DATED 12th Decr. 1899

Preceds

1105 Ry d/ 7-10-99
1335-36 Ry d/ 20-11-99

80/1

RAC Fr
17/1

[Despatch Abstract.]

Reconnaissance Survey from Baliapatam to Mangalore.

Comm: to the Agent & Manager, M. Ry, the sanction of the Govt. of India to ~~the~~ a revised estimate amounting to Rs 7167 of the Cost of a — and to an allotment ~~of grant~~ of Rs 7000 to meet outlay on the Survey.

Indexed.

[P. W. 26.
200—30-3-99.]

BACK PAPERS.

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

FURTHER PAPERS.

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

RAILWAY.

Government (1899) of Madras.

PUBLIC WORKS.

Recd. } 1899.
Regd.

Enclosures

Spare copies

G.O., No. 1452 Ry., 12th December 1899.

DECEMBER.

Baliapatam-Mangalore Reconnaissance Survey

Communicating to the Agent and Manager, Madras Railway, the sanction of the Government of India to a revised estimate amounting to Rs. 7,167 of the cost of the —, and to an allotment of Rs. 7,000 for the purpose.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Railway.

Read the following papers :—

From—The Agent and Manager, Madras Railway.
To—The Consulting Engineer for Railways, Madras.
Dated—Madras, 24th March 1899, No. 10694/317.

I have the honour to inform you that I have been instructed by my Board to apply for sanction to make a survey of a line from Baliapatam to Mangalore, the survey party to take the field in September next; and I shall be glad if the necessary permission can be given at an early date.

I enclose statements (*not printed*) showing the estimated cost of a reconnaissance and of a final location survey, amounting to Rs. 13,900 and Rs. 48,177, or Rs. 154 and Rs. 535 per mile respectively.

We are prepared to undertake either the one or the other as the Government may direct; the cost to be debited to Revenue.

Note by the Consulting Engineer for Railways, Madras, dated 2nd April 1899.

Prima facie there is every reason to believe that it will pay well to extend the Calicut-Baliapatam section of the Madras Railway to Mangalore, a distance of 9(miles; but until a survey is made we know very little about it. More however i: wanted than a mere engineering survey. Such a survey, and the estimate to be base thereon, will tell us the cost of building the road; but that is no use unless we c: form some opinion as to the amount of traffic likely to come on it. Operatin expenses we can estimate sufficiently nearly from our knowledge of those of the re: of the system.

The moment the subject of extending to Mangalore comes up for the consider: tion of Government we are met by the gauge difficulty. The Government of India ha ordered that the Calicut-Cannanore line must be built on the broad gauge, an naturally, its extension to Mangalore, if undertaken, must be on the same gaug However, the evil must be minimized by Government insisting on the estimate for th proposed extension being prepared on the same principles as those on which tl Calicut-Cannanore section is being estimated for and built; viz., that the substructu shall be suitable for the minimum permissible to a broad gauge line, that is fit to car a very first-class metre gauge line, and that the road itself shall be made of che: sleepers and light broad gauge rails, so that conversion, which hereafter is bound come, may be as little costly as possible.

It is essential that a traffic survey should be conducted by a traffic exper simultaneously with, or better, in advance of, the engineering survey; and the Madr Railway Company will now be asked to arrange for this and to provide for it in th estimate.

My opinion is that all that is requisite at this stage is a really good tr survey, and a light flying line of traverse survey and levels. * * *. The Con ing Engineer will issue the necessary instructions.

From—The Consulting Engineer for Railways, Madras.
To—The Agent and Manager, Madras Railway.
Dated—Madras, 8th April 1899, No. 1115.

I have the honour to acknowledge the receipt of your letter No. 10694/317, dated the 24th March 1899, and in reply to request that the estimate of the Baliapatam-Mangalore survey may be prepared so as to cover the cost of a survey by a Traffic officer also. My experience of strictly engineering surveys is that the information which they offer in regard to traffic matters is more or less valueless; a forecast of probable earnings is more important even than a forecast of probable cost.

2. As regards the engineering survey, I shall be glad if instead of two alternative estimates you will submit two successive ones, viz., one for the first season, to cover the cost of the best line of rough flying levels and traverse which an intelligent Engineer can carry through with the help of a smart assistant and a couple of surveyors, and another for a second season, to include the cost of perfecting the first survey up to the point of commencement of actual construction.

The traffic survey combined with the rough traverse will enable your Directors and Government to agree whether the extension is or is not good enough to make. Should they agree to make it, the second survey will be necessary before work can be started; and can indeed go on simultaneously with construction, as I have known done elsewhere; should the results of the first engineering and of the traffic survey be discouraging, the second survey need not be made.

From—The Agent and Manager, Madras Railway.
To—The Consulting Engineer for Railways, Madras.
Dated—Madras, 15th September 1899, No. 10694/1147.

Adverting to your letter No. 247/O., dated 26th August 1899, I have the honour o enclose, for you to analyse, an estimate (*not printed*) amounting to Rs. 22,232, for naking a reconnaissance survey from Baliapatam to Mangalore. The estimated cost comes to Rs. 247 per mile, which is practically the lower of the two figures mentioned n your letter.

By the mail yesterday, I wrote to the Board asking for communication of their pproval by telegraph to the undertaking of the survey, but to prevent delay when iis approval has been received, the estimate is now submitted to you. I will apply rmally for the sanction of Government on receipt of the Board's approval to the itlay being incurred.

Note by the Consulting Engineer for Railways, Madras, dated 20th September 1899.

In March last the Agent, Madras Railway Company, under instructions from the oard of Directors, applied for sanction to make a survey to Mangalore from aliapatam, the terminus of the Cannanore extension.

After some correspondence as to the sort of survey that would be required, the ablishment likely to be engaged, etc., etc., the Agent has written to say that he has it to his Board an estimate, amounting to Rs. 22,232, or at the rate of Rs. 247 per le, for a survey the scheme for making which has been based on the instructions veyed to him in my letter No. 247/O, dated the 26th August 1899.

The Agent has asked his Board to telegraph out their approval of the estimate. eanwhile, to save time, it will be as well to forward the estimate to the Government India for consideration, with an intimation that on receipt of a reply from the rd the result will be telegraphed to the Government of India, and with an ession of the hope that the estimate may be sanctioned and a grant allotted under Miscellaneous Railway Expenditure" and instructions given for the work to be n hand.

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—, a

Order— No. 1104 Ry., dated 7th October 1899.

The Government of India will be addressed.

From—The Secretary to the Government of Madras, P.W. Dept., Ry. Branch.
To—The Secretary to the Government of India, Public Works Department.
Dated—Ootacamund, 7th October 1899, No. 1105 Ry.

I am instructed to forward a copy of an estimate which has been received from the Agent, Madras Railway Company, under cover of his letter No. 10694/1147, dated the 15th September 1899, of the cost, Rs. 22,232, of making a preliminary survey from Baliapatam to Mangalore. The accompanying note dated the 20th instant, by the Consulting Engineer for Railways, explains the circumstances which have led to the submission of the estimate.

2. I am directed by His Excellency in Council to strongly recommend that permission be accorded for the making of the survey, and that the necessary grant be allotted, in order that the work may be put in hand immediately after the cessation of the north-west monsoon.

3. The sanction of the Board of Directors, Madras Railway Company, shall be communicated on receipt.

From—The Agent and Manager, Madras Railway.
To—The Consulting Engineer for Railways, Madras.
Dated—Madras, 7th October 1899, No. 10694/B. 1234.

In continuation of my letter No. 10694/1147, dated the 15th ultimo, I have the honour to inform you that I have to-day received from the Board the following telegram, viz., "Mangalore approved," which is understood to mean that the Board approve of the reconnaissance survey from Baliapatam to Mangalore being undertaken, the cost of the survey to be debited to Revenue for the present. I now beg to request that you will kindly communicate to me the sanction of Government to the estimate, amounting to Rs. 22,232, for the survey, which has already been submitted to you.

Telegram from—The Secretary to the Government of Madras, P.W.D., Ry. Branch.
To—The Secretary to the Government of India, Public Works Department.
Dated—12th October 1899, No. 21 A.

My letter numbered and dated as follows: 1105 Ry., 7th instant. Board have approved survey.

Telegram from—The Secretary to the Government of Madras, P.W.D., Ry. Branch.
To—The Secretary to the Government of India, Public Works Department.
Dated—23rd October 1899, No. 51 B.

My letter numbered and dated as follows: 1105 Ry., dated 7th October 1899. Since that letter was written Mr. Upcott's demi-official received saying that grant not likely to be available for such surveys but that sanction might be expected to their debit to Railway revenues. Madras Board consent to this. Please therefore wire if survey may go on and doubtless your reply to my 1105 will be to same effect.

From—The Secretary to the Government of India, Public Works Department.
To—The Secretary to the Government of Madras, P.W. Dept., Ry. Branch.
Dated—Simla, 25th October 1899, No. 2057 R.C.

I am directed to acknowledge the receipt of your letter No. 1105 Ry., dated 7th October 1899, and telegrams Nos. 21 A., and 51 B., dated 12th and 23rd October 1899, submitting, for the sanction of the Government of India, an estimate amounting to Rs. 22,232, corresponding to a rate of Rs. 247 per mile, of the cost of a preliminary survey for a line of railway from Baliapatam to Mangalore.

2. In reply, I am to say that the Government of India are unable at present to provide the necessary funds for the proposed survey under the head "41. Miscellaneous Railway Expenditure," and as there are many financial objections to charging the cost to "Revenue Suspense" unless there is an immediate prospect of the work being undertaken within two or three years which does not at present obtain, I am accordingly to request that the detailed survey may be deferred until funds are available.

3. I am, however, to suggest, that a "reconnaissance survey" of the route, such as is contemplated in paragraph (1), chapter II of the Rules for the preparation of Railway Projects (1893) corrected up to June 1899 (*vide* Public Works Department No. 1407 R.C. of 1899) might advantageously be made at a reduced cost.

From—The Consulting Engineer for Railways, Madras.
To—The Agent and Manager, Madras Railway.
Dated—Madras, 1st November 1899, No. 3327.

With reference to correspondence ending with your letter No. 10694/B. 1234, dated 7th October 1899, on the subject of the proposed Baliapatam-Mangalore Railway Survey, I have the honour to inform you that the Government of India have written to say that they are unable to sanction a grant for the purpose of the survey under the head 41. Miscellaneous Railway Expenditure, and that there are objections to charging the cost to Revenue suspense unless there is an immediate prospect of the work being undertaken within two or three years, which does not at present obtain.

2. They have, however, suggested that a reconnaissance survey might be made, at a reduced cost, of the sort contemplated in paragraph (1), chapter II of the "Rules for the preparation of Projects" (1893) corrected up to June 1899, a copy of which went to you with my No. 915 Ry., dated the 15th August 1899.

3. I have the honour therefore to request that I may be furnished with a fresh estimate for such a reconnaissance at a very early date.

From—The Agent and Manager, Madras Railway.
To—The Consulting Engineer for Railways, Madras.
Dated—Madras, 16th November 1899, No. 10694/1420.

With reference to your letter No. 3327 of the 1st instant, I have the honour to submit a revised estimate amounting to Rs. 7,166–12–0 of the cost of a reconnaissance survey from Baliapatam to Mangalore and to request that the sanction of Government may be conveyed to me for the expenditure being charged to Revenue.

2. In forwarding this estimate the Engineer-in-Chief for Construction writes as follows:—

> "The provision will cover the cost of a survey of the description required in paragraph 1, chapter II of the "Rules for the preparation of Projects" with the exception of the information as to foundations of major bridges. The line under notice will cross 12 and possibly 15 rivers and backwaters and the boring work necessary to give accurate information as to depths of foundation would occupy a considerable time and be costly. From experience on the Calicut-Cannanore Extension we know the approximate cost per foot run of bridges suitable for a West Coast river or backwater, and the boring work should I think be postponed until the detailed survey is made."

Enclosure.

General Abstract Estimate.

Main and Sub-heads.	Abstract.	
	Sub-heads.	Main head.
	RS. A. P.	RS. A. P.
I.—Survey expenses	..	529 0 0
(a) Field expenses	175 0 0	..
(b) Office do.	354 0 0	..
II.—Plant	..	3,051 8 0
(a) Tents	1,023 0 0	..
(b) Furniture	173 8 0	..
(c) Instruments	1,855 0 0	..
(d) Tools	..	..
III.—Establishment	5,112 0 0	5,112 0 0
	..	8,692 8 0
Credit half value of tents, instruments and furniture to be returned to stock	..	1,525 12 0
Rate per mile RS. A. P. 79 10 0	..	7,166 12 0

Order—No. 1335 Ry., dated 20th November 1899.

The Government of India will be addressed.

From—The Secretary to the Government of Madras, P.W. Dept., Ry. Branch.
To—The Secretary to the Government of India, Public Works Department.
Dated—Madras, 20th November 1899, No. 1336 Ry.

With reference to correspondence ending with your letter No. 2057 R.C., dated the 25th October 1899, I am instructed to forward a copy of a letter from the Agent, Madras Railway Company, No. 10694/1420, dated the 16th November 1899, enclosing a revised estimate amounting to Rs. 7,166-12-0 of the cost of a reconnaissance survey from Baliapatam to Mangalore.

2. I am instructed to strongly recommend that permission be accorded by telegraph to the survey being put in hand, at the cost of the Madras Railway Revenues as suggested by the Company's Agent, and as approved by his Board.

3. As every week's loss of time at this time of year is of serious importance, I am instructed to express the hope that early orders may be received in reply to this reference, for delay must necessarily occur in getting a staff and plant together for the survey.

Telegram from—The Secretary to the Govt. of India, Public Works Department.
To—The Secretary to the Government of Madras, P.W. Dept., Ry. Branch.
Dated—Calcutta, 29th November 1899, No. 2231 R.C.

Your letter numbered and dated as follows: 1336 Ry. 20th instant. Estimate amounting to Rs. 7,167 of the cost of reconnaissance survey from Baliapatam to Mangalore sanctioned chargeable to head 41. An allotment will be made in a separate communication.

Telephone from—The Consulting Engineer for Railways, Madras.
To—The Agent and Manager, Madras Railway.
Dated—1st December 1899, No. 3683.

Government of India has sanctioned your estimate for Baliapatam-Mangalore survey and will allot a grant. Government Order will follow. Meanwhile you may start work.

From—The Secretary to the Government of India, Public Works Department.
To—The Secretary to the Government of Madras, Public Works Dept., Ry. Branch.
Dated—Calcutta, 30th November 1899, No. 424 A.R.

In continuation of Public Works Department telegram No. 2231 R.C., dated 29th November 1899, I am directed to convey the sanction of the Government of India to an allotment of Rs. 7,000 under head "41. Miscellaneous Railway Expenditure" to meet outlay to be incurred during the current financial year on a reconnaissance survey from Baliapatam to Mangalore.

Order—No. 1452 Ry., dated 12th December 1899.

Communicated to the Agent and Manager, Madras Railway.

(True Extract.)

Francis J. E. Spring,
Secretary.

To the Agent and Manager, Madras Railway.
„ Examiner, Guaranteed Railway Accounts.
„ Consulting Engineer for Railways.

Exd. P. Seetharam.

Estimate of Proposed Reconnaisance Survey from Baliapatam to Mangalore – Distance 90 miles

Particulars	Rs	Rs
Staff.		
Executive Engineer in charge of Survey with Batta for 3 months	3,000	
Assistant Engineer with batta	1,650	
Two Surveyors	1,260	
Writer	210	6,120
Lascars		540
Cart hire		450
Coolies for Clearing Jungle		1,996
Tools Plant &c.		300
Pegs Bamboos &c.		1,000
Sundry Stores		150
Maps		377
Building Centre line pegs with masonry		2,300
Contingencies		667
Net Estimated Cost of the Reconnaisance Survey. 90 miles at Rs 154 4/9 per mile	Rs –	13,900

Chief Engineer's Office
Royapuram 23rd March/99

C. W. Storey
Chief Engineer

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Baliapatam - Mangalore Survey

4

General Abstract Estimate - Final Location -

	Main and Sub Heads	Abstract			
		Sub Head		Main Head	
I	Survey Expenses			10,080	10
	(a) Field Expenses	8,734	-		
	(b) Office Expenses	1346	10		
II	Plant			10,587	-
	(a) Tents	3944	-		
	(b) Furniture	324	15		
	(C) Instruments	6,159	9		
	(d) Tools	158	8		
III	Establishment	37,077	.	37,077	-
	Total			57,744.	10
	Deduct Anticipated Credit Value of Plant less freight charges			9567	.
	Net Estimated Cost of the Survey 90 miles at Rs. 535 per mile. Rupees			48,177.	10

Chief Engineer's Office
Royapuram 23rd March /99

E. W. Storey
Chief Engineer

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Baliapatam – Mangalore Survey –

Survey Expenses (a) Field Expenses –
(b) Office Expenses –

5 Br

No.	Description of work	Quantity		Rate		Per		
Field Expenses –	Lockspitting	90	mile	6	-	mile	540	-
	Pegs large @ 25 per mile	90	"	5	.	.	450	-
	" Small 55 per mile	90	"	4	.	.	360	-
	Mallets	15	No.	1	8	Each	22	8
	Compensation for Crops	90	Miles	45	-	mile	4,050	-
	Cart hire for 8 months	8	month	50	.	month	400	-
	Coolies Jungle Cutting	90	mile	16	10	mile	1,496	4
	Rope String &ca	Lump Sum					50	-
	Cloth for flags	Lump Sum					10	"
	Paint (white lead 28 lb)	Lump sum					10	"
	Nails Screws	Lump sum					30	"
	Repairs to houses damaged by Survey	90	miles	10	-	mile	900	"
							8,318,	12
	Contingencies @ 5%. –						415	4.
	Total (a) Field Expenses –						8,734	.
Office Expenses –	Stationery ordinary	Lump Sum					300	.
	Forms Books &ca		do				200	,
	Paper double Elephant	10	Qrs	15	12	Qr.	157	8
	" mounted	5	Rolls	40	.	Roll	200	.
	Tracing Cloth	15	Rolls	15	.	Roll	225	.
	Section paper	5	.	20	.	.	100	.
	Drawing pins, Colors, Saucers, pencil, rubber & Drawing pencils &ca	Lump sum					100	.
							1,282	8
	Contingencies @ 5%						64	2.
	Total (b) Office Expenses						1,346	10.

Baliapatam - Mangalore Survey -

II Plant (a) Camp Equipage
(b) Furniture

6 pm

No.	Description of work	Quantity	Rate		Per	Amount	
a,	Tents Hill for Office 12' × 12'	1	315	.	Each	315	-
a,	„ Swiss Cottage (1 for Office) 14' × 14'	2	445		„	890	-
	„ Shooting pals	2	100		„	200	-
	„ Bechoba 10' × 10'	7	150		„	1,050	-
	„ Servants pal 10' × 10'	15	50		„	750	-
	„ Necessary 4' × 4'	4	33		„	132	-
	Bath Room	3	40		„	120	-
	General Service	1	200		„	200	-
	Mats & Carpets for tents	Lump Sum				100	-
	Contingencies @ 5 %					187	14
	Total (a) Camp Equipage					3,944	14.
	Table drawing on trestles	2	12	-	Each	24	-
	„ Office for Office	1	13	8	„	13	8
	„ Office for Writer & Subordinates	4	8	-	„	32	-
	Chairs	6	3	-	„	18	-
	Stools	3	2	-	„	6	-
	Stationery chests	3	8	-	„	24	-
	Cash Safe light	1	97	-	„	97	-
	Camp boxes	1	7	-	„	7	-
	Despatch boxes	2	2	8	„	5	-
	Medicine chests full	1	20	-	„	20	-
	Lanterns Hurricane	12	3	8	„	42	-
	Padlocks English 3"	6	3	8	„	21	-
	Contingencies @ 5 %					15	7
	Total (b) Furniture					324	15

Baliapatam - Mangalore Survey

II Plant (C) Instruments

7 [illegible]

Instruments

Description of Work	Quantity		Rate		Per	Amount	
Theodolites (3 Screw 5" Troughton Elliot)	4	no.	650	"	Each	2,600	"
Levels (Dumpy 3 with Compass)	5	"	300	"	"	1500	"
Levelling Staves	8	"	56	"	"	448	"
Compasses Prismatic with tripods	3	"	120	"	"	360	"
Ranging Rods	30	"	"	8	"	15	"
Umbrellas Survey	6	"	37	4	"	223	8
Drawing boards 32" × 23"	2	"	12	"	"	24	"
Instrument Boxes 2nd Class	3	"	35	"	"	105	"
do do 1st class	1	"	50	"	"	50	"
Stencil plates Sets 1/2"	2	Sets	7	4	"	14	8
Parallel rulers of sizes (1 large) 18" 12"	2	no.	13 8	8 12	Each	13 8	8 12
Tape 100 ft. Metallic	20	"	5	8	"	110	"
100 ft. Chains with arrows	4	"	16	"	"	64	"
Curves (Ry) box	1	"	30	"	"	30	"
Set Squares Sets in box Ebony	2	"	16	"	"	32	"
Scales boxes of Sets wood	2	"	10	"	"	20	"
" " papers	2	"	5	"	"	10	"
Pantograph for enlargement & reduction	1	"	30	"	"	30	"
Ebony levels	2	"	32	"	"	64	"
Aneroid barometer large	2	"	35	"	"	70	"
Cross Staff	1	"	1	"	"	1	"
Plane table	1	"	12	"	"	12	"
Binocular glasses	1	"	35	"	"	35	"
Straight edges Steel (3 feet & 4 ft long)	2	"	10	"	"	20	"
Foot rules 2 ft. long	3	"	2	"	"	6	"
						5,866	4
Contingencies @ 5 %						293	5
Total Rupees						6,159	9

Baliapatam - Mangalore Survey

II Plant (d) Tools

8 Pro

Description of work	Quantity		Rate		Per	Amount	
Mamoties	24	No.	„	14.	Each	21	-
Picks (light)	12	„	1	12	„	21	„
Shovels (light)	6	„	2	.	„	12	„
Axes (American with handles)	12	.	1	8	„	18	.
Crow bars	4	.	1	.	„	4	„
Hammers of Sizes	12	-	2	.	.	24	-
Brands	6	.	6	.	.	36	-
Bill hooks light English or American	12	„	1	4	„	15	.
Contingencies 5 %						7	8.
Total Rupees						158	8

Baliapatam - Mangalore - Survey -

III Establishment

9 Pr

No.	Description of Work.	Quantity	Rate	Per	Amount
1	Executive Engineer	12	900.	month	10,800
	Travelling allowance		100	"	1,200
1.	Assistant Engineer	8	475	"	3,800
	Travelling allowance		75	"	600
3	Surveyors	12	180	"	6,480
	Travelling allowance		30	"	1,080
3	Surveyors	12	130	"	4,680
	Travelling allowance		30	"	1,080
1	Clerk	12	70	"	840
1.	Store Clerk	6	30	"	180.
1.	Draughtsman	12	70	"	840
1.	Assistant do	12	35	"	420
4	Peons	12	9	"	432
40	Lascars	8.	9	"	2,880
					35,312
	Contingencies @ 5%				1,765
	Total				37,077

Baliapatam - Mangalore Survey

(No. I.) 5000-15-3-88.

SERIAL
No. 1

No. 10694
317

MADRAS RAILWAY.

AGENT AND MANAGER'S OFFICE,

MADRAS, 24th March 1899.

CONSULTING ENGINEER FOR RAILWAYS
RECEIVED
25 MAR 1899
MADRAS.

1577
25.3.99

From

The Agent and Manager,
Madras Railway Company,

To

The Consulting Engineer for Railways,
Madras.

SIR,

I have the honor to inform you that I have been instructed by my Board to apply for sanction to make a survey of a line from Baleapatam to Mangalore, the survey party to take the field in September next; and I shall be glad if the necessary permission can be given at an early date.-

I enclose statements showing the estimated cost of a Reconnaisance and of a final location Survey amounting to Rs 13.900 and Rs 48,177 or Rs 154 and Rs 535 per mile respectively.-

We are prepared to under-take either the one or the other as the Government

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a mere Engineering Survey, Such a Survey and
[illegible] will take us

Government may direct, the cost to be debited to Revenue.–

n P

I have the honor to be,
Sir,
your most obedt. Servt.,

Pro Agent and Manager.

Inclo: 7

MADRAS RAILWAY.

From

The Agent and Manager,

M. R. Co.,

To

The Consulting Engineer

for Railways.

No.

Dated 188

Recd

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orm No. 33.

OFFICE OF THE CONSULTING ENGINEER FOR RAILWAYS,

Madras, 27th March 1899.

EXAMI
Regr. No. 179
27 MAR. 1899
Enclosures........
RAILWAY ACCOUNTS, MADRA

No. 1010

SERIAL
No. 12

OFFICE NOTE.

Letter from the ~~Agent~~ Manager Madras Railway, No. $\frac{10694}{317}$, dated 24th March 1899, forwarded to the Examiner of Railway Accounts. for remarks.

a/B
for E. R.

27/3 99

A.R.

E. R. is enquiring into this on tour. This will be disposed of by him at Ooty when he returns from tour. See that these papers go to Ooty. JLd 31.3.99.

Note by the Con. Eng. for Ry. Madras

Prima facie there is every reason to believe that it will pay well to extend the Calicut Baliapatam section of the Madras Ry. to Mangalore, a distance of 90 miles. But until a survey is made we know very little about it. More knowledge is wanted than

[500—1-12-98.]

a mere engineering survey. Such a survey and the estimate to be based thereon will tell us

EXAMINER'S REPLY.

The Sanction of the Govt. of Ind. is necessary to the estimate, whether for a reconnaissance or for a final location of the proposed extension. In forwarding the estimate it should be mentioned that it is proposed to charge the expenditure if sanctioned, temporarily to Revenue

JGH 29/3/99

C.R.
27.3.99

Rib

st of building the road. But that is no use unless we can form some
inion as to the amount of traffic likely to come on it. Operating expenses we
n estimate sufficiently nearly from our knowledge of those of the rest of the
ystem.

The moment the subject of extending to Mangalore comes up for the consideration of
vernment we are met by the gauge difficulty ~~of the gauge question~~. ~~Against the strongest~~
~~protest~~ of this office the Govt of India ~~have decreed that the proposed~~ metre gauge
xtension & conversion policy for the Madras Ry must not be complete. They have
dered that the Calicut Cannanore line must be built on the broad gauge, and,
aturally, if its extension is to be undertaken to Mangalore it must be
uilt on the same gauge. However the evil must be minimised by our
sisting on the estimate for the proposed extension being prepared on the
me principles as those on which the Calicut Cannanore section is being
timated and built, viz that the substructure shall be suitable for
minimum permissible to broad gauge, that [illegible]
the gauge line, and that the road itself [illegible] cheap
sleepers and old broad gauge rails so that conversion which hereafter is
bound to come may be as little costly as possible.

It is essential that a traffic survey should be conducted by a
affic expert, simultaneously with, or better in advance of, the engineering
vey, and the Madras Ry Co. will now be asked to arrange for this
to provide for it in their estimate.

My opinion is that all that is requisite at this stage will be a really
lly good traffic survey, and a light flying line of traverse survey
d levels. But the traverse survey and levels must be made with far
greater intelligence than was displayed by the makers of those for the
nnanore and Cochin surveys if they are to be worth the money spent
them. The Con. Engr. will issue the necessary instructions.

No.

108 S 2

Note by the Consulting Engineer for Railways, Madras, dated 2nd April 1899.

Prima facie there is every reason to believe that it will pay well to extend the Calicut-Baliapatam Section of the Madras Railway to Mangalore, a distance of 90 miles. But until a survey is made we know very little about it. More however is wanted than a mere engineering survey. Such a survey and the estimate to be based thereon will tell us the cost of building the road. But that is no use unless we can form some opinion as to the amount of traffic likely to come on it. Operating expenses we can estimate sufficiently nearly from our knowledge of those of the rest of the system.

The moment the subject of extending to Mangalore comes up for the consideration of Government we are met by the gauge difficulty. Government of India ordered that the Calicut-Cannanore line m on the broad gauge, and naturally, if its extension to Mangal be undertaken it must be on the same gauge. However, the evil minimized by our insisting on the estimate for the proposed e being prepared on the same principles as those on which the Calicut-Cannanore Section is being estimated for, and built, *viz*: that the substructure shall be suitable for the minimum permissible to broad gauge, that is fit to carry a very first class metre gauge line, and that the road itself shall be made of cheap sleepers and old broad gauge rails, so that conversion which hereafter is bound to come, may be as little costly as possible.

gm letter
reply to request

It is essential that a traffic survey should be conducted by a traffic expert, simultaneously with, or better in advance of, the ~~eng~~ engineering survey, and the Madras Railway Company will now be asked to arrange for this and to provide for it in their estimate.

My opinion is that all that is requisite at this stage will be a really good traffic survey, and a light flying line of traverse survey and levels. But the traverse survey and levels must be made with far greater intelligence than was displayed by the makers of those for the Cannanore and Cochin survey if they are to be worth the money spent on them. The Consulting Engineer will issue the necessary instructions.

SERIAL
3

Form No. 1

No. 1115

Madras, 8th April 1899.

From

THE CONSULTING ENGINEER FOR RAILWAYS,
MADRAS,

Reminders.

To

THE AGENT AND MANAGER, M. RY. 110

Reply No.

dated

SIR,

I have the honour to acknowledge the receipt of your letter No. 10694/317. dated the 24th March. 99, and in reply to request that the Estimate of the Baliapatam Mangalore Survey may be prepared so as to cover the cost of a survey by a Traffic officer also. My experience of strictly Engineering surveys is that the information which they offer in regard to traffic matters is more or less valueless & forecast of probable earnings is more important even than a forecast of probable cost.

2. - As regards the Engineering Survey. I shall be glad if ~~the~~ instead of two alternative estimates you will submit two successive ones, viz one for the first ~~year~~ season, to cover the cost of the best line of rough flying levels and traverse which an intelligent Engineer can carry through with the help of a smart Assistant and a couple of Surveyors, and another for a second season, to include the cost of perfecting the first survey up to the point of commencement of actual construction.

The Traffic survey combined with the rough traverse will enable your Division and Government to agree whether the extension is or is not good enough to make. Should they agree to make it, the second survey will be necessary before work can be started; and can indeed go on simultaneously with construction, as I have known done elsewhere; should the results of the first enquiries and of the Traffic survey be discouraging the second survey need not be made.

I have &

FWS.

6/4/98

---

25 Pr

Baliapatam - Mangalore Survey.

General Abstract Estimate

Main and Sub Heads.	Abstract Sub-head	 Main Head.
I. Survey expenses: —		
(a) Field Expenses. —	2,673	
(b) Office expenses. —	1,104	3,777
II. Plant: —.		
(a) Tents. —	1,729	
(b) Furniture. —	206	
(c) Instruments —	3,352	
(d) Tools. —	56	5,343
III. Establishment: —.	14,874	14,874
Total Rupees		23,994
Credit 1/3 value of Tents, Instruments, and Furniture to be returned to stock. —		1,762
Balance		22,232
Cost per mile = Rs 247.		

(Sd)
Engineer-in-Chief
Construction.

C. C. Extension
Engineer-in-Chief's Office
for Construction
Royapuram 9th Sept 99

I. Survey Expenses. 26 Bn

Description of work	Quantity	Rate	Per	Amount
(a) Field Expenses.				
Lockspitting ——				
Pegs (large & Small) ——	90 miles	2 〃 〃	mile	180 〃 〃
Mallets. ——	6	1 〃 〃	each	6 〃 〃
Compensation for crops ——	90 miles	10 〃 〃	mile	900 〃 〃
Cart hire 4 months ——	4	60 〃 〃	month	240 〃 〃
Coolies for jungle cutting a ——	miles 4	300 〃 〃	〃	1,200 〃 〃
Strings, flags &c ——		〃 〃 〃	〃	20 〃 〃
				2,546 〃 〃
Contingencies at 5 per cent ——				127 〃 〃
		Total Rupees		2,673 〃 〃
(b) Office Expenses: ——				
Stationery ——				300 〃 〃
Forms Books &c ——				150 〃 〃
Paper double Elephant ——	6 qrs	17 〃 〃	qr	102 〃 〃
〃 Mounted ——	6 Bs	40 〃 〃	each	240 〃 〃
Tracing Cloth ——	6 Rolls	15 〃 〃	〃	90 〃 〃
Section Paper ——	6 qrs	20 〃 〃	〃	120 〃 〃
Pens, colors, Saucers &c		〃 〃 〃		50 〃 〃
				1052 〃 〃
Contingencies at 5 per cent ——				52 〃 〃
		Total Rupees		1104 〃 〃

II. Plant.

27 Bm

Description of Work.		Quantity.	Rate.			Per.	Amounts.		
(a) Camp Equipage:-									
Tents swiss	12'×12'	1	355	-	-	each	355	-	-
" Hill	12×12	2	280	-	-	"	560	-	-
Shooting Pals	"	2	150	-	-	"	300	-	-
Rowtee	12×12	1	240	-	-	"	240	-	-
Servants Pal	8×8	3	40	-	-	"	120	-	-
Necessary	5×5	1	40	-	-	"	40	-	-
Bath room	6×6	1	30	-	-	"	30	-	-
			Total Rupees-				1,645	-	-
Contingencies @ 5%							84	-	-
			Total Rupees-				1,729	-	-
(b) Furniture.									
Table Drawing		1	25	-	-	each	25	-	-
" Office		2	17	8	-	"	35	-	-
" Chairs		5	4	8	-	"	22	8	-
" Stools		2	4	-	-	"	8	-	-
Stationary chest		1	20	-	-	"	20	-	-
Cash safe		1	20	-	-	"	20	-	-
Camp boxes		3	6	-	-	"	18	-	-
Despatch boxes		1	20	-	-	"	20	-	-
Lanterns		3	6	-	-	"	18	-	-
Padlocks		5	2	-	-	"	10	-	-
							196	8	-
Contingencies 5%							9	8	-
			Total Rs.				206	-	-

II Plant - Continued 28 Bov

Description of work	Quantity	Rate			Per	Amount		
(C) Instruments								
Theodolites	2	475	„	„	each	950	„	„
Levels	4	300	„	„	„	1200	„	„
Levelling staves	8	38	„	„	„	304	„	„
Pocket Compass	1	22	„	„	„	22	„	„
Compasses - prismatic with tripod	2	120	„	„	„	240	„	„
Ranging Rod	30	2	„	„	„	60	„	„
Umbrella	6	7	„	„	„	42	„	„
Drawing Boards	2	12	„	„	„	24	„	„
Instruments 2nd Class	3	25	„	„	„	75	„	„
Stencil Plates	1	25	„	„	„	25	„	„
Parallel Rulers	2	3	„	„	„	6	„	„
Tapes 100 feet metallic	6	8	12	„	„	52	8	„
Chains 100 with arrows	3	16	„	„	„	48	„	„
Curves	1	10	„	„	„	10	„	„
Set squares	2	1	„	„	„	2	—	—
straight edges steel	2	10	—	—	„	20	„	„
Scales	2	10	„	„	„	20	„	„
Levels abony	1	42	„	„	„	42	„	„
Binoculars	1	50	„	„	„	50	„	„
						3192	8	„
Contingencies @ 5%						159	8	
		Total Rupees				3352	„	„
(d) Tools								
Mamoties	12	1	„	„	each	12	—	—
Picks	6	1	„	„	„	6	„	„
Shovels	6	2	„	„	„	12	„	„
Axes	6	3	„	„	„	18	„	„
Crowbars	2	3	„	„	„	6	„	„
						54	—	—
Contingencies @ 5%						2		
						56	„	„

III. Establishment. 2g Por

	Period	Rate.			Per.	Amount.		
1. Executive Engineer (800+75)	6 months	875	-	-		5,250	-	-
3 Surveyors – (150+60)	„	630	„	„		3,780	„	-
3 – Do – (100+30)	„	390	„	„		2,340	-	-
1 Clerk – Rs. 60	„	60	„	„		360	„	-
1 Cashkeeper „ 60	„	50	„	„		300	„	-
1 Draftsman „ 60	„	60	„	„		360	„	-
1 – Do – „ 40	„	40	„	„		240	„	-
2 Peons – „ 8	„	16	„	„		96	-	-
30 Lascars „ 8	-	240	„	-		1,440	-	-
						14,166	„	-
Contingencies @ 5%						708	-	-
		Total Rupees				14,874	„	„

(A. & M. 1.)

No 10694

1147

CONSULTING ENGINEER FOR RAILWAYS
RECEIVED
18 SEP. 1899
MADRAS.

MADRAS RAILWAY.

AGENT AND MANAGER'S OFFICE,

Madras, 15th September 1899.

From

The Agent and Manager.
M.A.C.

To 240

The Consulting Engineer for Railways.
Madras.

SIR,

Adverting to your letter No. 247/0 S.12 dated 26th August 1899. I have the honor to enclose for you to analyse an estimate amounting to Rs 22,232 for making a reconnaissance survey from Baliapatam to Mangalore. The estimated cost comes to Rs 247 per mile, which is practically the lower of the two figures mentioned in your letter.

By the Mail yesterday, I wrote to the Board asking for communication of their approval by telegraph to the undertaking of the survey, but to prevent delay when this approval has been received, the estimate is now submitted to you. I will apply formally for the sanction of Government on receipt of the Board's approval to the outlay being incurred.

I have the honor to be,
Sir,
your most obedient servant,

Agent and Manager.

Enclo/1.

ASS

Form No. 14.

1147

PUBLIC WORKS DEPARTMENT,
RAILWAY BRANCH.

C. No. 4891/18.9.99

NOTE ~~FOR~~ by the Con. Engr. for Ry. Madras.

H. S. for approval

30 P

Appd. A.S.H. 25.9.99

In March last the Agent Madras Ry. Co. under instructions from his Board of Directors, applied for sanction to make a survey from Beliapatam (the terminus of the Cannanore extension) to Mangalore.

After some correspondence as to the sort of survey that would be required, the establishment likely to be engaged, &c. &c., the Agent has written to say that he has sent to his Board an estimate amounting to Rs 22.232, or at the rate of Rs 247 per mile, for a survey the scheme for making which has been based on the instructions conveyed to him in my letter (copy attached) No. 247/0. dated the 26th Aug. 99.

P

The Agent has asked his Board to telegraph out their approval of the Estimate. Meanwhile to save time it will be as well to forward the Estimate to the Govt. of India for consideration with an intimation that on receipt of a reply from the Board the result will be telegraphed to the Govt. of India, and with an expression of the hope that the Estimate may be sanctioned and a grant allotted under "41 Miscellaneous Ry. expenditure" and instructions given for the work to be put in hand.

F.J.S.
20/9/99

HS 20/9/99 R/J 30/9/99

Form No $\frac{10}{A.}$

No. 1105. Ry.

Government of Madras,

PUBLIC WORKS DEPARTMENT,

RAILWAY BRANCH.

Order No. 1104. Ry dated 7/10/99
The Govt. of India will be
addressed

To

The Secretary to the Government of India,
Public Works Department,

31 P

A.S.H.
28.9.99

Ooty, the 7th Octr 189

Sir,

I am instructed to forward a copy of an estimate which has received from the Agent Madras Ry. Co., under cover of his letter No. $\frac{10694}{1147}$, dated the 15th Sept. 99, of the cost, Rs 22232, of making a preliminary survey from Baliapatam to Mangalo

The accompanying Note, dated the 20th inst., of the Cons. Engr. f explains the circumstances which have led to the submission of the estimate.

2.- I am directed by H.E. in Council to strongly recommend th permission be accorded for the making of the survey, and that th necessary grant be allotted, in order that the work may be put in hand immediately after the cessation of the N.E. Mon

3.- The sanction of the Board of Directors M. Ry. Co. shall be communicated on receipt.

I have &

FKS

Despatched on 7/10/99

Documents accomp:
(1) Est & note referred to
(2) Copy of ~~Boards~~ letter No $\frac{247}{O}$ of 26/8/99
WAM

(A. & M. 1.)

No 10694
B 1234

MADRAS RAILWAY.

AGENT AND MANAGER'S OFFICE,

Madras, 7th October 1899

No 5256
Recd. 9/10/99

From

The *Agent and Manager,*
M. Rly

32 P

To

The *Consulting Engineer for Railways.*
Madras.

SIR,

In continuation of my letter no. X 10694 dated the 15th ultimo. I have the 1147 honour to inform you that I have to-day received from the Board the following telegram viz. "Mangalore approved" which is understood to mean that the Board approve of the reconnaissance survey from Baliapatam to Mangalore being undertaken, the cost of the survey to be debited to Revenue for the present. I now beg to request that you will kindly communicate to me the sanction of Government to the estimate amounting to Rs 22,232, for the

A grant under "41 Miscellaneous Railway Expenditure" has been asked for vide SR's note which formed an enclosure to letter 1105 R & 7.10.99

Has been applied for in letter to India 1105 R & 7.10.99

No. 7.

TELEGRAM ~~URGENT~~ ~~ORDINARY~~ DEFERRED

FROM R.

To Works Simla

35D

57 B× Appleand 1105. Ry. dated 7th Oct. 97. Since that letter was written Mr Upcott's demi official received saying that grant not likely to be available for such survey but that sanction might be expected to their debit to Railway Revenue. Madras Board consent to this. ~~as my wire 21.A. 10th inst.~~ Please therefore wire if survey may go on. ~~[illegible]~~ and doubtless your reply to my 1005 will be to same effect.

Despd.

FRS
23/10/97

MADRAS RAILWAY.

From
The Agent and Manager.

To
The Consulting Engineer
for Railways.

No.

Dated

Recd.

Form No. 20.

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

From S.R. To Works.

No 21A. Applaud (my letter numbered & dated as follows) 1105 Ry anomaly (7th instant) Board have approved [illegible]

34

12.10.99.

Taken for Baliapatam Mangalore case

Public Works (1899) Department.

RAILWAY BRANCH.

CURRENT No. 1360

Order

From The Govt. of India

No. 2057 RC

Dated 25th October 1899

Received
Registered } 31-10-99

Enclosures

Spare copies.

SUBJECT.

Railway from Baliapatam to Mangalore

Stating that the Govt. of India are unable at present to provide the necessary funds for the proposed survey for a line of —. & requesting that the detailed survey may be deferred until funds are available

BACK PAPERS.

No.	Date.

FURTHER PAPERS.

No.	Date.

---

31 OCT 1899
GOVT. OF MADRAS RYS.

All communications should be addressed to the Secretary.

No. 2057 R.C.

GOVERNMENT OF INDIA.

PUBLIC WORKS DEPARTMENT.

RAILWAY CONSTRUCTION.

368

To

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

Simla, the 25th October 1899.

Sir,

I am directed to acknowledge the receipt of your letter No.1105 Ry., dated 7th October 1899, and telegram No.21 A., and 51 B., dated 12th and 24th October 1899, submitting, for the sanction of the Government of India, an estimate, amounting to Rs.22,222, corresponding to a rate of Rs.247 per mile, of the cost of a preliminary survey for a line of Railway from Baliapatam to Mangalore.

2. In reply, I am to say that the Government of India are unable at present to provide the necessary funds for the proposed survey under the head "41-Miscellaneous Railway Expenditure", and as there are many financial objections to charging the cost to "Revenue suspense" unless there is an immediate prospect of the work being undertaken within 2 or 3 years which does not at present obtain, I am accordingly to request that the detailed survey may be deferred until funds are available.

3. I am, however, to suggest, that a "reconnaissance survey" of the route, such as is contemplated in paragraph (1)ˣ Chapter II, of the Rules for the preparation of Railway Projects (1893) corrected up to June 1899 (vide

Flag S

Public

Public Works Department No.1477 R.[illegible], of 1899) might advantageously be made at a reduced cost.

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

Secretary.

Documents accompanying :-
Nil.

J.H.H.

Form No. 1/2.

Mysore

No. 3327

Madras, 1st Nov 1899.

From

THE CONSULTING ENGINEER FOR RAILWAYS,
MADRAS,

Reminders.

378

To

THE AGENT AND MANAGER, M. RY.

SIR,

Reply No. ____
dated ____

With reference to correspondence ending with your letter No. 10694/B.1234 dated 7th Oct. 99. on the subject of the proposed Baliapatam Mangalore Ry. survey. I have the honour to inform you that the Govt of India have written to say that they are unable to sanction a grant for the purpose of the survey under the Head 41 Miscellaneous Ry. Expenditure, and that there are objections to charging the cost to Revenue Surveys unless there is an immediate prospect of the work being undertaken within 2 or 3 years, which does not at present obtain.

2.- They have however suggested that a Reconnaissance Survey might be made at a reduced cost, of the sort contemplated in para (1) Chap II of the "Rules for the Preparation of Projects" (1893) corrected up to June 1899, a copy of which went to you with my No. 915-R. dated the 15th Aug 99.

3.- I have the honour therefore to request that I may be furnished with a fresh estimate for such a reconnaissance at a very early date.

I have &c
FWS 1/11

ched on 1/11/99

Madras Railway.

General Abstract Estimates of the proposed reconnoissance Su
Baliapatam & Mangalore 90 Miles

40 Br

Main & Sub Heads	Abstract Sub Heads	 Main Head
Survey Expenses		529
a) Field - do -	175	
b) Office - do -	354	
Plant		3,051/8
a) Tents	1,023	
b) Furniture	173/8	
c) Instruments	1,855	
d) Tools		
Establishment	5,112	5,112
		8,692/8
Credit ½ Value of Tents, Instruments furniture to be returned to Stock		1,525/12
Rate per mile Rs 79 - as 10 - P ..		7166/12

Sd E W Stoney.
Chief Engineer
14/11/99.

(Sd) H J Thompson
Engineer-in-Chief for
Constructions.

I Survey Expenses.

41 Bom

Descriptions of Works	Quantity		Rate			Per	Amount		
(a) Field Expenses									
Pegs (Large + Small)	-	-	-	-	-	-	25	-	-
Mallets		2	1	-	-		2	-	-
Cart hire 2 months		2	60	-	-		120	-	-
Sundries		-	-	-	-		20	-	-
							167	-	-
Contingencies 5%							8	-	-
							175	-	-
(b) Office Expenses									
Stationery	-	-	-	-	-	-	100	0	0
~~Forms~~, Books &c	-	-	-	-	-	-	50	0	0
Paper double Elephant	2	Qrs	17	-	-	Qr	34	0	0
" mounted	2		40	-	-	Each	80	-	-
Tracing Cloth	2	Bolts	15	-	-	-	30	-	-
Section paper	2	Qr	20	-	-	-	40	-	-
Sundries	-	-	-	-	-	-	20	-	-
							354	-	-

II Plant

41 2 Bor

Description	Quantity	Rate			per	Amount		
(a) Camp Equipage								
Tents Swiss 12 x 12	1	355	.	-	Each	355	-	-
" Hill 12 x 12	1	280	.	.	.	280	.	.
" Bichoba 10 x 10	1	150	.	.	.	150	-	.
Servants pal 5 x 8	3	40	.	.	.	120	.	.
Necessary 5 x 5	1	40	.	.	.	40	.	.
Bath Room 6 x 6	1	30	.	.	.	30	-	.
						975	-	-
Contingencies 5%						48	.	.
						1,023	-	.
(b) Furniture.								
Table Drawing	1	25	.	.	Each	25	-	-
" Office	2	17	8	.	.	35	-	-
Chairs	3	4	8	.	.	13	8	-
Stools	2	4	-	-	-	8	-	-
Stationery Chest	1	20	-	-	-	20	-	-
Cash Safe	1	20	-	-	.	20	-	-
Despatch Boxes	1	20	-	-	-	20	-	-
Lanterns	3	6	-	-	-	18	-	-
Pad Locks	3	2	-	.	.	6	-	-
						165	8	-
Contingencies 5%.						8	-	-
						173	8	-

II Plant Contd. 4 3 Bn

Description of Work	Quantity	Rate			per	Amount		
(C) Instruments								
Theodolite	1	550	"	"	Each	550	"	"
Levels	2	300	.	.	"	600	-	-
Levelling Staves	4	38	.	.	"	152	-	-
Pocket-Compass	1	22	.	.	"	22	-	-
Compasses Prismatic with tripod	2	120	.	.	-	240	.	.
Ranging Rods	10	2	.	.	"	20	.	.
Umbrellas	2	7	.	.	.	14	.	.
Drawing Board	1	12	-	-	-	12	.	-
Instruments 2nd class	1	25	.	.	.	25	-	-
Stencil Plates	1	25	.	-	.	25	.	-
Parallel Rulers	1	3	.	.	.	3	.	.
Tapes 100ft metallic	3	8	12	.	.	26	4	.
Chain 100ft with arrows	2	16	.	.	.	32	.	.
Curves	1	10	-	-	-	10	.	-
Set Squares	2	1	.	.	.	2	-	-
Straight Edges Steel	1	10	-	-	-	10	.	.
Scales	2	10	-	-	-	20	.	-
Levels Abney	1	42	.	.	-	42	-	-
Binocular.	1	50	.	.	.	50	.	.
						1855	4	.

III Establishment

	Period	Rate	Per	Amount
1 Executive Engineer (800+75)	3 months	875 - -	X	2,625 0 0
2 Surveyors (150+60)	"	420 - -		1,260 - -
1 Clerk & Cash Keeper 60/-	"	60 - -		180 - -
1 Draftsman 60/-	"	60 - -		180 - -
2 Peons 8/-	"	16 - -		48 - -
24 Lascars 8/-	"	192 - -		576 - -
				4,869 - -
Contingencies 5 %				243 - -
				5,112 - -

(Sd) E. W. Stoney.
Chief Engineer
14. 11. 99.

(Sd) ~~H.~~ J Thompson
Engineer-in-chief
for Construction

(No. I.) 5000-15-3-88.

No. 10694
1420

MADRAS RAILWAY.

AGENT AND MANAGER'S OFFICE,

MADRAS, 16th November 1899.

6004

From

The Agent and Manager,
Madras Railway Company,

To 388

The Consulting Engineer for Railways,
Madras.

SIR,

With reference to your letter No. 3327 T of the 1st instant, I have the honour to submit a revised estimate amounting to Rs 7,066-12-0 of the cost of a reconnaissance survey from Baliapatam to Mangalore and to request that the sanction of Government may be conveyed to me for the expenditure being charged to Revenue.

2. In forwarding this estimate the Engineer-in-Chief for Construction writes as follows:—

"The provision will cover the cost "of a survey of the description required "in para I Chapter II. of the "Rules for the "preparation of Projects" with the exception "of the information as to foundations of "Major Bridges. The line under notice "will cross 12 and possibly 15 Rivers and Backwaters

Flag S.

"Backwaters and the boring work neces-
"sary to give accurate information as
"to depths of foundation would occupy
"a considerable time and be costly.
"From experience on the Calicut-Cannanore
"Extension we know the approximate
"cost per foot run of Bridge suitable
39 St "for a West Coast River or Backwater
"and the boring work should, I think, be
"postponed until the detailed survey
"is made".

I have the honour to be,
Sir.
Your most obedt. Servant

Agent & Manager.

Encl/1.

MADRAS RAILWAY.

From
The Agent and Manager,
M. R. Co.,

To
The Consulting Engineer
for Railways

Dated 188

Recd.

No.

Form No. 1.

PUBLIC WORKS DEPARTMENT,
RAILWAY BRANCH.

Papers to be read in Proceedings :—

B/

No. 1105 Ry dated 7 October 1899

W.C. current No. 5256 of 9.10.99

Telegram to Works. No. 21. at. of 12.10.99

—— do —— No. 51 B. of 23.10.99

P.W.R. current. No. 1360 of 31.10.99

Letter to Ct M. No. 3327 of 1.11.99

E.C. current No. 6004 of 17.11.99

ORDER. No. 1335 Ry dated 20/11/99

45 P

The Government of India will be addressed

Form No. 10/A.

No. 1336 Ry. Urgent

Government of Madras,

PUBLIC WORKS DEPARTMENT,

RAILWAY BRANCH.

Draft the
necessary forward G.O.
let them act [illegible]
[illegible] of H.E.
[illegible] approved of from letter
I need not [illegible] again
[illegible] not be [illegible]
[illegible]

FWS
20/11

To

468

The Secretary to the Government of India,
Public Works Department,

Madras, the 20th Nov. 1899

Sir,

With reference to correspondence ending with your letter No. 2057-R.C. dated the 25th Oct. 99. I am instructed to forward a copy of a letter from the Agent M.R.C. No. $\frac{10694}{1420}$ dated the 16th Nov 99, enclosing a revised estimate amounting to Rs. 7166-12-0 of the cost of a reconnaissance survey from Beliapatam to Mangalore.

2. – I am instructed to strongly recommend that permission be accorded by telegraph to the survey being put in hand, at the cost of M.R. Revenue as suggested by the Company's Agent and as approved by the Board.

3. – As every week's loss of time at this time of year is of serious importance I am instructed to express the hope that early orders may be received in reply to this reference. For delay must necessarily occur in getting a staff and plant together for the survey. I have &

FWS
20/11/99

Despatched on 20/11/99

Public Works (1899) Department.

RAILWAY BRANCH.

CURRENT No. 1496

From Govt of India

Order

No. 223/R.C

Dated 29—11—99

Received

Registered 30-11-99

Enclosures

Spare copies.

SUBJECT.

Reconnaissance Survey from Baliapatam to Mangalore

Sanctioning the Estimate of the cost of the —

BACK PAPERS.

No.	Date.

FURTHER PAPERS.

No.	Date.

41

Class. Dfd	INDIAN TELEGRAPH.	Monthly Local No. 113

To Station Madras Chepauk

From Station Calcutta

Words.	Day.	Hour.	Minute.	Official Instruction.
4/7/11	29	12	55	Dfd Rectd

To (Person) Works Railway

From (Person) Works

RECEIVED
30 NOV. 1899
C. No. 1496
GOVT. OF MADRAS RYS.

2231 R.C. Applanding

1336 Railway 20th inst antalgic estimate amounting to Rupees 7167 of the Cost of reconnaissance Survey from baliapatam to Mangalore sanctioned chargeable to head 41 an allotment will be made in a seperate communication

your letter N
dated as

Recd. from L. N. At Hrs. Mts. By

Sent 11 15 AM 30 NO 99 CHEPAUK

L. N. At Hrs. Mts. By

Date

H. Gandhi
Postmaster.

PUBLIC WORKS DEPARTMENT,
RAILWAY BRANCH.

No. 3683
1-12-99.

Telephone to AM.

Government of India has sanctioned your Estimate for Baliapatam Mangalore Survey and will allot a grant. Government Order will follow. Meanwhile you may start work.

48P.

Despd. 12.40
CEnt
1/12/99.

1/12/99

Despatched on 1/12/99

Public Works (1899) Department.

RAILWAY BRANCH.

CURRENT No. 1520

1452 R.
p.e for 16/12

From Govt of India

Order

No. 424 A.R

Dated 30-11-99
Received
Registered 5-12-99
Enclosures
Spare copies.

SUBJECT.

Reconnaissance Survey from Baliapatam to Mangalore

Sanctioning an allotment of Rs 7000/- to meet outlay on a ——

——nce——

BACK PAPERS.

No.	Date.

FURTHER PAPERS.

No.	Date.

All [illegible] cations should be addressed to the Secretary.

No. 424 A.R.

GOVERNMENT OF INDIA.

PUBLIC WORKS DEPARTMENT.

ACCOUNT.

Railway.

SECRETARY TO
RECEIVED
5 DEC. 1899
C. No 152
GOVT. OF MADRAS RYS.

To.

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

49 P

Calcutta, the 30th November 1899.

Sir.

In continuation of Public Works Department telegram No. 2231 R.C.S dated 29th November 1899, I am directed to convey the sanction of the Government of India to an allotment of Rupees 7,000/- under head "41. Miscellaneous Railway Expenditure" to meet outlay to be incurred during the current financial year on a reconnaissance survey from Baliapatam to Mangalore.-

I have the honour to be,
Sir,
Your most obedient Servant.
R.W. Burn

Offg. Dy. Secretary to the Govt. of India

Hunt
30.11.99.

cuments accompanying.
— nil —

Form No. 2. A

PUBLIC WORKS DEPARTMENT,
RAILWAY BRANCH.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

READ the following

Letter from A.M. No. $\frac{10694}{317}$ d/ 24.3.1899 S1
Note by the Con. Engr. for Rys d/ 2.4.1899 S2
Letter to A.M. 1115 d/ 8.4.1899 S3
—— do —— 1224 d/ 17.4.1899. S4
Letter from A.M. No. $\frac{10694}{500}$ d/ 4.5.1899. S5
—— Do —— No $\frac{10694}{551}$ d/ 15.5.1899 with Encls. S6
Letter to A.M. No. 43/0 d/ 22.5.99 S7
Letter from A.M. No. 10694/615 d/ 30.5.1899. S8
Letter to A.M. No. 74/0 d/ 2.6.99. S10
Letter from A.M. No. 10694/1027 d/ 23.8.99 with Encls S11
Letter to A.M. No. 247/0 d/ 26.8.99. Flag P
Letter from A.M. No. 10694/1147 d/ 10.9.99 with Encls. Flag X
Note by the Con. Engr. for Rys d/ 20.9.99. Flag F
Letter to India No. 1105 Ry d/ 7.10.1899. Flag E
Letter from A.M. No. 10694/B1234 d/ 7.10.99 Flag H
Telegram to India No. 21 A. d/ 12.10.99 Flag F
—— Do —— No 51 B d/ 23.10.99. Flag M
Letter from India No. 2057 RC d/ 25.10.1899. Flag L
Letter to A.M. No. 3327 d/ 1.11.99 Flag T
Letter from A.M. No 10694/1420 d/ 16.11.99 with Encls Flag O
Do No. $\frac{1335}{1336}$ Ry d/ 20.11.1899. Flag V
Telegram from India No. 2231 RC Flag S
d/ 29.11.99

Telephone to A.Ge. of 1st Decr 1899. No 3683 76 W

~~7.1.1~~

Letter from India No. 424. A.C. of 30.11.1899

Order thereon No. 1452. Ry of 12-12-1899.

Communicated to the Agent and Manager, Madras Railway.

FJS

7/12/99

Note.

It is proposed to print the papers [illegible] was in the [illegible]

[illegible] 9/12/99

JMS

To

The Agent & Manager M. Ry } 13/12/99
" Examiner of Ry Accounts } [illegible]
" Consg Engr for Rys ✓

Despatched on 13/12/99
S.C. 30/12/99

[illegible] 9/12/99

50 P

57 P