[L. & M.
2,000—28-10-97.]

Local & Munl. (1898) Department.

MISCELLANEOUS.

G.O., No. 296 L

DATED 18-2-98

INDEXED.

DESPATCHED

[Despatch Abstract.]

Improvement of the drainage and waterways of certain rivers in the Kistna District – Communicating to the District Board, Kistna, letter from the Engineer in Chief of the Bezwada-Madras Railway forwarded with the endorsement of the P.W.D regarding the cost of improving the drainage and waterways of the Tungabhadra, Nallamedu and Rampeu rivers.

BACK PAPERS.

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

FURTHER PAPERS.

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

[L. & M. 300—2-12-97.]

LOCAL AND MUNICIPAL DEPARTMENT.

Papers to be read in Proceedings :—

Again G.O., No. , dated 189

Again G.O., No. , dated 189

Current No. 3202 L of 1897, dated 24th November 1897, from the President, Distt. Bd., Kistna.

„ „ 322 L „ 1898, „ 27th January 1898, „ the Public Works Departt. (Ry. Branch)

„ „ „ 189 , „ , „

ORDER. No. 296 L mis. d 18/2/98

The letter from the Engineer-in-Chief of the Bezwada-Madras Railway, forwarded with the endorsement of the Public Works Department read above will be communicated to the District Board, Kistna.

V.P. 15/2/98

16.2.98

17.2.98

To

The President, Distt. Bd., Kistna.

„ Public Works Department.

Desp. 22/2/98

BACK

P. W.

~~LOCAL & MUNL.~~ (1897) DEPARTMENT.

Railway Branch

OFFICE OF ENGINEER IN CHIEF BEZWADA MADRAS RAILWAY
No. 284
14 JAN. 98

CURRENT No. ~~3 L~~
26

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

SECRETARY TO GOVERNMENT LOCAL & MUNICIPAL DEPARTMENT
6- DEC.-1897

Recd 5. 1. 98

~~Order~~. No 1 of 6-1-98

Transferred to the Public Works Department, Railway Branch

H. Tremenheere
Ag. Secretary to Government

V. R. 28/12/97

No 9 R.M. d 8 January 1898

Transfer to Engl VMR for favour of remark

6/1/98

From

R. Morris Esquire,
President, Dt Bd
Kistna

Refer to No. 1315/283 of 97

Dated 26 Nov 1897

Received

Registered

Enclosures (Three)

Spare copies

SUBJECT.

Submitting for the ~~perusal~~ & orders
copy of a resolution of the District
of Govt ~~(about the cost of making~~
Board requesting that the Government
~~certain improvements in connection~~
will be pleased to direct that the cost of improving
~~with~~ the drainage & water ways of
Tungabhadra Nallamada & Rainpeta
which had been necessitated by the Bezwada
rivers ~~a copy of the Proceedings of the~~
Madras Railway ~~should~~ be borne by the Railway
~~Engineers' Conference about improve-~~
and not from local funds
~~ments to the Guntur - Bapatla road~~
~~in connection with the Bezwada - Madras Railway~~

11/12/97

5
322 L/98

p45

BACK PAPERS.

G. O.	No.	Department.	Date.

FURTHER PAPERS.

G. O.	No.	Department.	Date.

OFFICE OF ENGINEER I.I.C.
Regr. No. 284
11 JAN. 8
BEZWADA

Proceedings of the Conference held at Bapatla on the 28th August 1897 regarding the drainage and waterways of the Tungabhadra, Nallamada and Ramperu rivers.

Present on the Committee

Major W. L. C Baddeley R.E. Superintending Engineer 2nd circle, Through Michell Esqr. Offg Engineer in chief B.M. Ry. N. C. Lewis Esqr. Executive Engineer, Kistna western Division. W. A Mathews Esqr. Engineer to the Local Fund Board Kistna, James Wallace Esqr. Executive Engineer — Bapatla Division B. M. Ry.

"The Committee having inspected the Railway crossings of the three rivers in question &c read the following letters:-

p 42 1. Letter No F/$\frac{4537}{76}$ dated 10th August 1897 from the Engineer-in-chief B M Ry to the chief Engineer Irrigation Branch Madras, P.W.D. relating to the proposals for the widening training &c of the Tungabhadra river which crosses the B M Ry near chain 2605.68 mile 228.83 from Madras.

p 39 2. Letter No B/$\frac{4531}{76}$ of the 9th August 1897 from the Engineer-in-chief B.M. Ry to the Collector Kistna District relating to the proposals for the revision of the waterways on the Bapatla-Guntur road &c of the Nallamada river which crosses the B.M. Ry at chain 2300.12 mile 223 from Madras.

p 175 of 418 p II 3. Letter No B/$\frac{4565}{418}$ of the 10th August 1897 from the Engineer-in-chief B.M. Ry to the Superintending Engineer 2nd Circle, Bezwada, relating to the proposals for the crossing the B.M. Ry of the Perali drain at chain 1978.01 mile 217 from Madras.

1/3202 H 97

4. A report prepared by Mr J. Wallace Executive Engineer on the discharge of the waters

4/322 H 98

of the Ramperu drainage over the roads crossing the drain. It was agreed that in order to better open out the new channel of the Tungabhadra river at chainage 2605.68, for which 7 Spans of 40 feet are provided by the Railway a spill opening 400 ft bed width and 3 ft deep be cut from the left bank of the new drain cut to connect this with the old channel of the Tungabhadra.

For the opening of the channel up stream and providing more waterway across the Bapatla Guntur road, the Local Fund Engineer and the Superintending Engineer explained that low ramps on this road will not suit and that the bridges will be extended to provide the requisite waterway; and the Committee agree that the present road bridge of 3 Spans of 20 feet should be increased by 7 Spans of 20 feet or 200 lineal feet of waterway; and that the straight cut between this road bridge and the Railway be widened.

To effectually close the old channel the Irrigation Department will continue the spoil embankment from the new cut for the Northern channel across the old Tungabhadra River about 250 feet west of the Railway and complete this embankment as far as the cultivation on the left bank of the old channel, the Railway arranging to continue this embankment to join it up with the Railway embankment. The irrigation department will also arrange to pitch, with heavy stone pitching, the section of this embankment which crosses the old channel. For the Ponnur Straight cut drain which is nearly parallel with the Railway from Ponnur Station to the Tungabhadra Railway bridge, the waterway provided for this on the Tsundur-Ponnur road is considered insufficient and the present bridge of 2 Spans of 20 feet will be doubled making an opening of 4 Spans of 20 feet.

This will be done by the Irrigation Department.

(1) The Nallamada main channel (Railway bridge 5 Spans of 60 feet at chainage 2300.12) and (2) Spill of this river known as the Mungalagundi (Railway bridge 5 Spans of 20 feet at chainage 2335.97). For the main channel the Irrigation Department are prepared to increase the present road bridge of 5 Spans of 20 feet by 10 more Spans of 20 feet making it 15 Spans of 20 feet or 300 lineal feet waterway. For the Mungalgundi spill, the Local Funds Board Engineer explained that a project has been sanctioned to double the size of the road bridge making it 6 Spans of 18 feet or 108 lineal feet waterway.

The Committee strongly recommend that both of these bridge extensions be carried out during the coming working season. This new drainage channel which is designed to relieve the upper portion of the Ramperu Swamp and which will cross the Railway on the skew at chainage 1978.01 is intended to have a bed width of 50 feet. It is agreed that 50 feet bed width be considered for the present the full waterway to be provided and that the Irrigation Department construct regulating sluices on the Coast road Bridge which is to be built to the East of and below the Railway crossing of the new drain, that the abutments and approaches of this road Bridge be heavily pitched to render the works secure in the sand formation, that the length of drain between the Road and Railway bridges be pitched over bed and slopes, that the Railway bridge be provided with long parallel wing wall abutments on deep well foundations that the Railway embankment approaches be heavily pitched for a sufficient length on both sides;

that heavy pitched flooring (3 feet thick) be put over the bed of the channel to extend from 25 feet above to 50 feet below the face of the abutments, and to be carried up the slopes of the drain, and above this light pitching for such length of channel as may be considered necessary. That the whole of the Cost of the Railway Bridge and works connected therewith be met by the Irrigation Department, the railway bridge being constructed by the Railway Department.

The Committee consider that the waterway in the Vettapalem Santa Ravur road should be increased by lengthening the low ramp to the west of the pile bridge by 100 to 150 feet, the bottom being at the level of the ground surface.

That on the Chinnaganjam - Inkulu road the ramp to the west of the Inkulu Bridge (10 spans of 22 feet) be lowered to the level of the ground surface and to be 400 ft long at this level.

Mr Mathews agrees with the above and will bring the matter before the Local Funds Board at an early opportunity.

The Committee are of opinion that the foregoing proposals are most essential in the interests of the Railway and of the District, and that they should be given effect to as early as possible

(Signed) M. LE Baddeley.
Major RE
(Signed) J. Michell
(Signed) W.C. Lewis
(Signed) W.A. Mathews.
(Signed) James Wallace

Bapatla
Dd 29th August 97

(True Copy)

22
Ry C No 26/98

4.XI.97

For Ag. Collr.

Proceedings of the District Board, Kistna, passed at the Meeting held at Bezwada on Saturday the 20th November 1897 in the Jubilee Museum.

Present.

R. Morris Esquire, President, District Board Kistna.

Ex-officio Members.

M. Young Esquire, Head Assistant Collector, Bezwada

Mahommed Azeezuddeen Hussain Sahib Bahadur, General Deputy Collector Narasarowpett.

Non Officials

M.R.Ry. C. V. Subrahmanyam Pantulu garu
" Bh. Ramayya Pantulu garu

Elected official Members.

" M. Subbarow Pantulu garu

Elected non-official Members

" M. Lakshminarasimham garu
Revd. W. M. Powell
" Rao Bahadur M. Ethirazulu Pillai garu
" T. Rajalingam Pantulu garu
Mir Shemsuddeen Sahib garu
Safder Hussain " "
" T. Apparow Pantulu garu
" J. Lakshminarayana Sastri garu
" P. Venkata Kristnayya Naidu garu
Revd. L. L. Uhl
" Z. Venkatapatirazu garu
" V. Venkata Subbayya Pantulu garu
" M. Sreeramulu garu
Sowdager Mohadeen Pacha Sahib garu
" S. Narayanaswamy Naidu garu

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14(a) Read letter from the Local Fund District Engineer No 1268 dated 30th September 1897 forwarding for sanction an estimate for Rs 7,433 for improving the iron rail bridge in the 2nd furlong of 28th mile of Guntur Bapatla road.

Resolution. —

The estimate is formally sanctioned. The Board however considers that, as the work is one, which would have been quite unnecessary but for the advent of the Railway and as the alterations are proposed solely to suit the Railway Engineers, the Railway and not the Board should be charged with the cost. The President is requested to address the Government on the subject.

(signed) R. Morris
President

(True extract)

2/12/97
Vice President

29/11/97

2/12/98

E.1
P.17 Ry C No 226/98

71

No.

KISTNA DISTRICT BOARD'S OFFICE,
Camp Masulipatam
Dated the 1897.

DISTRICT BOARD OFFICE, KISTNA.
DESPATCHED ON 3-...189

LOCAL & MUNICIPAL DEPT.
CURRENT No. 3222 L

From
R. Morris Esquire
PRESIDENT, DISTRICT BOARD
KISTNA.

To
THE ~~CHIEF~~ SECRETARY TO GOVERNMENT,
LOCAL AND MUNICIPAL DEPARTMENT,
MADRAS.

SIR,

In August last, a conference was held by the marginally noted officers, regarding the drainage and water ways of the Tungabhadra, Nallamada and Romperu rivers and some definite conclusions have been arrived at, tending to material improvements, that may have to be effected in connection with them (Vide a copy of the Proceedings of the conference and the sketch).

Major W. L. C. Baddeley R.E. Superintending Engineer II Circle.
Theo Mickell Esqr offg Engineer in chief B. M. Railway.
W. C. Lewis Esqr Executive Engineer, Kistna Western Division.
W. A. Mathews Esqr, L. F. Engineer Kistna
James Vallace Esqr Executive Engineer Bapatla Division B. M. Railway.

2. Consequently the District Local Fund Engineer forwarded an estimate for Rs 7,433 for altering the iron rail bridge in the 2nd furlong of 28th mile of Guntur-Bapatla road, over the Nallamada Vagu, so as to increase the water way. as formally sanctioned in District Board Resolution 14 a

2
322 L/98

(copy enclosed) and has been sent to Government through the Superintending Engineer II Circle.

3. The members of the Board expressed themselves at the meeting as very strongly of the opinion that, as these alterations would have been unnecessary but for the advent of the Bezwada-Madras Railway it was unfair to call upon Local Funds to bear the cost. In according formal sanction to the estimate, a rider was added to this effect and calling upon me to move the Government in the matter.

4. I have therefore the honor to request that the Government will be pleased to direct that the cost of this and all similar works, not in themselves necessary but for the Railway, should be borne by the Railway and not by Local Funds.

I have the honor to be,

Sir,

Your Most Obedient Servant,

2 12 97

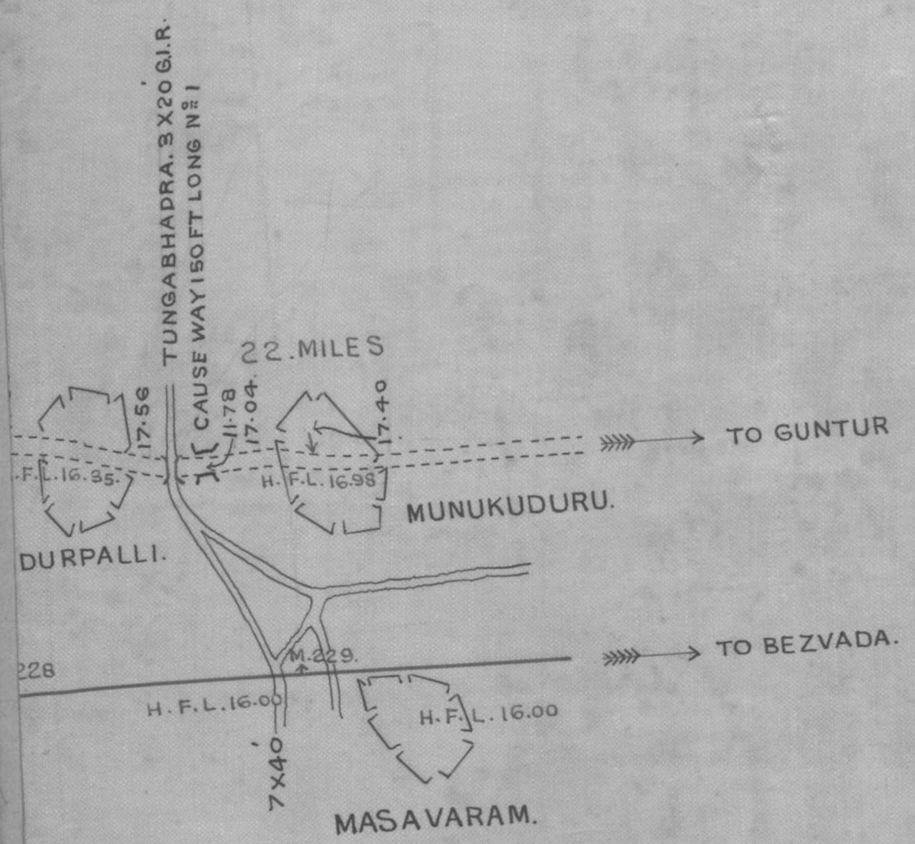
For President

2/12/97

OFFICE OF ENGINEER
BEZWADA MADRAS RAILWAY
8 JAN 97

(1) THE FIGURES IN BLACK AT RIGHT ANGLES TO THE ROAD INDICATE THE LEVEL OF ROAD.

(2) THE FIGURES IN RED PARALLEL WITH ROAD AND BY-VILLAGES ETC. INDICATE HIGH FLOOD LEVELS



EXECUTIVE ENGINEER.

BAPATLA DIVISION

B.M.RY

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Local & Munl. (189) Department.

CURRENT No. 322 L

From The P. W. D. Ry Branch.

Order

No. 44 R. M.

Dated 27-1-98

Received 4-2-98

Registered

Enclosures 6

Spare copies.

SUBJECT.

Transferring with remarks papers re. the Cost of improving the drainage and water-ways of the Tungabadra Nallamedu & Ramperu Rivers.

A 15/2/98
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ublic Works (1898) Department.

Railway

CURRENT No. 93

UNDER SECY TO GOVT. 14 FEB 98 PUBL

322 L

From

The Engr. in. ch.
Bezwada-Madras Ry

No. B | 416/76

Dated 18th January 1898
Received
Registered } 19-1-98.
Enclosures
Spare copies

der No. 44 R.M. dated the 27th Jan 98.

Transferred to the Local & Municipal Dept.
reference to their memorandum No. 1. dated
4th Jan 98. with the remark that in the
ion of this Dept. no case has been made out
debiting the State Railway with the cost of the
ement of the District Road. Attention
vited to paras 10 and 11 of the Engineer in
's letter.

Francis J. E. Spring
Joint Secy. P.W.D.
Railways.

ER

SUBJECT.

Drainage & waterways of the Tungabhadra. Nallamada and Ramperu rivers

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Acknowledging with remarks. the papers regarding the —

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BACK PAPERS.

No.	Date.

FURTHER PAPERS.

No.	Date.

In your reply please quote the number and date of this letter.

No. B/416
76

CONSULTING ENGINEER FOR
RECEIVED
19 JAN. 1898
MADRAS.

From

THE ENGINEER-IN-CHIEF,
BEZWADA-MADRAS RAILWAY,

To

THE SECRETARY
P.W.Department Railway Branch
Madras.

Dated Madras, the 18th January 1898.

Sir,

I have the honour to acknowledge your No.9 R.M dated 8-1-98 and enclosures noted below:-

i. Proceedings of the conference held at Bapatla on the 28th August '97 regarding the drainage and waterways of the Tungabhadra, Nallamada and Ramperu rivers.

ii. Proceedings of the District Board Kistna passed at the meeting held at Bezwada on Saturday the 20th November 1897 in the Jubilee Museum.

iii. Letter from R. Morris Esquire, President District Board Kistna to the Secretary to Government, Local and Municipal Department Madras.

iv. A sketch map shewing B.N.Ry and Bapatla Guntur Road between Nallamada and Tungabudra rivers.

v. Local and Municipal Department endorsement No.1 dated 4th January '98

2. I see that the estimate for Rs.7,433 referred to in para 2 of letter No. ~~3202~~ 1315 I of ~~2-12-97~~ 24-11-97 from the President District Board Kistna, to the Secretary to Government Local and Municipal Department, Madras, is said to refer to a bridge over the NullamadaVagu at the 2nd furlong in mile 28 of the Bapatla-Guntur Road

Enclosures. 6
322 I/98

I think this is an error and that the bridge intended to be referred to is over the Mungalgundi at the 27th mile of the road-or it may be perhaps that the mileage has been altered from that shewn in the tracing accompanying your letter. I think the Mungalgundi at mile 27 is intended, because it will be seen that in the proceedings of the conference held at Bapatla on the 28th of August '97 the Local Board Engineer Mr. W. A. Mathews stated that a "project has been sanctioned to double the size of the road bridge [over the Mangalgundi] making it 6 spans of 18 feet or 108 lineal feet of waterway". The railway bridge over the Mangalgundi is 100 feet lineal waterway. I feel so sure this is the bridge to which the estimate refers that I reply to your letter without asking if such is the case.

3. The three cases your letter refers are the

a. Nullamada and Mangalgundi bridges.

b. The Tungabhadra bridge

c. The Hampera bridge

4. The circumstances of the Nullamada and Mangalgundi Bridges are precisely similar and in giving the following extracts from my letter B 4531/76 of 9-8-97 to the Collector Kistna District, the remarks on the Nullamada apply in every way to the Mangalgundi, or as it is called in the President of the Kistna District Board's letter, the Nullamada Vagu. The tracing shows that the Mangalgundi [or Nullamada Vagu] and the Nullamada are about 1½ miles apart both on the Bapatla-Guntur Road and the Railway, and both road bridges are about the same distance from the railway. Also both road bridges are on the up stream side of the railway.

5. The present spans of road and railway bridges over these two streams are as under:-

	Railway	Road
Nullamada	5 x 60 = 300 ft	5 x 20 = 100 ft.
Nullamada Vagu [Mungalgundi]	5 x 20 = 100 ft.	3 x 18 = 54 ft.

6. In my letter to the Collector Kistna District regarding the Nullamada I said "The road bridge over the Nullamada channel except in very ordinary floods is an obstruction-and has probably been the cause, when high floods occurred, of damming the water up until the road was cut through at weak points, which were afterwards provided with openings or turned into ramps or Irish Bridges". That the present road bridge is an obstruction in high floods there is no doubt, and the inefficiency of the 100 lineal feet of waterway was admitted long ago by the Irrigation Department as will be shewn further on. "The railway embankment is at the Nullamada channel only about 150 feet from the road, and the bridge over the road, should a serious flood occur will prevent the full discharge of the channel proper, so that the result will be the heading up of the water and possible flooding of the country. I do not think the railway would go." "The railway bank would, while obstructed by the road bridge dam up the water which would spread over the country to the East". "It would have been injudicious to limit the railway opening for the Nullamada proper to that of the road bridge [100 l.ft.] and provide for the other 200 feet elsewhere. The result might have been the formation of an entirely new channel east of the railway". "I have been over the ground with Mr. Wallace [Executive Engineer Bapatla Dn] and discussed the question with him, and entirely agree with his proposals for demolishing the present road bridge of 100 feet over the Nullamada and substituting a causeway [Irish bridge] of about 300 feet long. The lengthening of the opening to 200 feet is now contemplated and materials are being collected for the work and it is ultimately intended to increase the [road] bridge to 300 feet. The money which would be spent in lengthening the road bridge 200 feet would more than cover the cost of the causeway".

7. The proposal to lengthen the Nullamada Road bridge as also the Mungalgundi emanated I believe from the District Board. My Executive Engineer proposed causeways as quite sufficient and cheaper and Mr. Lewis the Executive Engineer

Kistna Western Division agreed with him. In letter No.3667 of July 21st 1897 from the Executive Engineer to the President (Chairman,) Local Fund Board Masulipatam the Executive Engineer says "To convert these bridges [the Nullamada and Mangulgundi] into good ramp-causeways, as I have suggested and as Mr. Lewis approves, seems the most practical and economical way to meet the difficulty. The Bapatla Guntur Road is in many places below high flood level and besides, has many ramps on it in lieu of bridges, so that the traffic would not be seriously impeded by converting these two bridges into ramp-causeways. Moreover, with the railway alongside and practically parallel, there is now less need of the road, and the saving of public funds in making ramp-causeways instead of bridges should be considered".

8. It is clear from the foregoing remarks and extracts the insufficiency of the waterways over the Nullamada and Mangalgundi had been admitted and that it had been decided to lengthen both of them before the conference of the 28th of August. No question of charging the cost of lengthening these bridges to the Railway has ever been raised up to the present, and it rested with the Board to adopt ramped causeways or additional spans, whicheWer they preferred.

9. In the report of the meeting of August 28th sent with your letter I see it is stated that the "Irrigation Department are prepared to increase the present road bridge [over the Nullamada] by 10 more spans of 20 feet", while the Local Funds Board Engineer explained that a project had been sanctioned to double the size of the road bridge over the Mangalgundi. I do not know why one bridge is in charge of the Irrigation department and one in that of the local board, but the proceedings were signed by Superintending Engineer and Executive Engineer of Irrigation and by the Engineer to the Local Board. Had there been any reason for charging the cost of improving the road to the Railway it would have been brought forward at the meeting, and from the wording of the proceedings of the meeting it is quite clear that the cost was to be borne either by the Irrigation Department or the Local Funds Board or both, but not by the Railway.

10. In the case of both the Nullamada and Mangalgundi [Nullamada Vagu] it must be borne in mind that the railway is on the down stream side of the road-that full allowance has been made in the railway for the passage of water by the natural channels-and that any obstruction is directy caused not by insufficient waterway in Railway openings but by insufficient waterway in the road, which is on the up stream side of the railway.

11. In course of time, had the Railway not been made I think I may assume that as funds permitted the road would have been gradually improved by additional bridging required not only in these two places, but many others. The expense of so doing would not be borne by the Railway. If sufficient waterway was not originally provided in the road for these two streams, the Railway cannot be called upon to bear the cost of now turning this portion of the road from a second into a first class road and providing the necessary additional waterway.

12. In place of increasing the length of either the Nullamada or Mangalgundi bridges I would recommend that my Executive Engineer's suggestions be adopted-both for the sake of saving time and money. That the present bridges over both be dismantled-that the Nullamada be provided with a paved causeway 200 feet long, and the Mangalgunda with a causeway 100 feet long-the reduced level of the bottom of the causeways being 5.00 [Railway datum].

13. The circumstances of the Tungabudra bridge are quite different from those of the Nullamada and Mangalgundi-and I do not see how it can be a work affected by any remarks contained in Cir. No. (letter) 3202 1 from the President District Board, Kistna, to the Secretary to Government, Local and Municipal

Department, Madras.

14. Para 12 also applies to the Rampéru Bridge.

I have the honour to be

Sir

Your most obedient servant

Edw. J. More

Engineer-in-Chief.

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en copied 21-2-98 } 189 M
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AGAIN G.O., No. , DATED
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