

MADRAS RECORD OFFICE.

Government of Madras.

DEPARTMENT

GO. No.	From
	Ms.
Dated	To

Not to be folded or roughly handled

Fort Saint George, Public Works Consultation of 30th March 1858.

No. 13. Read the following letter from Colonel C. E. FABER, Chief Engineer; to H. FORBES, Esq., Acting Secretary to Government, dated 3rd March 1858, No. 7754.

SIR,

1. With reference to Extract from Minutes of Consultation No. 118 of the 22nd January 1858, I have the honor to forward the accompanying copy of a

1 Copy of letter from Acting District Engineer of the Kistnah Division No. 158 of 15th February 1858, with one enclosure, viz.
1 Do. from Acting Collector of Masulipatam to District Engineer of Kistnah Division No. 14 of 10th February 1858.

letter from the Acting District Engineer of the Kistnah Division, under date the 15th Instant, No. 158, explaining that it is not intended to raise the proposed new road from Ibrampatam to Masulipatam, on the river and channel Dykes, every where $2\frac{1}{2}$ yards, but that where the water stands in the Canal below the surface of the country the spoil bank will merely be

spread out and levelled, and only where the Canal is within embankments will the road necessarily be taken on a high level.

2. Thus near Bezoarah, and for short distances below each of the Locks, the cuttings being heavy, the water will not stand over the berms of the Canal, and the spoil banks affording more than enough earth will merely require levelling down to a proper section, while as the respective Locks are approached the earth removed to form the channel being all required to make up the embankments, their height is regulated by the level of the surface of the water, and cannot be lowered to make up the width for the roadway, as supposed by Government.

3. The height of many miles of the embankments near the Locks, and where the channel crosses hollows, being 3 and $3\frac{1}{2}$ yards, the mean elevation of the proposed road is roughly stated at $2\frac{1}{2}$ yards, and the average earth-work required to be performed to widen the embankment sufficiently to carry it, or to level down the spoil banks, is correctly given in the estimate, and cannot be reduced.

4. With his letter the District Engineer submits one from the Acting Collector, which is likewise herewith forwarded for the information of Government, in which Mr. Knox deprecates the abandonment of the old road, on account of the advantages to travellers and troops of the Bungalows and villages situated thereon. Lieutenant Chambers concurs in opinion with the Acting Collector, and would prefer re-constructing the old road to transferring it to the Dykes, but as a discussion of this question would re-open the whole subject after it has been well considered by me, in communication with the late Acting Collector, and the experienced District Engineer lately in charge of the Kistnah Division, and decided* by Government, I shall refrain from saying more than that the present Acting District Engineer seems much to over-rate the

* Extract Minutes Consultation No. 891 dated 8th May 1857.

difficulties of obtaining new encamping grounds and supplies on the line of the Canal, as it passes within less than half a mile of the Bungalows and halting places at Cunkypaud and Nedamole, and close by many other large villages. Troops and Travellers will probably always use the Canal when it is open, whether the road runs on its banks or not, and the loss of one of three Bungalows, namely that at Weyoor, is therefore of not much importance.

5. Lieutenant Chambers acknowledges that the gravelling of the old road will be more expensive than the new, but he thinks not so much so as is supposed, as it touches the Canal and old Poolairoo at many points. It happens however that the old road closely approaches the navigable Canal only at Perunky, 6 Miles from Bezoarah, and between Paumuroo and Nedamole, and every where else is from half a mile to five miles from it. The gravel, besides having to be re-loaded, would have to be carted very considerable distances, which is an extremely expensive, if not impossible operation, in that part of the country, for the old Poolairoo, by which it would seem Lieutenant Chambers expects to be able to transport the material, is not navigable except for rafts, and is not worth being made so for such boats as would be required.

6. The old road may be retained in its present state as a fair weather track, but I would repeat my recommendation of the estimate of Rupees (1,46,000) one lac, and forty-six thousand, being sanctioned as early as possible, as a Military work of vital necessity, for the preservation of the valuable stores and costly equipments now unceasingly moving westward from Masulipatam.

Fort Saint George, Public Works Consultation of 30th March 1858.

Letter from Lieutenant O. W. S. CHAMBERS, Acting District Engineer Kistnah Division; to Colonel C. E. FABER, Chief Engineer, dated Bezoarah, 15th February 1858, No. 158.

SIR,

Being unable to arrange a personal conference with the Acting Collector as suggested by you for the purpose of discussing the expediency of reducing the height of the dykes on which the proposed new road from this to Masulipatam is to run, I addressed him on the subject in writing and have the honor of enclosing a copy of his reply.

2. From a conversation with Lieutenant Beatty who framed the Estimate and from a study of that document, I have come to the conclusion that Government in Extract from the Minutes of Consultation is under a Misapprehension in supposing that it was ever the District Engineers intention to raise the new road everywhere 2½ yards above the surface of the country.

3. Wherever the surface of the water in the canal is below or on a level with the berms, Mr. Beatty assures me that the establishment of the road was to be effected by levelling out the spoil taken from the Canal to a width of 6 or 8 yards, it is only where the water in the Canal is above the berm that he purposed throwing up additional Material for the formation of the road, in each case there would be a large expenditure on earthwork, whether the road was formed by levelling down an Old bank or throwing up a new one.

4. The question raised by Government may therefore be considered as disposed of.

5. Referring to the Collector's letter, I must confess myself to be of his opinion with respect to the expediency of retaining the Old road; it is several miles shorter than the proposed new one, passes through towns and villages, is provided with Bungalows, encamping grounds, Native halting places and Bazaars, it is bridged throughout; its first 8 miles were originally made with large stone and require now but a little gravel to be in good order.

6. The new line on the contrary has several disadvantages the principal of which is, that running on a green embankment, which will take years to consolidate, much of the Metal with which it will be covered will be swallowed up before the road becomes firm enough to bear heavy traffic. I am surprized to see what large holes are made in our embankments, some of them 3 years Old, by the passing of elephants.

7. The expenditure in gravelling the Old road would of course be greater than in gravelling the Bank of the Canal down which the metal will be brought, but the Old road touches the Canal and the Poolairoo in so many places, that this extra charge would not be very considerable, whilst the saving on the earthwork would be great.

8. I think myself that it would be advantageous to repair and Metal thoroughly the Old road and to do enough to the surface of the Canal bank to make it an excellent bridle road; a small yearly allowance, say Rupees 50 a mile for 3 or 4 years, would effect this latter improvement.

Letter from T. J. KNOX, Esq., Acting Collector of Masulipatam; to O. W. S. CHAMBERS, Acting District Engineer Kistnah Division, dated Ellore, 10th February 1858. No. 14.

SIR,

I have the honor to receive your letter requesting my opinion on the subject discussed in para. 3 of Minutes Consultation under date 22nd January 1858, regarding which the Chief Engineer was pleased to direct that we should confer.

2. I feel some hesitation in offering an opinion on a matter so purely pertaining to your profession.

3. It is no doubt true that raised roads are as a rule objectionable, but it strikes me that in this instance much will depend on the nature of the Subsoil.

Fort Saint George, Public Works Consultation of 30th March 1858.

4. If the water of the Canal Oozes through its banks and consequently renders the ground on which the foundation of the road must be placed soft, as is very probable, it appears to me the road should be raised considerably and so constructed that the water which did not run off its surface but percolated through ruts should be caught ere it sunk to the level of the Canal water made to fall into the Canal.

5. I confess, however, I am sorry to find that the old road is to be deserted, communications can hardly be too numerous and it would be far better for the country to have two lines running from Bunder to Bezoarah than one as the Canal with a road on its banks would prove the additional expense to Government would not prove very great, and the inconvenience to Troops and Travellers halting on the Canal without Villages to afford supplies will be considerable.

No. 14. ORDER THEREON, No. 533; dated 25th March 1858.

Under the explanation furnished by the Chief Engineer in the foregoing letter, the Right Honorable the Governor in Council authorizes for entry in the Budget 1859-60, the estimate of 1,46,000 Rupees submitted by him on the 19th November 1857, for constructing the road from Masulipatam to Ibrahimpatam, on one of the embankments of the Canal from Masulipatam to Bezoarah, and on the river dyke above the latter place.

2. The Canal from Weyairoo to Musulipatam was originally intended to take the place of the road from Ibrahimpatam to the coast, thus completing by water the great Military communication between the Nizam's dominions and the town of Masulipatam. Subsequently however, on the report of the Collector in 1854, it was admitted that the Canal would not wholly supply the place of a road; and accordingly a reduced estimate of 43,250 Rupees was entered in the Budget of 1856-57, for the partial reformation of the existing road between the points referred to; the coating to be provided in lieu of substantial metal, being only gravel, potter's earth, and sand. In their orders on the Budget of that year, the Government of India expressed doubts of the efficiency of this material for the purpose to which it was to be applied, and thought that, as the road would be subject to heavy traffic, the additional cost of proper metal might perhaps be wisely incurred. It was in consequence of this opinion, that the present estimate of 1,46,000 Rupees has been proposed for a completely metalled road.

3. The Government having already decided in favor of constructing the road on the Canal bank, will not again discuss the question of maintaining the old road, re-opened by the Acting Collector, more especially as it is calculated to be a more costly work.

(Signed) H. FORBES,

Acting Secretary to Government.

No. 14.

Masulipatam Collectors
Circuit Cutcherry at Ellore
10th February 1858.

From J. J. Knox Esquire
Acting Collector of Masulipatam
To W. L. Chambers
Acting District Engineer
Nizamat Division

Sir,
I have the honor to receive your letter requesting my opinion on the subject discussed in para 3 of Minutes Consultation under date 22nd January 1858 regarding which the Chief Engineer was pleased to direct that we should confer.

2. I feel some hesitation in offering an opinion on a matter so purely pertaining to your profession.

3. It is no doubt true that raised roads are as a rule objectionable, but it strikes me that in this instance much will depend on the nature of the subsoil.

4. If the water of the Canal oozes thro' its banks and consequently renders the ground on which the foundations of the road must be placed soft, as is very probable, it appears to me the road should be raised considerably and so constructed that the water which did not run off its surface, but percolated thro' it, should be caught
ere

ies it sunk to the level of the Canal water made to
fall into the Canal. -

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that the Old road is to be deserted, communications
can hardly be too numerous and it would be far
better for the Country to have two lines running
from Pander to Pegorah than one as the Canal
with a road on its banks would prove the additional
expense to Government would not prove very great,
and the inconvenience to Troops and Travellers halt-
ing on the Canal without Villages to afford supplies
will be considerable. -

Thurs 8th

(Signed) J. J. Knox

Acting Collector

(True Copy)

(Signed) W. L. Chambers

Acting Dist. Eng. & H. D. Eng.

[True Copy]

W. L. Chambers

Chief Engineer

To The Chief Engineer in the D.M.
Madras.

Sir,
Being unable to arrange a personal

Conference with the Acting Collector as suggested
by you for the purpose of discussing the expediency
of reducing the height of the dykes on which the pro-
posed new Road from this to Masulipatam is
to run, I addressed him on the subject in writing
and have the honor of enclosing a Copy of his reply.

2. From a conversation with Lieutenant
Beatty who framed the Estimate and from a
study of that document, I have come to the con-
clusions that Government in Extract from the
Minutes of Consultations is under a misappre-
hension in supposing that it was ever the
District Engineer's intention to raise the new
Road everywhere $2\frac{1}{2}$ Yards above the Surface of
the Country.

3. Wherever the Surface of the water in
the Canal is below or on a level with the
berms, Mr. Beatty assures me that the Establi-
ment of the Road was to be effected by
levelling out the spoil taken from the Canal

No. 6942 dated 27th
January 1858.

No. 118 of 1852
January 1858.

1858.

De. 11th

Enclosed in a letter from the
Chief Engineer in the D.M.
to the Secretary to Government
of the 11th Dec.

Dated 3rd March 1858

No. 449 of 1857

Order of the Government of the
of Masulipatam, of the 11th Dec.
1857. On relation to the
proposed new Road from this to
Masulipatam, viz. to run

to a width of 6 or 8 Yards, it is only where the water in the Canal is above the level that he proposed throwing up additional Material for the formation of the road, in each case there would be a large expenditure on earthwork, whether the Road was formed by levelling down an Old bank or throwing up a new one.

4. The question raised by Government may therefore be considered as disposed of.

5. Referring to the Collector's letter, I must confess myself to be of his opinion with respect to the expediency of retaining the Old road: it is several Miles shorter

than the proposed new one, passes through towns and villages, is provided with Bungalows, encamping grounds, Native halting places and Bazaars, it is bridged throughout: its first 8 Miles were originally made with large stones and requires now but a little gravel to be in good order.

6. The new line on the contrary has several disadvantages the principal of which is, that running on a green Embankment, which will take Years to consolidate, much of the Metal with which it will be covered will be swallowed up before

before the road becomes firm enough to bear heavy traffic. I am surprised to see what large holes are made in our Embankments, some of them 3 Years Old, by the passing of Elephants.

7. The expenditure in gravelling the Old road would of course be greater than in gravelling the Banks of the Canal down which the metal will be brought, but the Old road touches the Canal and the Pools in so many places, that this extra charge would not be very considerable, whilst the savings on the earthwork would be great.

8. I think myself that it would be advisable to repair and Mettal thoroughly the Old road and to do enough to the surface of the Canal banks to make it an excellent bridle road: a small yearly allowance, say Rupees 50. a Mile for 3 or 4 Years, would effect this latter improvement.

I have &c

Signed W. L. Chamberlain
S. L. Dist. Eng. & R. Division

Dagobah
15th February 1858

(True Copy)

W. L. Chamberlain
Colonel
Chief Engineer

Public
Communications.

Central Office of W. M.
No 7/57 Fort P. George 3 March 1858
From The Chief Engineer
To The Secretary to Government
P. W. Department.

Sir
1. With reference to Extract from
Minutes of Consultations No 118 of the
22^d January 1858, I have the honor to
forward the accompanying copy of a
letter from the Acting District Engineer
of the Kistnah Division, under date
the 15 instant No 158, explaining that
it is not intended to raise the pro-
posed new road from Ibrahimpatam
to Masutipatam, on the River and
Channel Dykes, every where 3/4 yards,
but that where the water stands in
the Canal below the surface of the
Country the spoil bank will merely
be spread out and levelled, and only
where the Canal is within Embank-
ments will the road necessarily be
raised on a high level.

2. Thus near Berach and for
short distances below each of the Locks
the Cuttings being heavy, the water will
not stand over the banks of the Canal
and the spoil banks affording more
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While

while as the Respective Locks are approached the earths removed to form the Channel being all required to make up the Sub-
stantments, their height is regulated by the level of the surface of the water, and cannot be lowered to make up the and the for the roadway, as supposed by Government.

3. The height of many miles of the Substantments near the Locks, and where the Channel crosses hollows, being 3 and $3\frac{1}{2}$ yards, the mean Elevation of the proposed road is roughly stated at 22 yards, and the average earth work required to be performed to under the Substantment sufficiently to carry it, or to level down the Spoil Banks, is correctly given in the Estimate, and cannot be reduced.

4. With his letter the District Engineer submits one from the Acting Collector, which is likewise herewith forwarded for the information of Government, in which Mr. Key deprecates the abandonment of the old road, on account of the advantages to travellers and troops of the Bungalows and Villages situated thereon. Lieutenant Chambers concurs in opinion with the Acting Collector, and would prefer reconstructing the old road to transferring it to the Dykes, but as

Colonel Miles
11/8/57 dated
8 May 1857.

a discussion of this question would reopen the whole subject after it has been well considered by me, in communication with the Acting Collector, and the experienced District Engineer lately in charge of the District Division, and decided by Government, I shall refrain from saying more than that the present Acting District Engineer seems much to overrate the difficulties of obtaining new encamping grounds and supplies on the line of the Canal, as it passes within less than half a mile of the Bungalows and halting places at Cunkypand and Madanole, and close by many other large Villages. Troops and Travellers will probably always use the Canal when it is open, whether the road run on its banks or not, and the loss of one of three Bungalows, namely that at Weyoor, is therefore of not much importance.

5. Lieutenant Chambers acknowledges that the gravelling of the old road will be more expensive than the new, but he thinks not so much so as is supposed, as it touches the Canal and old Pools at many points. It happens however that the old road closely approaches the navigable Canal only at Pommurro, 6 miles from Benarrah, and between

Pommurro

Pannurroo and Nedanole, and every where else is from half a mile to five miles from it. The gravel, besides having to be re-loaded, would have to be carted very considerable distances, which is an extremely expensive, if not impossible operation, in that part of the Country, for the old Port Cairns, by which it would seem Lieutenant Chambers expects to be able to transport the material, is not navigable except for Rafts, and is not worth being made so for such boats as would be required.

P. The old road may be retained in its present state as a fair weather track, but I would repeat my recommendation of the Estimate of Rupees 14,000 / One Lac and forty six thousand, being sanctioned as early as possible, as a military work of vital necessity for the preservation of the valuable stores and costly equipments now unceasingly moving Westward from Masulipatam.

I have the honor to be

Sir

Your most Obedt Servant

Subst Officer of P. & M. S. Colne
Fort St George

3 March 1858 Chief Engineer

W. B.

Extract from the Minutes of Consultation
Under date the 25th March 1858

I Read the following letter
from the Chief Engineer.

Wrote dated 3rd March / 58
N^o 750

Under the explanation
furnished by the Chief Engr in
the foregoing letter, the Right
Hon^{ble} the Gov^r in Council au-
thorizes for entry in the budget of
1859/60, the estimate of £46,000
submitted by him on the 19th
Nov^r 57, for constructing the road
from Masulipatam to Shobham
patam, on one of the embankments
of the canal from Masulipatam
to Vizianagur,
and on the river dyke above the
latter place.

The Canal from Weyam
to Masulipatam was originally
intended to take the place of the
road from Shobhampatam to the
coast, thus completely making

[Handwritten signature/initials]

Cons^l 24th January 1858
1st March 1858
12th April 1858
12th May 1858

Cons^l 1858
12th April 1858
12th May 1858

Mr. H. P. Chief Engineer
to the Secretary of Government
No. 20 Colaba

Recd 23rd
Mar 24th 1858

Cons^l 1858
12th April 1858
12th May 1858

Cons^l 1858
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the great military communica-
tion between the Spaniards
dominions and the town of Ma-
nila. Subsequently, how-
ever, in the report of the Colr in
1852, it was admitted that the
Canal would not wholly supply
the place of a road; and accord-
ingly, a reduced estimate of \$3,250
was entered in the budget of
1856/57, for the partial reforma-
tion of the existing road between
the points referred to, the cost being
to be provided in lieu of substan-
tial material, being only gravel,
potter's earth, and sand, ~~therefore~~
in their ^{order of} ~~report~~ the budget of
that year; the Govt of India ex-
pressed doubts of the efficiency
of this material for the purpose
to which it was to be applied, &
thought that as the road would
be subject to heavy traffic, the
additional cost of proper material
might perhaps be wisely incurred.
It was in consequence of this opinion,

that the present estimate of
1,46,000 Rs has been proposed
for a completely metalled road.

The Govt having already
decided in favor of constructing
the road on the canal bank,
will not again discuss the ques-
tion of maintaining the old
road, reopened by the Acting
Colr, more especially as it is cal-
culated to be a more costly work.

R. G.

9 Copies to the Chief Secy.
D. 26.

Feb 11 1878 1878 24th
Sgt. to Gen. 24th March

24th 1878

Regimental and
Cavalry 24th March 1878

From the 1st Regt 16 Aug 1878
Cavalry 1878 24th March

Building for entry
in the Budget of 1878/79 the
estimate of 11,600 for the
construction of the road from
Mankin to Mankin
Junction.

From the 1st Regt 16 Aug 1878
Cavalry 1878 24th March

24th 1878 14