

(1) Number of pages _____

(2) Date of repair _____

(3) Initials of the Referencer _____

MADRAS RECORD OFFICE

Government of Madras

Public Works

DEPARTMENT

G.O. No.	2391	Press
B.P. No.		Mis.
Dated	7-9-	1876
		195

Not to be folded or roughly handled

*Proceedings of the Madras Government, Public Works Department,
7th September 1876. No. 2,391.*

Read the following papers:—

No. 97.	From District Engineer, Madura, dated 6th February 1875, No. 4,566.
No. 97-A.	From " " " 13th March " " 5,112.
No. 97-B.	From " " " 5th April " " 44.
No. 97-C.	From " " " 29th May " " 730.

No. 97-D. From Lieutenant-Colonel J. F. FISCHER, R.E., District Engineer, Madura, to Colonel G. W. WALKER, R.E., Chief Engineer, Public Works Department, dated Madura, 10th August 1875, No. 1,897.

ADVERTING to your Memorandum of the 30th April 1875, No. 462, I have the honor to submit, for your consideration, the accompanying longitudinal and cross sections of the Paumben Channel showing its condition in 1870 and in 1875, and the depth to which it is proposed to carry down its bed; at the same time I beg to

submit a comparative statement showing the items of the sanctioned estimate, the items of work actually performed, and an estimate of the probable cost to complete the work; also a statement of actual cost of work for the last two years, and a sketch of the dredge showing the latest alterations made to the machinery which is now reported to be working quite satisfactorily.

2. There has been some delay in sending up these documents, as, owing to many changes, the records could not be readily searched. Mr. Fonseca went away on leave, and I wanted to have a full account of the working of the dredge after the machinery had been rearranged, and this could be done only after the strength of the south-west monsoon had subsided.

3. It does not appear that any rate was fixed for the several items of work in the sanctioned estimate, as up to 1872-73 convict labor seems to have been employed on the work, and I have no means of ascertaining on what data the estimate was based, but I presume the estimate was sanctioned more for the purpose of obtaining data, as it could not have been supposed such a work as this would cost only Rupees 22,800 if carried out by hand labor only. The revised estimate amounts to Rupees 82,000, and the rates are taken from the data obtained from last year's working, so that I am in hopes it may be found sufficient, but I have very grave doubts on the subject as with only one dredge so much work has to be done over again, each time the vessel has to stop work for repairs, but, if another were sanctioned, I think the project should be completed for one lakh of Rupees, including its cost of construction.

4. The work is now costing for dredging Rupees 1-12-9 per cubic yard, a saving of 6 Annas a cubic yard having been made from the previous year's cost by altering the machinery, and I am in hopes by the better arrangements we have lately adopted a good deal more saving will be effected, but as stated before, as long as a single dredge only is employed, much of the work must be done twice over nearly, and it is impossible to work economically in this manner, as Mr. Robertson pointed out in his report. For blasting and raising the work is now costing Rupees 2-10-0 a cubic yard, a saving of Rupees 1-14-0 having been made by using larger charges and better arranged.

5. I find the cost of dredging on the Clyde by the most powerful machine was only 2·6 pence per cubic yard of silt and sand, and the material was taken away by Steam Hopper Barges a distance of 27 miles and deposited for 5·46 pence a cubic yard. Hard gravel and boulder clay cost on the Clyde for dredging only 20·8 pence a cubic yard, or less than a Rupee a cubic yard, so it is quite evident one of these powerful Clyde dredges could certainly do the work of this channel for less than a Rupee a cubic yard and save half a lakh of Rupees in the cost *at the least*, as the lift is only one half of that on the Clyde. The cost, however, of these very efficient machines, I fear, precludes all possibility of the Government being able to sanction one for such a work as this, but, if the ship canal were again taken up, these data from the Clyde may be of use in estimating its probable cost. The most powerful dredger on the Clyde lifting upwards of 30 feet costs apparently £18,000 without its Hopper Barges, and these appear to cost about £5,000 a piece, but would not be required at Paumben.

6. I found the dredge here working by means of one 6 inch pinion turning the toothed wheel attached to the drum over which the buckets passed, and these were only twelve in number; sixteen men were required to turn the crank handles at one time, a relief of sixteen men being at hand; the motion was most irregular and jerking; the buckets came up not half full; the whole of the machinery shook at every turn of the crank, and it was quite evident the buckets jumped over the bottom of the channel not doing half their work. At first I put on another 6 inch pinion and 36 inch wheel, and this improved the working considerably, but the motion was rather too slow, so one pinion was increased to 12 inch diameter, and the results, as reported up to date, are altogether satisfactory, as the dredge now works quite smoothly with sixteen buckets, and twelve men bringing up more than double the quantity of material it formerly did.

7. I beg to enclose a sketch of this machine, which is a very simple one, and would, I believe, be found of great use in the Godavery and Kistna Canals, in dredging the sand banks of the Upper Godavery navigation works and on the East Coast Canal or any other similar works; its cost including four boats at Paumben is only Rupees 18,000, and this is not nearly so efficient as it can be made, but I was obliged to use the wheels I found about the place, and I trust then the Government will be pleased to allow us to construct another machine so as to get on with this work more expeditiously and economically, for I greatly fear the result obtained up to date will be considered any thing but satisfactory.

No. 97-E. From District Engineer, Madura, dated 16th Sept. 1875, No. 2,340.

No. 97-F. From Lieutenant-Colonel J. F. FISCHER, R.E., District Engineer, Madura, to Major-General G. W. WALKER, R.E., Secretary to Government, Public Works Department, dated Ramnad, 27th March 1876, No. 4,803.

I HAVE the honor to report, for the information of the Government, that I lately inspected the Paumben channel works, and regret to state the old dredge is nearly worn-out, and, if a new one is not supplied, the work of this estimate is likely to come to a standstill. I have frequently asked for another dredge, and in my last report I particularly explained the necessity for this and the advantages we had secured by the improved machinery, but up to this date no reply has been received in this office.

2. The trade through this channel is now very considerable, and it would be a great pity to allow any interruption to occur.

3. I find that by arranging the machinery as lately carried out, the cost of dredging is reduced to one half of what it was previously, so that it would be very advisable to have two or three dredges at work and keep the channel clear throughout, at present with only one very old worn-out machine; as fast as one obstruction is removed another forms up, and it cannot, therefore, be said that any satisfactory progress has been made with the present estimate.

No. 97-G. From the same officer, dated Madura, 7th June 1876, No. 907.

ADVERTING to the concluding portion of paragraph 2 of G.O., No. 179, under date the 21st January 1875, I have the honor to submit, for the information of

Government, the accompanying longitudinal and cross sections of the Paumben North Channel taken at low water spring tides on the 28th March 1876, showing in distinct colors the parts silted up in 1875-76, as also the improvements made in that year, and the work remaining to be done as per estimate submitted with my letter, No. 1,897, dated 10th August 1875.

2. I request that you will be so good as to obtain the early sanction of Government to this estimate and to return the same to me for execution during the current official year.

No. 97-H. From the same officer, dated Madura, 7th June 1876, No. 910.

As no provision has been made in the current year's Provincial Budget for "deepening the Paumben Channel from 12 to 14 feet at low water," although there still remains an unexpended balance of Rupees 332 out of the sanctioned estimate of Rupees 22,810 for this work, I have the honor to request that you will be so good as to allot the above-mentioned sum of Rupees 332 from such source as may be available at the disposal of Government. With my letter of the 10th August 1875, No. 1,897, I submitted a revised estimate for this work, but up to this date no orders thereon have been passed; the traffic through this channel is now yielding to the Government a revenue of nearly Rupees 30,000 a year, and the tonnage passing through it is nearly 2½ lakhs; it is therefore of the utmost importance the work should not be neglected, and I beg therefore early instructions may be sent to me on the subject.

No. 98. ORDER THEREON, 7th September 1876, No. 2,391.

CIVIL WORKS, No. 6-B.

(a) Heads of Service.—Provincial.
Fund.—Ordinary.
Class.—Original Works. *Lock Plant*
Main-head.—(2) Miscellaneous Public Improvement.
Sub-head.—B. *Aids to Marine Navigation.*
Section.—III. *Miscellaneous.*
Name of Work.—Constructing a dredge and four mud boats for employment on the Paumben Channel.
Dredge.—Rupees 13,040, No. 136 W.
Amount.—Boats, Rupees 4,800, No. 137 W.
To be carried out by the Public Works Department.

It appears that the estimate of Rupees 22,810 for deepening the Paumben Channel to 14 feet throughout, sanctioned in G.O., No. 721, of 2nd March 1866, was nominally worked out all but Rupees 334 on the 31st March 1876. But it is perfectly evident from the reports of the District Engineer of Madura, and the comparative statement, that the work done has but little reference to the details

Proceedings of the Madras Government, Public Works Department,
7th September 1876. No. 2,391.

of that estimate which was not prepared in such a manner as to be in any way reliable. Nor is the District Engineer's present estimate of Rupees 82,056 complete.

2. What is chiefly required appears to be another dredge, and an increase of the maintenance allowance for working sanctioned in G.O., No. 1,134, of 19th April 1873. The District Engineer's estimates of Rupees 13,040 for a dredge and Rupees 4,800 for four mud boats are sanctioned; and an appropriation of Rupees 3,000 made by the

From the grant for Special Repairs, Tools and Plant, Godavery, held at the disposal of Government in G.O., No. 2,303, of 30th August 1876	rs. 2,587	transfers shown in the margin, to be applied exclusively to making a commencement with the new dredge. The balance required for its completion will be made available on the 1st April 1877; also Rupees 4,800 for the boats. And the present maintenance allowance of Rupees
From the Reserve under Provincial	413	
	3,000	

6,000 will be increased to Rupees 10,000 from the date on which the new dredge shall have been set to work, which will be duly reported.

(True Extract.)

Colonel,

Offg. Under Secy. to Govt., P.W.D.

To the District Engineer, Madura.
" Examiner of Public Works Accounts.
" Marine Department.

No. 5112 District Engineer Office
Madras 13 March 1876
From

Lieutenant Colonel J. F. Fisher M.S.
District Engineer Madras.

Colonel G. W. Walker M.S.
Secretary to Government
Madras.

Sir,

In reference to the Memorandum from the Under Secretary to Government P.W.D. No. 238 of the 15 Instant, I have the honor to state that the Hand Dredge estimated for is to be similar to the one now in use except that the machinery has been recently arranged so as to utilize the power more efficiently.

The Plan called for in the Memorandum above quoted will be submitted on receipt of the same from the

P. W. 1875 Dept
From No. 1746
The District Engineer
Madras

To
The Secretary to
Government Madras.

Dated 13th
Recd 16th March 1875

States that the
Sand Dredge delineated
for is similar to the one
now in use in the
Pamban Channel.

Encls No. 4 of 30/4.

No 1897

District Engineers Office
Madurai 10 August 1875

From

Genl Colonel J. F. Fischer R.E.
District Engineer, Madurai

To

Colonel E. W. Walker R.E.
Chief Engineer D.P.W.

Re

Enclosures 5-

2 Longitudinal
cross sections.

1 Comparative
Statement.

1 Statement of
actual cost of
work for the
last 2 years.

1 Sketch of
Dredge.

Adverting to your Memo
of the 30th April 1875, No. 462,
I have the honor to submit for
your consideration the accompany-
ing longitudinal and cross sections
of the Pamban channel showing
its condition in 1870 and in 1875
and the depth to which it is
proposed to carry down its bed.
at the same time I beg to submit
a comparative statement showing
the items of the sanctioned estimate
the items of work actually performed

With kind
regards

and an estimate of the probable cost to complete the work; also a statement of actual cost of work for the last 2 years: and a sketch of the Dredge showing the latest alterations made to the Machinery which is now reported to be working quite satisfactorily.

2 There has been some delay in sending up these documents as owing to many changes the records could not be readily searched. Mr Fonseca went away on leave, and I wanted to have a full account of the working of the Dredge after the machinery had been re-arranged and this could be done only after the strength of the South West monsoon had subsided.

3 It does not appear that any rate was fixed for the

213
several items of work in the sanctioned estimate as up to 1872-73 convict labor seems to have been employed on the work and I have no means of ascertaining on what data the estimate was based, but I presume the estimate was sanctioned more for the purpose of obtaining data as it could not have been supposed such a work as this would cost only Rupees 22,800 if carried out by hand labor only - The revised estimate amounts to Rupees 82,000 and the rates are taken from the data obtained from last year's working so that I am in hopes it may be found sufficient but I have very grave doubts on the subject as with only one Dredge so much work has to be done over again, each time the vessel has to stop

work for repairs but if another were sanctioned I think the project should be completed for 1 lac of Rupees including its cost of construction.

The work is now costing for Dredging Rupees 1-12-9 per

cube yard, a saving of 2 annas

a cube yard having been made

from the previous years cost by

altering the machinery and I

am in hopes by the better arrange-

ments we have lately adopted

a good deal more saving will be

effected but as stated before as

long as a single Dredge only

is employed much of the work

must be done twice over nearly

and it is impossible to work

economically in this manner as

Mr Robertson pointed out in his

report. For blasting & raising

the work is now costing Rupees 2-10-
a cube yard a saving of Rupees 1-14-
having been made by using larger
charges and better arranged.

5 I find the cost of Dredging
on the Clyde by the most powerful
machine was only 2.6 pence per
cube yard of silt and sand,
and the material was taken away
by steam hopper barges a distance
of 27 miles and deposited for
5.46 pence a cube yard. Hard
gravel and boulder clay cost on
the Clyde for dredging only 20.8
pence a cube yard or less than a
Rupee a cube yard, so it is quite
evident one of these powerful Clyde
dredges could certainly do the work
of this channel for less than a
Rupee a cube yard and save half
a lac of Rupees in the cost at the least
as the list is only one half of that

on the Clyde. The cost however of these
very efficient machines I fear
precludes all possibility of the Govern-
ment being able to sanction one
for such a work as this; but if
the ship canal were again taken
up these data from the Clyde
may be of use in estimating its
probable cost. The most powerful
dredger on the Clyde lifting upwards
of 30 feet costs apparently £18,000
without its hopper barges and these
appear to cost about £5000 a piece
but would not be required at
Parrumb.

6. I found the Dredge here
working by means of one 6" pinion
turning the toothed wheel attached
to the drum over which the buckets
passed and these were only 12 in
number. 16 men were required to turn
the crank handles at one time.

417
at relief of 16 men being at hand
the motion was most irregular and
poorly the buckets came up not
half full the whole of the Machinery
shook at every turn of the crank
and it was quite evident the buckets
pumped over the bottom of the
channel not doing half their work.
At first I put on another 6" pinion
and 36" wheel and this improved
the working considerably but the
motion was rather too slow so one
pinion was increased to 12" diameter
and the results as reported up to
date are altogether satisfactory as
the Dredge now works quite smoothly
with 16 buckets and 12 men bringing
up more than double the quantity
of material it formerly did.

I beg to enclose a sketch
of this machine which is a very
simple one and would I believe

be found of great use in the Godavery
and Krishna canals, in dredging
the sand banks of the upper Godavery
navigation works and on the
East coast canal or any other similar
works - its cost including 4 boats
at Panambur is only Rs. 18,000
and this is not nearly so efficient
as it can be made but I was obliged
to use the wheels I found about
the place; and I trust then the
Government will be pleased to allow me
to construct another machine so as to
get on with this work more expeditiously
and economically for I greatly fear
the result obtained up to date will
be considered anything but satisfactory.

I have the honor to be

Sir

Your Most Obedt servant

W. T. S. S. S.

District Engineer

1892

Comparative statement showing the quantity of work executed in the Paumotu Channel on the sanctioned Estimate of Rs 22, Channel to a uniform depth of 14 feet @ low water. —

Description of work.	As per sanctioned Estimate			As per work actually executed up to 31 st March 1875.			Balance as per sanctioned Estimate				Quantity - mining Churn feet at
	Quantity	Rate	Amount	Quantity	Rate	Amount	Quantity		Amount		
							Excess	Deficient	Excess	Deficient	
1	2	3	4	5	6	7	8	9	10	11	12
Removing single by Dredge.	Cubic feet			Cubic feet			Cubic feet	Cubic feet			Cubic feet
do Rock & single by blasting and Dredging	448,200	"	1,728	Stones.	"	"	"	"	"	"	17,825 1/2
	(340,760)	"	3,110	58,818	"	2,304	12 1/2	"	"	"	613 1/2
	70,000	"	2,214	Blasting	"	12,621	5 7/8	"	"	11,816	12,273
Removing debris by Dredging	410,760	"	2,214	60,100 1/2	"	150	12 1/2	"	350,659 1/2	"	2,063 3 1/4
do Sand by do	1,290,000	"	2,484	"	"	"	"	"	1,290,000	"	2,484
Sundries	"	"	524	"	"	779	4 9/16	"	"	255	4 9/16
Repairing Tools & Plant	"	"	127 50	"	"	"	"	"	"	"	127 50
Total			22,810			15,856	3 7/8		12,071	6 8/16	17,297 3 1/4
				Deduct the amount of materials at site on the 31 st March 1875.		2,744	4 8/16				
						13,111	14 1/16				

This is quite comprehensive & cannot be made better for & will show your work has been done from the money.

This is quite comprehensive & can well be made better & still doing no more than done from the Mass.

1. The

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870 and that remaining to be done to excavate the
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by of work/actually/remain-
to be done to excavate the
at to a uniform depth of 14
low water.

Remarks.

Rate	Amount
13	14
1	
2	35,650 10 8
3	21,859 8
2	24,546
	82,056 28

15.
Same figure as previous.
x of the quantity blasted about a third is obtain-
able in shape of stones, the rest becomes pulverized & has to
be dredged.
Most of the expenses incurred have been debited
against Maintenance allowance.
Why?

Most of the expenses incurred
for the work estimated
in the Budget have
been debited against
Maintenance allowance.

Copied
W. T. Tucker
Sd. R. E.
District Engineer

En 3 Jan a letter from
the Civil Engineer Master
to the Chief Engineer
D.W. No 1897 dated
10 Oct 1875.

Comparative
Statement

Ms 5234/95

Statement showing the description and quality of work executed in Deepening the Sumbow Channel during 1873-74 and 74-75.

Years	By Hand Dredge	Blasting and Raising Stones.		Remarks							
	Quantity	Rate	Amount	Quantity	Rate	Amount					
Jan 1873-74	783	2	2 9 ¹⁰ / ₁₆	1702	3 3	194	4	7 9 ³ / ₇	870	6	* This includes all the materials and labor required for blasting purposes as well as for raising stones. about a third of the quantity blasted may be considered a fair proportion of stones obtainable the rest becomes pulverized and requires to be dredged
Jan 1874-75	533 1/2	1	12 9 ¹⁰ / ₁₆	961	5 3	471	2	10 ²³ / ₇	1237	7 10	
Average	Rate	1	15 9 ¹⁰ / ₁₆				*	3	8 10 ² / ₇		

Spur Lecky, Wm. to Lecky
Super. R.E.
Detment Engineer

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Copy of a sketch
showing the quantities &
composition of waste from
in deep mining the Pennine
Charnock showing
1873-74-75

Dehri/Enquirers Affce 25
Perceadon 16 September 1875

№ 2340

From

Wentland & J. Fisher & Co
District Engineer, Madras

Y

Major General G. W. Walker R.E.
Secretary to Government W.H.W.

di

I have the honor to forward
 a statement showing the first month
 work of the hand dredge at
 Pambun with the altered machinery
 as compared with the work executed
 last year: the general result is a
 saving of $9\frac{1}{3}$ annas per cubic yard
 of material dredged which consi-
 dering the work is being done
 in a tide-way where strong currents
 prevail may be deemed very
 satisfactory, and I trust the

Enclosure 1 -
Statement

1218 - June 1/75 to 617-622 with Ch^o }
 886-2657 + 2387 ^{hatched} of 1875 - }
 - 9 - Aug 1/72 to 139-440.
 - 2 - June 1/66 - 52-53.
 - 24 - Aug 1/72 - 506-508
 - 5 - Sept " - 51-52.
 - 23 - Oct " - 123 hatched.
 - 18 - June 1/73 - 208 -
 - 9 - Dec " - 157-158.
 - 6 - Nov 1/74 - 99-100.
 - 14 - Aug - - 274-275
 - 21st June 1/75 - 373-374.
 Ch^o 1746 of 1875 (orig) - with right -
 Ch^o English hatched by 662 of 30; April 1/75

P. W. 1875 Sept.

From No: 5234
The District Engineer
Madura

The Chief Engineer
D. W.

Dated 10 Aug 78
Received 1/3-c-

Encs 2 ✓

7 2nd Plant with Genl. Wolfer
- 1 given to Billings
Reports about
Parrish's
channel

1222

Recd - 24-8-75
Recd - 28-8-75
Recd - 13-8-75

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Government will now be pleased
to allow us to have another dredge
in which better arrangements can
be made.

2. The cost per cubic yard at present by manual labor is 8 annas which is not high, for as well as I can recollect the steam sea dredges at Cocornaduh only did the same work at 6 annas a cubic yard and the depth there was less on an average than at Pannabun.

I have the honor to be
 Sir
 your most obedient servant
Wm. H. Smith
 District Engineer,

District Engineer,

N^o 976.

Don't forget 1875.

No of working days	Quantity of labor and debris for labor dredged	Quantity of labor and debris for labor dredged	No of working days	Quantity of labor and debris for labor dredged	
18	8490 or 3144 Cords	340 13 9	1 1 11	23	
				21702 or 8044 Cords	403 11 10 18

1. The first step is to identify the problem or question that needs to be answered. This involves understanding the context and the specific requirements of the task.

There are two more
pages. See that they are

Quarrelled

17
Worst to best
1880-1885

11 West Main St., New York City.

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From record - 1842. Co. 1st

End: 1. via letters from
the Richard Rogers
House to the City of
P.D.D. 1842. 1842. 1842.

1842. 1842. 1842.

Comptroller
of the Court of the
State of New York
during the
absence of the
Attorney General

10. 1. 80.3

District Engineer's Office
Received 27 March 1876
31

From

Nat.H. Coll. J. L. Fischer Ph.

Districte Lingueiri Madura

To Major General G. M. Walker &c.
Government

Secretary to Government

Sir, I have the honor to report for
 the information of the Government that
 I lately inspected the Taunham Channel
 works and regret to state the old Dredge
 is nearly worn out, and if a new one is
 not supplied the work of this estimate
 is likely to come to a stand still. I have
 frequently asked for another Dredge and
 in my last report I particularly explai-
 ned the necessity for this and the
 advantages we had ~~formerly~~ by the im-
 proved machinery, but up to this date
 received in the office.

2. The trade through this channel is now very considerable and it would

Chickadee

L.D. 18 June /75 110.617 - 4.22 Supt.
 " 28 Aug /75 - 373 - 674
 " 30 Nov /66 - 62 - 63
 Brown 110.627 31.141 /75 Borel

Q. J. S. 1875. Paper.

St. S. Ador.
Jm. 5999

Wm. C. Cullen
The Western Engineer

Diastema

The Secretary to Lord

978. 23/4/77

История

Paid 16th Sep. 1880
 Received 18th — 80
 Recd. 20th — — }

22310

Goodby. V

Deposits on the

Work done by hand men.

at Portland for the

Arvid G. Smith & Co. Portland, Me.

For wedding card

duch

It is a great pity to allow any interruption,
to occur.

3. I find that by arranging the machinery as lately carried out the cost of dredging is reduced to one half of what it was previously, so that it would be very advisable to have 2 or 3 dredges at work and keep the channel clear throughout, at present with only one very old worn out machine, as fast as one obstruction is removed another forms up and it cannot therefore be said that any satisfactory progress has been made with the present estimate.

I have the honor to be

Your Most Obedt Servt

University of California, Berkeley

Christlich Leitzner

N^o 97-4

Dr 1876 Sept
 from No 2312
 The Bishop's Library
 Boston
 To
 The Secretary to Govt
 P. B. S.
 Hartford.
 Sent by N. Hancock
 Dec. 30
 " "
 No 4803.
 Cannon Church—
 reports regarding the
 operation in the— &
 requests to supply a
 new head & roof.

From
Lieut. Col. J. F. Fischer Ph.
District Engineer, Madras
To
Major General: C. W. Walker Ph.
Secretary to Government
P. M. D.

Adverting to the concluding por-
tion of para 2 of G.O. No 179 under date the
January 175 I have the honor to submit
the information of Government the accom-
panying longitudinal and cross sections
the Poughkeepsie North channel taken
low water spring tides on the 28th March
showing in distinct colors the parts
dredged up in 1875/76 as also the improve-
ments made in that year and the work
remaining to be done as per estimate
submitted with my letter No. 1897 dated
August 175.
I request that you will be

good as to obtain the early sanction of Government to this estimate and

to return the same to me for execution
during the current official year.

I have the honor to be

Sir
Your most obedient

W. T. Tucker Esq. Col. R. G.

District Engineer Madras

District Engineer's Office

9/57

six year, and the tonnage passing through
 it is nearly 2 3/4 Laes, it is therefore of
 the utmost importance the work should
 not be neglected & I beg therefore early
 instructions may be sent to me on the
 subject.

I have the honor to be

Sir
Your most obedt servt

Wm. T. Wickham Coll. A. Coll. O. C.

District Engineer of
Madras.

4821-1-75 No 179

4/1/1876
1/1/1876

P. W. 1876 Department
From 1876

The District Engineer
Madras
To
The Secretary to Govt.
P. W. D.

Dated 7 June 76.
Recd 12 June 76

No 910

Encl.

Deepening the Caumbe
Channel - Requesting
to provide funds for
in the Canal office
Geo. —

No 977

Cir-31-8.76 Vtd 7.9.76

Sept 21-6-76

Sept 26 at 14-6-76. R. 12

For. pul. up.

42

For. 6 Nov/62 - No 2668

17 Feb/63 - 417

22 July - 1998

24 Aug/64 - 2481.

1 Nov - 8742.

18 July/65 - 2088.

2 March/66 - 721

19 April/73 - 1184

19 Sept/73 - 148

6 Nov/74 - 8784

21 Jan/75 - 179

18 June - 1728.

Public Works Department.

UNDER date the

READ the following:—

Letter from Dist. Ingr. Madura. (H.E. N. 4566 of 6th Febry. 1877)

" " do do	7	13112 " 13 th March "
" " do do	6	144 " 3 rd April "
" " do do	6	150 " 29 th do "
" " do do	6	11897 " 10 August "
" " do do	6	2340 " 16 th Sept "
" " do do	6	14803 " 27 th March 1877
" " do do	6	907 " 7 th June "
" " do do	6	910 " do "

x These letters are
recorded in 90 by
1728-3 18 June 66

It appears that the
estimate of No. 22,810 for
deepening the Pumber
Channel to 44 feet through
cautioned in G. O. No. 42
of 2nd March 1866 was
initially worked out at
No. 534 on the 31st March 1866.
But it is perfectly evident
from the report of the Dis-
trict Engineer of Madras
and his attempt at a ^{the} Com-
parative Statement, that
the work done has ^{but little} ~~not~~
slightest reference to the
details.

year details of that estimate
it is which was not prepared
the in such a manner as to be
not in any way reliable. Nor
is the District Engineer's
present estimate of Rs. 82,056

~~in any way more to be
depended on as reliable complete.~~

What is chiefly required
appears to be another Bridge,
and an increase of the
maintenance Allowance

for working sanctioned
in G.O. No. 4134 of 19th April
1873. The District Engineer's
estimates of Rs. 13,040 for
2 Bridges, and Rs. 4,800
for 4 Mud Boats are

sanctioned; and an allotment
of Rs. 3,000 made by the
Government for the purpose
of repairs, tools and plant.

It is proposed to be applied
exclusively to making a
commencement with the
new

From the grant for
Special Repairs, Tools
& Plant, Godavery

From the Reserve
under Provincial

J. S. Madhwa
Engr. & L. D.
Marine Dept.

X. L. L.

new Bridge. The balance
required for its completion
will be made available on
the 1st April 1877; also
Rs. 4,800 for the Boats. And
the present Maintenance
Allowance of Rs. 6,000 will
be increased to Rs. 10,000 from
the date on which the new
Bridge shall have been set
to work; which will be duly
reported.

4186

Govt. of Madras.

PUBLIC WORKS.

To

The N. B. Chandra

Dated

Issued

Recd.

Encl.

G. O. of 1876, No. 239/

Nos. 97-98

Sub in 97-98

Constructing a dredge
and 4 Mud boats

for employment in the
Pamban Channel

Estimates for

sanctions of

N^o 97-98