

Public Works (1898) Department.

G.O., No. 232 J

DATED 19 March 98

1/3/98

[Despatch Abstract.]

Compensation for land. The revised estimate of Rs. 19,700 for — required for excavating the Junga Bhadra Side channel, Commamui Canal, Sanctioned

100/6

✓
8.3.98

19/3/98
21/3/98

The revised estimate of Rs. 19,700 for — required for excavating the Tungabhadra side channel, Commamur canal, sanctioned.

Irrigation.
Account.

(Signed) W. HUGHES,
Chief Engineer for Irrigation.

To the Chief Engineer for Irrigation.
 " Superintending Engineer, II Circle, with two enclosures.
 " Examiner, Public Works Accounts.

Exd. S. J. Pereira.

Public Works (1898) Department.

CURRENT No. 2507

From The Chief Engineer for
Irrigation

Order

No. 84 of 11-3-98

Dated 11-March-98

Received }
Registered } 17-3-98

Enclosures 5

Spare copies

SUBJECT.

Tunfabhudra Side Channel
— Revised estimate of Rs 19,700
for excavating the — note
recommending that the — may
be sanctioned.

FURTHER PAPERS.

PUBLIC WORKS DEPARTMENT,
IRRIGATION BRANCH.

King alibonra Tide channel
at old recommending for sanction
revised estimate of 12 19700 for
enclosing the —

UNDER date the

READ the following

From the Supp. Engineer, Second Circle / H.E. No. 229-K.W. dated 27. 1-98)
 To _____ do _____ do _____ (H.E. No. $\frac{II}{34-K.S}$ dated 25. 2-98)
 From _____ do _____ do _____ (H.E. No. 627-K.W. dated 4. 3-98)
 No 84. Id. 11. 3-98

Note by the Chief Engineer for Inspection

In the estimate for excavating the Jungabhadra side channel, Comma-
mur Canal, Krishna delta system, paucity
ed in G.O. N^o. 50 I dated 19 January 1930,
a provision of Rs. 13,700 was included
for compensation for land required for
the Channel. The latter amount was
provided, as information about the
cost of land from the Revenue dept.
was not then available. It is now

reported that the cost of the land ^{will} be Rs. 19,700. ^{The} ~~for which~~ revised estimate is submitted ^{for this item} by the Supp. Engineer, Second Circle, which may be sanctioned.

wide Ind. flagged F

Issue

16:35 W.H.

Acu
167 2/3

prospect

WA
11.395
fr. 23294.3.98
A. de Herem.

The following revised estimate
for Rs. 19,700. is sanctioned in super.

- Season

provision of the provision of Rs. 13,700 made
for item 1 of the estimate sanctioned in
G.O. No. 50, dated 19 January 1898, the
excess, ~~being~~ of Rs. 6,000, being met
from the balance of the provision made
for item 710 of the statement printed
in P.M.L. No. 857, dated 11 October 1893:-

Capital expenditure not charged to Revenue.

49. Irrigation.

Kistna delta system.

Western Section.

I. Works.

Common Canal.

3. Distributaries.

Excavating the Tungabhadra side Channel.

2. Land.

Compensation for land. — Rs. 19,700.

2. This sanction is registered as
No. 182 J. of 1897-98.

11/3/98

11/3/98

7.5.98

19.3.98

The Chief Engineer for Irrigation.
- Supp. Engineer, Second Circle with 2 encls.
- Examiner, P.W. Accounts.

Form No. 1-500-1-11-97

10/2/98

H.S. 12/3/98

Public Works (1898) Department.

CURRENT No. 66 K.S.

From The Supg. Engineer
Second Circle

No. 627 K.W.

Dated 4th March 1898

Received 7-3-98

Registered

Enclosures

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SUBJECT.

Tungabhadra Side ch.
Reporting the source from
which the difference of
Rs 600 between the estimate
for land compensation
submitted & that sanctioned
in G.O. No 50 J d/ 19.1.98
for —

7.5.98

11/3/98

10/2/98

19.3.98

FURTHER PAPERS.

SUPERINTENDING ENGINEER'S OFFICE,
SECOND CIRCLE, *Bezawada.*

No. 627 Kw

DATED 4 March 1898

FROM,

J. Hannon Esquire,
SUPERINTENDING ENGINEER,
H. C. B. R.

To,

The Chief Engineer,
Los Irrigation.

Enclos :

SIR,

In reply to your N^o II of
25th February 98, I have the honor
to inform you that the difference of
Rs 6000/- may be met from the balance
of provision as per item N^o 710 of the
statement printed with G.O. N^o 8571
11-10-93

I have the honor to be
Sir,

Yours most obed^t Serv^t
Wm. Pitt
3.3.98 E. Engineer

CS $\frac{3}{3}$ For Supp. Engrs to Cerule

Public Works (1897⁸) Department.

IRRIGATION BRANCH.

ISSUE No. 34 [#] K8

To

The Supg Engineer
2nd file

(Reply to letter No. , dated)

Dated 25.2.98

Despatched 28.2.98

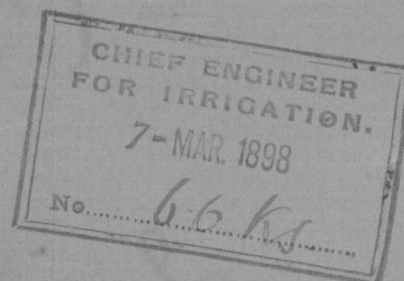
Enclosures *

* Particulars of Enclosures.

SUBJECT.

Compensation for land re-
-quired for Toongaburra
side channel. B.E. requests
to report the source from which
the difference of Rs 6000 between
the estimate pr - am submitted
and that sanctioned in
force 50 of 1919-58 may be
met.

Inclused



02/05/98
2509/98

BACK PAPERS.

No.	Date.
K37 K8	27-1-98

Sent to Government with No. I.,

dated 1897.

Printed with G.O., No. I.,

dated 189 .

REMINDERS ISSUED.

No. 1, dated 189 .

" 2 "

" 3 "

" 4 "

" 5 "

KEEP-WITHS.

FURTHER PAPERS.

No.	Date.
166 K8	4-3-98

II
No 34 K8 of 25 298
Memo.

With reference to his endorsement No 229. K.W. dated 27 Jan'y. 1898, the Supp. Engineer, Second Circle, is requested to be so good as to report the source from which the difference of Rs. 6,000. between the estimate for land compensation now submitted and that sanctioned in G.O. No. 50-1 dated 19 January 1898 may be met, the balance now available for unforeseen works of the Kishna delta system being only Rs. 1496.

[Signature]
25/1
98.

To The Supp. Engineer,
Second Circle.

[Signature]
24/1/98.

Public Works (1898) Department.

CURRENT No. 3768

From The Superintending Engineer
" Circle

Order

No. 229 Kw

Dated 27 January 1898

Received 31 — do —

Registered

Enclosures 1

Spare copies

SUBJECT.

Compensation for land
required for Jungabhadra
side channel.

Forwarding an estimate
for — in substitution
of the one sent under
this office No. 2341 Kw

24-11-97.

23/1/98

P-278

PAPERS.

FURTHER PAPERS.

Date.	No.	Date.
1-2-98.		
N 363 Ks d 26 11 97		
I 4 I 5-11-98	I 34 Ks	25-2-98
	K 66 Ks	4-3-98

Copy of a letter from W. C. Lewis Esquire, Executive Engineer Kistna Western Division, to the Superintending Engineer II circle. N: 347 I 8/10-1-98.

In continuation of this office N: 231 I dated 1 October 97, I have the honor to forward herewith an Estimate amounting to Rs 19,700 for Compensation for land for Jungabhadra Side Channel and to request that this maybe substituted for the Estimate of Rs 13,700 sent to you with the letter quoted above.

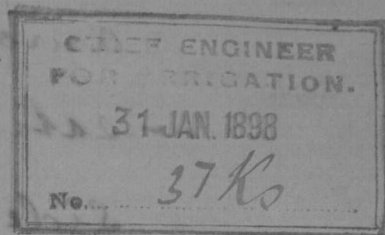
2. I was not able to get the information about the cost of land from the Revenue Department before the submission of the Estimates for the project in question, hence the necessity for the present estimate.

N:

No. 229 KW Office of the Suptg. Engineer
II Circle
Bengaluru 27. 1. 98. Encls: 1

Forwarded to the Chief
Engineer for Irrigation in conti-
nuation of this office No. 2341 KW
dated 24. 1. 97. Encls: 1

Wm. M.



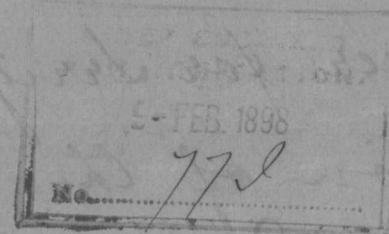
Executive Engineer,
for Suptg. Engineer,
II Circle

27. 1. 98

CWS
2509/98

IRRIGATION.
ACCOUNT.

Government (1898) of Madras.
PUBLIC WORKS.



Recd.

Enclosures

1898.

Regd.

Spare copies

G.O., No. 50 I., 19th January 1898.

JANUARY.

Tungabhadra Side Channel

Revised estimate of Rs. 1,07,300 for excavating the —, Commamur canal, Kistna
Western delta, sanctioned.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT

Irrigation.
Account.

READ—the following papers:—

From W. C. LEWIS, Esq., Executive Engineer, Kistna Western division, to the
Superintending Engineer, II Circle, dated 1st October 1897, No. 231 S.
I have the honour to forward herewith

I have the honour to forward herewith revised estimates, amounting to Rupees 1,07,300, for the Tungabhadra side channel.

2. The block levels for new distributaries not yet having been taken, the details for them cannot be worked out and a rough sum of Rs. 3 per acre has been given.

3. For two reasons it is urgently necessary that the new channel should be put in hand at once:

(a) That the railway bridges over the Aremanda and Alavala channels are only temporary wooden ones, the permanent bridge having been built on the new alignment.

(b) The masonry works at the existing head of the Aremanda and Alavala channels are in an exceedingly shaky condition and past repair without rebuilding and in danger of being carried away at any time. I have a large supply of rough stone available for emergencies, but in case of a failure before the new channel is ready, there may be a very extensive loss of crops. I would therefore request that sanction may be obtained at an early date, that the new supply channel may be made ready, at any rate before the irrigation season of 1899. I hardly dare to hope the existing dams will last as long as that.

4. There has been a great deal of correspondence about the proper alignment of this channel in Mr. Hannan's and Mr. Martin's time, but I can find no final orders in writing from any Superintending Engineer to adopt the present alignment. Mr. Malet says he got your verbal approval before marking out the new line and putting the estimate in hand on that alignment. The railway bridge has now been built on the proposed alignment, so it is necessary to adhere to that.

ENCLOSURES.

REPORT to accompany estimate for Tungabhadra side channel.

Estimate	...	...	...	...	...	...	...	RS.
								1,07,300

The Tungabhadra is an old spill channel of the Kistna which was made use of on the construction of the anicut for the easy distribution of water without delay.

2. The chief branches are the Aremanda and Alavala channels which take off from masonry heads at a dam across the Tungabhadra, which is now in a very shaky condition.

3. The Tungabhadra has now been worked into the Commamur canal as far as Jagerlamudi, 8 miles $1\frac{1}{2}$ furlongs of the canal, at which place two under-tunnels pass the Guntur nallah under the canal, into the Tungabhadra, where surplus vents allow irrigation water to pass into the Tungabhadra.

4. The project completion estimates proposed to make a new channel close along the bank of the Tungabhadra to take up the irrigation of the Alavala and Aremanda channels and use the Tungabhadra for drainage purposes only from the Commamur canal to the sea, as it is, at present, below Aremanda dam 12 miles down.

5. The course of the Tungabhadra is so extremely sinuous, and it would interfere so much with the natural drainage of the country, that it was thought better to adopt a new line, leading along high ground, which would enable a considerable extension of irrigation to be obtained, which has been provided for in the proposed anticipated duty of 90 acres per cubic foot per second.

6. The new line cuts the Aremanda and Alavala channels some little way below their existing heads, and a dividing sluice will be provided at the point where they separate. A permanent bridge of three spans of 12 feet has been built for the Bezwada-Madras Railway line where it crosses the proposed line at 7 miles.

Temporary wooden bridges have been provided where the line crosses the two existing channels which will be filled in when the channels are diverted.

7. The chief masonry works provided are—

	RS.
Head sluice in Commamur canal	1,950
Kopalli drain under-tunnel at about 2 furlongs to pass the square miles into the Tungabhadra	3,620
Combined road culvert and under-tunnel at 1 mile 5 furlongs to carry the Guntur-Tenali road and pass the road side drain under the channel	8,000
An aqueduct at 3 miles to carry the channel over a natural dip which carries drainage for 3 square miles	5,600
Two drops, one of which will carry a bridge for a village road.	
A head sluice for the existing Bodapad channel at 11 miles 2 furlongs.	690
Aremanda and Alavala regulator	2,790
Cattle-crossings have been provided at all important donkas or village pathways	

8. The area at present irrigated is 11,800 acres. An increase of 13,400 acres is anticipated, partly under the minor distributaries to be excavated in the high ground, and partly land that can be cultivated by improved supply in the existing channels. The details for the proposed branch channels have not been worked out, as block levels have to be taken first, but a sum of Rs. 3 per acre is allowed for them. They will be approximately as follows.

At 1 furlong from head a branch will take off on each side to take up existing irrigation under spouts from Commamur canal which are a source of danger and waste.

At $3\frac{1}{2}$ furlongs—one on right side to irrigate lands between the Kopalli drain and road side drain—beyond the Tenali road a branch on each side will take up irrigation between the road side drain and the low ground.

Two branches will take off above each drop and one on left at 7 miles below the railway bridge.

9. The provision in the sanctioned project estimates is as follows :—

	Sanc-	Proposed.
	R ^s .	R ^s .
Head sluice	1,360	1,950
Road bridge	9,150	8,000
Aqueduct	5,000	5,600
Aremanda sluice	550	2,790
Alavala sluice	1,500	
Tungabhadra side channel earthwork	8,660	22,340
Minor channels work	2,000	40,200
Earthwork	4,100	
Cattle-crossings	7,000	5,160
Compensation	530	13,700
Drops	...	3,250
Dodapad sluice	...	690
Under-tunnel at 2 furlongs	...	3,620

The important excesses are in earthwork and distributaries, which are chiefly due to the proposals to extend irrigation; and in land, which is due to the alteration of alignment as the old line passed along Government waste at the edge of the drain.

10. I have not yet got a valuation of the land from the Revenue Department, but I consider the sum of Rs. 100 per acre an ample allowance, as much of the land is dry at present.

11. The total cost of the proposal will figure out as follows:—

	RS.
Main channel	67,100
Branches at Rs. 3 per acre	40,200
	1,07,300
Capitalized abatement of land revenue	13,050
Tools and plant and establishment, 2½ per cent.	22,883
	1,43,033

The anticipated additional revenue will be 13,400 acres at Rs. 4 per acre

The ultimate return on the proposed outlay will be 37·0 per cent.

12. The dimensions of all these works are calculated on the duty of 90 acres per cubic foot per second as laid down by Chief Engineer in his No. II/154 K.S., dated 12th September 1893, and it is not likely that this duty will be obtained for many years, seeing that 50 acres is about the average duty for the season at present, or 44 acres per cubic foot per second, maximum discharge. The proposed distributaries should, consequently, be taken up gradually as the duty is improved.

13. It is possible, also, that much of the ground being high, there may be a good deal of dry crops watered, which is much to be wished for and encouraged, as by large extensions of this method of cultivation instead of the present wasteful system of flooding rice, the usefulness of these canals may be indefinitely extended.

14. The estimates are recommended for sanction from the sum of Rs. 39,850 provided for under item Nos. 611, 617 to 622, 650, 651 and 666 of the project statement printed with G.O., No. 857 I., dated 11th October 1893, and the excess of Rs. 67,450 from the balance of the provision under item No. 710 of the same statement.

Estimate Form—Abstract—Classified.

Sub-head.	Names of works.	Amount of estimate for individual work.	Total of sub-heads.	Total for each canal or distributary.	Total of each main head.
1	2	3	4	5	6
	CAPITAL EXPENDITURE NOT CHARGED TO REVENUE.	RS.	RS.	RS.	RS.
	49. IRRIGATION.				
	Kistna Delta System.				
	Western Section.				
	I. Works.				
	Commamur Canal.				
	3. Distributaries.				
	Excavating the Tungabhadra side channel.				
2. Land ..	Compensation for land	13,700	13,700		
3. Works ..	Head sluice	1,950			
	Under-tunnel about 0 mile 2 furlongs ..	3,620			
	Road culvert and under-tunnel at 1 mile 5 furlongs.	8,000			
	Aqueduct at 3 miles	5,600			
	Drop at 3 miles 1 furlong	1,310			
	Bridge at 5 miles	1,940			
	Head sluice to Tungabhadra-Bodapad channel at 11 miles 2 furlongs	690			
	Regulators for Aremanda and Alavala channels at 11 miles 7 furlongs	2,790			
			25,900		
			39,600		
4. Earthwork ..	Excavating Tungabhadra side channel	22,340	22,340		
5. Miscellaneous ..	Cattle-crossing No. 1 at 2 miles 200 feet ..	350			
	Do. .. 2 at 3 miles 6 furlongs 100 ft. ..	380			
	Do. .. 3 at 4 miles 1 furlong 540 ft. ..	380			
	Do. .. 4 at 7 miles 4½ furlongs	515			
	Do. .. 5 at 7 miles 7 furlongs 200 ft. ..	525			
	Do. .. 6 at 8 miles 1 furlong 150 ft. ..	530			
	Do. .. 7 at 9 miles 5 furlongs	600			
	Do. .. 8 at 10 miles 1 furlong 80 ft. ..	610			
	Do. .. 9 at 10 miles 6 furlongs 550 ft. ..	620			
	Demarcation stones	650			
			5,160		
				67,100	
	Distributaries to irrigate 13,400 acres at Rs. 3 per acre			40,200	
					1,07,300

No. 2341 K.W.

Forwarded to the Chief Engineer for Irrigation for favour of sanction of Government being obtained to the estimate, amounting to Rs. 1,07,100, for excavating Tungabhadra side channel, Kistna Western division.

2. The report accompanying the estimate explains the necessity for the work.

3. The amount of the estimate may be met from the provision pointed out by the Executive Engineer in his paragraph 14 of the report accompanying the estimate.

(Signed) W. C. DEMORGAN,
Supg. Engineer, II Circle.

24th November 1897.

No. 4 I.

Note by the Chief Engineer for Irrigation.

In the original estimate sanctioned for the completion of the Commamur canal, Western delta, Kistna delta system, provision was made for excavating a new channel along the bank of the Tungabhadra—an old spill channel of the Kistna originally used for the distribution of water—to take up the irrigation of the Alavala and Are-manda channels, the principal branches of the Tungabhadra, and use the latter for drainage purposes only. As the course of the Tungabhadra is very sinuous and may interfere with the natural drainage of the country, it is proposed to adopt a new line for the channel leading along high ground, which would increase the present area of irrigation from 11,800 to 25,200 acres. The additional revenue anticipated on the extension of 13,400 acres is Rs. 53,600.

2. The accompanying estimate which provides for excavating the channel and constructing the necessary masonry works, &c., amounts to Rs. 1,07,300, as altered in this office, no provision having been made therein by the Superintending Engineer for foundation for the revetment to the cattle-crossings. The revised estimate involves an excess of Rs. 67,450 over the existing sanction for these works, Rs. 13,700 thereof being for land compensation and the rest for distributaries and earthwork. The revised estimate may be sanctioned as the excess is chiefly due to the proposed extension of irrigation.

(Signed) W. HUGHES,
Chief Engineer for Irrigation.

5th January 1898.

ORDER—No. 50 I., dated 19th January 1898.

The following revised estimate amounting to Rs. 1,07,300 for excavating the Tungabhadra side channel, Commamur canal, Western section, Kistna delta system, is sanctioned in lieu of the existing sanctioned provision aggregating Rs. 39,850 for items 611, 617 to 622, 650, 651 and 666 of the statement printed in Proceedings of Madras Government, No. 857 I., dated 11th October 1893, the excess Rs. 67,450 being met from the balance of the provision made for item 710 of the same statement.

2. This sanction is registered as No. 155 I. of 1897-98.

(True Extract.)

(Signed) W. HUGHES,
Joint Secy. to Government,
Irrigation Branch.

To the Chief Engineer for Irrigation.
" Superintending Engineer, II Circle, with fifty-six enclosures.
" Examiner, Public Works Accounts.

Erd. T. K. Narayana Aiyangar.