Public Works

Marine (1899) Department.

7/7/18

G.O., No. 380
381

DATED 28 April 99

1/4/99

[Despatch Abstract.]

Kollur Side Channel

Estimate of Rs 31.000 for excavating its branches from the Bank Canal, Krishna Western Delta, approved & copy of the Proc: ordered to be forwarded to the Govt of India for sanction.

Kollur Side Channel

Forwarding a Copy of Proc: Approving an Estimate of Rs 31000 for excavating the — its branches from the Bank Canal, Krishna Western Delta.

M.S. [illegible]

Jul 12/5

BACK PAPERS.

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

FURTHER PAPERS.

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

IRRIGATION.
ACCOUNT.

Government {1899} of Madras.

PUBLIC WORKS.

Recd. } 1899. *Enclosures*
Regd. } *Spare copies*

G.O., Nos. 380, 381 I., 28th April 1899.

APRIL.

Kollur Side Channel

Forwarding copy of Proceedings approving an estimate of Rs. 31,000 for excavating the — and its branches from the Bank canal, Kistna Western delta.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.
Account.

Read—the following papers :—

From J. HANNAN, Esq., Superintending Engineer, II Circle, to the Chief Engineer for Irrigation, dated Camp, Duggirala, 9th January 1899, No. 25 I.

I have the honour to forward herewith, for your approval and sanction of Government under Open Capital account, plans and estimates, amounting to Rs. 34,747, including establishment, tools and plant, &c., charges for excavating Kollur side channel and its branches from the Bank canal, Kistna Western division.

2. The report which accompanies the estimates explains the necessity for the work.

Enclosures.

Report to accompany Estimate for excavating Kollur Side Channel.

This channel takes off from a sluice at 15½ miles, Bank canal (canal mileage). The estimate for the sluice was sanctioned in G.O., No. 414 I., dated 25th May 1894. The sluice has two vents—one to supply the Varahapuram channel (the estimates for which were sanctioned in G.O., No. 135 I., dated 14th February 1895), and the other to supply the Kollur side channel, the estimates for which are now sent up for sanction. These channels, together with the Rayakampad affluent, are intended to irrigate and drain the Kollur block.

2. There are now two box sluices and several spouts in the right bank of Bank canal supplying about 3,400 acres in this block, the two principal existing channels being the Anantavaram channel at 16 miles and the Ipur channel at 18 miles. The surplus water from the existing channels and spouts, together with the natural drainage, is carried down the natural depressions and causes much injury to a considerable area of dry land. The ryots in this block used to cultivate wet crops with the aid of the drainage, and the Revenue Department used to charge them with water-rate for water thus taken. Some of the ryots protested against this and brought civil suits against the Government. They succeeded in the High Court which decided that water-rate could not be charged on lands benefited by the involuntary flow. This tract of country is very low and water is required only occasionally. The Government is, at present, losing a lot of revenue which it would have got, had irrigation channels been in existence in this block. The fact was brought to the notice of Government and it was ordered in G.O., No 560 I., dated 11th June 1897, that irrigation channels should be provided for in such blocks at as early a date as possible.

3. The line proposed for the Kollur side channel runs along the Bank canal for the first 4 miles 6½ furlongs. It then turns away from the canal and goes in a straight line to about ½ furlong from the Rayakampad affluent.

4. The hydraulic details are given in the tabular statement. The length of the channel is 7 miles 1 furlong. For the first 3 miles 3½ furlongs the full supply depth will be 3 feet and the bed and surface falls ·65 foot per mile. At 3 miles 3½ furlongs, there will be a drop in F.S.L. of 1·27 feet and in bed of ·77 foot. From 3 miles 3½ furlongs to 4 miles 6 furlongs 530 feet, the channel will have a fall of one foot per mile and an F.S.L. depth of 2·5 feet. At the latter place there will be a drop of 2 feet. The channel will be continued with the same fall and depth up to 6 miles 1½ furlongs where there will be a drop of 1 foot and 6 inches, respectively, in F.S.L. and bed. From this point it will be continued with the same fall, but with a depth of 2 feet up to 7 miles 1 furlong where a tail drop is provided with the rear floor at bed level of the affluent.

5. The line of the channel crosses five important donkas or village tracks. At three of these bridges have been provided, and at the other two where drops have also to be built, a combined bridge and drop has been provided. The necessity for providing permanent bridges at these crossings has been amply proved. If not built at the time the channel is excavated, they are never built afterwards. The channel gets into bad order and efficient regulation is rendered impossible. These bridges are 12-feet spans and less carried over Madras Railway old double-headed rails placed 2 feet apart. Over the rails, a layer of 2″ planking is laid and over this another layer of 1½″ planking is laid diagonally. This design of bridge is very light and cheap. The necessary calculations regarding the strength, together with a sketch of the rail, are appended.

6. For the portion which runs along the canal bank, only the right bank is necessary and the earthwork obtained from the excavation is more than enough for this bank, and where it is in excess, the earth will be thrown on the canal right bank. In the lower portion both banks have to be formed, and as the earth from the channel will not be sufficient for them, side pits will have to be excavated.

7. The Ipur and Anantavaram channels, which are now branches of the Bank canal with box sluices at their head, will become branches of this channel. The Anantavaram channel is an old one which will be improved with a sluice at its head and a masonry drop at 7 furlongs. The hydraulic and other details are noted in the tabular statement. As the channel is too wide in the first mile, masonry section walls are proposed to allow of proper section of the channel being maintained.

8. Pipe sluices with shutters and locking arrangements are provided for the direct irrigation under the main and branch channels in order to allow of proper regulation being carried out. These are now proposed at every ½ mile. But their exact position will be fixed after the channels are tried for one year.

9. The existing Ipur channel is only 4 furlongs long. It will be extended till it meets the Rayakampad affluent. A masonry head sluice, a combined bridge and drop at 5 furlongs and another drop at 1 mile 2 furlongs and tail drop at end are provided on this channel. The hydraulic and other details are given in the tabular statement.

10. The area proposed to be brought under cultivation is 5,000 acres, of which 3,400 acres are already under wet. The extra ayacut to be brought under cultivation is 1,600 acres. This, at Rs. 5 an acre, will produce to Government a water-rate of Rs. 8,000. Deducting from this the probable maintenance and collection charges at As. 8 an acre, the net revenue will be Rs. 7,200.

The estimated outlay is Rs. 31,000, and the net return will be about 23·22 per cent. as shown below :—

	Rs.
Amount of estimates	26,030
Establishment	4,933
Tools and plant	37
Total ...	31,000

The net revenue being Rs. 7,200, the return will be 23·22 per cent.

11. The works are highly remunerative and are recommended for sanction under Open Capital, Kistna delta system.

Estimate Form—Abstract—Classified.

Sub-head.	Names of works.	Amount of estimate for individual works.	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.				
	Open Capital Account.				
	Western Section.				
	I. Works.				
	Bank Canal.				
	3. Distributaries.				
	Remunerative Works.				
	Kollur Side Channel.				
2. Land ..	Compensation for land	3,360			
			3,360		
3. Works ..	Bridge at 0 mile 3½ furlongs	1,390			
	,, at 1 ,, 6½ ,, ...	1,310			
	,, at 2 miles 4½ ,, ...	1,320			
	Drop at 3 ,, 3½ ,, ...	200			
	Combined bridge and drop at 4 miles 6 furlongs 530 feet	520			
	Combined bridge and drop at 6 miles 1½ furlongs ..	420			
	Tail drop at 7 miles 1 furlong	240			
	Pipe sluices for direct irrigation (37 sluices) ..	3,700			
			9,100		
4. Earthwork ..	Excavating the channel	4,270			
			4,270		
5. Miscellaneous.	Demarcation stones	260			
			260		
				16,990	
	Anantavaram Branch Channel.				
2. Land ..	Compensation for land	160			
			160		
3. Works ..	Head sluice	410			
	Drop at 7 furlongs	250			
	Pipe sluices for direct irrigation (20 sluices) ..	2,000			
			2,660		
4. Earthwork ..	Excavating the channel	1,270			
			1,270		
5. Miscellaneous.	Demarcation stones	130			
			130		
				4,220	
	Ipur Branch Channel.				
2. Land. ..	Compensation for land	1,060			
			1,060		
3. Works ..	Head sluice	390			
	Combined bridge and drop at 5 furlongs	480			
	Drop at 1 mile 2 furlongs	210			
	Tail drop at 1 mile 6 furlongs	190			
	Pipe sluices for direct irrigation (14 sluices) ..	1,400			
			2,670		
4. Earthwork ..	Excavating the channel	980			
			980		
5. Miscellaneous.	Demarcation stones	110			
			110		
				4,820	
			I. Works ..		26,030
			II. Establishment ..		4,933
			III. Tools and plant ..		37
			Total, Estimate ..		31,000

(Signed) R. A. SRINIVASA AIYANGAR,
Ex. Engr., Kistna Western Divn.

4th November 1898.

No. 73 I.

Note by the Chief Engineer for Irrigation.

In the right bank of the Bank canal, Kistna Western delta, there are two box sluices and several spouts for the irrigation of about 3,400 acres in the Kollur block, the drainage from which, together with the surplus water from the existing channels and spouts, is carried down the natural depressions to the low-lying tracts where the ryots utilize it for the cultivation of wet crops in their dry lands, but no water-rate can be levied on such irrigation as, under the ruling of the High Court embodied in the Proceedings of the Board of Revenue (Land Revenue), No. 143, dated 5th May 1897, communicated with G.O., No. 560 I., dated 16th June 1897, water-rate cannot be charged on lands irrigated by the involuntary flow of water. In order to avoid the loss of revenue resulting from the above ruling, it was directed in the Government Order quoted above that irrigation channels should be extended, as early as possible, to the low-lying tracts in which irrigation by involuntary flow has occurred in the past. The Superintending Engineer, II Circle, accordingly submits the accompanying estimate for excavating the Kollur side channel and its branches, whereby an additional 1,600 acres will be brought under irrigation yielding a water-rate of Rs. 8,000. Deducting from this amount Rs. 800, the probable cost of maintenance, the net revenue will be Rs. 7,200, or a return of 23·22 per cent. on the total direct charges.

2. Certain alterations in the designs of the masonry works suggested by the Superintending Engineer but carried out in this office, have increased the amount of the estimate from Rs. 24,600 to Rs. 26,030. The estimate, as altered, is recommended for sanction, the work being classed as remunerative; it will probably be completed by the 31st March 1900.

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

24th March 1899.

Order—No. 380 I., dated 28th April 1899.

The estimate amounting to Rs. 26,030, or Rs. 31,000 including establishment and tools and plant, for excavating Kollur side channel and its branches from the Bank canal, Kistna Western delta, is approved.

2. Ordered that a copy of these Proceedings, together with the estimate and plans for the work, be forwarded to the Government of India with a request that sanction to the estimate may be accorded at an early date, under "49. Capital expenditure not charged to Revenue," Kistna delta system, Open Capital account.

[Here enter No. 381 I., dated 28th April 1899.]

(True Extract.)

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

To the Chief Engineer for Irrigation.
,, Superintending Engineer, II Circle.
,, Examiner, Public Works Accounts.

Endorsement—No. 381 I., dated 28th April 1899.

Forwarded.

(By order.)

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

Exd. T. K. Narayana Aiyangar.

Public Works (1899) Department.

CURRENT No. 2918

7/4/99.

From Mr Schiess Engineer for Irrigation

Order

No. 73 D.

Dated 24 March 1899.

Received 27-4-99

Registered

Enclosures ~~52~~ 80 (23 plans)

Spare copies

SUBJECT.

Excavating Kollegal Sidefalls
Note recommending for sanction
Estn Rs 21,000 for —

Ans B/please
& Plans returned
R 7/99

BACK PAPERS.

No.	Date.

FURTHER PAPERS.

No.	Date.

H. E.

PUBLIC WORKS DEPARTMENT,

IRRIGATION BRANCH.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

Note recommending for sanction estimate of Rs 31,000 as increased in this office for excavating Kollur side Channel

UNDER date the

READ the following

From the Supg: Engineer II Circle — No. 25. I. dy 14th January 1899.
Classified abstract estimate amounting to Rs 31,000.
Rs 73 I dy 24 3 99

Note by the Chief Engineer for Irrigation

In the right bank of the Bank Canal, Kistna Western delta, there are two box sluices and several spouts for the irrigation of about 3,400 acres in the Kollur block, the drainage from which, together with the surplus water from the existing channels & spouts is carried down the natural depressions to the low-lying tracts where the ryots utilise it for the cultivation of wet crops in their dry lands, but no water-rate can be levied on such irrigation

Plans returned in 1 cover.

Issue
WH
5/5/99
I
LCIS 2/4/99

as, under the ruling of the High Court embodied in the Proceedings of the Board of Revenue (Land Revenue) No 143 dated 5th May 1897 communicated with G. O. No 560 - J. dated 16th June 1897 water-rate cannot be charged on lands irrigated by the involuntary flow of water. Inorder to avoid the loss of revenue resulting from the above ruling it was directed in the G. O. quoted above, that irrigation channels should be extended, as early as possible, to the low-lying tracts in which irrigation by involuntary flow has occurred in the past. The Supg: Engineer, II Circle, accordingly submits the accompanying estimate for excavating the Kollur side channel, & its branches, ~~which together with the Varatapparam~~

~~Channel, and the Royakampad effluent, is intended to irrigate and drain 5000 acres in the Kollur block, of which 3400 acres are already under wet cultivation. It is~~ whereby ~~are anticipated that the~~ additional 1600 acres will be brought under irrigation ~~said~~ yielding a water-rate of Rs 8000, ~~Deducting~~ from this amount Rs 800, the probable cost of maintenance, the net revenue will be Rs 7200. ~~It will represent~~ or a return of 22·43 23·22 per cent on the total direct charges.

2. Certain alterations in the designs of the masonry works suggested by the Supg: Engr ~~but~~ carried out in this office, ~~which~~ have increased the amount of the estimate from Rs 24,600 to Rs 26,030.

The estimate, as altered, is recommended for sanction, the work being classed as remunerative; it will probably be completed by the 31st March 1900.

Order thereon: ~~No: 308~~ No: 380 dated 28-4-99.

The estimate amounting to Rs: 26,030 or Rs: 31,000 including establishment and tools and plant ~~charges~~, for excavating Kollair side channel and its branches from the Bauk canal, Kistna Western delta, is approved.

2. Ordered that a copy of these Proceedings, together with the estimate and plans for the work, be forwarded to the Government of India with a request that sanction to the estimate may be accorded at an early date, under "49 Capital expenditure not" "charged to Revenue", Kistna delta system, Open Capital account.

Endorsement
Forwarded. No: 381 dated 28-4-99.

Appd.
A.E.H.
30.3.99

Posted under Standing Order 23 (a)
11/5/99

24/3/99

W.H.
24.3.99

To. The Chief Engr for Irrign:
" Supg: Engr II Circle
" Examiner Estimates

E. I. Form No. 1 (a)—500—21-4-98.

Initd 7/5/99

C.S. 21/1/99

Public Works (1899) Department.

CURRENT No. 23 K.S.

From The Superintending Engr II Circle

Order

No. 25 J.

Dated 14.1.99.
Received 16. Jan 99.
Registered
Enclosures 52 sheets & two plans
Spare copies

SUBJECT.

Excavating Kollair Side Chl — Forwards for Approval & Sanction plans and Estimate amounting to Rs: 31,000 for —

DS 1
W.H. 2 of

18/1/99

BACK PAPERS.

No.	Date.
13413	16-6-99

FURTHER PAPERS.

No.	Date.

Report to accompany Estimate for Excavating Koller Side Channel

This Channel takes off from ~~the~~ ab 15½ miles, Bank Canal (Canal Mileage). The Estimate for the Sluice was sanctioned ~~in~~ by No 414 I dated 25-5-94. The Sluice has two vents, one to supply the Varakapuram Channel (the Estimates for which were sanctioned ~~in~~ G. O. No 1351 dated 14-2-95) and the other to supply the Koller Side Channel, the Estimates for which are now sent up for sanction. These channels together with the Rayakanpad Affluent are intended to irrigate and drain the Koller block.

2. There are now two bodies and several sponts ~~in~~ the Right bank of Bank Canal supplying about 3400 acres ~~in~~ this block, the two principal existing channels being the Thavaram Channel at 16 miles and the Ipur Channel at 18 miles. The surplus water from the existing channels and sponts together with the natural drainage is carried down the natural depressions and causes much injury to a considerable area of dry land. The ryots ~~in~~ this block need to cultivate wet crops with the aid of

1/23 RS

If the drainage and the Revenue Department used to charge them with water pale for water thus taken. Some of the ryots protested against this and brought Civil Suits against the Government. They Succeeded in the High Court which decided that water pale could not be charged on lands benefited by the Subsidiary flow. This tract of Country is very low and water is required only occasionally. The Government is at present, losing a lot of revenue which it would have got, had irrigation channels been in existence in this block. The fact was brought to the notice of Government and it was ordered vide G.O. No 960 I dt 11-6-97 that irrigation channels should be provided for in such blocks at as early a date as possible.

3. The line proposed for the Kollair Side Channel passes along the Bank Canal for the first 4 Fr - 6½ furs. It then turns away from the canal and goes in a straight line to about ½ a furlong from the Rayalcheruvu Affluent.

4. The hydraulic details are given in the tabular Statement. The length of the channel is 7 miles 1 furlong. For the 1st 3 miles 3½ furlongs the full supply depth will be 3 ft and the bed and Surface falls .65 ft per mile. At 3 miles 3½ furlongs, there will be a drop in F.S.L of 1.27 ft and in bed of .77 ft. From 3 Fr - 3½ furs. to 4 Fr - 6 F - 530 ft, the channel will have a fall of one foot per mile and an F.S.L depth of 2.5 ft.

23-3-99 Ag. 27 VI

3 Sh

At the latter place there will be a drop of 2 ft. The channel will be continued with the same fall and depth upto 6 Fr - 1½ furs where there will be a drop of 1 ft and Six inches respectively at the tail and bed. From this point it will be continued with the same fall but with a depth of 2 ft upto 7 Fr 1 fur where a tail drop is provided with the rear floor at bed level of the Affluent.

5. The line of the channel crosses 5 important Donkas or village tracks. At 3 of these, bridges have been provided and at the other two where drops have also to be built, a combined bridge and drop has been provided. The necessity for providing permanent bridges at these crossings has been amply proved. If not built at the time the channel is excavated, they are never built afterwards. The channel gets into bad order and efficient regulation is rendered impossible. These bridges are 12 feet Spans and consist of Madras Railway old double headed rails placed 2 ft apart. Over the rails, a layer of 2" planking is laid and over this another layer of 1½" planking is laid diagonally. This design of bridge is very light and cheap. The necessary calculations regarding the strength together with a sketch of the rail are appended.

6. For the portion which runs along the Canal bank, only the right bank is necessary

excavation and the earthwork obtained for the excavation is more than enough for the bank. And where it is in excess, the earth will be thrown on the canal right bank. In the lower portion, both banks have to be formed and as the earth from the Channel will not be sufficient for them, side pits will have to be excavated.

7. The Ipur and Anantavaram Channels, which are now branches of the Bank Canal with two sluices at their head, will become branches of this Channel. The Anantavaram Channel is an old one which will be improved with a sluice at its head and a masonry drop at 7 furs. The hydraulic and other details are noted in the Tabular Statement. As the channel is too wide in the first mile, masonry section walls are proposed to allow of proper distribution of the channel being maintained // Pipe sluices with shutters and locking arrangements are provided for the direct irrigation under the main & branch channels in order to allow of proper regulation being carried out. These are now proposed at every ¼ mile. But their exact position will be fixed after the channels are tried for one year.

8.

9. The existing Ipur Channel is only 4 miles long. It will be extended till it meets the Rayekanpad affluent. A masonry head sluice, a combined

Ipur Channel

cum bridge and drop at 5 furlongs and another drop at 1 fur 2 furs and tail drop at end are provided on this Channel. The hydraulic and other details are given in the tabular statement.

10 The area proposed to be brought under cultivation is 5000 acres of which 3400 acres are already under wet. The extra ayacut to be brought under cultivation is 1600 acres. This, at Rs 5 an acre, will produce to Government a water-rate of Rs 8000. Deducting from this, the probable maintenance and collection charges at 0-8-0 an acre, the net revenue will be Rs 7200.

The estimated outlay is Rs 24,000 and the net return will be 21 per cent as shewn below:—

Amount of estimates —	Rs	24,000
Establishment		4933
Tools and plant —		37
Tools and Plant at 24½ p.c on the above —	Rs	5880
Abatement of Land Revenue —	Rs	4120
Total	Rs	34,000

The net revenue being Rs 7,200, the return will be 21 per cent.

Please see remarks, unless it is intended to calculate the percentage on the whole charge as shewn above, the return will be 23.22 per cent.

11. The works are highly remunerative and

[illegal] are recommended for Sanction [illegal]
Open Capital, Kistna Delta System.

N. a. Srinivasa Ampayya
Dt. 11.98
Executive Engineer
Kistna Western Dn

SUPDG. ENGR'S OFFICE
No. 24/3742
RECEIVED
SECOND CIRCLE

B

ESTIMATE FORM—Abstract—Classified.

Sub-head.	Names of Works.	Amount of Estimate for individual Works,	Total of Sub-heads.	Total for each Canal or Distributary.	Total of each Main head.	Remarks.
1	2	3	4	5	6	7
						5 Mr
	Capital Expenditure not charged to Revenue.					
	4 Irrigation					
	Kistna Delta System.					
	Open Capital Account.					
	Western Section					
	1 Works.					
	Bank Canal.					
	3 distributaries					
	Remunerative Works.					
	Kollur Side Channel					
2 Land.	Compensation for Land	3360				
			3360			
3 Works.	Bridge at 0 m - 3½ furlongs	1390				
	do at 1 m - 6½ fur.	1310				
	do at 2 m - 4½ fur.	1320				
	Drop at 3 m - 3½ fur.	200				
	Combined bridge and					
	Drop at 4 m - 6 fur - 530 ft	~~500~~ 520				
	do at 6 m - 1½ fur.	420				
	Tail Drops at 7 m - 1 fur	240				
	Pipe Sluices for direct	3700				
	irrigation (37 Sluices)	~~2200~~ 2320	9100			
			~~8360~~ 7700			
4 Earthwork	Excavating the Channel	~~4270~~ 4310				
			4270 ~~4310~~			
5 Miscellaneous	Demarcation Stones	260	260	16990 ~~16850~~ 15,630		
	Carried over	~~15620~~		~~15630~~ ~~16850~~ 16990		

STATION _____
Dated _____

5,000—10-1-95.

Executive Engineer.

(E. No. 126.)

_____ Circle.

Division—

District

ESTIMATE FORM—Abstract—Classified.

To accompany the Detailed Estimate No.

of 189 -9 for *

* Here enter the Name and Description of work in full.

ESTIMATE FORM—Abstract—Classified.

Sub-head.	Names of Works.	Amount of Estimate for individual Works.	Total of Sub-heads.	Total for each Canal or Distributary.	Total of each Main head.	Remarks.
1	2	3	4	5	6	7
	~~Brought forward—~~	~~15620~~	-	~~15620~~		6 Brs
	Anantavaram branch Chl			~~16050~~ 16990		
2 Land.	Compensation for land	160	160			
3 Works	Head Sluice	410				
	Drop at 7 furlongs	250				
	Pipe Sluices for direct irrigation (20 Sluices)	2000 ~~1600~~	2660 ~~2260~~			
4 Earthwork	Excavating the Channel	1270 ~~1290~~	1270 ~~1290~~			
5 Miscellanious	Demarcation Stones.	130	130	4220 ~~3840~~ 3840		
	Spur Branch Channel					
2 Land	Compensation for land.	1060	1060			
3 Works.	Head Sluice	390				
	Combined Bridge and drop at 5 furlongs	480 ~~470~~				
	Drop at 1 fur - 2 fur.	210				
	Tail Drop at 1 fur - 6 fur.	190				
	Pipe Sluices for direct irrigation (14 Sluices)	1400 ~~420~~	2670 ~~2380~~			
	Carried over.	~~22070~~	3730 ~~3440~~	~~22070~~ ~~19470~~ 21210		

Station _____

Dated _____

~~Executive Engineer.~~

5,000—10-1-96.

(E. No. 126)

Circle.

Division—

District

ESTIMATE FORM—Abstract—Classified.

To accompany the Detailed Estimate No.

of 189 -9 for*

* Here enter the Name and Description of work in full.

ESTIMATE FORM—Abstract—Classified.

Sub-head.	Names of Works.	Amount of Estimate for individual Works.	Total of Sub-heads.	Total for each Canal or Distributary.	Total of each Main head.	Remarks.
1	2	3	4	5	6	7
				21210		
	Brought forward		3730	19470		
	Spur Channel Continued					
4 Earthwork	Excavating the Channel	980				
			980			
5 Miscellaneous	Demarcation stones	110				
			110			
				4820		
					26030	
	9 J. works				4933	
	Establishment				24000	
	6 % Tools & plant				37	
				Total Estimate	31,000.	

Supt. Engr. Second Circle

Executive Engineer.

5,000—10-1-96.

Details of Enclosures:

1 Sketch Map
5 Sheets of sections for Kolleru Side Chl
7 Masonry plans of do
1 Plan of double headed rail
2 Sheets of sections for Anantavaram Branch Chl
2 Masonry plans do
1 Sheet of sections for Ipur branch Chl
4 Masonry plans

23 Sent in a roll
1 Report
1 Tabular Statt
1 Class: abstract
1 Sheet of Circulation
11 Estimates of Kolleru Side Chl
6 " for Anantavaram Branch Sidech.
8 " Ipur do

29

52 Grand total

(E No. 126.)

Second Circle.

Division— Kistna Western.

District Kistna.

ESTIMATE FORM—Abstract—Classified.

To accompany the Detailed Estimate No.

of 189 -9 for* Excavating Kolleru Side Channel and its branches—

* Here enter the Name and Description of work in full.

Superintending Engineer's Office, II Circle,
Camp Bezwada, 9—1— 1899.
Despd 14.1.99.

No. 251 dy 14.1.99

From

SUPERINTENDING ENGINEER,
II CIRCLE,

To

THE Chief Engineer
for Irrigation

16 JAN. 1899
23 K.S

SIR,

Enclosures. 52 as per Separate list Enclosed

I have the honor to forward herewith for your approval and sanction Govermment under Open Capital Account plans and Estimates amounting to Rs 34747 including Establishment, tools and plant & charges for Excavating Kolleru side channel & its branches from the bank Canal Kistna Western Division.

2. The report which accompanies the estimates explain the necessity for the work

I have the honour to be
Sir,
your most obedt servt

Superintending Engineer
II Circle

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