Public Works (1897) Department.

G.O., No. 45465

DATED 18 February 1897

[Despatch Abstract.]

Seat M. Pwd: Revenue Deptt on Season
telegram from Kurnool for week
ending 30th January 1897 Cuttack
S.E. Ry Circle.

//

T.C. 16/2/97

[F.W. 25. 5,000—30-11-96.]

Indexed.

BACK PAPERS.

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

FURTHER PAPERS.

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

urgent

Public Works (1897) Department.

CURRENT No. 1620

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B

From *The Revenue Department.*

Order *No 454 Way 16.2.97*

Communicated
to the Supt Engineer III
Circle.

15/2/97

S.E III Circle & 16/2/97
R.B.

No. *808*

Dated *11th February 1897.*

Received *15.2.97*

Registered —

Enclosures *1*

Spare copies

SUBJECT.

Noticing that the Board has already in para 5 of its Proceedings dated 25-1-97 No 55 taken notice of the "rigorous enforcement of fining," referred to in the telegram from Kurnool for the week ending 30th Jan 97.

BACK PAPERS.

BACK PAPERS.

No.	Date.
4332.	10.2.97

FURTHER PAPERS.

No.	Date.

Revenue Department.

Proceedings of the Madras Government.

Read the following:-

BOARD OF REVENUE (REV. SETT., L. RDS. AND AGRI.), 25TH JAN. 1897, No. 55.

PROCEEDINGS OF THE BOARD OF REVENUE
(REVENUE SETTLEMENT, LAND RECORDS AND AGRICULTURE).

READ—the following Fortnightly narrative for the Kurnool district during the period ending 15th of January 1897 :—

STATE OF THE COUNTRY.

Rainfall and water-supply—

	INCHES.
Rainfall in rain-registering stations	·06
Do. up to the period from 1st April 1896	15·72
Average rainfall expected in the period	·03
Do. do. up to the period from 1st April 1896 ...	27·17

There were 52 cents and 25 cents of rain at Giddalore and Markapur, respectively, on the 2nd and 3rd currents. One-eighth *padami* of rain was also reported during the fortnight in the villages of Gullasingavaram, Ramavaram and Mettupalli near Owk, as also some showers in a few villages to the north of Nandyal. Water-supply generally sufficient for drinking purposes except at Sripathirowpet, a hamlet of Atmakur and Gutupalli of Kalwa division, and diminishing in parts of Kurnool and Nandyal divisions. The supply is insufficient for irrigation purposes except in canal villages. None of the tanks in the Kurnool and Nandikotkur divisions have received any supply. But in the Nandikotkur division the supply in the Bhavanasi and private wells is sufficient. In the Nandyal division water in spring channels is sufficient for flooding dry crops raised on wet lands. Owk tank has dried up, as also all the tanks in the Koilkuntla taluk except that of Uppalapad, which has only a few days supply. In the Cumbum division the Kanchipalli tank has received a fresh supply and the Cumbum tank has two months' supply. Canal-fed tanks have full supply.

Agricultural operations and condition of standing crops.—Agricultural operations still continue. In the *Kurnool division*, picking cotton is going on in some of the villages of Pattikonda taluk, while land under canal and wet land in Dhone are being prepared for second crop paddy and in some other villages fields on which the early crops have been harvested are being ploughed and kept ready for next year in the Ramallakota taluk. In the *Nandikotkur division*, sowings of the second crop paddy, black gram, Bengal-gram and transplantation of ragi under canal and private wells are going on in parts. In the Atmakur firka tank-bed lands are cultivated.

In the *Nandyal division*, paddy, horse-gram, cholum and cotton are harvested and ragi under wells transplanted in the Nandyal and Sirvel taluks. Second crop paddy is raised under canal and spring channels in the Nandyal taluk. White cholum is sown on wet lands in the Kalwa and Owk divisions. Cholum and cotton generally and paddy under Kumikuntla are harvested in the Koilkuntla taluk.

Cotton picking is going on in several villages of Sirvel taluk.

In the *Cumbum division*, harvests are nearly complete in the Cumbum taluk, but Bengal-gram is still being sown in a few villages, while ragi and onions are planted under wells. Lands are also prepared in the taluk for fresh sowings and in the Markapur taluk for fresh cultivation of ragi under wells.

State of standing crops.—In the *Kurnool division*, white cholum is good in some parts but wiltered in others of Ramallakota taluk; cotton and indigo are fair but linseed and other crops have generally failed. In some villages of Gonegundla and Pattikonda firkas of Pattikonda taluk, Bengal-gram and cholum have not germinated and the standing crops generally require rain before a good outturn can be expected.

In the *Nandikotkur division*, all the standing crops are in good condition except white cholum and horse-gram in *thuvva* lands in the Atmakur division which require some more rain. White cholum sown after the November rains is reported to be wiltering.

In the *Nandyal division*, standing crops in the Nandyal taluk are generally good, except those raised after the November rains, which have wiltered. In Sirvel the standing crops are all in good condition, but the dry crops raised after the November

rains, though still fresh, require another rain. In Koilkuntla the dry and wet crops under the wells and canal are good. Variga and cholum sown recently are fading.

The standing crops except korra in Markapur are good in the *Cumbum division*; paddy, oil-seeds and ragi have come to harvest in the Markapur taluk.

Supply of fodder and pasture and condition of cattle.—Pasture sufficient for the present in Cumbum division on hills in canal and spring channel villages and some villages of Pyápali firka and not available elsewhere.

Fodder sufficient for the present in the Cumbum division, in some villages of Nandikotkur division, in Nandyal and Sirvel taluks and in some villages of Koilkuntla taluk, but running short elsewhere except in canal villages and red-soil villages of Pattikonda taluk. Fodder is, however, sold dear everywhere and scarcely available for sale in villages. Hill grass continues to be used extensively.

Condition of cattle good in Cumbum division and normal elsewhere except in parts of Koilkuntla, Ramallakota, Pattikonda and Sirvel taluks, where they are becoming weak. Rinderpest is prevalent in parts of Pattikonda, Nandikotkur and Nandyal taluks, but not so severe as in the last fortnight.

General remarks on above subjects.—The sky was cloudy for many days, but there was no rain actually except a little in the Cumbum division.

The few showers in the Nandyal division were not very beneficial to the standing crops. The late-sown crops will not, it is apprehended, come to maturity.

Tank-bed lands were freely given to poorer ryots for cultivation.

Food supplies and the state of the markets.

Prices of principal food-grains at principal markets in the affected tracts in seers of 80 tolas per rupee for the period ending 15th of January 1897—

Stations.	Rice.		Ragi.		Cholum.		Cumbu.		Remarks.
	End of last fortnight.	End of current fortnight.	End of last fortnight.	End of this fortnight.	End of last fortnight.	End of this fortnight.	End of last fortnight.	End of this fortnight.	
Pattikonda ..	8·64	8·64	..	..	12·36 (W) 15·45 (Y)	13·39 (W) 15·45 (Y)	..	..	
Pyápali ..	8·64	8·64	..	..	15·48 (Y)	16·48 (Y)	..	..	
Kurnool ..	8·58	8·58	14·19	14·19	15·07 (W) 17·81 (Y)	15·07 (W) 16·44 (Y)	11·87	11·87	*In rice*—falling at Atmakur, Nandyal, Kalwa, Koilkuntla and Owk and stationary elsewhere.
Nandikotkur ..	9·29	9·29	..	..	16·44 (W and Y)	16·78 (W) 16·44 (Y)	..	..	
Atmakur ..	9·29	10·01	..	..	15·07 (Y) 16·44 (W)	16·44 (W and Y)	..	..	*In ragi*—falling at all stations except Kurnool and Giddalore.
Nandyal ..	9·29	10·01	17·41	18·06	15·07 (Y) 15·75 (W)	17·12 (W) 16·09 (Y)	13·12	14·37	
Kalwa	7·86	8·58	..	..	16·44 (W) 17·81 (Y)	16·40 (W) 17·81 (Y)	..	..	*In cholum*—falling at Pattikonda, Atmakur, Nandyal, Koilkuntla and Owk and stationary elsewhere.
Koilkuntla ..	9·13	9·96	15·00	17·25	12·64 (Y) 13·43 (W)	14·22 (Y) 14·22 (W)	13·05	13 05	
Owk	9·13	9·96	15·00	16·50	13·43 (Y) 14·22 (W)	15·40 (Y) 15·80 (W)	..	11·60	
Allagadda ..	8·58	8·58	15·48	16·12	13·01 (Y)	13·01 (Y)	..	..	*In cumbu*—falling at Nandyal and stationary elsewhere.
Giddalore ..	8·71	8·71	15·80	15·00	15·01 (W)	15·01 (W)	14·50	14·50	
Markapur ..	10·79	10·79	18·00	19·50	..	..	14·50	14·50	
Average ..	8·99	9·31	15·84	16·66	15·02 (W) 15·32 (Y)	15·59 (W) 15·78 (Y)	13·51	13·31	

W = White. Y = Yellow.

Activity of trade.—Trade is comparatively active and grain is freely exposed for sale in the markets. Imports into and exports from Kurnool and Nandyal are extensive. In the Nandikotkur taluk there is not much demand for grain in the markets; hence trade is somewhat inactive there.

Condition of the People.

1. *On works.*—The condition of people on the several works was good and the usual sanitary arrangements and medical aid continued. The following works were in progress during the fortnight:—

(1) Owk-Tadpatri road.
Owk-Banganapalli road.
Owk Union roads.
(2) Koilkuntla-Nossam road.
(3) Bellary road near Kodumur.

The remaining section of the Owk works was also taken over by the Public Works Department on the 3rd instant.

(2) (1) The number of coolies on all the three works at Owk again fell to 2,071. This is mostly due to harvests in their villages. Another kitchen was opened in connection with the Owk Union road works during the fortnight. The Head Assistant Collector has been asked to open a kitchen in connection with the third work also. The number fed at the two kitchens was 52.

(2) The work on the Koilkuntla-Nossam road has practically proved a failure. The number of coolies fell to 17 and it was not considered worth while to keep the work open; it was accordingly ordered to be transferred to the Koilkuntla-Allagadda road.

(3) The Kodumur work is still in charge of the Minor Irrigation Overseer. The number of coolies attending this work has gradually increased, and it is therefore important that the Public Works Department should take charge without further delay.

(3) No information has as yet been received from the District Forest-Officer regarding the forest work reported to have been opened near Mutyalpad in spite of two reminders. His explanation has been called for.

2. *In Villages.*—Condition of people in the Cumbum Division continues to be good. The special report called for by the Board has not yet been received from the Divisional Officer. As already explained in my last fortnightly the condition of people in the Nandikotkur Division also gives no cause for anxiety. There is sufficient demand for labour throughout the taluk on account of the harvests and sowings in canal villages, watching the standing crops and cutting hill grass which is stored up in large quantities in hill side villages by the ryots.

The condition of people in the Kurnool division is generally good except in black soil villages of Pattikonda taluk, though in some of them the poorer classes are engaged partly in harvests and partly in the removal of nuth grass and in sinking wells. As it was reported that the poorer classes about Maddikera are in urgent need of work, the Executive Engineer was again asked to start work on the Maddikera-Nancherla station road with the least possible delay. The work has since been opened by the Head-quarter Public Works Department Sub-Divisional Officer, to whom also orders by wire have been issued to open at once work at Pattikonda on the Pattikonda-Molagavalli station road. To give relief to the affected hill villages of Pyápali firka, the Deputy Collector recommended that repairs to the Racherla tank may be undertaken as a test relief work after investigation by the Tank Restoration Party, promising to submit further proposals after another personal inspection. The Executive Engineer has been requested to take steps to open the work at a very early date. The village officers of some of the villages in Ramallakota taluk appear to have reported that there is no work for labouring classes, but the Tahsildar is of opinion that, as none came to the test work opened at Kuruva-Nagalapuram, there must be some local demand for labour. The Executive Engineer has, however, been requested to re-open the work at Kuruva-Nagalapuram as desired by the Board in B.P., No. 398, dated 5th December 1896.

In the Nandyal division.—The condition of the people of Nandyal taluk is generally good. The Head Assistant Collector now reports that the condition of people in Paniem firka has greatly improved since the harvests have begun and the needy have migrated to Nandyal and other canal villages where they get from 2 to 3 annas a day. The Tahsildar reports that none would go to relief work unless paid 2 annas a day. Under these circumstances, the Head Assistant Collector thinks that there is no necessity for opening the relief work on the Paniem-Banganapalli road referred to in the last fortnightly, until the harvesting season is over. The condition of people in Koilkuntla and Owk firkas is reported to be bad and the result of the work ordered to be opened near Koilkuntla (vide *supra*) may be watched.

The condition of people in Sirvel taluk is generally good, as labour is available to some extent owing to harvests and other agricultural operations.

None have yet come forward in Kurnool town to accept the relief sanctioned for weavers.

Mahazars having been received from the weavers of Nossam in Koilkuntla taluk and Kolleru, Doddavada and Padakantla, Sirvel taluk, the Head Assistant Collector has been asked to submit detailed proposals for their relief and also to report why the scheme sanctioned for Jammalamadugu weavers should not be introduced into these villages.

Sickness and Mortality.—No deaths have been reported from want of food. Small-pox slightly prevalent in parts of Nandikotkur. Public health is generally good.

Remarks.—Except in the most affected villages detailed above, there need not be much anxiety about the condition of the people in general till about the beginning of March when all harvests will have ceased. The condition has improved owing to fall in prices of food-grains, harvests and demand for labour which is locally met in several parts.

The Divisional Officer of Cumbum states that there is a superstitious belief current in villages that a three years' famine is in store. This also appears to be the common belief everywhere.

MEASURES OF RELIEF.

(1) *On works.*—In what taluks open, and comparison of numbers :—

Taluks.	Number employed.	
	Last fortnight.	This fortnight.
Koilkuntla	2,974	2,089
Pattikonda	740	888
Total ...	3,714	2,977

REMARKS.—Fall is due to harvests.

(2) *Gratuitous relief.*—Numbers relieved at kitchens and otherwise :—

Taluks.	Number relieved at kitchens.	
	This fortnight.	Last fortnight.
Koilkuntla	68	32
Pattikonda	32	50
Total ...	100	82

(3) *Private charity.*—Nil.

Remarks.—The Circle Inspectors of Allagadda and Owk are continuing their enquiries regarding the grant of relief in villages and preparing a list of destitute persons requiring relief.

INSPECTIONS OF THE COLLECTOR.

Taluks and places visited.—On the 14th I inspected Chinna Tekur in the Ramallakota taluk and the fields on the way.

General Remarks—Loans.—The Deputy Collector of Pyápali reports that 238 applications involving Rs. 37,350 are pending disposal in the Pattikonda taluk. The sanction for the appointment of a special Revenue Inspector asked for in my telegram, dated 8th January 1897, may be expedited to ensure the speedy disposal of the applications. As regards the Ramallakota taluk and the Nandyal division, the Divisional Officers promise further detailed reports which are awaited. Strict orders have issued from this office from time to time for the prompt disposal of all applications and the submission of weekly progress reports by the Tahsildars. A more satisfactory progress is expected in the near future.

2. The Superintending Engineer has wired to the Chief Engineer for the posting of four Upper Subordinates to the Kurnool division.

LOAN TRANSACTIONS.—Statement showing particulars of Loan Transactions under the Land Improvement and Agriculturists' Loans Acts.

Taluks.	Repair and construction of wells.								Purchase of fodder.								Other purposes.								Cattle and seed-grain.								Total.								Number of wells.	
	Applications accepted.		Loans disbursed.		Applications pending		Applications accepted.		Loans disbursed.		Applications pending		Applications accepted.		Loans disbursed.		Applications pending.		Applications accepted.		Loans disbursed.		Applications pending.		Applications accepted.		Loans disbursed.		Applications pending.		Applications accepted.		Loans disbursed.		Applications pending.		Under construction or repair.	Constructed or repaired.
	Number.	Amount.	Number.	Amount.	Number.	Amount.	Number.	Amount.	Number.	Amount.	Number.	Amount.	Number.	Amount.	Number.	Amount.	Number.	Amount.	Number.	Amount.	Number.	Amount.	Number.	Amount.	Number.	Amount.	Number.	Amount.	Number.	Amount.	Number.	Amount.	Number.	Amount.	Number.	Amount.		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	
Markapur	..	..	..	..	..	11	Rs. 2,650	..	..	..	..	..	..	..	..	..	..	11	Rs. 2,650	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Nandikotkur	..	..	..	..	..	..	..	..	..	..	..	2	400	..	..	..	..	2	400	..	..	..	..	..	..	24	1,120	..	..	..	..	..	..	..	..	..	..	..	24	1,120	..

RESOLUTION—dated 25th January 1897, No. 55.

Submitted for the information of Government.

2. The cultivation returns for December, which were available when the Collector's report was written, show that, with the November rainfall, much of the deficiency in the area put under crop had been made good, and that in no taluk was the deficiency *in the area sown* up to December very serious. On the other hand, the report on the outturn of the early crops harvested up to November shows that on more than one-third of the area the early sowings failed entirely, whilst from about 423,000 acres, the crops harvested yielded only from 2-4 anna crops on the average. The returns from the Sirvel taluk, however, are very defective and the Collector is requested to take due notice of the neglect to furnish the return. Abstracts of the statements submitted by the Collector are appended.

From the above statements, it will be seen that the cultivation figures afford but a partial view of the success of the agricultural operations of the season, for not only has there been a widespread loss of early crop, but the late sowings, it now appears, will not, it is apprehended, come to maturity even in the Nandikotkur division (*vide* paragraph 3, B.P., No. 34 of 1897); the white cholum sown after the November rain is reported to be wiltering. Under the canal, and for the most part in the eastern section of the district, the crops are good; elsewhere they are poor or bad.

3. Pasture is generally scarce, and fodder is dear everywhere, and in some places not available, and the cattle are suffering in parts of the central and western sections of the district.

Prices in seers of 80 tolas per rupee on

Grain.	December 19th.	January 2nd.	January 16th.
Cholam ..	14·6	15·1	15·8
Ragi	15·9	15·8	16·6

Taluks.	Numbers on works on		
	December 19th.	January 2nd.	January 16th.
Koilkuntla	3,661	2,773	1,655
Pattikonda	508	765	906

4. Prices are easier than they were a month ago, and grain now appears to be brought freely to market.

5. The condition of the people is reported to be generally good, and the Collector considers that no anxiety need be felt until the harvests are over. This must occur this year much earlier than usual. The numbers on the relief works have been decreasing rapidly of late in Koilkuntla, but increasing in Pattikonda. The decrease in the former is attributed to harvest work, but this appears doubtful, and is partly attributable to the closing of the Nossam works. In Pattikonda, the increase has taken place entirely at Kodamur, and, seeing that this place is only about 20 miles from head-quarters, it is to be regretted that the Collector could not even get so far during the period. Chinna-Tekur is only 9 miles from Kurnool and is the only place visited by the Collector. This is the second fortnight successively in which the Collector's touring has given cause for remarks. In other parts of Pattikonda, works are urgently required and only since the close of the period under report do they appear to have been opened. Although the Public Works Department has been placed in executive charge of relief works, this step in no way relieves the Collector and his Divisional Officers of their responsibility for seeing that they are adequate and that relief is afforded at once when it is required. To ensure this, it in necessary that the district officers should be specially active at a period such as the present. As the condion of the people in Koilkuntla is reported to be bad, it should receive the immediate attention of the Collector, especially as they are deserting the relief works. If, where the gross work is short of the task assigned by only 4 per cent., fines of from 10 to 50 per cent. are inflicted, it is no wonder that coolies desert the works.

6. The starting of a relief work in Sirvel should be no longer delayed and the reports called for in B.P., No. 461 of 1896, should be expedited.

7. The Collector's loan statement is again incomplete and not in accordance with his general remarks on the subject.

(True Copy and Extract.)

(Signed) R. V. SRINIVASIAR,
Secretary.

To the Secretary to Government, Revenue Department.
" Collector of Kurnool.
Copy to the Sanitary Commissioner.

Order thereon Mis.No.784 d/10th.February 1897.

Recorded.

(True Extract)

Sd/ G. Stokes.

Ag: Secretary to Government.

Md. Shaik Karim.

APPENDIX A.

STATEMENT of outturn of early crops during 1896 in the Kurnool District.

Taluks.	Outturn. 0.	Outturn. Over 12 annas.	Outturn. 1 to 12 annas.	Average outturn of area in column 4.	Extent of crop standing.
1	2	3	4	5	6
Paddy.	ACS.	ACS.	ACS.	ACS.	ACS.
Pattikonda	2,692	..	774	3	961
Ramallakota	495	8	613	6	2,154
Nandikotkur	4,717	1	12	5	6,218
Nandyal	5,195	..	7	2	6,601
Koilkuntla	954	..	117	4	1,854
Sirvel	5,316	..	..	..	3,518
Cumbum	63	6	112	7	9,215
Markapur	115	..	1	6	1,543
Total ..	19,547	15	1,636	4	32,064
Cholum.					
Pattikonda	30,006	237	74,819	3	2,253
Ramallakota	7,492	68	37,837	3	..
Nandikotkur	1,131	11	5,264	4	82,266
Nandyal	3,668	60	11,392	2	56,145
Koilkuntla	3,737	143	4,649	4	75,997
Sirvel			Not reported.		
Cumbum	422	659	15,063	4	368
Markapur	1,421	18	2,176	3	5,286
Total ..	47,877	1,196	151,200	3	222,315
Korra.					
Pattikonda	50,771	..	35,320	2	136
Ramallakota	10,517	137	46,456	2	12
Nandikotkur	12,083	405	23,878	3	3,450
Nandyal	3,849	40	4,190	3	2,254
Koilkuntla	5,084	36	4,162	2	5,966
Sirvel	3,723	..	5,933	2	5,774
Cumbum	683	316	32,329	3	48
Markapur	5,538	..	10,444	2	11,375
Total ..	92,248	934	162,712	3	29,015
Arika.					
Pattikonda	7,370	..	1,581	2	1,990
Ramallakota	2,122	..	2,422	2	1,660
Nandikotkur	12,058	..	1,556	2	5,348
Nandyal	6,547	20	739	3	2,407
Koilkuntla	715	..	46	6	1,666
Sirvel	13,940	..	831	2	5,289
Cumbum	96	..	316	2	11,583
Markapur	872	..	..	..	14,747
Total ..	43,720	20	7,491	2	44,690
Sajja or Cumbu.					
Pattikonda	3,546	..	14,443	2	..
Ramallakota	1,374	..	11,661	2	..
Nandikotkur	2	..	90	4	..
Nandyal	7	1	139	2	65
Koilkuntla	..	..	11	5	10
Sirvel	25	..	263	2	2
Cumbum	246	399	15,740	4	..
Markapur	1,173	717	17,562	4	116
Total ..	6,373	1,117	59,909	3	193
Ragi.					
Pattikonda	96	6	45	2	175
Ramallakota	24	..	44	3	159
Nandikotkur	125	1	31	4	235
Nandyal	130	..	108	2	366
Koilkuntla	50	..	82	3	1,249
Sirvel	547	..	37	2	994
Cumbum	634	..	1,611	4	11,677
Markapur	446	..	10	10	5,196
Total ..	2,052	7	1,968	4	20,051

Statement of outturn of early crops during 1896 in the Kurnool District—*cont.*

Taluks.	Outturn. 0.	Outturn. Over 12 annas.	Outturn. 1 to 12 annas.	Average outturn of area in column 4.	Extent of crops standing.
1	2	3	4	5	6
Other food-grains including pulses.	ACS.	ACS.	ACS.	ACS.	ACS.
Pattikonda	6,281	..	1,856	2	19,817
Ramallakota	3,955	..	3,643	2	15,851
Nandikotkur	368	..	154	2	9,124
Nandyal	8,485	..	9,170	2	9,718
Koilkuntla	168	..	19	5	3,789
Sirvel			Not reported.		
Cumbum	2	2	419	3	7,557
Markapur	187	..	1	2	6,398
Total ..	19,446	2	15,262	2	72,254
Cotton.					
Pattikonda	3,003	..	..	..	16,998
Ramallakota	..	..	..	..	24,123
Nandikotkur	..	..	..	..	21,539
Nandyal	237	..	..	..	34,724
Koilkuntla	727	..	..	..	52,547
Sirvel			Not reported.		
Cumbum	3	..	..	..	3,280
Markapur	90	..	..	..	7,902
Total ..	4,060	..	..	..	161,113
Indigo.					
Pattikonda	306	34	1,193	5	444
Ramallakota	1,722	..	3,979	2	2,250
Nandikotkur	2,852	..	5,044	3	4,106
Nandyal	1,139	..	3,613	3	1,816
Koilkuntla	220	89	161	9	2,338
Sirvel	258	..	996	5	1,486
Cumbum	60	152	1,553	6	435
Markapur	145	7	108	3	301
Total ..	6,702	282	16,647	3	13,176
Castors.					
Pattikonda	149	..	2,845	2	37,561
Ramallakota	8	..	940	5	21,181
Nandikotkur	333	..	..	..	4,104
Nandyal	17	..	..	..	6,854
Koilkuntla	52	..	30	6	1,483
Sirvel			Not reported.		
Cumbum	1	..	..	..	4,310
Markapur	141	..	..	..	13,404
Total ..	701	..	3,815	2	88,897
All Others.					
Pattikonda	1,404	..	1,382	2	4,775
Ramallakota	467	..	570	3	8,704
Nandikotkur	376	30	76	4	16,397
Nandyal	77	..	2	2	5,764
Koilkuntla	3	40	72	5	1,222
Sirvel			Not reported.		
Cumbum	2	..	95	5	1,086
Markapur	20	10	14	5	853
Total ..	2,349	80	2,211	2	38,801

APPENDIX B.

STATEMENT showing the extent occupied by and the outturn of the early crops harvested during 1896 in the Kurnool district.

Principal crops.	Area harvested up to 30th November 1896 on which the outturn was			Total area harvested.	Average outturn of area in column 4.	Area of standing crops at the end of November.
	0.	13 annas and upwards.	1 to 12 annas.			
1	2	3	4	5	6	7
	ACS.	ACS.	ACS.	ACS.	ANNAS.	ACS.
Paddy	19,547	15	1,636	21,198	4	32,064
Cholum	47,877	1,196	151,200	200,273	3	222,315
Korra	92,248	934	162,712	255,894	3	29,015
Arika	43,720	20	7,491	51,231	2	44,690
Cumbu	6,373	1,117	59,909	67,399	3	193
Ragi	2,052	7	1,968	4,027	4	20,051
Other food-grains including pulses ..	19,446	2	15,262	34,710	2	72,254
Cotton	4,060	..	..	4,060	..	161,113
Indigo	6,702	282	16,647	23,631	3	13,176
Castor-oil and lamp-oil seeds	701	..	3,815	4,516	2	88,897
All others	2,349	80	2,211	4,640	2	38,801
Total ..	245,075	3,653	422,851	671,579	3	722,569

APPENDIX C.

Prospects of the standing crops in Kurnool at the end of November.

Taluks.	Remarks.
Pattikonda	In the Pyapalli firka the condition of the standing crops is indifferent. In other firkas paddy under wells, castors, cotton, red gram and chillies have revived by recent rains and may yield 6 to 8 annas.
Ramallakota	Paddy and garden crops under the canal and wells are good; red gram, white cholum, castors and cotton have improved somewhat by recent rains and a fair outturn expected.
Nandikotkur	Paddy, white cholum and cotton are in excellent condition everywhere and an outturn from 8 to 16 annas is expected. The other standing crops are young and are likely to yield an outturn of 4 to 12 annas.
Nandiyal	The standing crops are generally in good condition; but those sown after the recent rains are not thriving in many villages, as the soil did not receive sufficient moisture. In some of the villages of the Paniem firka, the crops are very bad.
Koilkuntla	The standing crops are in good condition and, with some rain about the end of the month, are expected to yield 8 to 12 annas. All the crops under the canal and wells are in good condition. In six villages adjoining Koilkuntla, the soil is reported to have not got sufficient moisture even for sowing variga.

Prospects of the standing crops in Kurnool at the end of November—cont.

Taluks.	Remarks.
Sirvel	Information incomplete; but so far as is known, paddy and arika under the canal and cholum, cotton and horse-gram are in good condition.
Cumbum	All the standing crops except ragi and arika are thriving, while the latter two are reviving after the rains.
Markapur	The standing crops, arika, cotton, gingelly, castor and dholl are greatly improved. Paddy is likely to yield a fair outturn in some villages.

APPENDIX D.

STATEMENT showing the areas sown in the Kurnool district in 1896 up to December compared with the averages for five years up to that date and the averages for the whole year.

Taluks.	First crop.					
	Dry.			Wet.		
	Up to December		Annual average.	Up to December		Annual average.
	1896.	Average.		1896.	Average.	
1	2	3	4	5	6	7
	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.
Markapur	112,901	122,023	128,142	2,056	4,399	5,444
Cumbum	116,357	118,933	118,596	10,785	11,787	13,286
Sirvel	168,834	177,085	177,209	4,630	3,435	3,483
Koilkuntla	193,429	191,383	212,883	3,833	3,287	3,980
Nandyal	191,238	207,431	207,297	5,557	5,926	5,929
Nandikotkur	222,941	237,322	238,666	4,734	4,599	4,610
Ramallakóta	289,734	305,884	306,435	1,458	2,306	2,108
Pattikonda	341,952	357,403	363,482	3,743	3,216	4,375
Total ..	1,637,386	1,717,464	1,752,710	36,796	38,955	43,215

Taluks.	Second crop.					
	Dry.			Wet.		
	Up to December		Annual average.	Up to December		Annual average.
	1896.	Average.		1896.	Average.	
	8	9	10	11	12	13
	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.
Markapur	3,427	2,941	9,253	85	195	683
Cumbum	4,610	2,341	7,309	735	147	3,469
Sirvel	865	1,793	2,198	53	658	338
Koilkuntla	573	1,319	1,177	188	98	1,027
Nandyal	639	1,875	2,337	101	62	1,941
Nandikotkur	2,827	2,930	3,156	90	87	403
Ramallakóta	4,093	1,610	1,638	88	108	702
Pattikonda	6,398	2,187	3,507	174	176	1,037
Total ..	23,432	16,996	30,575	1,514	1,531	9,605

REVENUE DEPARTMENT.

1897.

Board of Revenue

(Revenue Settlement, Land Records and Agriculture),

MADRAS.

Printed January 28th,.

Proceedings, 25*th Jan.* 1897, *No.* 55.

Off.
1620/97

Fortnightly Narrative.—Submitting to Government, with remarks,—of the Kurnool District for period ending 15th January 1897.

Revenue Department.

Proceedings of the Madras Government.

Read Season telegram from Kurnool for week ending 30th January 1897.

Order thereon, No. 808 Mis. d/11th February 1897.

The Government notes that the Board has already in para 5 of its proceedings, dated 25th January 1897, No. 55, taken notice of the "rigorous enforcement of fining" referred to in the above telegram.

(True Extract)

Ag: Secretary to Government.

To the Board (Revenue Settlement, &c)

To the Public Works Department. ✓

9/KS.
12.2.97

No. 3

Public Works (1897) Department.

1208W

G.O., No. 455 W

DATED 16 February 97.

128

fc

for 1208W 97.

1 2

[Despatch Abstract.]

Briefly: Proposal to construct a railway between Vavuniya and Pankulam abandoned for the present.

T.C. 14/2/97

[P.W. 25.
5,000—30-11-96.]

Indexed. 18/2/97

BACK PAPERS.

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

FURTHER PAPERS.

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

Public Works (1897) Department.

CURRENT No. 1310

B/

Order No. 455 Wdg 16.2.97

1620 D 16.10.96

Recorded ***From*** The L & M. Deptt.

on Cuttack 12.2.97.

12/2/97. ***No.*** 226 L.

Dated 2-2-97.

Received 5.2.97

Enclosures 3 x (x 13 Plans)

Spare copies

I/ths B Cmb

SUBJECT.

Bridges

Ordering that in the circumstances stated the proposal to construct D 17/2/97 over the Varaha-nadi & Pambar must be abandoned for the present.

Copies to the J.S. VI circle

BACK PAPERS.

BACK PAPERS.

G.O.	No.	Department.	Date.

FURTHER PAPERS.

G.O.	No.	Department.	Date.

No. 174 Wd.

OFFICE OF THE SUPERINTENDING ENGINEER,
6TH CIRCLE,

Trichinopoly, 18th February 1896.

8/19-

FROM

W. Hughes Esquire
~~THE~~ SUPERINTENDING ENGINEER,
6th CIRCLE.

TO

THE CHIEF ENGINEER,
P. W. D.

Sent to T. J with Cir. 1303 m. 8.2.96

D. 212/96

Sent Separately per Packet Desk

SIR,

ENCLOSURES. 10.

With reference to G.O. No: 3127 W/ 15th December 1895, I have the honor to submit a complete estimate amounting to ~~Rs~~ 65,300 for bridging the Varahanadi below the Pambar junction and an approximate estimate amounting to ~~Rs~~ 1,27,100 for bridging the rivers on the line of the present road.

2. The arguments in favor of either proposal are stated in my letter No: 277 Wd. of 22 June 1895 which was

1. Estimate with re- port & data as complete. for Rs 65300
1. Bridge Plan
1. Lake Plan
1. Index Map.
1. Longitudinal Section above and below the Varahanadi & Pambar Junction.
3. Sheets of cross sections of — do — do —
1. Cross section of river showing the bridge & approaches.
1. Approximate estimate of ~~Rs~~ 1,27,100 for bridges across Varahanadi & Pambar

500—13 11-93.

Resolution

replied to in the Chief Engineer's No. 2608 C of 26 August 1895 in which the preparation of an estimate for a bridge below the junction was ordered. The design is in general accordance with the Chief Engineer's instructions except that the springing of the arches is put one foot lower and elliptic arches allowed as these block the waterway less than segmental arches and are nearly as easy to build while they look much better. The arched bridge is cheaper than an iron bridge of the same width of roadway and about the same cost as an iron bridge of 14 feet roadway.

3. The estimate for bridging the present road allows for bridges of the sizes stated in paras 5 & 6 of my letter quoted above. On this line arched bridges are practically impossible. The Executive Engineer has allowed for 18 feet width of roadway but it is questionable

whether this might not be reduced in the case of the two smaller streams to the width given in the standard plans viz 14 feet. The Varahanadi Bridge being in the town should be fully 18 feet.

I have the honour to be
Sir
Your most obedient Servant

W. Hughes.

Superintending Engineer
Madras

C.H.
17/9

BACK PAPERS.

P. W. CURRENT No. 174 Ind/96

P. W. D. 6th CIRCLE.

Encls: 26 (8 Plans)
Rec'd: 20-2-96

FROM

THE SUPERINTENDING ENGINEER,

6TH CIRCLE.

TO

THE CHIEF ENGINEER,

P.W.D.

No. 174 Ind

Dated 18
Received February 1896.

Enclosures. 10

Varahanadi Bridge
— Submitting write
remarks a complete
estimate with plans &c
for constructing the
— below Pambar
Junction &c.

I

For scrutiny

16/2/1896

Cross
21.2.96

[25]
5,000-3-11-96.

Local and Municipal Department,

PROCEEDINGS OF THE MADRAS GOVERNMENT.

READ the following papers—

From the Public Works Department, No. 1620 D, dated 16" October 1896, transferring note by the Chief Engineer regarding the bridging — the Varahanadi and Pambar.

From the President, District Board, Madura, Ref. on Cur. No 884/D.B., dated 16" January 1897.

With reference to endorsement No. 1265 dated 5" November 1896 of Government forwarding for remarks plans and estimate for the construction of a bridge over the Varahanadi at Periyakulam (herewith returned) I have the honour to forward herewith copy of District Board's resolution No. 199 dated 16" November 1896 and copy of letter No. 223 dated 23" December 1896 from the Chairman of Periyakulam Municipal Council enclosing resolution No. 203 dated 17" December 1896 of that Council.

2. The inconvenience caused by floods in the Varahanadi and Pambar is only temporary and very occasional, and the road itself is not of first rate importance. The bridge proposed is not a necessity but a luxury, and the money required for its construction would be far more usefully spent in repairing the roads. As for the town of Periyakulam it naturally desires that the two rivers should be bridged separately, but would be quite unable to contribute the differences in cost between the single and double bridge schemes. I beg to refer to the previous correspondence on the subject. Vide my letter No. 138 d/22-11-95.

(Enclosure)

Proceedings of the District Board, Madura, dated 16" November 1896.

Present:-

* * * Resolution

...CK PAPERS.

7

Resolution No. 199.

Read District Board's Proceedings No.68, dated 20" April 1896 regarding the subject of bridging the Varahanadi.

Also Endorsement of the Secretary to Government, No.1265 dated 5" November 1896, forwarding for early remarks in communication with the Periyakulam Municipal Council, two estimates with plans- one for Rs 65300 to Rs 71000 for the construction over the Varahanadi of a single bridge below its junction with the Pambar, and one for Rs 127100 to Rs 140000 for two bridges over the two rivers on the present line of road.

The Board considers that it is useless to discuss at length the merits of the single and double bridge proposals now as it is strongly of opinion that neither scheme should be undertaken until other more pressing needs of the District have been satisfied.

Proceedings of the Municipal Council, Periyakulam, dated 17" December 1896.

\+ \+ \+

No.203:- Read letter from the Superintending Engineer estimating the construction of a suspension bridge at about Rs.30,000.

Read also letter from the President, District Board, Madura, sending Endorsement of the Chief Secretary to Government for the remarks of the Council on the question of constructing bridges over the Varahanadi and the Pambar separately or one over both the rivers after junction.

The Council considers that 2 bridges - one over the Varahanadi and the other over the Pambar are quite necessary so far as the people in the town are concerned.

As a temporary measure the Council proposes to use ferry boats on baskets.

Copy of communication from the Chairman, Municipal Council Periyakulam, to the President, District Board, Madura, No.223/23-12-96.

I have the honour to forward copy of the resolution of the Council

8

Council No. 203/17-12-96 on the subject of bridging the Vara-hanadi and the Pambar and to inform you that the council is still of opinion that two bridges are necessary so far as the people of the Municipality are concerned. The two bridges may be both masonry or one masonry and the other a suspension bridge. In case two bridges are constructed the Municipality will contribute Rs 10000 already promised, and cannot afford to pay more. The plans and estimates received with your letter quoted above are returned separately, which please acknowledge the receipt of.

Order No. 226 L.Mis., dated 2" February 1897.

In the circumstances stated, the proposal to construct bridges over the Varahanadi and Pambar must be abandoned for the present.

(True extract)

Secretary to Government.

To

The President, District Board, Madura.

,, Chairman, Municipal Council, Periyakulam.

,, Public Works Department, with Enclosures in Cur. No.2875 L returned.

Rm

(E. No. 123.)

CIRCLE— VI

DIVISION— Madura

DISTRICT— Madura

SUPG. ENGINEER'S OFFICE
No.
15 FEB. 1896
P.W.D.
SIXTH CIRCLE.

TALUK (OR ESTATE IN CASE OF ESTATE WORKS.)
Paramakudi

ESTIMATE FORM.—Abstract.

Financial Head—

Budget Head—

Departmental Head— Original Works

Main Head—

Sub-Head—

Project of which
the work forms part—

Section—

Name of Work— Constructing Bridge across the Varagunady and Pamban Rivers at the present Roadway crossing at Paramakudi

Amount of Estimate, Rs.— 127,100-0-0

To be carried out by— 1.34 Sub

REFERENCES.

Enclo Pc 10 to S.E.6th Jc 18-2-96

Connected with
No. 455 W 7 16.2.97

O.C.S. D 9
1744/96
13/8/97

17
2873 W 96

ESTIMATE FORM.—Abstract.

Quantity.	Description of Work.	Rate.	Per	Amount	Total.
1	2	3	4	5	6
		Rs.		Rs.	Rs.
	Constructing a Proposed Girder Bridge across the Varaganady River			67380 ✓ 65000	
	Constructing a Proposed Girder Bridge across the Pambar River			42000 ✓ 37100	
	Constructing a Culvert across the Vary channel			16400 ✓	
	Forming Road way between Bridges			8600 ✓	
	Total Estimate Rs				134380 ✓ 127100

Grand Total of Estimate ... 134380 ✓ 127100

STATION ——————

Date 13-2-1896.

30,000—15-5-95.

A Joyce
Executive Engineer.
Madura Div.

(E. No. 123.)

CIRCLE— VI

DIVISION— Madura

DISTRICT— Madura

TALUK (OR ESTATE IN CASE OF ESTATE WORKS.)
Periakulam

ESTIMATE FORM.—Abstract.

Financial Head—

Budget Head—

Departmental Head—

Main Head—

Sub-Head—

Project of which the work forms part—

Section—

Name of Work— Forming Roadway between Bridges across the Varaganady and Pambar Rivers

Amount of Estimate, Rs.— 8600

To be carried out by—

REFERENCES.

Rs 8-7 10
1220/96
310/97

15
287-1896

ESTIMATE FORM.—Abstract.

Quantity.	Description of Work.	Rate.	Per	Amount	Total.
1	2	3	4	5	6
		Rs.		Rs.	Rs.
	Forming Road way between Bridges				
37922	Earthwork for forming the Roadway.	4-4-	1000 cft	1516	✓
15809	Metalling the Roadway	4-8-	100 cft	711	✓
10540	Gravelling do	2-4-	do	237	✓
	Railings at sides of Road	L.S		4000	✓
	Compensation for land including Temporary Compensation			1500	✓
	Contingencies at 4 p/c			318	✓
	Petty supervision at 4 p/c			318	✓
	Total Rs.			8600	✓
	Grand Total of Estimate ..			8600	✓

STATION

Date 13-2- 1896.

30,000—15-5-95.

Ajoyce
Executive Engineer.
Madura Dt.

ESTIMATE FORM.—Detail Measurements.

Detail of Work.	Number.	Measurements in Feet.			Area or Contents.	Total Quantity of each description of Work.
		Length.	Breadth.	Depth.		
1	2	3	4	5	6	7

N.E. 62"
~~1710/96~~
1310/97

19/2875 W/P

E. 120.
50,000—14-5-95.

ESTIMATE FORM.—Detail Measurements.

Detail of Work.	Number.	Measurements in Feet. Length.	Breadth.	Depth.	Area or Contents.	Total Quantity of each description of Work.
1	2	3	4	5	6	7
Forming Road pay & Approaches Bridges						
Earthworks						
From 230ft to 960ft approximately		cft			90572	
" 1440ft to 1700ft do		cft			47209	
" 2000ft to 3130ft do		cft			211341	
Total Earthworks		cft				349122
Metalling Road						
From 230ft to 960ft.	1	730	18	3/8	6427	
" 1440ft to 1700ft	1	260	18	3/8	1755	
" 2000ft to 3130ft	1	1130	18	3/8	7627	
Total Metalling		cft				15809
Gravelling Road						
From 230ft to 960ft	1	730	18	1/4	4205	
" 1440ft to 1700ft	1	260	18	1/4	1170	
" 2000ft to 3130	1	1130	18	1/4	5085	
Total Gravelling		Cft				10540
Railings at sides of Road		L.S			Rs	4000
Compensation for land including temporary Compensation					L.S	Rs 1800

Ajoyce
Executive Engineer
Madura Division

Ag

12
Rec'd
Checked
13/10/97

20/2/98

(E. No. 123.)

Circle— Madura

Division— Madura

District— Madura

Taluk (or Estate in case of Estate Works.)
Periakulam

ESTIMATE FORM.—Abstract.

Financial Head—

Budget Head—

Departmental Head—

Main Head—

Sub-Head—

Project of which the work forms part—

Section—

Name of Work— Culvert across the Vaigai channel: Constructing a

Amount of Estimate, Rs.— 1600 — —

To be carried out by—

REFERENCES.

ESTIMATE FORM.—Abstract.

Quantity.	Description of Work.	Rate.	Per	Amount	Total.
1	2	3	4	5	6
		Rs.		Rs.	Rs.
	B. F.			14737	
	Compensation for land			200	
	Contingencies at 5 %.			732	
	Petty Supervision at 5 %.			731	
	Total Rs				16400
	Grand Total of Estimate ..				16400

STATION

Date 13 - 2 - 1896

Executive Engineer.

30,000—15-5-95.

(E. No. 123.)

CIRCLE—

DIVISION—

DISTRICT—

TALUK (OR ESTATE IN CASE OF ESTATE WORKS.)

ESTIMATE FORM.—Abstract.

Financial Head—

Budget Head—

Departmental Head—

Main Head—

Sub-Head—

Project of which the work forms part—

Section—

Name of Work— Culvert

Amount of Estimate, Rs.—

To be carried out by—

REFERENCES.

ESTIMATE FORM.—Abstract.

Quantity.	Description of Work.	Rate.	Per	Amount	Total.
1	2	3	4	5	6
		Rs.		Rs.	Rs.
	Cut stone work in Cheek Coursing & Concreting a				
12237	Concrete (Broken stone in Surkhi mortar)	13-4-0	100 cft	1621	✓
2872	Coursed Rubble 2nd class set in Surkhi mortar for foundation	24-0	100 cft	689	✓
17709	do do in ordinary mortar for Superstructure	23-0	100 cft	4073	✓
110	Cut stone work	1-2-0	cft	124	✓
1482	Granite apron for flooring	8-12-0	100 cft	130	✓
6113	Rough stone work	6-0-0	100 cft	367	✓
1491	Gravel backing to Revetment	2-8-0	do	37	✓
329	Wood work for planking	3-12-0	cft	1234	✓
3000	Pointing	2-0-0	100 cft	60	✓
1701	Metalling Road way	4-8-0	100 cft	77	✓
1134	Gravelling do	24-0-0	100 cft	26	✓
78700	Forming approaches	4-0-0	1000 cft	315	✓
	Baling water	L.S		700	
8 Nos	Guard stones	2-0-0	Each	16	✓
71500	Excavating foundation	3-12-0	1000	268	✓
2 Nos	Main Iron Girders of wrought Iron Bowstring Type 44' long & Rise including Cost of Erection &c	1500-0-0	Each	3000	✓
10 Nos	Cross Girders 27' long	200-0-0	do	2000	✓
				14737	✓
	Grand Total of Estimate ..				

STATION _____

Date 13 - 2 - 1896.

A Joyce
Executive Engineer.
Madura Dt.

30,000—15-5-95.

ESTIMATE FORM.—Detail Measurements.

Detail of Work.	Number.	Measurements in Feet. Length.	Breadth.	Depth.	Area or Contents.	Total Quantity of each description of Work.
1	2	3	4	5	6	7
Cut stone work						
Coping of parapets	4	31	1 3/4	3/0	81	
do of pilasters	8	2	2	6/0	20	
Bed stone Below Girders	4	3	1/2	1/2	9	
Total of Cut stone				Cft		110
Granite apron for flooring						
Between Abutments	1	38	19/2	2	1482	
Total of Granite apron for flooring						Cft 1482
Rough stone						
Apron in front and Rear	2	41	10	2	1640	
Ch[illegible] Revetments do do	2	47	1/2	13	1833	
Bank Revetments in front & Rear	4	27/2	1/2	16	2640	
Total of Rough stone work					Cft	6113
Gravel Backing to Revetments						
1/3 of the Quantity of Revetments				Cft		1491
Wood work						
Planking						
Road way	1	43	19/2	3/8	329	
Total of wood work for planking					Cft	329
Pointing approximately			Sft			3000
Metalling Road way	1	252	18	3/8	1701	
Total of Cft						1701
Gravelling Road way	1	252	18	1/4	1134	
Total of Cft						1134
Forming approaches (approximately)					Cft	78700
Baling water L.S				Do		
Excavating foundation (approximately)					Cft	71500
Guard stones						8 Nos

21/2/1896 Asst

A Joyce
Executive Engineer
Madura Dt.

E. 120.
50,000—14-5-95.

ESTIMATE FORM.—Detail Measurements.

Detail of Work.	Number.	Measurements in Feet. Length.	Breadth.	Depth.	Area or Contents.	Total Quantity of each description of Work.
1	2	3	4	5	6	7
Culvert across the Vari Canal						
Constructing a						
Concrete pd Surkhi mortar						
Wing walls	2	36¼	10¼	6	4459	
do do	2	42½	10¼	6	5228	
Abutments	2	44½	5	6	870	
Retaining walls	2	35	4	6	1680	
Total Concrete pd Surkhi mortar cft						12237
Coursed Rubble stone 2nd Sort						
pd Surkhi mortar						
Foundation						
Wing walls	2	32¼	8¼	2	1064	
do do	2	40	8¼	2	1320	
Part of abutments	2	11½	7	2	184	
Retaining wall	2	38	2	2	304	
Total Coursed Rubble 2nd Sort pd Surkhi mortar cft						2872
Coursed Rubble 2nd Sort pd mortar						
Superstructure						
Wing walls	2	29½	5	18	5310	
do do	2	33¼	5	18	5986	
Abutments	2	24⅜	5⅝	18	4934	
do above	2	29	2	1⅝	180	
Blocking Course to wings	4	35	2	2	560	
Parapets	4	33	1/2	2⅝	551	
Projection to pilasters	8	2	½	2⅝	181	
Total Coursed Rubble 2nd Sort pd mortar cft						17709

(E. No. 123.)

Circle— VI

Division— Madura

District— Madura

Taluk. (or Estate in case of Estate Works.)
Periakulam

ESTIMATE FORM.—Abstract.

Financial Head—

Budget Head—

Departmental Head—

Main Head—

Sub-Head—

Project of which the work forms part—

Section—

Name of Work— Proposed Girder Bridge across the Varuhar River: Constructing a

Amount of Estimate, Rs.— 37100-0-0

To be carried out by—

REFERENCES.

14
Rs 5103
1760/56
1310/97

22
2875 Cft

ESTIMATE FORM.—Abstract.

Quantity.	Description of Work.	Rate.	Per	Amount	Total.
1	2	3	4	5	6
		Rs.		Rs.	Rs.
	B J			20000 ✓	
				15526	
6 Nos.	Main Ines Girders of Whipple Murphy Type 55 ft long 5ft Rise including Cost of Erection & Complete	2000-	Each	12000	✓
30 Nos.	Cross Girders 22½ long	200-	do	6000	✓
	Compensation for Lands			200	
				1900	✓
	Contingencies at 5 %			1687	
	Petty Supervision at 5 %			1902	✓
				1687	
				42000	✓
	Total Estimate Rs			37100	

Grand Total of Estimate .. 37100

Station

Date 13-2-1896.

C A Joyce

Executive Engineer.

Madura Div

30,000—15-5-95.

(E. No. 123.)

Circle—

Division—

District—

Taluk (or Estate in case of Estate Works.)

ESTIMATE FORM.—Abstract.

Financial Head—

Budget Head—

Departmental Head—

Main Head—

Sub-Head—

Project of which the work forms part—

Section—

Name of Work—

Amount of Estimate, Rs.—

To be carried out by—

REFERENCES.

ESTIMATE FORM.—Abstract.

Quantity.	Description of Work.	Rate.	Per	Amount	Total.
1	2	3	4	5	6
		Rs.		Rs.	Rs.
	Proposed Girder Bridge across the Pambar River Constructing a				
159·93	Concrete Broken stone in Surkhi mortar	13-4-	100	2119	✓
	Coursed Rubble 2nd Sort in				
91·75	Surkhi mortar for foundation	24-	do	2202	✓
	do in ordinary mortar				
268·48	for Superstructure	23-	do	6175	✓
664 3/8	Cut stone work	1-2-	cft	748	✓
100·04	Grouted apron for flooring	8-12	100	945	✓
82·93	Rough stone work	6--	do	498	✓
16·88	Gravel Facing to Revetments	2-8-	do	42	✓
15·53	Metalling Roadway on approaches	4-8-	do	70	✓
10·39	Gravelling do	2-4-	do	23	✓
11·93	Woodwork (teak) for planking	3-12-	cft	4474	✓
7·00	Pointing	2--	100	140	✓
93·250	Forming approaches	4--	1000	373	✓
110·000	Removing Sand from foundations	28--	1000	275	✓
	Excavating Trenches	L.S		1400	
8 Nos	Guard Stones	2--	Each	16	✓
	Baling water			1500	
	C.O			1552 6	
				20000	✓
	Grand Total of Estimate ..				

Station

Date 13 - 2 - 1896.

A Joyce

Executive Engineer.

Madura

30,000—15-5-95.

ESTIMATE FORM.—Detail Measurements.

Detail of Work.	Number.	Measurements in Feet.			Area or Contents.	Total Quantity of each description of Work.
		Length.	Breadth.	Depth.		
1	2	3	4	5	6	7

15
Measured
Checked
13/10/97

23/2/97 Checked

E. 120.
50,000—14-5-95.

ESTIMATE FORM.—Detail Measurements.

Detail of Work.	Number.	Measurements in Feet. Length.	Breadth.	Depth.	Area or Contents.	Total Quantity of each description of Work.
1	2	3	4	5	6	7
Grouted apron						
Between abutments and pier	3	49	24/2	3	10804	
Total flooring of grouted apron					Cft	10804
Rough stone work						
Apron	1	16½	10	2	3230	
Revetments	4	33¾	1/2	25	5063	
Total Rough stone					Cft	8293
Wood work						
Planking for Roadway	1	163/2	19/2	3/8	1193 3/32	
Total wood work					Cft	1193 3/32
Gravel backing to Revetments	1/3 of the above				Cft	1688
Metalling						
Approaches	1	230	18	3/8	1553	
Total cft						1553
Gravelling						
Approaches	1	230	18	1/4	1035	
Total cft						1035
Pointing approximately				cft		7000
Forming approaches do				cft		93250
Removing sand from foundation do				cft		110000
Excavating Trunches	L.S				Rs	200
Guard Stones	8					8 Nos
Baling water	L.S				Rs	1500
Main Truss Girders of principals						
Murphy Dryer 55' long 3 ft Rise						6 Nos
Cross Girders 22½ long						20 Nos
Compensation for Land			L.S		Rs	200

A Joyce
Executive Engineer
Mahiwalpur

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ESTIMATE FORM.—Detail Measurements.

Detail of Work.	Number.	Measurements in Feet. Length.	Breadth.	Depth.	Area or Contents.	Total Quantity of each description of Work.
1	2	3	4	5	6	7
13 0					0804	
Pier walls	2	24¾	2	3	291	
Total Rubble (Coursed) 2nd Sort in Superstructure					Cft	9178
Coursed Rubble 2nd Sort in Ordinary mortar Superstructure						
Wings R and Left	2	463/4	4 7/8	19	15514	
do do	2	37	4 7/8	19		
Abutments	2	20½	6 7/8	10	4520	
do above	2	23	2½	2	230	
Piers	2	26	5	20	5200	
Cutwaters	4	43/4	1/2	20	370	
Parapets	2	47	1/2	2578	659	
do	2	37½	1/2	2578		
Projection for the Pilasters	8	2	1/2	2278	181	
Total cft						26874
Deduct: Bed stone under Girders	6	53/4	1/2	1/2	26	
Total cft						26
Total Coursed Rubble 2nd Sort in Ordinary mortar less deduction					Cft	26848
Cut stone						
Bed stone	6	33/4	1/2	1/2	20	
Coping stone to parapets	2	43	13/4	3/8	1003/8	
do do	2	35½	1/4	3/8		
Blocking course	2	47	3	1	282	
do	2	37½	3	1	225	
Coping to pilasters	8	2½	2½	5/8	31¼	
Total Cut stone					Cft	6645/8

E. 120.
50,000—14-5-95.

ESTIMATE FORM.—Detail Measurements.

Detail of Work.	Number.	Measurements in Feet. Length.	Breadth.	Depth.	Area or Contents.	Total Quantity of each description of Work.
1	2	3	4	5	6	7
Constructing a Proposed Girder Bridge across the Vaigai River						
Concrete in surkhi mortar						
Left wing and abutment	1	114½	10¼	2	2347	
Retaining walls at Left End	2	27	4	2	432	
do wood	2	13½	4	3½	378	
do wood	2	13½	4	5½	594	
Retaining in the centre	2	18	4	7	1008	
do wood	2	12	4	8	768	
do wood	2	5	4	6¾	270	
do wood	2	6	4	5½	264	
Retaining wall at Rt End	2	63	4	4	2016	
Ditto	2	26	8	5	1040	
do	1	26	8	4	832	
Right wing and abutment	1	114½	10¼	4	4694	
Do walls	1	36	4	2	288	
do	1	31	4	4	496	
do	1	28¼	4	2	202	
do	1	25¼	4	4	404	
Total concrete cft						15993
Coursed Rubble 2nd sort in Surkhi mortar: Foundation Right and left wings and abutments	2	112½	8¼	3	5569	
Ditto	2	28¼	6	3	1017	
Retaining walls	2	16½	2	3	1938	
Do walls	2	30	2	3	360	
					8884	

(E. No. 123.)

Circle— VI

Division— Madura

District— Madura

Taluk (or Estate in case of Estate Works.)
Peraiyur

ESTIMATE FORM.—Abstract.

Financial Head—

Budget Head—

Departmental Head—

Main Head—

Sub-Head—

Project of which the work forms part—

Section—

Name of Work— Proposed Girder Bridge across Varaganady: Constructing a

Amount of Estimate, Rs.— 65000 — —

To be carried out by—

REFERENCES.

16
P.W.S.
Pt 4/96
13/10/97

24/2875 Pt 96

ESTIMATE FORM.—Abstract.

Quantity.	Description of Work.	Rate.	Per	Amount	Total.
1	2	3	4	5	6
		Rs.		Rs.	Rs.
	B. J.			35105 ✓ 32945	
	Baling water	L.S		2000	
34000	Sand filling	3-4	1000 ft	102 ✓	
8 Nos.	Main Cross Girders of whipple Murphy type (55' long & 11' deep) including Cost of Erection &c	2000	Each	16000 ✓	
4 Nos.	Cross Girders 27' long including Cost of Erection &c	200	do	8000 ✓	
	Compensation for Land			50	
					61257 ✓
	Contingencies at 5%			3062 ✓ 2953	
	Petty Supervision — Do			3061 ✓ 2950	6123
	Total Rs			65000	
					67380 ✓
					67380 ✓
	Grand Total of Estimate . .				65000

~160

STATION _____

Date _____ 189

A Joyce

Executive Engineer.

Madura 4th

30,000—15-5-95.

(E. No. 123.)

CIRCLE—

DIVISION—

DISTRICT—

TALUK (OR ESTATE IN CASE OF ESTATE WORKS.)

ESTIMATE FORM.—Abstract.

Financial Head—

Budget Head—

Departmental Head—

Main Head—

Sub-Head—

Project of which the work forms part—

Section—

Name of Work—

Amount of Estimate, Rs.—

To be carried out by—

REFERENCES.

ESTIMATE FORM.—Abstract.

Quantity.	Description of Work.	Rate.	Per	Amount	TOTAL.
1	2	3	4	5	6
		RS.		RS.	RS.
	Proposed Girder Bridge across the Vanganady: Contd a/c				
8083	Concrete Broken stone in Surkhi mortar	√ 13-4--	100 cft	1071	√
19587	Coursed Rubble stone 2nd sort in Surkhi mortar for foundation	21--	do	4101	√
44086	do in ordinary mortar for Superstructure	23--	do	10133	√
820	Cut stone work	√ 12--	Cft	923	√
33691	Granite ajaram for flooring	√ 8-12--	100 cft	2944	√
14885	Rough stone work	√ 6--	100 cft	903	
1502	Gravel backing	2-8--	do	38	√
1645½	Wood work for planking	3-12--	Cft	6171	√
2668	Metalling Roadway	4-8--	100 cft	120	√
1779	Gravelling do do	2-4--	do	40	√
8500	Pointing	√ 2-0-0	100 cft	170	√
143000	Forming approaches	√ 4--	1000 cft	572	√
143000	Removing Sand for foundations	√ 2-8--	1000	358	√
	Excavating Pump Well	L. S		510	
18 Nos	Wells 4' diar 8' deep	94--	Each	1692	√
14 Nos	do 5½' diar 8 deep	66-8	Each	931	√
69 Nos	do 5½' diar 4' deep	62--	do	4278 2268	
8 Nos	Guard stones	2--	do	16	√
	60			32340	
				35105	

Grand Total of Estimate ..

STATION

Date 13-2-1896

A Joyce

Executive Engineer.

Madura Div

30,000—15-5-95.

ESTIMATE FORM.—Detail Measurements.

Detail of Work.	Number.	Measurements in Feet.			Area or Contents.	Total Quantity of each description of Work.
		Length.	Breadth.	Depth.		
1	2	3	4	5	6	7

17
8583
1310/97

25/2875 1454

18 Nos
1/2
30

(3)

E. 120.
50,000—14-6-95.

ESTIMATE FORM.—Detail Measurements.

Detail of Work.	Number.	Measurements in Feet. Length.	Breadth.	Depth.	Area or Contents.	Total Quantity of each description of Work.
1	2	3	4	5	6	7
Guard stones						8 Nos
Baling water	L.S				Rs	
Sand filling between Rubble arches				cft		34000
Main Truss Girders of pin & nipple Murphy type 55' long & Rise						8 Nos
Cross Girders 27' long						40 Nos
Compensation for land	L.S				Rs	50

Asonye
Executive Engineer
Madras Division

ESTIMATE FORM.—Detail Measurements.

Detail of Work.	Number.	Measurements in Feet. Length.	Breadth.	Depth.	Area or Contents.	Total Quantity of each description of Work.
1	2	3	4	5	6	7
Rough Stone work						
Apron up	1	263	10	2	5300	
do below	1	254	10	2	5080	
Revetments up	1	48½	1½	33	2401	
do below	1	42½	1½	33	2104	
		Total Rough stone			cft.	14885
Gravel backing 1/3 of the quantity for the Revetments	cft.					1502
Woodwork						
Planking to Roadway	1	225	19½	3/0	1645½	
		Total planking			cft.	1645½
metalling at both ends	1	395	10	3/0	2668	
		Total metalling			cft	2668
Gravelling do	1	395	10	¼	1779	
		Total Gravelling			cft.	1779
Pointing approximately	cft.				—	85·00
Forming approaches to	(Approximately)				cft	143000
Removing sand for foundations	do				cft	143000
Excavating Subsoil	L.S				Rs	50
Wells						
Below pers 7 dia 8 deep						10 Nos
Below left abutment 5½ dia 8 deep						14 Nos
Below retaining walls 5½ dia 7 deep						69 Nos

(2)

E. 120.
50,000—14-6-95.

ESTIMATE FORM.—Detail Measurements.

Detail of Work.	Number.	Measurements in Feet. Length.	Breadth.	Depth.	Area or Contents.	Total Quantity of each description of Work.
1	2	3	4	5	6	7
B.J. Total cft						44343
Deduct						
Ends of pers & abutments	8	7	2½	1¾	245	
do stone below girders	8	7	1½	½	42	
Total deduction cft						287
Total Coursed Rubble stone in mortar less deduction cft						44056
Cut stone						
Below girders	6	7	1½	½	32	
	4	3½	1½	½	11	
do parapets	2	37	3	1	222	
	1	46	3	1	138	
	1	36	3	1	108	
Coping to parapets	2	33½	1¾	⅜	43	
	1	42	1¾	⅜	28	
	1	32	1¾	⅜	21	
Coping to Continuation of parapet	2	150	1¾	⅜	197	
do to pilasters	8	2	2	5/8	20	
Total Cut stone cft.						820
Grouted apron for flooring						
Between abutments	1	222	52½	3	34965	
Remainder below stream (Left)	1	23½	12	3	846	
do up stream (Right)	1	28½	4¼	3	1197	
Total cft.						37008
Deduction: Cutwaters	6	7	¼	3	180	
Spaces occupied by pers	3	40	6	3	2160	
Below stream at Rt.	1	12	17	3	270	
up the stream at Left	1	17	6½	3	332	
Triangular portions of abutments	2	11½	5¾	3	397	
Total cft.						3317
Total flooring less deduction cft.						33691

ESTIMATE FORM.—Detail Measurements.

Detail of Work.	Number.	Measurements in Feet. Length.	Breadth.	Depth.	Area or Contents.	Total Quantity of each description of Work.
1	2	3	4	5	6	7
B.J.					19230	
Retaining wall below stream	1	27/2	2	3	1632	
Total Rubble stone (Coursed 2nds set)						19387
in Surki mortar for foundation cft.						20062
Coursed Rubble stone in mortar 2nd set						
Superstructure						
Wing walls left side	1	46½	47/0	19	4307	
	1	33	47/0	19	3057	
do Right side	1	18½	47/0	19	1572	
	1	14¾	47/0	19	1366 ~~5004~~	
Portion of abutments	2	21½	6/0	19	5004	
do above	2	31½	2½	1¾	276	
Piers	3	31½	5	20¾	9764	
Cutwaters	6	7	1¼	19	990	
Continuation of wing walls	2	10	4½	16	2592	
	2	50	4/0	12¾	4257	
	2	50	3¾	9½	3563	
	2	50	3¼	6¼	2031	
	~~2~~	~~60~~	~~27/0~~	~~3~~	~~862~~	
Blocking Course over wings	2	37¼	2	1	149	
	1	46¼	2	1	93	
	1	36¼	2	1	73	
Parapets	2	37	1½	2/0	292	
	1	46	1½	2/0	181	
	1	36	1½	2/0	142	
Continuation of Blocking course	2	150	2	2	1200	
do of parapets	2	200	1½	2/0	1578	
Projection of pilasters	8	2	½	2/0	181	
Total						44343

E. 120.
50,000—14-5-95.

ESTIMATE FORM.—Detail Measurements.

Detail of Work.	Number.	Measurements in Feet. Length.	Breadth.	Depth.	Area or Contents.	Total Quantity of each description of Work.
1	2	3	4	5	6	7
Proposed Girder Bridge over the aforesaid Construction Concrete in Surkhi mortar						
Wings left side	1	41½	10¼	6	2530	
	1	27¾	10¼	6	1707	
Retaining walls up the stream	1	36	4	7	1008	
	1	24¼	4	5	485	
	1	22	4	5	440	
do do below the stream	1	31	4	7	868	
	1	40¾	4	5	815	
	1	10½	4	5	210	
Total Concrete in Surkhi mortar cft.						8083
Rubble stone (Coursed 2nd & 3rd sort) in Surkhi mortar						
Foundation						
Wings left side	1	47¾	8¼	2	788	
	1	33¼	8¼	2	549	
Part of left abutment	1	21½	8¼	2	355	
Piers and Cutwaters	3	40	6	2	1440	
Portion of Right abutment	1	21½	8¼	6	1264	
Wings Right side	1	16	8¼	6	792	
	1	21½	8¼	6	1264	
do in Continuation	2	10	7½	6	1620	
	2	50	6¾	5¼	3544	
	2	50	6	4½	2700	
	2	50	5	3¾	1875	
	~~2~~	~~50~~	~~4¼~~	~~3~~	~~1275~~	
Retaining wall up the stream	1	294	2	3	1764	
		60				

18
Chk'd C.P.
5 to 56
13/10/97

26/2875 Cft

Grouted Apron

50 cft of Concrete pi Surkhi mortar at 13¼ per 100 cft	6	10	-
50 cft of Loosely packed dry rubble work at Rs 4 per 100 cft	2	-	-
Sundries	-	2	-
Total Rs	8	12	-

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Bt Major

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a Joyce
Executive Engineer
Madura Division

Cut stone work

Cut stone including cartage from a distances of 5 miles	1	2	-
Total Rs	1	2	-

Sinking wells

Well external dia 5'6" & 8' deep

90 cft of Brick pi Surkhi mortar at Rs 20 per 100 cft	10	-	-
100 cft of Concrete pi Surkhi mortar at Rs 13¼	13	4	-
Sinking &c Complete	20	-	-
Curb Ring &c	15	4	-
Total Rs	66	8	-

Well external dia 5'-6" & 7' deep

79 cft of Brick pi Surkhi mortar at Rs 20 per 100 cft	16	-	-
88 cft of Concrete pi Surkhi mortar at Rs 13¼ per 100 cft	12	-	-
Sinking &c Complete Rs	19	-	-
Curb Ring &c	15		
Total Rs	62	-	-

Well external dia 7' & 8' deep

109 cft of Concrete pi Surkhi mortar at Rs 13¼	25	-	-
110 cft of Brick pi Surkhi mortar at Rs 20 per 100 cft	24	-	-
Sinking &c Complete	25	-	-
Curb Ring &c	20		
Total Rs	94	-	-

Well external dia 5' & 6' 8" mean depth

59 cft of Concrete pi Surkhi mortar at Rs 13¾	8	-	-
61 cft of Brick pi Surkhi mortar at Rs 20	12	-	-
Sinking &c Complete	18		
Curb Ring &c	13		
Total Rs	51		

Data

Particulars		Amount		
Concrete pr Surkhi mortar				
Materials				
110 cft Broken Stone 1½" gauge at Rs 2.8.– per 100 cft		2	12	–
1½ miles cartage for do at Rs 1.–.– per 100 cft		1	10	6
20 cft. lime at 2 as 6 ps per cft		3	2	–
1 mile cartage for do at 2 as 6 ps per mile		–	2	6
20 cft of Sand		–	2	–
20 cft of Surkhi at Rs 6 ps per cft		1	14	–
	Total Rs	9	11	–
Labour Labour and Sundries		3	9	–
	Total Rs per 100 cft	13	4	–
Coursed Rubble 2nd sort pr Surkhi Mortar				
Materials				
120 cft of Stone at Rs 5.–.– per 100 cft at quarry		6	–	–
5 miles Cartage at Rs 1.4.– per mile		6	4	–
16 cft of Lime at 2 as 6 ps per cft		2	8	–
1 mile Cartage for do at 2 as per mile		–	2	–
16 cft of Sand		–	1	6
16 cft of Surkhi at 2 as per cft		2	–	–
	Total Rs	16	15	6
Labour Labour and Sundries		7	–	6
	Total Rs	24	–	–
Coursed Rubble 2nd Sort pr ordinary mortar Same as above minus the Cost of Surkhi		22	–	–
Scaffolding charges		1	–	–
	Total Rs	23	–	–

19
Rs 2.8
taken
13/10/97

27
2.8.0

The road between the Varahanadi and the Pambar are liable to submergence during heavy floods. It is therefore proposed to raise the road above the flood level and construct a skew bridge (45°-0") of 40 feet span to discharge the flood water likely to be dammed up by the proposed road.

The girders &c will be of the same type as for the other two bridges.

The work will be carried out in accordance with the Standard Specifications.

A. V. Ramalingam.
Assistant Engineer

a joyce
Executive Engineer
Madura Division
13-2-1896

of 4-50 feet spans giving a length of about 442 ft waterway on the square. The left wing wall and three of the spans of the bridge, will be built on well foundations, hard sub-soil being met with at a considerable depth below the bed; while the remaining span and the right wing wall will be built on Kankar. At right bank the road will be carried between retaining walls for a length of about 190 feet from the abutment to avoid the difficulty of procuring earth & the heavy compensation for houses. River sand will be used for filling in between the retaining walls.

The girders will be of Whipple Murphy's type design, depth being $\frac{1}{10}$th of the clear span (50 feet). The Cross girders will rest on the bottom boom at each point where the diagonal and Vertical bars meet it & on them 4½" planks will be laid. The roadway will be about 18 feet 3 ft. broad. No details are drawn for the girder and only approximate costs are allowed in the estimate.

2. Bridge across the Pambar.

For the reasons stated above the Pambar bridge will also be built in the line of the existing road at a skew of about 30°. It will be of 3 spans of 50 feet giving a length of about 130 feet waterway on the square.

The foundations will be carried down to Kankar level as showed in the plan accompanying. The girders &c will be of the same type as for the Varahanadi bridge.

3 and 4. Culverts across the Vari Channel & forming Roadway.

Report to accompany the Estimate for Constructing Girder Bridges across the Varahanadi and the Pambar Rivers at the present road Crossing near Periyakulam.

Amount of Estimate Rs. 127,100

An Estimate amounting to Rs 71300 was submitted for bridging the Varahanadi River below its junction with the Pambar & forming a road Connecting the Bridges with the Cummaya-naikkanur Uthamapolliam road.

In G. O. No 3127 dt 5.12.95 an estimate was called for for bridging the two rivers at the present road Crossing. The present alternative Estimate has accordingly been prepared, and provides for the following works.

1. Constructing a girder Bridge across the Varahanadi River.
2. -D°- Across the Pambar.
3. -D°- Across the Vari Channel
4. Forming roadway Connecting the 3 bridges with the existing road on either side.

1. Bridge across the Varahanadi River.

As the river cannot be crossed at right angles without extremely sharp curves in the approaches, which would make the bridge awkward, it is proposed to Construct a skew bridge (45° of

Office 20
Survey
1310/97

6

List of Plans accompanying S.E. 6 Circle No: 206 Dtd. 28/29 February 1896: —

1. Survey of the Varahanadi river about the road crossing at Periyakulam (1 Sheet)
2. Survey of river Pambar about the road crossing near Periyakulam (1 Sheet)
3. Plan of proposed Girder Bridge across Varahanadi near Periyakulam (1 Sheet)
4. Plan of proposed Girder Bridge across Pambar near Periyakulam (1 Sheet)
5. Proposed Girder Bridge across the Vari Channel (1 Sheet).
6. Longitudinal Section of road along present road showing level of Girder Bridge (1 Sheet)

A Srinivasa Pillay
Head Clerk
29-2-96.
Superintending Engineer's office
6th Circle

29/2.

P. W. CURRENT No. 2442 /3.

Ends 7(6 Cir
Recd: 2.3.96

P. W. D. 6th CIRCLE.

FROM

THE SUPERINTENDING ENGINEER,
6TH CIRCLE.

TO

THE CHIEF ENGINEER,
P. W. D.

No. 206 md

Dated 28th / 29 } February 1896
Received

Enclosures. /-

Bridging the present Road near Periyakulam: —

Submits 6 plans connected with the rough estimate for —

28/2/96

I.

For scrutiny in connection with the estimate already received from the SE

CE
3.3.96

Ex

C.M. 1310/97.

OFFICE OF THE SUPERINTENDING ENGINEER,

6TH CIRCLE.

No. 206 md.

Trichinopoly, 28th February 1896.

5 29/-

FROM W. Hughes Esquire,

~~THE~~ SUPERINTENDING ENGINEER,

6th CIRCLE.

TO

THE CHIEF ENGINEER,

P.W.D.

SIR,

ENCLOSURES
1 List (Plans sent by Parcel Post).

I have the honour to forward 6 plans connected with the rough estimate for bridging the present road Pariyakulam, submitted with my letter No: 174 md. dated 18th February 1896.

cms 1710 sent by Post 21/2

I have the honour to be
Sir.
Your most obedt Servant.
By order
A Srinivasa Pillay
Head Clerk.
for Superintending Engineer
W Circle

29/2

PLAN No 1
SHEET No 1

INDEX MAP

SHOWING VARAHANADI AND PAMBAR RIVERS

ABOVE AND BELOW ROAD CROSSING

Scale 16" to 1 Mile

1000 500 0 1000

Wet Lands

PULAN KOLAM

Varahanadi

To Kodaikanal

Pambar

Traveller's Bungalow

To Ammayanaikanur

A

A'

TOLL GATE

Burning Ground.

Rest House
W.L 18
@ M.F.L 910·10

B.M. Bottom of Rest House
910·18

Varahanadi

B.M. on Top of Parapet Wall of Culvert
913·84

Varahanadi

B.M. on Top of Parapet Wall of Culvert
916·84

TE FOR
BRIDGE

wet Lands

To Uthamapaliyam

Proposed Culvert 10' span

Rev. Noyes Bungalow.

11°13'

M.F.L 911·10

@ N.G.L M.F.L
910·00

PROPOSED BRIDGE

Varahanadi

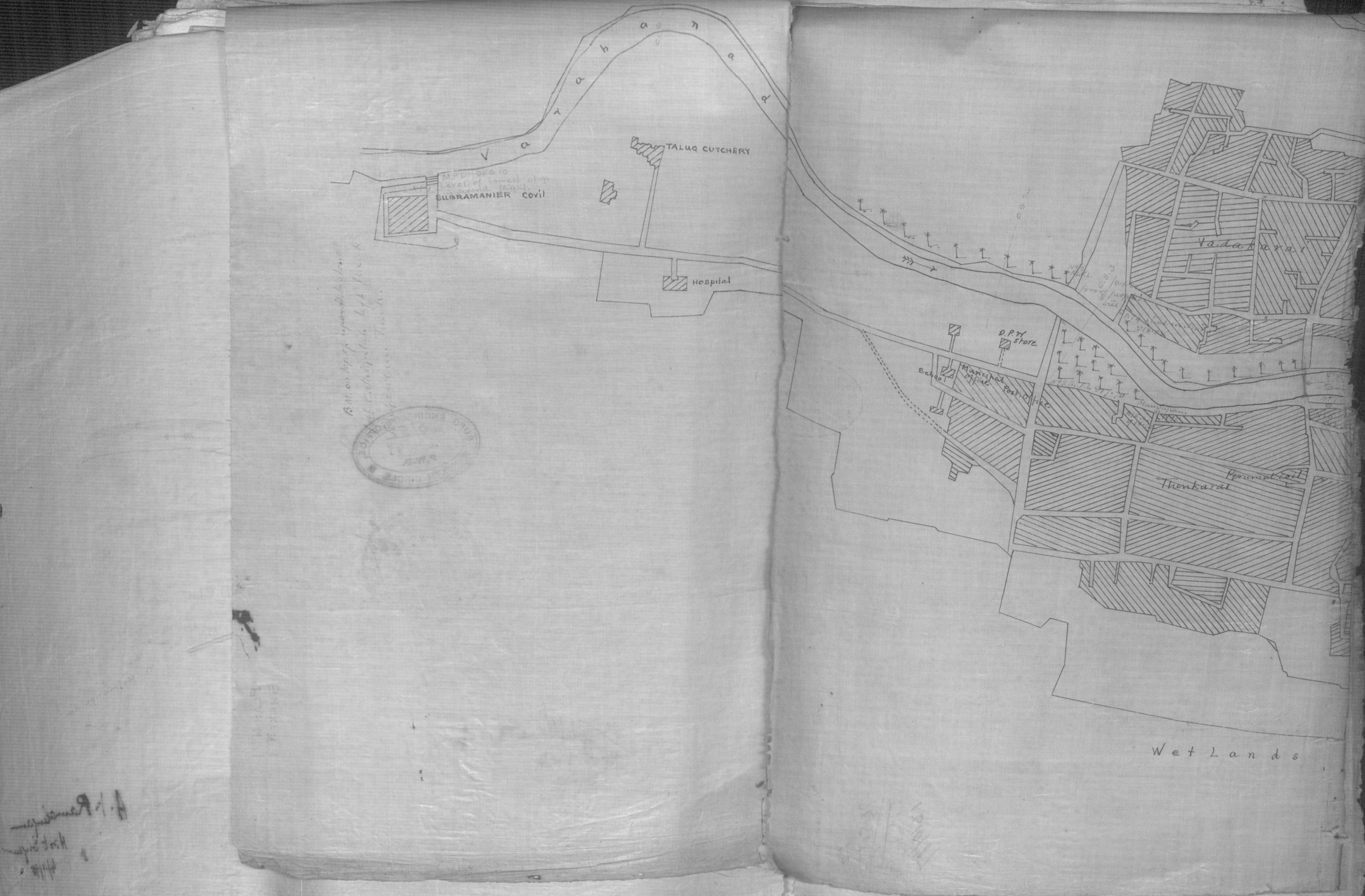
B.M. on D.S. above Coping Brick 900·44

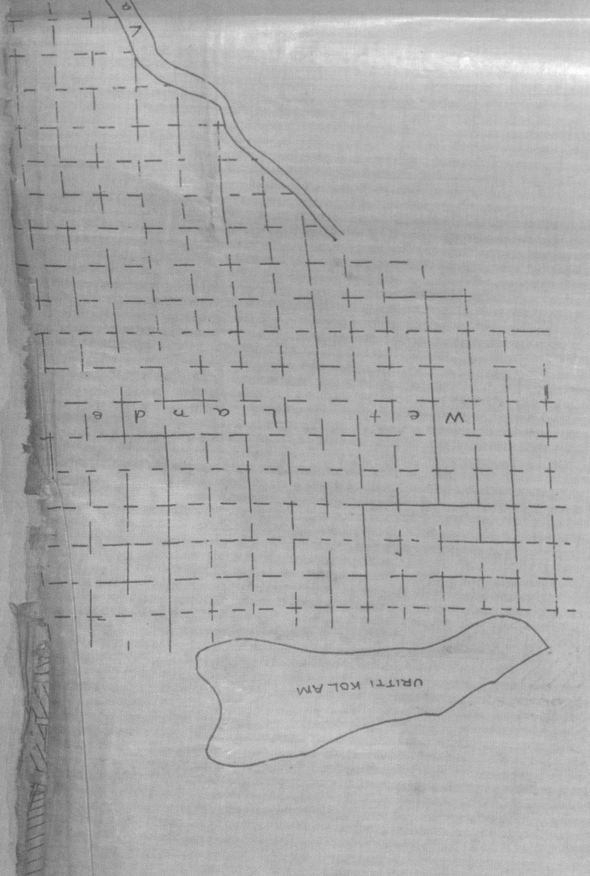
To Melmangalam

W. Hastings.
SUPG ENGINEER.
VI CIRCLE.
18-2-96

EXECUTIVE ENGINEER
MADURA DIVISION
16-2-96

A. V. Ramalingam
Asst Engineer
4/11/95


TALUQ CUTCHERY
SUBRAMANIER Covil
Hospital
P.W.D. store
School
Municipal Office
Post Office
Vadakarai
Thenkarai
Wet Lands



To Uthamapalayam

SUPd ENGINEER
VI CIRCLE
18-2-96

EXECUTIVE ENGINEER
MADURA DIVISION
16-12-95

A. P. Ramalingam
Asst Engineer
4/11/95

PLAN No 1
SHEET No 1

The Proposed Road and Bridge across Varahanadi. river

Plan showing the site of

Scale 1/1000

100 50 0 100 200 300 400 500

PROPOSED CULVERT. Not marked Site Report

PROPOSED ROAD TO

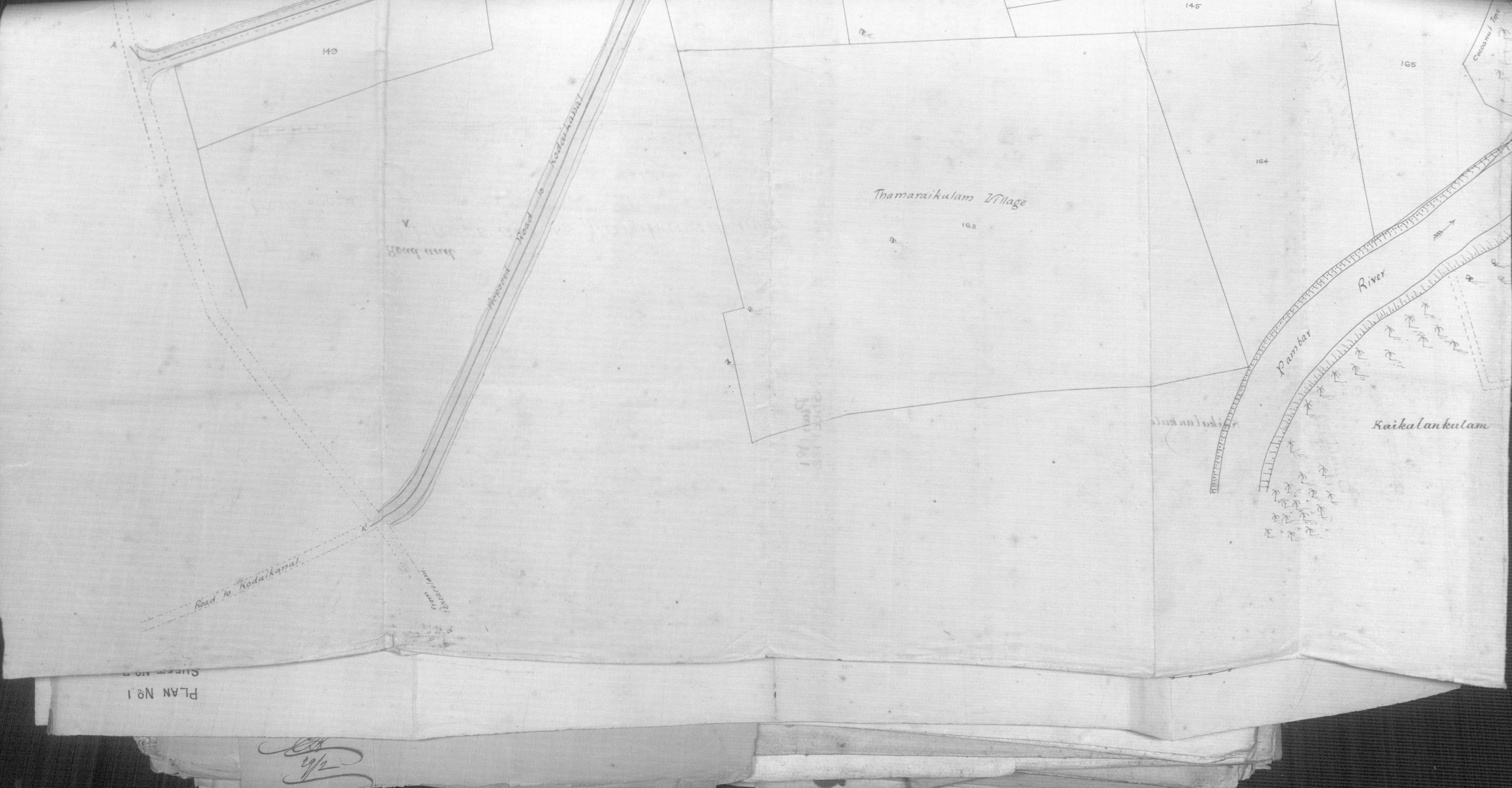
Proposed Culvert

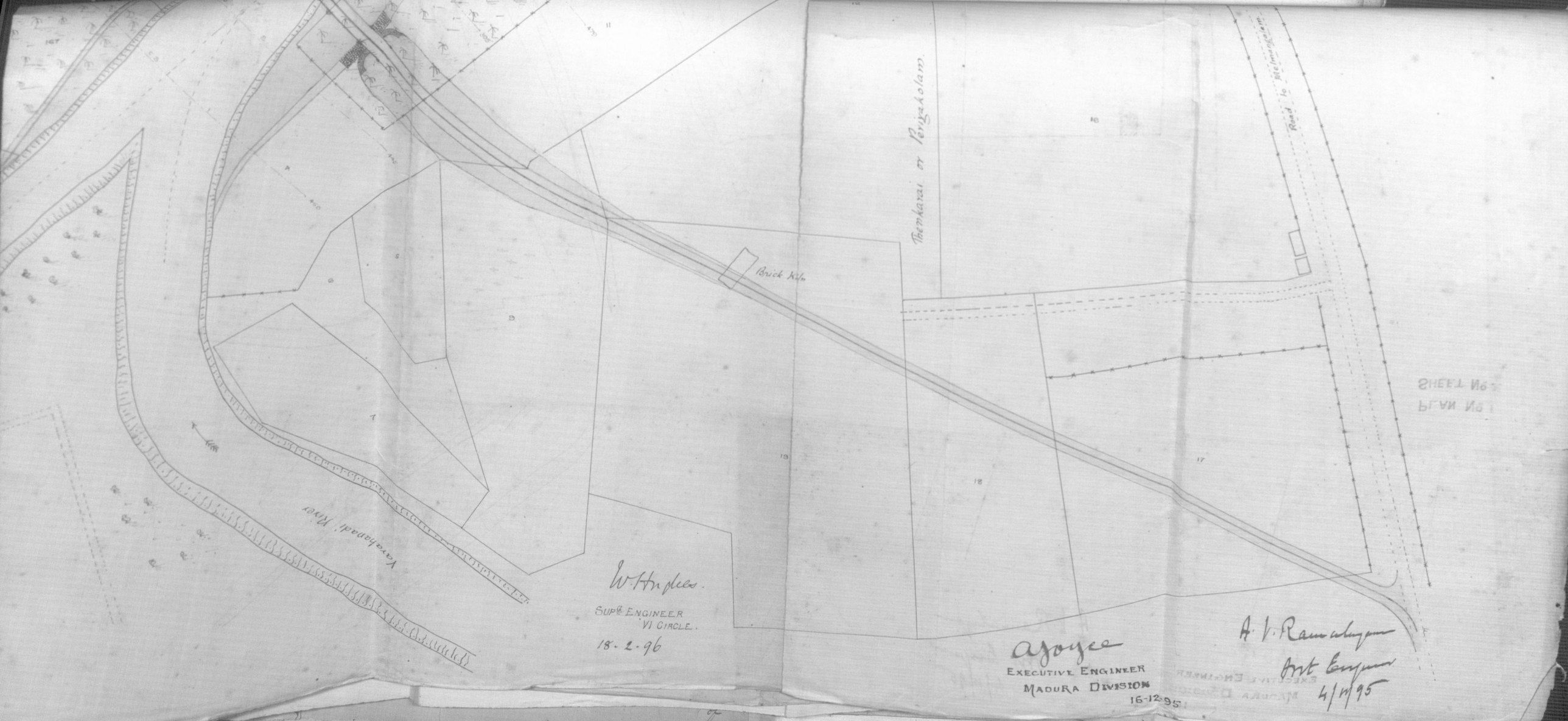
Road to Anjayam

142

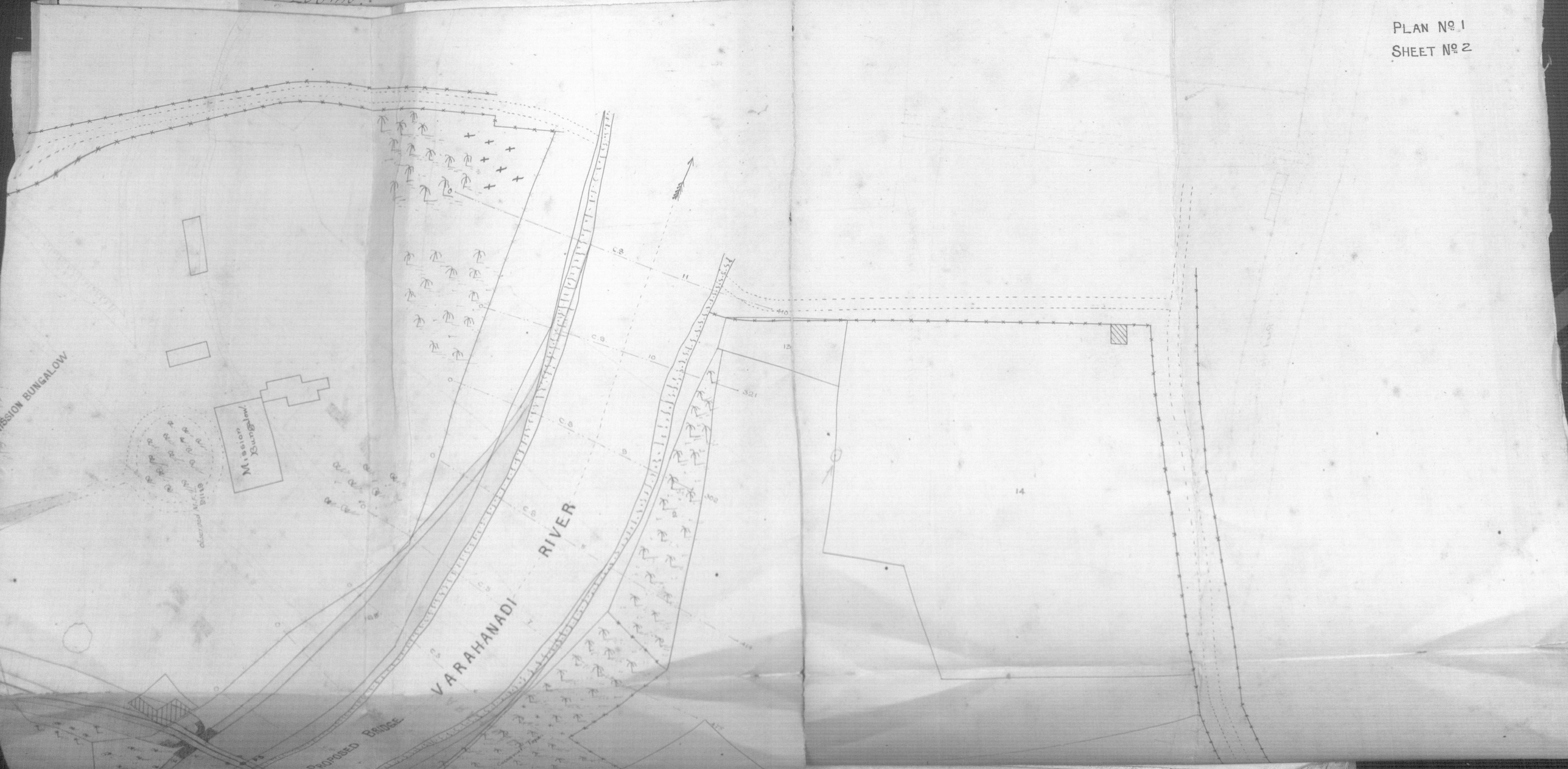
143

144


149
145
165
164
163
Thamaraikulam Village
Proposed Road to Kodaikanal
Road to Kodaikanal
River
Pambar
Kaikalankulam


Brick Kiln
Vaigai River
Road to Melamangalam
W. Hughes.
Supg. Engineer
VI Circle.
18-2-96
Executive Engineer
Madura Division
16-12-95
A. V. Ramalingam
Asst Engr
4/11/95

PLAN No. 1
SHEET No. 2



1200 — 899·23 — 896·92

1100 — 898·63 — 896·60

DATUM 8.60.0.D

3300 — 899·78

Present crossing of main road
B.M. on top of parapet of culvert 91076

3200 — 899·52

Observed W.P.L. 91618 Level of Rest-house for Planters at Rajamantrikudi west of main road.

3100 — 899·25

Observed W.P.L. 91260 Level of Step of house at crossing of Middle road

3000 — 899·25

2900 — 899·26

2800 — 898·92

BED OF VARAHA NADY RIVER

2700 — 898·66

2600 — 898·80

2500 — 898·83

2400 — 898·52

OBSERVED F.L. IN THE VARAGHANADY RIVER

Present crossing of main road
B.M. on floor Southern side Travellers Bungalow 9.19.91

℄ OBSERVED F.L. IN THE PAMBAR RIVER
℄ —— Do —— Do —— IN THE VARAGHANADY RIVER

BED FALL 5·5' PER MILE

BED FALL 12' PER

PAMBAR LEVELS

2300	2200	2100	2000	1900	1800	1700	1600	1500	1400	1300												
898·29	897·92	897·65	897·90	900·64	898·10	900·58	898·00	900·76	897·64	899·90	897·50	899·28	897·36	899·24	897·36	898·93	897·39					

1100 ---898.63 – 896.60---

1000 ---898.26 – 896.42---

900 ---898.38 – 896.55---

800 ---898.10 – 896.20---

700 ---897.71 – 896.25---

600 ---897.98 – 896.35---

500 ---897.73 – 896.33---

400 ---897.56 – 896.30---

300 ---897.23 – 896.05---

200 ---896.46 – 896.10---

BED OF VARAHANADY RIVER

BED FALL 5.5' PER MILE

BED OF PAMBAR RIVER

BED FALL 12' PER MILE

LONGITUDINAL SECTION OF VARAHANADY AND PAMBAR ABOVE AND BELOW JUNCTION.

HORIZONTAL SCALE $\frac{1}{1000}$
VERTICAL —— Do —— $\frac{1}{100}$

Observed M.F.L. 910·66
Land of mound in lake at right of line

Junction of Varahanady and Pambar rivers
Observed M.F.L. 911·19
Level of ground in front of Mission Bungalow

911·25

PROPOSED SITE FOR BRIDGE
B.M. on demarcation right side 902·39

OBSERVED M.F.L. IN THE VARAGHANADY RIVER BELOW

BED FALL 6·4' PER MILE.

C.S. № 1	C.S. № 2	C.S. № 3	C.S. № 4	C.S. № 5	C.S. № 6	C.S. № 7	C.S. № 8	C.S. № 9	C.S. № 10	C.S. № 11				
896·40	896·33	896·02	896·13	896·10	896·04	896·02	895·82	895·70	895·51	895·40				
896·16	896·33													
100	0	100	200	300	400	500	600	700	800	900				

CM 1310/97

N° 1 SHEET N°

JUNCTION

BED FALL 6·4 PER MILE

1100 — 895·26

1200 — 895·04

1300 — 894·93

1400 — 894·86

1500 — 894·39

1600 — 894·36

1700 — 894·50

1800 — 894·06

1900 — 894·50

2000 — 894·28

2100 — 893·75

PLAN Nº 2
SHEET Nº 1

JUNCTION

RIVER BELO

C.S.Nº 11

2.00	2300	2400	2500	2400	2700	2800	2900	3000	900
895·00	893·70	893·22	893·18	893·20	893·05	892·90	892·78	892·65	895·40

EXECUTIVE ENGINEER
16-12-95 MADURA DIVISION

A. V. Ramalingam
Asst Engineer
4-11-95

PLAN No. 3

Plan No 2
Sheet No 1

Sixth Circle
Madura Division

24
Oss 97
1310/97

Longitudinal Section of Varaha-
nadi & Pambar Rivers above and
below the junction.

10/267 Sch/Gk

Encls No 5 to S.E.C. No ——
18.2.96

PLAN No. 3
SHEET No. 1

Plan No - 3
Sheet No - 1

25
Dupl
1310/97

Varahanadi River

L.S. Section at the site of proposed bridge and road.

11
28/5/96

Encls No 9 to S.E. 6th No 18-2-96

900	915·23	0	917·55
850	915·19	30	917·31
800	914·79	80	916·11
750	914·27	130	915·48
700	914·05	180	915·19
650	914·28	230	914·89
600	913·98	280	914·63
550	913·56	330	914·39
500	913·69	380	914·14
450	913·95	430	914·31
400	913·83	480	914·01
350	913·91	530	913·72
300	913·36	580	913·67
250	912·90	630	913·64
200	912·77	680	913·47
150	912·25	730	912·69
100	911·60	780	912·02
50	912·02	830	911·55
0		880	910·65
		930	910·08
		980	909·44

LEFT FLANK

1 IN 330

A
917·50

CENTRE OF ROAD LEADING TO AMMAYANAIKAN

B.M. ON FLOOR, SOUTHERN SIDE,
TRAVELLERS BUNGALOW 919·91

1 IN 100

1 IN 275

RIGHT FLANK

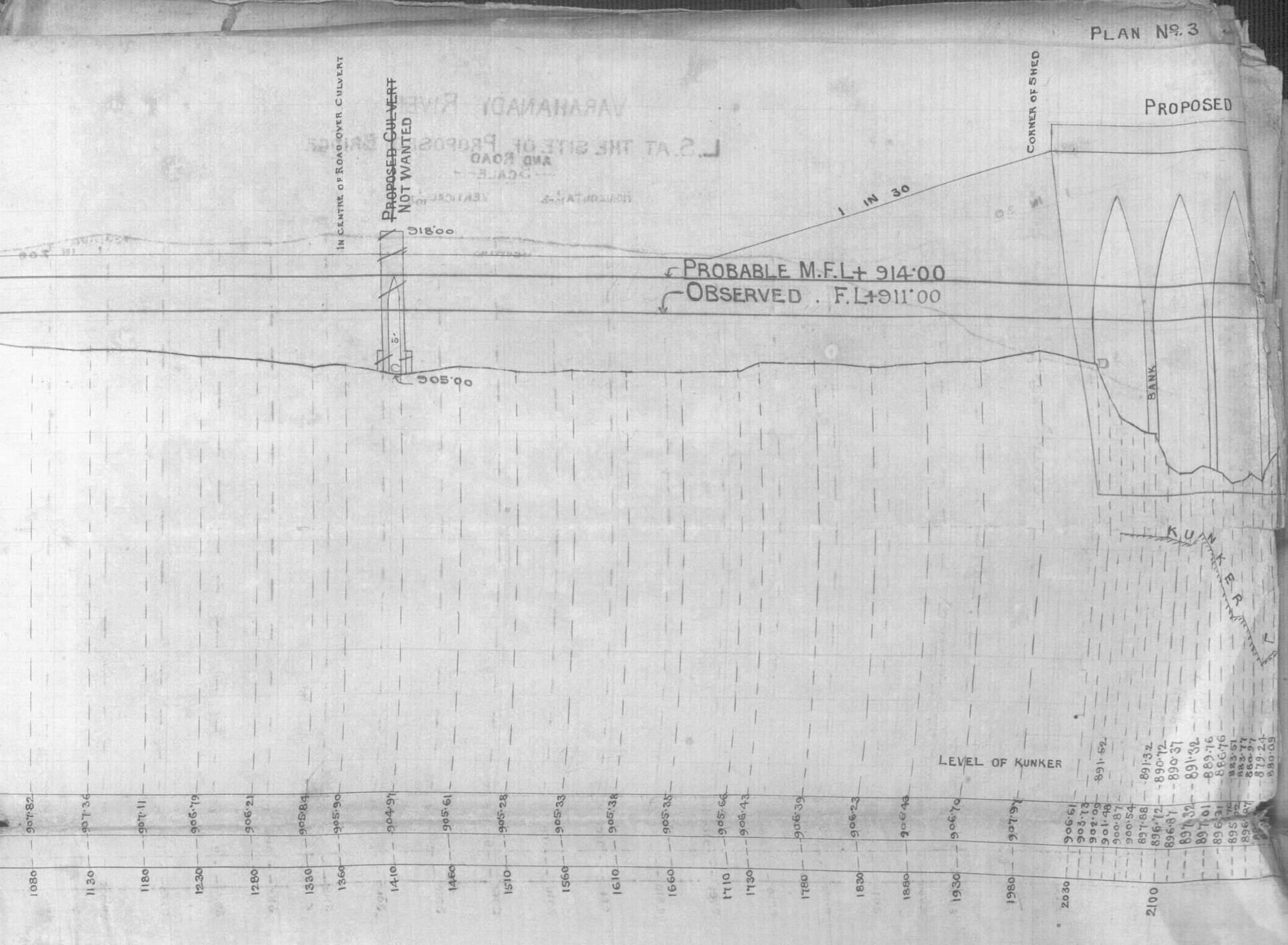
914·00

1 IN 100

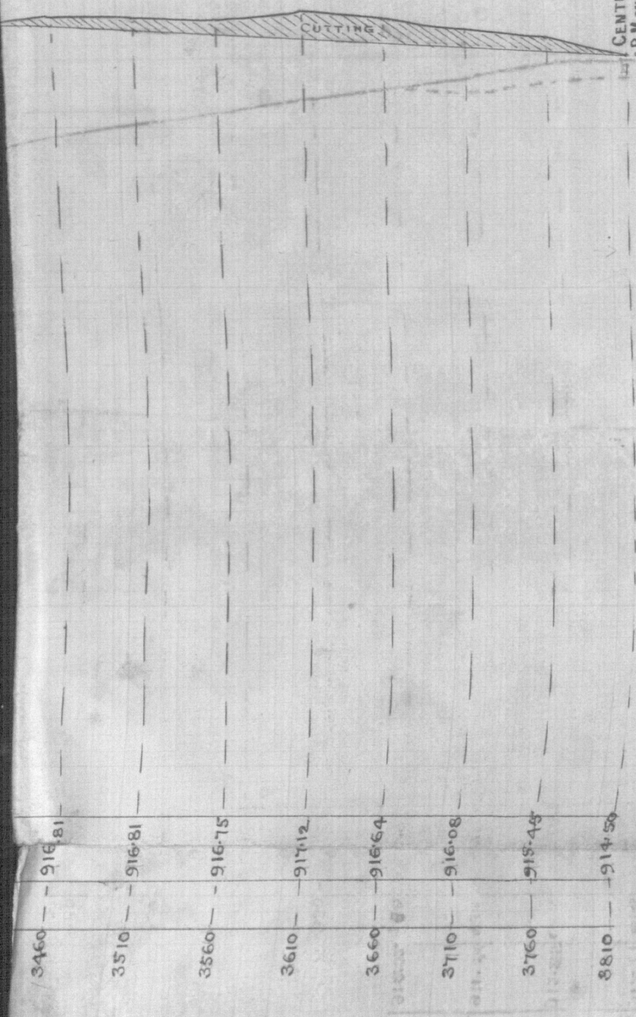
B

916·00

PLAN No. 3


PROPOSED CULVERT NOT WANTED
IN CENTRE OF ROAD OVER CULVERT
918·00
905·00
PROBABLE M.F.L+ 914·00
OBSERVED . F.L+911·00
1 IN 30
CORNER OF SHED
PROPOSED
BANK
KUNKER
LEVEL OF KUNKER
1080 1130 1180 1230 1280 1330 1360 1410 1460 1510 1560 1610 1660 1710 1730 1780 1830 1880 1930 1980 2030 2100
907·82 907·36 907·11 905·79 906·21 905·84 905·90 904·97 905·61 905·28 905·33 905·38 905·35 905·66 906·43 906·39 906·23 906·48 906·79 907·97 906·61 903·13 902·09 901·48 900·87 900·54 897·88 896·72 896·87 891·32 891·01 889·76 886·76 883·51 883·77 886·97 879·24 880·09
891·52 891·32 890·72 890·37 891·32 889·76 886·76 883·51 883·77 886·97

PLAN No 3
SHEET No 1



W. Hughes
SUPG ENGINEER.
VI CIRCLE.
18-2-96

A V. Ramaswamy
Asst Engineer
4-11-95

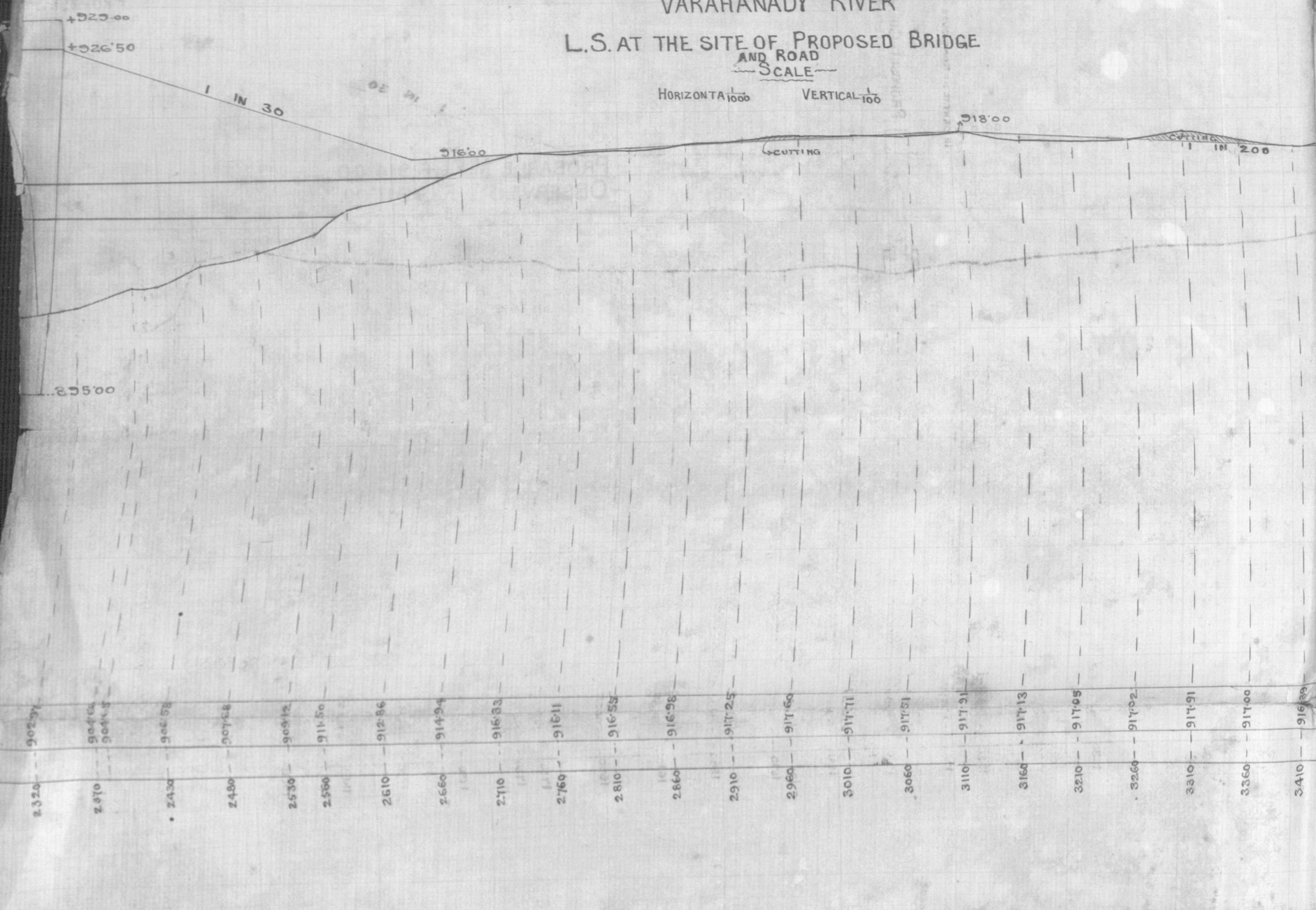
EXECUTIVE ENGINEER
MADURA DIVISION
16-12-95

VARAHANADY RIVER

L.S. AT THE SITE OF PROPOSED BRIDGE AND ROAD

SCALE

HORIZONTAL 1/1000 VERTICAL 1/100



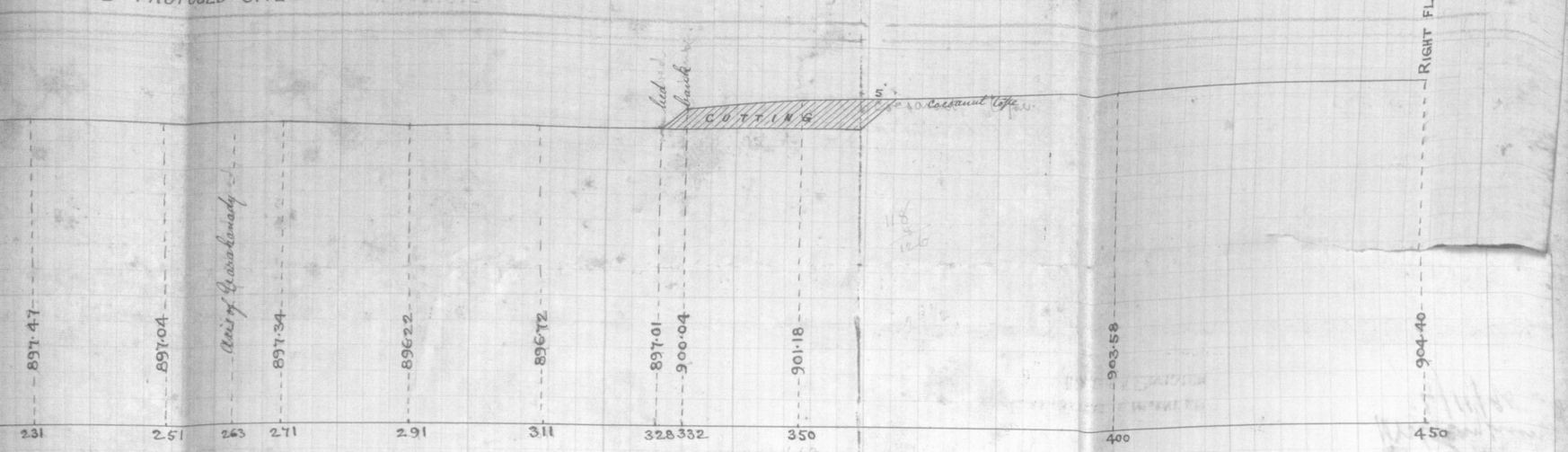
C/R. 1310/47

NADY RIVER ABOVE AND BELOW JUNCTION.

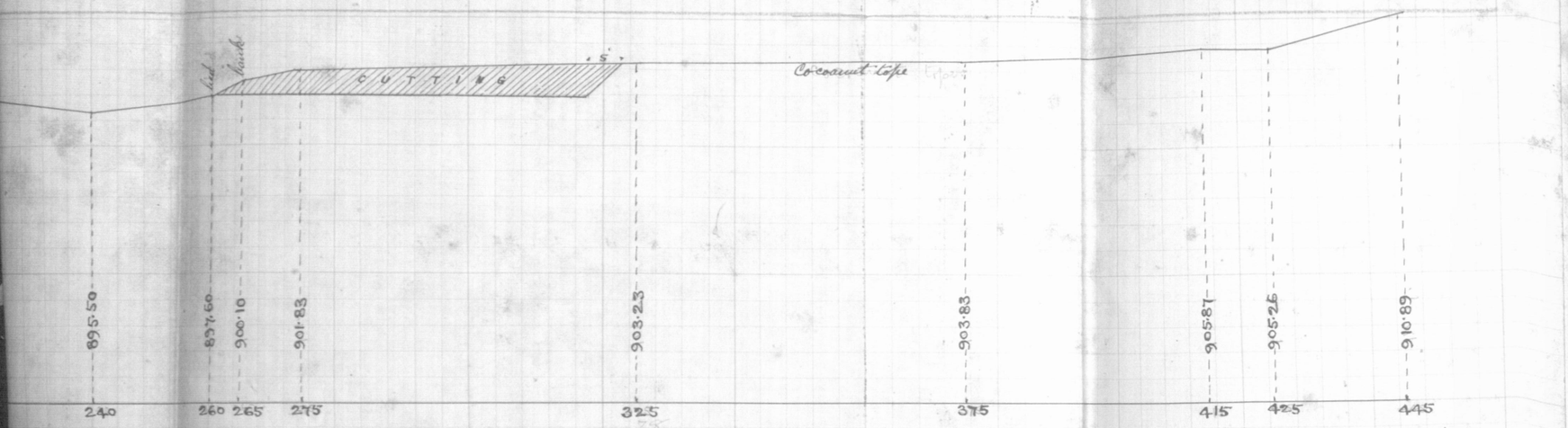
SCALE $\frac{1}{200}$ NATURAL

PLAN Nº 4
SHEET Nº 1

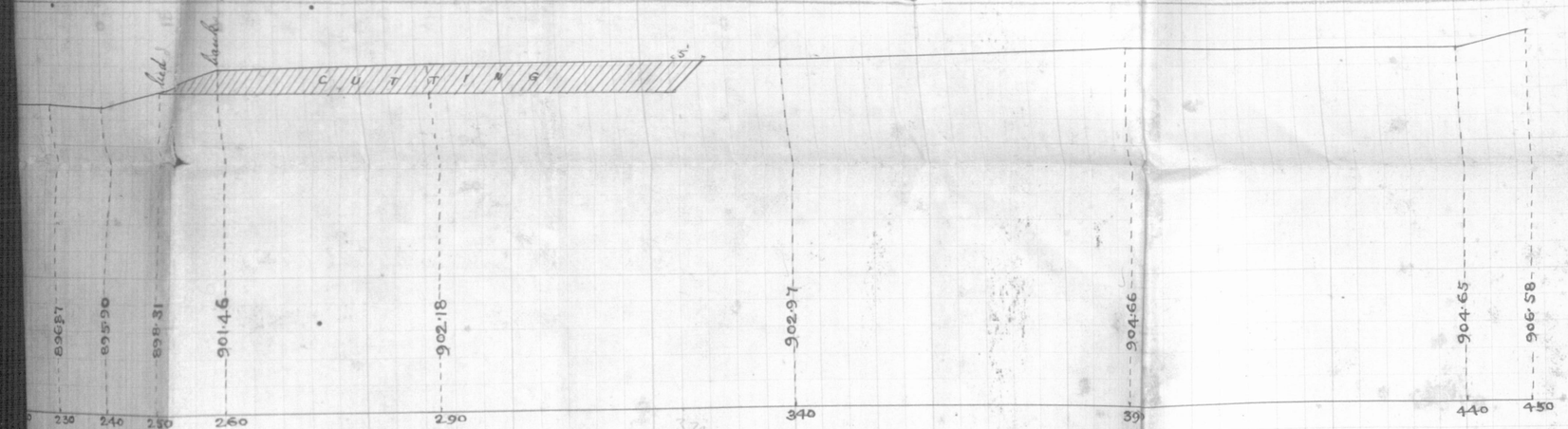
2.00' ABOVE PROPOSED SITE



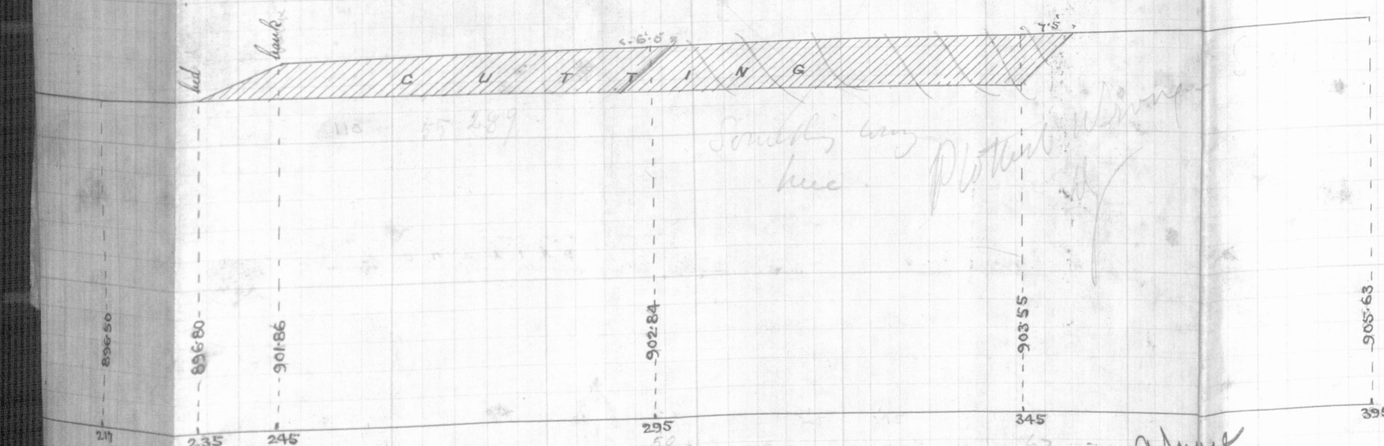
100' ABOVE PROPOSED SITE



PROPOSED SITE



OW PROPOSED SITE



EXECUTIVE ENGINEER
MILDURA DIVISION
16-12-95

A. J. Ramsbottom
4/11/95

CROSS SECTIONS OF VAR

C.S. No 1

+914·24
+911·24

897·71
897·93
904·29
904·10
+850·00
903·61
904·51
907·79
LEFT FLANK

C.S. No 2

+914·12
+911·12

897·41
898·03
897·73
897·51
898·52
902·27
903·42
903·87
906·36
907·52

C.S. No 3 AT TH

+914·00
+911·00

896·02
895·76
896·31
897·01
897·32
896·87
896·76
897·88
900·54
900·87
901·48
902·09
903·73
906·61
907·97

C.S. No 4 100' BEL

+913·88
+910·88

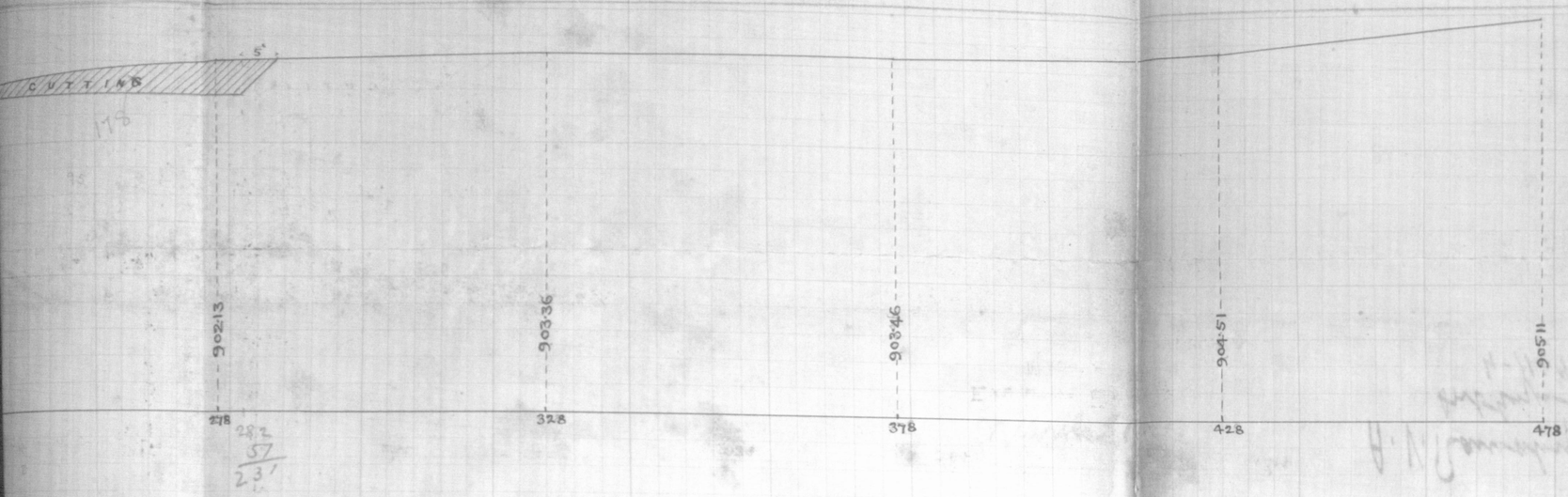
896·41
896·25
896·78
898·92
899·91
901·72
902·49
904·40
907·87
910·33
909·37
+850·00

5 (CONTINUED)

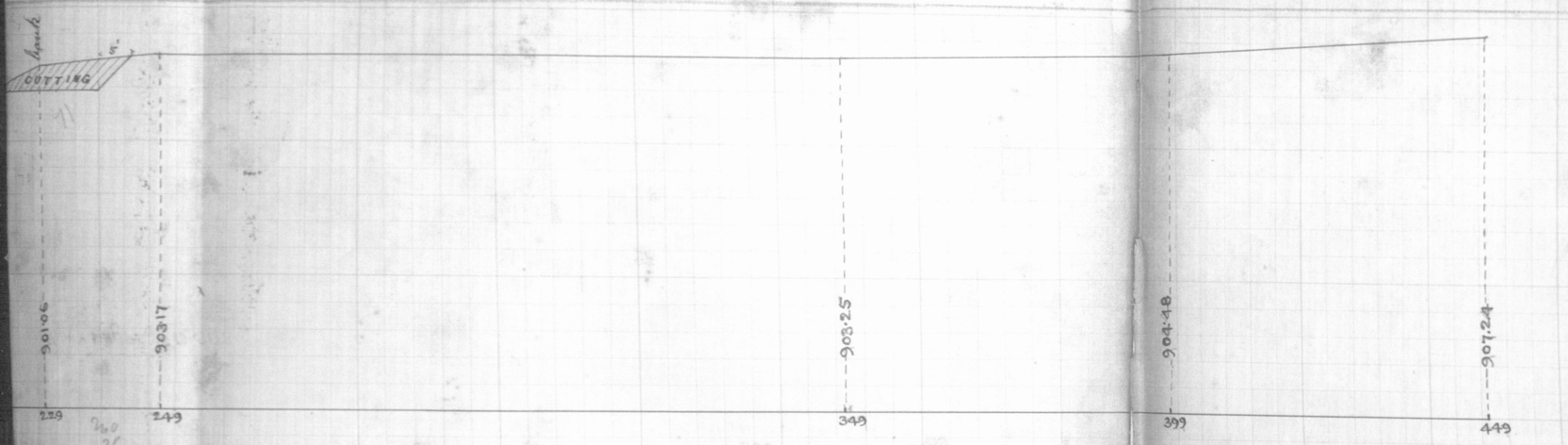
1/200

PLAN Nº 4
SHEET Nº 2

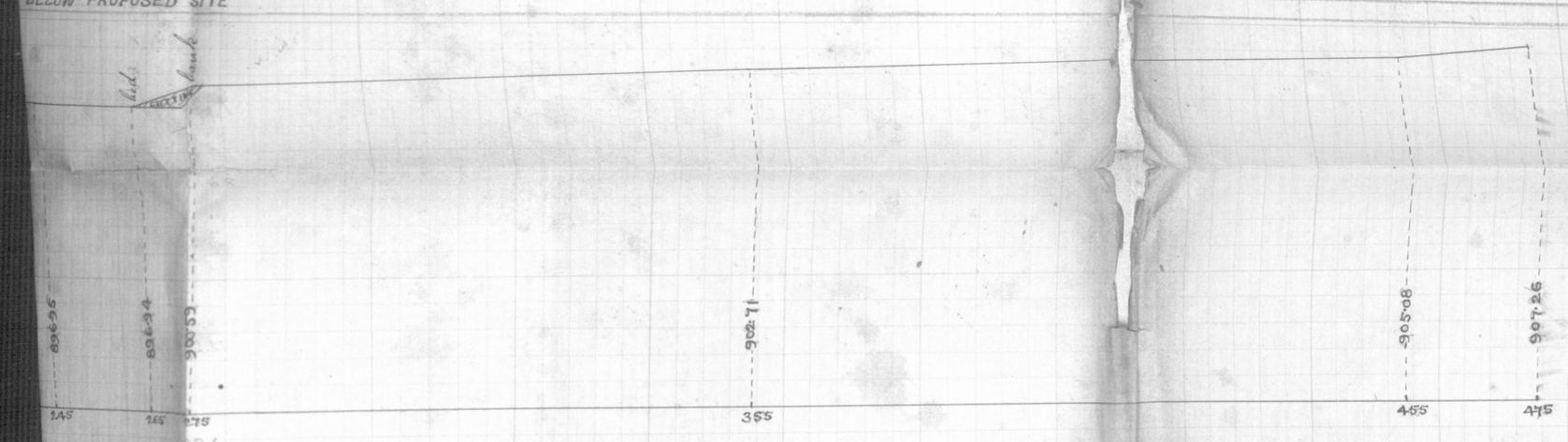
0' BELOW PROPOSED SITE



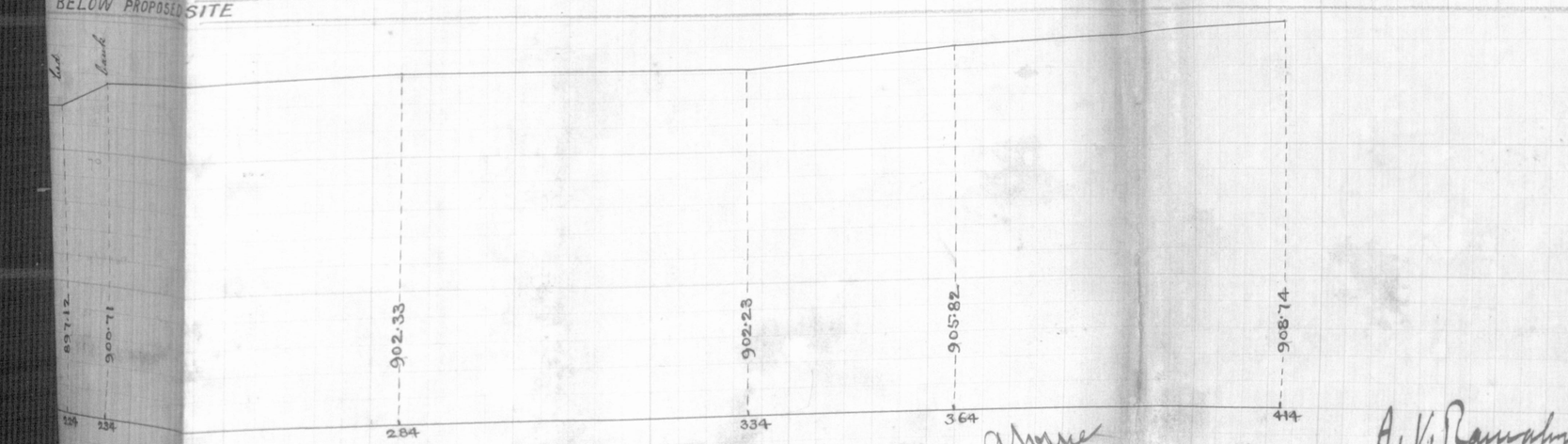
BELOW PROPOSED SITE



BELOW PROPOSED SITE



BELOW PROPOSED SITE



A. Joyce
EXECUTIVE ENGINEER
MADURA DIVISION
16-12-95

A. V. Ramachandran
Asst. Engineer
4-1-95

CROSS SECTIO

SCA

C.S.№ 5 AT 2

+913.76
+910.76

C.S.№ 6 AT 300

+913.64
+910.64

C.S.№ 7 AT 40

+913.52
+910.52

C.S.№ 8 AT 500

+913.40
+910.40

+850.00

CUTTING

CUTTING

CUTTING

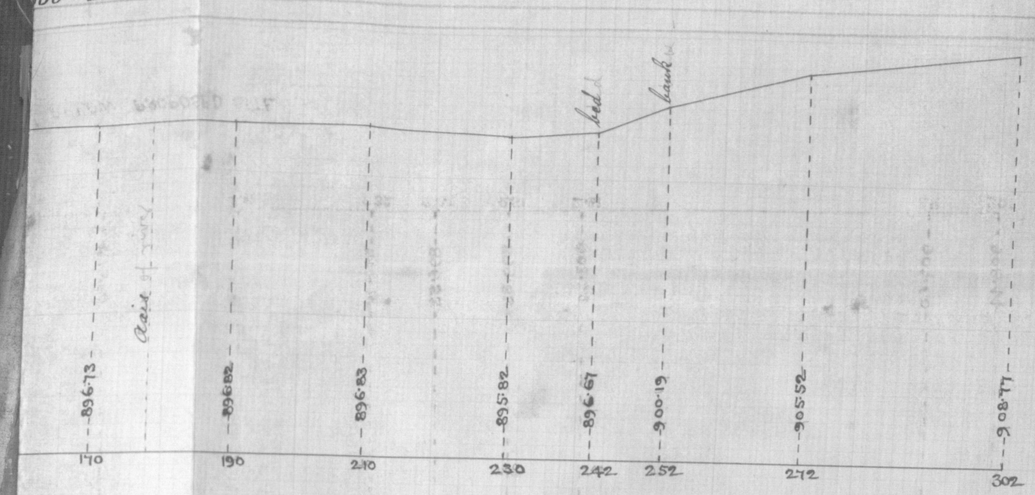
CUTTING

NS (CONTINUED)

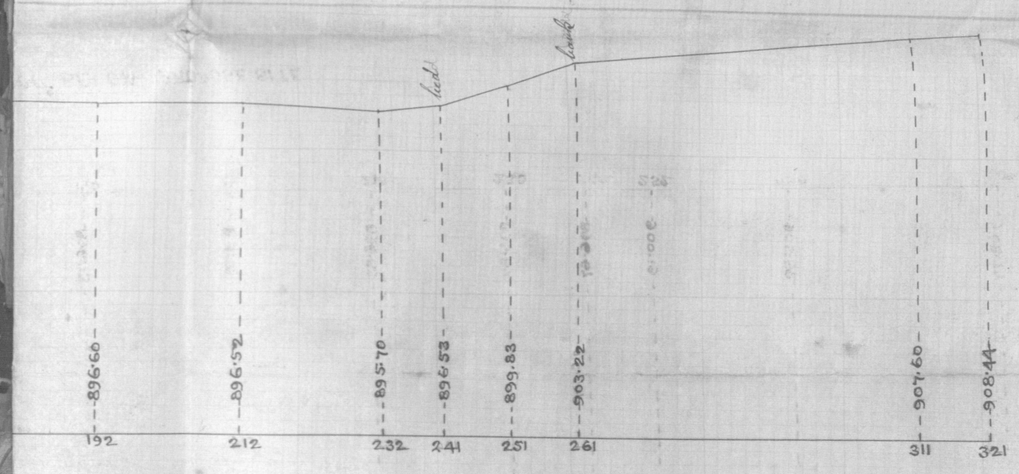
LE 1/200

PLAN Nº 4
SHEET Nº 3

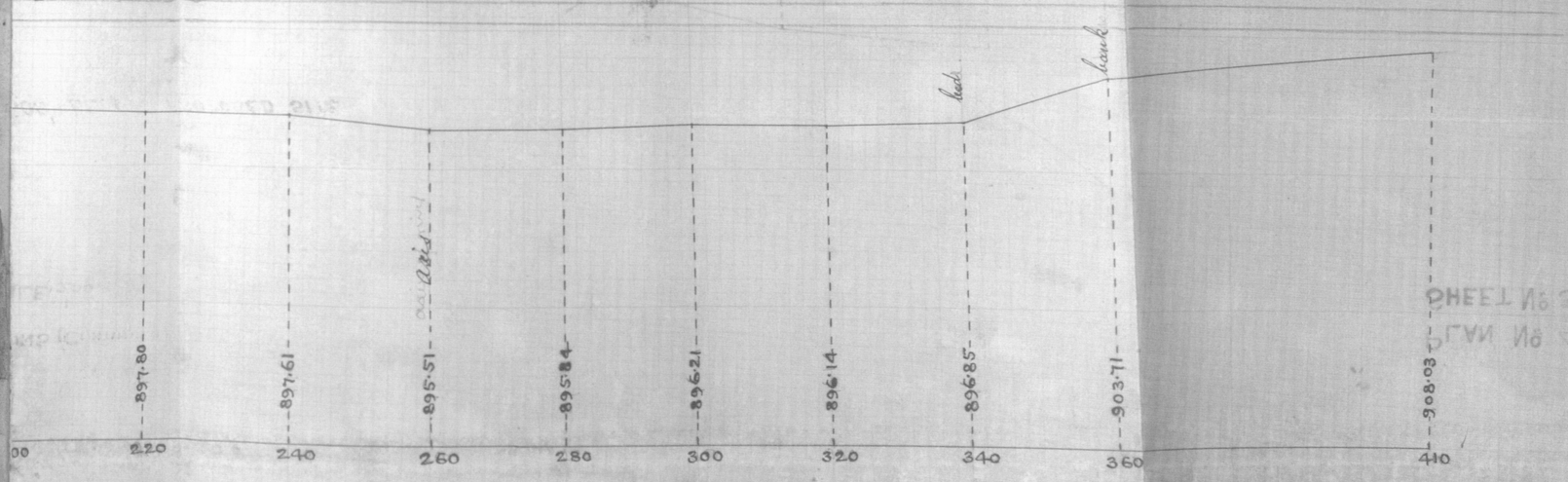
00' BELOW PROPOSED SITE



00' BELOW PROPOSE SITE



' BELOW PROPOSED SITE



A. J. Joyce
EXECUTIVE ENGINEER
MADURA DIVISION
16-12-95

A. V. Rumsbyn
Asst Engineer
4/1/95

W. Hughes
SUPG ENGINEER
VI CIRCLE.
18-2-96

+850.00

0 — 908.27

50 — 907.27

100 — 904.03

160 — 901.72

175 180 — 900.80 bank

898.24 bed

C.S. No. 11 AT 80 +913.04 +910.04

+850.00

0 — 907.32

10 — 905.41

60 — 902.73

101 112 — 899.11 bank

897.80 bed

132 — 897.31

152 — 897.43

172 — 897.42 Axis

C.S. No. 10 AT +913.16 +910.16

+850.00

0 — 908.17

10 — 906.52

60 — 903.27

100 — 900.70 bank

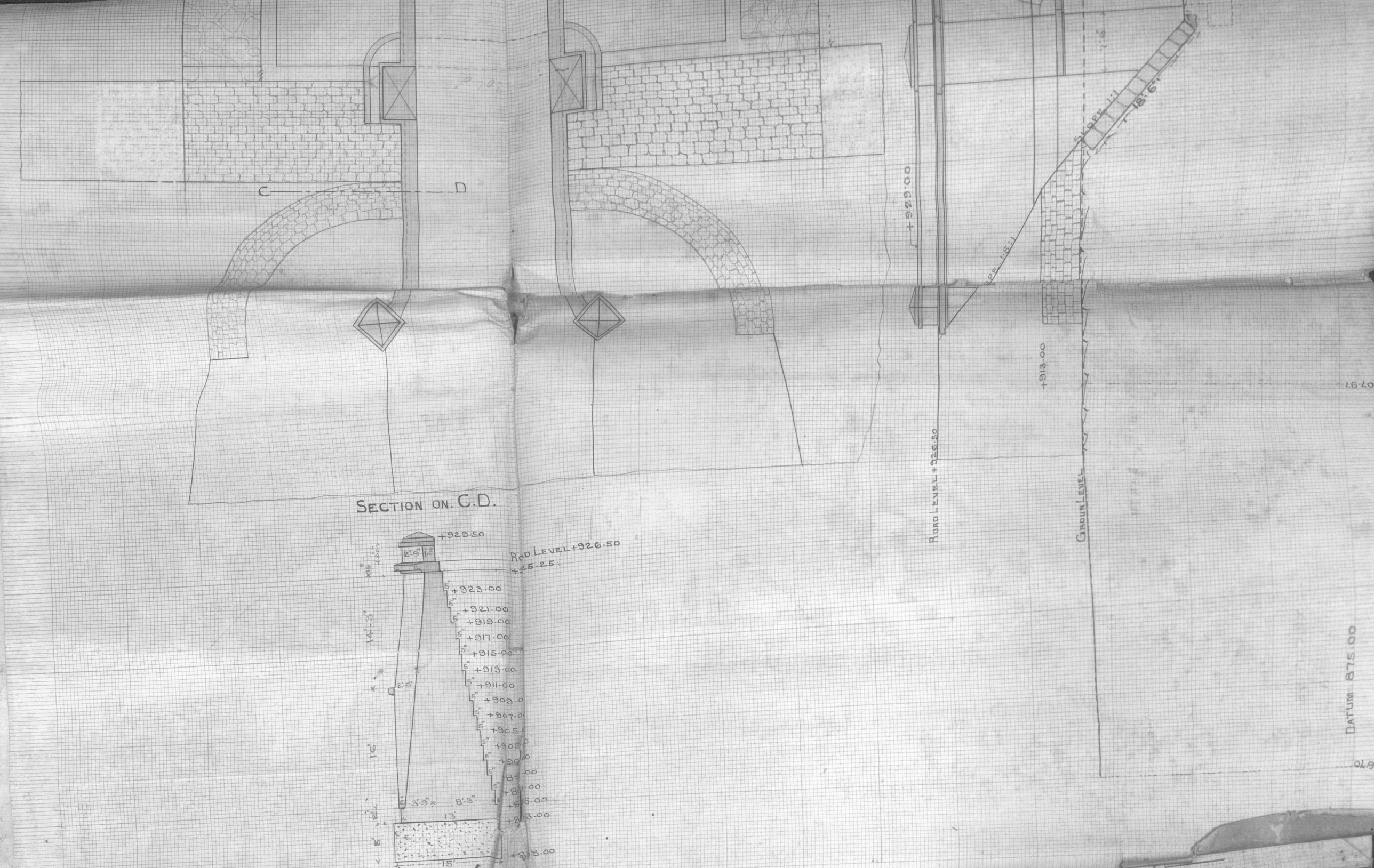
110 — 897.67 bed

130 — 897.97

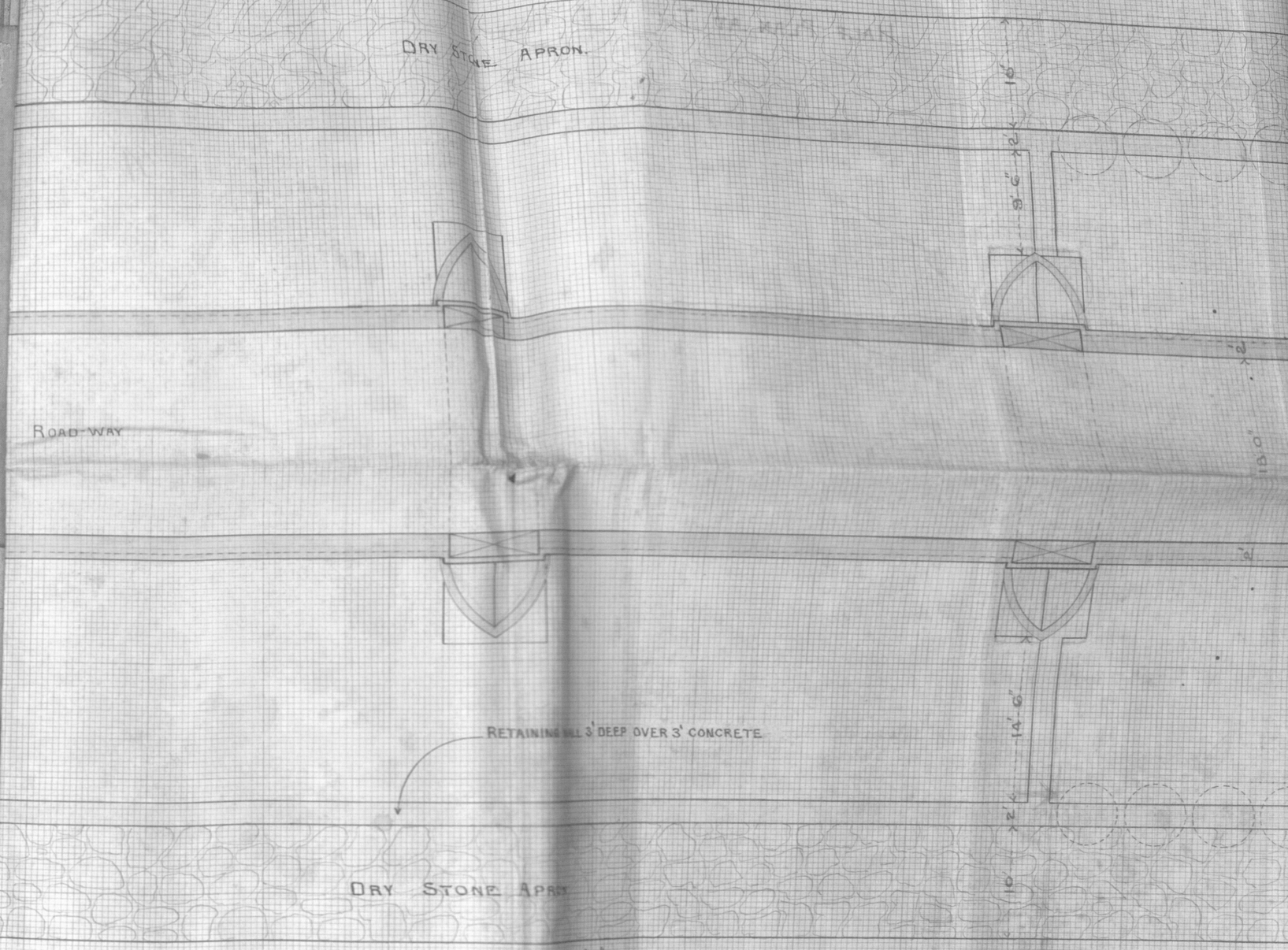
150 — 896.83

C.S. No. 9 AT +913.22 +910.28

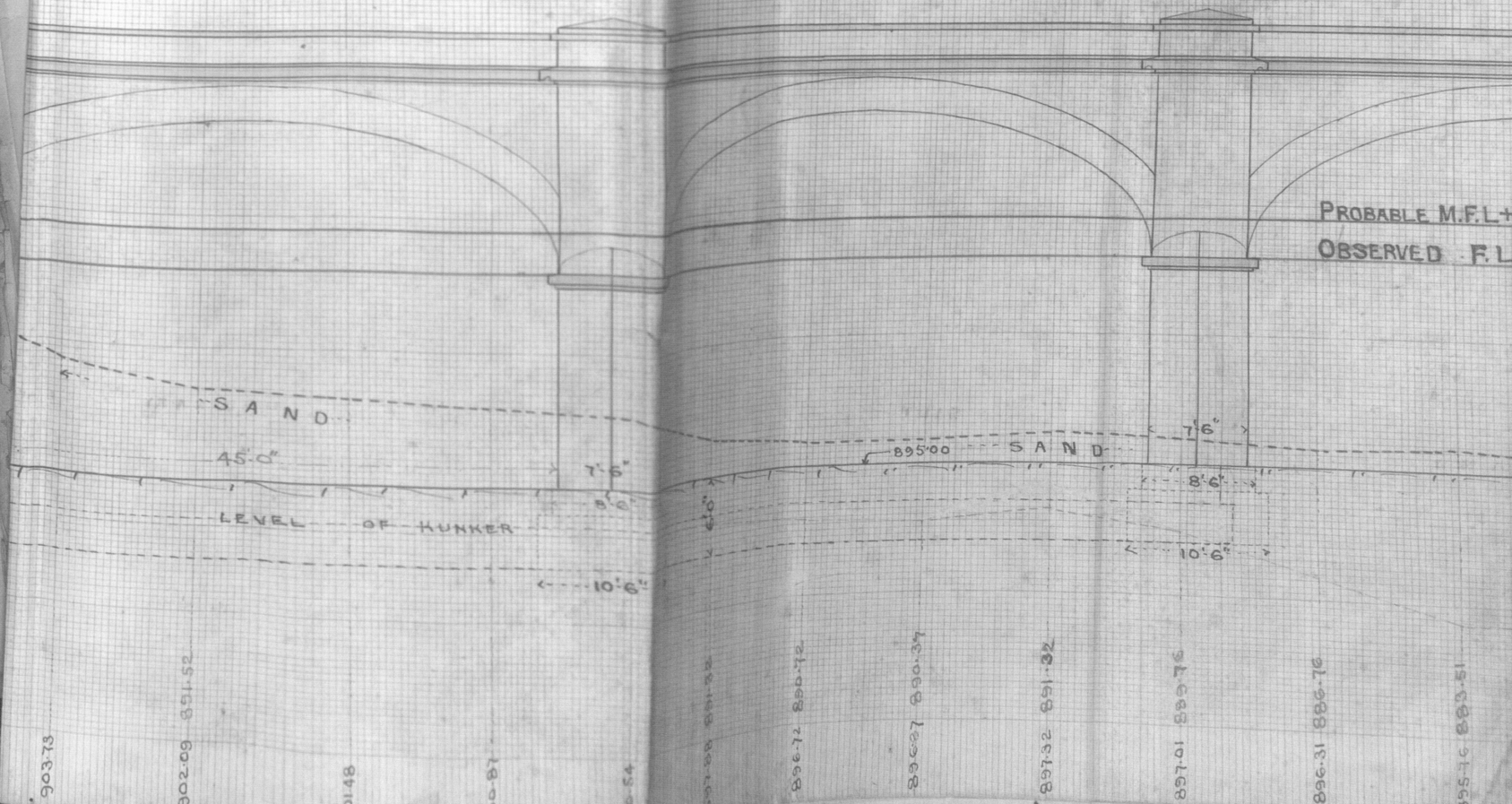
CROSS SECTI


C
D
+929.00
SLOPE 1:1
18'-6"
+913.00
ROAD LEVEL +926.50
GROUND LEVEL
DATUM 875.00
SECTION ON C.D.
+929.50
ROAD LEVEL +926.50
+925.25
+923.00
+921.00
+919.00
+917.00
+915.00
+913.00
+911.00
14'-3"
16'
3'-9"
8'-3"
13'
15'

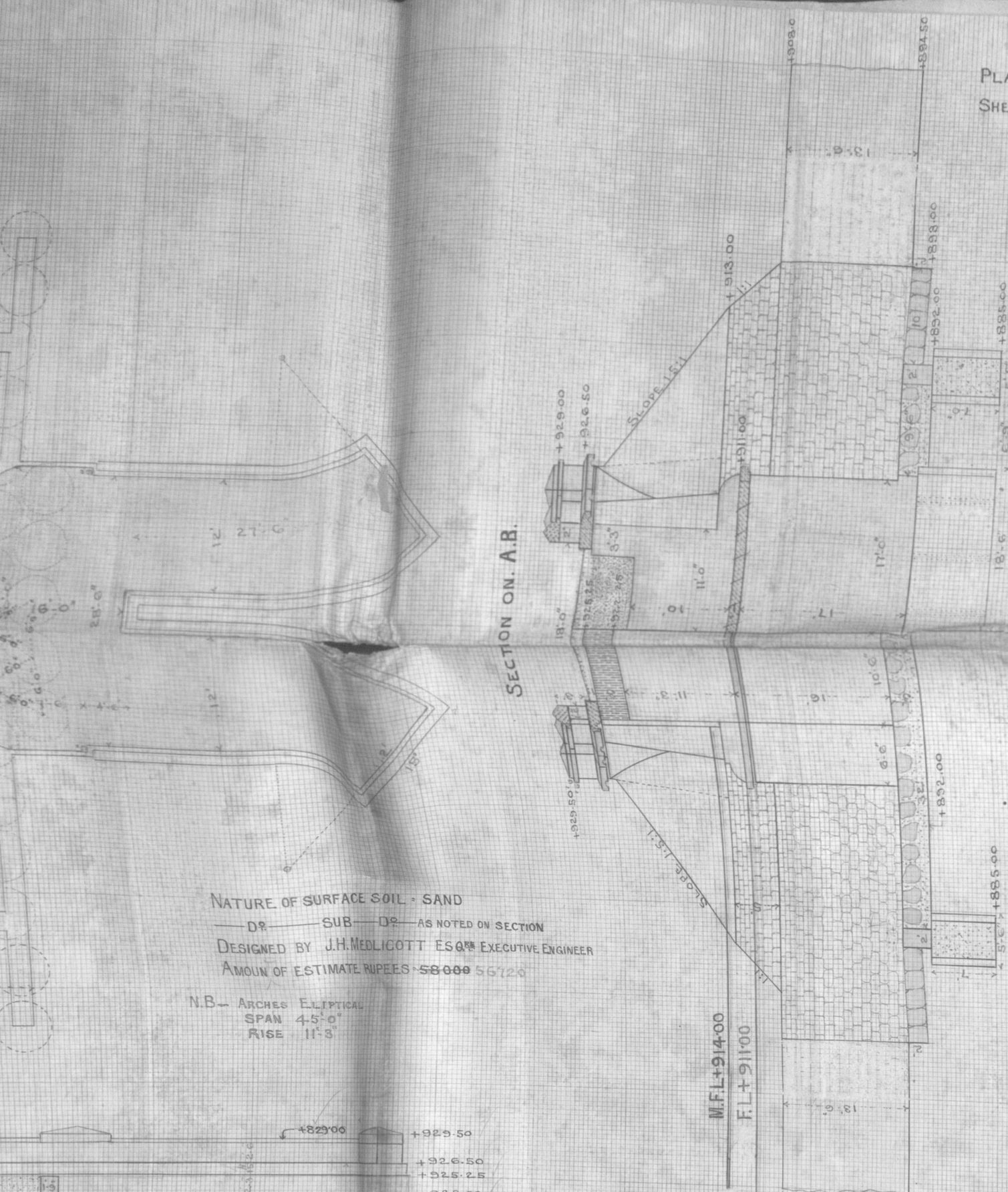
HALF PLAN AT TOP



HALF ELEVATION

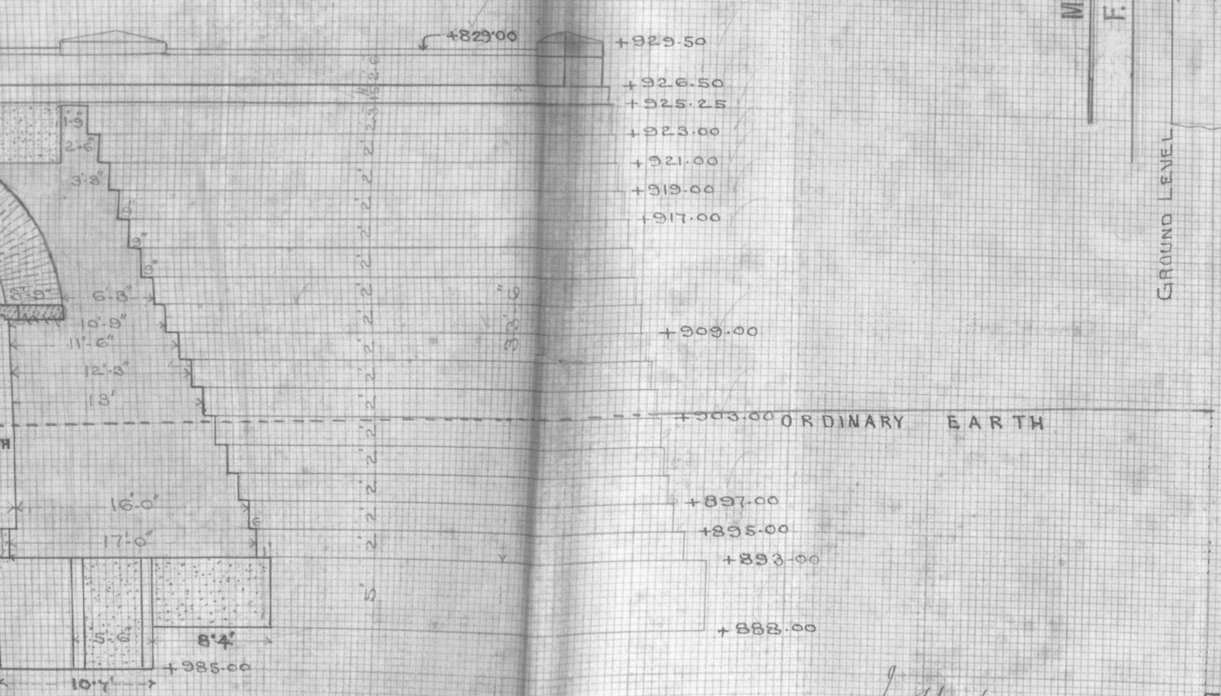


PLAN No. 5
SHEET No. 1



NATURE OF SURFACE SOIL - SAND
——Dº.—— SUB——Dº.—— AS NOTED ON SECTION
DESIGNED BY J.H. MEDLICOTT ESQRE EXECUTIVE ENGINEER
AMOUN OF ESTIMATE RUPEES ~~58000~~ 56720

N.B.— ARCHES ELLIPTICAL
SPAN 45'-0"
RISE 11'-3"



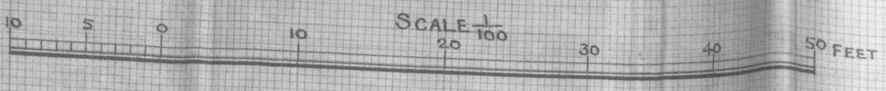
A. V. Ramalingam
ASSISTANT ENGINEER
16/12

W. Hughes
SUPERINTENDING ENGINEER
VI CIRCLE.
18-2-96

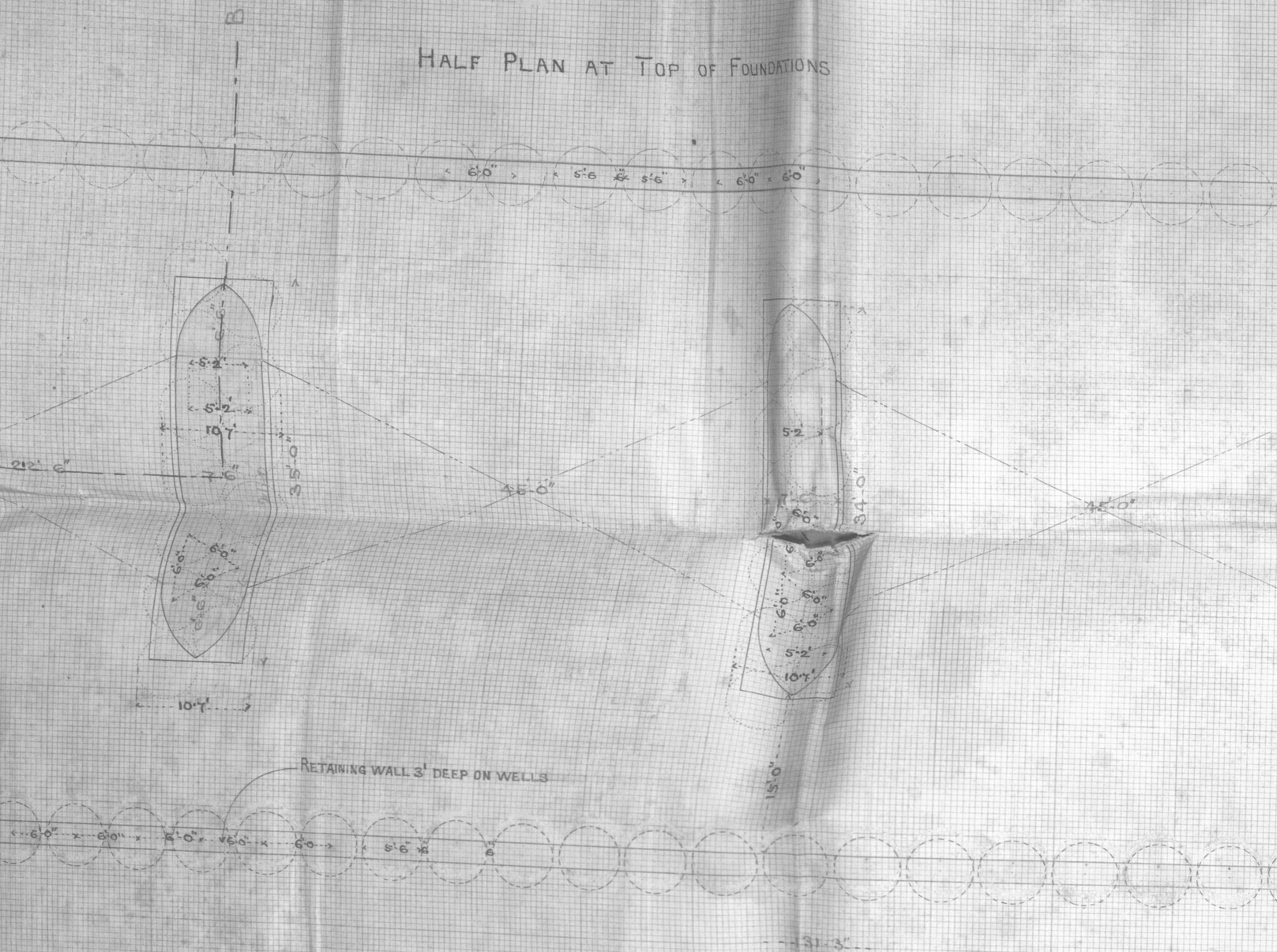
Ajoyce
EXECUTIVE ENGINEER
MADURA DIVISION.
16-12-95

PROPOSED BRIDGE

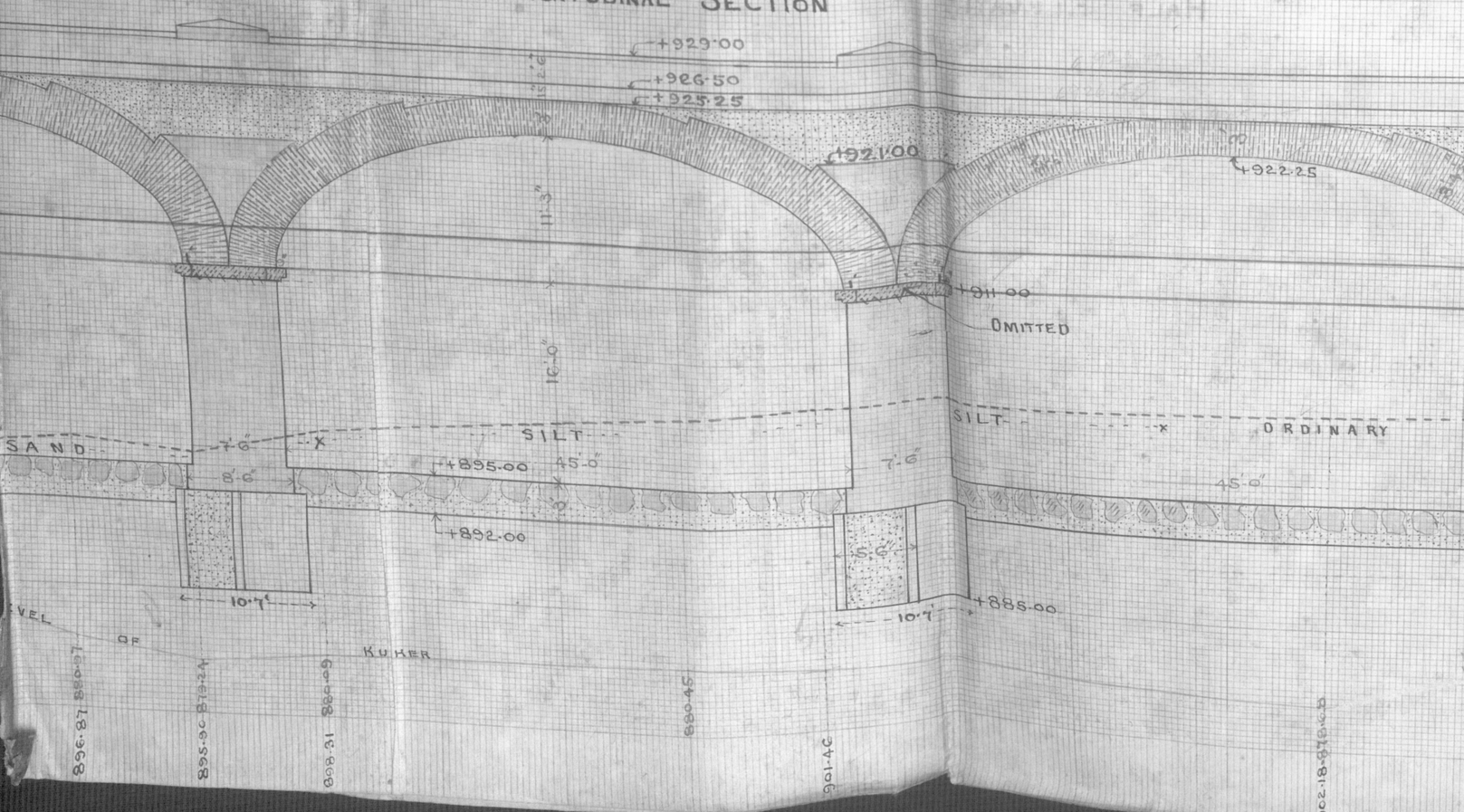
ACROSS THE VARAHANADY RIVER BELOW ITS JUNCTION WITH THE PAMBR RIVER



HALF PLAN AT TOP OF FOUNDATIONS



HALF LONGITUDINAL SECTION



C.N. 1310/97

Plan No. 5
Sheet No. – 1

Sixth Circle

Madura Division

29
Cs 5. 96
1310/97

Proposed Bridge across the Varahanadi River below its junction with the Pambar River.

Enclo No 2 to S. E. 6" No 18-2-96

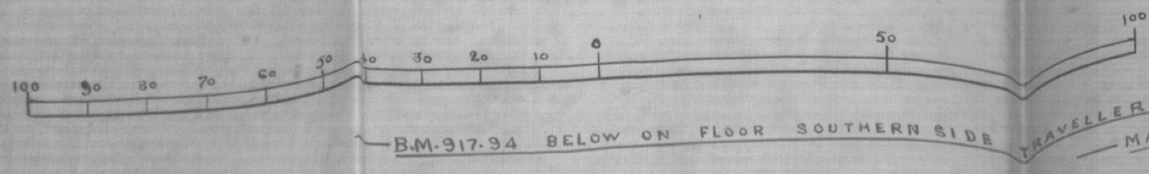
PLAN Nº 1
SHEET Nº 1

SURVEY OF PAMBAR RIVER.

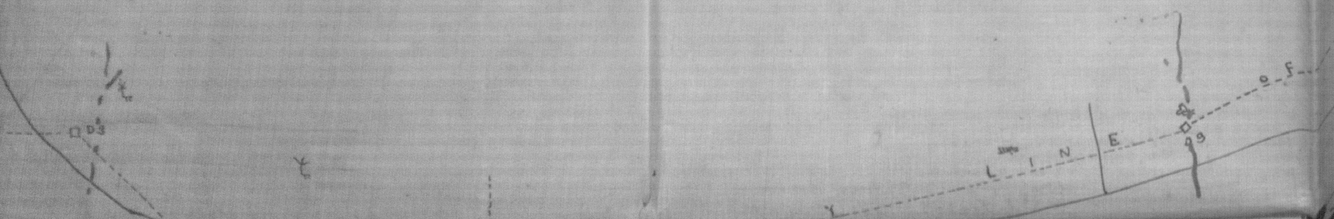
ABOUT THE ROAD CROSSING.

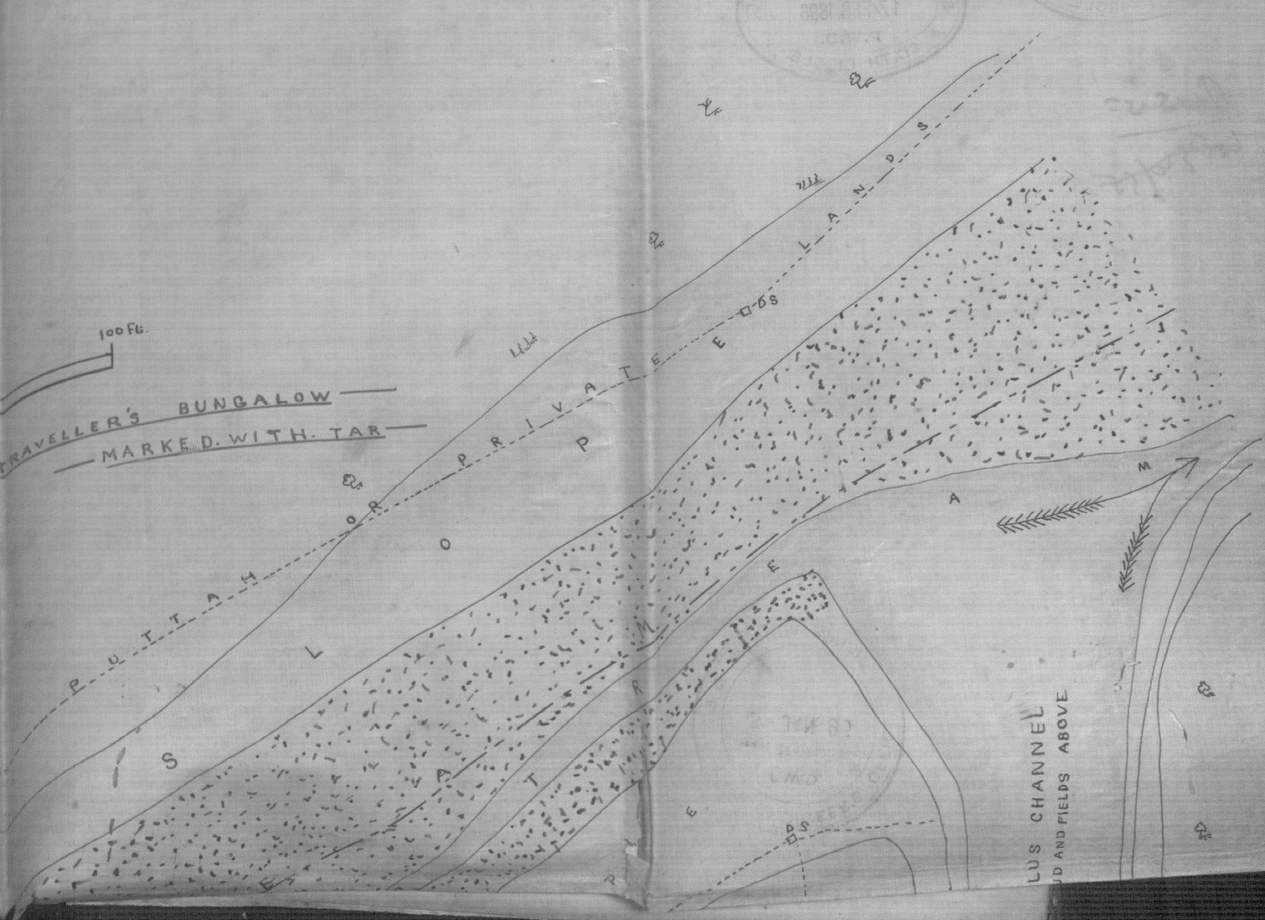
NEAR PERIYAKULAM

SCALE - 1/200



B.M. 917.94 BELOW ON FLOOR SOUTHERN SIDE TRAVELLER'S BUNGALOW MARKED WITH TAR




PRIVATE ROAD
TO
MAMALAPURAM
PLANTAINS
PLANTAINS
PLANTAINS

RIVER

SUBMERGED LAND

RIVER

PULIYAH LANDS

CULTIVATION

GARDEN

LINE OF BOUNDARY

PULIYAH LANDS

LINE OF BOUNDARY

PULIYAH LANDS

DRAINAGE CHANNEL

CEMETERY

A SHED IN RUINS

OLD LANDING

A. Ramalingam
ASST ENGINEER

R I V E R

L I N E

S U M M E R

R I V E R

B O U N D A R Y L I N E O F

D R Y C U L T I V A T I O N

E

O M

S T R E A

R

S L

P U T T A H L A N D S

W A S T E

F

A X

o P E

A N D

Approved
Exec Engineer
13-3-96.

A. Ramaswamy
ASST ENGINEER
27-

E
N
S
W

CEMETERY.

A SHED IN RUINS.

OLD LAMP

BOUNDARY LINE OF PUTTAN OR PRIVATE

BOUNDARY LINE OF PUTTAH OR PRIVATE

WASTE LAND

BOUNDARY LINE OF

CULTIVATION

Qf

Qf

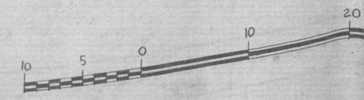
Qf

PROPOSED CIRDE

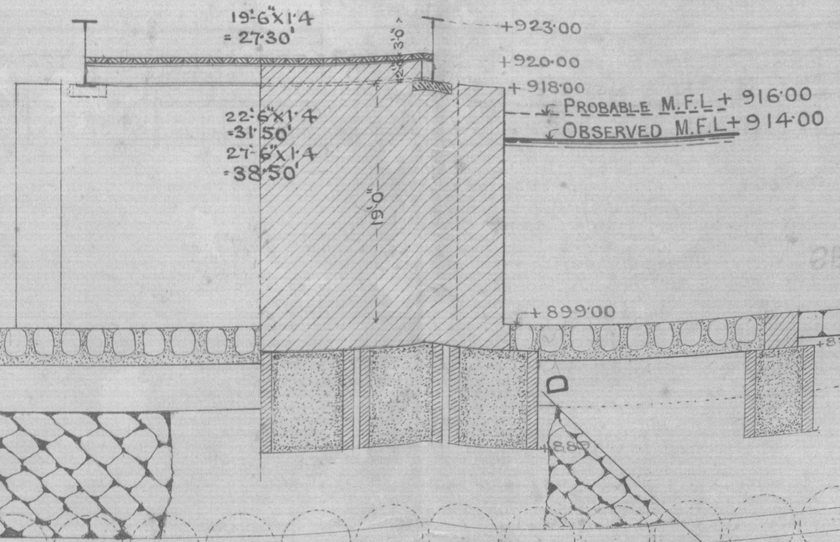
ACROSS THE VARAG

NEAR PERIYAKUL

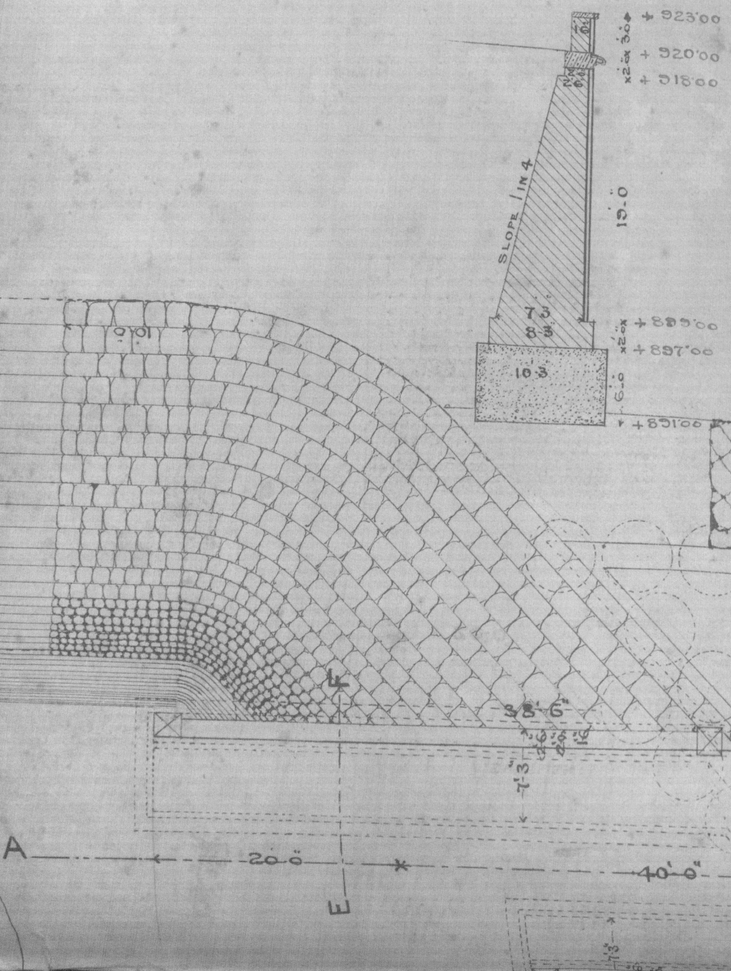
Scale 1/100



SECTION ON C.D.



SECTION ON E.F.



ROUGH STONE IN CONCRETE MORTAR
OR GROUTED APRON

REVETMENT

REVETMENT

20'-0"

ROUGH STONE APRON

10'-0"

+923·00

+920·00

+918·00

+916·00

+914·00

+899·00

SECTIONAL ELEVATION ON A

APPROACH 1-IN-50

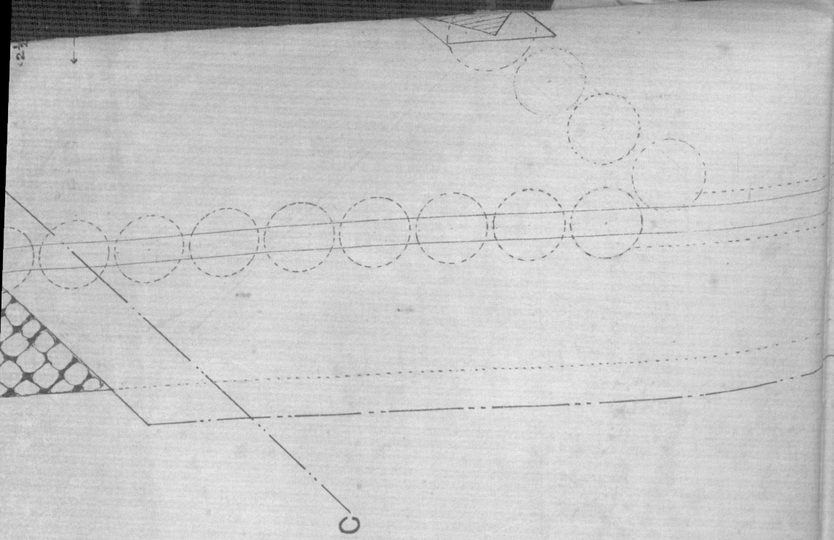
+923·00

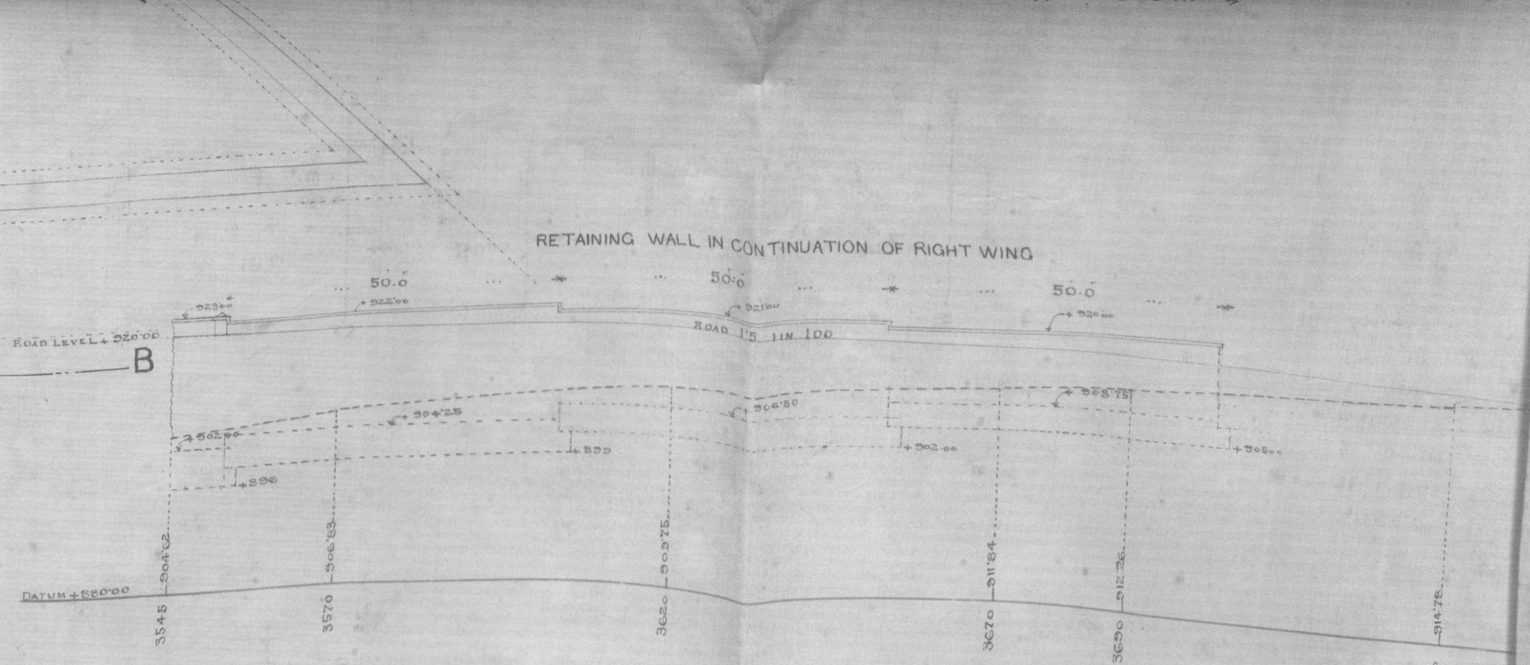
+920·00

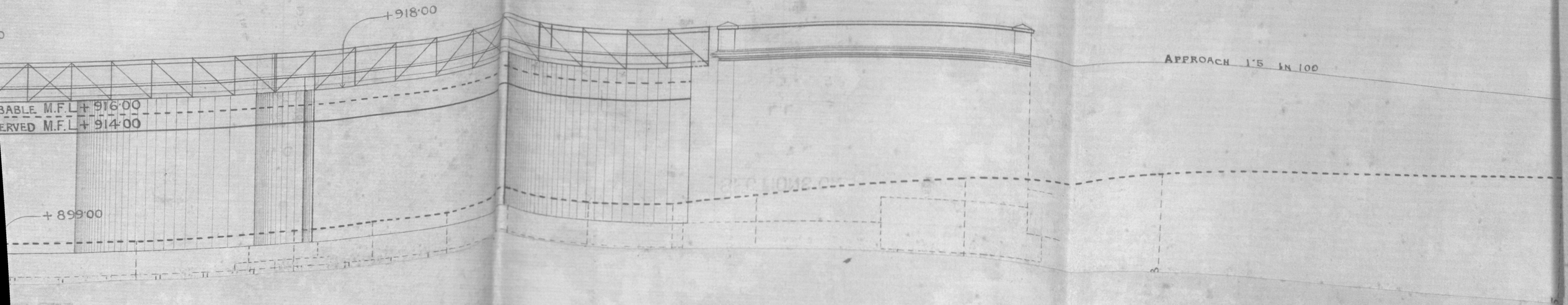
+899·00

+897·00

+923·00


C


RETAINING WALL IN CONTINUATION OF RIGHT WING
50.0
50.0
50.0
ROAD LEVEL + 920·00
B
ROAD 1:5 IN 100
+ 923·00
+ 922·00
+ 921·00
+ 920·00
+ 304·25
+ 306·50
+ 305·75
+ 302·00
+ 305·00
+ 299
+ 296
DATUM + 880·00
304·62
306·83
309·75
311·84
312·26
314·78
3545
3570
3620
3670
3690
3740
SCALE 1/200.


+ 918·00
BABLE M.F.L + 916·00
ERVED M.F.L + 914·00
+ 899·00
APPROACH 1:5 IN 100

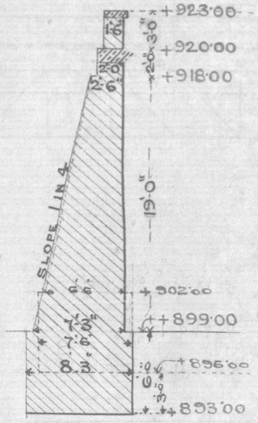
RIDGE

DI

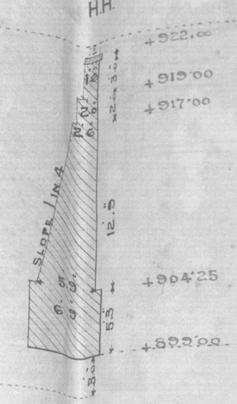
PLAN Nº1
SHEET Nº2

SECTIONS ON

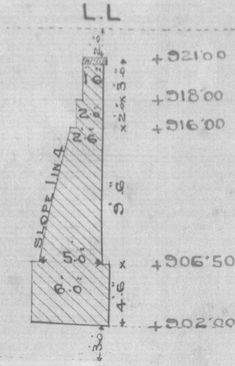
G.G.



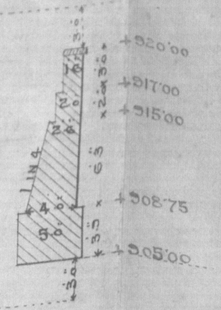
H.H.



L.L



M.M.



REFERENCE

COURSED R
CUT STONE
CONCRETE
DRY RUBBL
GROUTED

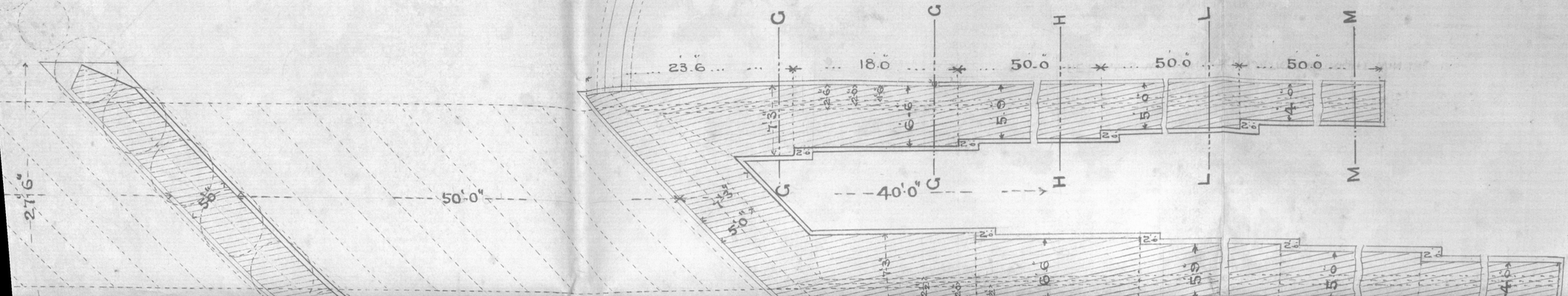
WELL

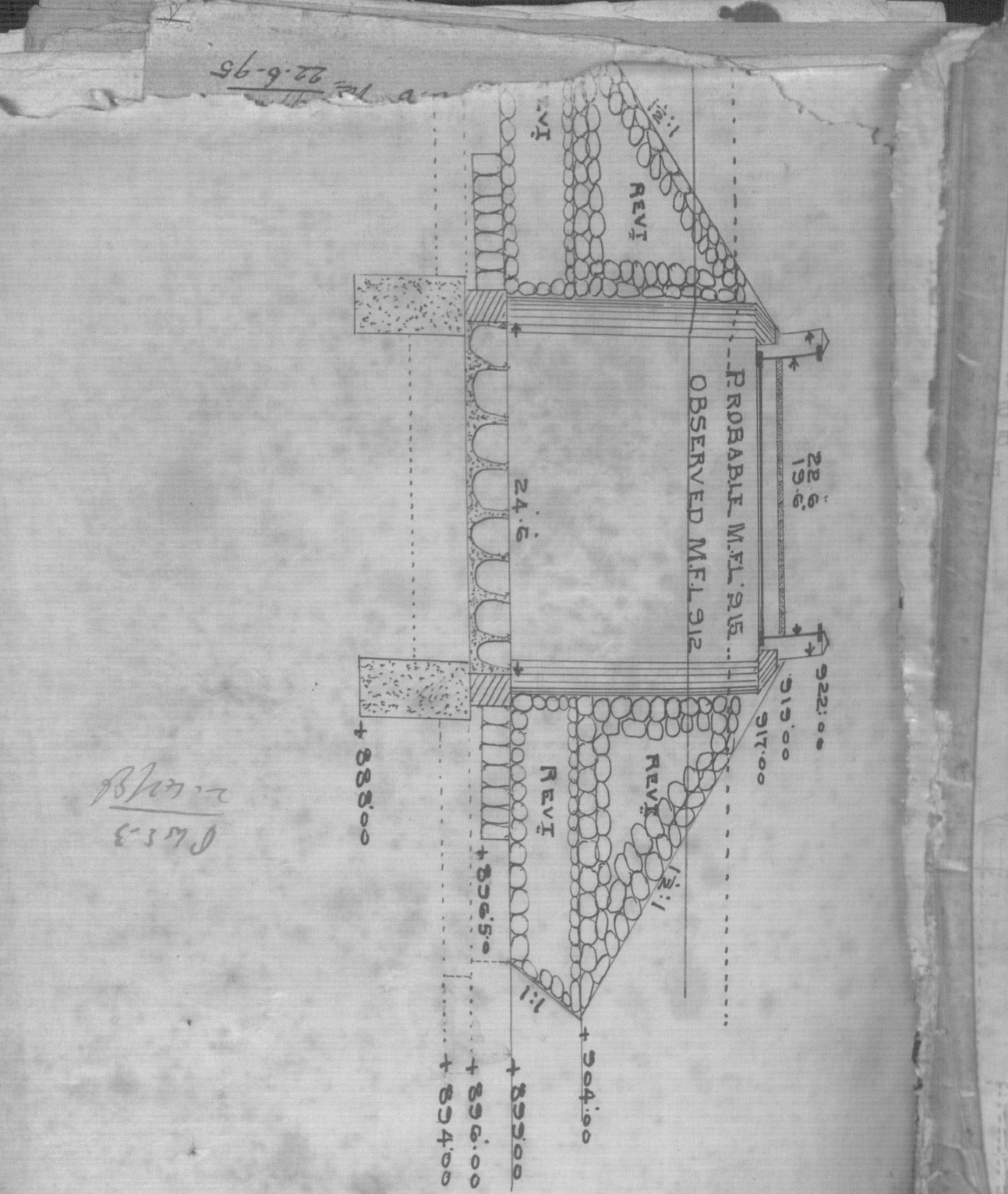
7 FEET DP BELOW
5½ D² D² BELOW
5½ D² D² RETAIN

NATURE OF SURFACE SOIL
D² SUB-SOIL

DESIGNED BY

AMOUNT OF ESTIMATE Rs



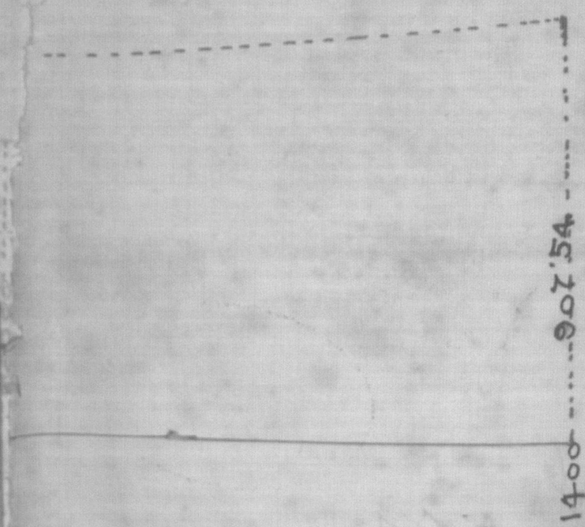


22-6-95

A.V. Ramalingam

ASSISTANT ENGINEER

EACH 1 IN 50



EXECUTIVE ENGINEER,
MADURA DIVISION.

13-2-96

C.N. 1310/9/

...INTENDING ENGINEER,

10·6

7·3¾

9·7

15

REFERENCE

NATURE OF SURFA...

_.DO._... SUB-...

DESIGNED BY

AMOUNT OF ESTI...

B

37·6

38·6

REVETMENT SLOPE 1½:1

REVETMENT 1:1

47·0

REVETMENT SLOPE 1½:1

REVETMENT SLOPE 1:1

38·0

50·65

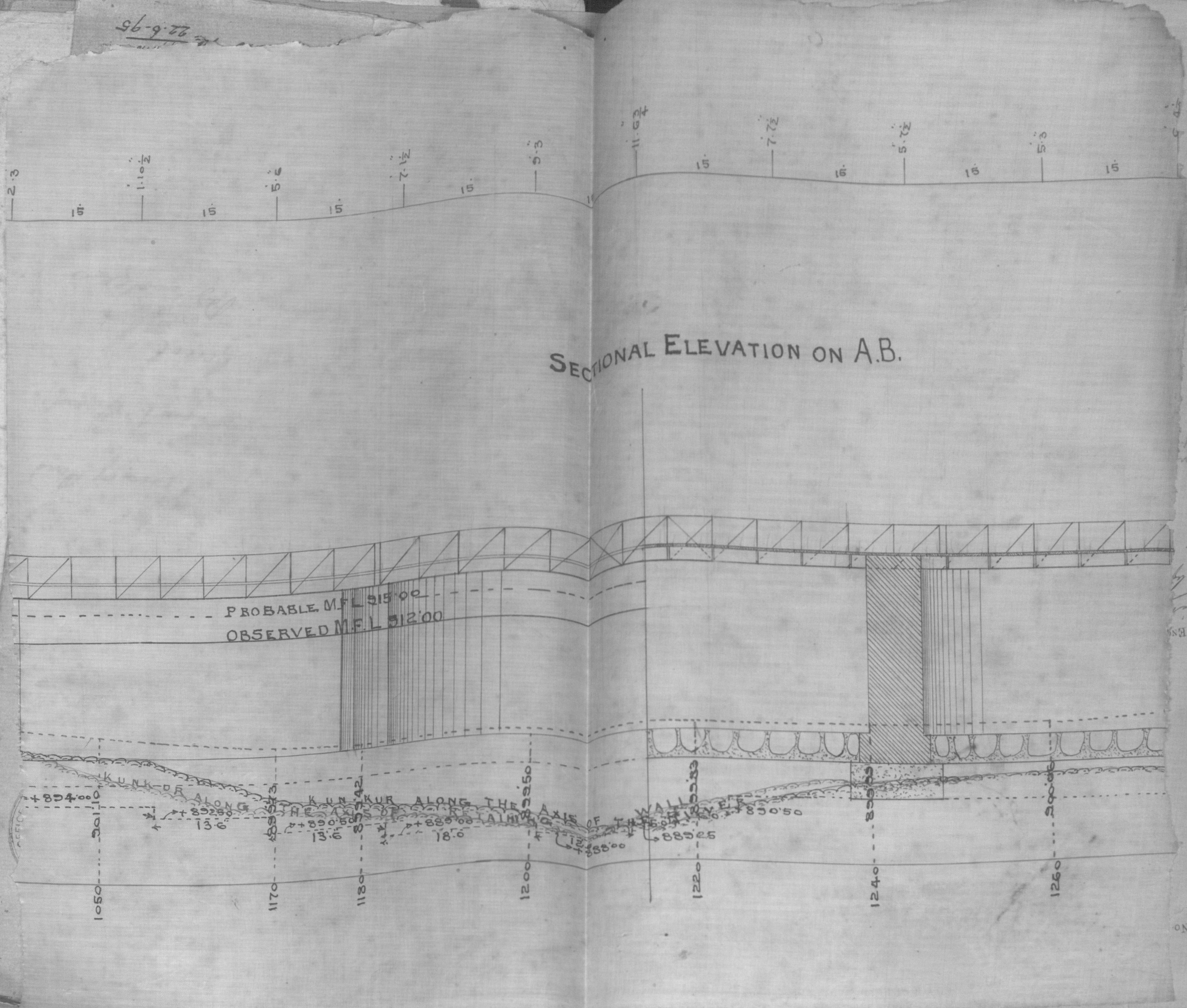
90·38

130·0

135·0

22.6.95

SECTIONAL ELEVATION ON A.B.

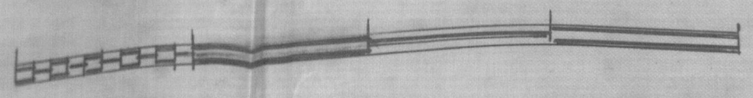


PROPOSED GIRDER BRIDGE

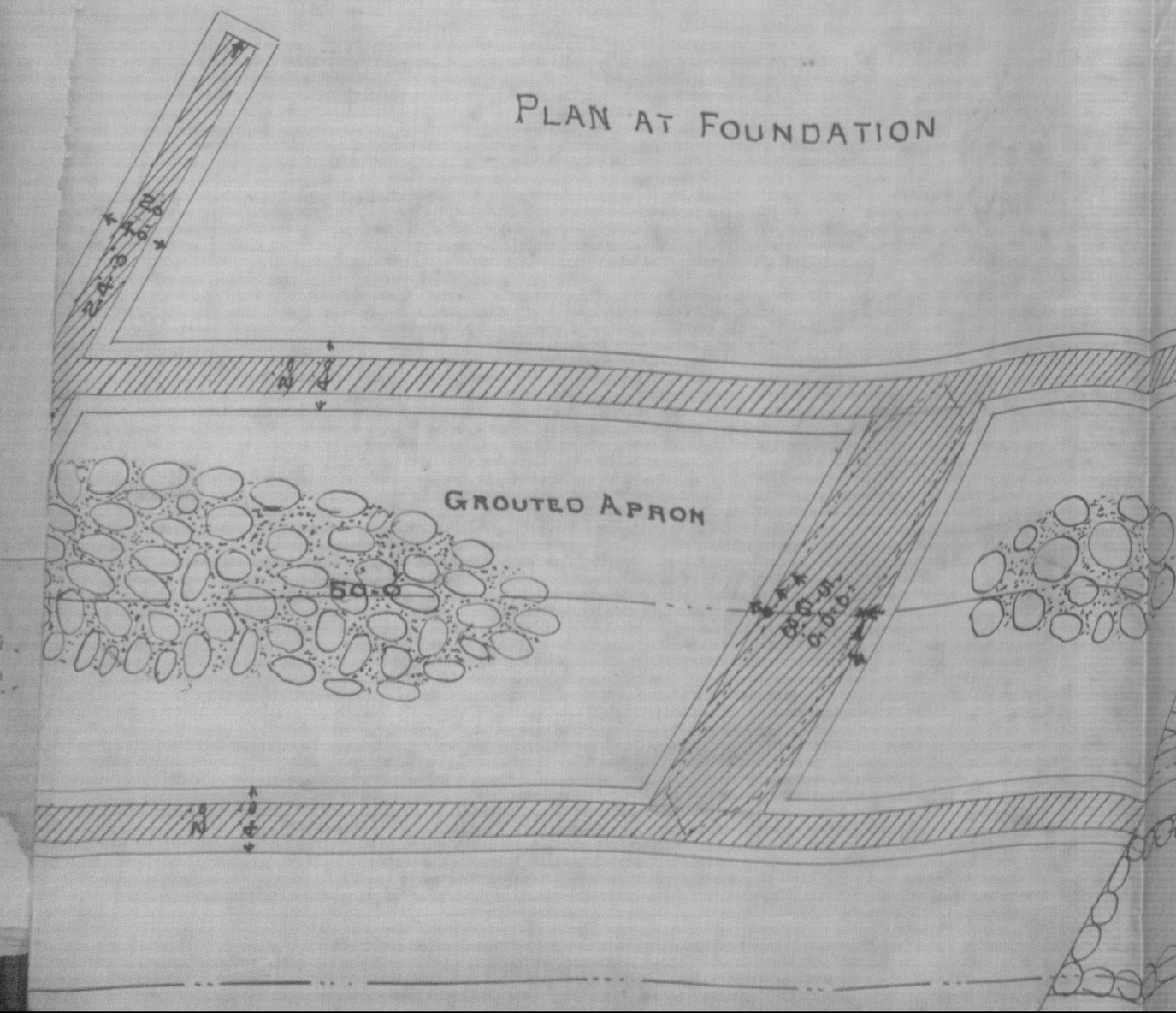
ACROSS THE PAMBAR

NEAR PERIYAKULAM

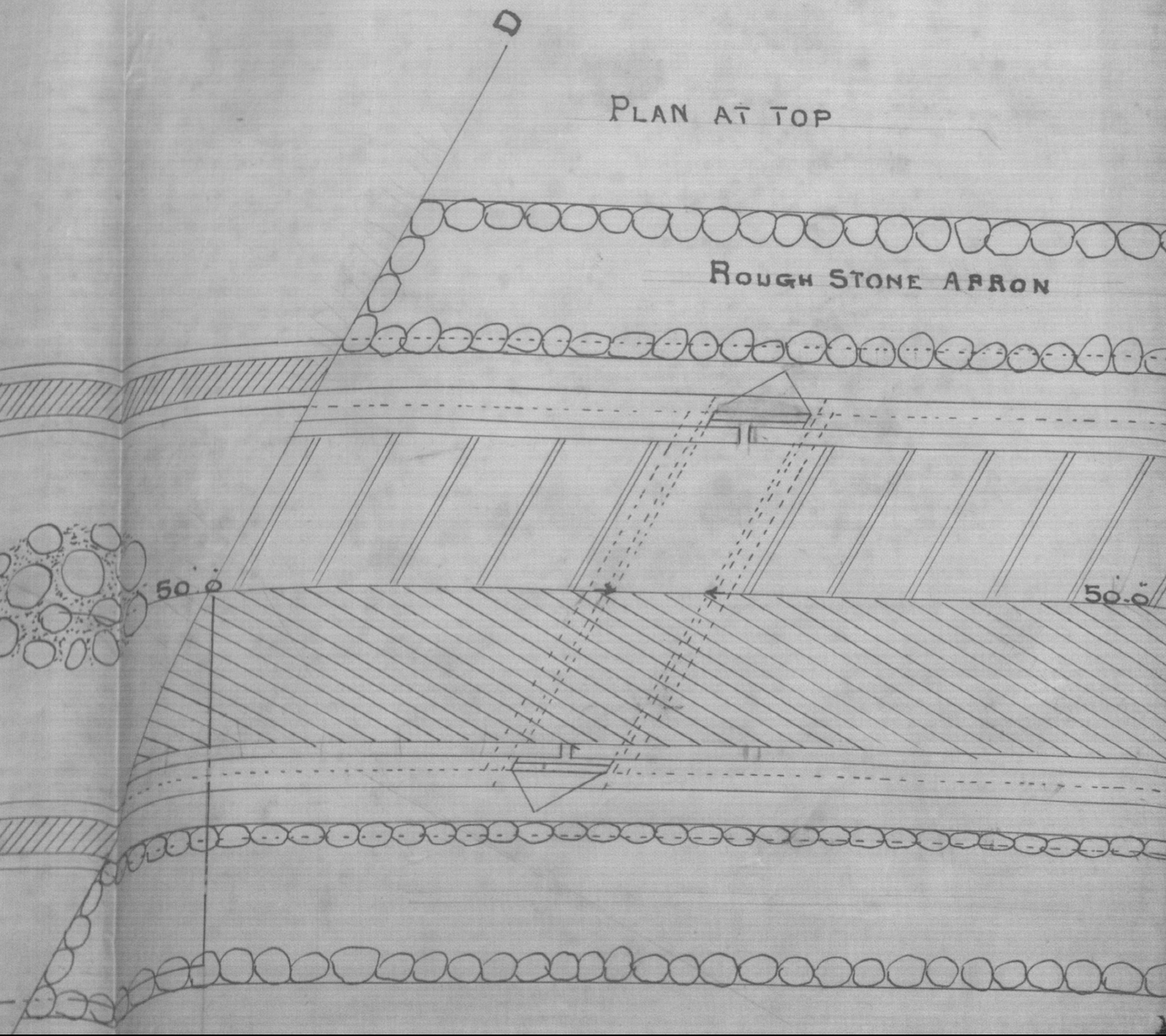
Scale $\frac{1}{100}$



PLAN AT FOUNDATION



PLAN AT TOP



NAL SECTION ACROSS PRESENT ROAD CROSSING

—IN—

PAMBAR AND VARAHANADY RIVERS

SCALE { LONGITUDINAL 1/1000
VERTICAL 1/60

LEFT OF ROAD ON RIDGE OF ADJACENT GROUND

CENTRE OF ROAD ON BASEMENT OF REST HOUSE MARKED WITH TAR. 916.13

ON SIDE DRAIN OF ROAD TO AMMAYANAYAKANUR

RIGHT

LEFT

914.46 906.04 915.13 906.27 914.19 912.63 914.66 912.50 914.92 911.98 914.74 911.26 912.58

908.14 909.48 910.32 910.91 911.63 912.25 913.41 914.11 914.27 913.49 913.87 914.07

3100 3200 3300 2400 2500 2600 2700 2800 2900 3000 [illegible]

ROAD WAY. 917.00

PROBABLE M.F.L. 915.00

922.00

912.00

917.00

PROPOSED ROAD WAY

PROBABLE M.F.L. 915.00

ANUR

Observed M.F.L 912.00

GIRDER BRIDGE SKEW

50 50 50

PAMBAR

LEFT EDGE

AXIS OF STREAM

RIGHT EDGE

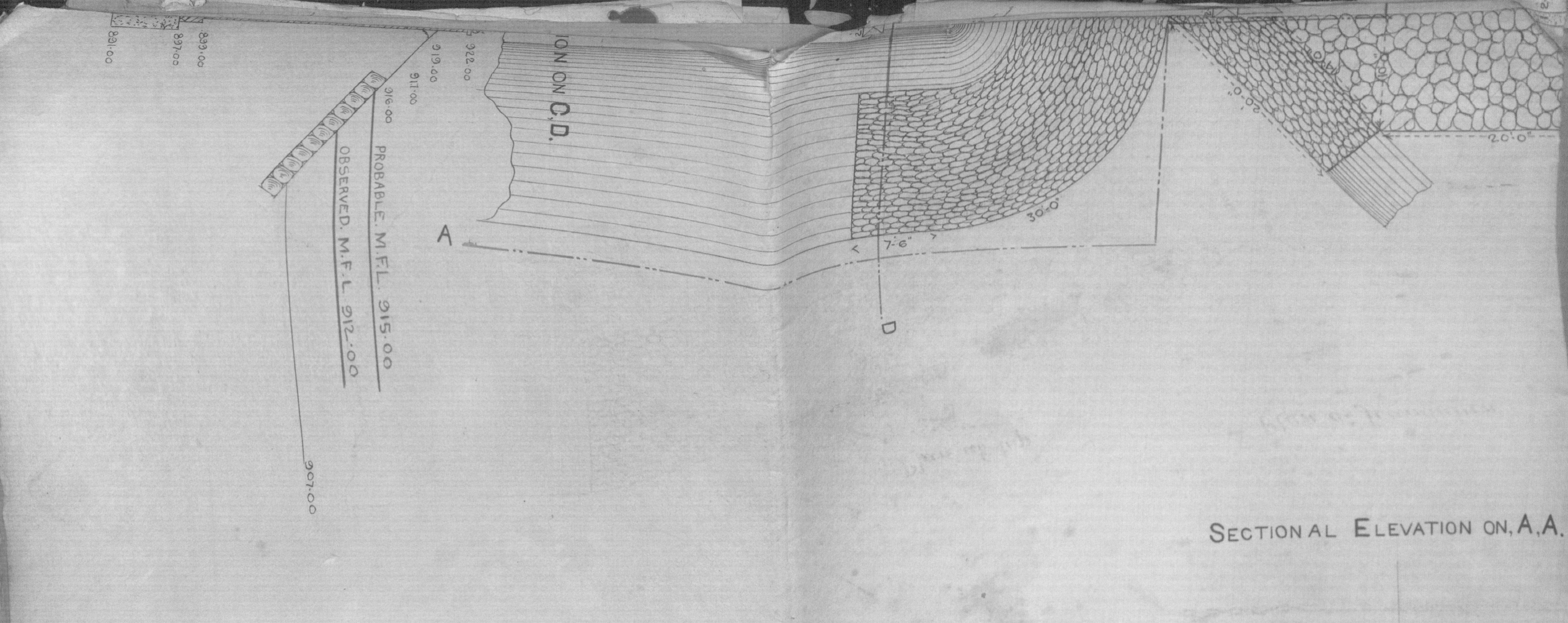
LEFT OF ROAD TO AMMAYANAICKA

ON FIELDS

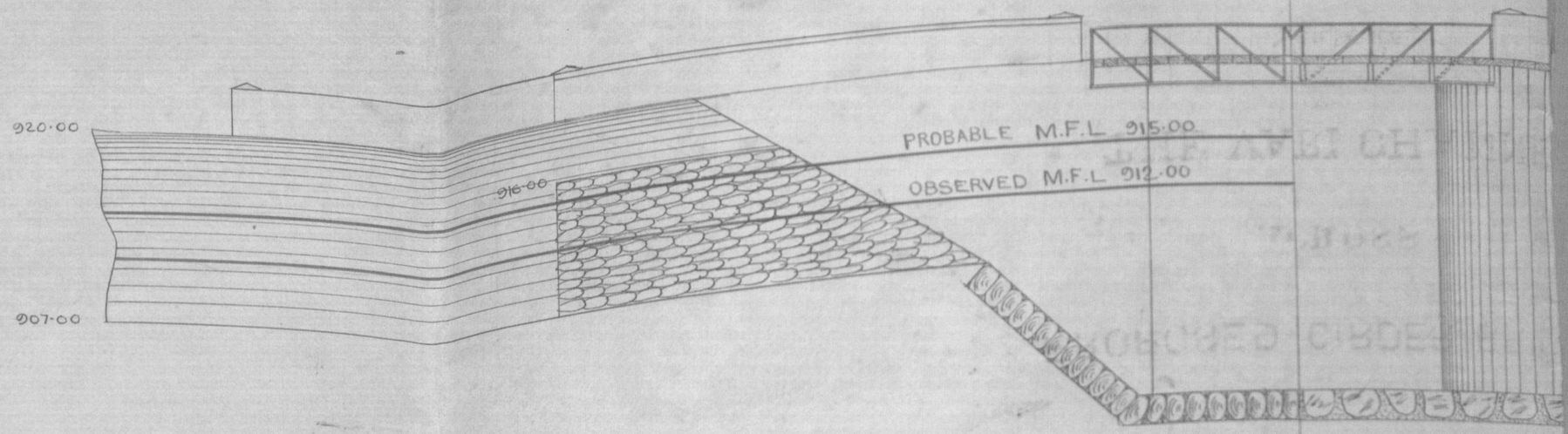
911.58 911.23 910.16 909.79 909.82 910.10 899.73 899.89 899.83 899.79 900.06 902.09 903.88 904.64 904.81 905.41 905.91 906.18 906.72

810 910 1010 1060 1110 1130 1170 1200 1250 1240 1290 1300 1350 1400 1450 1500 1550 1600 1650 1700


PROBABLE M.F.L. 916.00
M.F.L 914.00
SKEW BRIDGE
50 50 50 50
VARAHANADY RIVER
LEFT EDGE
RIGHT EDGE
CENTRE
RIGHT FLANK OF VARAHANADY
B.M. ON TOP OF PARAPET OF CULVERT
918.76
918.00
920.00
921.00
922.00
923.00
1 IN 50
B.M. ON FLOOR SOUTHERN SIDE
IN TRAVELLERS BUNGALOW
MARKED WITH TAR. 917.94
PROPOSED
ROAD FROM AMMAYANAYAK
917.28
917.11
200
+895.00 ABOVE M.S.L.
A.V.R. Swamy
ASST ENGINEER
7/5/26



SECTIONAL ELEVATION ON, A.A.



REFERENCE

- Coursed rubble 2nd sort
- Cut stone work
- Concrete
- Dry rubble apron
- Grouted apron

NATURE OF SURFACE SOIL
-- Dº --- SUB-SOIL

DESIGNED BY - - - -

AMOUNT OF ESTIMATE Rs. - -

ENGINEER OFFICE
SUPG.
17 FEB 1896
No. 3
DEPTT. C.P.W.D.

PROPOSED GIRDER BRID

ACROSS

THE VARI CHANNE

Scale. $\frac{1}{100}$.

10 0 10 20

Plan at top

Plan at foundation

Road way

SECTION

SLOPE 1 IN 4

45 DEGREES

33'-0"

36'-0"

4'-0"

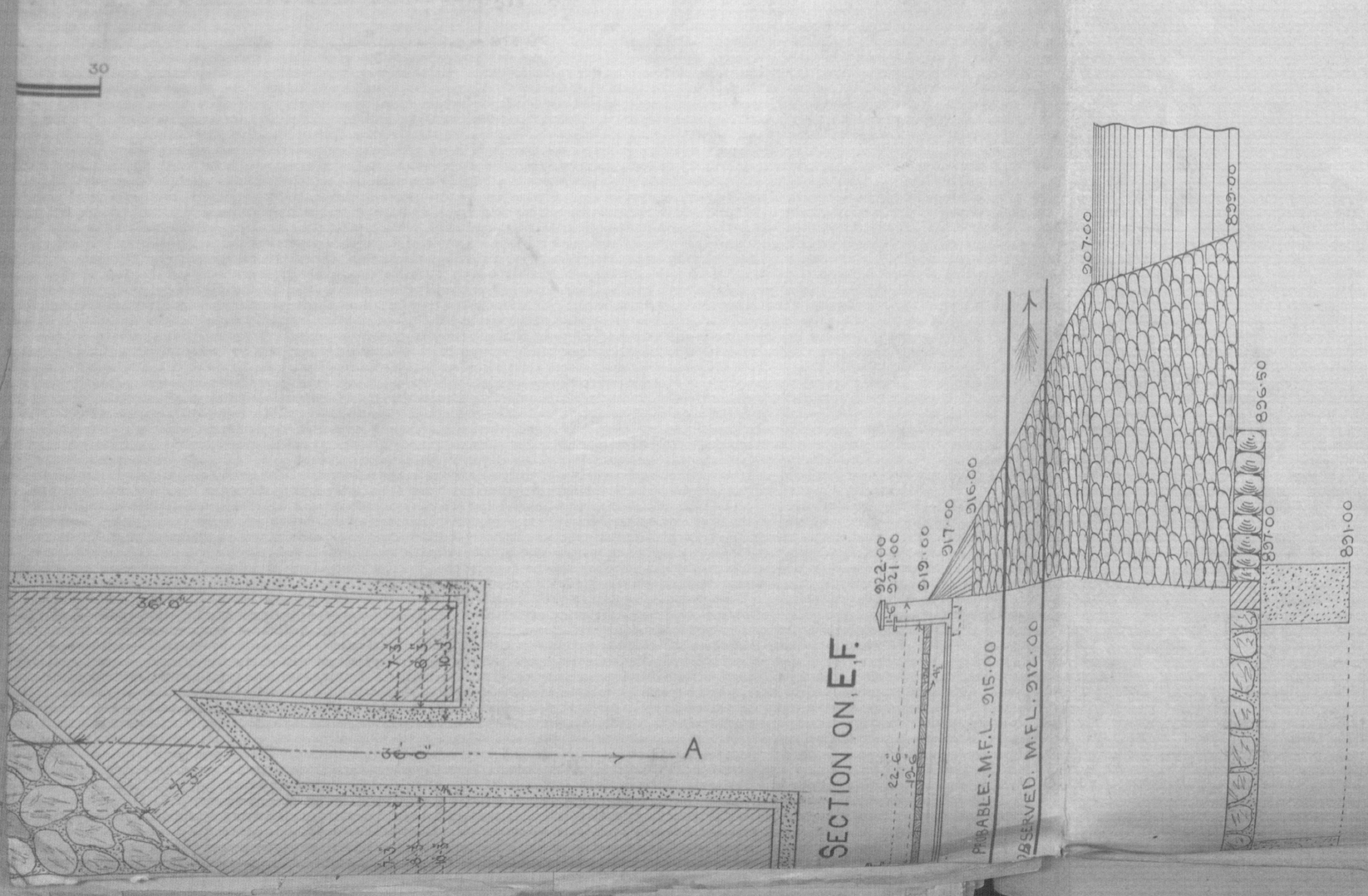
10'-0"

PLAN N°1
SHEET N°1

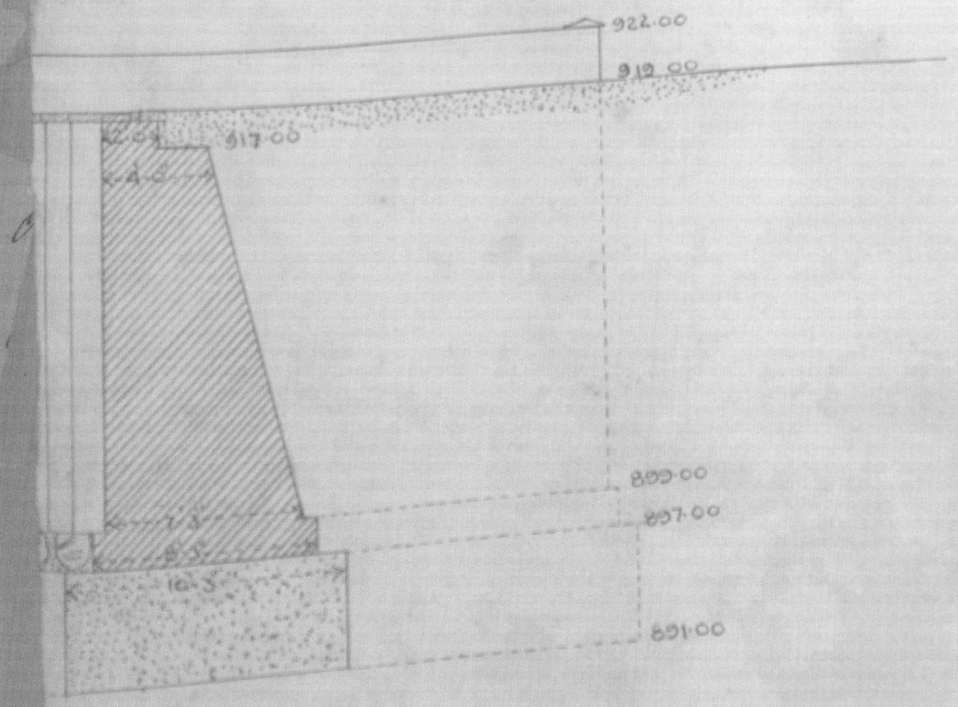
GE

L

30



E



A. V. Ramalingam

ASSISTANT ENGINEER

ajoyce

EXECUTIVE ENGINEER.
MADURA DIVISION.

SUPD. ENGINEER'S OFFICE,
No. 3111
17 FEB. 1896
P.W.D.
TRICHINOPOLY