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MIL NADU ARCHIVES

RNMENT OF TAMIL NADU

P.W. DEPARTMENT

G.O. No. **B.P. No.**	1355 W	**Press.** **Mis.**
Dated	30.5.1881	~~197~~.

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GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

30th May 1881, No. 1,355 W.

General.
Establishment.

Read the following paper :—

No. 64. Proceedings of Government, dated 9th May 1881, No. 1,175 W.

As it is desirable to reduce the number of forms now in use in the Irrigation Branch of this department with a view to lessen as much as possible the labor now thrown on the offices concerned and also to have an opinion as to the best method of compiling a Manual for the Irrigation Department from the materials afforded by the existing standing and circular orders in that branch, the Government has decided to appoint the following Committee to advise them on the measures which it may be desirable to take with this object, viz. :—

President.

Colonel R. H. Sankey.

Members.

Lieutenant-Colonel J. O. Hasted.
Major H. R. Mead.

The Committee are at liberty to consult such officers of the department as they consider best fitted to aid them in the above duty.

(Signed) R. H. SANKEY, Colonel, R.E.,
Secretary to Govt., P.W.D.

MEMORANDUM of disposals agreed to in Committee of 16th May 1881 in regard to Colonel Mullins' abstract of S.O., Irrigation Branch, for Public Works Code.

(1.) *Size of plans.*—No additions required to paragraphs 987 to 996 of Code.

(2.) *Positions of Irrigation Works.*—Such slight additions as here needed may be dealt with by a S.O. No. 990-A of the Code.

(3.) *Bridle-paths on river channel and large channel banks, also width of bridges and bund way to be allowed for bridges over different classes of canals, as also gradients of approaches to bridges, banks, &c.*—To be dealt with in Chapter XVII of Code.

(4.) *Progress Reports.*—To be included under Code Forms, Appendix L, paragraph 958. See also G.O., No. 1,064 W., 23rd April 1881.

(5.) *Date of submission of Irrigation Projects.*—Not required.

(6.) *Correspondence.*—Not required.

(7.) *Information of completion of projects to be given to Collectors.*—To be dealt with in Code, Chapter XVII.

(No number.) *Executive Engineers to watch over extensions of irrigation.*—To be dealt with in Code, Chapter XVII.

(8.) *Reasonable equality of expenditure throughout the year to be secured.*—Not required as already sufficiently dealt with in Code, paragraph 1,140, &c.

(No number.) *Number of works concurrently under execution.*—Not required.

(9.) *Names of surplus works, &c.*—To be dealt with in Chapter XVII of Code.

(10.) *Administration Report.*—Not required, the last published Administration Report being always the best guide to what is needed.

(12.) *Unanswered Reference List.*—To be included under Code Forms, paragraph 958.

(13.) *Procedure for the acquisition of land.*—No further textual instructions required than those already given in paragraphs 1,152 and 1,153 of Code Forms to be included under Appendix L, paragraph 958.

(13-A.) *Land Estimates.*—Ditto.

(14.) *Revenue Survey Maps and Atlas Sheets.*—Any instructions specially needed on this subject for the Irrigation Branch, in addition to those conveyed in paragraphs 304, 311, 993, 994, 995, 1,051, and 1,052, to be given in Chapter XVII.

(17.) *Reconstruction of masonry works due to failure of old works.*—May be dealt with by adding the few words required to paragraph 970 of the Code or by a paragraph in Chapter XVII.

(18.) *Temporary Survey Establishments.*—Such additions as may be needed to paragraph 117 of the Code to afford the Chief Engineer for Irrigation and Superintending Engineers the requisite latitude in certain cases to be given in the form of an S.O.

(20, 20-A & 20-C.) *Tanks affecting Railways.*—Question to be reserved as more or less directly connected with that relating to tank maintenance generally.

(21.) *Records of Irrigation Works*—May be dealt with as an addition to paragraph 1,171 of the Code by an S.O.

(22.) *Preservation of the health of working parties.*—Not required as being dealt with in Appendix W of the Code.

(23.) *Allotments for incomplete surveys.*—See ante No. 18.

(25.) *Grouping of Irrigation Works*—To be dealt with in Chapter XVII.

(26.) *Emergent works.*—Not required as having been already sufficiently disposed of in paragraph 1,169 of the Code.

(28.) *Decimal Scales.*—Such additions as may be needed to the instructions laid down in paragraph 989, &c., of the Code may be given in Chapter XVII.

(30 & 30-A.) *Abstract Rainfall Registers.*—To be dealt with in Code Forms, Appendix L, paragraph 958.

(31.) *Investigation of conduct of Irrigation Branch.*—Special establishment not required as the subject is sufficiently dealt with in paragraphs 473 to 479 of the Code.

(33.) *Register of Water-levels.*—To be disposed of in connection with Appendix L, paragraph 958.

(34.) *Minor Works Repairs and Management.*—Question to be reserved.—See ante 20, 20-A and 20-C, though some portions may be provisionally dealt with in Chapter XVII.

(36.) *Irrigation Registers.*—To be reserved as above.

(37.) *Details of Tanks.*—May be dealt with in Chapter XVII and in Appendix L.

(38.) *Inspection Notes.*—Not required as being already sufficiently dealt with in Code, paragraph 288.

(39 & 39-A.) *Water Diagrams.*—To be dealt with in Appendix L, paragraph 958.

(No number.) *Classified list of systems for which Capital and Revenue Accounts are kept.*—To be dealt with in Chapter XVII and in Appendix L.

(No number.) *Minor Systems.*—To be dealt with in Appendix L.

(Signed) R. H. SANKEY, Colonel, R.E., President.
(„) J. O. HASTED, Lieut.-Col., R.E., } Members.
(„) H. R. MEAD, Major, R.E., }

ABSTRACT of Standing Orders, Irrigation Branch, for Public Works Code.

Nos.	Subject.	Paragraphs for Code.
1, 1-A.	Size of Plans ...	*Vide* revision of Government of India Code 14.
2	Positions of Irrigation works.	The positions of Irrigation works, when some well-known town or river is not shown on the plans, is to be indicated by giving the latitude and longitude.
3	Bridle-path on river, canal, and large channel banks.	The top width of river, canal, and large channel embankments should be sufficient to allow of easy inspection on horseback. A width of 6 feet is the minimum required for river and canal embankments, and this width should be allowed for one bank of large channels. Branches of trees to be cleared away so as to give a clear headway of 9 feet as a minimum.
4	Progress Reports ...	The forms of progress reports are given in appendix for detailed instructions.—See Standing Order No. 4, Irrigation Branch, annas and pies to be omitted, the entries being made to the nearest rupee.
4-A.	Do. ...	
5	Date of submission of Irrigation projects.	Irrigation projects should, as a rule, be submitted to the Chief Engineer for Irrigation from April to September inclusive, it being difficult to find opportunity for their examination and review during the other months of the year.
6	Correspondence ...	All correspondence relating to Irrigation projects, works or subjects and all applications for funds provided in the Irrigation budgets should be addressed to the Chief Engineer for Irrigation. Applications for alterations or re-arrangement of budget appropriations must be transmitted through the Examiner of Public Works Accounts in form.
7	Information of completion of projects to be given to Collectors.	Executive Engineers of Divisions are to give through the Superintending Engineers timely intimation to Revenue Officers of the completion of projects or works whether new works, restorations or improvements, whereby an increased quantity of water may become available for irrigation; the quantity of water to be stated as accurately as may be practicable.
...	Executive Engineers to watch over extension of irrigation.	It is the duty of Executive Engineers of divisions to ascertain whether the spread of irrigation is in proportion to the increased quantity of water made available by Irrigation works in their divisions, and when such is not the case to confer with the Revenue Officers with a view to the removal of impediments to such extension.
8	Reasonable equality of expenditure throughout the year to be secured.	Work should be carried on regularly throughout the year whenever it is of a description not necessarily confined to a particular part of the year, as is the case with canal and channel clearances, repair of the interior parts of tank bunds, &c. The close of the official year should not affect the progress of works which are to be carried on to completion in the following year. The examination and measurement of completed work should not be postponed until the last month or so of the official year.
...	Number of works concurrently under execution.	The number of works under execution at one and the same time should not be excessive, but should be such as will admit of effective supervision and of a rate of expenditure proportioned to the grants and allotments. It is much better to complete 100 works within the year than to commence 120 works and finish only 70 within the year. All works completed within the year should invariably be measured up and paid for before its close.

Abstract of Standing Orders, Irrigation Branch, for Public Works Code—*cont.*

Nos.	Subject.	Paragraphs for Code.
9	Names of surplus works, &c.	The name *calingulah* is applicable only to those escapes or surplus weirs which have upright stones fixed in the crest or body walls and which are regulated by closing or clearing the spaces between these stones. Weirs not having upright stones for the disposal of surplus water are to be called *surplus weirs*, sluices for a similar purpose are called *surplus sluices*, weirs in connection with locks are *lock weirs*; weirs across rivers or streams for the purpose of supplying canals or channels are called *anicuts*.
10	Administration Reports.	Executive Engineers of Divisions will prepare annually, as soon after the close of the official year as possible, administration reports giving a clear and concise account of the year's operations and of all events effecting the efficiency or progress of the Irrigation works in their divisions. Detailed instructions for the preparation of these reports will be found in Standing Order 10, Irrigation Branch.
12	Unanswered Reference Lists.	Lists of unanswered references relating to Irrigation works or subjects are to be prepared and submitted monthly by Executive Engineers to Superintending Engineers, and similar lists by the latter to the Chief Engineer for Irrigation.
13	Procedure for acquisition of land.	All applications for land required for Irrigation works to be made to Revenue Officers by means of land plans and schedules. When revenue survey maps are available, the boundaries of the land required are to be laid down on the village maps (scale 16 inches to the mile) and the area to be taken up should, if to be occupied permanently, be colored red, but if only temporarily yellow, any contiguous land already acquired being colored red or yellow according to the class and cross hatched to distinguish it from the fresh land to be taken up. The lengths of the boundary lines and of diagonals are to be marked in plain figures. When revenue survey maps are not available, surveys on the same scale should be prepared. The schedules are to be in Form to be used for land registers. Printed forms are to be used and the schedules are to be sent in duplicate to the Collector, who will use one copy to convey to the Public Works Officer concerned intimation of the transfer of the land. For detached or isolated works the entries in columns 1 and 4 will generally be the same; in regard to some minor works of large projects, the entries in these columns will require to be supplemented in the column of remarks, *e.g.*— Column 1.—Western Delta, Godávari. „ 4.—Narsápur canal (distributaries). „ 12.—Chinchinada channel, Ravipad branch. The entries must serve the double purpose of providing a complete record of land acquired for Irrigation works and of supplying the Account Department with the information it requires. The same procedure is to be followed for works locally sanctioned for which land may be needed as for works under execution on estimates sanctioned by Government, and provision must be made for land compensation in the estimates for all works for which land will have to be taken up. When land is to be only temporarily occupied and not permanently acquired, the words "temporary occupation" are to be plainly written at the head of the schedule.

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FORM.

Schedule for Application for Land.

No. of 188 -8 .

Division.

Name of Project.	Number and Date of Government Order.	Amount of Estimate.	Name of Work for which Land required.	Situation of Land, Villages.	Area of Land.	Land Plan. No.	Land Plan. Plot.	Description of Land and Areas.	Assessment.	Amount of Compensation.	Date of Transfer.	Remarks.
1	2	3	4	5	6	7		8	9	10	11	12
		RS.							RS. A. P.	RS. A. P.		
Godávari Western Delta—completion estimates.	768, 14th March 1871.	12,90,640	Narsápur Canal (distributaries).	Pantapad ..	2·76	41	1	Government .. Wet .. 0·43				Chinchinada channel, Ravipad branch.
							2	Do. .. Dry .. 0·75				
							3	Do. .. Waste. 1·14				
							4	Inam .. Dry .. 0·44				
			Do. ..	Ravipad ..	3·85	42	1	Government .. Waste. 2·33				Do. do.
							2	Inam .. Garden. 0·24				
							3	Do. .. Dry .. 1·26				
			Do. ..	Atsanta ..	7·33	46	1	Government .. Wet .. 0·95				Atsanta channel.
							2	Do. .. Dry .. 1·13				
							3	Do. .. Waste. 4·15				
							4	Inam .. Garden. 0·28				
							5	Do. .. Wet .. 0·82				

N.B.—1. Separate schedules are to be prepared for each canal or principal part of a project so that all the schedules belonging thereto may be filed together.

2. Columns 1 to 7 will be filled up in the Executive Engineer's Office. Column 8 will also be filled in, but in pencil, so as to allow of revision by the Revenue Officers if necessary.

3. Generally it will be convenient to prepare separate land plans for separate villages, but if one plan includes the lands of more than one village, the plots must be separated by the village boundary line.

4. Land for any number of minor parts of one principal part of a project may be included in one schedule, but separate land plans are to be prepared for each such minor part.

5. Columns 9 to 11 will always be blank when the schedule is sent to the Collector, and these columns will be filled in by him.

6. This schedule to be sent to the Collector in duplicate, and the duplicate to be returned by him as the authority for the occupation of the land by the Public Works Officer.

Abstract of Standing Orders, Irrigation Branch, for Public Works Code—*cont.*

Nos.	Subject.	Paragraphs for Code.
13-A	Land estimates ...	For every project or work for which it may be necessary to take up land an estimate in detail showing the lengths and widths of the land required is to be prepared. This detailed estimate will include all the land required, whether Government waste or not, and will correspond with the land plan and schedule required by paragraph. An abstract land estimate will also be prepared to accompany the other abstract estimates and will show the extent and estimated value of the land of each description required for the project or work, viz., Government waste— Government land under dry cultivation. Do. do. do. wet do. Inam do. do. do. Do. do. do. dry do. and any other descriptions there may be. These particulars will be required for each separate or principal part of a considerable project, *e.g.*, for each canal, distributary, &c., but for all the parts of one canal or minor project they may be shown in one statement, provided the particulars appertaining to each part are clearly exhibited, *vide* Form. Every estimate for land must show on what information (and from whom obtained) the rates entered have been fixed.

FORM. Abstract Land Estimate showing the particulars of the amounts entered in the Work Abstract Estimate No. for land compensation.

Description of Land.	NAMES OF INDIVIDUAL WORKS OR COMPONENT PARTS OF PROJECT.										TOTAL.	
	Anicut and Head Works.		A. Canal.		B. Canal.		C. Channel.		D. Bungalow.			
	Extent.	Value.	Extent.	Value.	Extent.	Value.	Extent.	Value.	Extent.	Value.	Extent.	Value.
	ACRES.	RS.	ACRES.	RS.	ACRES.	RS.	ACRES.	RS.	ACRES.	RS.	ACRES.	RS.
Government waste ..	37·27	..	147·15	..	29·35	..	14·65	..	2·81	..	231·23	..
Do. land, dry cultivation.	15·60	312·00	7·83	195·75	..	..	..	..	..	..	23·43	507·75
Do. do. wet do. ..	..	..	..	..	16·40	1,312·00	5·43	515·85	..	..	21·83	1,827·85
Inam do. do. do. ..	..	..	..	..	..	..	..	..	..	..	..	..
Do. do. dry do. ..	1·14	34·20	2·07	82·80	..	..	..	..	..	..	3·21	117·00
(Here enter any other descriptions.)												
Total ..	54·01	346·20	157·05	278·55	45·75	1,312·00	20·08	515·85	2·81	..	279·70	2,452·60

The values of land given in this statement are based on rates obtained from statements furnished by the with his letters Nos. , dated

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Abstract of Standing Orders, Irrigation Branch, for Public Works Code—*cont.*

Nos.	Subject.	Paragraphs for Code.
14	Revenue Survey Maps and Atlas Sheets.	The scales to which maps are compiled in the Revenue Survey Office are— District maps ... ... ½ inch to the mile. Taluk do. ... ... 1 inch do. Government village maps, 16 inchs do. Zemindari do. 4 inchs do. Superintending Engineers and Executive Engineers of Divisions are to have copies of the District and Taluk Maps of their circles and divisions, so far as they have been published, always available for reference. The revenue survey maps, so far as issued, are to be used for the preparation of sketch maps in illustration of reports or projects for land plans, site plans, group maps, and similar purposes, and no details given on these maps are to be resurveyed without clear necessity. The taluk maps are to be furnished also to all officers in charge of sub-divisions and to all subordinates for the taluks in which they are employed. Supplies of village maps will be obtained by Executive Engineers from time to time as required. The atlas sheets also are to be supplied to all who can make good use of them, and generally every subordinate above the rank of Overseer should have one or more of the atlas sheets as part of his office records. The several descriptions of revenue survey maps are obtainable as follows.
	District and Taluk maps.	From the Superintendent, Madras Survey.
	Government and Zemindary village maps.	From the Collectors of Districts.
17	Restoration of masonry works due to failure of old works.	An estimate for the reconstruction of a masonry work owing to failure of the old work must be accompanied either by a plan of the old work or by such a description of it as will, with information regarding the cause of failure, enable a judgment to be formed of the suitability of the new design. Unless the failure is clearly not the result of faulty design, reconstruction on the same design is inadmissible. The Executive Engineers will be held responsible that the cause of failure is in every case fully investigated.
18	Temporary Survey Establishment.	Temporary survey establishments for the investigation of new projects will be sanctioned by Government only. Those for investigations connected with— (1) the repair of Irrigation works; (2) the restoration of Irrigation works to efficiency when they have deteriorated; (3) the determination of the capacities of tanks; (4) the grouping of Irrigation works may be sanctioned by the Chief Engineer for Irrigation. For detailed instructions see S.O. No. 18, Irrigation Branch.
20, 20-A & 20-C	Tanks affecting Railways.	Half-yearly returns of tank affecting railways are to be prepared and submitted in accordance with the detailed instructions given in S.O. Nos. 20, 20-A, and 20-C, Irrigation Branch. The returns are due shortly after the 30th June and 31st December. When the tabular statement giving complete particulars of tanks of this class has been once compiled, only an index has to be thereafter submitted.
21	Records of Irrigation works.	All Executive Officers employed upon the construction of important Irrigation works are required to draw up a record giving a complete account of the progress, difficulties and the means employed for overcoming these, &c., of such work. When the works are in more than one divi-

Abstract of Standing Orders, Irrigation Branch, for Public Works Code—*cont.*

Nos.	Subject.	Paragraphs for Code.
		sion, the divisional records will afterwards be compiled in the Superintending Engineer's Office. S. O., No. 21, Irrigation Branch, refers to this subject and to the much required history of the great systems of irrigation.
22	Preservation of health of working parties.	The prevention or restriction of epidemic sickness is of great importance to the successful execution of large works, and all such precautions and arrangements as can be readily taken and carried out for the prevention of sickness should be carefully attended to. The first necessity is the provision of latrines and the absolute prohibition of nuisances on any part of the ground near large public works in progress. For latrines all that is needed is a trench about 4 feet deep, 2 feet wide, and of a length of from 15 to 40 feet according to the number of people employed in its vicinity with pieces of plank laid across the trench at intervals and such a screen round it as may be most easily put up with the bamboo mats or other materials available. No top covering is necessary or desirable. Twice a day at any rate all the excreta deposited should be covered over with an inch or so of the earth taken out of the trench: a sweeper to be allotted to one or more latrines to attend to this and to keep the places clean. All petty superintendents are to be required to see that the latrines are used and no nuisances committed. Whenever labor is hutted on ground under the control of Public Works Officers, as also at places where conservancy establishments live, the greatest possible cleanliness must be enforced and a proper number of latrines provided. When sickness occurs among the laborers on large works and takes the form of bowel complaints by arranging for cooking or warming the food of the workpeople so that they may not have to take their rice cold, the health of the people may be secured and the spread of sickness prevented. The cost will be confined to fuel and to the loss of a portion of the working day of the coolies detailed to prepare the food. When considerable numbers of workpeople are employed on works in charge of an officer or experienced subordinate, a few simple medicines should be obtained for issue to the coolies. This is desirable even when dispensaries are not very far off, for when epidemic sickness is prevalent simple remedies administered at once are of great value in checking disease and in affording time for the application of more complete treatment.
23	Allotments for incomplete surveys.	In applying for allotments for incomplete surveys the following information is to be given:—(1) the original sanction for the survey, (2) the amount of the estimate, (3) the expenditure to the end of the past official year.
25	Grouping of Irrigation works.	Irrigation works other than the great and minor systems are grouped under four classes or sub-divisions— (*a*) Works supplied by rivers or streams. (*b*) Groups of tanks, rainfed. (*c*) Isolated tanks, rainfed. (*d*) Miscellaneous, including spring ponds and channels. For all groups under (*a*) and (*b*) an illustrative group map is required to be prepared and maintained, but one or more groups may be shown on the same map provided, the normal dimensions, 30 by 22 inches, are adhered to. For isolated tanks a map for a convenient tract of country will suffice. Revenue survey maps, when available, are alone to be used for group maps. For forms and detailed instructions see S. Os., 25 and 25-A, Irrigation Branch.

Abstract of Standing Orders, Irrigation Branch, for Public Works Code—*cont.*

Nos.	Subject.	Paragraphs for Code.
26	Emergent Works ...	Under Chapter 3 of the Code, paragraphs 294 (*c*) and 337 (*d*), Superintending and Executive Engineers are empowered to sanction emergent repairs, and these powers are to be exercised under the following rules:— (1.) A definite sanction is to be given and an appropriation made without delay. Whoever ascertains on the spot that work is emergently necessary must also ascertain its quantity and its probable cost, and sanction is to be given for this amount at once and an appropriation obtained. (2.) This power of sanction is confined to work which cannot be postponed without risk of loss of revenue or damage, and it is limited to the time during which the emergency continues. The closing of a breach in a tank-bund or supply-channel is an emergent work during the continuance of the rains, but, when the rains are over and nothing can be done to benefit the cultivation of that season, the repairs required cease to be emergent and should be provided for by regular estimate under the rules. (3.) There must be a reasonable probability of the work to be done being effectual. To close a breach in a tank-bund, when, from the general state of the bund and the absence of adequate surplus works, another breach at the same place or elsewhere would be probable would be improper, but it would be quite proper to clear away the ends of the bund to a sufficient length to ensure the water not rising too high and to then close the breach, both works being included in an emergent estimate. (4.) The value of the work as regards revenue to be secured and crops to be saved must be in reasonable proportion to the outlay required, any expenditure short of the amount of revenue involved may properly be spent on emergency on work which will be of permanent value, and there will be cases in which a larger sum may be properly spent.
28	Decimal Scales ...	For plans of masonry works the vertical heights of longitudinal sections and the horizontal and vertical measurements of cross sections, only decimal scales may be used.
30 30A	Abstract Rainfall Registers. ...	The form of register is given in Appendix; the amount of information will vary for different stations according to the means of observation available at all stations; the monthly fall and the maximum fall in 24 hours will be shown. Further details should be recorded wherever there is a Public Works Office, and at anicuts or regulating works at which there is a resident Superintendent. The rainfall registers at Public Works stations are to be examined from time to time and initialled by Superintending and Executive Engineers.
31	Investigation of Conduct of Irrigation Branch Special Establishments.	The following procedure is prescribed for inquiries into the conduct of members of the conservancy, water-regulation, or navigation establishments. I.—The charges to be recorded in detail. II.—The reports or other papers connected with the charges to be enumerated. III.—The witnesses examined to be enumerated. IV.—A summary of the reply or defence made by the accused to be recorded. V.—The officer making the investigation to record a review of the result of the investigation and to state

Abstract of Standing Orders, Irrigation Branch, for Public Works Code—*cont.*

Nos.	Subject.	Paragraphs for Code.
		his opinion as to the result in respect of each distinct charge. VI.—If the officer making the investigation be not in charge of the division in which the accused is serving, the papers will be transmitted to the Divisional Officer who will record his opinion on the several charges and his decision in the case. VII.—In all cases the officer disposing of the case to furnish the accused, if punishment be awarded, with a copy of— (*a*) the charges considered proved; (*b*) the opinion on the charges (V); (*c*) the decision. VIII.—A notice of the misconduct and of the punishment awarded to be in all cases entered in the Service Register. IX.—All previous punishments awarded to be noticed in the review or opinion (V) immediately after the opinion or the charges just investigated. The entry should be somewhat thus :— "The Service Register" shows the following previous punishments :— Reprimanded on the for Fined on the for Suspended on the for and permitted to return to duty with a reprimand. *N.B.*—Suspensions removed without punishment should not be recorded. Reduced to for X.—An appeal will lie to the Superintending Engineer, whose decision will be final. The record as above prescribed will be sent to the Superintending Engineer when required and will be returned to the Divisional Office with a copy of the decision on the appeal.
33	Registers of Water-levels.	At every anicut and regulating work at which a resident conservancy establishment is maintained the water-levels must be regularly registered. The registers must show clearly— (1) water-levels above and below an anicut. (2) water-levels above and below each head sluice or other regulating work. (3) the area of vent open at each head sluice or regulator. For type forms of registers and for detailed instructions see Standing Order 50, Irrigation Branch.
34	Minor Orginal Works, Repairs and Management.	For the systematic utilization of the lump-sum grants allotted to divisions in Schedules B and C of the Budget for Irrigation and Navigation and Agricultural Works, Divisional Engineers are required to draw up annually a scheme of expenditure for the approval of the Superintending Engineer of the Circle and Collector of the District and to take care that a sufficient number of estimates are prepared and submitted for sanction before the commencement of the official year to ensure the steady progress of the works to be carried out from these grants. The estimates for Minor Original Works should always amount to at least the sum allotted and, as the latter is usually of no great amount, while the need of improvements of the kind provided for by the grant under this head is great, the lapse of any portion of the money at the close of the year must be avoided.

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Abstract of Standing Orders, Irrigation Branch, for Public Works Code—*cont.*

Nos.	Subject.	Paragraphs for Code.
		The Repair grants will be distributed— *1st*, to annual maintenance estimates; *2nd*, to special repair estimates; and a percentage, usually of about one-fourth of the grant, should be reserved for expenditure in the last quarter of the year to meet unforeseen requirements of works which may sustain damage during the monsoon rains. By the 1st March in each year at latest estimates for special repairs under the several main heads sufficient to absorb at least half the grant should have been submitted to the Superintending Engineer for sanction. Immediately after the 1st April, and in no case later than the 15th April, Divisional Engineers will forward to the Superintending Engineer a list showing the incomplete special repair works, the sanction for which does not lapse under the rules in paragraph , and the amount of the appropriation required to complete each one. Such works will be gone on with in anticipation of the receipt of the appropriations, the Superintending Engineer's sanction for which should reach the Divisional Engineer before the close of April. *Irrigation Works* which are not isolated are required to be dealt with by groups. Every irrigation work taken up for special repair must be made safe and efficient and must therefore have all its requirements ascertained and attended to. In selecting works to be taken up for repair, the relative importance of individual works or particular groups of works, whether as regards the revenue involved or their effect on other works to which they may be a source of danger should be considered. *River embankments* must as a rule be brought to the normal fixed margin above maximum flood-level from their upper ends downwards, and, when once brought to proper level and section, they should be so maintained by annual estimates. The raising of embankments to their proper level in the lower miles before the upper miles have been made safe is to reverse the proper order of work. *River conservancy.*—Under repairs are included— (1) nanel or wild-cane planting for the protection of river banks, the regulation of the margin of the river, the maintenance of the proper point of division between rivers at their bifurcation and for other similar purposes; (2) the construction of groynes with perishable materials; (3) the construction of modussils and other temporary protection to river banks; (4) Grass revetments (nanel usually). (5) the restoration to efficiency of permanent works which have suffered injury or wear and tear. River conservancy is a rule confined to the deltaic or embanked parts of rivers; when from exceptional circumstances other parts of rivers have to be conserved apart from the requirements of irrigation works upon them, the work considered necessary will in the first instance be deemed an original work and will be dealt with under the rules for such work. Similarly the construction of permanent groynes, whether of stone or other durable material and revetments of masonry, stone, concrete, &c., whether for the protection of river banks, or for the establishment of spurs at the bifurcation of rivers, are not chargeable to Repairs, but to Original Works.

Abstract of Standing Orders, Irrigation Branch, for Public Works Code—*cont.*

Nos.	Subject.	Paragraphs for Code.
		Divisional Officers are required, when inspecting connected irrigation works, with a view to determine their requirements, to consider whether the continued maintenance of any individual work of the group is necessary and desirable, or whether all the irrigating duty desired or expected from it could not be more efficiently or economically done in some other way, or by some other tank or channel. Such consideration is more especially necessary when the expenditure found requisite to make the work safe and efficient and the past cost of maintenance are out of proportion to the revenue. Divisional Officers should employ their Assistants and Subordinates in carrying out regularly and systematically instructions issued for their guidance, and, except for emergent work, no estimates for special repairs to works not included in the scheme of outlay for the year should be prepared by them without the concurrence of the Divisional Engineer. Divisional and Sub-divisional Officers should encourage villagers to make known their views and wishes at all times, and especially when the tanks or channels in which they are directly interested are under inspection. At such times moreover much may be done to induce the Village Officers to look after the works and to stop practices which are injurious to them. Inspection registers will be of great value in the management of irrigation works and in preparing and discussing the scheme of expenditure for any year. They should be kept by taluks generally and for connected works by groups. In the latter case the greater part of the left page will be a transcript from the group lists, and thereafter the columns to be added would be those required to show the hydraulic details which have to be given in support of all estimates, together with a wide column for remarks. It is as easy to write notes in such a register as in any other book, and thus a permanent record of value for reference at all times and invaluable to officers on first joining a division will be gradually compiled.
36	Irrigation Registers ...	The forms approved by Government are given in Proceedings, Board of Revenue, No. 154, of the 29th January 1880. In the registers to be supplied by the Revenue Officers to the Officers of the Public Works Department only those irrigation works which are classed as Imperial will be included. Divisional Engineers must take care that the registers of works in their divisions are complete, and in their annual administration report at the end of the part relating to irrigation works they will show the exact state of their registers and up to what date they have been written up.
47	Details of Tanks ...	The details of information regarding all tanks, whether isolated or in groups, in charge of the Public Works Department, are given in the form appended to Standing Orders, Irrigation Branch, No. 47. Every tank estimate should be accompanied by full information in this form for the tank concerned and for, at any rate, all the considerable tanks above it. Superintending Engineers will exercise their discretion as to whether it will be advisable to sanction an estimate for a tank belonging to a group until the circumstances of the group generally have been ascertianed, and until therefore it can be determined what tanks classed as Imperial should continue to be maintained. For divisional record a book or books, by groups in each taluk or other convenient unit, should be made up containing a sufficient number of printed forms for the posting

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Abstract of Standing Orders, Irrigation Branch, for Public Works Code—*cont.*

No.	Subject.	Paragraphs for Code.
		information given with each estimate. Superintending Engineers should maintain a similar record for reference.
38	Inspection Notes ...	The inspection notes of Superintending Engineers (*vide* paragraph 288) should be written on half margin and should show the division and sub-division in which each work inspected is situated and also the date of inspection. The half page for the remarks of the Chief Engineer for Irrigation should be left entirely blank throughout.
39 and 39-A	Water Diagrams ...	For all important anicuts and main channels for which water registers are maintained water diagrams are to be prepared annually and will be accompanied by carefully-prepared and complete information of discharges, water distribution, irrigating duty of the water used, and other essential details. The detailed instructions are contained in Standing Orders Nos. 39 and 39-A, Irrigation Branch.
	Classified lists of Systems for which Capital and Revenue Accounts are kept.	Separate lists are required, for the several main heads under Irrigation Works, to be maintained for all systems of irrigation for which Capital and Revenue Accounts are kept (*vide* Forms in Appendix). When additions are made to the number of primary or secondary distributaries or to that of main or branch drains after the compilation of the lists, the names will be inserted in the proper positions, and for primary distributaries the number to be noted will be that of the previous channel with the letter A appended for the first additional channel, B for the second, and so on. The numbers once given are not to be altered unless in connection with extensive general revision of the arrangements of a system, in which case of course fresh lists for the main heads concerned must be prepared. For every canal or principal channel classed under (2) Main Canals and Branches; for every primary distributary classed under (3) Distributaries, together with its branches (secondary distributaries); and for every drain classed under (4) drainage and protective works, together with its branches (secondary drains), a list of component works is required—Forms , Appendix . Tertiary distributaries and tertiary drains will be treated as component works of the secondaries to which they appertain and will not otherwise appear in the lists. Similarly field channels for direct irrigation from canals will be treated as component works of the canals under O. Miscellaneous. In order to prevent mistakes primary distributaries will be entered simply as channels, *e.g.*,— Peddapudi channel. Secondary distributaries as branch channels, *e.g.*,— Itakota branch channel. Smaller channels will be called— (1) Minor channels (tertiaries, &c.) (2) Field channels.
	Minor Systems ...	For the smaller systems of irrigation similar lists in forms adapted to the circumstances (*vide* Forms 1 to , Appendix , are to be maintained).

FORM No. 1, APPENDIX

GODAVARI DELTA, EASTERN SECTION.

List of Canals classed under main head (2) *Main Canals and Branches.*

Position of Head of Canal.	Names of Canals.	Length of Canals.	Remarks.
M. CHS.		M. CHS.	
...	Main	4 12	*N.B.*—The position of head of canal is referred to the general mileage of the section of the delta which is measured from head of main canal.
0 65	Bank	38 40	
4 12	Cocanada	27 48	
4 12	Sámalkót	34 28	
6 45	Mundapetta	13 35	Head on Cocanada Canal.
13 3	Coringa	24 37	
21 69	Injeram	11 9	Head on Coringa Canal.
	Total length ...	153 49	

FORM No. 2, APPENDIX

GODAVARI DELTA, EASTERN SECTION.

List of Channels classed under main head (3) *Distributaries.*

No. of Channel.	Position of Head General Mileage.	Names of Channels supplied from Canals.		Names of Branch Channels.	Length of Channels.	Remarks.
				Bank Canal.		
	M. CHS.				M. CHS.	
1	6 78	Madiki ...	L.B.	......	5 20	*N.B.*—L.B. signifies that the off-take is on left bank of canal.
2	8 59	Chopella ...	L.B.	......	5 42	
				Narsipudi ...	1 15	
3	9 36	Mulastanum ...	L.B.	......	5 25	
4	11 43	Janada ...	L.B.	......	4 69	
				West side ...	0 79	
				Alanur, No. 1 ...	1 3	
				Do. „ 2 ...	1 14	
				Do. „ 3 ...	2 5	

And so on.

FORM No. 3, APPENDIX

GODAVARI DELTA, EASTERN SECTION.

List of Drains classed under main head (4) *Drainage and Protective Works.*

Position of Head General Mileage.	Length of Main Drains.	Names of Main Drains.	Infall of Branches.	Names of Branch Drains.		Length of Branch drain.	Remarks.
M. CHS.	M. CHS.		M. CHS.			M. CHS.	
18 51	17 37	Biccavole ..	1 70	Oolapilly	R.B.	0 30	R.B. signifies that infall is on right bank of main drain; L.B., left bank head of main drain on Sámalkót Canal.
			9 40	Vettapalem ..	L.B.	2 29	
			10 20	Sarpaveram ..	L.B.	2 40	
			13 50	Yelairu	L.B.	6 15	
			14 0	Kaikavole ..	R.B.	3 1	
7 23	26 40	Tooliabaga ..	..	....	..	..	
			3 30	Thapeswaram surplus	R.B.	0 5	Head on Cocanada Canal.

And so on.

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FORM No. 4, APPENDIX

GODAVARI DELTA, CENTRAL SECTION.

List of Component Works of Canals classed under (2) *Main Canals and Branches.*

No.	Sub-heads.	Items.	Sides L or R.	Mileage.	——
1	2	3	4	5	6
		Main Canal.		M. CHS.	
1	D. Regulators ...	Head sluice (Bobberlunka) ...	...	...	
2	I. Navigation Works.	Head lock	...	...	
			...	8 0	Canals ends.
		Gunnaram Canal.			
1	I. Navigation Works.	Ralli lock...	...	8 4	
2	Do. ...	Do. lock weir	...	8 15	
3	I. Navigation Works.	Lascars' sheds	R.	8 15	
4	Do. ...	Ramchendrapur lock	...	14 55	
5	Do. ...	Do. lock weir ...	...	14 56	
6	Do. ..	Do. lock sheds ...	L.	14 56	
7	F. Other C. D. Works.	Syphon culvert at Gopalapuram.	...	17 7	
8	G. Bridges ...	Bridge Gopalapuram	...	17 20	
9	O. Miscellaneous.	Field sluice	L.	20 29	
	* * *	* * * *			
18	H. Escapes ...	Surplus weir Bellempudi ...	L.	25 55	
19	K. Buildings ...	Office shed, Gunnaram	L.	26 79	Amalapur road.
20	G. Bridges ...	Bridge	...	27 1	
21	F. R. and H. T. Works.	Gunnaram aqueduct	...	27 20	

And so on.

FORM No. 1, APPENDIX

TAMBRAPARNI RIVER IRRIGATION.

List of Main Channels.

GROUP.		Names of Anicuts.	Names of Main Channels.	Lengths of Main Channels.	Bank of River.	Remarks.
No.	Section.					
				M. CHS.		
1	...	Kodamelalaghiyen ...	......	...	...	
	A.	......	Left bank (east) ...	? ?	L.B.	
	B.	......	Right do. (west) ...	? ?	R.B.	
2	...	Nathiyuni	Nathiyuni	? ?	L.B.	
3	...	Kannadien	Kannadien	? ?	R.B.	
4	...	Ariyanaikapuram ...	Kodagan	? ?	L.B.	
5	...	Pahlavur	Paliem	? ?	R.B.	
6	...	Suttamullay	Tinnevelly	? ?	L.B.	
7	...	Maradur	......	...	...	
	A.	......	Left bank (east) ...	? ?	L.B.	
	B.	......	Right do. (west) ...	? ?	R.B.	

FORM No. 2, APPENDIX

Tambarparni River Irrigation.

List of Distributaries.

No. of Channel	Position of Head.	Names of Channels supplied from Main Channels.	Names of Branch Channels.	Length of Channels.	Remarks.
Kodamelalaghiyen Left Bank Channel.					
	M. CHS.			M. CHS.	
...	...	(Here enter primaries). ...	(Here enter secondaries)	...	
Kodamelalaghiyen Right Bank Channel.					
...	...	(Here enter primaries). ...	(Here enter secondaries)	...	
Nathiyuni Channel.					
...	...	(Here enter primaries). ...	(Here enter secondaries)	..	

No. 65. Order thereon, 30th May 1881, No. 1,355 W.

The Government confirm the several disposals as suggested by the Committee.

2. The Chief Engineer for Irrigation will now, in accordance with these decisions, frame, for submission to the Code Committee, the forms for his branch to be included in Appendix L, paragraph 958, of the Code, also the draft of such proposed additional paragraphs (or modifications of existing ones) to Chapter XVII of the Government of India Code as may be required for its better adaptation to the requirements of the department in this Presidency.

3. In regard to the treatment of tanks situated above railways, as also others forming groups or series throughout the Presidency, no rules other than those now existing are for the present needed, but these rules will not be codified without the further orders of Government.

4. No immediate action will be taken in regard to the professional circulars of the Irrigation Branch, though when opportunity offers these should be recompiled in the form of a manual of references for officers of the department. They will in this shape afford useful hints though not having the force of Government Orders.

(True Extract.)

Captain, R.E.,
Ag. Under Secy. to Govt., P.W.D.

To Superintending Engineers.
,, Superintendents of Works.
To the Chief Engineer for Irrigation.
,, Consulting Engineer for Railways.
,, Secretary, Public Works Code Committee.

Exd. J. W. Fischer.
Spare Copies

GENERAL.
ESTABLISHMENT.

Govt. of 1881 Madras.

PUBLIC WORKS.

To

SUPERINTENDING ENGINEERS,
&c., &c., &c.

Dated May, 30th

Issued

Recd. *Encl.*

G. O., 30th May 1881, No. 1,355 W.

MAY.
Nos. 64-65.

Standing Orders, Irrigation Branch, for Public Works Code.—Confirms the several disposals suggested by the Committee in regard to Colonel Mullins' abstract of —.

1355

Memo: of disposals agreed to in Committee of 16th May 1881 in regard to Colonel Mullins' abstract of S. O. Irrigation Branch for P. W. Code.

(1) Size of Plans.

No additions required to paras 987 to 996 of Code.

(2) Positions of Irrigation Works.

Such slight additions as here needed may be dealt with by a S. O. No. 990 a of the Code.

(3) Bridle paths on river channel, and large channel banks; also width of Bridges and bund way to be allowed for Bridges over different classes of Canals

as also gradients of approaches to bridges, banks, &ca.

To be dealt with in Chapter XVII of Code.

(4) Progress Reports.

To be included under Code Forms Appendix Ia, para 958, see also G. O. No 1064 I, 23rd April 1881.

(5) Date of submission of Irrigation Projects.

Not required.

(6) Correspondence

Ditto.

(7) Information of completion of projects to be given to Collectors.

To be dealt with in

Code

PS 1385/4

Code Chapter XVII.

(No number) Executive Engineers to watch over extensions of Irrigation

Ditto.

(8) Reasonable equality of expenditure throughout the year to be secured.

Not required as already sufficiently dealt with in Code para 1140 &ca.

(No number) Number of works concurrently under execution

Not required.

(9) Names of surplus works &ca

To be dealt with in Chapter XVII of Code.

(10) Administration Report

Not required the last published Administration Report being always the best guide to what is needed.

(12) Unanswered reference list.

To be included under Code forms para 958.

(13) Procedure for the acquisition of land.

No further textual instructions required than those already given in paras 1152 and 1153 of Code forms to be included under Appendix to para 958.

(13 A) Land Estimates

Ditto.

(14) Revenue Survey maps and Atlas sheets.

Any instructions specially needed on this subject for the Irrigation Branch in addition to those conveyed in paras 304, 311, 993, 994, 995, 1051 and 1052 to be given in Chapter XVII.

(17) Reconstruction of masonry works due to failure of old works.

May be dealt with by adding the few words required to para 970 of the Code or by a para in Chapter XXII

(18) Temporary Survey Establishments.

Such additions as may be needed to para 117 of the Code to afford the Chief Engineer for Irrigation and Superintending Engineers the requisite latitude in certain cases to be given in the form of an S.O.

20
20 A
20 C } Tanks affecting Railways.

Question to be reserved as more or less directly connected with that relating to tank maintenance generally.

(21) Records of Irrigation works.

May be dealt with as an addition to para 1171 of the Code by an S.O.

(22) Preservation of the health of working parties.

Not required as being dealt with in appendix W of the Code.

(23) Allotments for incomplete Surveys

See ante No. 18.

(25) Grouping of Irrigation works.

To be dealt with in Chapter XXII

(26) Emergent works

Not required as having been already sufficiently disposed of in para 1169 of the Code.

(28) Decimal scales.

~~No additions required.~~

Such additions as may

be

be needed to the instructions laid down in para 989 &c. of the Code may be given in Chapter XVII.

30 } Abstract Rainfall
30A } Registers.

To be dealt with in Code forms Appendix I to para 958.

(31) Investigation of conduct of Irrigation Branch Special Establishment

Not required as the subject is sufficiently dealt with in paras 473 to 479 of the Code.

(33) Register of Water levels.

To be disposed of in connection with appendix I to para 958.

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(34) Minor works Repairs and management

Question to be reserved see ante 20, 20A & 20B though some portions may be provisionally dealt with in Chapter XVII.

(36) Irrigation Registers

To be reserved as above.

(37) Details of Tanks

May be dealt with in Chapter XVII and in appendix I.

(38) Inspection notes.

Not required as being already sufficiently dealt with in Code para 288

39
39A } Water diagrams

To be dealt with in appendix to para 958.

(No number) Classified list of systems for which Capital and Revenue Accounts are kept.

To be dealt with in Chapter XVII and in Appendix to.

(No number) Minor Systems

To be dealt with in appendix to.

R. H. Sankey Colonel R.E. President

Lieut. Col. R.E.
Major R.E. } Members.

P. W. C. No 3204

E – 1

Recd: 30 May 81

R-30-5-81

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13535/16

Abstract of S.Os Irrigation Branch for P.W. Code.

No.	Subject	Paras for Code.
1 1A.	Size of Plans	vide revision of S.O. Code 14
2.	Positions of Irrigation works.	The positions of irrigation works, when some well known town or river is not shown on the plans, is to be indicated by giving the latitude and longitude.
3.	Bridle paths on river, canal & large channel banks.	The top width of river, canals, and large channel embankments should be sufficient to allow of easy inspection on horseback. A ~~clear~~ width of 6 feet is the minimum required for river and canal embankments and this width should be allowed for one bank of larger channels. ~~A clear headway of not less than [illegible] of feet to be kept clear of~~ Branches of trees to be cleared away so as to give a clear headway of 9 feet as a minimum
4.	Prog. Reports	The forms of Progress Reports are given in Appendix. For detailed instructions see Standing Order No. 4 Irrigation Branch. Annas and pies to be omitted, the entries being made to the nearest Rupee.
4A	do.	
5	Date of Submission of Irrigation Projects	Irrigation projects should as a rule be submitted to the Chief Engr. for from April to Sept. inclusive, it being difficult to find opportunity for their examination and review during the other months of the year.
6.	Correspondence	All correspondence relating to irrigation projects, works or subjects and all applications for funds provided in the Irrigation Budgets should be addressed to the Chief Engineer for Irrigation. Applications for the alterations or rearrangement of Budget allotments

must be transmitted through the Examiner of Stock in Form 17

7. Information of completion of projects to be given to Collectors

Executive Engineers of Divisions are to give, through the Supt Engineers, timely intimation to Revenue officers of the completion of projects, or works whether new works restorations or improvements, whereby an increased quantity of water may become available for irrigation. The quantity of water to be stated as accurately as may be practicable. ~~It is~~

" Executive Engineers to ~~see that~~ watch over extension of irrigation.

It is the duty of Executive Engineers of Divisions to ascertain whether the spread of irrigation is in proportion to the increased quantity of water made available by irrigation works in their Divisions, and when such is not the case to confer with the Revenue officers with a view to the removal of ~~obstacles~~ impediments to such extension

8. Reasonable equality of expenditure throughout the year to be secured

~~Throughout the~~ Work should be carried on regularly throughout the year whenever it is of a description not necessarily confined to a particular part of the year as is the case with Canal and Channel clearances, repairs of the interior parts of Tank bunds &c. The close of the Official year should not affect the progress of works which are to be carried on to completion in the following year. The examination & measurement of completed work should not be postponed until the last month or so of the Official year –

" 9 Number of works concurrently under execution.

The number of works under execution at one and the same time should not be excessive but should be such as will admit

R-30-3-87

a rate of of effective supervision, and of the expenditure proportioned to the grants and allotments. It is much better to complete 100 works ~~[illegible]~~ within the year than to commence 120 works and finish only 70 within the year. All works completed within the year should invariably be measured up and paid for ~~[illegible]~~ before its close.

9 Names of surplus works &c.

The name *Calingulah* is applicable only to those ~~escapes or surplus weirs~~ which have upright stones fixed in the crest or body walls, and which are regulated by closing or clearing the spaces between these stones. Weirs, not having upright stones, for the disposal of surplus water are to be called *surplus weirs*; sluices for a similar purpose are called *surplus sluices*; weirs in connection with locks are *lock weirs*. Weirs across rivers or streams for the purpose of supplying canals or channels are called *Anicuts*.

10 Administration Reports.

Executive Engineers of Divisions will prepare annually as soon after the close of the official year as possible Administration Reports giving a clear and concise account of the year's operations and of all events affecting the efficiency or progress of the Irrigation works in their Divisions. Detailed instructions for the preparation of these Reports will be found in Standing order 10 Irrigation Branch.

The standing Order is dated 1873 – 6 years & needs revision. Every change of Classification involves revision so I think it is submitted to the Board

12 Measurement &c Lists.

Lists of measurement & Journals relating to Irrigation works or subjects are to be prepared and submitted monthly by Executive Engineers to Superintending Engineers and similarly by the latter to the Chief Engineer for Irrigation

13 ~~13A~~ Procedure for acquisition of land

All applications for land required for Irrigation works ~~are~~ to be made to Revenue officers by means of land plans and schedules. When Revenue Survey maps are available the boundaries of the land required are to be laid down on the village maps (scale 16 inches to the mile) and the area to be taken up should ~~land coloured~~ yellow, any contiguous land already acquired being coloured red) – The lengths of the boundary lines and of diagonals ~~should~~ are to be marked in plain figures – When Revenue Survey maps are not available, survey maps on the same scale should be prepared. The schedules are to be in ~~the~~ form ~~directed in G.O. No. 1617, 20 June 1892 vide~~ Form , to be used for land registers. Printed forms are to be used and the schedules are to be sent in duplicate to the Collector, who will use one copy to convey to the P.W. officer concerned intimation of the transfer of the land. For detached or isolated works the entries in columns 1 & 4 will generally be the same; in regard to some minor works of large projects the entries in these columns will require to be supplemented in the column of remarks; e.g.

Col. 1 – Western Delta Godavari
" 4 – Narsapur Canal (Distributaries)
" 12 – Chinchinada Ch. [illegible]

if to be ~~acquired~~ occupied permanently be coloured red, but if only temporarily ~~be~~

or yellow according to the class & crop cultivated to distinguish it from the fresh land to be taken up

[illegible] these revised the ~~with the addition of a column~~ form so as to give all necessary particulars.—

Form.

Schedule for application for Land.

No. of 188– 8—22

______ Division

Name of Project	No. & date of G.O.	Amount of Estimate	Name of work for which land required	Situation of land Villages	Area of land	Land Plan No.	Land Plan Plot	Description of land and areas		[illegible]	Amount of Compensation	Date of Transfer	Remarks
1	2	3	4	5	6	7		8		9	10	11	12
Godavari Western Delta – Completion Estimates	768 14/3/71	1290,640	Narsapur Canal (Distributaries)	Pentapad	2.76	41	1	Govt. – wet	0.43				Chinchinada & Ravipad branch.
							2	" – dry	0.75				
							3	" – waste	1.14				
							4	Inam dry	[illegible]				
			do.	Ravipad	3.83	42	1	Govt. waste	2.33				— do —
							2	Inam – Garden	0.24				
							3	do dry	1.26				
			do.	Atsanta	7.33	46	1	Govt. – wet	0.95				Atsanta Channel
							2	– dry	1.13				
							3	– waste	4.15				
							4	Inam Garden	0.28				
							5	" wet.	0.82				

NB. 1. Separate Schedules are to be prepared for each Canal or principal part of a project, so that all the Schedules belonging thereto may be filed together

2. Columns 1 to 7 will be filled up in the Executive Engineers Office – Col 8 will also be filled in, but in pencil, so as to allow of revision by the Revenue Officers if necessary.

3. Generally it will be convenient to prepare separate land plans for separate villages but if one plan includes the lands of more than one village, the plots must be [illegible] separated by the village boundary line

4. Land for any number of minor parts of one principal part of a project may be included in one schedule, but separate land plans are to be prepared for each such minor part.

5. Cols 9 to 11 will always be blank when the Schedule is sent to the Collector, and these columns will be filled in by him

6. This Schedule to be sent to the Collector in Duplicate, and the Duplicate to be returned by him as the authority for the occupation of the land by the P.W. Officer

Form. Schedule for application for Land. No. of 188–8–22

__________ Division

Name of Project	No. & Date of G.O.	Amount of Estimate	Name of Work for which land required	Situation of Land Villages	Area of Land	Land Plan No.	Land Plan Plot	Description of land and areas		Age of me[illegible]	Amount of Compensation	Date of Transfer	Remarks
1	2	3	4	5	6	7		8		9	10	11	12
Godavari Western Delta Completion Estimates	768 14/3/71	1290,640	Nasapur Canal (Distributaries)	Pentapad	2.76	41	1	Govt. – wet	0.43				Chinchinada ch. Rasipad branch.
							2	" – dry	0.75				
							3	" – waste	1.14				
							4	Inam dry	~~[illegible]~~				
			do.	Rasipad	3.85	42	1	Govt. waste	2.33				— do —
							2	Inam – Garden	0.24				
							3	do dry	1.26				
			do.	Atsanta	7.33	46	1	Govt. – wet	0.95				Atsanta Channel
							2	– dry	1.13				
							3	– waste	4.15				
							4	Inam Garden	0.28				
							5	" wet.	0.82				

NB. 1. Separate Schedules are to be prepared for each Canal or principal part of a project; so that all the Schedules belonging thereto may be filed together

2. Columns 1 to 7 will be filled up in the Executive Engineers Office – Col 8 will also be filled in, but in pencil, so as to allow of revision by the Revenue Officers if necessary.

3. Generally it will be convenient to prepare separate land plans for separate villages but if one plan includes the lands of more than one village, the plots must be [illegible] separated by the village boundary line

4. Land for any number of minor parts of one principal part of a project may be included in one schedule, but separate land plans are to be prepared for each minor part.

5. Cols 9 to 11 will always be blank when the Schedule is sent to the Collector, and these columns will be filled in by him

6. This Schedule to be sent to the Collector in Duplicate, and the Duplicate to be returned by him as the authority for the occupation of the land by the P.W. Office

The ~~[illegible]~~ entries must serve the double purpose of providing a complete record of land ~~taken~~ acquired for irrigation works, and of supplying the Account Dept. with the information it requires

The same procedure is to be followed for works locally sanctioned, for which land may be needed, as for works under execution on estimates sanctioned by Government, and provision must be made for land compensation in the Estimates for all works for which land will have to be taken up.

When land is to be only temporarily occupied and not permanently acquired, the words "Temporary Occupation" are to be plainly written at the head of the schedule

14

8A Land estimates

For every project or work for which it may be necessary to take up land an estimate in detail showing the lengths and widths of the land required is to be prepared. This detailed estimate will include all the land required, whether Government waste or not, and will correspond with the land plan and schedule required by para .

An abstract land estimate will also be prepared to accompany the other abstract estimates and will show the extent and estimated value of the land of each description

Form   Abstract Land Estimate showing the particulars of the amounts entered in the work Abstract [illegible] estimate No.   for land compensation

Description of land	Names of individual works or component parts of project										Total	
	Ancient Headworks		A. Canal		B. Canal		C. channel		D Bungalow		extent acres	value Rupees
	extent acres	value Rupees	extent acres	value Rupees	extent acres	value Rupees	extent acres	value Rupees	extent acres	value Rupees		
Government waste	37.27	—	147.15	—	29.35	—	14.65	—	2.81	—	231.23	—
do land dry cultivation	15.60	312.00	7.83	195.75	—	—	—	—	—	—	23.43	507.75
do do. wet cultivation	—	—	—	—	16.40	1312.00	5.43	515.85	—	—	[illegible]	[illegible]7.85
Inam do. do. do	—	—	—	—	—	—	—	—	—	—	—	—
do do. dry do.	1.14	34.20	2.07	82.80	—	—	—	—	—		3.21	117.00
(here enter any other description)												
	54.01	346.20	157.05	278.55	45.75	1312.00	20.08	515.85	2.81	—	279.70	2452.60

The values of land given in this statement are based on rates were obtained from statements furnished by the ______ with his letters No.   dated required for the project or work, by

Government waste
" land under dry cultivation.
" do do wet do.
Inam do do do do.
" do do dry do.

and any other descriptions there may be.

These particulars will be required for each separate or principal part of a considerable project; e.g. for each Canal, Distributary &c, but for all the ~~works~~ parts of one Canal or minor project they may be shown in one Statement, provided the particulars appertaining to each part are clearly exhibited

vide form

Every estimate for land must show on what information (and from whom obtained) the rates entered have been fixed

---

14 Revenue Survey Maps & Atlas Sheets

17

~~Superintending Engineers and Executive Engineers of~~

~~Division Headquarters~~

The scales to which maps are compiled in the Revenue Survey Office are;

District maps	½ inch to the mile
Taluq do	1 do do.
Govt. Village do.	16 inches do.
Zemindary do.	4 do do.

Superintending Engineers and Executive Engineers of Divisions ~~should~~ are to have copies of the District and Taluq maps of

their Circles and Divisions,
so far as they have been published,
always available for reference.
The Revenue Survey maps, so
far as published, are to be used
for the preparation of Sketch
maps in illustration of Reports
or projects, for land plans,
site plans, ground maps, and similar
purposes, and no det[illegible] given
on these maps are to be resur-
veyed without clear necessity.
The Taluq maps are to be furnished
also to all ~~Subordinate~~ Officers
in charge of Subdivisions and
to all Subordinates for ~~the~~ Taluqs
in which they are employed.
Supplies of Village maps will
be obtained by Executive Engineers
from time to time as required.
The Atlas Sheets also are to be supplied
to all who can make good use
of them and generally every
Subordinate above the ~~grade~~ rank
of Overseer should have ~~them~~
one or more of the Atlas Sheets
as part of his Office records.
The several descriptions of Revenue
Survey maps are obtainable as
follows.

17.	Reconstruction of masonry works, due to failure of old works	An Estimate ~~for the~~ reconstruction of a masonry work, owing to failure of the old work, ~~though~~ ~~chargeable to repairs when the duty of the work is not materially altered~~, must be accompanied either by a plan of the old work or by such a description of it as will, with information regarding the cause of failure, enable a judgment to be formed of the suitability of the new design — unless the failure is clearly not the result of faulty design, reconstruction on the same design is inadmissible. Executive Engineers will be held responsible that the cause of failure is in every case fully investigated.
18.	Temporary Survey Establishment.	Temporary Survey establishments for the investigation of new projects ~~for~~ will be sanctioned by Government only. Those for ~~[illegible]~~ investigations connected with (1) the repairs of irrigation works (2) the restoration of irrigation works to efficiency when ~~permitting~~ ~~in the case of tanks to~~ they have deteriorated (3) the determination of the capacities of tanks (4) ~~the~~ proposals of irrigation works may ~~to~~ be sanctioned by the Chief Engineer for Irrigation. For detailed instructions see S.O. No. 18 Irrigation Branch.

20 20A 20C.	Tanks affecting Railways.	Half yearly returns of Tanks affecting Railways are to be prepared and submitted in accordance with the detailed instructions given in S. O's No. 20, 20 A, & 20 C Irrigation Branch. The returns are due [illegible] after the 30 June & 31 December. When the tabular statement giving complete particulars of tanks of this class has been once compiled, only an Index has to be thereafter submitted.
21	Records of Irrigation works.	All Executive Officers employed upon the Construction of important Irrigation works are required to draw up a record giving ~~the~~ a complete account of the progress; difficulties, and the means employed for overcoming these, of such works. When the works are in more than one Division ~~the~~ the Divisional records will afterwards be compiled in the Superintending Engineer's Office. S.O. No. 21 Irr Br: refers to this subject and to the much required history of the great Systems of Irrigation
22	Preservation of health of working parties	The prevention or restriction of epidemic sickness is of great importance to the successful execution of large works and all such precautions and arrangements as can be readily taken & carried out for the prevention of sickness should be carefully attended to. The first necessity is the provision of latrines and the absolute prohibi

of nuisances on any part of the ground near large public works in progress — ~~The~~ For latrines all that is needed is a trench about 6 feet deep, 2 feet wide, and of a length of from 15 to 40 feet according to the number of people employed in its vicinity, with pieces of plank laid across the trench at intervals, and such a screen round it as may be most easily put up with the bamboo mats or other materials available — No top covering is necessary or desirable — Twice a day at any rate, all the excreta deposited should be covered over with an inch or so of the earth taken out of the trench: a sweeper to be allotted to one or more latrines to attend to this and to keep ~~the~~ places clean — All petty Superintendents are to be required to see that the latrines are used and no nuisances committed.

Wherever labour is hutted on ground under the control of Public Works officers, as also at places where Conservancy establishments live the greatest possible cleanliness must be enforced & a proper number of latrines provided

When sickness occurs ~~among~~ among the labourers on large works and takes the form of bowel complaints

22

by arranging for cooking or warming the food of the workpeople so that they may not have to take their rice cold, the health of the people may be secured and the spreading of sickness prevented. The cost will be confined to fuel and to the loss of a portion of the working day of the coolies detailed to prepare the food.

When considerable numbers of workpeople are employed on works in charge of an Officer or experienced subordinate, a few simple medicines should be obtained for issue to the Coolies. This is desirable even when Dispensaries are not very far off; for when epidemic sickness is prevalent, simple remedies administered at once are of great value in checking disease, and in affording time for the application of more complete treatment.

23. Allotments for incomplete Surveys.

In applying for allotments for incomplete Surveys the following information is to be given (1) the original sanction for the Survey (2) the amount of the Estimate (3) the expenditure to the end of the past official year.

25. Grouping of Irrigation Works.

Irrigation Works other than the Grand & minor Systems are grouped under the Chapters or subdivisions

(a) Works supplied by rivers or streams

(b) Groups of tanks, rainfed

(c) Isolated tanks, rainfed

(d). Miscellaneous, including spring pools & channels.

For all groups under (a) + (b) an illustrative group map is required to be prepared and maintained but one or more groups may be shown on the same map provided the ~~dim~~ normal dimensions, 30 by 22 inches, are adhered to. For isolated tanks a map for a convenient tract of country will suffice. Revenue Survey maps when available are allowed to be used for group maps. ~~[illegible]~~ For forms and detailed instructions see S.O. 25 + 25.A. Irr. Br.

26 Emergent works

Under Chapter 3 of the Code paras: 294 (C); & 337(d), Superintending & Executive Engineers are empowered to sanction emergent repairs, and these powers are to be exercised under the following rules

(1) a definite sanction is to be given and an appropriation made without delay – Whoever ascertains on the spot that work is emergently necessary, must also ascertain its quantity + its probable cost; and a sanction is to be given for the full amount at once, and an appropriation obtained.

(2) the ~~p~~ powers of sanction ~~are~~ is confined to works which cannot be postponed without risk of loss of revenue or damage, & it is limited to the time during

while the emergency continues The closing of a breach in a tank bund or supply channel is an urgent work during the continuance of the rains, but when the rains are over and nothing can be done to benefit the cultivation of that season, the repairs required cease to be emergent & should be provided for by regular estimate under the rules

(3) there must be a reasonable probability of the work to be done being effectual – To close a breach in a tank bund, when from the general state of the bund & the absence of adequate surplus works, another breach at the same place or elsewhere would be probable would be improper; but it would be quite proper to clear away the ends of the bund to a sufficient length to ensure the water not rising too high & to then close the breach, both works being included in an emergent estimate

(4) the value of the work as regards revenue to be secured, and crops to be saved, must be in reasonable proportion to the outlay required – Any expenditure short of the amount of revenue involved may properly be spent on emergency on work which will be of permanent value, and there will be cases in which a larger sum may be properly spent.

28. Decimal scales

For plans of masonry works, the vertical heights of longitudinal sections, & the horizontal and vertical measurements of cross sections only decimal scales may be used.

30 / 30A. Abstract Rainfall Registers.

The form of register is given in Appendix — The amount of information will vary for different stations according to the means of observation available. At all Stations the monthly fall and the maximum fall in 24 hours will be shown — Further details should be recorded wherever there is a P.W. Officer, ~~which there is~~ and at Anicuts or regulating works at which there is a resident Superintendent. The Rainfall registers at P.W. Stations are to be examined from time to time and initialled by Supd. & Executive Engineers.

31. Investigation of Conduct of Subordinate Spl: Special Establishment.

The following procedure is prescribed for enquiries into the conduct of members of the Conservancy, Water regulation or navigation Establishment

I
II
III
IV
V

As in the S.O.

VI If the Officer making the investigation be not in charge of the Division in which the accused is serving, the papers will be transmitted to the Divisional

Officer who will record his opinion on the several charges and his decision in the case

VII as VIII in S.O.

VIII as IX in S.O.

IX as X in S.O.

X. An appeal will lie to the Superintending Engineer, whose decision will be final. The record as above prescribed will be sent to the Supdt. Engineer when required and will be returned to the Divisional Officer with ~~the~~ a copy of the decision on the appeal.

33. Register of water levels.

At every Anicut and regulating work at which a ~~special resident~~ conservancy Establishment is maintained the water levels ~~ought to~~ must be regularly registered. The Registers ought to show clearly ~~[illegible]~~

(1) water levels above and below an anicut

(2) do above and below each lock sluice or other regulating ~~[illegible]~~ work

(3) the area of vent opened at each lock sluice or regulator

For type forms of Registers ~~A to D~~ ~~required in Appendix~~ and for detailed instructions see S.O. 80 Irr: Br.

34. Minor O. Works, Repairs & Management

For the systematic utilization of the lump sum grants allotted to Divisions in Schedules B & C of the Budget for Irr & a Works Divisional Engineers are required to draw up annually a scheme of expenditure

4 10A

be deemed an Original work and will be dealt with under the rules for such work. Similarly the construction of permanent groynes whether of stone or other durable material and revetments of masonry, stone, concrete &c, whether for the protection of river banks, or for the establishment of spurs at the bifurcation of rivers are not chargeable to Repairs but to Original works.

Divisional Officers are required when inspecting connected irrigation works, with a view to determine their requirements, to consider whether the continued maintenance of any individual work of the group is necessary and desirable, or whether all the irrigating duty desired or expected from it could not be more efficiently or economically done in some other way, or by some other tank or channel. Such consideration is more especially necessary when the expenditure found requisite to make the work safe and efficient, and the past cost of maintenance, are out of proportion to the revenue

Divisional Officers should employ ~~furnish~~ their assistants and subordinates ~~with definite instructions~~ in carrying out regularly and systematically instructions issued for their guidance and except for emergent work no estimates for special repairs to works not included in the Scheme of outlay for the year schedules prepared by them without the concurrence of the Divisional Engineer.

Divisional and Subdivisional Officers should encourage villagers to make known their views and wishes at all times, and especially when the tanks or channels in which they are directly interested are under inspection - At such times moreover much may be done to induce the village officers to look after the works and to stop practices which are injurious to them.

Inspection registers will be of great value in the management of irrigation works, and in preparing and discussing the schemes of expenditure for any year - They should be kept by talugs generally, and for connected works by groups - In the latter case the greater part of the left page will be a transcript from the group lists, and thereafter the columns to be added would be those required to show the hydraulic details, which have to be given in support of all estimates, together with a wide column for remarks - It is as easy to write notes in such a register as in any other book and thus a permanent record of value for reference at all times and invaluable to officers on first joining a Division, will be gradually compiled.

11/

36 Irrigation Registers

The forms approved by Government are given in Proceedings Board of Revenue 60 No. 154 of the 29 January 1880.

G O No. 254 I. 5/5/80

In the Registers to be supplied by the Revenue Officers to the Officers of the P.W.D only those irrigation works which are classed as Imperial will be included. Divisional Engineers must take care that the registers of works in their Divisions are complete and in their Annual Administration report at the end of the part relating to irrigation works they will ~~report~~ show the exact state of their registers and up to what date they have been written up.

47 Details of Tanks

The details of information regarding all tanks, whether isolated or in groups, in charge of the P.W.D, are given in the forms appended to G.O Irr: Br: No. 47. Every tank estimate should be accompanied by full information in this form for the tank concerned, and for, at any rate, all the considerable tanks above it. Superintending Engineers will exercise their discretion as to whether it will be advisable to sanction an estimate for a tank belonging to a group until the circumstances of the group generally have been ascertained, and until therefore it can be determined what tanks classed as Imperial should continue to be maintained. For Divisional records a book or books, by preference each taluq or other convenient unit, should be made up containing a sufficient number of printed forms for the posting up of the information given with each estimate. Superintending Engineers should maintain a similar record for reference.

38 Inspection notes — The Inspection notes of Superintending Engineers ~~should~~, vide para: 288, should be written up half margin, and should show the Division and Subdivision in which ~~the~~ each work inspected is situated, & also the date of inspection. The half pages for the remarks of the Chief Eng. &c. should be left entirely blank throughout.

39 & 39A Water diagrams — For all ~~rivers~~ important Anicuts and main channels for which water registers are maintained water diagrams are to be prepared annually and will be accompanied by carefully prepared and complete information of discharges, water distribution, irrigating duty of the water used, and other essential details. The detailed instructions are contained in S.O. No. 39 & 39A Irr: Br:

Classified Lists of Systems for which C&R A/cs are kept — Separate lists are required, for the several main heads under I. Works, to be maintained for all Systems of Irrigation for which Capital and Revenue accounts are kept vide Forms in Appendix. Where additions are made to the number of primary or secondary distributaries or to that of main or branch drains after the compilation of the lists, the names will be inserted in the proper positions and for primary distributaries the number to be noted will be that of the previous channel with the letter A ~~added~~ appended for the first additional channel, B for the second & so on. The numbers once given are not to be altered unless ~~[illegible]~~ in connection with ~~the case of~~ extensive general revision of the arrangements of a system in which case of course fresh lists for the main heads concerned must be prepared.

For every Canal or principal channel classed under (2) Main Canals & Branches; for every primary distributary classed under (3) Distributaries, together with its branches (secondary distributaries); and for every ~~main~~ Drain classed under (4) Drainage and protective works, together with its branches (secondary drains), a list of Component works is required. forms Appendix

Tertiary Distributaries & tertiary Drains will be treated as Component works of the Secondaries to which they appertain, and will not otherwise appear in the lists. Similarly field channels ~~from~~ for direct irrigation from Canals will be treated as Component works of the Canals under O. Misc.

In order to prevent mistakes

Primary distributaries will be entered simply as channels e.g.
Peddapudi channel 43
Secondary distributaries as branch channels e.g.
Itakota branch channel
Smaller channels will be called
(1) minor channels (tertiaries &c)
(2) Field channels

Minor Systems

For the smaller systems of Irrigation similar ~~forms~~ lists in forms adapted to the circumstances vide Forms 1 to Appendix are to be maintained

13/ Form No 1 Appendix 56

Godavari Delta — Eastern Section

List of Canals classed under Main head (2) Main Canals & Branches

44

Position of Head of Canal M	ch	Names of Canals	Length of Canals M	ch	Remark
0	0	Main	4	12	NB. The position of head of canal is referred to the general mileage of the Section of the Delta which is measured from head of main canal
0	65	Bank	38	40	
4	12	Cocanada	27	48	
4	12	Samulcotta	34	28	
6	45	Mundapetta	13	35	Head on Cocanada Canal
13	3	Coringa	24	37	
21	69	Injeram	11	9	Head on Coringa Canal
		Total length	153	49	

Form No 2 Appendix

Godavari Delta — Eastern Section

List of channels classed under Main head (3) Distributaries

No. of Chany	Position of Head Genl. mileage M	ch	Names of channels supplied from Canals		Names of Branch Channels	Length of Channels M	ch	Remarks.
			BANK CANAL					
1	6	78	Madiki	LB.	- - - - - -	5	20	NB LB. signifies that the offtake is on left bank of Canal
2	8	59	Chupella	LB	. . . .	5	42	
[illegible]					Narsipudi	1	15	
3	9	36	Mulastanam	LB	- - - -	5	25	
4	11	43	Janada	LB	- - - - - -	4	69	
					Westside	0	79	
					Channel No 1	1	3	
					do " 2	1	14	
					do " 3	2	5	

& so on.

Godavari Delta — Eastern Section

List of drains classed under main head (4) Drainage & Protective Works

4

Position of Head Gen. Mileage		Length of main Drains		Names of main Drains	Infall of Branches		Name of Branch drains		Length of Branch drains		Remarks
M	ch	M	ch		M	ch			M	ch	
18	51	17	37	Biccavole	1	70	Oolapilly	RB	0	30	RB signifies that infall is on right bank of main drain; LB left bank. Head of main drain on Samulcotta Canal
					9	40	Vellapalem	LB	2	29	
					10	20	Sarpavaram	LB	2	40	
					13	50	Yelairu	LB	6	15	
					14	0	Kaikavole	RB	3	1	
7	23	25	40	Tooliabaga	3	30	Thapeswaram surplus	RB	0	5	Head on Cocanada Canal
							£120 m				

Godavari Delta — Central Section

List of Component works of Canals classed under (2) Main Canals & Branches

No.	Subheads	Items	Sides L or R	Mileage M	Mileage ch	
1	2	3	4	5		6
		MAIN CANAL				
1	D. Regulators	Head sluice (Bobbarlanka)	—	—	—	
2	I. Navigation works	Head lock	—	—	—	
				8	0	Canal ends
		GUNNARAM CANAL				
1	I. Navigation works	Ralli lock	—	8	4	
2	do	do lock weir	—	8	15	
3	do.	Lascars sheds	R	8	15	
4	do.	Ramchendrapur lock	—	14	55	
5	do	do lock weir	—	14	56	
6	do	do lock sheds	L	14	56	
7	F. Other C.D. works	Syphon culvert at Gopalapuram	—	17	7	
8	G Bridges	Bridge Gopalapuram	—	17	20	
9	O. Miscellaneous	Field sluice	L	20	29	
x	x	x	x	x	x	
18	H. Escapes	Surplus weir Bellampudi	L	25	55	
19	K. Buildings	Office shed, Gunnaram	L	26	79	
20	G Bridges	Bridge ———	—	27	1	Amalapuram road
21	F. R & H. I. Wks	Gunnaram Aqueduct	—	27	20	
		£200 m.				

Form 1 Appendix

Tambraparni River Irrigation

List of Main channels.

Group No.	Section	Names of Anicuts	Names of Main channels	Length of Main channels M	Ch	Bank of River	Remarks.
1	—	Kodamelalagliyan					
	A	— — — — — —	Left bank (East)	?	?	LB	
	B		Right do (West)	?	?	RB	
2	—	Nattiyunni	Nattiyunni	?	?	LB	
3	—	Kannadian	Kannadian	?	?	RB	
4	—	Ariyanaikapuram	Kodagan —	?	?	LB	
5	—	Pallavur	Paliem —	?	?	RB	
6	—	Suttamullay	Tinnevelly —	?	?	LB	
7	—	Maradur					
	A	— — — —	Left Bank (East)	?	?	LB	
	B	— — — —	Right do (West)	?	?	RB	

Form 2 Appendix

Tambraparni River Irrigation

List of Distributaries.

No of Channel	Position of Head M	Ch	Names of channels supplied from main channels	Names of Branch channels	Length of Channels M	Ch	Remarks.
			Kodamelalagliyan Left Bank channel				
			(here enter Primaries)	(here enter Secondaries)			
			Kodamelalagliyan Right Bank channel				
			(do)	(do)			
			Nattiyunni channel				
			(do)	(do)			

& so on.

M. E. I.

Kindly see if your office can reply to the press queries in the accy. proof

Cy
S.a.w.
7/6.

The queries have been replied to: The other blanks may be left. They can't be filled in till Code is prepared fully.

D.W.H.
7.6.81

Ds.a 8/6 D.W.H.

No. 1355 W.

PUBLIC WORKS DEPARTMENT.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

UNDER date the 30. May 1881

Read the following :—

Procs: of Govt. (G.O. No 1175 W of 9th May /81)

Procs: of Committee on Irrign Forms &c assembled at the Govt Office Ootacamund on the 16th May 1881 under G.O. No. 1175 W of 9th May /81.

Abstract of S.O.s Irrigation Branch for P.W. code drawn up by Colonel Mullins R.E.

The Government confirm the several disposals as suggested by the Committee.

2. The Chief Engineer for Irrigation will now in accordance with these decisions,

frame for submission to the Code Committee the Forms for his Branch to be included in Appendix L para 958 of the Code; also the draft of such proposed additional paras (or modifications of existing ones) to Chapter XVII of the Govt of India Code, as may be required for its better adaptation to the requirements of the Department in this Presidency

3. In regard to the treatment of tanks situated above Railways as also others forming groups or series throughout the Presidency no rules other than those now existing are for the present needed, but these rules will not be codified without the further orders of Government.

4. No immediate action will be taken in regard to the Professional Circulars of the Irrigation

[illegible]

Branch, though when opportunity offers these should be recompiled in the form of a Manual of references for Officers of the Department. They will in this shape afford useful hints though not having the force of Government Orders.

21/5/81

S. E. ✓
Ss of Wks ✓
C. E. for I ✓
C. E. for Rys ✓
Secty P. W. C. C. ✓

Recd
15-6-81

R. 20-5-81
Cir 23/5 O.L. 26 [illegible]

9-5-93

3204

Govt. of (1881) Madras.

PUBLIC WORKS.

31/1/-

To

Dated

Issued

Recd. Encl.

G. O., 30 May 1881, No. 1355 W

Nos. 64–65

Standing Orders Irrigation
Branch for P. W. Code

Confirms the several dis-
posals suggested by the
Committee in regard to
Col Mullins's Abstract of

+55/12