M.R.O. 1—77,008—8-6-37.

(1) Number of pages.....

(2) Date of repair.....

(3) Initials of the Referencer.....

MADRAS RECORD OFFICE.

Government of Madras.

Public works **DEPARTMENT.**

G.O. No. 2471 Press / ~~Mis.~~
349 to 356

Dated 19-10-1842.

Not to be folded or roughly handled

Despatch

Proceedings of the Madras Government, Public Works Department, 19th October 1872.

Read the following papers:—

No. 349. From the Superintending Engineer, 1st Division.
(Here enter No. ——, dated 24th July 1872.)

No. 350. From do. do., 2nd Division.
(Here enter No. ——, dated 22nd July 1872.)

No. 351. From do. do., 3rd Division.
(Here enter No. ——, dated 12th Aug. 1872.)

No. 352. From do. do., 4th Division.
(Here enter No. 1,669, dated 23rd July 1872.)

No. 353. From do. do., 5th Division.
(Here enter No. 93, dated 31st July 1872.)

No. 354. From do. do., 6th Division.
(Here enter No. ——, dated 10th Aug. 1872.)

No. 355. From do. do., 8th Division.
(Here enter No. ——, dated 8th Aug. 1872.)

Statement showing the progress of Agricultural Works under execution from the Extraordinary Grant for the quarter ended 30th June 1872.

Name of Work.	Amount of Estimate.	Current year's grant.	Expenditure		Total Expenditure to date.	Succinct Account showing the state to which the works have been advanced up to date.
			During the quarter.	During the current year.		
	Rs.	Rs.	Rs.	Rs.	Rs.	
Extension of Irrigation from Western Delta	13,04,640	2,00,000	26,960	26,960	2,52,589	*Nursapore Canal.* Two locks finished; two weirs finished; earthwork of Mogultur extension in progress. On minor channels; earthwork about ·25 done. Four masonry works finished. *Bank Canal.* 1. Under-tunnel built. *Venkiah and Weyaru.* 1. Alterations of weir done. *Restoring navigation with Weyaru.* Earthwork ·8 done. Double lock in progress. Mid-level channel head-sluice finished. Low do. do. three-fourths done. *Attelli Canal.* Widening, etc., in first mile done. Materials for lock and weir being collected, and approach and tail channels of latter nearly finished. Two under-tunnels (minor channels) finished. *Yanamaduru Drain.* Earthwork ·12 done. *Bondada and Rayacuduru Drain.* Lower portion in progress. *Caza Drain.* Deepening, etc., between Navarasapurum and sluice nearly finished. *Bagaswarum Drain.* ·5 done. *Drain west of Nursapore Canal.* Main drain finished. Some minor in falls to dig. Of two bridges over 1½ done.

Ellore Canal.

Mid-level channel, earthwork $\frac{13}{16}$ done; masonry works ten finished two in progress.
Low level channel, earthwork ·9 done; masonry works finished excep six village sluices.
Pundicodu drain, earthwork ·8 done; masonry works finished.
Drain from 7½ miles mid level channel finished.
Do. 9½ do. do. earthwork, half done; masonry one-fourth done.
Drainage diversion, earthwork ·7 done.

Additional surplus weir near head of Ellore Canal.

Ten sluices built, up to floor level.

Rest-houses.

One at Chettipett up to 6 feet above basement.

Lock at Thosipoody.

Excavating foundations and filling in	1·0
Concrete	1·0
Rough stone-in-chunam	0·97
Cut-stone coping and flooring	0·95
Brick-in-chunam	1·0
Cut-stone quoins	1·0
Rough-stone apron	1·0
Plastering with two coats of chunam	0·33

Calingulah at Thosipoody.

Excavating foundations and filling in	0·90
Concrete	1·0
Rough stone-in-chunam	0·75
Cut-stone in do.	0·78
Rough-stone apron	1·0

Lock at Chintapilly.

Excavating foundations and filling in	1·0
Concrete	1·0
Rough stone-in-chunam	0·97
Cut-stone quoins...	0·92
Cut-stone coping and flooring	0·47
Rough-stone apron	1·0
Brick-in-chunam	1·0
Plastering with two coats of chunam	0·33

Statement showing the progress of Agricultural Works under execution from the Extraordinary Grant, etc.—(Continued.)

Name of Work.	Amount of Estimate.	Current year's grant.	Expenditure: During the quarter.	Expenditure: During the current year.	Total Expenditure to date.	Succinct Account showing the state to which the works have been advanced up to date.
	Rs.	Rs.	Rs.	Rs.	Rs.	
Extension of Irrigation from Eastern Delta ...	10,80,800	1,00,000	52,726	52,726	3,05,255	*Calingulah at Chintapilly.* Excavating foundations and filling in ... ... 0·95 Concrete ... ... 1·0 Rough stone-in-chunam ... ... 0·78 Cut-stone in do. ... ... 0·55 *Rest-house at Chintapilly.* Rough stone-in-chunam... ... ... 1·0 Brick-in-chunam... ... ... 0·72 Excavating foundations and filling in ... ... 1·0 Arch-work ... ... 1·0 Mud walls ... ... 0·9 Concrete ... ... 1·0 *Lock at Madapad.* Excavating foundations and filling in ... ... 0 90 Rough stone-in-chunam ... ... 0·54 Concrete ... ... 1·0 Cut-stone coping and flooring ... ... 0.24 Do. quoins... ... ... 0·2 Brick-in-chunam ... ... 0·25 *Calingulah at Madapad* Excavating foundations and filling in ... ... 0·5 Concrete... ... ... 0·75 Rough stone-in-chunam... ... ... 0·5 Cut-stone in do. ... ... 0·5 Rough-stone apron ... ... 0·22 *Calingulah at head of Thooliabaga Drain.* Excavating foundations and filling in ... ... 0·75 Concrete ... ... 1·0 Rough stone-in-chunam... ... ... 0·62 Cut stone-in-chunam ... ... 0·28 Rough-stone apron ... ... 0·24 *Lock at Coovoor.* Excavating foundations and filling in ... ... 0 75 Concrete ... ... 1·0 Rough stone-in-chunam... ... ... 0·82 Cut-stone coping and flooring ... ... 0·38 Do. quoins ... ... 0·44 Brick-in-chunam ... ... 0·85 Rough-stone apron ... ... 0·26 *Improving Cocanada Canal.* Earthwork... ... ... 0·45 *Thosepody North Side Channel.* Earthwork ... ... 0·90 *Excavating Thooliabaga Drain.* Earthwork ... ... 0·44 *Excavating Kootookooloor Drain* ... ... 1·00 *Nadurubadu Aqueduct*... ... ... 1·00 *Escape over Bheemavarum Aqueduct wall* ... ... 1·00 *Bheemavarum Sluice.* Excavating foundations ... ... 0·60 *Biccavole Drain.* Excavating earthwork ... ... 0·02 *Biccavole, No. I. Drop* ... ... 1·00 *Biccavole, No. II. Drop.* Excavating foundations and filling in ... ... 1·0 Concrete ... ... 1·0 Rough stone-in-chunam... ... ... 1·0 Cut stone-in-chunam ... ... 1·0 Rough-stone apron ... ... 1·0 Cut-stone coping ... ... 0·50 *Ventoor Calingulah.* Excavating foundations and filling in ... ... 1·00 Concrete ... ... 1·00 Rough stone-in-chunam ... ... 1·00 Brick-in-chunam ... ... 1·00 Cut stone-in-chunam ... ... 0·80 Rough-stone apron ... ... 1·00

Proceedings of the Madras Government, Public Works Department, 19th October 1872.

Statement showing the progress of Agricultural Works under execution from the Extraordinary Grant, etc.—(Continued.)

Name of Work.	Amount of Estimate.	Current year's grant.	Expenditure: During the quarter.	Expenditure: During the current year.	Total Expenditure to date.	Succinct Account showing the state to which the works have been advanced up to date.	
	Rs.	Rs.	Rs.	Rs.	Rs.		
Enlargement, extension, and improvement of the channels in the Masulipatam section of the Kistna Delta.	1,83,100	20,000	2,164	2,164	1,47,646	*Masulipatam Canal.*	
						From 1st to 4th mile	0·58
						From 4th to 12¼ mile	0·67
						Pulliru from Kankupad to head of Polrazucodu	1·01
						Masonry works	1·00
Widening the head of Masulipatam canal for 1,000 yards from the anicut to the head of Ellore branch.	1,13,530	25,000	2,201	2,201	31,815	Earthwork	0·39
						Masonry work	·28
Sloping down the banks of the Main Canal from the southern flank of the anicut, and enlarging the head of Main Canal from Seetanagaram to Doogeralla.	2,76,400	25,000	3,255	3,255	2,22,624	Earthwork	1·08
						Masonry works	1·00
Enlargement and improvement of Ryves' channel and its branches and construction of the masonry works.	4,14,193	30,000	13,584	13,584	1,77,140	Head-sluice and bridge	*0·92
						Head of channel	0·60
						Three accommodation bridges, materials collected.	
						Enlarging and improving Ryves' channel	0·87
						Do. do. branch channel	0·99
						Masonry works	0 66
Extension of Commamore channel and construction of the necessary masonry works.	1,95,770	20,000	156	156	1,75,888	Earthwork	0·94
						Masonry works	0·80
						Rapid at Doogeralla.	
						Earthwork	0·744
						Revetment	0·6
						Masonry works	0·74
						Main Reservoir.	
						Earthwork	1·13
						Revetment	·64
Improvements to the Survapully channel.	4,20,060	65,000	14,767	14,767	3,50,569	Turfing	·93
						Masonry	1·13
						Channel south of Pennair.	
						Earthwork	·84
						Rubble pitching	·56
						Masonry works	·99
						Anicut.	
Anicut across the Vellaur river at Pelandorai.	1,98,235	60,000	5,801	5,801	76,990	Brick-in-chunam	·39
						Concrete work	·39
						Cut-stone do.	·13
						Head Sluice.	
						Brickwork in chunam	·70
						Cut-stone work	1·00
						Main Channel.	
						Earthwork	·41
						Materials under preparation for masonry buildings.	
						Dam across the Vennaur at the Vettaur Head.	
						Vennaur Sluices.	
						Excavating foundations	1·00
						Baling	1·00
						Centring	0·10
						Brick-in-chunam	0·85
						Plastering	0·12
						Pointing	0·00
						Cut-stone	0·73
						Shutters	1·00
						Sundries	0·57
						Vettaur Sluices.	
						Excavation	1·00
						Baling	1·00
						Centring	0·00
						Brick-in-chunam	0·86
						Plastering	0·78
						Pointing	0·37
						Cut-stone	0·48
						Shutters	0·75
						Sundries	0·55

* This is the correct figure.

Proceedings of the Madras Government, Public Works Department, 19th October 1872.

Statement showing the progress of Agricultural Works under execution from the Extraordinary Grant, etc.—(Concluded.)

Name of Work.	Amount of Estimate.	Current year's grant.	Expenditure During the quarter.	Expenditure During the current year.	Total Expenditure to date.	Succinct Account showing the state to which the works have been advanced up to date.
	RS.	RS.	RS.	RS.	RS.	*Dam across Pamaniar and Coryaur.*
Regulators for the principal branches for the Vennaur.	1,97,240	56,000	22,073	22,073	1,52,014	Brick-in-chunam... ... ... 0·73 Cut-stone... ... ... 0·68 Baling ... ... 0·96 Shutters ... ... 0·50 Earthwork ... ... 0·85 Excavation ... ... 0·96 Durbah rollers, pegs, durbah facing ... ... 0·60 Compensation ... ... 1·00
						Dam across the Pandavyar Head.
						Brick-in-chunam ... ... 0·78 Excavation ... ... 1·00 Baling ... ... 1·00 Cut-stone... ... ... 1·27 Store shed ... ... 1·00
						Dam across the Vellyaur Head.
						Brick-in-chunam ... ... 0·65 Excavation ... ... 1·00 Baling ... ... 1·00 Cut-stone... ... ... 0·63 Store shed ... ... 1·00
Streevigoontum Anicut ...	8,31,600	91,000	29,713	29,713	6,88,195	Anicut ... ... ·87 Head-sluices ... ... ·75 Masonry work, north side ... ... ·60 North tanks ... ... ·86 Masonry, south side ... ... ·88 North channel ... ... ·71 South tanks ... ... ·99 Do. channel ... ... ·90 The foundations of the anicut are completely finished. The body is raised to 3 feet above the level of the cut-stone flooring. The rough-stone apron is nearly finished, and the wing-walls are built up to lengths of from 10½' to 18'; all the masonry works with the exception of some of the small sluices are in progress; all the earthworks are completed, with the exception of the Oopar Odai embankment which is in active progress.

Statement showing the nature and progress of all preliminary surveys and inquiries under prosecution in connection with new Irrigation Projects intended to be carried out from Loan Funds.

District.	Name of Project.	Particulars of progress of investigation.
Ganjam ...	Rooshkoolia and Mahanuddy Project.*	Twenty-four miles check levels on Aska and Berhampore road. Plotting and preparing survey, plans, estimates and reports.
Do. ...	Vamsadara river or Chicacole Project.†	
Godavery ...	Central Delta Project ...	Projects are being revised by Superintending Engineer.
Do. ...	Unnamalunka do. ...	
Kistna ...	Eastern Delta ...	Plans and estimates for the irrigation and drainage of the Kykalur section completed. The field-work for the other sections is in progress and will be completed in a few months.
Do. ...	Western Delta	Plans and estimates for the extension of irrigation and for the improvement of the drainage almost ready.
Vellore ...	Survey operations in connection with Survapully Project.	Not yet taken in hand; will be if found necessary.
Tinnevelly ...	Numbiar River Irrigation	Levels and surveys completed, but work not yet plotted up.
Do. ...	The improvement and extension of irrigation under the Tambrapoorny and its tributaries.	Levels and sections of the Tambrapoorny channels nearly completed and nearly plotted up.
Madura ...	Periyaur Project	With Chief Engineer for Irrigation.

* Project was forwarded to the Chief Engineer for Irrigation on the 16th August 1872.
† All papers sent to the Chief Engineer for Irrigation.

No. 356. ORDER THEREON, 19th October 1872, No. 2,471.

IRRIGATION, No. 24. ORDERED that the above statements be tabulated and forwarded to the Government of India.

(True Extract.)

E. C. Slatter, Major, R.E.,
Ag. Joint Secretary to Government.

Govt. of India

PUBLIC WORKS.

To

Dated October 19th.

Recd.

Encl.

G. O., 19th October 1872, No. 2,471.

OCTOBER

Nos. 349-356

Agricultural Works.—Passing orders on statements showing the progress of Agricultural Works under execution from the Extraordinary grant and of Irrigation Works to be carried out from Loan Funds.

Irrigation

To be printed R.P.

256 f: 72

3

Extension of irrigation from Western Delta.	Wes.	313,040	200,000	26,960

Extension of irrigation from Wan								
Sloping down the banks of the main Canal from the southern flank of the anicut enlarging the head of main Canal from Kutanajaram to Doogerallai	2,76,400	25,000	3255	3255	222624	Earthwork Masonry works	1.08 1.00	
Enlargement & improvement of Pypre channel and its branches & construction of the masonry works	4,14,193	30,000	13584	13584	177140	Head sluice & bridge Head channel 3 accommodation bridges - Materials collected Enlarging & improving Pypre channel do do branch channel Masonry works	0.92 0.60 0.87 0.99 0.66	
Extension of Commamoor channel & construction of the necessary masonry works	195770	20,000	156	156	175880	Earthworks Masonry works Rapid at Doogerallai Earthworks Revetment Masonry works	0.94 0.80 0.744 0.6 0.74	
Improvements to the Suruapully channel	4,20,000	65,000	14767	14767	350569	Main Reservoir Earthworks Revetment Turfing Masonry Channel South of Pennair Earthworks Rubble pitching Masonry works	1.13 .64 .93 1.13 .84 .56 .99	

91

26960	252589	Nuwaparu Canal	2 Locks finished. 2 weirs finished. Earth work of Mogulthúr extension in progress. minor channels. earthworks about .25 done 4 masonry works finished.
		Banks Canal	1 Under tunnels finished.
		Verticals and Weparu	1 Alterations of Weir done
		Restoring navigation into Weparu	Earthworks .8 done Double Locks in progress Mid Level channel Head sluice finished Lock ——— 3/4 done.
		Attelli Canals.	Widening &c in first mile done. Materials for locks weirs being collected. & approach & tail channels of latter nearly finished. 2 under tunnels (minor channels) finished.
		Yanamaduwa Drain	Earthworks .12 done.
		Bondada & Rayacuduwa Drain	Lower portions in progress.
		Kaza Drain	Deepening &c between Nanaraca sluice & sluice nearly finished.
1000201		Wagá Kvariwa Drain	Lower portion .5 done.
		Drain West of Nuwaparu Canal	Main Drain finished Some minor in of 2 Bridg

Extension of Irrigation from Eastern Delta. 100000 52726 " 52726 " 305255 "

Mid Level channel	earthworks 13/16 done	
	masonry works 10 finished & in progress	
Low Level channel	earthworks 9 done	
	masonry works finished except 6 village sluices	4
Pundicoow Drain	earthworks 8 done	
	masonry works finished	
Elbow Canal	Drain from 7½ miles mid level channel finished	
	" " 9½ " " earthworks ½ done masonry ¼ done	
	Drainage Diversion earthworks 7 done	
	10 sluices built	
additional surplus weir near head of do	up to flow Level	
Rest Houses	One at Chettipett up to 6' above basement	

Locks at Thopipoody.

Excavating foundations & filling in	1.0
Concrete	1.0
Rough stone in chunam	0.97
Cut stone coping & flooring	0.95
Brick in chunam	1.0
Cut stone Quoins	1.0
Rough stone apron	1.0
Plastering with 2 coats of chunam	0.33

Calingulah at do

Excavating foundations & filling in	0.90
Concrete	1.0
Rough stone in chunam	0.75
Cut stone in do	0.78
Rough stone apron	1.0

Lock at Chinatapelli	Excavating foundations & filling in	1.0
	Concrete	1.0
	Rough stone in chunam	0.97
	Cut stone Quoins	0.92
	Cut stone coping & flooring	0.47
	Rough stone apron	1.0
	Bricks in chunam	1.0
	Plastering with 2 coats of chunam	0.33
Calingulah at Chintapelli	Excavating foundations & filling in	0.95
	Concrete	1.0
	Rough stone in chunam	0.78
	Cut stone in do	0.55
Rest House at —do—	Rough stone in chunam	1.0
	Bricks in chunam	0.72
	Excavating foundations & filling in	1.0
	Brick work	1.0
	Guard walls	0.9
	Concrete	1.0
Lock at Madapad	Excavating foundations & filling in	0.90
	Rough stone in chunam	0.54
	Concrete	1.0
	Cut stone coping & flooring	0.21
	—do— Quoins	0.6
	Bricks in chunam	0.25
Calingulah at —do—	Excavating foundations & filling in	0.5
	Concrete	0.75
	Rough stone in chunam	0.5
	Cut stone in do	0.3
	Rough stone apron	0.2
Calingulah at Head of Thotlabaga drain	Excavating foundations & filling in	0.75
	Concrete	1.0
	Rough stone in chunam	0.62
	Cut stone in chunam	0.2
	Rough stone apron	0.2
Lock at Covvur	Excavating foundations & filling in	0.75
	Concrete	1.0
	Rough stone in chunam	0.8
	Cut stone coping & flooring	0.20
	—do— Quoins	0.44
	Bricks in chunam	0.25
	Rough stone apron	0.6
Inferior Kocanada Canal	Earthwork	0.45

Anicut across the Vettaru River at Petandoraw	198.235	69000	5801	5801 " "	76990 " "

Anicut

Bricks in chunam	.39
Concrete work	.39
Cut stone — Ob —	.13
Head sluice	
Brickwork in chunam	.70
Cut stone work	1.00
Tenni Channel	
Earthwork	.41
Materials under preparation for masonry buildings	

Dam across the Vettaru at the Vettaru Head Vennaru sluices

Excavating foundations	1.00
Baling	1.00
Centring	0.10
Bricks in chunam	0.85
Plastering	0.12
Painting	0.00
Cut stone	0.73
Shutters	1.00
Sundries	0.57
Vettaru sluices	
Excavation	1.00
Baling	1.00
Centring	0.10
Bricks in chunam	0.86
Plastering	0.18
Painting	0.37
Cut stone	0.48
Shutters	0.75
Sundries	0.55

Regulators for the principal branches for the Vennaru	197.240	56200	22073 " "	22073 " "	152014 " "

Dam

Dam across Panamiar & Conjaur

Brick in chunam	0.73
Cut-stone	0.60
Paling	0.96
Shutters	0.50
Earthwork	0.15
Excavation	0.96
Dubab rollers pegs, durbab facing	0.60
Compensation	1.00

Dam across the Pandanyar Head

Brick-in-chunam	0.78
Excavation	1.00
Paling	1.00
Cut stone	1.27
Stone shed	1.00

Dam across the Pellayan Head

Brick in chunam	0.65
Excavation	1.00
Paling	1.00
Cut stone	0.63
Stone shed	1.00

Anicut	.87
Head sluices	.75
Masonry works	
North side	.60
North tanks	.80
Masonry south side	.88
North channel	.71
South tanks	.99
do Channel	.90

The foundations of the anicut are completely finished. The body is raised to 3 feet above the level of the cut-stone flooring. The rough stone apron is nearly finished and the wing-walls are built up to lengths of from 10½ to 18; all the masonry & works

Fixed proportion Anicut — 31,600 — 91,000 — 29.713 — 29.713 — 608195

Public Works Department

Proceedings of the Madras Government

Read the following.

From the Supt Engr 1st Dn (M. & N. - dated 24th July 1872)
" " " 2nd Dn (M. & N. - dated 22nd July 1872)
" " " 3rd Dn (M. & N. - dated 12 Augt 1872)
" " " 4 Dn (M. & N. 1669 dated 23rd July -)
" " " 5 Dn (M. & N. 93 dt 31 dt -)
" " " 6 Dn (M. & V. - dt 10 Augt -)
" " " 8 Dn (M. & N. - dt 8 dt -)

2471

Ordered that the above statements be tabulated & forwarded to the Govt of India.

50.
2

Despd to the Govt of India
25/10/72 No 35
Statements.

works with the exception of some of the small
sluices are in progress. All the earthworks
are completed, with the exceptions of the Ogbar
& dais embankment which is in active pro-
gress.

Emergent

Abc Journal Incents
Meeting of 1 & 2 R.P.

25 Lefs: 7 2

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Govt. of {1873} Madras.

PUBLIC WORKS.

To

Dated

Recd. Encl.

G. O. 19th Oct. No. 2471.

Nos. 2470 356

Agricultural Works.

Passing orders on Statements showing the progress of Agricultural Works under execution from the Extraordinary grant ~~for the Grants for Irrigation~~ and of Irrigation Works to be carried out from Loan Funds.