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MADRAS RECORD OFFICE.

Government of Madras.

Public works DEPARTMENT.

G.O. No. 3119 Press / Mis.

23-24

Dated 1 — 10 — 18 .

Not to be folded or roughly handled

No. 23. Read the following letter from the Consulting Engineer for Irrigation and Canal Company, to the Secretary to Government, Public Works Department, dated Camp, Nagatoor, 11th September 1866, No. 61 :—

1. With reference to the Order of Government No. 2,715, of the 28th ultimo, and in continuation of my letter No. 45, of the 2nd ultimo, I have the honor to report that I have given special attention to the subject of the proposed substitution of bridges for ferries on the first three sections of the Main Canal, and I now beg to make the following recommendations. I have spoken to the Collector on the subject also, but Mr. Sullivan having been but a short time in the District, was unable to give me much information, and recommended my consulting the Deputy Collector, Surdashiva Row, which I have accordingly done. The Executive Engineer appointed in the room of the late Major Flint has not yet joined.

2. Appended to paragraph 7 of the Chief Engineer's letter, printed with the Order of Government above referred to, is a list of the ferries already approved, and of the bridges proposed by that Officer, and a reference to that list will make the subjoined remarks more easily understood.

3. I find that Koontalapad is a village on the south side of the canal, where also most of its lands are situated, those on the north side being only 18·51 acres, having an assessment of Rupees 17-13-0, so that a bridge cannot be deemed necessary at this point; but, in order that access to those fields may be rendered easy at small trouble to the villagers, it is proposed that a small passenger ferry boat, with a rope fixed on either bank, be given to be worked and kept in repair by the villagers themselves. Should it be found that this boat is not deemed by them of sufficient importance to induce them to take this small amount of trouble, it can after a year's trial be withdrawn.

4. The next village for which a ferry was to be provided is Dudiyala, which is on the north bank; and though a small village, and indeed only a hamlet of Koontalapad, most of its lands* being on the opposite side of the canal, a bridge will be a great convenience, and it is intended therefore to provide a second class cart bridge to be built at the cutting close to the village.

* Those on the north side are 131·41 acres, assessment Rupees 28-2-10

5. Yedarur, the next village, has two ferries provided for it, one on the west side at the calingulah above the tank, and the other below the tank, a mile to the eastward The upper position does not afford a good site for a bridge, but below the tank, at 5¼ miles, or about three furlongs above the site of the temporary bridge, which, until recently, was used in lieu of a ferry, is a fairly convenient site, and here a second class cart bridge is intended to be built. As an additional convenience it is proposed, as at Koontalapad, to give a small ferry boat to be placed above the tank, and to be worked and maintained by the villagers.

6. For a bridge for Nidajood, a convenient site will be at the bend in the canal, which crossed by a well-defined track, at about, but perhaps a little above, the middle of the twelfth mile. This bridge will be a third class or bridle and foot bridge.

7. A similar bridge is required for Mungalapad, to be built at the deep cutting opposite the village, just above the present temporary bridge.

8. What is put down by the Chief Engineer as a second ferry for the village just named, is really for the accommodation of Mamdialpad, which lies three-quarters of a mile to the east of Mungalapad, and I wished, if possible, to make one bridge do for both villages by placing it half way between them; but it was found that the canal forming a tank at this point, no site could be selected, and as, were the villagers of Mamdialpad to use the Mungalapad bridge, they would have to make a circuit of some three miles to reach their fields, it becomes necessary to provide them with a separate third class bridge, for which a site has been selected south-east of the village, near the lower end of the fifteenth mile.

9. No ferry was provided for Sudrevu, and I find that a bridge is not required. What traffic there was resulted from the location there of a largo number of laborers employed on the canal. These have gone, and the village consists of only a few small huts.

10. For Pudur, a second class cart bridge, will be a great convenience. The site selected for it is just below the middle of the thirtieth mile, and from it the Chief Engineer proposes to clear a track over the high ground to join the track at present in use, and which crosses the canal bank at a ramp a little higher up.

11. The ferry entered at 31½ miles does not seem to be required; there is no village near this, and less than a mile lower down there is the Sultanpoor under-tunnel, which will be a spacious and convenient crossing.

12. I do not think that a ferry is required permanently in the 38th mile for the foot-path, which here crosses the line from Shaitankotta to Nundicotkoor. The latter is the Cusbah station, and no doubt the people want to go to and fro, but for the daily purposes of agriculture no such convenience is required, and, as the Ullur aqueduct in the 35th mile is very little out of the direct line between the two villages in question, and as, moreover, there will be a bridge in the 40th mile, which will be an alternative line requiring but a slight detour to reach Nundicot-koor, and accommodating also any traffic from Shaitankotta to the south-east, no other crossing seems necessary; but, until the road-way under the Ullur aqueduct is completed, a ferry should be maintained by the Company in the 38th mile.

13. The next bridge required will be one of the second class, at Maliyala, in the 40th mile, the site for which will be at the cutting close to the village.

14. The ferry entered by the Chief Engineer for the 41st mile, Maliyala to Mundeleur, is really for the cultivation of Mudigutla, lying to the south of the canal, which here spreads out into a tank. It would certainly be inconvenient for these villagers to be obliged to use the Maliyala bridge, and at the same time it would be, I am afraid, very expensive to provide a bridge near Mudigutla, owing to the widespread of the canal water; and here, therefore, it seems necessary to maintain a ferry, and to make a raised road-way through the shallow part of the tank, southwards to the higher ground; but should the expense of arranging a ferry be found on investigation to approximate to the cost of a foot-bridge, it will be better to provide the latter.

Proceedings of the Madras Government, Public Works Department,
1st October 1866.

15. The proposed permanent arrangements therefore for crossings in the first forty-three miles of the canal are as follows:—

Miles.	Towns and villages accommodated.	Class of crossing.	Description of crossing.	What traffic provided for.	
0	Soonkasala, &c.... ...	2nd Class	Head sluice.	All kinds.	
3rd	Dudiyala	Do.	Bridge, 9 feet.	Do.	
6th	Yedarur	Do.	Do.	Do.	
9th	Singaram, &c.	Do.	Culvert, 10 feet.	Do.	
12th	Nidajood	3rd do.	Bridge, 5 feet.	Cattle and foot passengers.	
14th	Mungalapad	Do.	Do.	Do.	
15th	Mamdialpad	Do.	Do.	Do.	
18th	Kurnool, &c.	1st do.	Hindry aqueduct	All kinds.	
19th	Do. do.	Do.	Gooty road bridge	Do.	
20th	Do. and Zoorapoor.	Do.	Bridge.	Do.	
21st	Do. do. ...	2nd do.	Culvert, 10 feet.	Do.	
23rd	Kadrabagh	2nd do.	Aqueduct.	Do.	
30th	Pudur	Do.	Bridge, 9 feet.	Do.	
33rd	Sultanpore	Do.	Culvert, 10 feet.	Do.	The 35th mile is nearly three miles long, so that the distances between some of these crossings is greater than here shown.
35th	Ullur	Do.	Aqueduct.	Do.	
40th	Maliyala	Do.	Bridge, 9 feet.	Do.	
42nd	Mudigutla	3rd do.	Ferry or bridge.	Men and cattle	

16. Altogether, therefore, seventeen crossings are proposed for a length of canal called forty-three but really about forty-five miles in length, and of these crossings all but four will accommodate all descriptions of traffic; and there can be no doubt, I think, that the substitution of bridges for ferries to so great an extent will greatly add to the convenience of the villagers having lands, or living near the canal.

17. The Government have, in the Order quoted at the commencement of this letter, approved the proposed design for the second class bridge, and if the allotment of crossings above given be sanctioned, the Chief Engineer can at once prepare the estimates for the four bridges of this class. A suitable design for the third class bridges has still to be decided upon.

18. I would, in conclusion, recommend that roads should be constructed, as early as may be possible, in the Public Works Department, from such of these crossings as may be made of much advantage to the general traffic of the Kurnool District. None but those who have travelled about it, know how extremely difficult it is to move about during a considerable part of the year, and numerous villages can be reached only with extreme difficulty. Thus, for instance, a road from the Pudur bridge in the thirtieth mile, viâ Bavapoor and Bapulcotoor to the main road leading from Kurnool, viâ Gardidimudaga to Nundial, would be a considerable convenience; also one from Ullur to Nundicotkoor, and one from the Maliyala bridge to join the Ullur and Nundicotkoor road.

No. 24. ORDER THEREON, 1st October 1866, No. 3,119.

CIVL WORKS, 8.

1. The Government sanction the permanent arrangements which the Consulting Engineer recommends in this letter for crossings in the first forty-three miles of the Madras Irrigation and Canal Company's Canal.

Proceedings of the Madras Government, Public Works Department
1st *October* 1866.

2. The design for second class bridges having already been approved, the preparation of estimates which have yet to be framed for four bridges of that class may now be undertaken.

3. Paragraph 18 will be communicated to the Superintending Engineer of the 3rd Division for consideration, and for the submission, if necessary, of estimates for the proposed roads.

(True Extract.)

(Signed) CHARLES A. ORR, Colonel, R. E.,
Secretary to Government.

To the Consulting Engineer Madras Irrigation and Canal Company.
,, Manager for do. do.
,, Superintending Engineer, 3rd Division.

Exd. S. T. Augustin.

Consulting Engineer's Office
Irrigation and Canal Co.
Camp Saytaur 11th September 1866

No 61

To
Captain John Mullen R.E.
Consulting Engineer Irr. and C. Co.

To
Colonel C. A. Orr R.E.
Secretary to Government P.W.D.

Sir

1. With reference to the order of Government, No 2715 of the 28th Ultimo, and in continuation of my letter, No 45 of the 2nd Ultimo, I have the honor to report that I have given special attention to the subject of the proposed substitution of Bridges for fords on the first 3 Sections of the Main Canal, and I now beg to make the following recommendations. I have spoken to the Collector on the subject also, but Mr Sullivan, having been but a short time in the District, was unable to give me much information, and recommended my consulting the Deputy Collector Sundaskira Row, which I have accordingly done. The Executive Engineer appointed in the room of the late Major

Major Flint has not yet joined.

2 Appended to para 7 of the Chief Engineer's letter, printed with the order of Government above referred to, is a list of the ferries already approved, and of the Bridges proposed by that officer, and a reference to that list will make the subjoined remarks more easily understood.

3 I find that Koontalapád is a village on the South side of the Canal, where also most of the lands are situated, those on the North side being only 18·51 acres having an assessment of Rupees 17-13-0, so that a bridge cannot be deemed necessary at this point; but in order that access to those fields may be rendered easy at small trouble to the villagers, it is proposed that a small passenger ferry boat, with a respite period on either bank, be given, to be worked and kept in repair by the villagers themselves. Should it be found that the boat is not deemed by them of sufficient importance to induce them to take the small amount of trouble, it can after a years trial be withdrawn.

4 The next village for which a ferry was to be provided is Pudigála, which is on the North bank; and though a small village, and indeed only a hamlet of Koontalapád, most of its lands being on the opposite side of the Canal, a bridge will be a great convenience, and it is intended therefore to provide a 2nd class Cart bridge, to be built at the cutting close to the village.

* Those on the North side are 151-11-0 assessment Rupees 23-2-10-

5 Pedaiúr the next village has two ferries provided for it, one on the west side at the Calangulah above the Tank, and the other below the Tank a mile to the Eastward. The upper position does not afford a good site for a bridge, but below the Tank, at 5½ miles or about 3 furlongs above the site of the temporary bridge, which must recently was used in lieu of a ferry is a fairly convenient site, and here a 2nd class Cart bridge is intended to be built. As an additional convenience it is proposed, as at Koontalapád, to give a small ferry boat to be placed above the tank pond to be worked and maintained by the villagers.

6 For a bridge for Nidagood, a convenient site will be at the bend in the Canal which is passed by a well defined track, at about, but perhaps a little above, the middle of the 12th mile. This bridge will be a 3 class or bridle and foot bridge.

7 A similar bridge is required for Mungadpád, to be built at the deep cutting opposite the village, just above the present temporary bridge.

8 What is put down by the Chief Engineer as a second ferry for the village just named, is really, for the accommodation of Mandialpád which

which lies $\frac{3}{4}$ of a mile to the East of Bungalapád, and I wished, if possible, to make one bridge do for both villages by placing it halfway between them, but it was found that the Canal forming a bank at this point, no site could be selected and as, were the villagers of Brandidálpad to use the Bungalapád bridge, they would have to make a circuit of some 3 miles to reach their fields, it became necessary to provide them with a separate 3rd Class bridge, for which a site has been selected South East of the villages near the lower end of the 15th mile.

9 No ferry was provided for Sudréim, and I find that a bridge is not required. What traffic there was resulted from the location there of a large number of labourers employed on the Canal. These have gone, and the village consists of only a few small huts.

10 For Pádúr a second class cart bridge will be a great convenience. The site selected for it is just below the middle of the 30th mile, and from it the Chief Engineer proposes to clear a track over the high ground to join the track at present in use, which crosses the Canal bank at a bridge a little higher up.

11 The ferry entered at 31½ miles does not seem to be required, there is no village near this, and less than a mile lower down there is the Allapúr under tunnel, which will be a spacious and convenient crossing.

12 I do not think that a ferry is required permanently in the 38th mile for the footpath, which here crosses the line from Shaitanhotta to Sundieathoor. The latter is the Cuddah Station, and no doubt the people want to get to and fro, both for the daily purposes of agriculture and such communication is required, and, as the Ullur Aqueduct in the 35th mile is nearly in the centre of the direct line between the two villages in question and, as moreover there will be a bridge in the 36th mile, which will be an alternative line requiring but a slight detour to reach Sundieathoor, and accommodating also any traffic from Shaitanhotta to the South East, no other crossing seems necessary; but, until the roadway under the Ullur aqueduct is completed, a ferry should be maintained by the Company in the 38th mile.

13 The next bridge required will be one of the 2nd Class at Baligala in the 50th mile, the site for which will be at the cutting close to the village.

11 The ferry entered by the Chief Engineer for the 11th mile Maliyala to Mundelewa is really for the cultivation of Mudigutta lying to the South of the Canal, which here spreads out into a Tank. It would certainly be inconvenient for those villagers to be obliged to use the Maliyala bridge, and at the same time it would be, I am afraid, very expensive to provide a bridge near Mudigutta, owing to the wide spread of the Canal water, and here, therefore, it seems necessary to maintain a ferry and to make a raised roadway, through the shallow part of the Tank, Southwards to the higher ground, but should the expense of arranging a ferry be found on investigation to approximate to the cost of a foot bridge, it will be better to provide the latter.

15 The proposed permanent arrangements therefore for Crossings in the first 43 miles of the Canal are as follows.

Miles	Towns and Villages accommodated.	Class of crossing	Description of Crossing	What traffic provided for
0	Conthavaka Tea	2 Class	Road Sluice	All kinds
3	Pudigala	do	Bridge 9'	do
6	Vedaveer	do	do	do
9	Sugaravu &c	do	Culvert 10'	do
12	Kedagod	3	Bridge 5'	Cattle & foot passengers
14	Irungalapad	do	do	do
15	Mundelapad	do	do	do
18	Kurnool Tea	1st	Sluice & Aqueduct	All kinds
19	do do	do	Cart road Culvert	do
26	do and Yerapoor	do	Bridge	do
21	do do	2	Culvert 10'	do
23	Kadrabagh	2	Aqueduct	do
30	Pedur	do	Bridge 9'	do
33	Sultanpore	do	Culvert 10'	do
35	Ullur	do	Aqueduct	do
40	Maliyala	do	Bridge 9'	do
42	Mudigutta	3	Ferry or Bridge	Men Cattle

The 35th brick is nearly 3 miles long, so that the distances between some of these crossings is greater than here shown.

16 All together therefore 17 Crossings are proposed for a length of Canal called 43, but really about 45 miles in length, and if these crossings all built to suit accommodate all descriptions of traffic, and there can be no doubt, I think, that the substitution of bridges for ferries to so great an extent will greatly add to the convenience of the villagers having lands, or living, near the Canal.

17 The Government have, in the order quoted at the commencement of this letter, approved the proposed design for the 2nd Class bridge and if the allotment of Crossings above given be sanctioned, the Chief Engineer can at once prepare the estimates for the 9 bridges of this Class. A suitable design for the 3rd Class bridges has still to be decided upon.

18 I would in conclusion recommend that roads should be constructed, as early as may be possible, in the Public Works Department, from each of these crossings as may be made of much advantage to the general traffic of the Kurnool District. Those, but those who have travelled about it, know how extremely difficult it is to move about during a considerable part of the year, and numerous villages can be reached only with

with extreme difficulty. Thus, for instance, a road from the Pulla bridge in the 30th mile, via Bavapoor and Bapulcotor to the main road leading from Hurnoor (via Gandidinnedaji to Irundicul would be a considerable convenience; also one from Allur to Irundicolthoor and one from the Baligala Bridge to join the Allur and Irundicolthoor road.

I have the honor to be,
Sir
Your most obedient servant
John Lindsay Captain R.E.
Consulting Engineer N.A. Circle

R. 25th Sept/66 Mch. do.

Copy to Chief Engr. & Secy. to Govt. P.W.D. for information
Chief Engr. & Secy. to Govt. &c. &c.
Secretary Board P.W.D.

Copy with reference to Abstract No. 2715 of 28th Sept. for information
Ch. Engr. & Secy. to Govt. &c. &c.
Secretary Board P.W.D.

C. 21st Sept/66 R. 28th

Public Works Department.

No. 3119

PROCEEDINGS of the MADRAS GOVERNMENT under date the 1st Octr 1866.
Read the following

From Consulting Engineer
N. A. Ry. Co. Compy (Here enter No. 61 dated 11 Sept 1866)

The Government sanction the permanent arrangements which the Consulting Engineer recommends in this letter for crossings in the first 43 miles of the Madras Irrigation and Canal Company Canal.

The designs for 2 Class Bridges having already been approved, the preparation of estimates which have yet to be framed for four Bridges of that class may now be undertaken.

Para 13 will be communicated to the C. Engr

of the 3d Dr. for Consideration and for the submission, if necessary, of estimates for the proposed roads.

P. W. 186 6. Department.

Ref. of the Govt. for Oct. 66

No. 3116

PROCEEDINGS OF GOVERNMENT. of Madras

Dated 1st October 1866

Further Ref. 311 of 20-2-71

Certain arrangements Connected with the proposed Substitution of Bridges for the first three Sections of Irrigation and Inundation Banks in Marine Canals for Carriage Communication &c.

A. 23. 24.

To The Const. Engr. in P.W.D.
" Drainage for do
" S. Engr. & do
C. 2104 2/1/67 D. 25th Despd 2d Oct.