M.R.O. 1—10,006—28-2-50.

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MADRAS RECORD OFFICE

Government of Madras

Public works DEPARTMENT

G.O. No.	2366	Press
B.P. No. 370-391		Mis.
Dated	25- 9.	195/873

Not to be folded or roughly handled

No. 390. Read the following Circular from the Government of India, Public Works Department, (Buildings and Roads—Military,) to the Governments of Madras and Bombay in the Public Works Department; the Inspector-General of Military Works; the Chief Commissioners of the Central Provinces and British Burmah; the Agents, Governor-General for Central India and Rajpootana; the Resident at Hyderabad, dated Simla, 8th August 1873, No. 43:—

I AM directed to forward, for information, copy of the correspondence marginally noted, regarding the standard plan for bakeries, and to request that the suggestions contained in the letter from the Commissary General may be acted on whenever projects for bakeries are under consideration.

Letter No. 965 B. M., dated 14th June 1873, from Government of India, Public Works Department, to Commissary General.
Letter No. 565, dated 27th June 1873, from Commissary General.
Note by Superintending Engineer, Hyderabad, on new Bakery at Trimulgherry.

2. The several objections raised in the note by the Superintending Engineer, Hyderabad, should also receive due attention.

(Signed) W. CROMMELIN, Colonel, R.E.,
Deputy Secretary to the Govt. of India.

From the Government of India, Public Works Department, to the Commissary General, dated 14th June 1873, No. 965 B. M.

I AM directed to forward the papers marginally noted having reference to certain alterations and additions proposed to be made to the steam bakery at Trimulgherry.

Copy of a letter from the Resident, Hyderabad, No. 136 G. W., dated 31st March 1873, with one enclosure and three plans.

2. The standard plan of bakery, it will be remembered, was prepared by Major Taylor, of the Commissariat Department, who was specially deputed to the duty by yourself. The plan of the Trimulgherry bakery is based upon the standard plan, the necessary alterations being made for the driving of the machinery by steam instead of bullock-power. The plan was prepared by the Executive Engineer in communication with the local Commissariat and Military Authorities, and was approved by you before receiving the sanction of the Government of India.

3. The main objections to the plan as originally sanctioned are—

1*st*.—That the oven-room is too narrow.

2*nd*.—That the kneading-room is not well situated in respect to the oven-room.

3*rd*.—That there is no provision for a soojee or drying-room, and, with reference to these objections, I am to inquire whether you consider it necessary that the standard plan should be revised, and, if so, in what respect.

From Lieutenant-Colonel J. I. WILLES, Commissary General, to the Secretary to the Government of India, Public Works Department, dated 27th June 1873, No. 565.

In reply to your letter, No. 965, of 14th instant, I have the honour to inform you that in the standard plan of bakories there are no doubt defects, and improvements might be suggested; but as no two officers agree as to what is really necessary, I would not propose any change in the existing standard plans, except in so far as from having steam machinery instead of bullock-power alterations have become necessary.

2. Certainly between the oven-shed and kneading-rooms there should be direct covered communication, and this not being so is a serious defect in the standard plan, and should be rectified.

3. The ovens themselves in the standard plan are faulty, but this subject has for a long time been under the consideration of Colonel Hutchinson, Inspector-General of Military Works, and Colonel Christopher, Deputy Commissary General, Central Circle, and at Lucknow and Meerut improved ovens have been erected. The fact of the oven-rooms being too narrow has not been brought to notice.

4. As regards a soojee-room. We do not use soojee, and if there is no godown convenient one should be erected in the bakery, but I see no absolute necessity for such a building in close proximity to the bakery.

5. Major, now Colonel, Taylor was deputed some years since by my predecessor to fix a standard of bakery, but I am not at all sure that this officer had any peculiar qualifications for the duty, and I would myself much rather have seen the erection of bakeries carried out entirely on plans prepared by your department, but as a standard plan has been accepted, it is sufficiently perfect for our wants modified; with reference to the introduction of machinery worked with steam; and in many stations in Bengal, owing to the flour being supplied from the Cawnpore Mills, other trifling changes may be necessary which can be arranged as the buildings are taken in hand.

6. To agitate now the question of another standard plan would, no doubt, cause delay in the erection of bakeries in stations where very urgently required.

Note by Major J. O. Magne, R.E., Superintending Engineer, Hyderabad, on new Bakery at Trimulgherry.

This bakery was sanctioned by the Government of India in July 1869 according to standard plan furnished by the Government of India.

Eventually it was decided to use steam machinery instead of bullock-power, and machinery containing all the latest improvements was sent out from England in 1870.

Soon after the works had been commenced, they were partially stopped for want of funds, and during this time the Executive Engineer reported that the machinery on its way from England was different from that indented for, and that the plans and estimate would have to be modified. This was done, and the final estimates were sanctioned by the Government of India in December 1870.

The works were re-commenced in 1871-72, when funds permitted. In the meantime, the ovens shown in the standard plan were condemned (*vide* Government of India Circular, No. 1,131—18 B. M., dated 19th October 1870,) and after due inquiry from Bangalore and Poona, the plan of those built at the former station, which the Executive Commissariat Officer recommended as having been known to answer, was adopted.

Several minor additions and alterations were made whilst the works were in progress, but nothing to alter the general arrangement of the standard plan of the Government of India.

Proceedings of the Madras Government, Public Works Department, 25th September 1873.

The bakery was tried two or three times on a small scale, but owing to some trifling defects in the flues and oven-doors (which could soon have been altered,) the smoke (also in my opinion partially the result of green wood used for fuel) rendered the oven-rooms unbearable.

On the 1st instant, the Commissary Officer had undertaken to supply bread to the troops, and it was only then that the real and most important defects of the bakery became apparent.

I have visited the building on three occasions since they commenced working, and seen all the defects complained of—

1st.—The Commissariat Officer is at present of opinion that the boiler and machinery are insufficient to do the work required of them. But with reference to the boiler, this I think has not been fully established: the fire-bars require to be lowered, and the fuel is not the best. I anticipate, though that at least two more mills will be required, to supply the full demand for flour, and to enable a small supply to be stored to provide against accidents.

The demand is 3,000 lbs. of bread a day, which require 2,400 lbs. of soojee and 4,800 lbs. of wheat or 86 bushels.

There are four 3-feet mills, which cannot be depended on to grind more than three bushels of wheat per hour: total 12 bushels per hour. The 86 bushels therefore require at least 7¼th hours' work, Sundays and all.

The work ought to be done in six days of seven hours each, with at least one stone to spare to allow of repairs and changes in stones, and it ought be be possible to grind at least 50 per cent. more flour than is actually required daily to guard against accident. In a bakery of this kind, where 3,000 men are dependant on the supply, there should be no chance of failure.

These extra stones, however, are not the most urgent portion of the bakery to be considered.

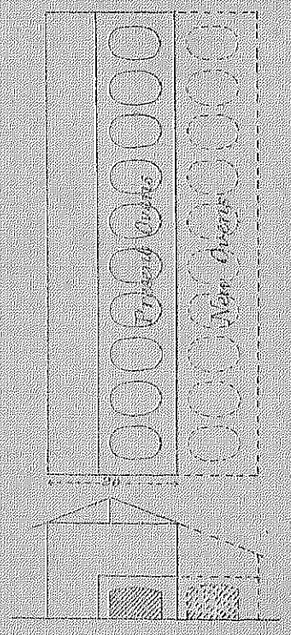
2nd.—Complaints are made, and not groundlessly, that the kneading-room is so situated that, in carrying the dough to the oven-room, it has to be exposed to a cold air, which causes it to fall and render the bread heavy. In both the Bangalore and Poona bakeries it has been ascertained that the kneading tables are in the same rooms and opposite the ovens.

3rd.—The oven-room is such that it is almost impossible to work in it. There are 12 ovens all requiring to be charged at once. This is necessary, as three bakings are required daily, each oven holding but 90 to 100 loaves. The room is but 20 feet wide, of which the ovens occupy 12 feet. By actual trial I find that each man in loading or unloading an oven requires 12 feet clear with his pole. Consequently in this building they find it very awkward to work at all, only just being able to avoid the pillars of the building, and in some cases it is not found possible to charge the ovens properly or fully. Moreover, whilst loading the bread is exposed to cold air, which, as before pointed out, is most injurious to it.

Whilst the ovens are being loaded, it is necessary to bring and take away the trays containing the loaves as brought from the kneading-room, and it is also necessary that the baker and his Superintendent should be able to move up and down and supervise the work, but this is simply impossible, and I have witnessed that the work is carried on with greatest inconvenience.

4th.—A soojee or drying-room has been entirely omitted from the plan. This is apparently essential, and a plan and estimate (amounting to Rupees 12,079) has been prepared for an additional building, and was about to be commenced on emergency, when the general unsuitableness of the building was brought to notice, but in the arrangement hereafter proposed, it will not be required.

2. After visiting the work, and duly considering with the Executive Commissariat Officers what the best arrangement would be under present circumstances, we have determined that the most feasible, and at the same time I believe the most economical, plan will be to demolish the present oven and flues, and build entirely new ones outside the present oven rooms at the back with their mouths opening into the present room.



The marginal sketch will show what I mean; the same fire-bricks, iron-doors, and other portions of the materials can be used again. The present room, 20 feet broad, will then admit of the ovens being worked, and the kneading tables also being brought into the room opposite the oven. It will only be necessary to build up the present arches supplying swing glass windows to the upper portion.

The present kneading-rooms will be divided by a cross wall, leaving the machinery for kneading all clear at one end, and the other portion can be converted into the soojee room.

These alterations are the main ones required, and at a moderate expense will make the building efficient.

The question of extra grinding stones or mills can be taken up at any time.

The Government of India have lately given an extra grant for these buildings during current year of Rs. 5,000. As the work is urgent, I would ask the Resident's sanction to commence the alterations as approved of by myself and the Executive Commissariat Officer at once, and the Executive Engineer can be called to submit the necessary plans and estimate. They will be within the powers of the Resident to sanction.

No. 391. ORDER THEREON, 25th September 1873, No. 2,366.

MILITARY WORKS, No. 12.

COMMUNICATED to District Engineers for information and guidance with reference to G. O., No. 220, dated 21st January 1868.

(True Extract.)

(Signed) G. W. WALKER, Colonel, R.E.,
Secretary to Government.

To District Engineers.
To the Executive Engineer, Wynaad.
,, Inspecting Engineer for Buildings.
,, Military Department.

Exd. E. C. Shunker.
Spare Copies.

No 4863

Govt. of 1873 Madras.

PUBLIC WORKS.

To District Engineers

Dated

Recd.

Encl. 1

G. O. 25 Septr 1873, No. 2366.

Nos. 390 & 391

Standard plan for Bakeries

Circular from the Govt of India forwarding correspondence regarding certain defects in the standard plan; Comd to ~~the officers~~ Dt Engrs.

No 2366

Communicated to District Engineers for information and guidance with reference to G.O. 220 d/ 23 January 1868.

D.C. Sent 7/10/73

No 390 91