

L. & M.
1898-12-6-98.

Local & Munl. (1898) Department.

MISCELLANEOUS.

G.O., No. 1515 Pms ✓

DATED 6-12-98

[Despatch Abstract.]

Private plague hospitals

Recording the Plague Commissioner's
Proceedings Communicating to the President Municipal Com-
mission, Madras & others certain hints as regards the provision
private plague hospital accomodation.

BACK PAPERS.

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

FURTHER PAPERS.

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

Proceedings of the Plague Commissioner, MADRAS — 1898.

Recd. 7 Nov.

Regd. 8 Nov.

1898.

Enclosures 2

Spare copies 6 of C.

Proceedings, No. 220 A, 18th October 1898.

Cnos 2429 & 2564 P.

Misc.

order No 15-157 nio 276-12-98

Recorded.

OCTOBER.

3/12/98

6 12 28

Private Plague Hospitals.

Hints as regards the provision of private plague hospital accommodation.

PROCEEDINGS OF THE PLAGUE COMMISSIONER.

READ—the following paper:—

Hints as regards the Provision of Private Plague Hospital Accommodation.

1. Three means of providing private plague hospital accommodation exist—
 - (a) Temporary sheds can be erected to suit the purpose on ground sites to be approved of by the Sanitary Commissioner.
 - (b) Houses may be taken up, such houses having been approved of for the purpose by the Sanitary Commissioner.
 - (c) A site can be selected and materials for hospital sheds collected ready for use at a moment's notice.
2. To save initial expense and at the same time to provide suitable accommodation, the Plague Commissioner would suggest that, wherever possible, arrangements may be made by a sub-committee to select suitable houses, either unoccupied, or houses which can be vacated for occupation in a few hours. The Plague Commissioner should be furnished with the addresses of such houses. He will then arrange to have them examined and reported upon by the Sanitary Commissioner. It is, however, pointed out that buildings will almost always require some alteration to fit them as hospitals. It would probably save much expense and much reduplication of staff if committees would unite to form one large private caste hospital for the north and one for the south, carefully equipped. A central committee elected by divisional committees and containing one member from each such committee might be formed to carry out two large central caste hospitals. Afterwards, if the plague attacked divisions one after another in force, separate divisional hospitals would no doubt be necessary.
3. The chief points about such houses are these—
 - (a) The house should have a compound. This need not be large, but it should be sufficient to prevent any chance of contact with the neighbouring houses. As a *minimum* standard, no buildings included in the hospital premises should be nearer neighbouring dwellings than 40 feet. In judging of the required size of a compound, it should be remembered that if suitable permanent buildings be not available, space must be at disposal for temporary buildings so as to bring up the total accommodation to the standard shown in the accompanying plans.
 - (b) There should be a supply of Red Hills pipe water either laid on at the house or within 50 yards of it.
 - (c) The room in the house should be well ventilated and of considerable height.
 - (d) If possible, there should either be godowns in the compound or room available for the erection of sheds in the compound for families and attendants of patients.
 - (e) Each patient should be allowed 144 square feet and 2,000 cubic feet. If ventilation is not suitable, structural alterations will be required to secure it.
4. If, instead of obtaining the use of houses, which, in most cases, will probably be very difficult, temporary shed hospitals are preferred, arrangements should be

made, as soon as possible, to fix the sites of such hospitals and to report on the matter to the Plague Commissioner, who will obtain the Sanitary Commissioner's opinion on the sites.

5. In choosing a site, the following points should be noticed:—

- (a) The site should be as near as possible to the locality inhabited by the people for whom it is intended.
- (b) The site should, if possible, be on gravelly dry soil and as free from vegetation as possible.
- (c) The site should be close to a supply of Red Hills water.

6. In order to avoid expense, it is suggested that materials to make the hospital (which should now be built, if possible, on the lines of the plan * annexed to these notes) should be collected at once and held ready-stored near the approved sites of the proposed hospitals ready for immediate use when necessary.

7. The Plague Commissioner understands that, if possible, the Municipal Commission would be willing to erect hospitals when asked to do so on the approved sites, the money being advanced to it by the committees appointed for the purpose. This, no doubt, would meet a great difficulty.

8. The Plague Commissioner, on behalf of Government, will be ready to advance half the cost of any *bond fide* plague hospital erected with his sanction on an approved site; also he will advance half the cost of such structural alterations as are referred to in paragraph 3 (c):

9. In private hospitals, as long as the arrangements are supervised by and approved of by the Sanitary Commissioner, the patients may be treated in any way their relations or caste people desire. The use of English medicines will not be required, nor need certificated medical officers be employed. All that is necessary is that the building and site should be approved by the Sanitary Commissioner and that due arrangements are made and approved of by the medical officers on plague duty in the city, under which all risk of infection to neighbouring houses and people is prevented.

10. Free access by relations and friends of patients to the patients in all hospitals will be permitted, provided that arrangements can be made to segregate such people in the compound of the hospital so as to prevent any chance of their carrying infection elsewhere.

11. Arrangements should be made as soon as possible to secure that the services of hospital assistants, hakims or native medical officers and lady attendants may be available for private hospitals when required.

12. The sooner arrangements are made and reported upon to the Health Officer, Madras Municipality, or the Plague Commissioner the better.

13. In case committees desire to use European medicines in their hospitals, a list is appended showing the medicines considered necessary by the Sanitary Commissioner. The list contains all the equipments really necessary for a hospital of five beds.

14. In case of deaths in hospitals, every possible concession will be made to the relations of the deceased as regards arrangements for burial. It is earnestly hoped that every possible publicity will be given to these rules and that every possible opportunity will be taken to prevent the spread of foolish and false reports regarding the action of the authorities on plague matters.

15. The office of the Plague Commissioner is in the Secretariat buildings in the Fort, and he will be always glad to see any one wanting information on matters connected with plague and to give every assistance within his power to those who desire to use private efforts in dealing with plague cases.

16. The *earliest possible* information should be given of the occurrence of any case of plague. It is at the beginning of an epidemic that our best chance lies, and it is for the public to assist the authorities in the early report of first cases and in carrying out of the approved efficient measures at the beginning.

* Not reprinted, being same as that circulated with G.O., No. 256 P., dated 23rd March 1898.

APPENDIX.

LIST A.

OUTFIT FOR A FIVE-BED CASTE HOSPITAL.*

THE following is a moderate equipment for a hospital for five patients. It will be of use to persons wishing to establish private caste or other plague hospitals:—

Disinfectants.		Appliances—cont.	
Perchloride of mercury ..	lb. 1	Flannel ..	yd. 1
Phenyle ..	5	Carbolic soap ..	cakes 2
Permanganate of potash ..	1	Lint ..	lb. 1
Acid, hydrochloric (commercial) ..	2	Cotton wool ..	1
Equipment.		Linseed ..	5
Cots with tape ..	no. 7	Tow ..	3
Mattresses (to be filled with straw) ..	7	Spirit lamp ..	no. 1
Date mats ..	15	Test tubes ..	2
"Burmese spoons" (for water) ..	6	Nitric acid ..	oz. 1
Cumblies ..	8	Drainage tube ..	grs. 1
Carpets ..	8	Scales and weights, with spare set of	grs. 1
Pillow cases ..	8	grain weights ..	set 1
Wire teapots for bedside ..	6	Dispensing bottles ..	no. 10
Slippers for ward coolies ..	2	Corks ..	doz. 2
Copper dekshas for boiling clothing ..	1	Draught glasses ..	no. 6
Copper dekshas, small, for cooking food ..	4	One-ounce and one-minim glass ..	1
Cocoonut spoons (small) ..	6	Slab ..	1
Iron enamel cooking pots ..	2	Spatula ..	1
Block tin saucepans (2-pints and 1-pint) ..	2	Roll of sticking plaster ..	1
Zinc buckets ..	2	Large mixture bottles ..	1
Firewood axe ..	1	Clinical thermometers ..	2
Kitchen knife ..	1	Drugs.	
Iron kettle ..	1	Acid, boric ..	oz. 4
Hanging lamps ..	2	Acid, carbolic ..	8
Hurricane lanterns ..	3	Acid, nitric hydrochlor. dil. ..	lb. 1
Portable tables ..	2	Acid, sulphuric dil. ..	oz. 2
Portable chairs ..	2	Ammonia bromide ..	2
Time-piece ..	1	Ammonia carbonas ..	1
Folding screen ..	1	Ammonia chloride ..	2
Bed-head ticket frames ..	1	Bismuth subnitras ..	1
Temperature charts ..	4	Caffeine citras ..	1
Zinc dressing trays ..	20	Camphor liniment ..	1
Large jars (old arrack) for disinfectants ..	1	Ether pur. ..	1
Hand-basins for disinfectants ..	2	Extractum belladonna ..	1
Washstand with basin, complete ..	1	Ext. Ergot. liquid ..	1
Lotion bowls ..	2	Glycerine ..	1
Earthen chippas ..	doz. 2	Gum acacia ..	2
Drinking-water chatties ..	no. 6	Hydrargyri perchloridum ..	1
Bed pans ..	3	Hydrargyri subchloridum ..	1
Ice box ..	1	Iodoform ..	1
Pewter or enamel urinals ..	4	Liniment terebinthinae ..	1
Appliances.		Liq. ammoniae acetatis ..	lb. 1
Small pocket dressing case ..	no. 1	Liq. hydrargyri perchlorido ..	oz. 4
Gum elastic catheters (male) ..	2	Liq. strychnia ..	1
Hypodermic syringes ..	1	Lysol ..	lb. 2
Enema syringe ..	1	Magnesia sulphatis ..	1
Two-ounce syringe ..	1	Ol. menth. pip. ..	oz. 1
Ice bags ..	1	Ol. recini ..	lb. 1
Waterproof sheets ..	1	Opium ..	oz. 1
Pestle and mortar ..	1	Phenacetin ..	oz. 1
Glass rod ..	1	Pil. col. co. ..	1
Bandage cloth ..	yds. 2	Pil. rhea co. ..	1
		Pot. iodid. ..	1

* In making Estimate for Lists A and B, the standards laid down for Bombay Plague Hospitals have been largely adopted.

Drugs—cont.

Pulvis ipecac. ..	oz. 1
Pulv. ipecac. co. ..	1
Pulv. jalap co. ..	1
Quinine sulphatis ..	1
Santonin ..	1
Soda bicarbonas ..	3
Spt. aetheris nitrosi ..	8
Spt. ammonia aromatici ..	8
Spt. of wine, methylated ..	4
Spt. vini rectificat. ..	4
Tinct. assafetid. ..	2
Tinct. card. co. ..	2
Tinct. digitalis ..	1
Tinct. hamamelis ..	1
Tinct. hyoscyami ..	1
Tinct. nucis vom. ..	2
Tinct. opii ..	2
Vaseline ..	lb. 1

For Medical Subordinate.

Cots (bed and pillow) ..	no. 2
Washstand (complete with enamel basin, &c.) ..	2
Towel rack ..	1
Table ..	1
Chair ..	1

Dispensary Furniture.

Shelf for drugs and appliances ..	no. 1
Box with lock and key for poisons ..	1
Dispensary table ..	1
Writing table ..	1
Chair ..	1
Washstand (complete with enamel basin, &c.) ..	1
Towel rack ..	1
Towels ..	1
Tin kettle ..	3

Stores.

Kerosine oil (125°) ..	tin 1
Firewood ..	(gallons 6)
Charcoal ..	At discretion.
Arrowroot ..	lb. 2
Anglo-Swiss condensed milk (milkmaid brand) ..	tins 3
Sugar ..	lb. 1
Whiskey ..	bot. 1
Arrack ..	bots. 2
Kitchen towels ..	no. 6

Blank folio books ..	Admission register.
	Case book.
	Stock book.
	Miscellaneous expenditure book.
	Return book.
Ink ..	On indent.
Pens ..	
Pins ..	
Stationery ..	

(2) The above estimate has been framed in response to a demand made by certain committees for information as to the various appliances and drugs that should be purchased and kept ready for a caste hospital, on the smallest feasible scale. It is not implied, therefore, that there are not drugs that might usefully be added to the above list; as soon as patients were received in the hospital, the medical officer* in charge would be entitled to make a further indent for medicines* that though useful are yet probably not so urgently required as those above enumerated. Such an indent might, however, reasonably be confined to the drugs and appliances, &c., stated in list B.

LIST B.

EQUIPMENT FOR A HOSPITAL NOT EXCEEDING TWENTY BEDS.

Furniture.		Furniture—cont.	
Wards—		Office—	
Tables ..	no. 2	Table ..	no. 1
Screens ..	4	Chairs ..	2
Chairs ..	2		
Washstand table ..	1	Cook-room—	
Cupboard ..	1	Table, common ..	1
Almirah ..	1	Kettle ..	1
Cots ..	20	Cooking utensils ..	6
Lanterns ..	6	Cans for hot water, etc. ..	4
Towels ..	20	Spoon, large ..	1
Plates ..	20	Knife ..	1
Spoons ..	6	Plates, iron ..	3
Pails ..	2	Pail ..	1
Spittoons, earthenware ..	20		
Iron can for poultices ..	1	Dispensary—	
Bowls, common ..	20	Table ..	1
Mats for cots ..	20	Shelf ..	1

* It is, of course, to be distinctly understood that these notes convey mere suggestions, and that, if the committees so elect, none but drugs commonly used by natives, hakims or vydians need be made ready. Similarly, the medical men employed need not be versed in European methods of treatment.

Furniture—cont.

Hospital Assistants' Quarters—			
Table	no.	1	
Chair	"	1	
Bedstead, cheap, cane	"	1	
Nurses' Quarters—			
Two Nurses—			
Table	"	2	
Chairs	"	2	
Arm chair	"	2	
Shelf	"	1	
Bedsteads, complete	"	1	
Commodore	"	2	
Chambers	"	2	
Washstand and crockery	sets	2	
Towel, horse	no.	2	

Crockery, etc., for Nurses.

Knives	no.	4
Forks	"	4
Spoons	"	2
Teaspoons	"	2
Cups and saucers	"	2
Plates, large	"	2
Plates, small	"	2
Tumblers	"	2
Teapot	"	2

Food.

Medical officers to arrange with contractor, 20th March 1897.

Clothing.

Pillow cases	no.	20
Towels	doz.	2
Dusters (dunghree)	"	2
Blankets	"	2
Coats	no.	40
Trowsers	"	30
Dhoties	"	30
Sheets	"	30
Sarries	"	30
Slippers (for ward boys)	"	36
Socks	"	10
Linen caps	prs.	20
Table cloths for nurses	doz.	40
Women's night dresses	doz.	3
Children's do.	doz.	1

Instruments.

Enema tubes	no.	2
Bottles, empty (6 oz.)	doz.	3
Corks of sizes	grs.	1
Glasses for serving medicines	no.	10
Feeding cups	"	10
Clinical thermometers	"	4
Bandages	doz.	1
Cotton wool	lb.	1
Syringe, large	no.	1
Syringe, small	"	1
Spatulas of sizes	"	1
Pestle and mortar	"	2
Slab, small	"	1
Spirit lamp	"	1
Scales with weights and measures, grains, drams	set	1
Measure glass (4 oz.)	no.	1
Measure glass (2 oz.)	"	1
Measure glass, minim	"	1
Scissors	"	1
Pill boxes of sizes	pr.	1
Pots, decoction, tin	packs	2
Pots, infusion	no.	2
Penal's camel hair	"	1

Instruments—cont.

Syringes, hypodermic	no.	1
Syringes, enema	"	2
Syringes, glass	"	2
Catheters, Nos. 6, 7, 8	"	3
Corkscrew	"	1
Ice bags	"	1
Lint	"	3
Cloth, sheeting	lb.	1
Bed pans	yds.	12
Pocket case	no.	3

Medicines.

Acid, boric	lb.	1
Acid, carbolic	"	3
Acid, galic	oz.	2
Acid, hydrocyanicum dil.	"	1
Ammonii bromid.	"	6
Ammonii carbonas	"	6
Aqua distillata	"	2
Argenti nitras	lb.	2
Acid, tartaric	dr.	1
Alumen	oz.	8
Ammonii chloride	"	8
Atropin. sulph.	lb.	1
Bismuthi subnitras	dr.	1
Borax	oz.	4
Caffein citratis	"	4
Camphora	"	1
Cocaine hydrochloras	"	2
Chiretta	dr.	1
Chloroform	lb.	2
Collodion	oz.	4
Creosotum	"	2
Cupri sulph.	"	1
Diachylon plaster	drs.	4
Extractum belladonnæ	yd.	1
Extractum ergot. liqui.	oz.	1
Extractum gentian	"	2
Guaiacol	"	1
Glycerine	"	1
Gum acacie pulv. opt.	lb.	1
Hydrargyri perchloridum	"	1
Hydrargyri subchloridum	oz.	4
Iodoform	"	1
Lint. camph. co.	"	2
Lint. iodi	lb.	1
Lint. saponis	oz.	4
Liq. ammon. acetatis	lb.	1
Liq. arsenicalis	oz.	4
Liq. epispasticus	"	4
Liq. morph. hydrochloris	"	1
Liq. plumbi sabacotuti	"	1
Liq. strychnine	lb.	1
Magnes. sulph.	oz.	2
Oleum anethi	lb.	4
Oleum menthæ piperitæ	oz.	1
Oleum cinnamon	"	1
Oleum ricini	"	2
Oleum terebinthinæ	"	5
Oleum arachis	lb.	1
Opium	"	6
Potass. citratis	drs.	4
Potass. iodidum	oz.	2
Pulvis ipecacuanhæ co.	"	2
Pulvis jalapæ compositus	"	1
Phenacetin	"	2
Pil. hydrargyri	"	4
Potass. bicarbonas	"	1
Potass. chloras	"	2
Potass. nitras	"	8
Potass. permanganatis	"	8
Pul. cretæ aromatic c. opio	"	4
Quinii sulph.	"	8
Potass. bromidum	"	6

Medicines—cont.

Saccharum alb.	lb.	1
Santonium	"	1
Sodii bicarbonas	oz.	1
Sodii salicylas	"	3 (4)
Spiritus methylatum	"	4
Spiritus atheris nitrosi	lb.	1
Spiritus ammon. aromat.	"	1
Spiritus rectificatus	"	2
Sulphur sublimati	"	1
Syrup chloral hydrate	oz.	8
Syrup tolu	"	8
Tincture aconiti	"	1
Tincture aurantii	drs.	2
Tincture cardamomi co.	oz.	2
Tincture cinchonæ	"	2

Medicines—cont.

Tincture digitalis	oz.	2
Tincture hamamelidis	"	2
Tincture hyoscyami	"	2
Tincture iodi	"	4
Tincture opii	"	4
Tincture scillæ	"	2
Tincture assafoetid.	"	2
Tincture belladonnæ	"	2
Tincture catechu	"	4
Unguentum hydrargyri	lb.	1
Unguentum simplex	"	1
Vaseline	"	1
Vin. ipecac.	"	1
Zinci oxidum	oz.	1
Zinci sulph.	"	2

STAFF.

(3) In the matter of expenditure on account of staff, it would not be found advantageous to open hospitals with so limited accommodation as five beds. The nursing attendance that must be rendered to patients in the grave condition usual in plague, is of a peculiarly harassing nature; therefore, unless circumstances such as the limited number of the caste, the nature of the site available, or the funds at disposal, forbid, it is advisable that accommodation for not less than ten beds in one locality be provided; because to secure effective nursing, and reasonable hours of rest, in practice, the staff for nursing five patients should be as complete as for nursing ten. However, following the principle of securing that which is essential before the appearance of plague, and trusting to expanding the scope subsequently, as has been suggested above in the case of supply of medicine, it may be held that the following staff should be kept in readiness for a hospital for five (say, three males and two females) and not exceeding ten patients:—

1 qualified nurse.
2 male ward attendants.
1 female ward attendant.
1 male toty.
1 female toty.
1 cook.

1 waterman.
1 dhoby.
1 hospital assistant.
Police guard to be estimated for by the Police officer responsible in each locality.

CONSTRUCTION OF CASTE HOSPITALS (TEMPORARY STRUCTURES).

(4) As a rule, it is advised that the unit for hospital construction and administration be a twenty-bed hospital. This is an arrangement found to have worked well in Bombay, where scales for staffs, equipment and drugs followed closely the lines advised in lists A and B. From information thus supplied, committees can readily frame estimates in relation to the number of beds for which they wish to make provision.

(5) Annexed is a site plan (Plan * No. I) showing the arrangement for a hospital of twenty beds—a "one-section hospital." Following this terminology, a ten-bed hospital would be a half-section hospital.

(6) Plan * No. I (a modification of that designed by Mr. James, C.E., of Bombay) is arranged with the object of economizing space as much as possible. When, however, more ground is at disposal, it would be advisable to allow considerably greater intervals between the buildings. It is not often in this Presidency that materials for temporary wards, 24 feet broad, can be obtained cheaply; hence, it would usually be found cheaper to make hospitals suitable for a single row of beds. Plan No. II shows the character of buildings suggested. The purpose of each structure is stated on the plan so as to prevent unnecessary description.

* Not reprinted, being same as that circulated with G.O., No. 256 P., dated 23rd March 1898.

MATERIALS.

(7) The sheds ordinary would be built of bamboos and bamboo matting, with paddy straw or cadjan leaves roofing. Beams or old iron rails may, under certain circumstances, offer advantages of economy and durability. Without going into details of structure of temporary buildings, which will be found fully entered into in the "Notes and Specification appended," the following general points are worthy of consideration:—

(a) Experience shows that well-built temporary sheds, with occasional repairs, will last seven or more years. Sheds hastily put up on the theory that any rough structure will suffice will, in the end, prove very expensive. Sheds with crooked and thin bamboos, with matting little thicker than brown paper, such as a contractor usually considers himself justified in giving for the money paid him, are a source of annoyance and discomfort to patients and medical staff alike, and of endless expense in effecting repairs. Committees are, therefore, strongly advised to use material that may reasonably be expected to protect patients from sun and rain, and will not stand in need of much repair for two years.

(b) All structures intended for dwellings should be provided with basements. Rammed gravel of 9 inches will suffice for the purpose; but, wherever funds are available, it will contribute much to the sanitary safety and comfort of staffs and patients if in the case of the wards the plinths be built with brick in mud—the interior filling being of gravel upon which concrete plastered with cement should be laid to form a flooring—*vide* sections in annexed plan No. II. If an impervious flooring be thus provided, it should have a gentle slope towards a shallow "saucer drain" made in the cement plaster, which would lead to a small impervious reservoir immediately outside the wall.

(c) Bathing platforms should be of brick or concrete cement-plastered, leading to cement-lined reservoirs. These spaces need not be elevated above the surface of the ground more than 3 or 4 inches, but should be provided with a slightly elevated border so as to prevent overflow on the surrounding surface. They should be screened in the interests of decency and should be apart for the respective sexes.

(d) Latrines should be provided with impervious receptacles. A very simple form of latrine is shown in plan No. III (Block No. 12). This represents a cement-plastered 9 inches ovoid drain, such as commonly used in Madras town leading to a cement-plastered reservoir. Immediately over the drain are placed tarred earthen mullays, or specially-made iron receptacles, for receipt of faecal matter. These receptacles are placed at intervals of 2 feet 6 inches, and are separated by bamboo screens forming separate compartments. The latrine is used by squatting across the drain. The urine passes direct into the drain, and thus to the reservoir. The foot-path may be of tamped gravel, but preferably should be of concrete cement-plastered. It should not be more than 2 feet 6 inches in breadth, which, with the curb of the drain, will afford ample space for the passage of persons although sufficiently limited to prevent its illegitimate use. Latrines should have thatched coverings to prevent flooding during rain, but space should be provided between the screen-walls and the eaves to permit of the free entrance of light and air.

(e) A platform made in the manner laid down for bathing purposes should be provided for disinfection of clothing. Adjoining it should be ovens made with earthen chatties, such as used by dhobies. If funds be sufficient, it is better to provide copper cauldrons in lieu of the earthen chatties. As the copper can be sold on breaking up of the hospitals, very little loss need be incurred.

(f) Where the town water-supply is available, it should be brought within the hospital compound by pipes. These should be provided with taps. A cement-plastered platform with a drain leading to a suitable position should be formed round the taps. In positions where supply of water is intermittent, owing to deficient pressure, cube iron tanks, resting on trestles or masonry and provided

with self-closing taps, should be used, so as to store a supply. Where no town water-supply is available, rule 36, page 103, in the brochure, "Madras Plague Regulations and Rules" should be followed.

(g) A brick-in-mud incinerator, 3 feet 6 inches high, of 3 feet diameter at the base, and 2 feet 6 inches at the mouth, should be provided. The general design is that of the common country lime-kiln. In this all rags, sweepings, old bedding, &c., should be destroyed daily.

IN CONVERTED PERMANENT BUILDINGS.

(8) When permanent buildings are selected, care as to the following points is desirable, in addition to such matters as are applicable to temporary structures already described:—

Ventilation, preferably by perfation by means of doors and windows, should be carefully provided wherever feasible. Similarly, the free admission of light should be systematically arranged for. As a minimum, the windows of the wards should measure one square foot for every 50 cubic feet. Rooms that do not permit of entrance of air and light direct from the outside should not be used for wards. If it can be so arranged, a window should be placed so as to separate each bed from its neighbour. In reckoning the cubic capacity of the rooms under paragraph 3 (e), no height above 13 feet should be regarded as contributing to the total available. Each ward should have stated at the doorway, on a painted board, the cubic capacity of the room, its superficial area, and the number of patients for whom it is intended, having regard to the standard laid down in paragraph 3 (e). Irregular brick tile floors, such as commonly found in dwellings, cannot be considered suitable for plague wards. These should be plastered with cement. It should be seen that a suitable exit for the washing of the floors is made, and that these are received in special impervious reservoirs for subsequent disposal. Walls out of repair should be put in order and rendered reasonably smooth, and be subsequently whitewashed. Every care should be taken to see that no dark corners or recesses exist in the house. All such places should be opened up, so as to admit light and air freely. Bath-rooms and kitchens in existing houses are generally defective in these respects, and should be freely opened up. It should not be hastily assumed that the existing bath-rooms or latrines will suffice; the condition of their floors (which should be cement-plastered) and the nature of the exit for water, and its ultimate disposal should be carefully ascertained in each case.

GENERAL ADMINISTRATION.

(9) Committees for caste hospitals will be primarily responsible, and will issue their own orders, for all matters connected with observances of caste, gosha, or race requirements, and for appointing persons responsible to them for the feeding, nursing and medical treatment of patients after such methods as they may approve. They are advised to make their arrangements conform with the wishes of the uneducated masses—not of the educated minority only. It is presumed that treatment by vydians and hakims will prove most popular, and should ordinarily be provided for. Where, in exceptional cases, European treatment is specially desired, no difficulty need be experienced in securing it by application to private practitioners. For instance, if it be felt that the majority of subscribers would prefer treatment by indigenous methods (rendering it unnecessary to store European medicines and appliances), it might be possible to secure that private practitioner practising European methods attend, and that a chemist supply medicines on contract rates; or, in the case of a patient well off, he might be allowed to select his own medical man practising European methods.

(10) The District Surgeon is responsible that the caste hospitals in his district are conducted with such care as to sanitary details as shall prevent the possibility of danger of spread from infected patients and material. Unless so required in writing by the committee responsible for the caste hospital concerned, he shall not interfere—unless with reference to sanitary precautions—in any matter concerning the medical treatment, food or attendance of the patient.

(11) If, at any time, in the opinion of the District Surgeon, reasonable sanitary precautions have not been taken in a caste hospital, he may give such orders, and may incur such expenditure recoverable from the committee responsible, as he may think absolutely necessary; provided he furnish a certificate that he considered the amount expended essential for protection of the public interests. If the committee so elect, before discharging the bill, they may obtain the opinion of the Sanitary Commissioner as to the necessity for the action taken.

(12) All caste hospitals should be open to the inspection of the Sanitary Commissioner, who should give such advice on sanitary matters to the committee responsible, the District Surgeon, the Municipality, or the Plague Commissioner, as he may consider the nature of the circumstances demands.

(13) Caste hospitals in which committees elect to use European methods of treatment as a matter of routine, and Government medical staffs are maintained, shall be subject to inspection by the Surgeon-General, who may advise the committee on any matter affecting medical treatment, feeding, attendance, or comfort of the patients.

(14) Relatives of patients should be encouraged to assist in nursing persons for whom they are responsible. For this purpose, as shown in the annexed plans, special dwellings should be provided for the hospital compound. The number of relatives that may thus be accommodated should not exceed two per patient; discretion on this point will rest with the District Surgeon, charge, subject to revision by the District Surgeon.

(15) Patients and relatives must regard themselves as subject to the following general rules for segregation:—

(a) Patients will not be allowed to leave the hospital precincts without receiving a certificate of discharge signed or countersigned, as he may desire (having regard to the status of the Medical officer in immediate charge), by the District Surgeon.

(b) Relatives of patients who have undertaken nursing shall not finally leave the hospital without the permission of the District Surgeon in writing, and until arrangements have been made by him to maintain them under observation either in their own houses, or in segregation camps. Temporary leave of absence may be given at any time if the District Surgeon is of opinion that the persons are of a class that may be trusted to keep their promise to return, provided disinfection of the body and of the clothing be previously conducted to the satisfaction of the District Surgeon.

(c) Superior nursing and medical staffs will not be subjected to segregation, provided such measures be taken for disinfection of their bodies and clothing as may satisfy the District Surgeon.

(d) Visitors to patients who have not handled the patient will be permitted to leave the hospital after disinfection with perchloride solution of their feet if bare, or of their boots if these be used. Menial servants may be allowed temporary leave of absence under the same rule as affects relatives of patients.

(e) Medical, nursing and menial staffs shall wear shoes and "putties," or other efficient protection, for their feet during hours of duty.

GENERAL SANITARY PRECAUTIONS.

(16) In each ward, solutions of lysol and of perchloride of mercury coloured with aniline blue should be kept in suitable bowls or basins for disinfection of the hands of the attendants.

(17) Each patient should be provided with a suitable impervious spittoon, such as tarred "mullays," containing coloured solutions of perchloride of mercury.

(18) Immediately outside of each ward should be kept a tub containing a coloured solution of the perchloride of mercury (1—1,000). Into this, all bedding and clothing, which it is not desired to destroy by fire, should be placed previous to sending them for final disinfection and washing.

(19) Clothing and bedding, which it is intended the hospital dhoby should wash, should, on removal from the tubs, be again plunged into clean perchloride of mercury solution (1—1,000) for an hour. They should then be boiled for an hour previous to final washing. All rags and sweepings should be carefully burnt. Collection and subsequent burning of the latter may be facilitated by using carbolized sawdust.

(20) Faecal matter both in the latrines and in bedpans should be received on disinfectants, and should be deposited in a special closed receptacle. Kerosine iron drums with close-fitting lids will be found sufficiently convenient.

(21) In hospitals of and above twenty beds, Field Silchar incinerators will offer convenient facilities for destruction of all infected matter, including faeces. Where destruction of faecal matter cannot be thus effected, committees should arrange for a special form of conservancy cart, which could receive the air-tight drums abovementioned containing faeces from one or more hospitals. The contents of each could be disposed of at points specially indicated by the municipality.

NOTES AND SPECIFICATION TO ACCOMPANY STANDARD DESIGN FOR A CASTE PLAGUE HOSPITAL. (PLAN No. II.)

GENERAL.

Basement Walls.—These, wherever shown, are not intended to support the superstructure. They are merely for retaining the earth filling in the basement and are therefore only 9" in thickness. The basement walls should be built after the posts and the framework of the roof have been placed in position.

The basement walls may be constructed of materials described below, the choice depending on the funds available:—

- (1) Brickwork in chunam, plastered over with cement, or
- (2) Brickwork in clay, plastered over with cement, or
- (3) Brickwork in chunam, pointed, or
- (4) Brickwork in clay, pointed with chunam. The basement walls shall be 9" in thickness raised 9" above ground and with a foundation of 9" below ground.

2. *Flooring.*—The concrete floor shall be formed of 4" of concrete plastered over with Portland cement. The concrete shall be composed of 4 parts of broken bricks (1" gauge), 2 parts of sand and 1 part of slaked chunam. The cement plastering shall be laid in a single coat of $\frac{1}{2}$ " thickness, and shall consist of 1 of cement and 2 of sand. If sufficient funds be available, concrete cement plaster should be employed as shown on the plans; if not, gravel may be substituted, except in latrines, bath-rooms, disinfecting platform and mortuary. The gravel floor shall consist of 4" of gravel rammed down to as smooth a surface as possible.

3. *Posts and Bressummer.*—These may be either of casuarina or any other approved wood. The posts shall be fixed at least 2' deep in the ground. A greater depth may be allowed if, by nature of the soil, the contractor considers it necessary. The posts shall be well-tarred before being fixed in the ground, and the tarring shall be carried to a height of 2' above floor level.

The position of the posts are clearly indicated on the plan.

4. *Walling.*—The walling as well as doors and windows will consist of double bamboo mats framed with bamboo reapers on bamboo runners, securely fixed to the posts. The walling shall be carried to within $1\frac{1}{2}$ ' of the bressummers, the space of $1\frac{1}{2}$ ' at the top being left entirely open.

5. *Doors and Windows.*—The doors and windows shall all open on the outside. The windows shall be hinged on the top and bamboo struts shall be provided to keep them open. The struts shall be secured to the walling by a sufficiently long rope. The hinges of the doors and windows shall be of strong coir rope. All windows will be 3' x 2', the longer dimension being placed horizontally.

The doors of the wards, hospital assistants' quarters, nurses' quarters and the mortuary will be $3' \times 6\frac{1}{2}'$. All other doors will be $3' \times 6'$.

6. *Roofing*.—The manner of trussing the various roofs is shown on the plan. But the contractor will be allowed to modify the arrangement with the consent of the supervising officer according to circumstances. The roofing will consist of single bamboo matting and over that paddy straw or hill grass supported by, and firmly secured to, bamboo rafters and reapers. In thatching the material employed should so overlap and be of a thickness that will render the roof watertight.

The roof shall have a slope of 2 to 1, or in other words, the rise of the roof shall be equal to half the span. The verandah roof shall have the same slope as the main roof.

7. *Wards*.—The wards are two in number—one for males and one for females. The male ward measures (available space) $120' \times 16'$, and the female ward $96' \times 16'$. They are intended to accommodate 10 and 8 patients, respectively, with a wall space of $12'$ and a superficial area of $12' \times 16' = 192$ square feet for each bed. The number of square feet allowed over the standard of 144 square feet is used to allow additional space for relatives and nursing staff, &c. The wards have a verandah $5'$ wide running all along on one side. The communication between the wards and the verandahs will be by as many doors, each $3' \times 6\frac{1}{2}'$, as there are beds in the ward. So as to secure the advantages of the protection afforded by the verandah, the beds of the patients should be placed on this side at a distance of $2'$ from the wall. On the opposite side of the ward, there will be two windows $3' \times 2'$, one on each side of the bed. There will thus be two windows between each two beds. The doors and windows are so arranged, because of the necessity that may arise for cutting off any bed or beds from the others. The arrangement of doors and windows shown will allow of this being done without interfering with ventilation or easy ingress and egress. The height of wards from the floor to the bressummer is $12'$.

The wards will have a basement wall all round as described in paragraph 1 *supra*. The flooring will consist of concrete plastered over with Portland cement, or if economy is essential, the floor may be formed of gravel as described before. If a concrete floor is laid it should have a fall of 1 in 100 from the verandah side to the opposite to facilitate the cleansing of the floor. Each ward will have a detached latrine and bath-room as shown on plan, and there will be a common cook room, measuring $20' \times 8'$ for the patients.

8. *Hospital Assistant's Quarters*.—This will consist of the following:—

- (1) A drug-room $10' \times 12'$ with an adjoining verandah $5'$ wide.
- (2) A living-room $12' \times 12'$ with an adjoining verandah $5'$ wide and a bath-room $6' \times 6'$ attached to the rear side.
- (3) A detached cook-room.

The main block will have a basement wall as described before and a gravelled floor. The height of the rooms will be $12'$ from the floor to the bressummer. The bath and cook rooms will be as specified elsewhere.

9. *Nurses' Quarters*.—These will consist of two adjoining rooms, each $12' \times 12'$ and $12'$ high with a bath-room $6' \times 6'$ attached to each. The rooms will have a gravelled floor with a basement wall around; pertaining to these quarters there will be a common cook-room $12' \times 6'$.

10. *Quarters for Relatives of Patients*.—These will consist of two blocks, each containing six rooms $10' \times 10'$ and $11'$ high with a verandah $5'$ wide on one side. The floor will be of gravel made into a ramp $6"$ high without any basement wall. There will be a bath-room and latrine, one each for males and females, and a common cook-room for the use of all the inmates.

11. *Servants' Quarters and Sweepers' Quarters*.—These will consist of three blocks as shown on the plan. The blocks for servants and orderlies will have three rooms each $10' \times 10'$ and $8'$ high. The block for sweepers will contain four rooms each $10' \times 8'$ and $7'$ high. The floor will be of gravel made into a ramp $6"$ above

ground without any basement wall. A latrine will be provided as shown on plan for the use of these people.

12. *Mortuary*.—This will be in two compartments each $10' \times 10'$ and $10'$ high, one for male corpses and the other for female corpses. The building will have a basement wall with concrete floor plastered over with cement. The floor will have a slope of 1 in 100 towards the side on which the cesspool is situated. Along the edge of the floor there will be a low wall $3"$ high and one brick thick. The walling will be of corrugated iron sheets to a height of about $2'$ from floor and above this the usual bamboo matting.

13. *The Disinfecting Platform*.—This will be an open platform (without any tatty walling or roof) $12' \times 10'$ with floor formed exactly the same as that for the mortuary.

14. *Cook-rooms*.—These will be of the dimensions given below:—

For patients	...	...	...	...	$20' \times 8'$ with ten fire places.
For relatives of patients	...	...	...	...	$15' \times 6'$ with seven fire places.
For Hospital Assistant	...	...	...	...	$10' \times 6'$ with two fire places.
For nurses	...	...	...	...	$12' \times 6'$ with three fire places.

All these rooms will be $8'$ high and have a plain gravelled floor without a basement wall. The fire places will be formed in the usual manner in this part of the country with earthenware *adduppos* bedded in clay and placed $2'$ from centre to centre. As a protection to the tatty walling from fire there will be a brick in clay wall $2'$ high between the fire place and the tatties as shown on the plan.

There will be a small sink in each of the cook-rooms connected with a cesspool outside. The sinks will be formed of $4"$ concrete with a curb wall $4\frac{1}{2}"$ wide and $3"$ high, the whole plastered over with cement.

15. *Bath-rooms*.—All bath-rooms, whether attached or detached from the main blocks, will be $6'$ square and $7'$ high from the floor to the bressummer. They will have a basement wall with concrete floor plastered over with Portland cement. Along the edge of the floor there will be a low wall $3"$ high and one brick thick. The floor will slope in the direction of the cesspool. The bath-rooms will have tatty walling.

16. *Latrines*.—The privy receptacles will consist of a $9"$ semi-oval channel formed of concrete *in situ* between two parallel masonry walls. The channel will be partitioned into spaces $2\frac{1}{2}'$ wide. In each space there will be placed a galvanized iron or stoneware pan across the channel with the edges of the pan resting on the walls of the channel. These pans will be shallower than the channel itself so as to allow a clear passage between the two. The walls of the channel will serve as foot rests. The solid excrement will be received in the pans and the urine will be discharged into the open channel. The channel shall have a fall in the direction of the cesspool of not less than $\frac{1}{4}"$ per every foot of its length. The building will have tatty walling and a roof as in other structures. The whole of the exposed masonry, including the channel, shall be plastered in cement as already specified.

17. *Cesspools*.—The cesspools shall measure $1\frac{1}{2}' \times 1\frac{1}{2}' \times 1\frac{1}{2}'$ inside. The floor shall be of $4"$ concrete, the walls of $9"$ thick brickwork and the whole of the interior and the top of the walls shall be plastered with cement.

Abstract of Detailed Estimate for the Construction of a Plague Hospital.

Quantity.	Description of work.	Rate.	Per	Amount.	Total.
BLOCK No. 1, MALE WARD FOR 10 BEDS.					
744 c.ft.	Earthwork	RS.	A.	P.	RS. A. P.
1,170 "	Concrete in chunam				
317 "	Brickwork in clay				
276 sqrs.	Plastering with cement, $\frac{1}{2}$ " thick				
1,743 r.ft.	Casuarina wood				
404 sqrs.	Thatched roofing with bamboo rafters and reapers and mats, &c., complete.				
30-32 "	Bamboo matting with bamboo runners and reapers including doors and windows.				
1 no.	Cesspool				
...	Contingencies				
Total					
BLOCK No. 1-A, FEMALE WARD FOR 8 BEDS.					
600 c.ft.	Earthwork				
936 "	Concrete in chunam				
263 "	Brick in clay				
22-26 sqrs.	Plastering with cement, $\frac{1}{2}$ " thick				
1,743 r.ft.	Casuarina wood				
404 sqrs.	Thatched roofing with bamboo rafters and reapers and mats, &c., complete.				
30-32 "	Bamboo matting with bamboo runners and reapers including doors and windows.				
1 no.	Cesspool				
...	Contingencies				
Total					
BLOCK No. 2, HOSPITAL ASSISTANTS' QUARTERS.					
201 c.ft.	Earthwork				
138 "	Gravel filling				
9 "	Concrete in chunam				
107 "	Brick in clay				
1-8 sqrs.	Plastering with cement, $\frac{1}{2}$ " thick				
545 r.ft.	Casuarina wood				
8-6 sqrs.	Thatched roofing with bamboo rafters and reapers and mats, &c., complete.				
10-89 "	Bamboo matting with bamboo runners and reapers including doors and windows.				
1 no.	Cesspool				
...	Contingencies				
Total					
BLOCK No. 3, QUARTERS FOR NURSES.					
242 c.ft.	Earthwork				
14 "	Concrete in chunam				
130 "	Gravel filling				
128 "	Brick in clay				
2-075 sqrs.	Plastering with cement, $\frac{1}{2}$ " thick				
442 r.ft.	Casuarina wood				
9 sqrs.	Thatched roofing with bamboo rafters and reapers and mats, &c., complete.				
12-66 sqrs.	Bamboo matting with bamboo runners and reapers including doors, &c.				
2 nos.	Cesspools				
...	Contingencies				
Total					
Carried over					

O.

3' X

-

each two 3

that may arise

of doors and windows

ventilation or easy ingress and egress

bressummer is 12'

The

8"

one hand cement, they will have fairly thick brickwork.

Abstract of Detailed Estimate for the Construction of a Plague Hospital—cont.

Quantity.	Description of work.	Rate.	Per	Amount.	Total.
BLOCK No. 4, QUARTERS FOR RELATIVES OF PATIENTS.					
Brought forward					
938 c.ft.	Gravel filling	RS.	A.	P.	RS. A. P.
1,279 r.ft.	Casuarina wood				
35 sqrs.	Thatched roofing with bamboo rafters and reapers and mats, &c., complete.				
35-6 "	Bamboo matting with bamboo runners and reapers including doors and windows.				
...	Contingencies				
Total					
BLOCK No. 5, SERVANTS' QUARTERS.					
641 c.ft.	Gravel filling				
580 r.ft.	Casuarina wood				
12-4 sqrs.	Thatched roofing with bamboo rafters, reapers, mats, &c., complete.				
15-4 "	Bamboo matting with bamboo runners and reapers including doors and windows.				
...	Contingencies				
Total					
BLOCK No. 6, SWEEPERS' SHED.					
344 c.ft.	Gravel filling				
327 r.ft.	Casuarina wood				
7 sqrs.	Thatched roofing with bamboo rafters, reapers, mats, &c., complete.				
5-28 "	Bamboo matting with bamboo runners and reapers inclusive of doors and windows.				
...	Contingencies				
Total					
BLOCK No. 7, DISINFECTING PLATFORM.					
74 c.ft.	Earthwork				
37 "	Concrete in chunam				
58 "	Brick in chunam				
1-2 sqrs.	Plastering with cement, $\frac{1}{2}$ " thick				
...	Contingencies				
Total					
BLOCK No. 8, MORTUARY.					
130 c.ft.	Earthwork				
52 "	Concrete in chunam				
64 "	Brick in chunam				
2-2 sqrs.	Plastering with cement, $\frac{1}{2}$ " thick				
224 r.ft.	Casuarina wood				
4-2 sqrs.	Thatched roofing with bamboo rafters, reapers, mats, &c., complete.				
2-5 cwts.	Walling with corrugated iron sheets				
5-35 sqrs.	Bamboo matting with bamboo runners and reapers including doors and windows.				
...	Contingencies				
Total					
Carried over					

Abstract of Detailed Estimate for the Construction of a Plague Hospital—cont.

Quantity.	Description of work.	Rate.	Per	Amount.	Total.
BLOCK No. 9, HOSPITAL COOK-ROOM 20' X 8'.					
	Brought forward	Rs.	A.	P.	Rs. A. P.
84 c.ft.	Brick work in clay				
26 "	Brick in chunam				
94 "	Earth filling				
36 sqrs.	Cement plastering, $\frac{1}{2}$ " thick				
252 r.ft.	Casuarina wood				
4 sqrs.	Thatched roofing with bamboo rafters, reepers and mats, &c., complete.				
3.71 "	Bamboo matting with bamboo runners and reepers inclusive of doors and windows.				
...	Contingencies				
	Total				

BLOCK No. 10, COOK-ROOM 10' X 6' FOR THE HOSPITAL ASSISTANTS.

34 c.ft.	Earth filling				
44 "	Brick work in clay				
26 "	Brick in chunam				
36 sqrs.	Plastering with cement, $\frac{1}{2}$ " thick				
108 r.ft.	Casuarina wood				
1.65 "	Thatched roofing with bamboo rafters, reepers and mats, &c., complete.				
2.0 "	Bamboo matting with bamboo reepers inclusive of doors and windows.				
...	Contingencies				
	Total				

BLOCK No. 10-A, COOK-ROOM 12' X 6' FOR NURSES.

41 c.ft.	Earth filling				
50 "	Brick work in clay				
26 "	Brick in chunam				
36 sqrs.	Plastering with cement, $\frac{1}{2}$ " thick				
112 r.ft.	Casuarina wood				
2.0 sqrs.	Thatched roofing with bamboo rafters, reepers and mats, &c., complete.				
2.16 "	Bamboo matting with bamboo reepers inclusive of doors and windows.				
...	Contingencies				
	Total				

BLOCK No. 10-B, COOK-ROOM 15' X 6' FOR RELATIVES OF PATIENTS.

50 c.ft.	Earth filling				
60 "	Brick work in clay				
26 "	Brick in chunam				
36 sqrs.	Plastering with cement, $\frac{1}{2}$ " thick				
118 r.ft.	Casuarina wood				
2.4 sqrs.	Thatched roofing with bamboo rafters, reepers and mats, &c., complete.				
2.5 "	Bamboo matting with bamboo runners and reepers inclusive of doors and windows.				
...	Contingencies				
	Total				
	Carried over				

Abstract of Detailed Estimate for the Construction of a Plague Hospital—cont.

Quantity.	Description of work.	Rate.	Per	Amount.	Total.
BLOCK No. 11, BATH-ROOM.					
	Brought forward	Rs.	A.	P.	Rs. A. P.
20 c.ft.	Earthwork				
15 "	Concrete in chunam				
24 "	Brick in clay				
12 "	Brick in chunam				
81 sqrs.	Cement plastering, $\frac{1}{2}$ " thick				
95 r.ft.	Casuarina wood				
1.08 sqrs.	Thatched roofing with bamboo rafters, reepers and mats, &c., complete.				
2.00 "	Bamboo matting with bamboo reepers inclusive of doors and windows.				
1 sq.ft.	Cuddapah slab stone				
...	Contingencies				
...	Add for 3 similar bath-rooms				
	Total				
BLOCK No. 12, LATRINE.					
42 c.ft.	Earthwork				
46 "	Brick in chunam				
48 "	Concrete in chunam				
1.23 sqrs.	Plastering with cement, $\frac{1}{2}$ " thick				
102 r.ft.	Casuarina wood				
1.65 sqrs.	Thatched roofing with bamboo rafters, reepers and mats, &c., complete.				
2.3 sqrs.	Bamboo matting with bamboo reepers inclusive of doors and windows.				
...	Contingencies				
4 nos.	Latrines as per above contingencies and supervision.				
	Total				

General Abstract Estimate for the Construction of a Plague Hospital.

Block Numbers.	Description of work.	Rate.	Per	Amount.	Total.
		Rs.	A.	P.	Rs. A. P.
1	Male ward for 10 beds				
1-A	Female ward for 8 beds				
2	Hospital assistants' quarters				
3	Quarters for nurses				
4	Quarters for relatives of patients				
5	Servants' quarters				
6	Sweepers' shed				
7	Disinfecting platform				
8	Mortuary				
9	Hospital cook-room				
10	Cook-room for hospital assistant				
10-A	Cook-room for nurses				
10-B	Cook-room for relatives of patients				
11	Four bath-rooms				
12	Five latrines				
...	Contingencies and supervision				
	Total				

No. 220 A, 18TH OCTOBER 1898.

Detailed Estimate for the Construction of a Plague Hospital.

Detailed Estimate for the Construction of a Plague Hospital.						
Detail of work.	Num-ber.	Measurements in feet.			Area or contents.	Total quantity of each description of work.
		Length.	Breadth.	Depth.		
BLOCK No. 1, MALE WARD FOR 10 BEDS.						
EARTHWORK.						
Excavating for foundation walls all round	1	282				
Filling in basement	1	120	19½		159	
Total, C. ft.					585	
CONCRETE IN CHUNAM.						
Flooring	1	120	19½			744
BRICK IN CLAY.						
Walls all round	1	282		1½	1,170	C. ft. 1,170.
PLASTERING WITH CEMENT.						
Basement all round	1	285			317	C. ft. 317.
Top of floor	1	121½	21		214	
Total, Sq. ft.					2,552	
CASUARINA WOOD.						
Posts in ward	2 × 16	14½			2,766	or Sqrs. 27-66.
Do. in verandah	16	10½				
Coupled trusses	16	46			472	
Bressummers	3	121			172	
Total, Rg. ft.					736	
THATCHED ROOFING WITH BAMBOO RAFTERS, REEPERS AND MATS, &c., COMPLETE.						
Ward in front	1	122	19		1,743	1,743.
Do. in rear	1	122	14		2,318	
Total roofing, Sq. ft.					1,708	
BAMBOO MATTING WITH BAMBOO REEPERS INCLUSIVE OF DOORS AND WINDOWS.						
Wall all round	1	272		10½	4,026	or Sqrs. 40½.
Gable ends	2	16		5½	2,856	
Total matting, Sq. ft.					176	
BLOCK No. 1-A, FEMALE WARD FOR 8 BEDS.						
EARTHWORK.						
Excavating for foundation walls all round	1	234			132	
Filling in basement	1	96	19½		468	
Total, C. ft.					600	600.
CONCRETE IN CHUNAM.						
Floor	1	69	19½		936	C. ft. 936.
BRICK IN CLAY.						
Walls all round	1	234		1½	263	C. ft. 263.
PLASTERING WITH CEMENT.						
Basement all round	1	237			178	
Top of floor	1	97½	21		2,048	
Total plastering, Sq. ft.					2,226	Sqrs. 22-26.

No. 220 A, 18TH OCTOBER 1898.

Detailed Estimate for the Construction of a Plague Hospital—cont.

Detail of work.	Num-ber.	Measurements in feet.			Area or contents.	Total quantity of each description of work.
		Length.	Breadth.	Depth.		
BLOCK No. 1-A, FEMALE WARD FOR 8 BEDS—cont.						
CASUARINA WOOD.						
Posts in ward	2×13	14½			384	Rg. ft. 1,413.
Do. in verandah	13	10½			140	
Coupled trusses	13	46			598	
Bressummers	3	97			291	
Total, Rg. ft.					1,413	
THATCHED ROOFING WITH BAMBOO RAFTERS, REEPERS AND MATS, &c., COMPLETE.						
Ward in front	1	98	19		1,862	Sqrs. 32-34.
Do. in rear	1	98	14		1,372	
Total roofing, Sq. ft.					3,234	
BAMBOO MATTING WITH BAMBOO REEPERS INCLUSIVE OF DOORS AND WINDOWS.						
Ward all round	1	224		10½	2,352	Sqrs. 25-28.
Gable ends	2	16		5½	176	
Total matting, Sqr. ft.					2,528	
BLOCK No. 2, HOSPITAL ASSISTANT'S QUARTERS.						
EARTHWORK.						
Excavating for foundation walls all round	1	95½			54	C. ft. 201.
Filling in basement of main building		26½	12		118	
Verandah	1	12½	4½		20	
Bath room	1	5½	4½		9	
Total, ft.					201	
CONCRETE IN CHUNAM.						
Bath room	1	5½	4½		9	C. ft. 9.
Total, C. ft.					9	
GRAVEL FILLING.						
Flooring of main building		26½	12		118	C. ft. 138.
Verandah		12½	4½		20	
Total, C. ft.					138	
BRICK IN CLAY.						
Walls all round	1	95½		1½	107	C. ft. 107.
PLASTERING WITH CEMENT.						
Basement all round		101½			76	Sqrs. 1-8.
Top of basement	1	95½			72	
Bath room	1	6	5½		32	
Total, Sq. ft.					180	
CASUARINA WOOD.						
Posts in main building	8	14½			118	
Do. in front verandah	4	9½			39	
Do. in side do.	3	10½			32	
Do. bath room	2	8½			17	
Bressummers	2	23½			47	
Do.	2	13½			27	
Do.	1	14			14	
Do.	1	6			6	

Detailed Estimate for the Construction of a Plague Hospital—cont.

the construction of a Plague Hospital—cont.

Detail of work.	Number.	Measurements in feet.			Area or contents.	Total quantity of each description of work.
		Length.	Breadth.	Depth.		

BLOCK No. 2, HOSPITAL ASSISTANT'S QUARTERS—cont.

CASUARINA WOOD—cont.

Coupled trusses	4	40			160	
Rafters in front verandah	4	8½			34	
Do. inside verandah	3	9			27	
Do. in bath room	2	12			24	
Total, Rg. ft.					545	Rg. ft. 545.
THATCHED ROOFING WITH BAMBOO RAFTERS, REEPERS, AND MATS, &c., COMPLETE.						
Main building	2	28½	10½		599	
Bath room	1	6½	9½		62	
Verandah in front	1	13½	8		108	
Do. inside	1	14	6½		91	
Total, Sq. ft.					860	Sqrs. 86.
BAMBOO MATTING WITH BAMBOO REEPERS INCLUSIVE OF DOORS AND WINDOWS.						
Main building all round	1	68			714	
Cross wall	1	12			126	
Gables	2	12			108	
Bath room, side	1	6			33	
Do. ends	2	6			108	
Total matting, Sq. ft.					1,089	Sqrs. 1089.

BLOCK No. 3, QUARTERS FOR NURSES.

EARTHWORK.

Excavating for foundation—retaining wall all round the quarters	1	83½			47	
Retaining wall round the bath rooms	2	15			16	
Filling in basement	1	24	10½		162	
Do. bath rooms	2	4½	4½		17	
Total, C. ft.					242	C. ft. 242.
CONCRETE IN CHUNAM.						
Bath rooms, floor	2	4½	4½		14	C. ft. 14.
GRAVEL FILLING.						
Floor of Nurses' quarters	1	24	16½		130	C. ft. 130.
BRICK IN CLAY.						
Retaining wall all round	1	83½			94	
Do. in bath rooms	2	15			34	
Total, C. ft.					128	C. ft. 128.
PLASTERING WITH CEMENT.						
Basement all round	1	107½			81	
Bath rooms	2	6			72	
Top of basement	1	71½			54	
Total, Sqrs.					207	Sqrs. 207.
CASUARINA WOOD.						
Posts	6	14½			89	
Do. in verandah	3	9½			29	
Do. in bath rooms	4	8½			35	
Bressummers	3	25½			77	
Do. in bath rooms	2	6			12	
Coupled trusses	2	42			126	
Rafters	4	11			44	
Do. in verandah	3	10			30	
Total, Rg. ft.					442	Rg. ft. 442.

Detailed Estimate for the Construction of a Plague Hospital—cont.

Detail of work.	Number.	Measurements in feet.			Area or contents.	Total quantity of each description of work.
		Length.	Breadth.	Depth.		
BLOCK No. 3, QUARTERS FOR NURSES—cont.						
THATCHED ROOFING WITH BAMBOO RAFTERS, REEPERS AND MATS, &c., COMPLETE.						
Roofing in front	1	26	19	...	494	
Do. in rear	1	26	11	...	286	
Do. over bath-rooms	2	7	8½	...	119	
Total, Sq. ft.	...	...	...	...	899	or Sqrs. 9.
BAMBOO MATTING WITH BAMBOO REEPERS INCLUSIVE OF DOORS AND WINDOWS.						
Main building, all round	1	72	...	10½	756	
Cross wall	1	12	...	10½	126	
Bath-rooms, side	2	6	...	6	72	
Do. ends	4	6	...	8½	204	
Gable ends	2	12	...	4½	108	
Total, Sq. ft.	...	...	...	...	1,266½	or Sqrs. 1266.
BLOCK No. 4, QUARTERS FOR RELATIVES OF PATIENTS.						
GRAVEL-FILLING.						
Floors of quarters	2	60½	15½	½	938	C. ft. 938.
CASUARINA WOOD.						
Posts, large	2	14	13½	...	378	
Do. small	2	7	7½	...	105	
Coupled trusses	2	7	44	...	616	
Bressummers	3½	60	...	...	180	
Total, Rg. ft.	...	...	...	...	1,279	Rg. ft. 1,279.
THATCHED ROOFING WITH BAMBOO RAFTERS, REEPERS AND MATS, &c., COMPLETE.						
Roofing in front	2	60	18	...	2,160	
Do. in rear	2	60	11	...	1,320	
Total, Sq. ft.	...	...	...	...	3,480	Sqrs. 35.
BAMBOO MATTING WITH BAMBOO REEPERS INCLUSIVE OF DOORS AND WINDOWS.						
Main building, all round	2	140	...	9	2,520	
Cross walls	2	5	10	...	900	
Gables	2	2	10	3½	140	
Total, Sq. ft.	...	...	...	...	3,560	Sqrs. 35.6.
BLOCK No. 5, SERVANTS' QUARTERS.						
GRAVEL-FILLING.						
Floors of quarters	2	30½	10½	...	641	
CASUARINA WOOD.						
Posts	2	8	10½	...	168	
Coupled trusses	2	4	36	...	288	
Bressummers	2	2	31	...	124	
Total, Rg. ft.	...	...	...	...	580	
THATCHED ROOFING WITH BAMBOO RAFTERS, REEPERS AND MATS, &c., COMPLETE.						
Roofing, front and rear	2	2	31	10	1,240	or Sqrs. 12.4.

No. 220 A., 18TH OCTOBER 1898.

Detailed Estimate for the Construction of a Plague Hospital—cont.

Detailed Estimate for the Construction of a Plague Hospital—cont.

Detail of work.	Number.	Measurements in feet.			Area or contents.	Total quantity of each description of work.
		Length.	Breadth.	Depth.		

BLOCK No. 5, SERVANTS' QUARTERS—cont.

BAMBOO MATTING WITH BAMBOO REEPEES INCLUSIVE OF DOORS AND WINDOWS.

Building, all round	2	80			1,120	
Cross walls	2 × 2	10			280	
Gables at ends	2 × 2	10			140	
Total, Sq. ft.					1,540	Sqrs. 15.4.

BLOCK No. 6, SWEEPERS' SHED.

GRAVEL-FILLING.

Floor of shed	1	40½	8½		344	C. ft. 344.
---------------	---	-----	----	--	-----	-------------

CASUARINA WOOD.

Posts	10	10½			95	
Bressummers	2	41			82	
Coupled trusses	5	30			150	
Total, Rg. ft.					327	Rg. ft. 327.

THATCHED ROOFING WITH BAMBOO RAFTERS, REEPEES AND MATS, &c., COMPLETE.

Roofing in front and rear	2	41	8½		697	Sqrs. 7.
---------------------------	---	----	----	--	-----	----------

BAMBOO MATTING WITH BAMBOO REEPEES INCLUSIVE OF DOORS AND WINDOWS.

Walling, all round	1	96			624	
Do. cross	3	8			156	
Do. gables	2	8			48	
Total, Sq. ft.					828	Sqrs. 8.28.

BLOCK No. 7, DISINFECTING PLATFORM.

EARTHWORK.

Excavating for foundation retaining wall, all round	1	41			23	
Filling in basement	1	10½			37	
Cess-pool	1	3			14	
Total, C. ft.					74	C. ft. 74.

CONCRETE IN CHUNAM.

Floor of room	1	10½			30	
Cess-pool	1	3			7	
Total, C. ft.					37	C. ft. 37.

BRICK IN CHUNAM.

Retaining wall, all round	1	41			46	
Cess-pool	1	6			9	
Do.	1	3			3	
Total, C. ft.					58	C. ft. 58.

PLASTERING WITH CEMENT.

Basement, all round	1	48½			36	
Inside of cess-pool	1	4½			9	
Top and floor of cess-pool	1	3			7	
Floor of room	1	12			120	
Total, Sq. ft.					172	Sqrs. 17.

No. 220 A., 18TH OCTOBER 1898.

Detailed Estimate for the Construction of a Plague Hospital—cont.

Continuation of a Plague Hospital—cont.

Detail of work.	Number.	Measurements in feet.			Area or contents.	Total quantity of each description of work.
		Length.	Breadth.	Depth.		

BLOCK No. 8, MORTUARY.

EARTHWORK.

Excavating for foundations retaining wall, all round	1	57	$\frac{1}{2}$	$\frac{3}{8}$	32	
Filling in basement	1	18½	8½	$\frac{3}{8}$	98	
Total, C. ft.	...	...	...	...	130	C. ft. 130.

CONCRETE IN CHUNAM.

Floor of rooms	1	18½	8½	$\frac{1}{2}$	52	C. ft. 52.
----------------	---	-----	----	---------------	----	------------

BRICK IN CHUNAM.

Retaining wall	1	57	$\frac{1}{2}$	1½	64	C. ft. 64.
----------------	---	----	---------------	----	----	------------

PLASTERING WITH CEMENT.

Basement, all round	...	60	...	$\frac{1}{2}$	45	
Floor	1	20	10	$\frac{1}{2}$	200	
Total, Sq. ft.	...	...	...	...	245	Sqrs. 4½.

CASUARINA WOOD.

Posts	6	12½	...	...	77	
Coupled trusses	3	35	...	...	105	
Bressummers	2	21	...	...	42	
Total, Rg. ft.	...	...	...	...	224	Rg. ft. 224½

THATCHED ROOFING WITH BAMBOO RAFTERS, REEPEES AND MATS, &c., COMPLETE.

Roofing, both sides	...	21	10½	...	441	Sqrs. 4½.
---------------------	-----	----	-----	-----	-----	-----------

WALLING WITH CORRUGATED IRON SHEET.

Walls exclusive of doors	...	54	...	2½	135	
Cross wall	...	10	...	2½	25	
Total, Sq. ft.	...	...	...	...	160	lb. × 1.56 = 25 Cwt.

BAMBOO MATTING WITH BAMBOO REEPEES INCLUSIVE OF DOORS AND WINDOWS.

Walls, all round	1	60	...	6½	390	
Cross wall	1	10	...	6½	65	
Gables	2	10	...	4	80	
Total, Sq. ft.	...	...	...	...	535	Sqrs. 5.35.

BLOCK No. 9, HOSPITAL COOK ROOM, 20' × 84'.

BRICKWORK IN CLAY.

Wall in sides and rear of fire-place	1	27½	$\frac{1}{2}$	3	62	
Fire-place	1	20	1½	$\frac{1}{4}$	22	
Total, C. ft.	...	...	...	...	84	C. ft. 84.

BRICKWORK IN CHUNAM.

Cess pool	1	3	3	3	27	
Sunk	1	3	2½	$\frac{1}{2}$	4	
Total, C. ft.	...	...	...	...	31	
Deduct races	...	1½	1½	2	5	
Total less deductions, C. ft.	...	...	...	...	26	C. ft. 26.

Detailed Estimate for the Construction of a Plague Hospital—cont.

Detail of work.		Num-ber.	Measurements in feet.			Area or Contents.	Total quantity of each description of work.
			Length.	Breadth.	Depth.		
BLOCK No. 9, HOSPITAL COOK ROOM, 20' X 8'—cont.							
EARTH-FILLING.							
Floor	...	1	22	8½		94	C. ft. 94.
PLASTERING WITH CEMENT, ½" thick							
Cesspool, top and floor	...	1	3	3		9	
Sides, inside	...	1	6	0	2	12	
Do. outside	...	1	9	0		7	
Sunk	...	1	3	2½		8	
Total, Sq. ft.	...					36	Sqrs. 36.
CASUARINA WOOD.							
Posts	...	8	10½			84	
Bressummers	...	2	22			44	
Coupled trusses	...	4	31			124	
Total, Rg. ft.	...					252	Rg. ft. 252.
THATCHED ROOFING WITH BAMBOO RAFTERS, REEPERS AND MATS, &c., COMPLETE.							
Roof, both sides	...	2	22	9		396	Sqrs. 4.
BAMBOO MATTING WITH BAMBOO REEPERS INCLUSIVE OF DOORS AND WINDOWS.							
Wall in front and sides	...	1	31½		6½	205	
Do. in rear sides	...	1	27½		4	110	
Gables	...	2	8		3½	56	
Total, Sq. ft.	...					371	Sqrs. 371.
BLOCK No. 10, COOK ROOM, 10' X 6' FOR THE HOSPITAL ASSISTANT.							
EARTH-FILLING.							
Raising the floor	...	1	10½	6½		34	C. ft. 34.
BRICK WORK IN CLAY.							
Wall in rear and sides of fire-place	...	1	15	¾	3	34	
Fire-place	...	1	8½	1½		10	
Total, C. ft.	...					44	C. ft. 44.
BRICK IN CHUNAM.							
Cess-pool	...	1	3	3	3	27	
Sunk	...	1	3	2½	¾	4	
Total, C. ft.	...					31	
Deduct recess	...	1	1½	1½	2	5	
Total less deductions, C. ft.	...					26	C. ft. 2
PLASTERING WITH CEMENT, ½" thick.							
Cess-pool, top and floor	...	1	3	3		9	
Sides, inside	...	1	6		2	12	
Do. outside	...	1	9			7	
Sunk	...	1	3	2½		8	
Total, Sq. ft.	...					36	Sqrs. 36.

Detailed Estimate for the Construction of a Plague Hospital—cont.

Estimate made for the Construction of a Plague Hospital—cont.

Detail of work.	Number.	Measurements in feet.			Area or contents.	Total quantity of each description of work.
		Length.	Breadth.	Depth.		
BLOCK No. 10, COOK ROOM, 10'x6', FOR THE HOSPITAL ASSISTANT—cont:						
CASUARINA WOOD.						
Posts	4	10½			42	Rg. ft. 108
Bressummers	2	11			22	
Coupled trusses	2	22			44	
Total, Rg. ft.					108	
THATCHED ROOFING WITH BAMBOO RAFTERS, REEPERS AND MATS, &c., COMPLETE.						
Roof, both sides	2	11	7½		165	Sqrs. 165
BAMBOO MATTING WITH BAMBOO REEPERS, INCLUSIVE OF DOORS AND WINDOWS.						
Wall in front and sides	1	16		6½	104	Sqrs. 2
Do. in rear do.	1	16		3½	56	
Gables	2	6		3	36	
Total, Sq. ft.					196	
BLOCK No. 10-A, COOK ROOM, 12'x6', FOR NURSES.						
EARTH FILLING.						
Raising the floor	1	12½	6½	¾	41	C. ft. 41
BRICK WORK IN CLAY.						
Wall in rear and sides of fire-places	1	17	¾	3	38	C. ft. 50
Fire-place	1	10½	1½	¾	12	
Total, C. ft.					50	
BRICK IN CHUNAM.						
Cesspool	1	3	3	3	27	C. ft. 26
Sink	1	3	2½	¾	4	
Total					31	
Deduct recess	1	1½	1½	2		
Total less deduction, C. ft.						
PLASTERING WITH CEMENT, ½" THICK.						
Cesspool, top and floor	1	3	3		9	Sqrs. 36
Sides, inside	1	6		2	12	
Do. outside	1	9			7	
Sink	1	3	2½	¾	8	
Total, S. ft.					36	
CASUARINA WOOD.						
Post	4	10½			42	Rg. ft. 112
Bressummers	2	13			26	
Coupled trusses	2	22			44	
Total, Rg. ft.					112	
THATCHED ROOFING WITH BAMBOO RAFTERS, REEPERS AND MATS, &c., COMPLETE.						
Roof, both sides	2	13	7½		195	or Sqrs. 20
BAMBOO MATTING WITH BAMBOO REEPERS, INCLUSIVE OF DOORS AND WINDOWS.						
Wall in front and sides	1	18		6½	117	or Sqrs. 216
Do. rear do.	1	18		3½	63	
Gables	2	6		3	36	
Total, Sq. ft.					216	

Detailed Estimate for the Construction of a Plague Hospital—cont.

Detail of work.	Num-ber.	Measurements in feet.			Area or contents.	Total quantity of each description of work.
		Length.	Breadth.	Depth.		
BLOCK No. 10-B, COOK ROOM, 15' X 6", FOR RELATIVES OF PATIENTS.						
EARTH FILLING.						
Raising the floor ...	1	15½	6½	½	50	C. ft. 50
BRICKWORK IN CLAY.						
Wall in rear and sides of fire-place	1	20	½	3	45	
Fire-place ...	1	13½	1½	½	15	
Total, C. ft. ...					60	C. ft. 60
BRICK IN CHUNAM.						
Cesspool	1	3	3	3	27	
Sink	1	3	2½	½	4	
Total ...					31	
Deduct recess	1	1½	1½	2	5	
Total less deduction, C. ft. ...					26	C. ft. 26
PLASTERING WITH CEMENT, ½" THICK.						
Cesspool, top and floor	1	3	3		9	
Sides, inside	1	6			12	
Do. outside	1	9		2	7	
Sink	1	3	2½	½	8	
Total, Sq. ft. ...					36	or Sqs. 36
CASUARINA WOOD.						
Post	4	10½			42	
Bressummers	2	16			32	
Coupled trusses	2	22			44	
Total, Rg. ft. ...					118	Rg. ft. 118
THATCHED ROOFING WITH BAMBOO RAFTERS, REEPERS AND MATS, &c., COMPLETE.						
Roof, both sides	16	7½			240	or Sqs. 24
BAMBOO MATTING WITH BAMBOO REEPERS, INCLUSIVE OF DOORS AND WINDOWS.						
Wall in front and sides	1	21		6½	187	
Do. in rear do.	1	21		3½	74	
Gables	2	6		3	36	
Total, Sq. ft. ...					247	or Sqs. 25
BLOCK No. 11, BATH-ROOM.						
EXCAVATION EARTHWORK.						
Walls, all round	1	21' 0"	0' 9"	0' 9"	12	
Filling in the basement	1	4' 6"	4' 6"	0' 4½"	8	
Total, C. ft. ...					20	C. ft. 20
CONCRETE IN CHUNAM.						
Under floor of bath-room	1	4' 6"	4' 6"	0' 4½"	8	
Do. of cesspool	1	3	3	½	7	
Total, C. ft. ...						C. ft. 15

Detailed Estimate for the Construction of a Plague Hospital—cont.

Detail of work.	Num-ber.	Measurement in feet.			Area or contents.	Total quantity of each description of work.
		Length.	Breadth.	Depth.		
BLOCK No. 11, BATH-ROOM—cont.						
BRICK IN CLAY.						
Walls, all round	1	21' 0"	0' 9"	1' 6"	24	C. ft. 24.
PLASTERING WITH CEMENT, $\frac{1}{4}$ " THICK.						
Basement, all round	1	24' 0"	...	0' 9"	18	
Top of floor	1	6' 0"	6' 0"	...	36	
Top and floor	1	3	2 $\frac{1}{4}$	...	7	
Side, inside	1	6	...	2 $\frac{1}{4}$	14	
Do. outside	1	7 $\frac{1}{2}$	...	$\frac{1}{4}$	6	
Total, S. ft.	...	...	...	...	81	Sqrs. 31.
CASUARINA WOOD.						
Post at corners	4	9' 9"	...	...	39	
Bressummers, all round	1	28' 0"	...	...	28	
Hip rafters	4	7' 0"	...	...	28	
Total, Rg. ft.	...	...	...	...	95	Rg. ft. 95.
BAMBOO MAT WITH BAMBOO REEPERS INCLUSIVE OF DOORS AND WINDOWS.						
All round the room	1	28' 0"	...	7' 0"	196	Sqrs. 20.
ROOFING, THATCHED.						
Front rear and sides	4	4' 6"	6' 0"	...	108	Sqrs. 108.
Cuddapah slab stone	1	1' 0"	1' 0"	0' 2"	$\frac{1}{3}$	C. ft. 1.
BRICK IN CHUNAM.						
Wall around	1	6	$\frac{3}{4}$	2 $\frac{1}{4}$	10	
Wall side	1	3	$\frac{3}{4}$	$\frac{1}{4}$	2	
Total, C. ft.	...	...	...	...	12	C. ft. 12.
BLOCK No. 12, LATRINE.						
EARTHWORK.						
Excavating for foundation wall around	1	30	$\frac{3}{4}$	$\frac{3}{4}$	17	
For concrete foundation and retaining wall	1	6 $\frac{3}{4}$	2 $\frac{1}{4}$	$\frac{3}{4}$	11	
Cesspool	1	3	3	1 $\frac{1}{2}$	14	
Total, C. ft.	...	...	...	...	42	C. ft. 42.
BRICK IN CHUNAM.						
Retaining wall, all round	1	30	$\frac{3}{4}$	1 $\frac{1}{2}$	34	
Cesspool	...	6	$\frac{3}{4}$	2 $\frac{1}{4}$	10	
Do.	...	3	$\frac{3}{4}$	$\frac{1}{4}$	2	
Total, C. ft.	...	...	...	...	46	C. ft. 46.
CONCRETE IN CHUNAM.						
Between retaining wall	1	9	4 $\frac{1}{2}$	$\frac{3}{4}$	30	
Under seats of drain	1	6 $\frac{3}{4}$	2 $\frac{1}{4}$	$\frac{3}{4}$	11	
Under cesspool	1	3	3	$\frac{3}{4}$	7	
Total, C. ft.	...	...	...	...	48	C. ft. 48.

Detailed Estimate for the Construction of a Plague Hospital—cont.

Detail of work.	Num-ber.	Measurement in feet.			Area or contents.	Total quantity of each description of work.
		Length.	Breadth.	Depth.		
BLOCK NO. 12, LATRINE—cont.						
PLASTERING WITH CEMENT, $\frac{1}{2}$ " THICK.						
Basement, all round	1	33			25	
Flooring	1	104	6		63	
Drain	1	7 $\frac{1}{2}$	1		8	
Cesspool, top and floor	1	3	2 $\frac{1}{2}$		7	
Do. inside	1	6		2 $\frac{1}{2}$	14	
Do. outside	1	7 $\frac{1}{2}$			6	
Total, Sq. ft.					123	Sqrs. 1.23.
CASUARINA WOOD.						
Posts	4	9 $\frac{1}{2}$			38	
Bressummers	2	11			22	
Coupled trusses	2	21			42	
Total, Rg. ft.					102	Rg. ft. 102.
THATCHED ROOFING WITH BAMBOO RAFTERS, REEPERS AND MATS, &c., COMPLETE.						
Roofing both sides	2	11	7 $\frac{1}{2}$		165	Sqrs. 1.65.
BAMBOO MATTING WITH BAMBOO REEPERS INCLUSIVE OF DOORS AND WINDOWS.						
Wall, all round	1	30		6 $\frac{1}{2}$	203	
Screens	3	3		4	36	
Total, Sq. ft.					239	Sqrs. 2.39.

M. S. Madan
5/11/98
for Plague Commissioner.

To the President, Municipal Commission, Madras,

with 30 spare copies of the hints and plans 2 and 3,

in supersession of the copies already sent.

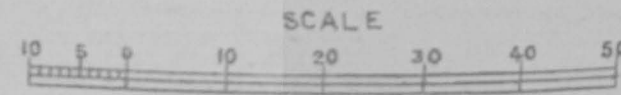
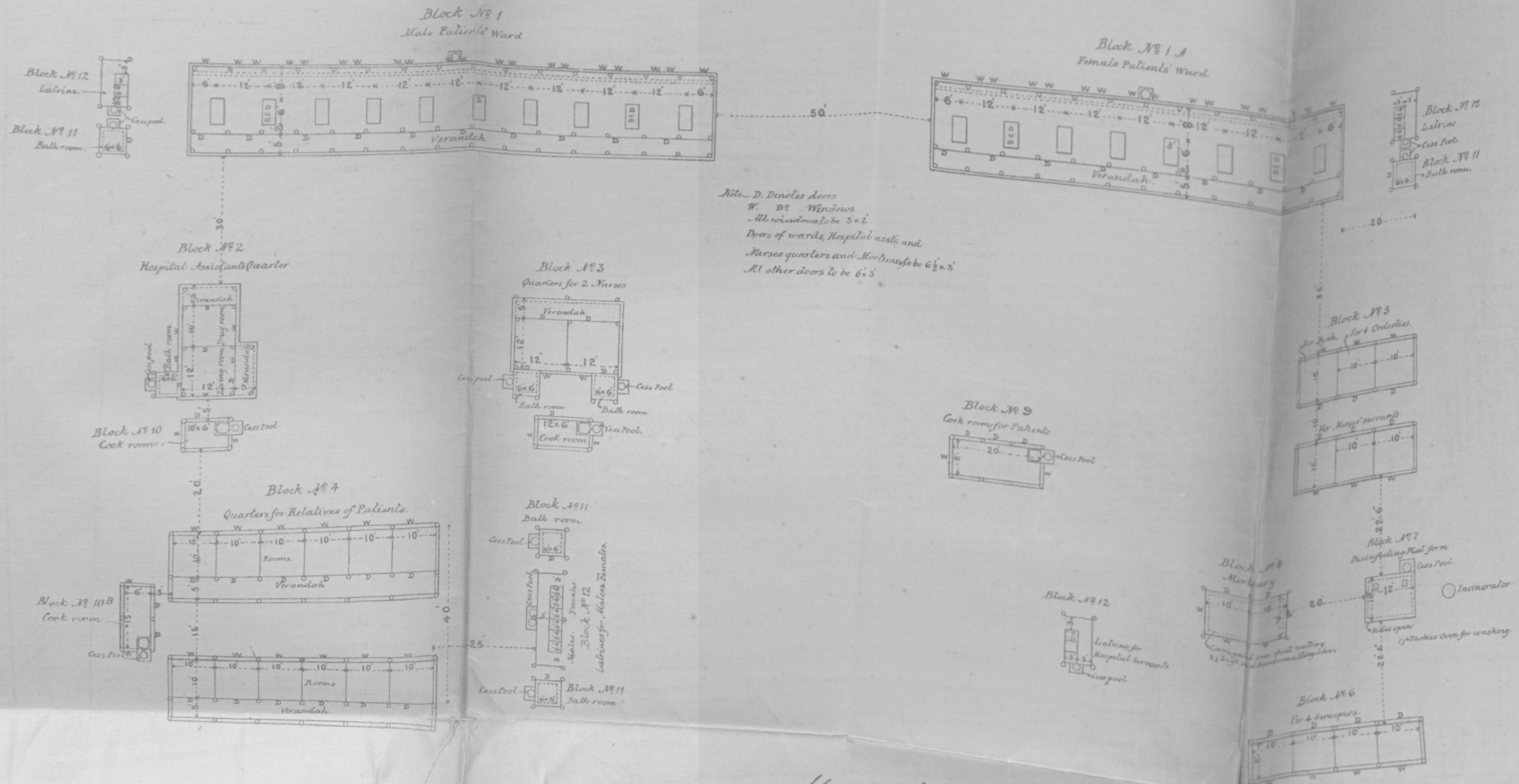
Copy to all Collectors except Madras (A—K). *with 3 copies of each of plans.*

" the Sanitary Commissioner.

" the Surgeon-General.

" the Secretary to Government, Local and Municipal Department. *with 1 copy each of plans.*
26 spare copies.

PLAN FOR PLAGUE HOSPITAL



Note: D. Denotes Doors
W. D. Windows
All windows to be 3x2
Doors of wards, Hospital assist. and
Nurses quarters and Mortuary to be 6 1/2 x 5
All other doors to be 6x5

Office of Sanitary Engineer
Ponnamallee Road, Madras
October 1898

Urmurug. Srinivas
Assoc. Mem. Inst. C. E.
Assistant Sanitary Engineer
to Govt

M. B. D. P. H.
Sanitary Commissioner
for Madras

S.O. (Reg. No. 4703
1898) Copies 100

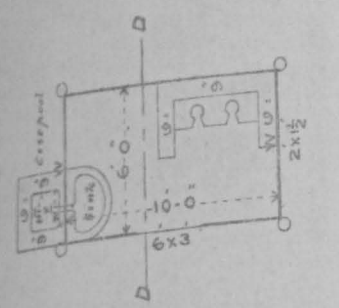
S.O. (Reg. No. 4709
1898) Copies 100

Sanitary Engineer
TO GOVT.
M.B.D.P.H.
Sanitary Commissioner
for Madras

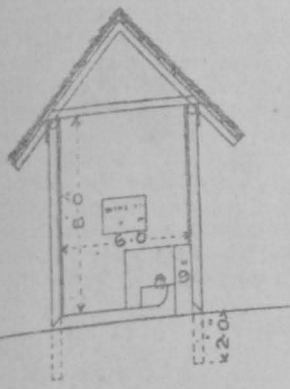
47 NOV 24

PLAN NO. 3

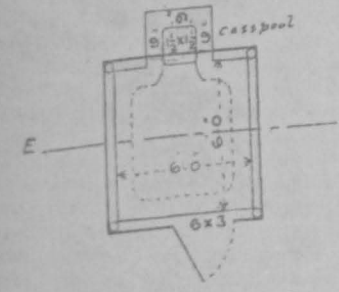
BLOCK NO 10 HOSPITAL ASSISTANTS' COOK ROOM
PLAN



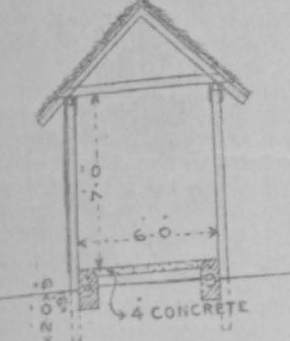
SECTION ON D-D



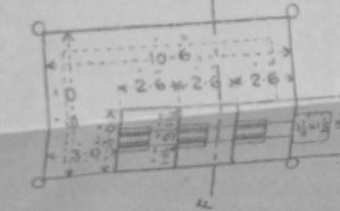
BLOCK NO 11 BATH ROOM FOR PATIENTS
PLAN



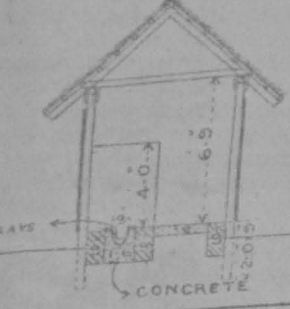
SECTION ON E-E



BLOCK NO 12 LATRINE FOR HOSPITAL SERVANTS
PLAN

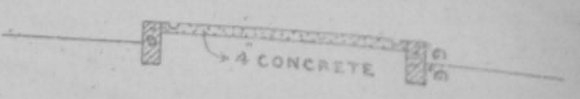


SECTION ON F-F

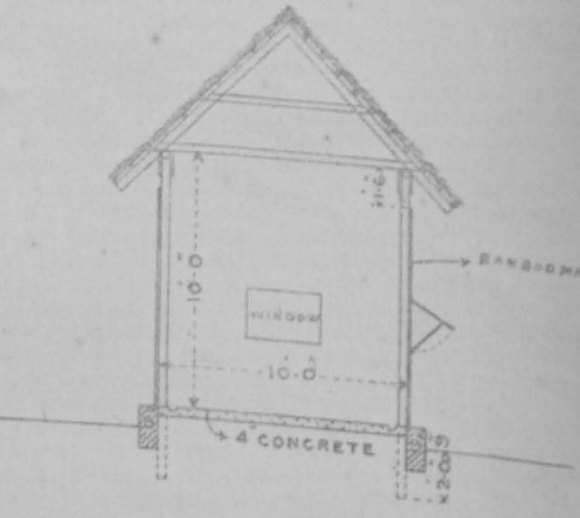


W. G. K.
ASSOC. M. INST. C.E.
ASST. SANITARY ENGINEER
TO GOVT.
M.B.D.P.H.
SANITARY COMMISSIONER
FOR MADRAS

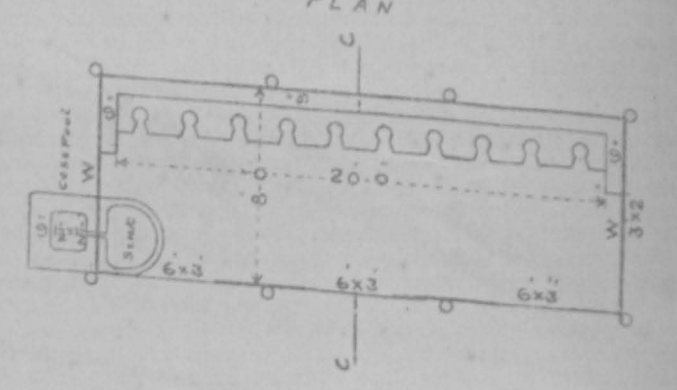
BLOCK NO 7 DISINFECTING PLATFORM
CROSS SECTION



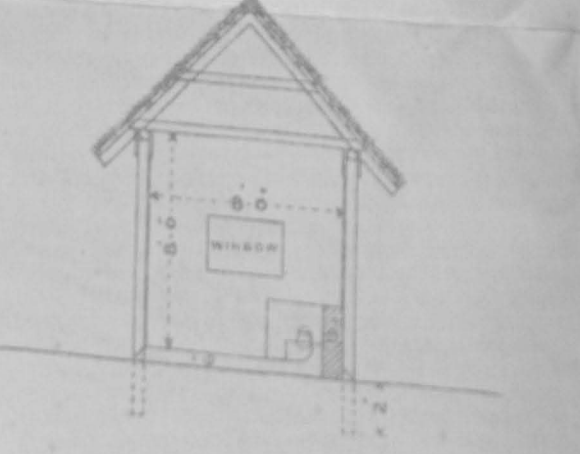
BLOCK NO 8 MORTUARY
CROSS SECTION



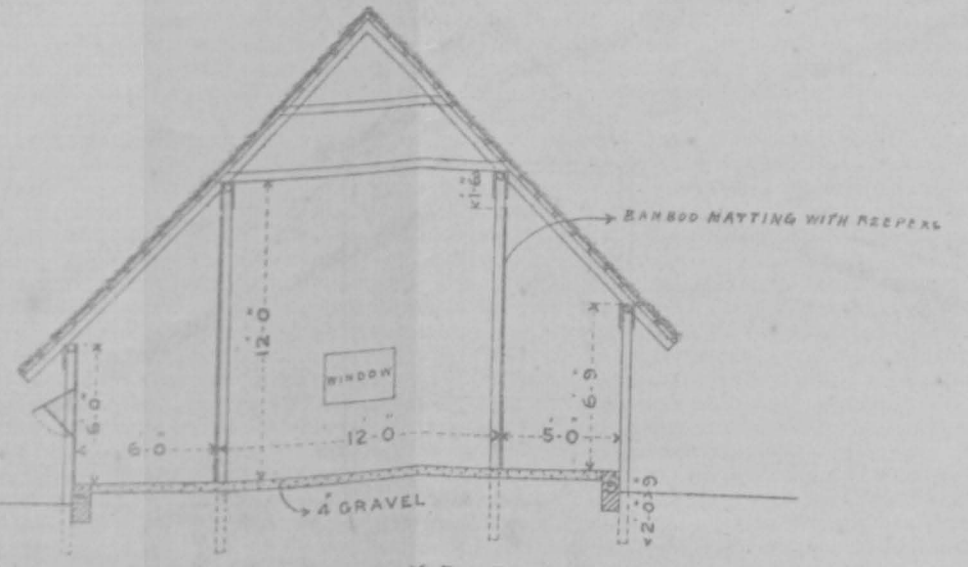
BLOCK NO 9 HOSPITAL COOK ROOM
PLAN



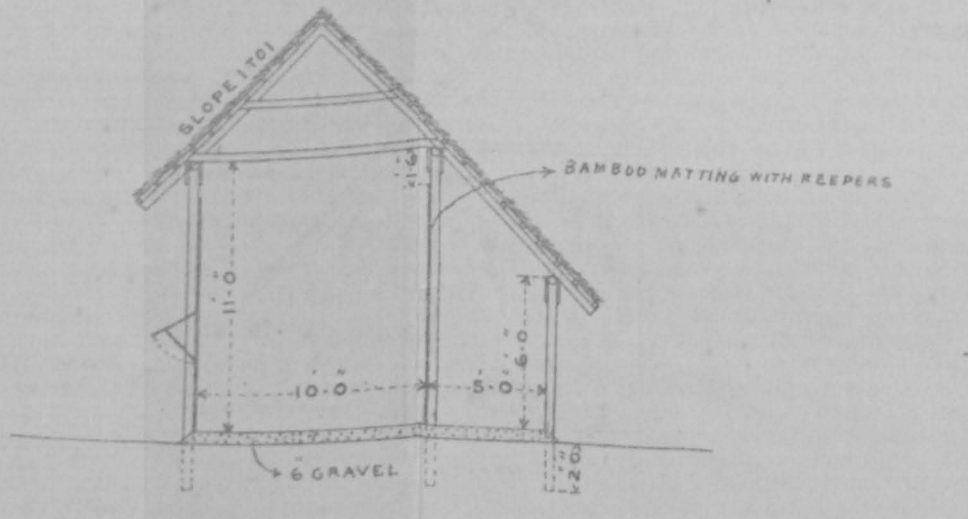
SECTION ON C-C



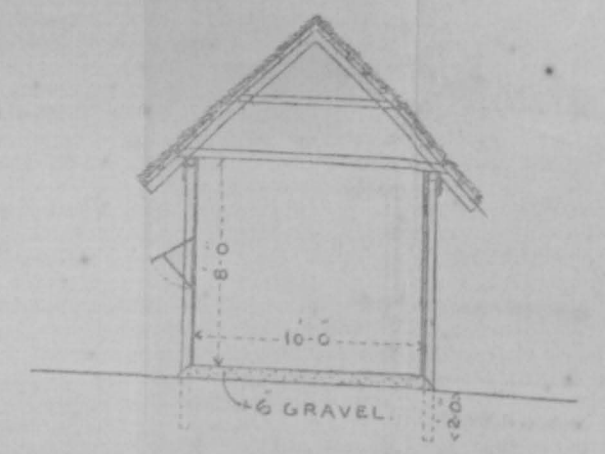
BLOCK NO 3 QUARTERS FOR NURSES
CROSS SECTION



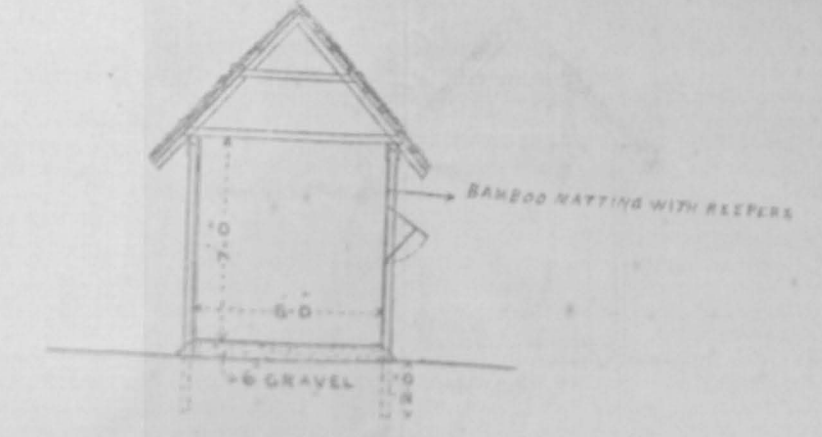
BLOCK NO 4 QUARTERS FOR FAMILIES OF PATIENTS
CROSS SECTION



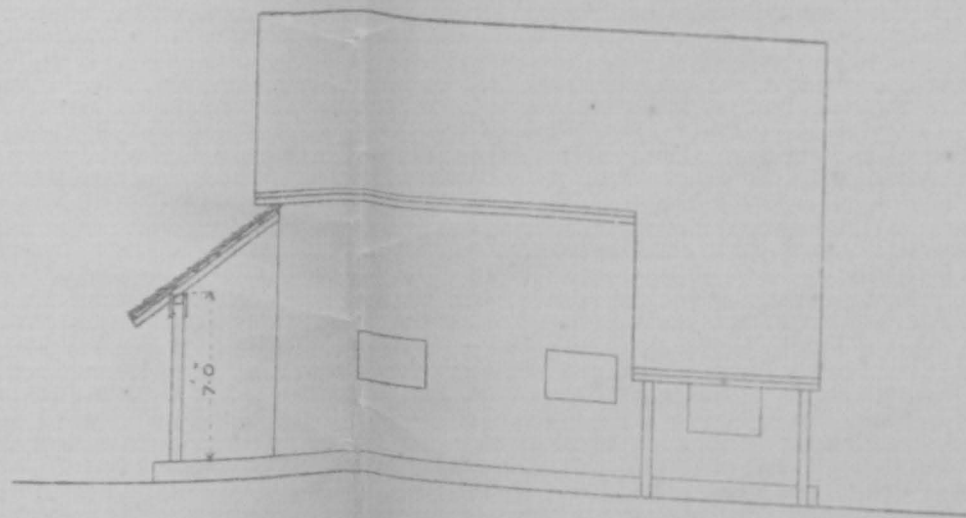
BLOCK NO 5 SERVANTS' QUARTERS
CROSS SECTION



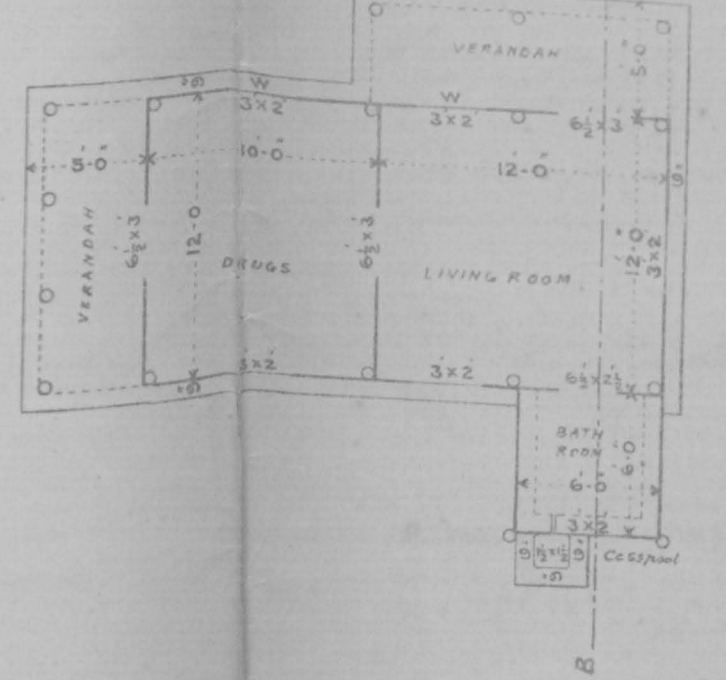
BLOCK NO 6 SWEEPERS' QUARTERS
CROSS SECTION



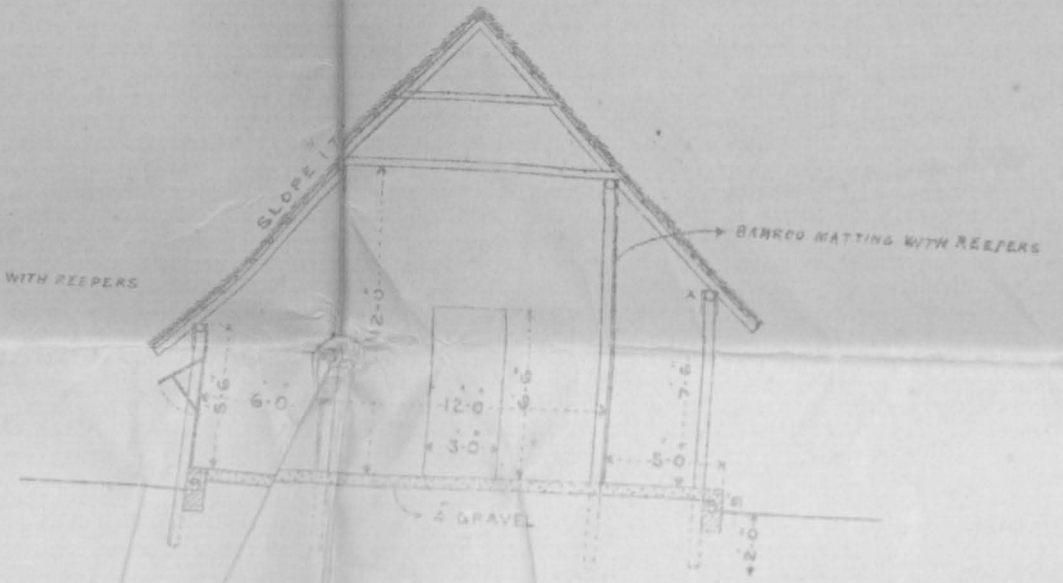
BLOCK NO 2 HOSPITAL ASSISTANTS' QUARTERS
ELEVATION



PLAN



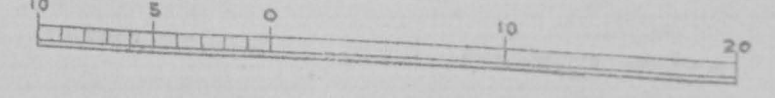
SECTION ON B-B



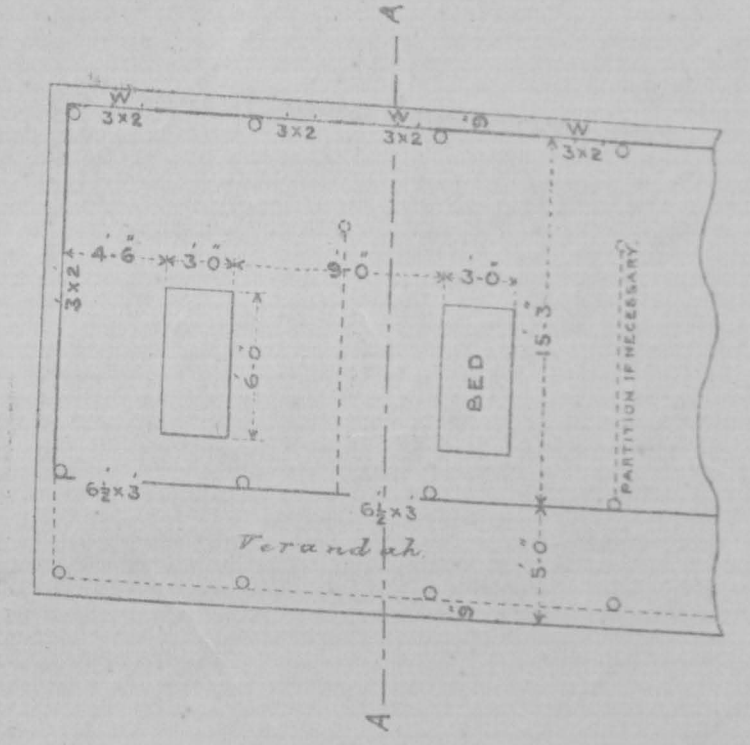
PLAN FOR PLAGUE HOSPITAL

NOTE - FOR BLOCK NO 2 VIDE PLAN NO 2

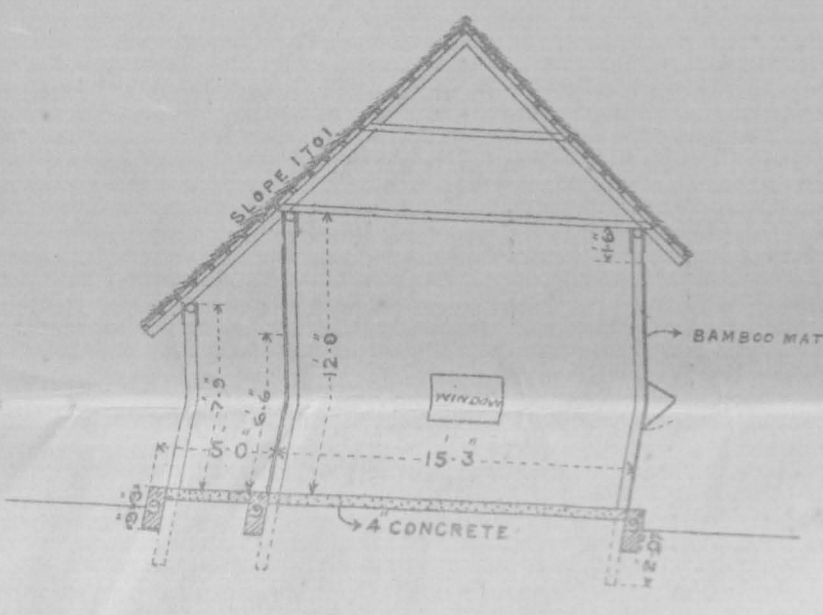
SCALE



BLOCKS NO 1 & 1A PATIENTS' WARDS
PLAN



SECTION ON A-A



OFFICE OF SANITARY ENGINEER
POONAMALLEE ROAD, MADRAS
OCTOBER 1898

O. of Reg. No. 4709
199 Copies 100

C No 2564 P

Proceedings of the Plague Commissioner,
MADRAS — 1898.

Recd. 25- } Nov } 1898.
Regd. 25- }

Enclosures

Spare copies 6 of cur

Proceedings, No. 689, 16th November 1898.

Cur.

NOVEMBER.

Plague Hospitals.

Ordering certain amendments in Proceedings, No. 220-A., dated 18th October 1898,
regarding —.

1 = Copy abstract only.
Q = Copy heading only.

No. 689, 16TH NOVEMBER 1898.

PROCEEDINGS OF THE PLAGUE COMMISSIONER.

PROCEEDINGS—No. 689, dated 16th November 1898.

When Proceedings of the Plague Commissioner, No. 220 A., dated 18th October 1898, were passed, the plague hospitals in Madras were under the District Surgeons and there was no special Medical officer in charge of the administration of plague hospitals in the city. Dr. Reeves has since been appointed to this charge and each hospital has been placed under a special Medical officer.

It is, therefore, necessary to amend the above proceedings.

The following amendments are ordered and the officers are requested to make the following alterations in the copies of the proceedings already issued:—

In all paragraphs of the proceedings for the words "Sanitary Commissioner" read "Special Medical officer appointed by Government to be in charge of plague hospitals in the City of Madras".

In list B, paragraph 10, for "District Surgeon" read "the Special Medical officer appointed by Government for the City." Omit the words "in his district." In paragraph 11 for "District Surgeon" read "Special officer appointed by Government to be in charge of plague hospitals in the City of Madras." For "Sanitary Commissioner" read "Surgeon-General."

In paragraph 12 for "District Surgeon" read "Special officer appointed by Government to be in charge of plague hospitals in the City of Madras." Before the words "Sanitary Commissioner" insert the words "Surgeon-General," for "he" read "they."

Paragraph 13 should be omitted.

Paragraphs 14 and 15 for "District Surgeon" read "Special officer appointed by Government to be in charge of plague hospitals in the City of Madras."

Discontinued
for Plague Commissioner.

To the President, Municipal Commission, Madras,
with 30 spare copies.

Copy to all Collectors except Madras (A—K).

" the Sanitary Commissioner.

" the Surgeon-General.

" the Secretary to Government, Local and
Municipal Department.

Exd. P. Seetharam.

When given for copying
When copied
When examined
When signed

189

READ AGAIN G.O., No. , DATED
189 .

CURRENT No.

ENCLOSURES TO C. No.

ORDER OF GOVERNMENT

.. .. A A A A A A A

LETTER OF GOVERNMENT.

STATEMENT WITH DITTO.

PAPERS NOT FILED UP, BEING MEANT FOR DESPATCH
IN ORIGINAL.

N.B.—

A = Copy in full.

B = Not to be copied.

P = Copy abstract only.

Q = Copy heading only.