

# Design response for emergency infectious disease Health Care Facility in the eye of COVID-19 :

## "PROJECT MANAGEMENT OF FIELD HOSPITAL"

### ABSTRACT

This paper described and discuss the phenomena as a project management approach to achieve the objectives in the provision of a design brief for the design of a field hospital for infectious disease as a facility in a day and to acquire schematic designs from architects within two days as examples in the decision making process by Malaysian National Security Council (MKN).

An explorative method in retrieving data from the phenomena and qualify them with the literature of precedent studies and best practice were adopted, apart from addressing the legitimacy of the process as per the institute and Board of Architects protocol.

The brief was to design standalone hospitals for infectious disease that detect the disease; contained it; keep the medical and health staff safe from harm, and able to accommodate those infected within the available resources of the Malaysian health system. The result was seven exemplar ideas contribution from members designed within the 12 hours of launching, meeting the need target of Mercy Malaysia on readiness. It shows that given the grave urgency of the COVID-19 situation to provide adequate hospital beds, a quick response by the institute has acquired a positive response from the members.

The institute may be called for aid after the government has worn off their resources. For better or worse, there are architects in the eye of COVID-19 or any calamity, is ready to serve.

### RESULT & DISCUSSION :

Initially, the exercise posted on the 3rd day of the MCO was received well by the members of the institute and outside architects who specialised in healthcare projects. However, due to the time constraint and probably lack of quick data on this non-typical project typology-field hospital/quarantine centre, only seven (7) firms finally submitted the proposals on Sunday evening and Monday the morning of 23 March 2020.

The team made a quick assessment of the seven proposals based on the project brief. Perhaps due to the broad requirements of the brief with no specific site and cost, the proposals submitted covers a variety of approaches and make. Considering the effort driven by these architects/designers were voluntary, the seven submissions were generally commented not solely base on the project brief but what each project focuses on. Thus, all proposals were submitted to the National Security Country through MERCY Malaysia for their deliberation and decision.

### CONCLUSION :

Although none of the proposals were neither turn down nor accepted for implementation, the team were informed that the design proposals were tabled to the national security council together with onward recommendations. From this exercise, it dawned to the non-government architects that as an NGO or an individual entity, the architects have no direct channel to serve the country. The team were informed that WAITING itself is a HUMANITARIAN act. It is the national security protocol that the institute may be called for aid only after the government has worn off their resources.

The country, upon the aftermath of the design exercise, witness many other parallel activities by the government in preparation for the surge of the pandemic cases through re-adaptive reuse of existing public residential institutions for quarantine centres and the reuse of major convention centres in capital cities as quarantine and isolation centres. Despite the handicap of no able to give aid to the country where Architects do best, DESIGN, creative adrenaline aligned effort of the government to voluntarily take up tasks for technical assessment of the gazetted premises as quarantine centres.

These acts showed that given the grave urgency of the COVID-19 situation in the country to provide adequate hospital beds, isolation structures, a quick response by the institute, have acquired a positive response from the members and beyond.

For better or worse, there are architects in whichever sector, including academia, in the eye of COVID-19 or any calamity, are ready to serve.

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## MALAYSIA'S EXPERIENCE

### INTRODUCTION:

The pandemic pulsate in all corners of the world and Malaysia is not excluded. This poster shares effort made by selfless architects in the Eye of COVID-19, how creativity churned in times of need.

### METHODOLOGY : TIMELINE ACTIONS

In managing the process of an unprecedented project within a space of 4 days, the team adopted an explorative method to gather data from the emerging phenomena and history and qualify them with both medical and technical literature of precedent studies and best practice apart from addressing the legitimacy of the process as per the institute and Board of Architects protocol.

## MANAGING PANDEMIC via ONLINE

25Jan '20

First Arrival case to Malaysia were confirmed among travellers from China in Johor via Singapore

18Mar '20

MOVEMENT CONTROL ORDER Imposed a nationwide lockdown

19 mar '20 to 20 mar '20

Task delegation - Mum and Mus to get PAM volunteers among those who had done hospitals to design with Aja to confirm from each architect called Norwina to do the brief; Ridha advise on council

20 mar '20 to 21 mar '20

Approved brief of field hospital in principal and issue to parties & answering queries

### OUTCOME

Received submission from the Architects General Assessment per Brief Discuss with PAM president Lilian, Abu Zarim, Thiri, Amzar and Alvin with Zarina

21 apr '20 to 22 apr '20

Outcome & Design preparation by Architects

23Mar '20

TOTAL RESULT IN 5 DAYS ACTION

7 exemplar design ideas

The result was seven exemplar ideas contribution from members designed within the 12 hours of launching meeting the need target of Mercy Malaysia on readiness

### APPROACHES TO DESIGN:

Establishment | Issue/ Problems Arising

Assessment | Field and Establishing Context & Constraint of Project

Planning | Devising Strategy Plan to overcome the obstacles to achieve the aim and maximise impact, based on the time, cost and risk factor ( of disaster). Problem>Strategy>Action>Management>Impact>Evaluation

Convergence | (Team), Technical, Volunteers

Mobilisation | Field Support/ Strategic Support

Deployment | Site Implementation & Execution of Plant

Diagram of Methodology, Activity & Project Flow Chart.

1 Conceptual rendition of spatial zoning, massing and use and quick installation on green open field.

2 Comprehensive proposal from zoning concepts, massing and to detail layout and images of the proposed facility on an open ground adhere to daylight and views of the outside world.

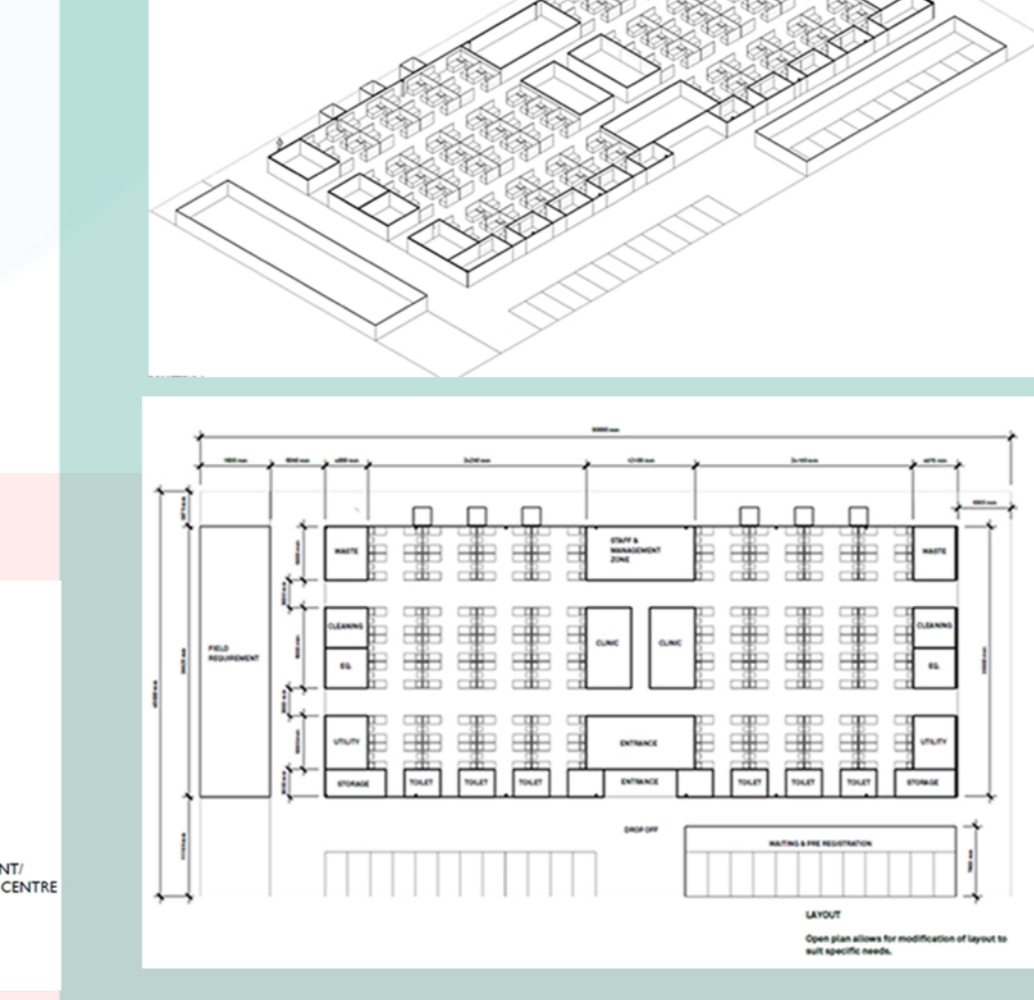
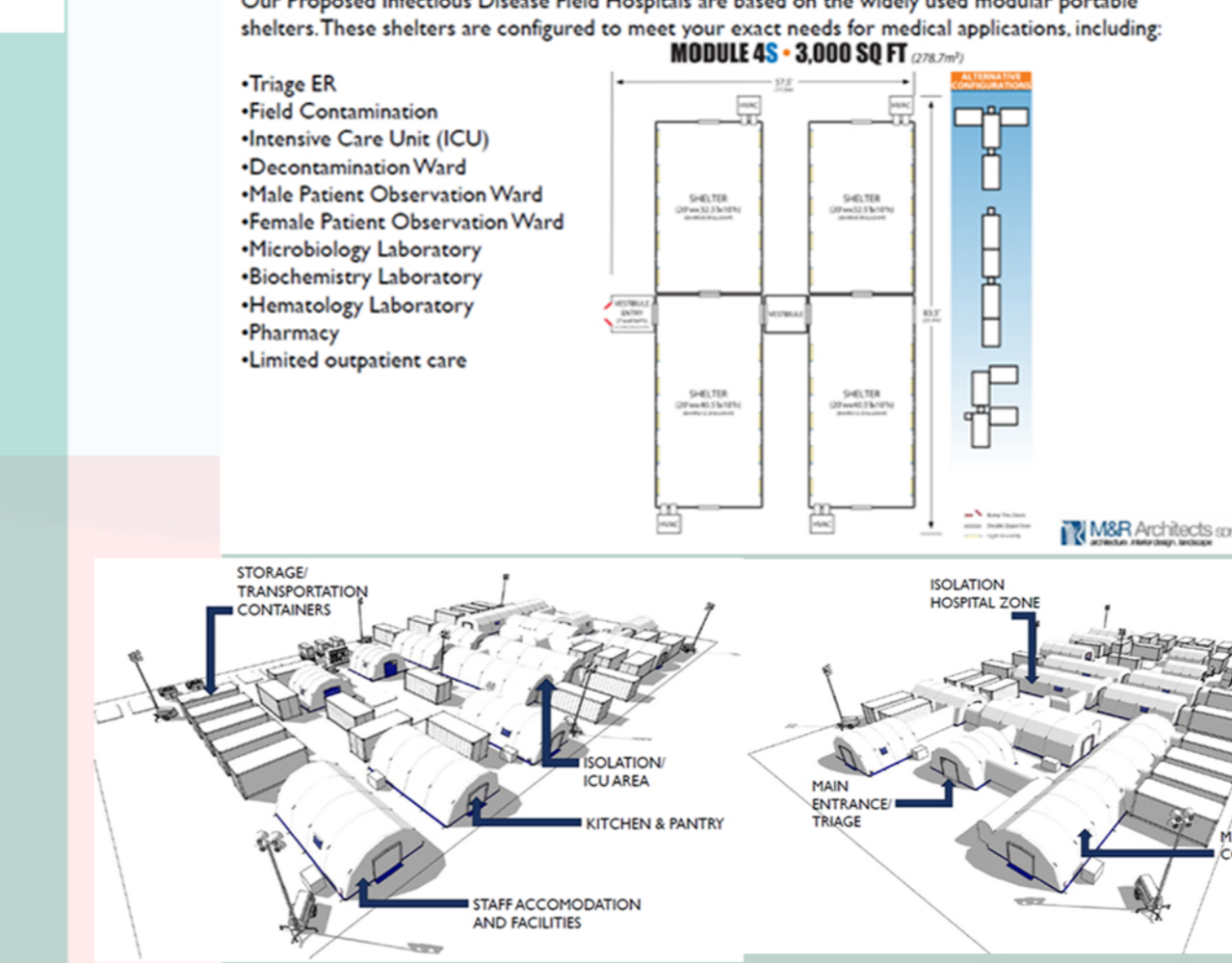
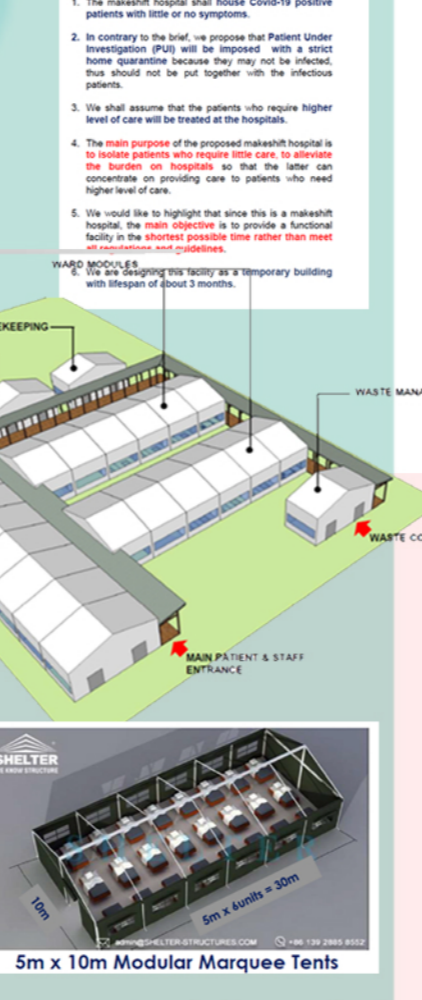
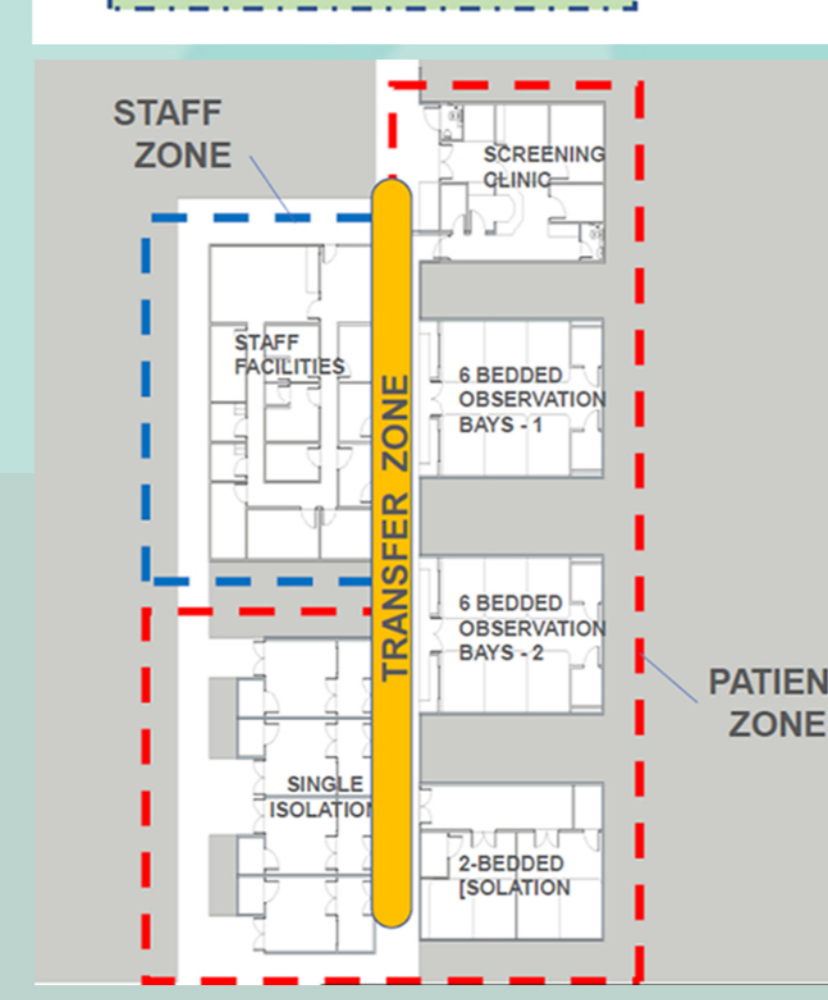
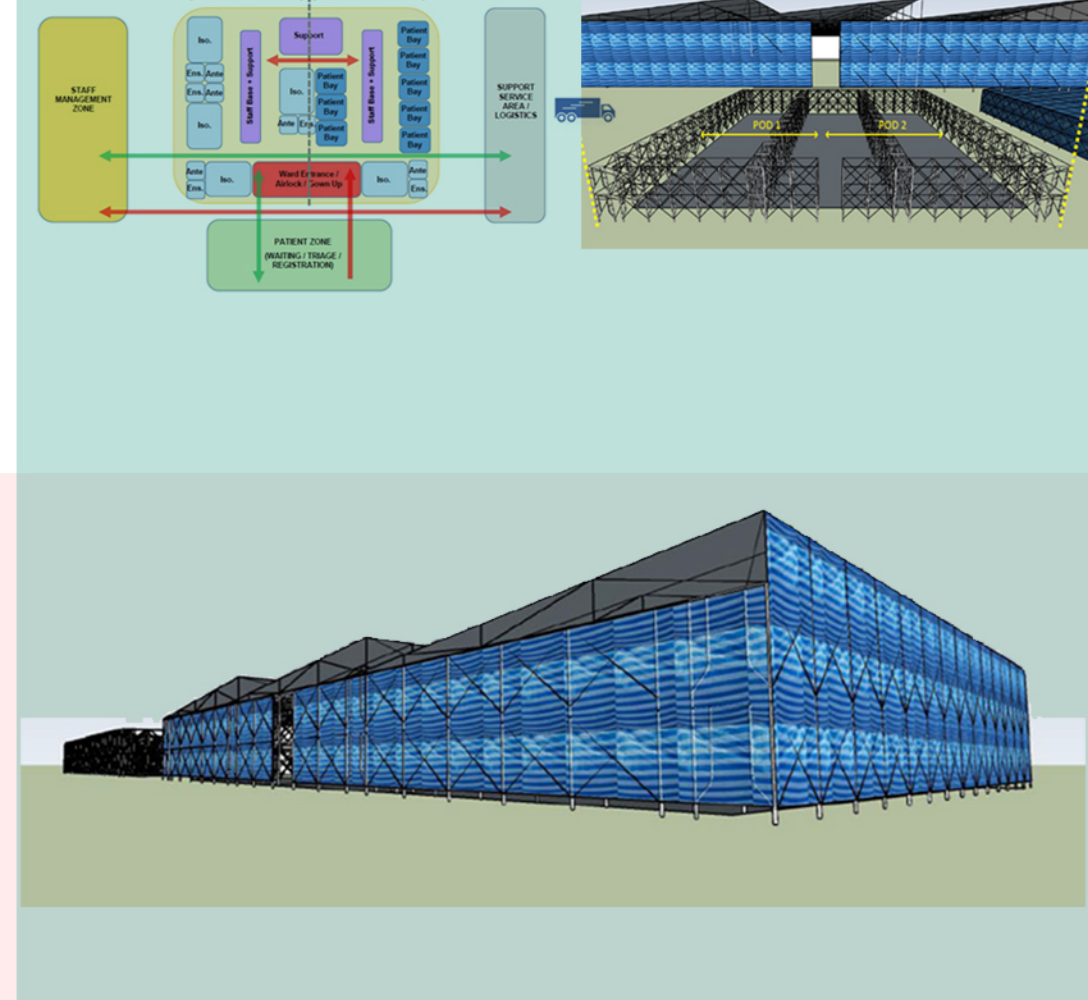
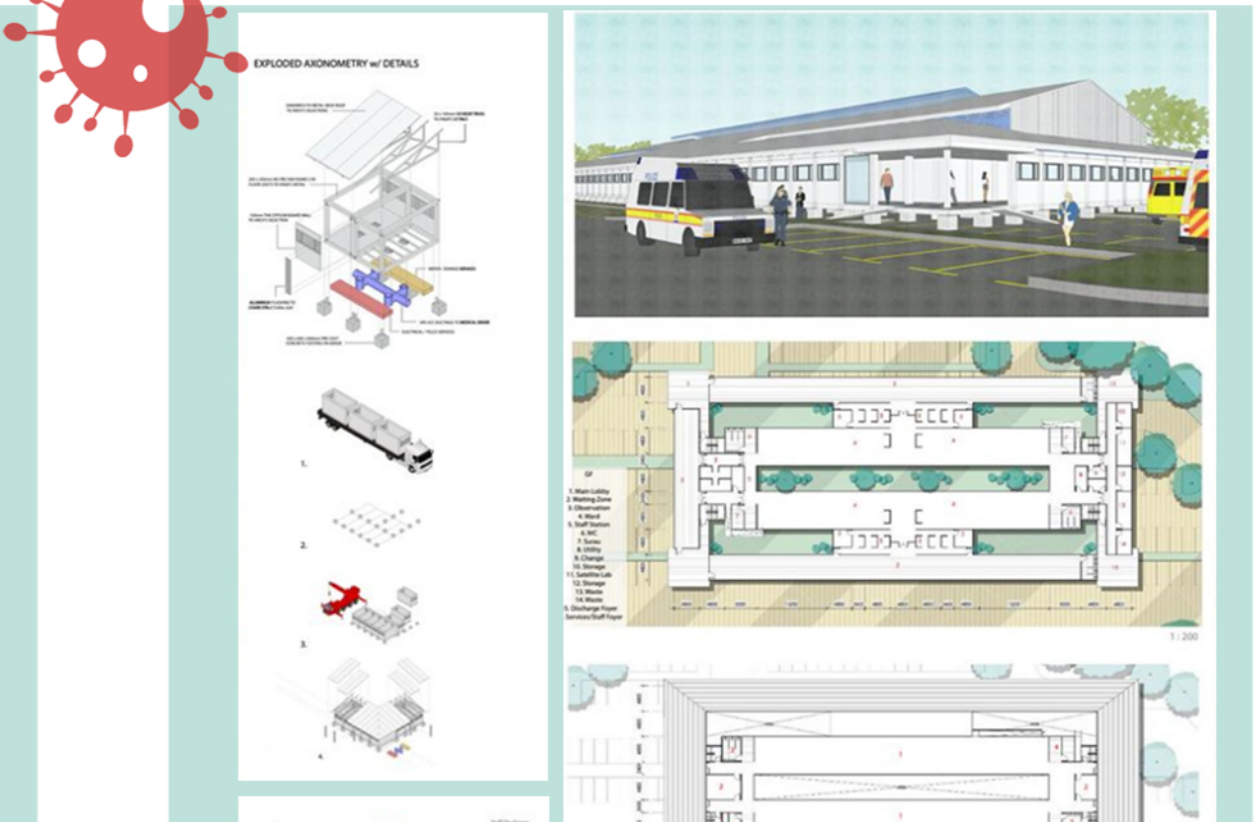
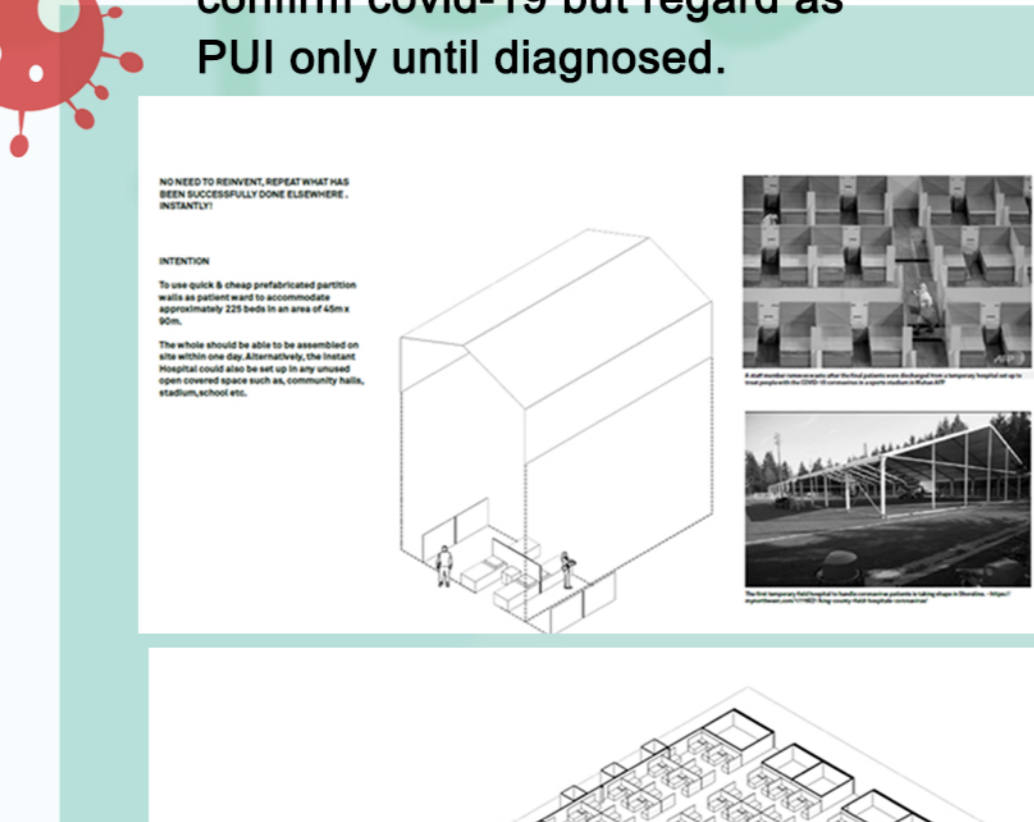
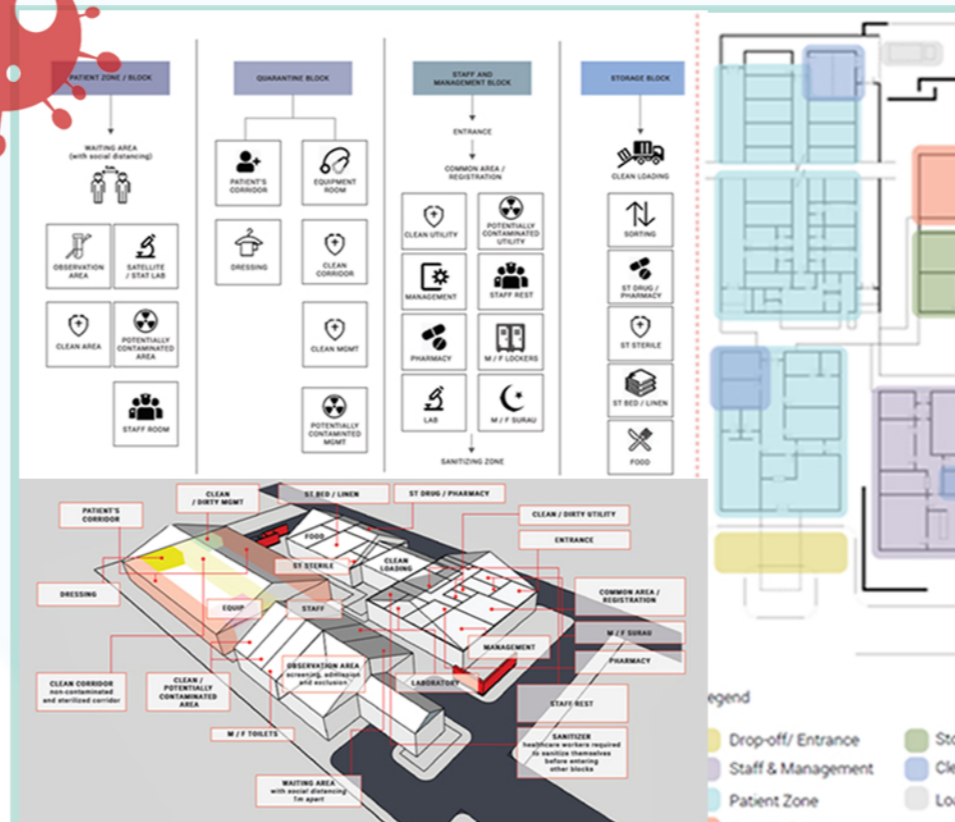
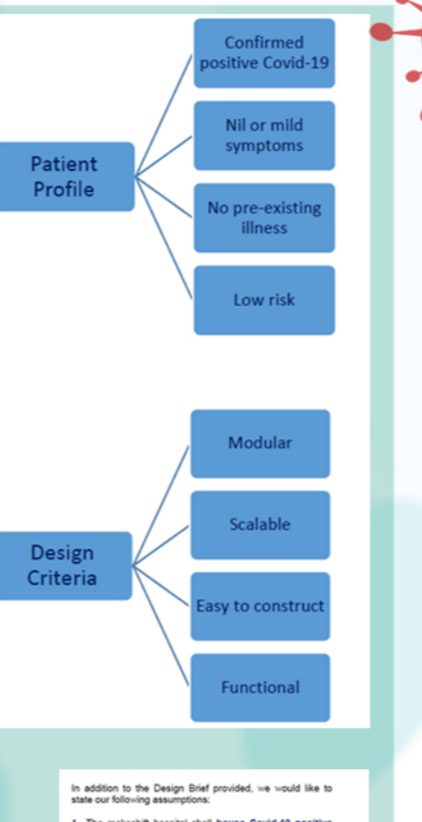
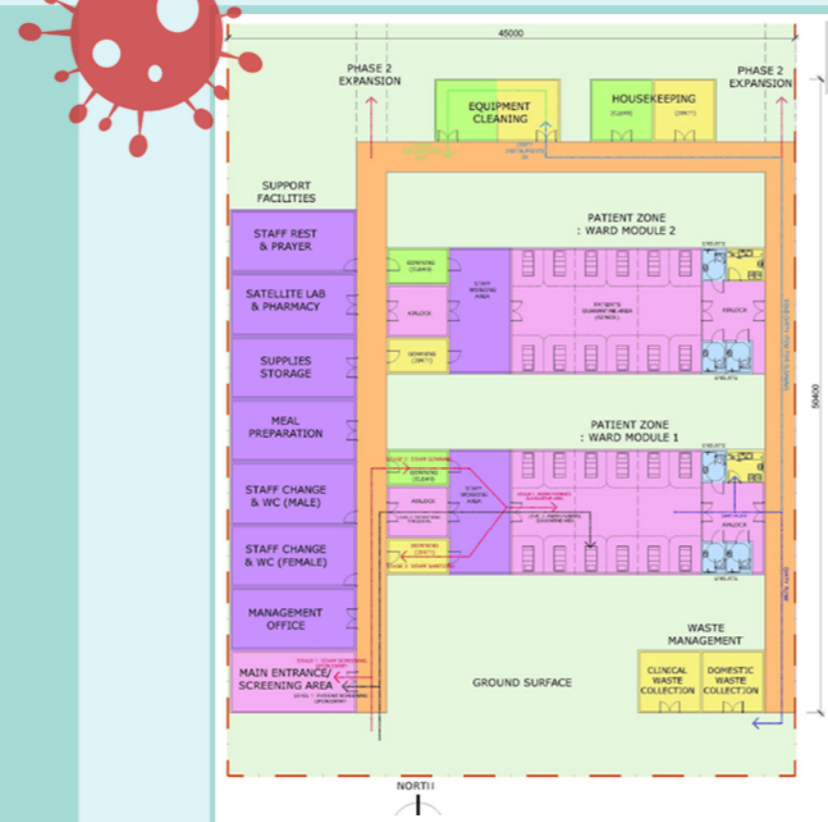
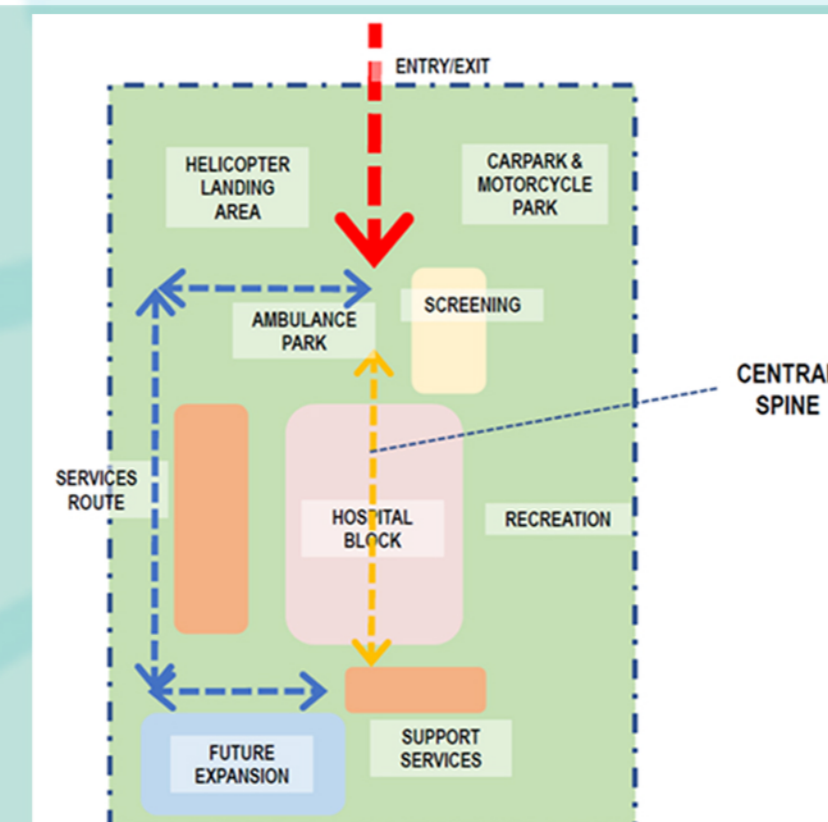
3 A detail concoction of spatial concepts relating to the severity of the facility stringent requirements on the massing and the buildability of the units to meet the minimum and probable expansion within an open ground.

4 A cheerful idea of easy to install village camp concept that address the stringent need of the facility in open ground with natural surroundings.

5 Conceptual idea on using army barracks.

6 As an instant hospital with maximum of 225 beds, as a quick solution to 'Isolate' first the bulk of patients which will later be filtered according to severity or recovery. The patients are not necessary confirm covid-19 but regard as PUI only until diagnosed.

7 A longer term strategy.



Six Health Design

Perunding Alam Bina

Mediconsult Sdn Bhd

RSP Akitek

M&R Architects Sdn Bhd

KARYASTUDIO

HXN Architects