



# Method Statement

# Modular Construction



# Welcome to Modular Concepts

Modular Concepts LLC was established in 2005 to harness the potential available in healthcare construction industry.

Since then the company has grown continually over the years by taking professional approach focusing on developing medical engineering and modular construction systems and solutions.

Currently, Modular concepts is one the leading provider of Modular construction system and medical engineering solutions. We are organized with well-equipped factories in multiple locations, more than 1200 human resources directly employed and 1000+ indirectly. We have branch offices in Dubai, Abu Dhabi, Germany, Oman, Kenya and India, Modular Concepts LLC has been an exemplary of an established Modular Construction and Medical Engineering company in middle east, Africa and India with a widely acclaimed reputation for excellence, innovation and cost effective engineering.

At present, we are a team of architects, engineers and management professionals pursuing a clear vision of delivering the projects that meets both the needs of clients and fulfill the very essence of design sustainability.

Having completed many hospital projects across Middle East, Africa and India we now manufacture hospitals and buildings for other segments like schools, hotels, residence apartment etc. in our factories and offer end to end solution in hospital construction in modular construction technology. We develop the concept arch design to modular grids and deliver the modules to site with 90% readiness.

Our overall strategy is based on a continuing improvement process of setting objectives, measuring results and providing feedback to facilitate further growth and progress.





Avitis Hospital

# Modular Construction (pre-fabricated)

Modular Construction is the method of using prefabricated modules, built off-site in a controlled manufacturing process to construct building structures.

A key difference of modular construction, however, is that the modules are constructed with steel rather than concrete; though it can be constructed with other materials such as timber, cross laminated timber and fibre reinforced polymers (composites).

Modular buildings are built with the same finishing materials and to the same building codes and architectural specifications as traditional construction.

They however, can be more economical as modular construction saves capital expenditure and delivers on time, and within budget. It also offers a safer construction environment as all the modules are built within factory conditions, thereby reducing the risks of accidents and related liabilities for workers.

From shortened project completion to minimal on-site disruption, there are many advantages to choosing modular construction.

Modular construction allows greater quality control and streamlines the building process, serving as the clear next step in the age of automation.

Modular construction moves the construction site to manufacturing facility for a major part of the building and, in this way, improves its predictability, increases productivity, and reduces the risks inherent in construction.

Modular buildings also generate great cost savings opportunities as a result of compressed construction schedules and Faster ROI (Return of Investment).

In every design and each modular project, our main focus is to meet customer's requirements and exceed his expectations, in terms of final product and service.

Our construction methods produce environmentally friendly structures, that are also safe and compliant with local building standards, across the world.



Shell Station

# Manufacturing Sustainability

## 1. Modular buildings are manufactured in controlled environments

The factory-controlled process ensures less waste is generated as waste is almost eliminated by recycling materials, controlling inventory and protecting building materials. Offsite construction is up to 50% quicker than traditional. It also results in less site disturbances as it minimize transport of raw materials delivered on daily basis as of site requirements to fewer bulk deliveries to a factory, which directly benefit of reducing the carbon footprint of the construction and also results in reducing noise, dust, etc. Minimized transport and traffic at site means fewer personnel on site;

## 2. Modular buildings are recyclable

No building will last forever, therefore the demolition (or recycling) of a building can be incorporated right from the beginning of the design as the modules can be disassembled, and the building material re-used again. Some modular buildings are manufactured using recyclable material from other projects. Being adaptable and flexible to changing needs, modular buildings are easy to move without disturbing surrounding landscapes. Minimizing pollution by minimizing waste creation and disposal by efficient use materials in factory, minimum or zero waste on site, recycling of scrap metals, re-use of modules or components.

## 3. Offsite construction uses less energy

Compared to an equivalent, traditionally-built project, up to 67% less energy is required to produce a modular building. Not only is the actual construction of the building 'greener', but the building is also energy-efficient for life. Modular buildings are now being installed with energy-efficient systems such as energy-efficient glass, geothermal systems and solar panels.

## 4. Modular can be built to the exact same standards as traditional

Buildings are designed and built to the same, higher sustainability standards as traditional construction. Unlike traditional construction, there are many cost savings associated with modular buildings, stemming from a reduction in project timeframes and leading to reductions in overall costs.





Our Factory Dubai

# Building Sustainability

Over the past decade, modular construction has grown substantially. Attitudinal changes towards offsite building techniques, as well as their increased sustainability and capabilities as seen on many high-profile jobs, have all contributed to this growth. Here are few reasons of how sustainable Modular building became.

- Minimize energy in use by good level of thermal insulation, efficient HVAC and control system for energy saving; green features such as LED lighting, ungraded triple glaze window, geothermal systems, solar panels and other green practices can be installed during construction process to promote energy efficient operations;
- Minimize co2 production by efficient operation and thermal insulation and use of materials;
- Minimize embodied carbon in materials by factory controlled operation, 100% recyclable, high strength to weight ratio, ease of deconstruction and re-use;
- Improved quality of the building, including better energy or seismic performance.





Our Comprehensive 20-year structural warranty assures you that your building will remain structurally sound, giving you complete reassurance in the strength of your Modcon Building.

This warranty covers the **structural, load-bearing elements of the building**. These are the external walls, floor roofs and columns in the unlikely event of any structural failure, we will repair or replace the element at fault.

## Fields of Applications

It is no surprise that many developers are now choosing modular construction technologies over more standard building practices. The increased availability of control, such as avoiding environmental hazards, more customizable dimension, and optimal building methods, in addition to significant costs savings, make modular construction well worth considering for any building project.







Our 5-year warranty cover the **external fabric** of the building, which includes the steel structure it-self, the floors, wall and roof panels, as well as the external windows and doors. In short, it covers any part of the external fabric that contributes to the building's function as structurally sound, insulated unity.

## Standards & Codes

Equipped with Steel Forming machineries and cranes that enable Hot Rolled Steel Modules and Cold Formed Modules, Modular Concepts is in a position to meet a vast range of modular building requirements of clients – modular homes, single storey, multistory, high end and low end modular buildings to suit different designs and most importantly budgets.

The Following global standards are followed:

- European Standards
- American Standards
- British Standard Institute (BSI),
- Health Building Notes
- Health Technical Memorandums
- GCC Standards
- American Concrete Institute (ACI)
- American Society of Civil Engineers (ASCE)
- American Society of Mechanical Engineers (ASME)
- ASTM International, and International Code Council (ICC),
- National Electrical Manufacturers Association (NEMA),
- National Fire Protection Association (NFPA) and others



### HRS Hot Rolled Steel

Strong and sturdy, allowing to build many storey high.



### CFS Cold Formed Steel

Light Gauge Steel, strong and light is perfect to build low rise buildings.

# Why Modular?

## Life span

Modular PPVC Buildings and Hospitals are strong structure designed to last.

Like conventional buildings PPVC confirms to structure, service and safety parameters of codes required for the type of structure.

## Speed

As major part of construction is off site, it leads to considerable shorter duration at site. Offsite and Onsite construction can go in parallel. Resulting in overall shorter design and construction schedule.

## Sustainability

PPVC building provide better thermal and acoustics performance owing to is better quality and inherent double layer wall between spaces. It results in more sustainable end product.

## Limitation and downside

### Deeper Structure

As each module has its own floor, wall and ceiling it leads to double layer these level leading to some inherent redundancy. So for same internal height modular building will require slightly more overall height and width. Though these double layers help in better acoustical and thermal performance.

### Market Perception

A major challenge of introducing modular construction to new market is the negative perception of modular construction. Which is often associated with trailer park, low end potable cabins.

Combating this negative perception require showing clients how to take advantage of the unique architectural opportunities and increased construction quality that modular construction allows.

### Technical Issues

1. Logistic, Transportation and Crane
2. Acoustic and Thermal Performance
3. Fire Safety
4. Large Open Spaces

Our Installation Team



# Why Modular?

## Quality

Volumetric Modular Construction delivers the majority of the final product from the controlled environment of factory by on line assembly system thus resulting in higher quality.

## Safety

More construction offsite means less time, better management of labour, less individual hour at height, less disturbances by weather thus resulting in better safety.

## Reduced Weight, Noise and Waste

Owing to its logistical requirement and steel construction PPVC Design are lighter up to 30 to 40% lighter than traditional construction. More production in factory yields less waste and reduced noise level at site, a major environmental aspect.

## Opportunities & Possibilities

### Housing, schools, hospital

Modular Construction has potential to provide quality and speedy construction for all type of facilities especially healthcare, housing and education.

Technological and Structure advancement has made it possible to do High Rise Building using modular concept. Building up to 30 stories are in operation for quite some time.

### Accessibility and resources

Modular Construction provides opportunities to provide Standard Health Care facilities in areas where it is not possible to provide using onsite conventional system. System can be used effectively to provide facilities for remote areas and relocation in time.

## Solutions

1. Advanced planning and road network analysis.
2. Modular Construction provides high level of acoustic and thermal separation because each module has separate floor, ceiling and wall elements. - For external walls additional insulation is used to maintain high thermal performance.
3. layers of fire resistance board as required. steel is painted with intumescent
4. Hybrid structure or open wall modules.

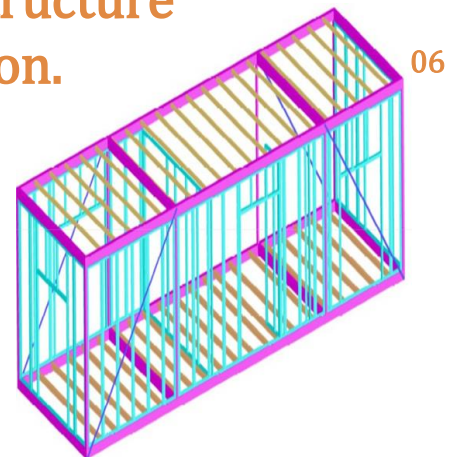


# Construction sequence of modular structure method of hot rolled steel construction.

## Prefabricated Prefinished Volumetric Construction (PPVC)

Core Module:

Modular construction system based on hot rolled steel (HRS) structure with cold formed steel (CFS) walls.



### 01. Research & Concept Design

Using the clients Conceptual Design Modcon will develop working drawings for the purpose of final approvals and manufacturing using our in house design teams. The form of construction offered by Modcon will enable the conceptual design offered by the client to be realized with minimum of design change. Case we are designer and builder, the project will be designed according to requirements understanding the central role of digital technologies in the fabrication of modular components, including building information management (BIM) tools and other computer aided design (CAD) tools and computer aided manufacturing (CAM) tools.

### 02. Hot rolled Steel frame (HRS)

The Module structure shall be made of steel base frame, columns, floor frame designed for the gravity and lateral loads i.e. dead load, imposed loads, wind load, earthquake loads, lifting, erection etc. as per relevant standard codes.

### 03. Floor Frame

The floor frame is made up of CFS or HRS sections and joists shall be placed on some spacing as per design. Floor joist is fixed on base frame by connector.

### 04. Cold Formed Steel walls (CFS)

The wall panel frame is made up of CFS sections and shall be paced on some spacing as per design. wall panel is fixed between base and roof frame by connector.

### 05. Ceiling Joist

The ceiling frame is made up of CFS or HRS sections and joists shall be placed on some spacing as per design. wall panel is fixed between base and roof frame by connector.

### 06. Combined module of CFS panels with HRS frame

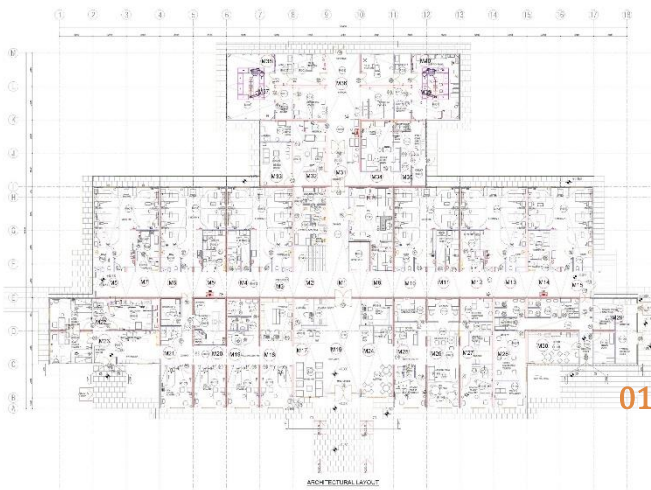
When all the elements are complete, we install Straps required for lateral force as well as for lifting.  
When the core module is complete depending on the logistics or design methodology, it can continue on assembly line for MEP and finishing's or be shipped to site.



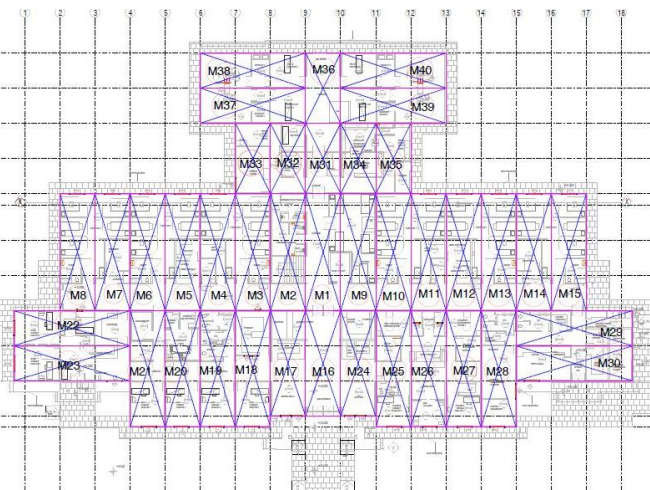
# Sequence at a glance

Original design

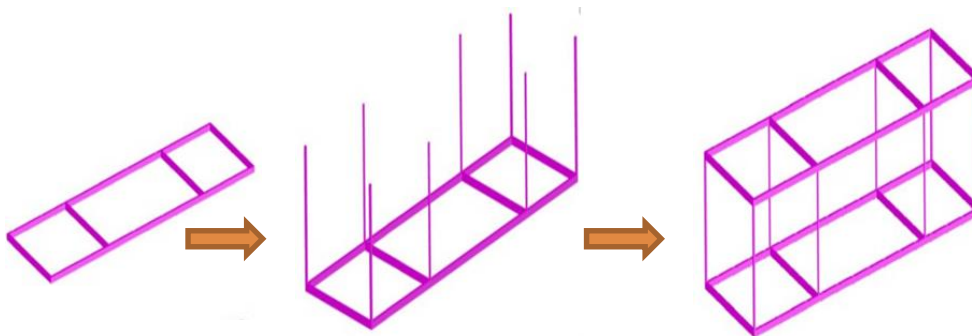
Modified to Modular



01



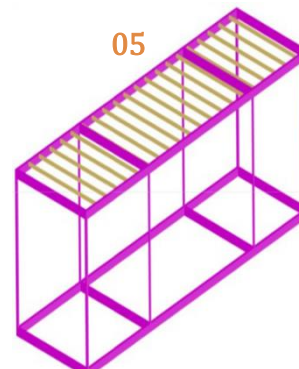
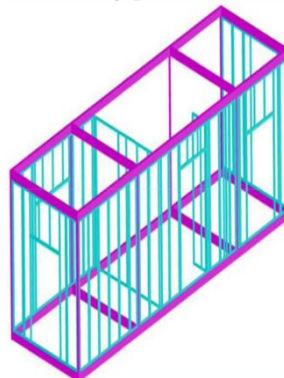
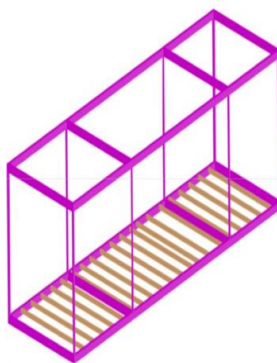
02



03

04

05



## Walls, ceiling, flooring, lifting details

### Typical Specifications

Prefabricated Prefinished Volumetric Construction (PPVC)

#### 07. Internal Walls

Internal walls are normal dry wall partition with light gauge steel track and stud framing and Gypsum Board Sheathing (normal/Moisture resistance/Fire Rated) as per wall requirement. As per wall requirement fire rated board are used to achieve desired fire rating, for wall in tile area are done with moisture resistance board.

#### 08. External Walls

External walls mostly used are dry wall system and treated as per external façade requirements. Our standard system is to use cement board as external sheathing with EIFS (external insulated façade system) treatment to make façade weatherproof, long-lasting and have better thermal performance.

#### 09. Floor

Based on load and use of category concrete with Deck slab or Cement board with sandwich panel floor system are used over joist of floor panel. Over both the system Vinyl, Tile or other floor finish are applied.

#### 10. Ceiling

Suspended ceiling of desired type can be suspended from the joist of module roof frame. Generally used ceiling are 60 x 60 Grid Acoustical ceiling, 60x60 Metallic clip-in ceiling, Plaster board ceiling with coves.

#### 11. Module Connection

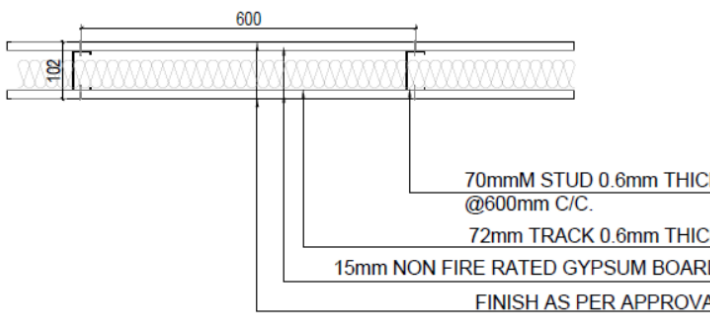
Module Column top are fixed with specially fabricated hooks which results in maintaining perfect alignment and helps in lifting process also. Upper floor Columns perfectly fits in the hooks at the top of lower modules. Wherever 2 or more modules are connecting a single shear plate is inserted in between hooks before placing upper modules to make joint act as one and proper transfer of vertical loads.



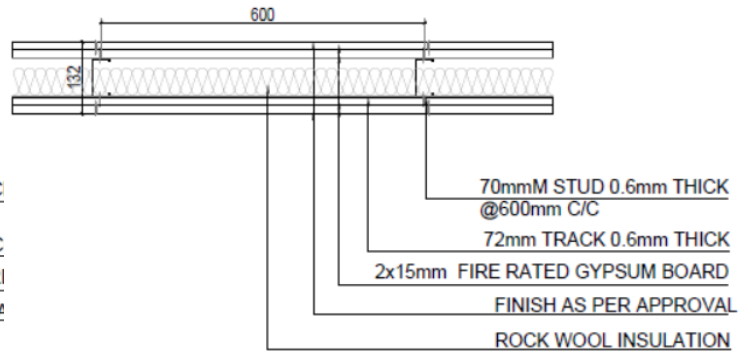
# Typical Details

## 07-Internal Wall

Non Fire Rated

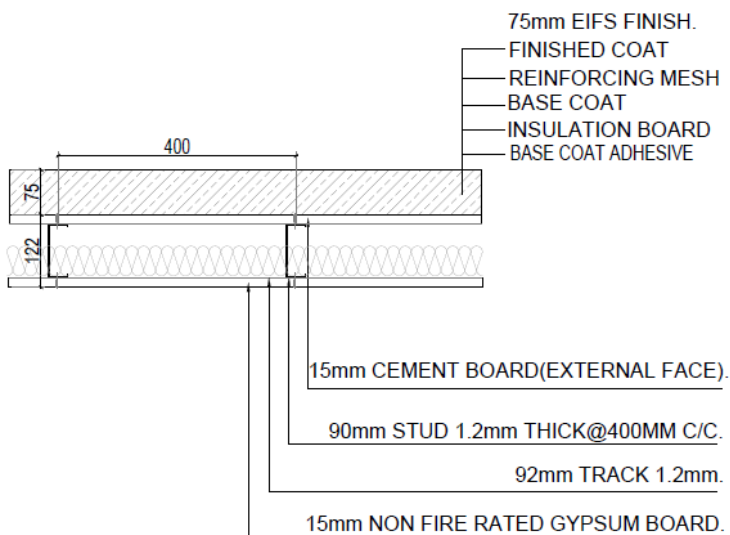


Fire Rated

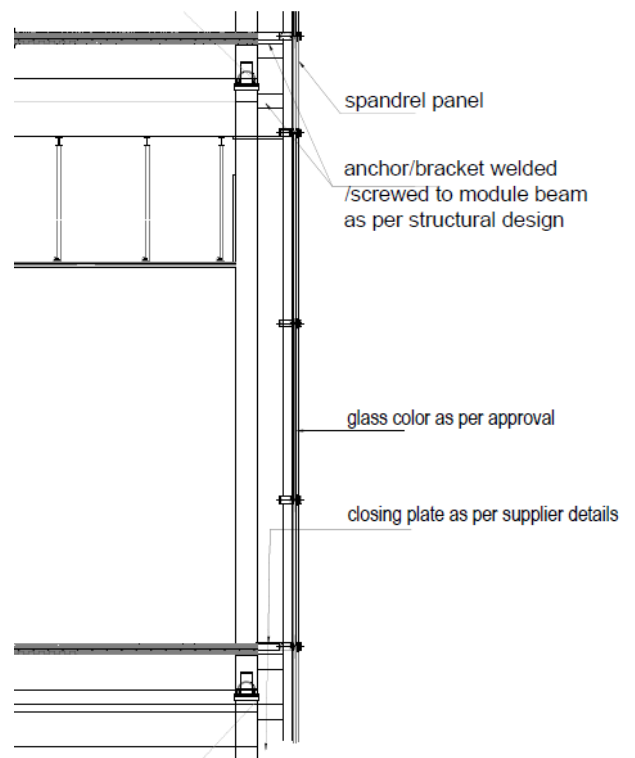


## 08-External Wall

External finish with EIFS

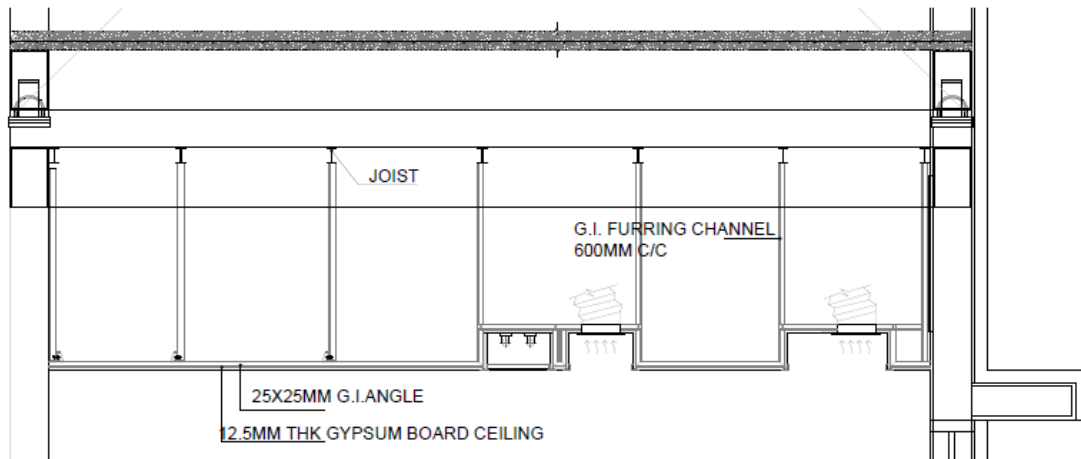


External finish with curtain wall



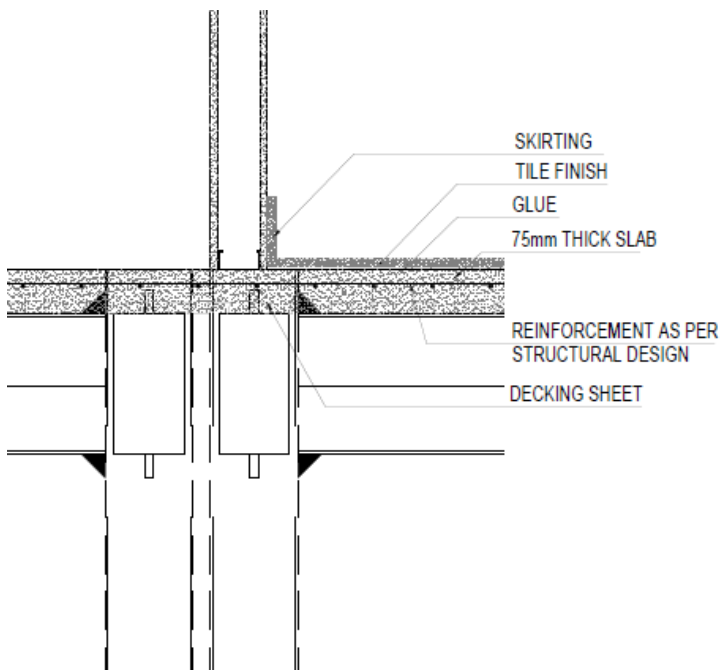
# Typical Details

## 09-Ceiling

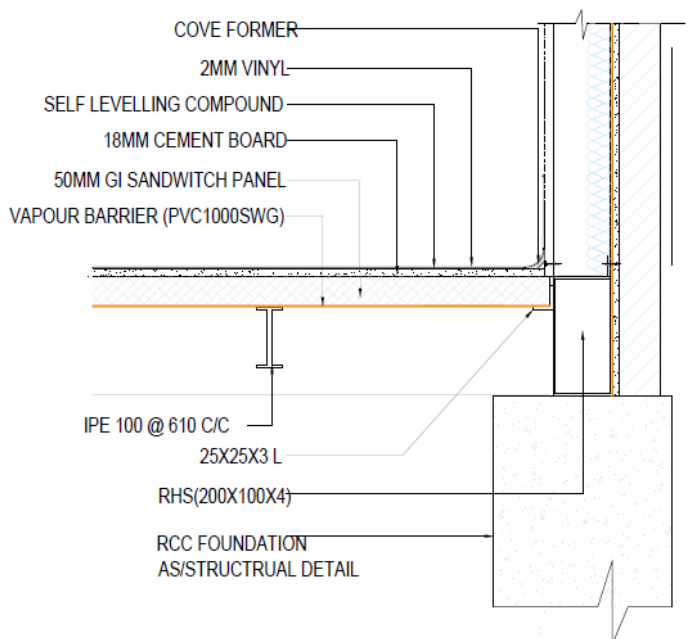


## 10-Floor

Floor with RCC and decking sheet



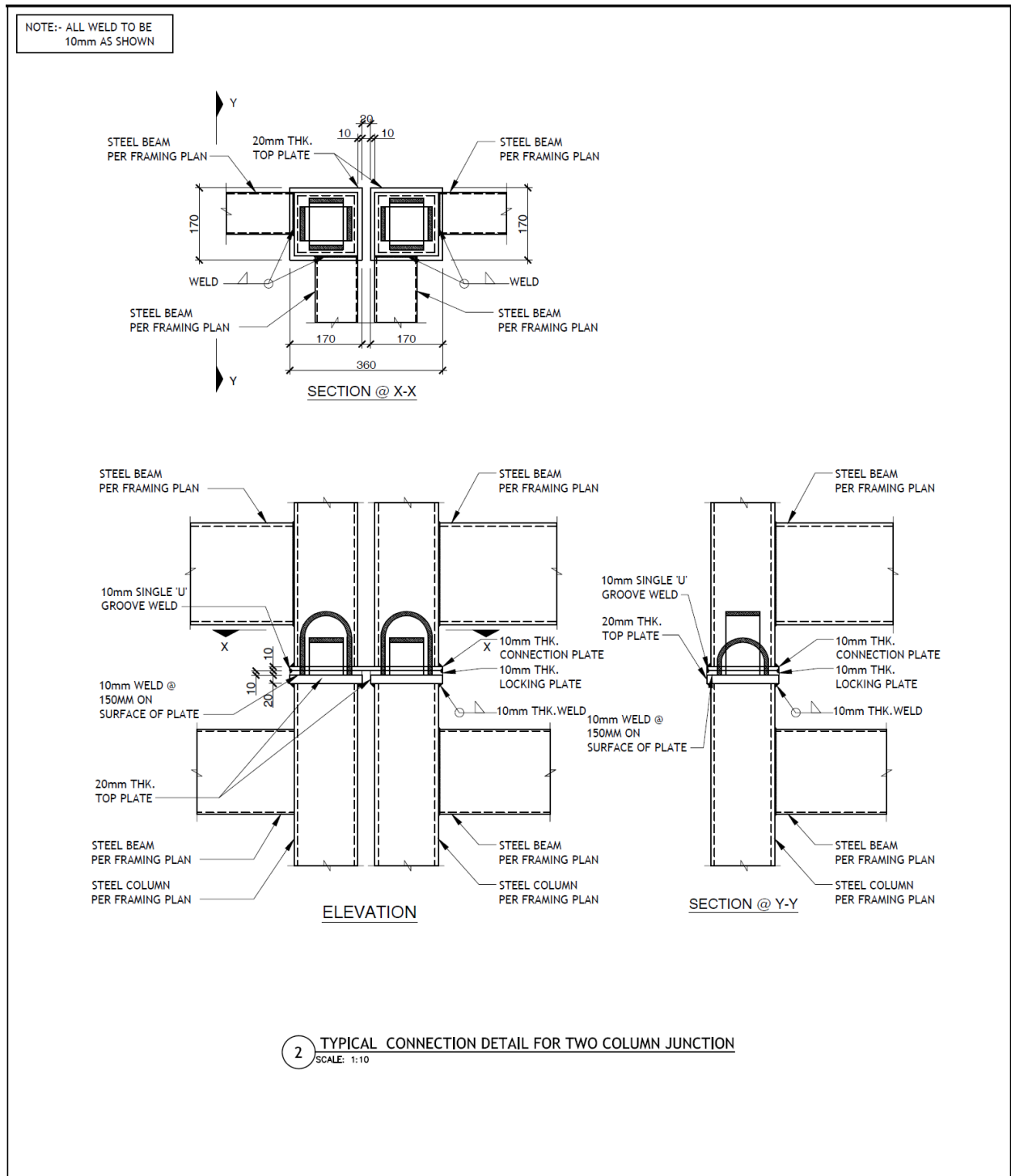
Floor cement board and sandwich panel





# Typical Details

## 11-Modular Connections – 2 Columns

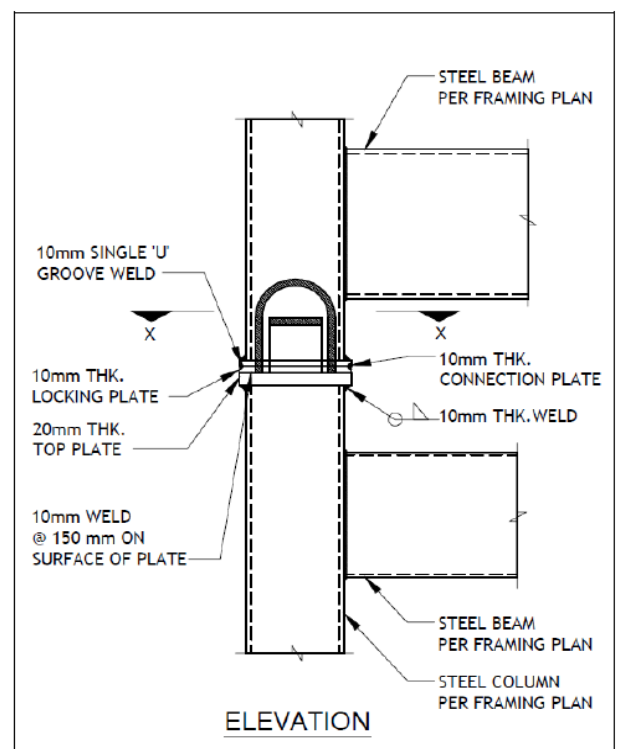








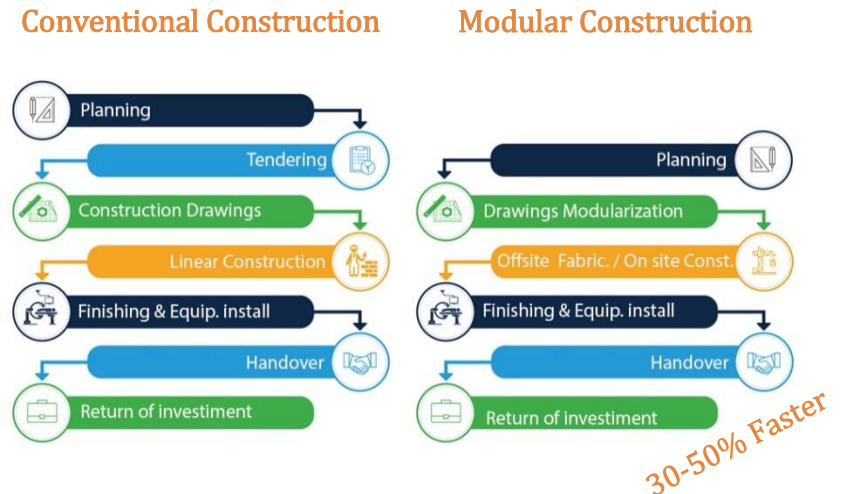
The module to module connection are reviewed for maximum axial force of 386kN (obtained from STAAD results for single column). The Upper module is resting on 10 mm connecting plate which rests on 10 mm locking plate. The locking plate is turn connected to 20 mm plate which is welded to lower module column.





# Logistics

## Processes



### 12. Off-site manufacturing

The fabrication of the module begins with a welded steel frame loaded onto the assembly line. The base floors, walls and ceilings are then fabricated on the frame and the electrical and plumbing services are added. The module is then insulated with the main floors and walls. Then the interior finishing, including painting and flooring, is completed while the windows and doors are attached. The module is prepared for transportation after the exterior finish is completed. (this work is done parallel to the on-site construction)

### 13. On-site construction

While the modules for the building are fabricated in the offsite factory, the site is developed for the installation of modules. Firstly, the site is surveyed for contours of the land. Secondly, the land is excavated and graded to a level for the foundation. Then the drainage for the site is laid down and finally the foundation on which the modules are to be installed is constructed.

### 14. Transportation

After finishing the module fabrication, the modules wrapped in weather proofing covering and transported to the site for installation. The modules are transported by road on trailers or tow trucks to site location or to a sea port where it will be loaded on ships by crane. The transportation depends on the design or purpose of the modules, the location of the factory and the site location, as many buildings are factored in one country and installed in another. Logistic analyses are essential.

### 15. Assembly

Once the modular units are complete, they're delivered to the jobsite and assembled into a building. Final installation is fairly simple, and speedy, as most of the construction work has already been conducted inside the facility or on site while the modules were being fabricated. The individual units are hoisted onto the foundation by crane and secured in place. As units are added to the rising structure, teams connect them together permanently.

### 16. Test, commissioning and handover

Assuring the quality and conformity during the construction, installation and commissioning phase is critical to the success of our projects. Commissioning and functional testing is performed to insure there are no leaks in the systems and everything is in working order. Control valves are cycled, instruments and the control system are checked, and pump operation is verified, just to name a few of the activities performed. We supply a complete checklist of commissioning activities in the installation and operating manual.



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# Case Study

## Al Ain Hospital

### Operating theatres & recovery ward

The Project Consisted of the Construction of Three Operating Theatres, Sterile Services Area and Recovery Ward.

Overall Floor Area 600m<sup>2</sup>.

Programme Duration Four Months.

Modular Concepts was responsible for the Design and Construction of the Building including all site enabling works.







# Al Ain Hospital Case Study



Steel Floor  
Steel Frame



Dry Wall,  
Ceiling,  
Medical Gas  
pipes



Insulation,  
Electric, wall  
prime painting,



Sub  
Distribution  
and wiring



Ducting,  
HVAC  
And Medical  
Gas Pipes



Laminar  
flow, pendant  
support,  
suspended  
Ceiling



# Al Ain Hospital Case Study

Plant room,  
And ready for  
transportation

From Crane to  
low bed  
trailers

From trailers  
at site, directly  
to installation

After  
installed  
Internal services  
connection  
starts

Completion of  
installation and  
finishing's

External  
Façade and  
finished.





# Project Reference 1



<b>Contract Title</b>	<b>: Koosamma Shambu Shetti Memorial Haji Abdullah Mother &amp; Child Hospital - Udupi - Karnataka - India</b>
<b>Client</b>	<b>: State of Karnatha and private partnership with Padmasshree Dr. BR Shetty.</b>
<b>Design and Build Contractor</b>	<b>: Modular Concepts, LLC</b>
<b>Consultant</b>	<b>: Modcon Group</b>
<b>Scope of Work</b>	<b>: Design &amp; Build, including all MEP Works, civil works, Medical Gas system, Structural and Architectural work, Modular Operating Theatre, Radiation Shielding, Medical Engineering and Medical Equipment</b>
<b>Duration</b>	<b>: 1 year</b>
<b>Completed</b>	<b>: 2015</b>

## Project Brief

Design and build 220 bed Hospital with 17,343 Sq meter of hybrid structure, utilizing conventional and modular construction – 244 modules were built in our Mangalore Factory shipped and assembled in Udupi. fully equipment the facility, testing and commissioning as turnkey complete solution



This is a unique and 'the first of its kind' Public Private Partnership Hospital Project in the whole of India, especially in the state of Karnataka wherein State Govt and a private entrepreneur have joined hands to provide world class healthcare delivery to the poor people of Karnataka.

This path breaking hospital project is built by a distinguished healthcare Entrepreneur Padmashree Dr BR Shetty for the poor people of Udupi, as a philanthropic project. Dr BR Shetty is also a pioneer of international repute and was instrumental in launching the much renowned NMC Healthcare hospital chain, which has more than 88 healthcare facilities in more than 10 different countries.

NMC Healthcare, the only FTSE 100 Company on London Stock Exchange among the GCC Countries, has now become the gold standard in healthcare delivery across the world



The brief was to plan a hospital with standard facilities and yet same time be able to accommodate as much as possible patients. To speed up construction technology, BR life awarded the hospital construction project to Modular Concepts India Pvt. Ltd.

#### **Prefabrication & Modularization**

While modules are being manufactured in Modular concepts factory in Mangalore, site work is occurring at the same time. This allows for much earlier building occupancy and contributes to a much shorter overall construction period, reducing labor & supervision costs. Saving even more time and money

Nearly all design and engineering disciplines are part of the manufacturing process.

The hospital building is composed of 224 modules manufactured in the company's manufacturing facility at Mangalore.

#### **Module**

Production started

December 2016, 224 Modules manufactured in just 89 days & set crews utilized one of the largest crawler cranes made and strategically planned its central location to set each of the 224 modules. The module erection finished within 21 days. The total completion of the hospital in 13 months.

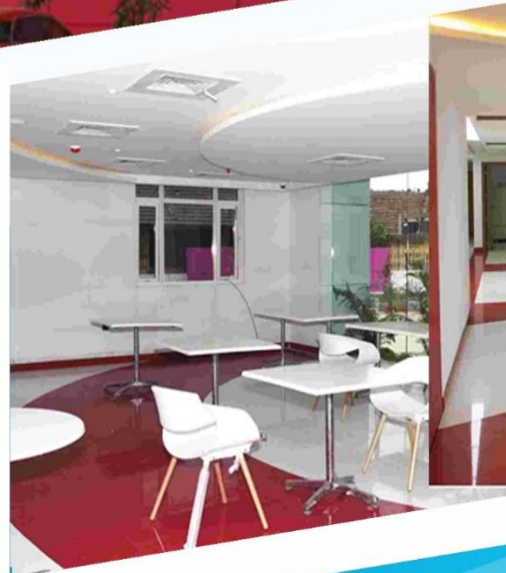
#### **Healthcare services - A Women's Health Care Center**

**Lobby** -Being a mother & child care hospital, the Interiors of the Main Lobby has been designed with a sense of femininity which is introduced via soft looks, light colors and discreet lighting.

The Hospital offers a dedicated entrance, welcoming double height space and the Reception itself has a very playful area for kids while the moms are busy interacting with Reception Managers. The soft curves in the flooring patterns and pink colors gave a very soothing effect to match the theme of mother & child hospital.













# Project Reference 2



<b>Contract Title</b>	:	<b>AVITIS SUPER SPECIALTY HOSPITALS PVT LTD, Nemmara, Palakkad - India</b>
<b>Client</b>	:	<b>AVITIS SUPER SPECIALTY HOSPITALS PVT LTD</b>
<b>Design Build Contractor</b>	:	<b>Modular Concepts, LLC</b>
<b>Scope of Work</b>	:	<b>Design &amp; Build – Pre-Fab, MEP, medical eng. and Civil Work</b>
<b>Year of completion</b>	:	<b>December 2018</b>

## **Project Brief**

A world class health care facility being established in the district of Palakkad, Kerala. The foundations stone for the hospital was laid on the end of 2016 and it was operating on 2018, 200 beds hospital, this project is a hybrid utilizing conventional and modular construction, our scope was design and build including all MEP, Medical Equipment and Medical Engineering including Medical Gas Piped System, Operating Theatre, Nurse Call System, Pneumatic Tube System, Isolated Power Supply system, Bed Head Unit & Pendant, fully equipment the facility, testing and commissioning as turnkey complete solution.

Status: Complete





**Factory:**  
**Nemmara Palakkad**

**200 modules**

**Manufacturing time:**  
**70 Days**

**Erection Time:**  
**18 Days**

**Start to finish:**  
**12 Months**

Set up in a calmingly beautiful and pristine 30 acre campus atop a small hill in Nemmara, Palakkad, the famous granary of Kerala, Avitis coalesces the best of nature, faculty, technology and infrastructure to provide world-class treatment and care in a cheerful and green environment.

The facility aims to transform lives by bridging the unmet clinical gaps in the region.

The region is characterised by a vast segment of people who are highly health conscious, well aware of the latest trends in medical science and uncompromising on their healthcare.

Avitis is proposed as a 200-bed facility that will provide a comprehensive range of tertiary super specialty medical care in its initial phase of operation.

The Reinforced concrete structural elements constitute the basement floors and ground floor.

The upper floors above the ground floor are of steel modular system. Modules are manufactured from Palakkad factory.

Prefabricated Prefinished Volumetric Construction Modcon Group has vast experience in prefabricated hospitals and modular medical buildings. Modular hospitals are a much better business decision.

- Extendable
- Customizable
- Relocatable
- Very ROI – friendly
- Occupancy at far lower cost than a traditional building
- Productivity increase up to 50%.

### Centralised HVAC chiller system

Centralised HVAC chiller system, currently set 3x200 tonnages crew chiller with 70% diversity which offloads a splendid cooling atmosphere. These typically use chilled water as cooling medium and use extensive ductwork for air distribution.

### Modular Operation Theatre

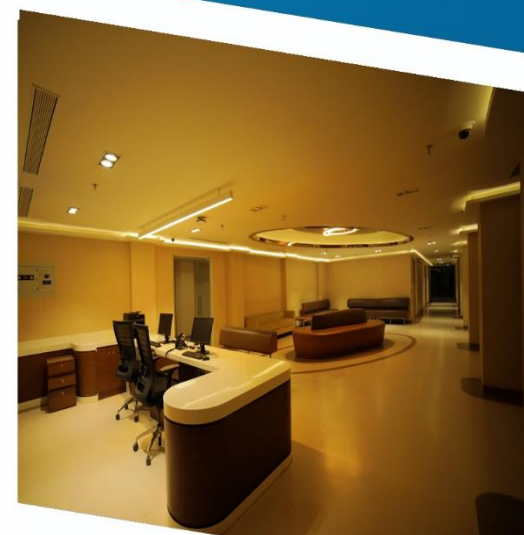
Design and Installation of Modular Operating Room Systems for Surgical, Intensive care and Recovery Units. Modular Operating rooms with smooth and seamless walls, Ceiling with integrated room lighting & air flow management, Surgeons control panels, Isolated power supply system's. For panel walls and ceilings, we use stainless steel of the highest quality, which meets international standards and the highest requirements of the health care system. Apart from this, Glass as custom design graphics made the hospital environment more friendly.













# Project Reference 3



Contract Title	: Shell Stations - India
Client	: Shell
Design and Build Contractor	: Modular Concepts, LLC
Consultant	: Modcon Group
Scope of Work	: Modular construction of convenience store and facilities, including fit-out, MEP works and civil works
Duration	: 25 days
Completed	: On Going until end of 2020.

## Project Brief

We have been awarded the design and build of 150 convenience store for shell Gas station, all over india. 6 unities





Over 150 retail stores

We were awarded the contract to construct the new shell retail outlets. The initial contract comprises of supply, installation, test and commissioning of 150 modular building. Nevertheless, as Shell expanded, our contract does as well, and we may manufacture over 200 unities.

Following Shell Technical Specifications and conceptual drawings, we have prepared the shop drawings for client approval, we also have done all surveys, accessibility plans, positioning of cranes and trucks before even start the manufacturing the unities, to ensure the transport of the modular buildings are done at safe and secure manner, complying with all traffic regulations en-route.

Factory:  
Nemmara Palakkad  
And  
Mangalore Factory

4 modules

Manufacturing time:  
20 Days including all  
internal finishing's.

Erection Time:  
1 Days

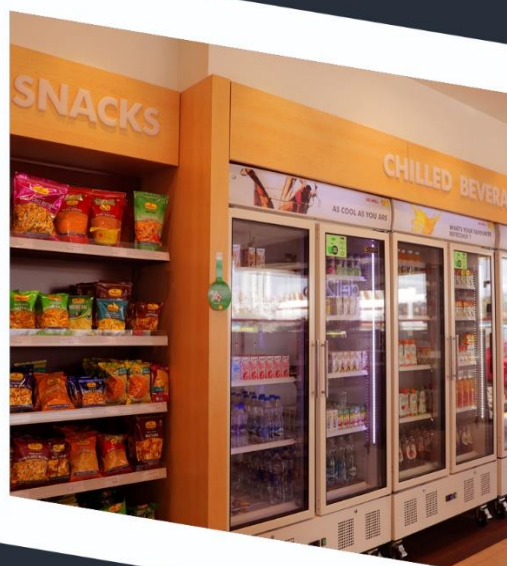
Start to finish:  
25 days, including  
site works and  
internal finishing  
and furniture and  
external facade.













# Project Reference 4



<b>Contract Title</b>	:	<b>H.H. Sheikh Khalifa Bin Zayed Hospital- Seychelles</b>
<b>Client</b>	:	Khalifa Bin Zayed Al Nahyan Foundation – Abu Dhabi
<b>Design Build Contractor</b>	:	Modular Concepts, LLC
<b>Scope of Work</b>	:	Design Build – Pre-Fab, MEP and Civil Work
<b>Target Year of completion</b>	:	December 2016

## **Project Brief**

The project comprises of construction of Women and Children Hospital with 30 beds with all support service facilities. The project is initiated by Khalifa Bin Zayed Al Nahyan Foundation – Abu Dhabi. The facility consisting of OR room, ICUs, Recovery, Pre and Post OP, Sterilization Dept., Radiology Department and all support service facilities). The scope of works under this contract including Volumetric off site construction fitted out with 1st and 2nd fix MEP and medical gas service, transportation, on site sub-structure and MEP plant room work), erection, testing and commissioning, supply and installation of medical equipment.

Status: Complete

This is a 30 bed hospital specialised in women and children care including Operating rooms, ICU's, Radiology dept. and all support service facilities.

Almost 90% of construction process is carried out from Modular Concept's factory at Dubai including fit-out & MEP (Mechanical, Electrical & Plumbing) works, the modules then were transported to Seychelles.

Simultaneous onsite preparation and offsite manufacturing cuts build times by as much as half.

Modules are weather sealed transported by ship to Seychelles from Dubai.

The module frames are extremely strong, very durable and designed to stack.

The Khalifa Bin Zayed Al Nahyan Foundation has inaugurated the Shaikh Khalifa Bin Zayed Al Nahyan Hospital, built at the cost of Dh23 million, in the Seychelles.

The move comes in line with the directives of the Crown Prince of Abu Dhabi to deliver humanitarian and development aid to Seychelles and support the health sector in the country

Factory:  
DIP Dubai, UAE

40 modules

Manufacturing time:  
50 Days

Erection Time:  
15 Days

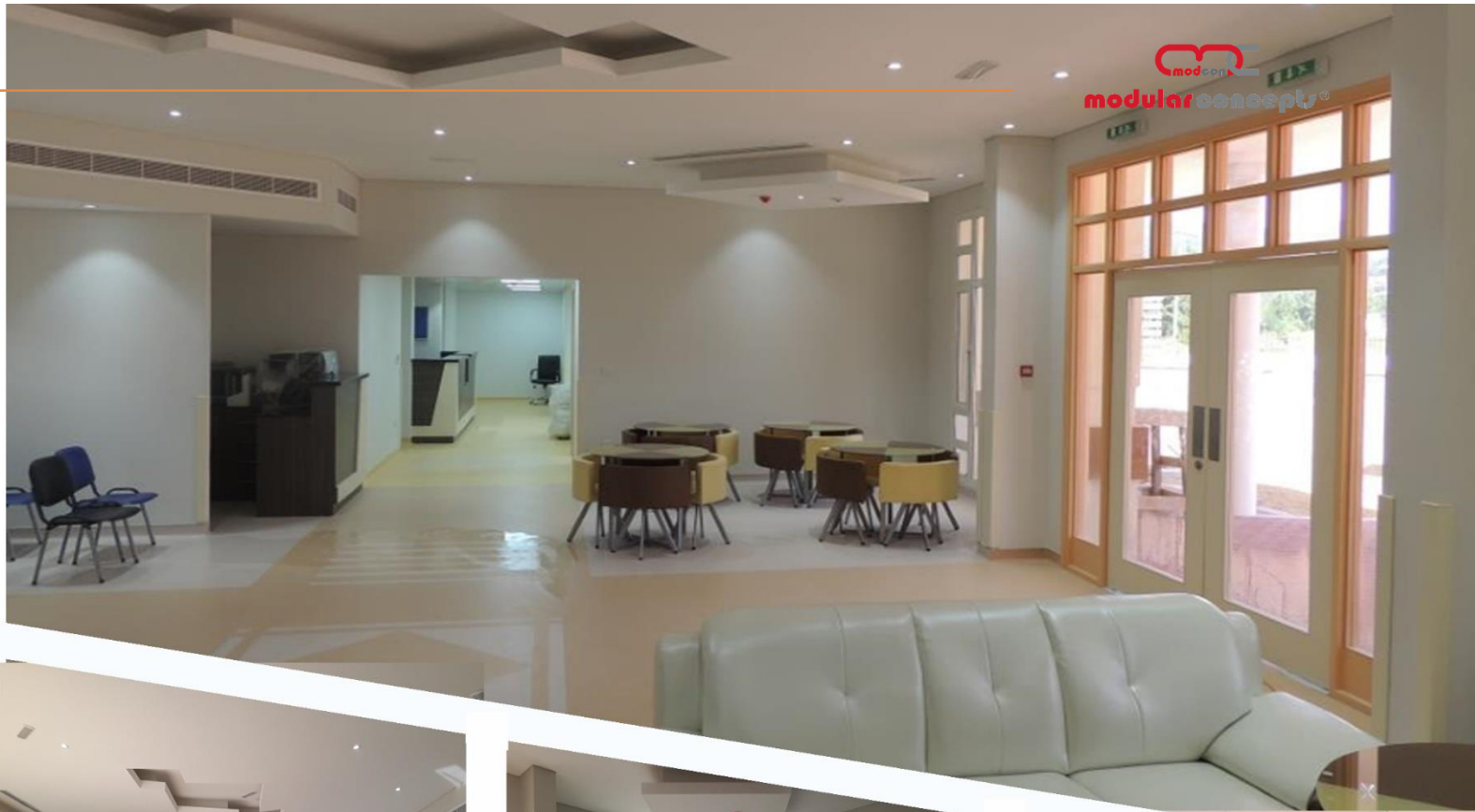
Total Cost:  
23M AED













# Project Reference 5



**Contract Title** : **EXTENSION OF AL MAROOF HOSPITAL COMOROS ISLAND(Prefab)**

**Client** : Khalifa Bin Zayed Al Nayan Foundation, Abu Dhabi

**Design and Build**

**Contractor** : Modular Concepts, LLC

**Consultant** : Modcon Group

**Scope of Work** : Modular Hospital Construction for MEP Works, Medical Gas system, Structural and Architectural work, Modular Operating Theatre, Radiation Shielding, Medical Engineering and Medical Equipment

**Duration** : 1 year

**Completed** : 2015

## Project Brief

The project comprises of an Extension of existing Al Maroof Hospital located in Moroni the capital of Comoros Union Africa as a donation from UAE KBZF organization by adding and fully supplying testing and commissioning of all 22 (2 OT, 12 ICU, Sterilization Dep. Radiology Department 2 Clinics). The scope of works under this contract include full modular construction in our factory in Jebel Ali then transport all to Comoros Union, fully equipment the facility, testing and commissioning as turnkey complete solution. (Project status: completed).





Modular Concepts was awarded the contract of turnkey Design, & Build of the extension of the Al Maroof Hospital in Comoros Island. This project was all Prefabricated Prefinished using the Volumetric Construction system developed by Modcon Group.

The modules were fabricated in UAE factory, and transported to Comoros Island by sea freight.

Parallel to the manufacturing of the modules the site work of substructure concrete work, masonry and plumbing was undergoing. The erection of the modules took only 12 days.

Our Contract also included all furniture and medical equipment supply, inhalation testing and commissioning. Including various systems of Electrical/ELV, Medical Gas system, medical equipment and furniture, medical equipment, external infrastructure works.

Factory:  
Jabel Ali - Dubai,  
UAE

25 modules

Manufacturing time:  
25 Days

Erection Time:  
8 Days













# Project Reference list

## Modular Construction (Prefab)

MODULAR VOLUMETRIC CONSTRUCTION PROJECTS			
NO	Project	Scope	Status
1	ETA Star Health Care DIP- UAE	60 Bed Hospitals - Design	Completed
2	Al Jimi Hospital Al Ain- UAE (Expansion Project)	Building consisting of three operation rooms, sterilization department and recovery	Completed
3	Elmahrouf Hospital - Union of Comoros - Expansion Project, Africa	Building consisting of 2 OT, Sterilization, Radiology, Intensive care unit - 12 beds, complete with support service facilities, Design & Build	Completed
4	Royal Chalet - Dubai Life Style City -Dubai, UAE	Vila - Design & Build	Completed
5	Reception Building -Traffic Directorate - Dubai, UAE	Office Building - Design & Build	Completed
6	Abu Dhabi Police Karafi Office - Abu Dhabi, UAE	Office Building - Design & Build	Completed
7	National molecular imaging center, Royal Court Affairs , Sultanate of Oman	On-site Modular Clean Rooms	Completed
8	Sheikh Khalifa Hospital – Seychelles, Africa	30 Bed hospital with OT, ICU, Sterilization, Radiology, Consultancy and support Services - Design & Build	Completed
9	Avitis Super Specialty Hospitals Pvt Ltd, Nemmara, Palakkad - India	200 Bed hospital with OTs, ICU Sterilization, Radiology, Consultancy and support Services - Design & Build	Completed
10	Koosamma Shambu Shetti Memorial Haji Abdullah Mother & Child Hospital - Udupi - Karnataka - India	Design and build 220 bed Hospital with 17343Sq meter of hybrid structure, utilizing conventional and modular construction	Complete
11	Office Building and warehouse – DIC Dubai - UAE	Design and build of office building (1300SQM) and warehouse (6500SQM).	On Going



# Branches

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Thank You  
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