



# **CASTING HAPPINESS**

PRECAST CONCRETE IS SAFE, VERSATILE, HEALTHY, OPTIMISED, DURABLE & ECO-FRIENDLY. PRECAST MAKES LIFE **SAFER AND HAPPIER**.

# Contents



# OUR FOUNDING FATHERS

Manama, the capital city of the Kingdom of Bahrain is located in the southeast coast of Arabian Gulf – a nation rich in culture and natural resources. In this beautiful country is where our founding fathers Abdul Aziz Mansoor Al-A'Ali and Ahmed Mansoor Al-A'Ali originate.

Abdul Aziz Mansoor Al-A'Ali from his younger years had seen his potential in running a business when he started the traditional local means of transport in the year 1900's. With his innovative mind and will power and because he saw the need for a smoother road and ease of accessibility, he discovered the future for concrete products in the region together with his brother Ahmed Mansoor Al-A'Ali. Till present, the business is growing a tremendous breakthrough in construction industry.

## CHAIRMAN'S MESSAGE

#### EAMCO was founded on three simple principles :

Operational excellence, quality products and superior customer service. More than three decades later, we zealously uphold these principles. They are not only the cornerstones of our success but also our pathfinders into the future.

EAMCO has adapted to all the changes in the market environment and successfully evolved and diversified. Today, our corporate standing is a testament to this ability.

Our corporate values revolve around our customers in all our relationships, integrity in all commitments, uncompromising quality and individual empowerment. These ideals define our reputation today.

As we expand and diversify seeking new frontiers to explore and develop, we are confident that our values will guide us on the right path.

We record here our sincere appreciation and thanks to our vast clientele, associates and employees for their inspiring confidence, contribution and support in our endeavors.

As we look forward to a challenging and rewarding future, EAMCO stands committed to the philosophies and ideals that have bought us so far.

### EAMCO CORPORATE PROFILE

Eastern Asphalt and Mixed Concrete Co. W.L.L., also known as EAMCO was established as a partnership in the year 1976 between Abdul Aziz Mansoor Al-A'Ali and Ahmed Mansoor Al-A'Ali, to manufacture asphalt construct roads and supply ready mixed concrete on the island. With the Middle East oil economy booming an urgent need was felt for fast-paced industrialization and housing. The industry called for the building of modern infrastructure to contribute to the rapidly growing construction industry in Bahrain. A resultant gap emerged between the growing demand for quality construction products and the limited supply capacity. EAMCO in its farsightedness grabbed the opportunity to bridge this gap.

EAMCO's flagship division - Eastern Asphalt was involved in major roads construction and contributed considerably in building roads network all over Bahrain. The various asphalt mixes produced by the plants for different applications meant that Eastern Asphalt could meet any specific requirement of the clients for projects, both big and small.

EAMCO's another division – Eastern Ready Mix has consistently produced high quality mixed concrete and has been a major contributor to infrastructural and housing projects in Bahrain. Over the years the composition of the concrete mixes has changed in tune with the technological changes in the construction industry and Eastern Ready Mix has stood up to such challenging situations at all times. This innovative and adaptive attitude of Eastern Ready Mix is evident from its multifarious concrete supplies to heavy industries, power projects, desalination plants, urea and aluminium plants, residential buildings and private villas etc.etc.

Visionary management and total dedication to quality and customer satisfaction saw the company grow exponentially in size, reputation and product lines. Firmly established as one of Bahrain's leading companies, EAMCO founders embarked on an ambitious diversification initiative. In the year 1985 to keep in tune with the latest construction methods and technology, a new division – Eastern Precast was set up... to deal with the manufacture and erection of hollow core slabs and other precast concrete elements. Precast construction then was relatively a new but promising concept in Bahrain and is now widely patronized by various sectors of the construction industry as an economical, reliable and practical solution over its cast-in-situ counterpart.

To support the above major divisions of EAMCO, the company has a stone crushing plant and an aggregate screening and sand washing plant which produces quality raw materials for production. It also has a fully equipped garage with a machinery workshop to look after the periodical and overall maintenance of all mobile equipments and vehicles and static plants. A centralised store which houses all the plants' and equipments' spares to ensure a good service backup. Each division has a Quality laboratory where the raw materials and the finished products are checked to match specifications.

EAMCO is a government approved supplier for all its products. EAMCO's plants and site operations are managed and supervised by engineers and technicians with extensive experience in their respective fields. The work force consists of skilled and unskilled employees backed up by external and in-house training facilities.







We believe in investing in the welfare and sustainability of our nation and its people. Since we opened our doors in 1985, we have made great efforts in putting this belief into action. From the way, we build homes, infrastructure, establishments and communities emerged a product that meets the needs of the present without compromising the ability of the future generation in satisfying their own needs. We balance the economic, social, and environmental impacts, recognizing that population growth will continue thus evaluating our products to adapt to its needs.





**Eastern Precast** is one of the major divisions of Eastern Asphalt and Mixed Concrete Company W.L.L. also known as EAMCO. It is one of the largest and fastest growing industries in the Kingdom of Bahrain producing architectural and structural precast concrete, pre-stressed hollow core slabs and other concrete range of products.

**Eastern Precast** established in 1985 deals with design, manufacture, delivery and erection of precast concrete elements and has been a promising construction concept in the Kingdom of Bahrain and is now widely patronized by various sectors of the construction and development industry as a reliable and practical erection system.

We have built a strong foundation through the years with our innovative technology and fully equipped facilities. Our factory has an area of 76,406 sq.m consisting of a production plant, stock yard, office building, logistics and transport. Eastern Precast employs qualified professionals who are great players in their field of expertise, and an estimate of 600 skilled and unskilled workers.

We are dedicated to what we promise on our stakeholders, that is why Eastern Precast is the top-notcher in tender and pre-qualification invites.

**Eastern Precast** is a trusted precast supplier by the government and private sectors.



# EASTERN PRECAST **CREDENTIALS**



Eastern Precast holds and maintains a quality policy for both its products and services, It adheres to the international quality management system as evident by its ISO Accreditation EN ISO 9001, EN ISO 14001, BS OHSAS 18001.

**Eastern Precast** is committed in its Quality Policy; To deliver quality products and services to the customer; To be the market leader; Maintains good profitability and turnover; Have satisfied and competent work force; and support the society for its development. Our Health and Safety Policy has been implemented for the benefit and welfare of our people. We are committed in the prevention of injury and ill health, prevention of pollution in the environment and continual improvement of our HSE management system, HSE performance and compliance to applicable Health, Safety and Environmental HSE laws in the Kingdom of Bahrain. We also consider international requirements related to health, safety and environmental hazards within the nature and scope of our business operation.



# MANUFACTURING

Precast components are manufactured in compliance with the Ministry of Works or International Standards or as per clients' specific requirements.

**Eastern Precast** offers a complete Integrated Precast Building System (IPBS) consisting of precast columns, precast/prestressed beams, stairs, flooring slabs and architectural cladding as an additional feature. The system mainly holds and maintains advantages in high quality building components flexibility in design layout and economical benefits and construction speed.

Eastern Precast also manufactures Prestressed Hollowcore Floor Slab system in a complete line of hollowcore slab profiles in thicknesses of 150mm, 200mm, 265mm, 320mm, 400mm and 500mm. The standard width of Hollowcore slabs is 1200mm.

#### Additional and other "Special" Precast Concrete Products manufactured are:

- Architectural Precast Insulated Wall Panels
- Precast Retaining Walls
- Architectural/Pigmented Boundary Walls
- Precast Concrete Tiles and Jumbo Slabs
- Precast Concrete Spacers
- Precast Culverts, Manholes and Barriers
- Architectural Elements (Flower Pots, Concrete Benches, Dust Bins, Bollards, Shelters)
- Latest is Precast Lightweight Panels

## MATERIAL

Our cement complies with British Standards BS EN 197-1:2000 and BS EN 197-2:2000. Fly ash complies with BS EN 450-1:2005 and aggregates comply with BS EN 12620:2002. Admixtures complies with BS EN 480:1997. Pre-stressing steel are stress-relieved low relaxation strand complying with BS EN 5896:1980. Strands are clean and free of deleterious substances at the time of casting. Concrete shall have minimum characteristic 28-day strength ranging from 35 to 60MPa and/or shall conform to the requirements of Ministry of Works Standard Specification for Construction Works.



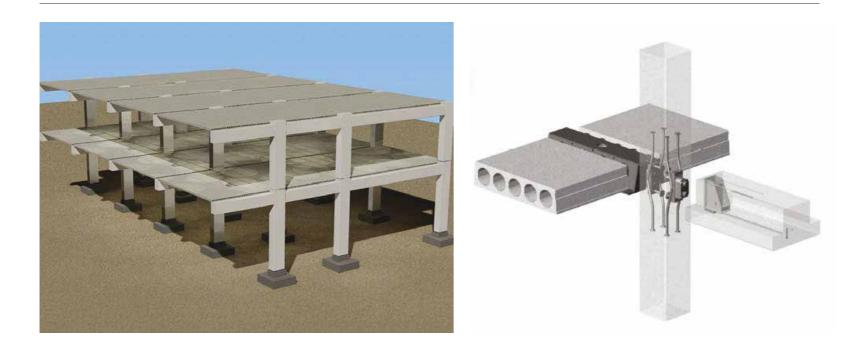
# **QUALITY CONTROL AND LABORATORY**

Concrete is produced using latest Elematic Batching Plant Technology, a highly controlled quantity system and maintained operational standard. Eastern Precast Laboratory is equipped with latest testing equipment to be precise with the monitoring of concrete quality and its components in accordance with ISO 9001:2008 Procedure Manual. Making and curing of standard test cubes for compressive strength test are executed in compliance with BS EN 12390-1:2000 and BS EN 12390-2:2008, and tested in accordance with the procedure stated in BS EN 12390-3:2000. Test Method for Hardened Concrete to acquire the release strength is 70-80 percent (%) of the required design concrete strength prior to de-tensioning of pre-stressing strands.



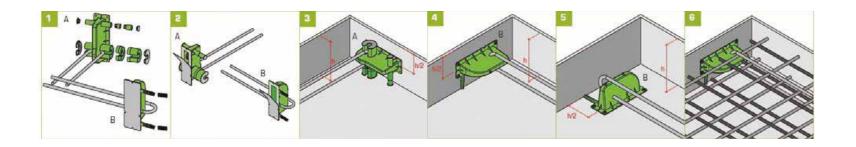
# DESIGN

In Eastern Precast, we have a team of talented and qualified designers experienced in a vast number of projects all over the Gulf region. We ensure that the actual design is in line with contract agreement, identifying the difference between actual and tender design, updating the technical literatures in the library with the current state-of-the-art technology. Recently, we have applied an innovative solution for joint connections which is the corbel less system and tenloc precast panel connector.



3D Building Model

Corbel Less System



# **DELIVERY AND HANDLING**

Precast Concrete products are lifted and supported during manufacturing, stock piling, transportation and erection operations at the lifting positions nominated by Eastern Precast Project and Erection Engineers. Transportation and site handling are performed with safety passing equipments supported by a proven erection methodology and certified by TUV.



# ERECTION

Not only do we produce precast elements, we also provide complete erection works and procedures in construction of buildings whilst the building contractor shall be responsible for providing suitable access at the site that will enable trucks and cranes to operate under their own power. All precast elements are erected corresponding to the layout given on the general arrangement drawings or the erection drawings and lifting plan and capacity. Any reinforcement required as for slab joint reinforcement and additional connections are placed as detailed on the construction drawings. Temporary shoring and bracing, if necessary, comply with EPC recommendations. Bearing strips are accurately set where required. In compliance with our HSE policy and implementation, all of our riggers and crane operators have undergone training and are certified by TUV.



# PRODUCTION

Each project is unique with its technical & client requirements that is why a method statement is essential to start with. Precast Method Statement complies with International standards, covers all activities related to the production of precast concrete members such as; mould works, cast-in, steel reinforcement, concreting works, curing, demoulding and stripping which, coincide with quality, health, safety and envioronmental requirements.



# WHAT IS PRECAST CONCRETE?



Precast concrete product is a factory-made component manufactured with concrete and which, later together with other elements, become part of a building structure. Precast concrete elements are prepared, cast and hardened at specially equipped plants at a permanent location. Once a precast concrete product is produced under strict quality control is satisfactory, with the mark of quality passed sticker, the unit is stored properly until delivery. In our factory yard, another visual inspection is made before it gets transported to the erection site.

#### Why choose Precast Concrete?

- Safe Concrete does not burn. Concrete construction prevents the spread of fire from one building to another. It is sufficiently strong to resist impacts, blasts and natural catastrophes like earthquakes, tornadoes and floods.
- Eco-friendly, made of natural raw materials (stones, gravels, sand, cement), locally available almost everywhere and in an enormous quantity, precast concrete minimizes the whole life cycle impact on the environment when compared with other construction materials. Precast concrete units can entirely be re-used or recycled (almost 100% of a concrete building can be recycled, no matter how heavily reinforced).
- Prefabricated concrete elements
- Shorter Construction period
- Durable Concrete is used where the structural stability has to be maintained for long period. Effective design detailing helps to lengthen the life of a concrete building. Eastern Precast offers guidance on building design for durability.
- Affordable
- Quality Controlled
- Sustainable
- UV Sensitivity
- Precast does not degrade from environment exposure to sunlight.



Precast building system is suitable to almost all types of buildings whether industrial, utility and service buildings, commercial offices, residential apartments, residential villas and townhouses, hotels and resorts, bridges, underground or overhead pedestrian walkways, road infrastructure projects, and cladding works.

#### Eastern Precast Building System offers the following advantages:

- Produce ECO buildings based on British and American Standards
- Sustainable product
- Reduced overall construction time
- High quality building components
- 2 hours fire rating thus eliminating additional encasement
- Flexibility in design layout
- Excellent thermal wall insulation capacity
- Light weight panels
- Contains recyclable materials that is friendly to down cycling
- Value engineered products that can be disassembled

# LIGHTWEIGHT CONCRETE ELEMENTS



ECO Buildings



# THE FIRST THERMO SOLID LIGHTWEIGHT PANEL IN BAHRAIN

#### Non-structural Precast Concrete

The First Thermal Insulated Panel is a solid concrete, made up of lightweight aggregates, cement and an expansion agent which entrained the air to the fresh mixed concrete. It offers excellent thermal insulation approved by the Ministry of Works in the Kingdom of Bahrain.

#### **ADVANTAGES:**

- Thermo Insulated and Engineered
- Lower your cooling system cost
- Excellent heat resistant wall complying to EWA's Thermal Insulation U-value requirement
- Has high fire resistant property
- Flexibility in Architectural Design
- Quick and clean construction
- Easy cut-out for MEP requirements
- Reduce Dead load leading to smaller beams, columns and foundation sizes
- Reduce Seismic weight
- Cost Efficient
- Complying to Sustainable Development

#### COMPLIANCE AND TESTING:

- Material Compliance Report by Ministry of Works No. 1800/2016
- Order No. 8/1999 Thermal Insulation Regulations in Bahrain
- British Standard 1881 Part 124:1988 Chemical Analysis of Concrete
- British Standard EN 12390 3: 2009 Concrete Test
- British Standard EN 12390 7: 2000 Density Test

#### **PHYSICAL PROPERTIES:**

- Compressive Strength of 6.8 N/mm<sup>2</sup> to 7.8 N/mm<sup>2</sup>
- Density 900 kg/m<sup>3</sup> enough to float in water
- Thermal Resistance







In our ongoing effort for continuous innovation and improvement to meet our valued clients' needs and satisfaction, Eastern Precast is pleased to introduce the "JUMBO SLABS" precast products.

EPC'S standard nominal sizes of Jumbo Slabs are 1200x1200mm, 600x600mm and 600x600mm this product can facilitate color-matching to have similar and outstanding architectural upshot. Standard slab colors are Caramel, Pearl White, Rose, Dove Gray and Titanium with variation of surface finishes from smooth to hard sandblast. Subject to clients' satisfaction, customized finish can also be produced to blend into existing structure or to transform perspective into a reality.

Jumbo Slabs have optimized design capabilities with different thickness specialized to carry heavy loads and at the same time complying with clients' requirements. Standard slab thicknesses are 100mm which is normally used for human load, 120mm which is suitable for light weight vehicle loads and 200mm which is designed for heavy weight trucks. Additional options offered by jumbo slabs features the following:

#### A) LIGHTSTONE

- Professional Finish
- Long-life LED integration

#### B) NANO-PROTECTIVE COATING

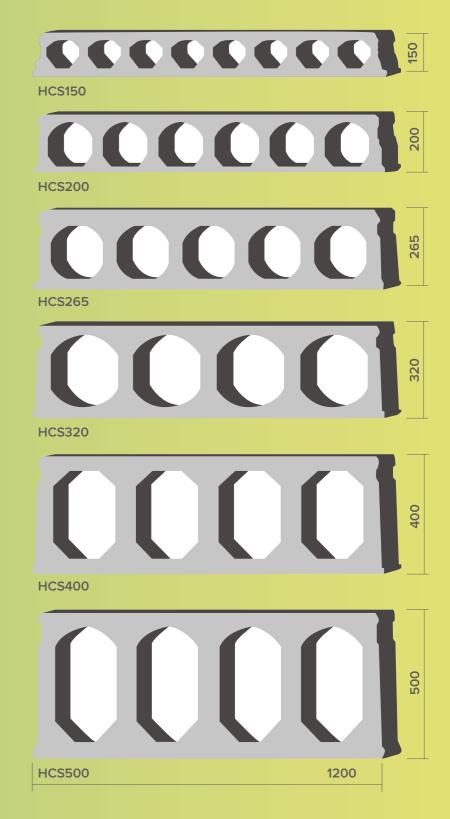
- Water resistant
- Anti-stain
- Excellent exterior and interior protection
- Minimize dirt absorption
- Simple application
- Provides color enhancement
- Maintenance free

# HOLLOWCORE SLABS

# PRECAST PRESTRESSED HOLLOWCORE SLAB SYSTEM

Since its introduction in 1985, Eastern Precast Hollowcore slabs have been widely accepted in the construction industry in the Kingdom of Bahrain as an economical and practical solution over its cast-in-situ counterpart. Hollow core slabs have been a competitive alternative to cast-in-situ and have proven to be a practical choice for floor and roofing members worldwide. Its speed in manufacturing, light in weight resulting into reduced foundation cost, long-span capability and versatility are few of the benefits attributed to the use of the hollowcore slabs.

Hollow core slabs are produced using an extruder machine on a 150 meter long line of steel beds. Fresh concrete is thoroughly compacted around the core formers and prestressing strands. The strands are anchored at bulkheads on both ends of the form. EPC offers a complete line of hollow core slab profiles in thicknesses of 150mm, 200mm, 265mm, 320mm, 400mm and 500mm. The standard width of Hollowcore slabs is 1200mm.



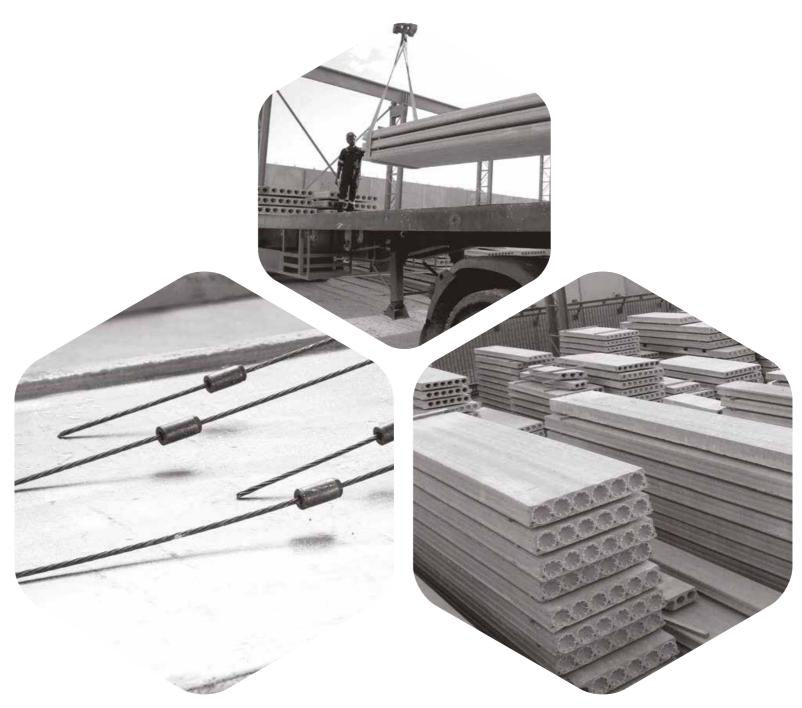
# **BENEFITS AND ADVANTAGES OF HOLLOWCORE PRODUCTS**

Factory Production | Structurally Efficient | Design Flexibility | Long span, up to 20m Rapid Installation | Fire resistance | Reduced on-site labour | Favorable cost rate



# **SERVICE AND STRENGTH**

Design, Manufacture and Installation of Quality products. Over 40 years of extensive and diversified experience. Maintains quality policy for products and services Integrity in all commitments to meet customers satisfaction

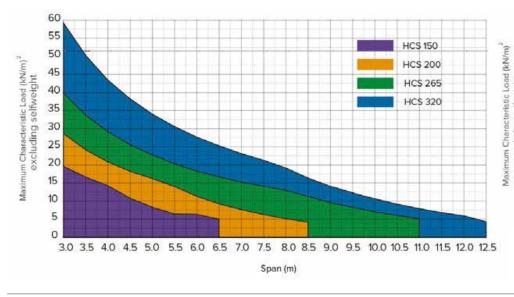


#### **Technical Details**

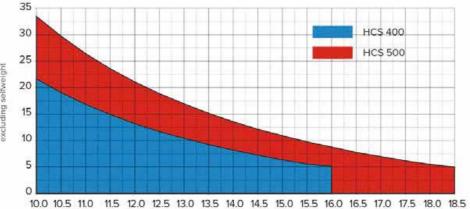
# HOLLOWCORE SLAB PROPERTIES AND TECHNICAL DETAILS

Slab Thickness	Nominal sl	ab weight	Cross-sectional	concrete cover	Concrete Grade	Minimum bearing length	
	without joint grout	with joint grout	Area (mm²)	(90-minute Fire Rate)	(standard)		
150mm	2.08 kN/m <sup>2</sup>	2.18 kN/m <sup>2</sup>	102,031	30 mm	G50	80 mm	
200mm	2.35 kN/m <sup>2</sup>	2.48 kN/m <sup>2</sup>	115,223	30 mm	G50	80 mm	
265mm	3.37 kN/m <sup>2</sup>	3.54 kN/m <sup>2</sup>	164,913	30 mm	G50/G60	80 mm	
320mm	3.75 kN/m <sup>2</sup>	3.94 kN/m <sup>2</sup>	183,813	30 mm	650/G60	120 mm	
400mm	4.84 kN/m <sup>2</sup>	5.07 kN/m <sup>2</sup>	236,937	30 mm	G60	150 mm	
500mm	6.04 kNlm2	6.35 kN/m2	295.658	30 mm	G60	150 mm	

Note: Standard Hollowcore width = 1200 mm. Strand Tensile Strength, fpu = 1770 MPa.

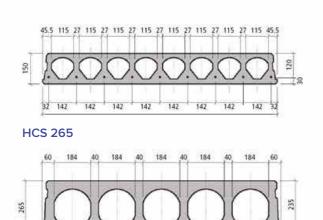


#### Hollowcore Slabs Span-Load Chart

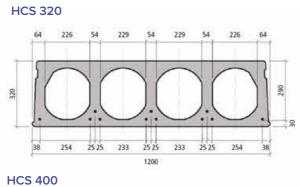


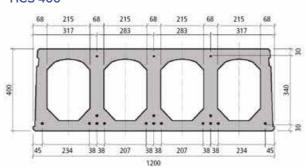
#### **Cross-Section**

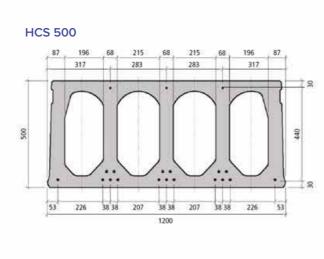
40 209 30 194



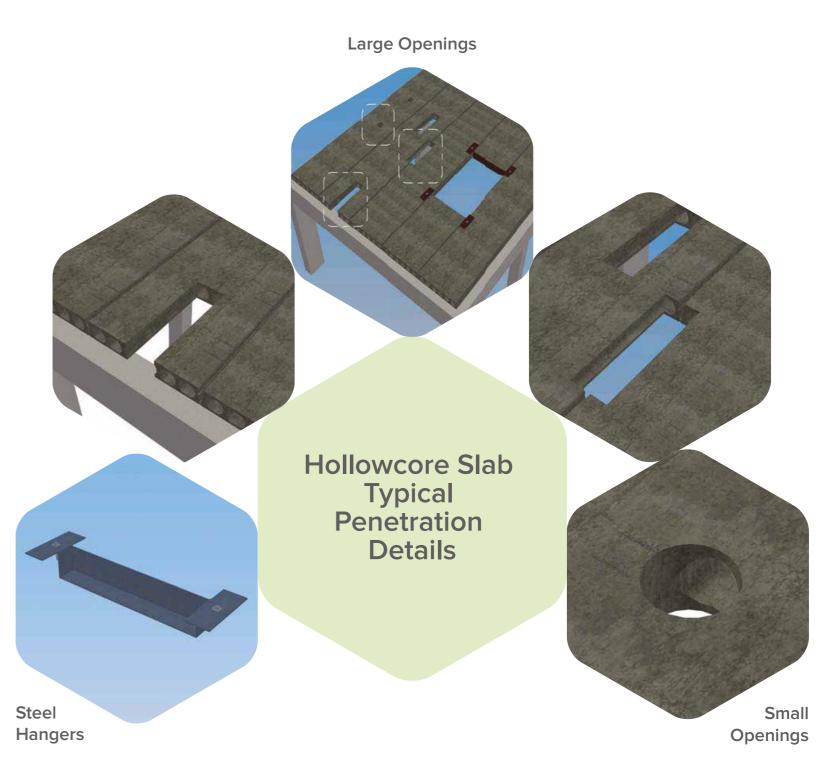
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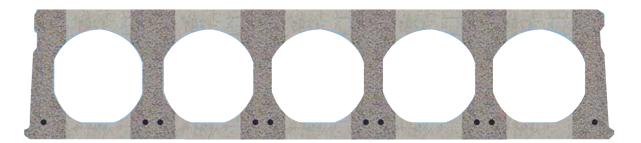




34 HOLLOWCORE SLABS

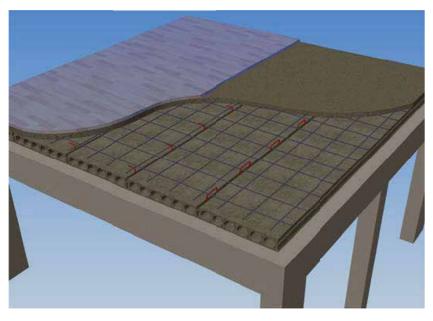


GUIDE FOR SAFE DRILLING

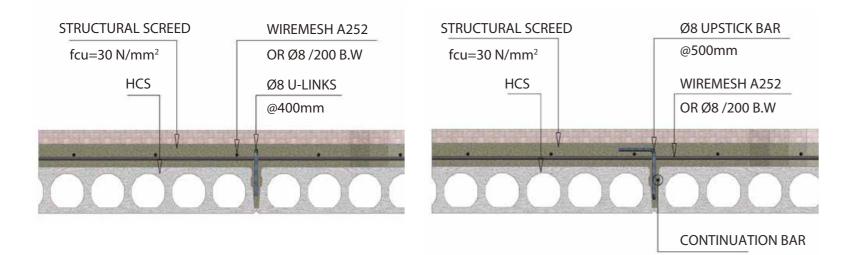


## **STRUCTURAL TOPPING**

Hollowcore Slab's structural capacity can be enhanced by the introduction of structural topping. The minimum thickness required is 50mm with concrete cube strength at 28th day of at least 30MPa. It is further recommended that wire mesh be used to reinforce the structural topping. With proper connection between Hollowcore Slab and topping, the two will act as a composite section. This increases the load bearing capacity of the slab and is especially suitable with greater imposed loads.



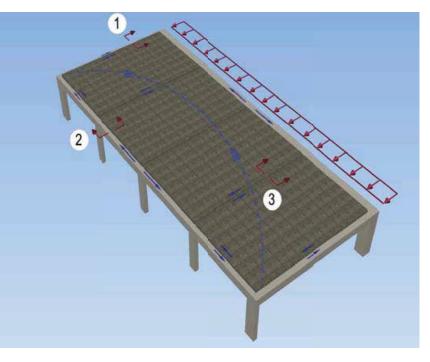
**Typical Reinforcement Detail of Structural Topping** 



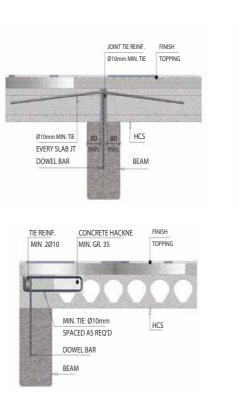
## **DIAPHRAGM ACTION**

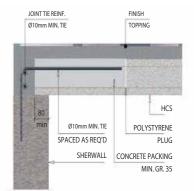
A series of hollowcore slabs will provide a basic diaphragm capable of resisting lateral loads in the form of lateral earth pressures, wind loads or seismic loads by a grouted slab assembly provided proper connections and details are installed. The function of a diaphragm is to receive these loads from the building elements to which they have been applied and transmit the loads to the lateral-resisting elements which carry the lateral loads to the foundation.

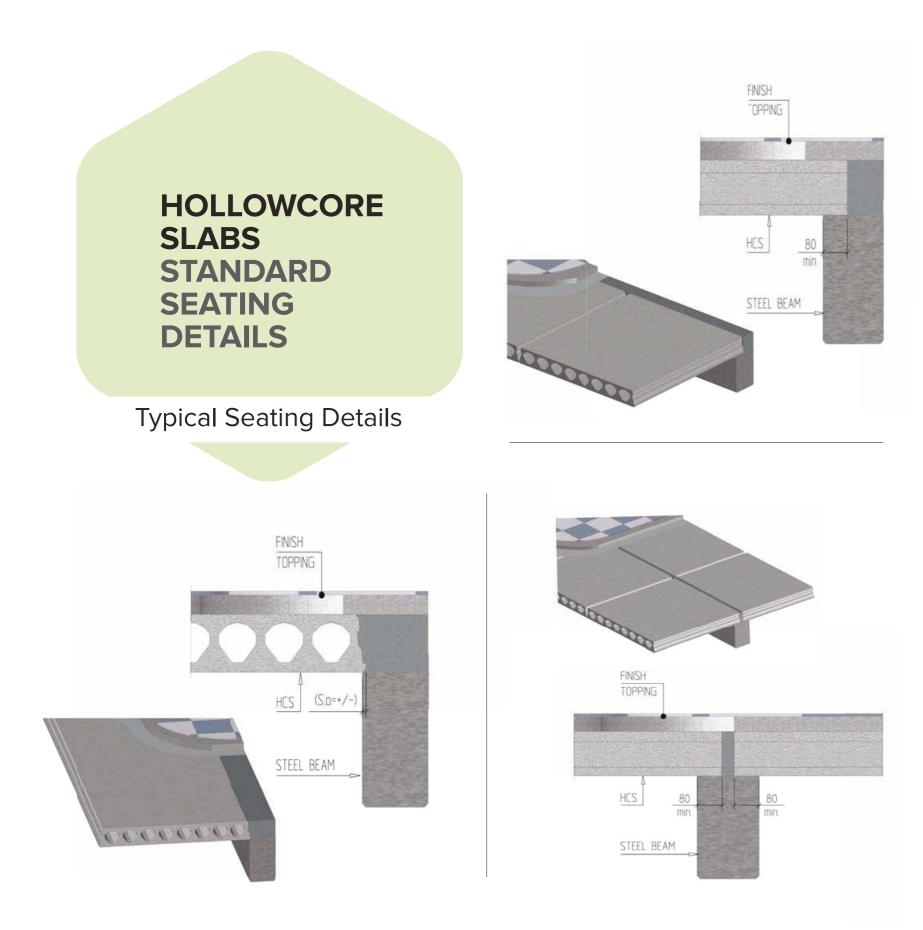
A tie system that satisfies the strength and force transfer demands on a diaphragm will generally satisfy the detailing requirements for structural integrity. The diaphragm must have the strength to transfer imposed lateral loads from the point of application to the point of resistance. The diaphragm spans between lateral-resisting elements as a deep beam or tied arch. Shears and tensions will develop and must be resisted in the diaphragm to have a complete system. Hollowcore Slabs may be used efficiently to produce a diaphragm either with or without a composite structural topping. Typical connection details that provides interaction between the Hollowcore Slabs and primary structure are shown on the sectional details as follows.

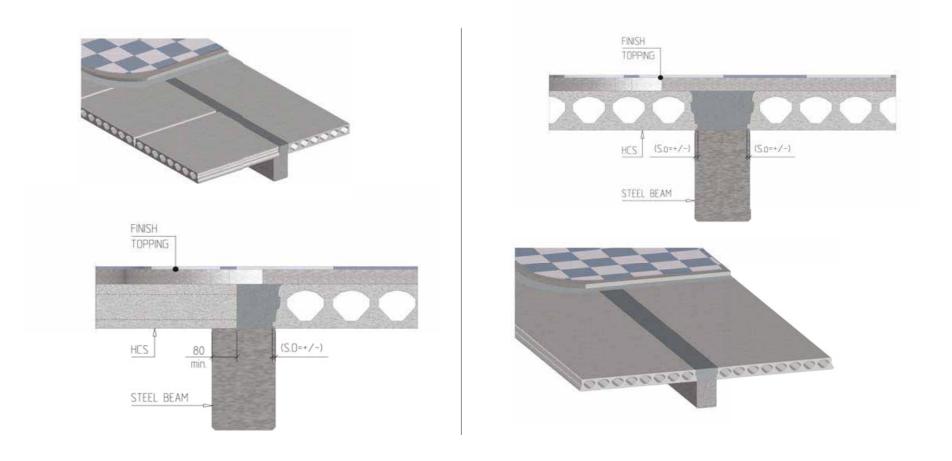


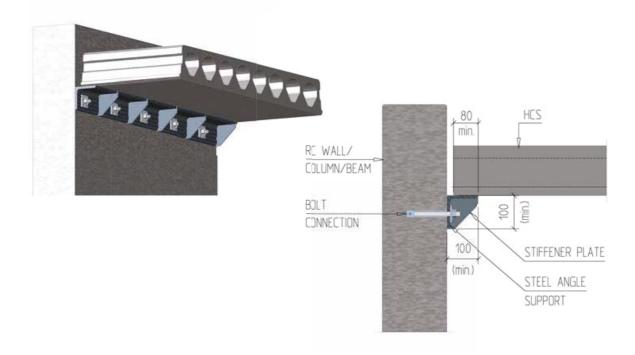
Schematic Diagram of Diaphragm Action

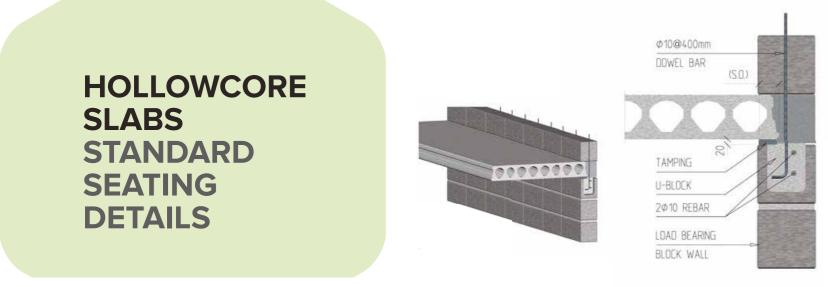




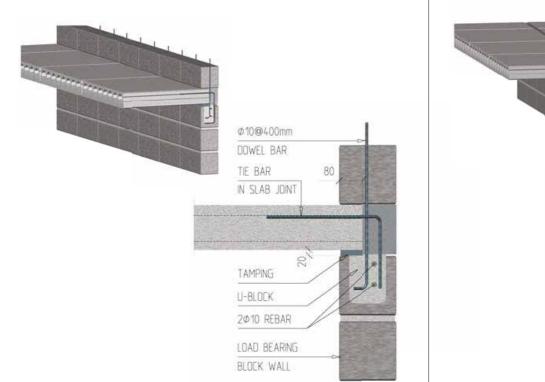


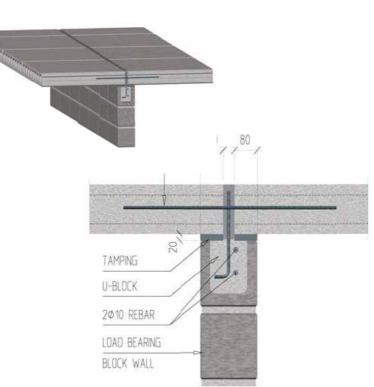






# Load Bearing Blockwall Support







#### ALLOWABLE HOLLOWCORE LOADINGS (kN/m<sup>2</sup>)

TABLE INDICATES MAXIMUM CHARACTERISTIC LOADINGS AT SERVICEABILITY LIMIT STATE (SLS) AND MAXIMUM DESIGN LOAD AT ULTIMATE LIMIT STATE (ULS) EXCLUDING SLAB WEIGHT.

UNIT SIZE SELFWEIGHT LOADINGS		150 mm 2.48 kN/m2		200 mm 2.72 kN/m2		265 mm 3.54 kN/m2		320 mm 3.94 kN/m2		400 mm 5.07 kN/m2		500 mm 6.35 kN/m2	
		CLEAR SPAN LENGTH (m)	3.0 m	19.70	28.00								
3.5 m	16.60		23.60										
4.0 m	14.20		20.30										
4.5 m	10.80		15.50	18.20	25.90								
5.0 m	8.30		12.00	16.20	23.10								
5.5 m	6.40		9.40	14.00	20.00								
6.0 m	6.30		9.20	11.30	16.20								
6.5 m	5.00		7.40	9.20	13.30	16.60	23.60						
7.0 m				7.60	11.00	15.20	21.70						
7.5 m				6.20	9.10	14.00	20.00						
8.0 m				5.10	7.50	13.00	18.60	19.10	27.70				
8.5 m				4.20	6.30	11.20	16.10	16.40	24.00				
9.0 m						9.50	13.70	14.10	20.70				
9.5 m				1		8.20	11.90	12.20	18.10				
10.0 m						7.00	10.20	10.60	15.80				
10.5 m						6.00	8.80	9.10	13.70				
11.0 m						5.10	7.50	7.90	12.10				
11.5 m								6.80	10.50	15.00	22.00		
12.0 m						T		5.90	9.30	13.30	19.60		
	12.5 m							4.30	6.70	11.80	17.50		
	13.0 m									10.50	15.70		
	13.5 m									9.30	14.00		
	14.0 m									8.20	12.50		
	14.5 m									7.30	11.20	12.20	18.10
	15.0 m									6.40	10.00	11.00	16.40
	16.0 m									5.20	8.00	8.80	13.30
	17.0 m											7.00	10.80
	18.0 m											5.50	8.70
	19.0 m											4.70	6.80
	20.0 m												

# PRESTRESSED HOLLOWCORE SLABS

FIGURES ARE FOR GUIDANCE ONLY. PLEASE CONSULT OUR TECHNICAL DESIGN TEAM FOR DETAILED CALCULATIONS.

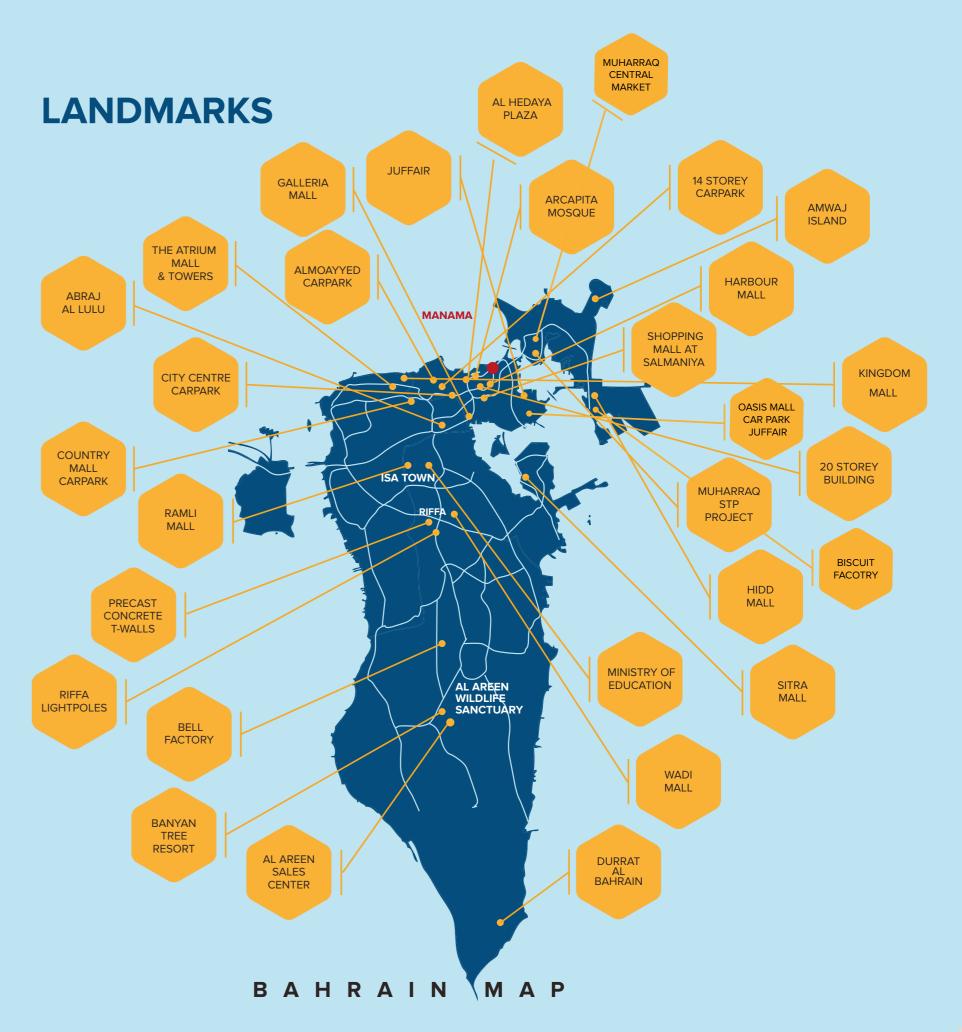
#### ALLOWABLE HOLLOWCORE LOADINGS WITH STRUCTURAL SCREED (kN/m<sup>2</sup>) TABLE INDICATES MAXIMUM CHARACTERISTIC LOADINGS AT SERVICEABILITY LIMIT STATE (SLS) AND MAXIMUM DESIGN LOAD AT ULTIMATE LIMIT STATE (ULS) EXCLUDING SLAB WEIGHT.

UNIT SIZE 150 mm 200 mm 265 mm 320 mm 400 mm 500 mm SELFWEIGHT 2.48 kN/m2 2.72 kN/m2 3.54 kN/m2 3.94 kN/m2 5.07 kN/m2 6.35 kN/m2 LOADINGS SLS ULS SLS ULS SLS ULS SLS ULS SLS ULS SLS ULS 50mm THK. STRUCTURAL SCREED 100mm THK. STRUCTURAL SCREED 3.5 m 21.30 30.20 4.0 m 18.40 26.20 4.5 m 16.10 22.90 22.00 31.20 5.0 m 14.20 20.30 19.60 27.80 5.5 m 12.80 18.30 17.60 25.00 6.0 m 11.10 15.90 16.00 22.80 6.5 m 9.00 13.00 14.60 20.80 19.40 27.60 7.0 m 7.20 10.50 13.40 19.20 17.80 25.30 7.5 m 5.80 8.50 12.30 17.60 16.40 23.40 8.0 m 10.50 15.10 15.20 21.70 22.40 32.40 8.5 m 9.00 13.00 14.20 20.30 20.80 30.10 9.0 m 7.70 11.20 13.20 18.90 19.30 28.00 9.5 m 11.60 16.60 16.90 24.70 6.60 9.60 10.0 m 5.50 8.10 10.00 14.40 14.80 21.70 10.5 m 8.60 12.40 13.00 19.20 11.0 m 7.30 10.60 11.40 17.00 11.5 m 10.00 15.00 21.80 31.50 6.20 9.10 12.0 m 5.30 7.80 8.90 13.50 19.60 28.40 12.5 m 7.80 11.90 17.60 25.60 13.0 m 6.80 10.50 15.80 23.10 13.5 m 6.00 9.40 14.30 21.00 14.0 m 12.90 19.10 14.5 m 11.50 17.10 18.30 26.60 15.0 m 10.20 15.30 16.60 24.20 16.0 m 12.10 13.80 20.30 7.90 17.0 m 6.30 9.50 11.10 16.50 18.0 m 8.80 13.30 19.0 m 6.90 10.70 5.50 8.40 20.0 m

FIGURES ARE FOR GUIDANCE ONLY. PLEASE CONSULT OUR TECHNICAL DESIGN TEAM FOR DETAILED CALCULATIONS.

# PRESTRESSED HOLLOWCORE SLABS







FLOATING RESTAURANT

> PROJECT: AMWAJ LAGOON & FLOATING RESTAURANT

LOCATION: AMWAJ ISLAND

CLIENT: AHMED MANSOOR AL AA'LI CO. BSE

APPLICATION: PRECAST COLUMNS PRECAST CURVED BEAMS PRESTRESSED HOLLOWCORE SLABS

CONSTRUCTION TIME: 6 MONTHS

TOTAL AREA: 100,000 M<sup>2</sup>



# COUNTRY MALL CARPARK

PROJECT: COUNTRY MALL CARPARK BUILDING

LOCATION: ABU SAIBA

CLIENT: M/S PROJECTS CONSTRUCTION CO. W.L.L

APPLICATION: PRECAST COLUMNS PRECAST PRESTRESSED BEAMS PRECAST SHEAR WALL PANELS (200mm) PRECAST RAILINGS PRESTRESSED HOLLOWCORE SLABS

CONSTRUCTION TIME: 3 MONTHS

**TOTAL AREA:** 8,200 M<sup>2</sup>

Opening Soon

1155110



# MINISTRY OF EDUCATION

PROJECT: MOE MAIN ENTRANCE GATE

LOCATION: ISA TOWN

CLIENT: ABDUL RAHMAN AL MANSOORI CONTRACTING CO. W.L.L

APPLICATION: PRECAST BOUNDARY WALL PANELS PRECAST BOUNDARY WALL COLUMNS

CONSTRUCTION TIME: 2 WEEKS

**TOTAL AREA:** 200 M<sup>2</sup>





PROJECT: RAMLI MALL

LOCATION: A' ALI

CLIENT: AL NAMAL CONSTRUCTION CO. WLL

APPLICATION: PRECAST COLUMNS PRECAST PRESTRESSED BEAMS PRECAST SPANDREL BEAMS PRECAST SHEARWALLS PRECAST STAIRS SLABS PRESTRESSED HOLLOWCORE SLABS

CONSTRUCTION TIME: 6 MONTHS

**TOTAL AREA:** 80,000 M<sup>2</sup>





PROJECT: SITRA MALL

LOCATION: SITRA

CLIENT: AHMED MANSOOR AL AALI CO. BSC

APPLICATION: PRECAST COLUMNS AND BEAMS PRECAST WALL PANELS PRECAST STAIRS SLABS PRESTRESSED HOLLOWCORE SLABS

CONSTRUCTION TIME: 8 MONTHS

**TOTAL AREA:** 50,000 M<sup>2</sup>



PROJECT: DURRAT AL BAHRAIN, ATOLL TWO & THREE, 160 VILLAS

LOCATION: DURRAT AL BAHRAIN

CLIENT: CHAPO (BAHRAIN W.L.L)

APPLICATION: PRECAST INSULATED WALL PANELS (180 & 230MM THICK) PRECAST WALL PANELS PRECAST SOLID WALL PANELS PRECAST LINTEL BEAMS PRECAST STAIR SLABS HOLLOWCORE SLABS (200MM THICK)

CONSTRUCTION TIME: 8 MONTHS (5 VILLAS PER WEEK)



PROJECT: DURRAT AL BAHRAIN ATOLL ONE, 83 VILLAS

> LOCATION: DURRAT AL BAHRAIN

CLIENT: M/S PROJECTS CONSTRUCTION CO. W.L.L

APPLICATION: PRECAST INSULATED WALL PANELS (180 & 230MM THICK) PRECAST SOLID WALL PANELS PRECAST LINTEL BEAMS PRECAST STAIR SLABS HOLLOWCORE SLABS (200MM THICK)

> CONSTRUCTION TIME: 4 MONTHS (5 VILLAS PER WEEK)

TOTAL AREA FOR ALL VILLAS: 60,000 M<sup>2</sup>





# ARCAPITA MOSQUE

PROJECT: ARCAPITA MOSQUE

LOCATION: MANAMA

CLIENT: NASS- MURRAY & ROBERTS JOINT VENTURE

APPLICATION: PRECAST CLADDING PANELS

CONSTRUCTION TIME: 3 MONTHS

**TOTAL AREA:** 2,000 M<sup>2</sup>



WADI MALL

> LOCATION: **RIFFA**

CLIENT: AL NAMAL CONSTRUCTION CO. WLL.

**APPLICATION:** PRECAST COLUMNS PRECAST PRESTRESSED BEAMS PRESTRESSED HOLLOWCORE SLABS

**CONSTRUCTION TIME: 5 MONTHS** 

TOTAL AREA: **35,000 M**<sup>2</sup>



AL AREEN SALES CENTRE

PROJECT: AL AREEN SALES CENTRE

LOCATION: AL AREEN

CLIENT: AL HAMAD CONSTRUCTION AND DEVELOPMENT COMPANY

# **APPLICATION:**

PRECAST COLUMNS PRECAST PRESTRESSED BEAMS PRECAST SOLID WALL PANELS PRECAST SHEARWALLS PRECAST FORM SLABS PRECAST STAIRS SLABS PRECAST PARAPETS PRESTRESSED HOLLOWCORE SLABS

CONSTRUCTION TIME: 2 MONTHS



# RIFFA LIGHTPOLES

PROJECT: SHEIKH SALMAN HIGHWAY DEVELOPMENT

LOCATION: WEST RIFFA

CLIENT: MINISTRY OF STATE OF MUNICIPALITIES AND ENVIRONMENT AFFAIRS

QUANTITY: 62 LIGHTPOLES

APPLICATION: PRECAST SHAFTS AND CROWNS

SURFACE TREATMENT: BUFF COLOUR SANDBLAST FINISH



**AL AREEN** DESERT RESORT

> **PROJECT:** AL BANYAN TREE RESORT, 78 VILLAS- 1

& 2 BEDROOM POOL VILLA

LOCATION: AL AREEN

CLIENT: AL HAMAD CONSTRUCTION AND DEVELOPMENT COMPANY

**APPLICATION:** PRECAST SOLID WALL PANELS (120, 150, 250MM THICK) PRECAST PRESTRESSED BEAMS PRECAST CORNICES PRECAST FINIALS PRECAST SOLID SLABS PRESTRESSED HOLLOWCORE SLABS (150MM THICK) PRECAST BOUNDARY WALLS (156MM THICK)

**CONSTRUCTION TIME: 5 MONTHS** 

TOTAL AREA: 18,700 M<sup>2</sup>



# CITY CENTRE CARPARK

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PROJECT: BAHRAIN CITY CENTRE CARPARK BUILDING

LOCATION: SANABIS DISTRICT

CLIENT: CEBARCO- WCT, W.L.L

APPLICATION: PRECAST COLUMNS PRECAST PRESTRESSED BEAMS PRESTRESSED HOLLOWCORE SLABS (200, 400, 500MM THICK)

CONSTRUCTION TIME: 8 MONTHS

TOTAL AREA: 125,000 M<sup>2</sup>



#### ALMOAYYED CARPARK

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PROJECT: ALMOAYYED MULTI-STOREY CARPARK BUILDING

LOCATION: SEEF DISTRICT

CLIENT: ALMOAYYED CONTRACTING

APPLICATION: PRECAST COLUMNS PRECAST CORNICES PRECAST PRESTRESSED PRECAST SOLID SLABS PRECAST SPANDREL BEAMS PRECAST SHEARWALLS (200MM THICK) PRECAST WALL PANELS & RAILING (135MM THICK) PRECAST STAIR SLABS PRECAST LANDING SLABS PRECAST PARAPETS (135MM THICK) PRESTRESSED HOLLOWCORE SLABS (200MM THICK)

CONSTRUCTION TIME: 5 MONTHS

TOTAL AREA: 30,000 M<sup>2</sup>



### HARBOUR MALL

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EL.

PROJECT: HARBOUR MALL BUILDING

LOCATION: BAHRAIN FINANCIAL HARBOUR, MANAMA

CLIENT: AL HAMAD CONSTRUCTION AND DEVELOPMENT COMPANY

APPLICATION: PRECAST COLUMNS PRECAST PRESTRESSED BEAMS PRECAST SOLID WALL PANELS (170, 200, 250MM THICK) PRESTRESSED HOLLOW CORE SLABS (150, 200, 265, 320MM THICK)

CONSTRUCTION TIME: 5 MONTHS

**TOTAL AREA:** 70,000 M<sup>2</sup>



PROJECT: HIDD MALL

LOCATION: HIDD

CLIENT: AL NAMAL CONSTRUCTION CO. WLL

APPLICATION: PRECAST COLUMNS PRECAST PRESTRESSED BEAMS PRECAST SHEARWALLS (200MM THICK) PRECAST STAIRCASES HOLLOWCORE SLABS (200, 320, 400MM THICK)

CONSTRUCTION TIME: 8 MONTHS

**TOTAL AREA:** 43,500 M<sup>2</sup>



GALLERIA MALL AND CARPARK

P.P.P.

PROJECT: GALLERIA MALL AND CARPARK

LOCATION: ZINJ

CLIENT: DADABHAI CONSTRUCTION

APPLICATION: PRECAST COLUMNS PRECAST PRESTRESSED BEAMS PRECAST SHEARWALLS (250MM THICK) PRECAST SHEARWALLS (300MM THICK) PRECAST STAIRS/LANDINGS PRECAST SOLID SLABS HOLLOWCORE SLABS (150, 200, 265, 320, 400, 500MM THICK)

CONSTRUCTION TIME: 4.5 MONTHS

**TOTAL AREA:** 22,583 M<sup>2</sup>



# BELL FACTORY

PROJECT: BELL FACTORY

LOCATION: BAHRAIN INTERNATIONAL CIRCUIT @ ZALLAQ

CLIENT: AHMED OMER TRADING & CONTRACTING EST.

APPLICATION: PRECAST COLUMNS PRECAST PRESTRESSED BEAMS PRECAST SOLID PANEL 230MM THICK PRECAST PARAPET PRECAST STAIRCASES PRECAST FORMSLABS PRECAST INSULATED PANEL 230MM THICK HOLLOWCORE SLABS (200, 320, 400MM THICK) HOLLOWCORE SLABS USED AS WALLS (200MM THICK)

CONSTRUCTION TIME: 2 MONTHS

**TOTAL AREA:** 6,736 M<sup>2</sup>





PROJECT: JUFFAIR MALL

LOCATION: JUFFAIR

CLIENT: AL NAMAL CONTRACTING & TRADING CO. WLL

#### **APPLICATION:**

PRECAST COLUMNS PRECAST PRESTRESSED BEAMS PRECAST SHEARWALLS (250MM THICK) PRECAST SHEARWALLS (300MM THICK) PRECAST STAIRCASES HOLLOWCORE SLABS (320, 400MM THICK)

CONSTRUCTION TIME: 8 MONTHS

**TOTAL AREA:** 37,874 M<sup>2</sup>



nhra

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82 PROJECTS

PROJECT: 14 STOREY CARPARK

LOCATION: SEEF DISTRICT

CLIENT: ABDUL RAHMAN AL MANSOORI CONTRACTING CO. WLL

#### **APPLICATION:**

PRECAST COLUMNS PRECAST PRESTRESSED BEAMS PRECAST SPANDREL BEAMS PRECAST SHEARWALLS PRECAST WALL PANELS & RAILINGS PRECAST STAIRS SLABS PRECAST LANDING SLABS PRECAST PARAPETS PRESTRESSED HOLLOWCORE SLABS

CONSTRUCTION TIME: 11 MONTHS

**TOTAL AREA:** 10,700 M<sup>2</sup>

#### 20 STOREY BUILDING HOORA

PROJECT: 20 STOREY RESIDENTIAL BUILDING

LOCATION: HOORA

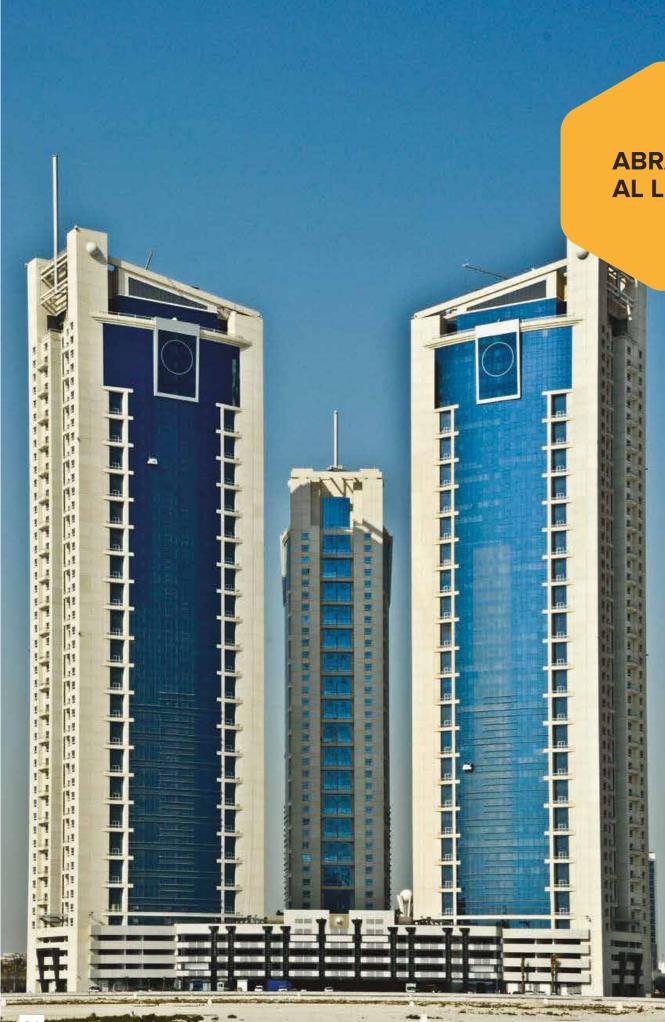
CLIENT: MASTER CONSTRUCTION

APPLICATION: PRECAST PRESTRESSED BEAMS PRESTRESSED HOLLOWCORE SLABS FORMSLABS

> CONSTRUCTION TIME: 9 MONTHS

> > TOTAL AREA: 7,600 M<sup>2</sup>





ABRAJ **AL LULU** 

> **PROJECT:** AL ABRAJ AL LULU PEARL TOWER

LOCATION: MANAMA

CLIENT: AL HAMAD CONSTRUCTION AND **DEVELOPMENT COMPANY** 

**APPLICATION:** PRECAST WALL CLADDINGS PRECAST BOUNDARY WALLS

SURFACE TREATMENT: WHITE CONCRETE WITH 20MM **OMANESE MARBLE** MEDIUM /HARD SANDBLAST FINISH

**CONSTRUCTION TIME: 12 MONTHS** 

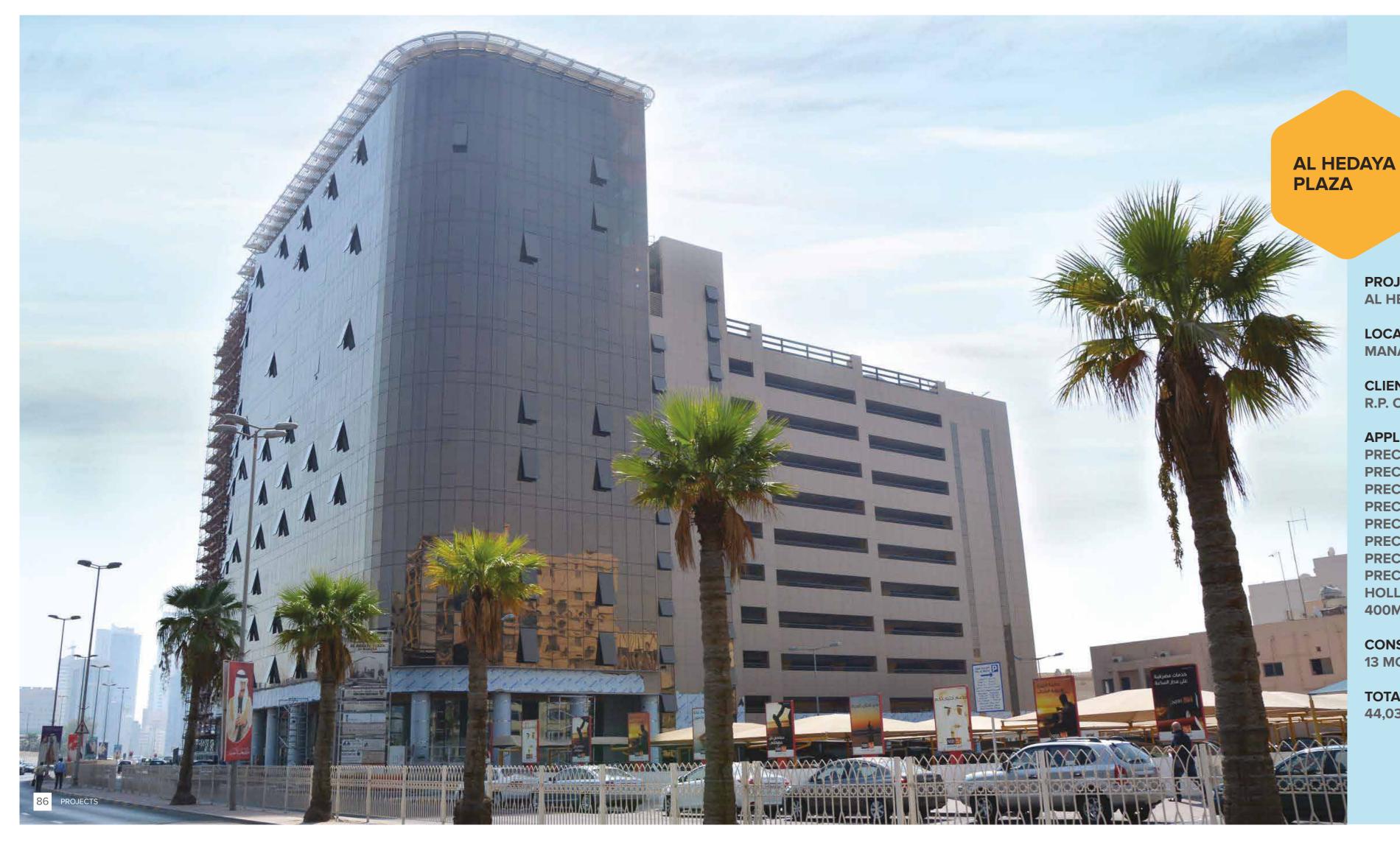
TOTAL AREA: 50,000 M<sup>2</sup>



MUHARRAQ STP AND SEWER

SAMSUNG ENGINEERING

**PRECAST MANHOLES** 



PROJECT: AL HEDAYA PLAZA

LOCATION: MANAMA

CLIENT: R.P. CONSTRUCTION

APPLICATION: PRECAST COLUMNS PRECAST PRESTRESSED BEAMS PRECAST SHEARWALLS (200MM THICK) PRECAST SHEARWALLS (200MM THICK) PRECAST SHEARWALLS (200MM THICK) PRECAST SHEARWALLS (300MM THICK) PRECAST SOLID SLABS (300MM THICK) PRECAST FORM SLABS (150MM THICK) HOLLOWCORE SLABS (150, 200, 265, 400MM THICK)

CONSTRUCTION TIME: 13 MONTHS

TOTAL AREA: 44,038 M<sup>2</sup>



**THE ATRIUM** MALL & **TOWERS** 

> **PROJECT: THE ATRIUM MALL & TOWERS**

LOCATION: SAAR

CLIENT: **AL NAMAL CONTRACTING** & TRADING CO. WLL

**APPLICATION:** PRECAST COLUMNS PRECAST PRESTRESSED BEAMS **PRECAST SHEARWALL PANELS (250 &** 300MM THICK) PRECAST STAIRCASE/ LANDING PRECAST FORM SLABS (100MM THICK) HOLLOWCORE SLABS (150, 200, 265, 320, 400MM THICK)

**CONSTRUCTION TIME:** 9 MONTHS (MALL) 8 MONTHS (2 TOWERS)

TOTAL AREA: **77, 162 M**<sup>2</sup>



## SHOPPING MALL AT SALMANIYA

PROJECT: SHOPPING MALL AT SALMANIYA

LOCATION: SALMANIYA

CLIENT: AL NAMAL CONTRACTING & TRADING CO. WLL

APPLICATION: PRECAST COLUMNS

PRECAST PRESTRESSED BEAMS PRECAST SHEARWALLS (250 & 400MM THICK) PRECAST STAIRCASES HOLLOWCORE SLABS (150, 200, 320MM THICK)

CONSTRUCTION TIME: 6 MONTHS

**TOTAL AREA:** 22,084 M<sup>2</sup>

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**PROJECT:** PRECAST CONCRETE T-WALLS

LOCATION: KING HAMAD HIGHWAY & RIFFA

CLIENT: CONSORZIO STABILE GMG S.c.ar.l.

**APPLICATION:** PRECAST CONCRETE T-WALLS 15 FT PRECAST CONCRETE T-WALLS 20 FT

**CONSTRUCTION TIME: 3 MONTHS & 2 WEEKS** 

QUANTITY: **15FT T-WALLS 595 PCS** 20FT T-WALLS 66 PCS





**PROJECT: KINGDOM MALL** 

LOCATION: SAAR / JANABIYA

CLIENT: DADABHAI CONSTRUCTION

**APPLICATION:** PRECAST COLUMNS, PRESTRESSED BEAMS, SHEARWALL PANELS, SOLID SLABS, STAIRCASES AND HOLLOW CORE SLABS

**CONSTRUCTION TIME: 14 MONTHS** 

TOTAL AREA: **78,200 M**<sup>2</sup>







**OASIS MALL CAR PARK AT** 

> **PROJECT**: OASIS MALL CAR PARK

LOCATION: JUFFAIR

CLIENT: MOHAMMED JALAL CONTRACTING

#### **APPLICATION:**

PRECAST COLUMNS, PRESTRESSED **BEAMS, PARAPET BEAMS, SHEAR WALL** PANELS, STAIRCASES AND HOLLOW **CORE SLABS** 

**CONSTRUCTION TIME: 4 MONTHS** 

TOTAL AREA: **14,682 M**<sup>2</sup>



MUHARRAQ CENTRAL MARKET AT MUHARRAQ

> PROJECT: MUHARRAQ CENTRAL MARKET

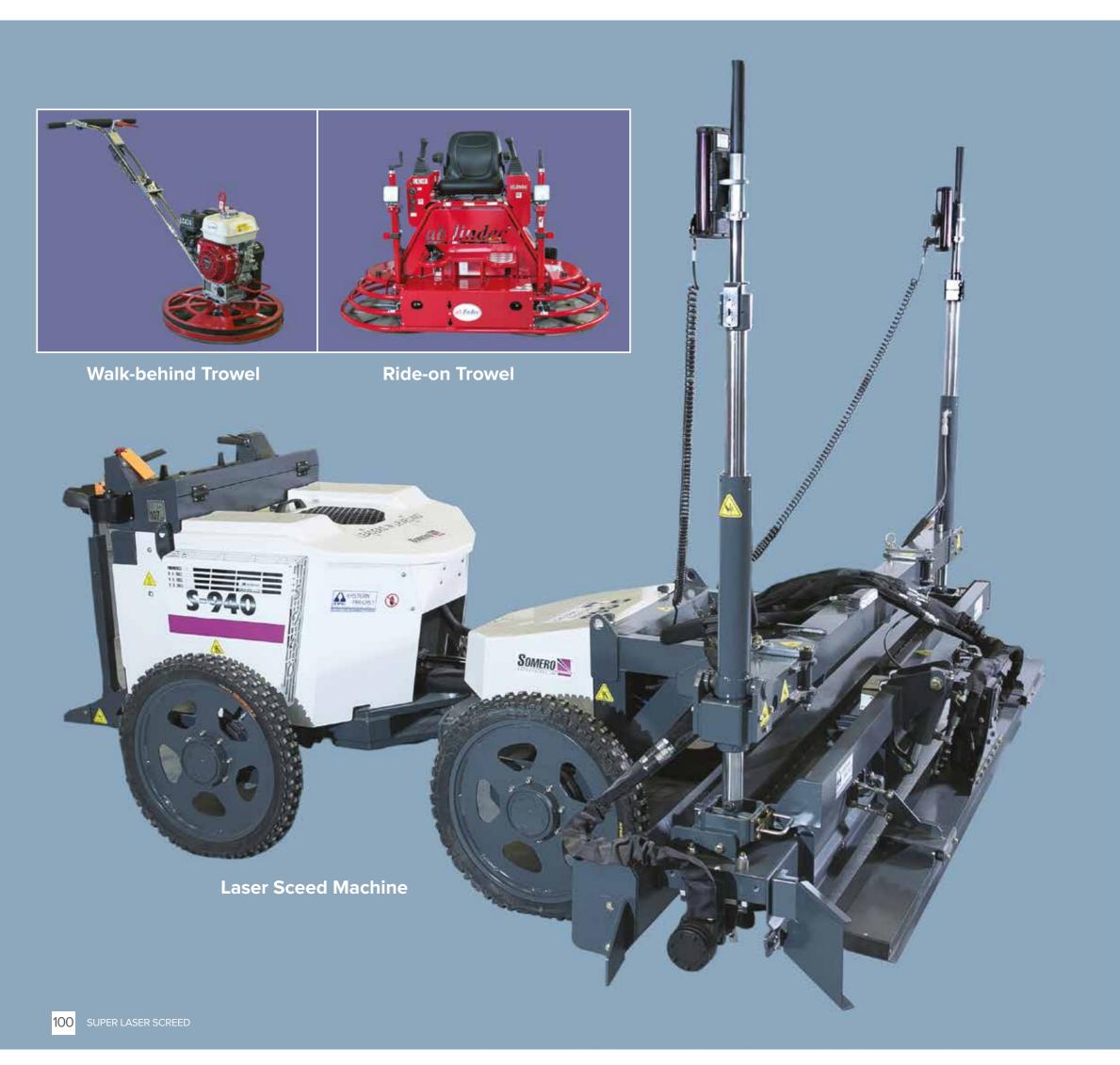
LOCATION: MUHARRAQ

CLIENT: UCA - AL AYAT - TEMCO JOINT VENTURE

APPLICATION: PRECAST COLUMNS, PRESTRESSED BEAMS, SHEAR WALL PANELS, SOLID SLABS, FORM SLABS, STAIRCASES AND HOLLOW CORE SLABS

CONSTRUCTION TIME: 8 MONTHS

**TOTAL AREA:** 21,677 M<sup>2</sup>





Eastern Precast a Division of Eastern WHY YOU SHOULD USE LASER Asphalt and Mixed Concrete Company W.L.L. (EAMCO) is the widely used fully integrated building solution provider in the Kingdom of Bahrain offering design, manufacture, delivery and installation of precast concrete. For more than three decades, Eastern Precast has been prominent in the market. It has portrayed it's role in building famous landmarks in the country producing architectural and structural precast concrete, prestressed hollow core slabs, and other concrete range of products. To know more visit www.eamco.bh

The Kingdom of Bahrain has continued its vision in providing the citizens infrastructure and development projects. One of the biggest Eastern Precast project is the construction of Bahrain International Airport - Precast Concrete West Car Park Building with a built up area of 82,000 m2. The project includes construction of sub-structure followed by production and erection of the precast concrete super-structure which includes precast elements of Columns, Beams, Shear walls, Staircases, and Hollow Core Slabs. In the same project . Less man hours Eastern Precast features the latest in . High control of surface flatness and Concrete Screed Technology.



# SCREED?

Laser Screed Machine is the latest technology suitable for various concrete flooring applications. This innovative machinery is used in horizontal concrete placement, to increase productivity, slab flatness and efficiency of the job site. Provides unmatched versatility and simplicity with increased power and productivity.

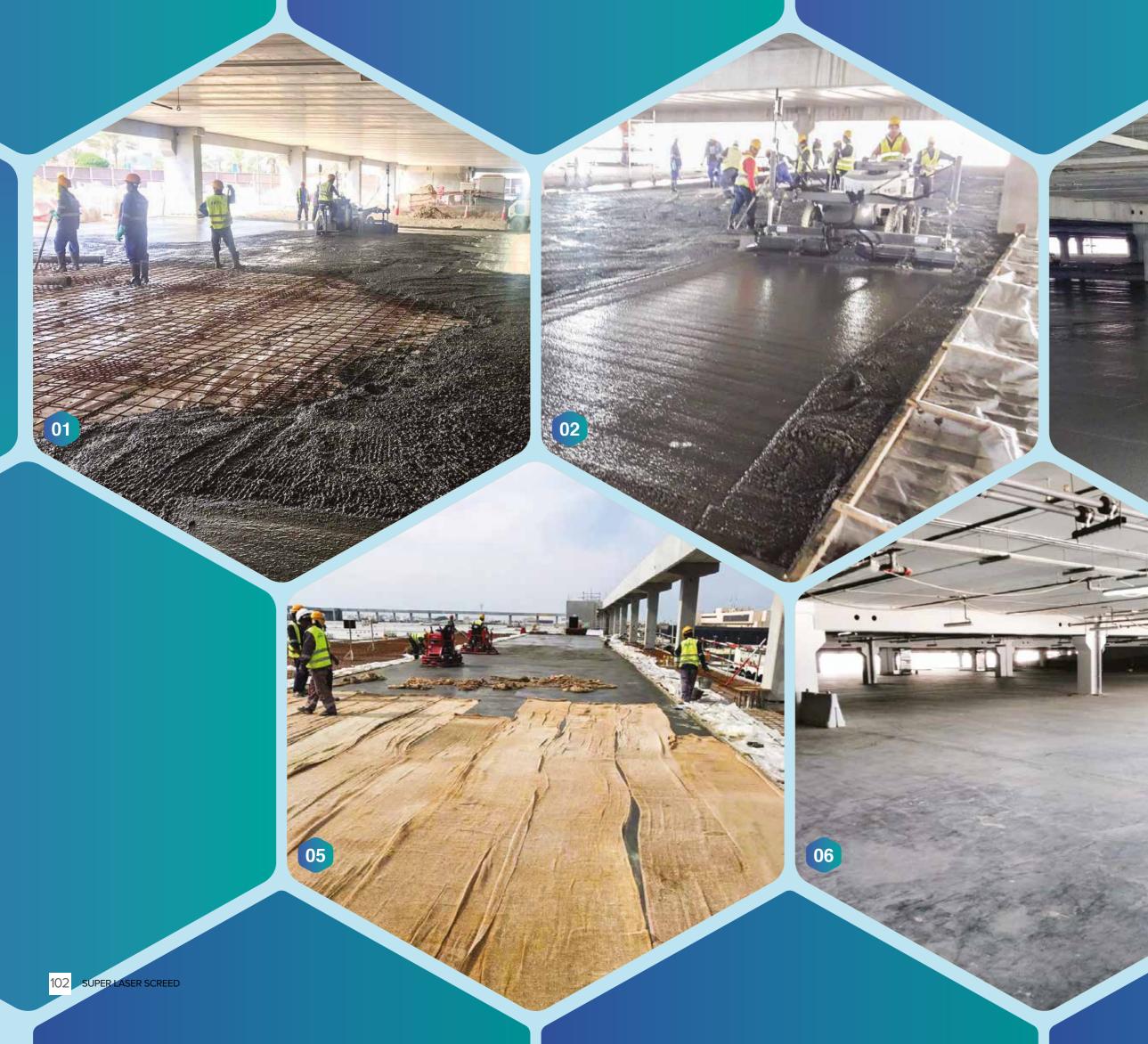
The Laser Screed Machine comes with **Concrete Finishing Machines;** Ride-on Trowel Floor Finishing Machine Walk-behind Trowel Floor Finishing Machine

These machines enhances the concrete surface which is as good and ready in meeting maximum operational efficiency

#### LASER SCREED ADVANTAGES

- Automated control of flatness and levelness as per the captured data of the machine's computer.
- High productivity, screed
- Less manpower and labour input
- levelness





120000M2 SUCCESSFULLY SCREEDED IN 2018 TO 2019

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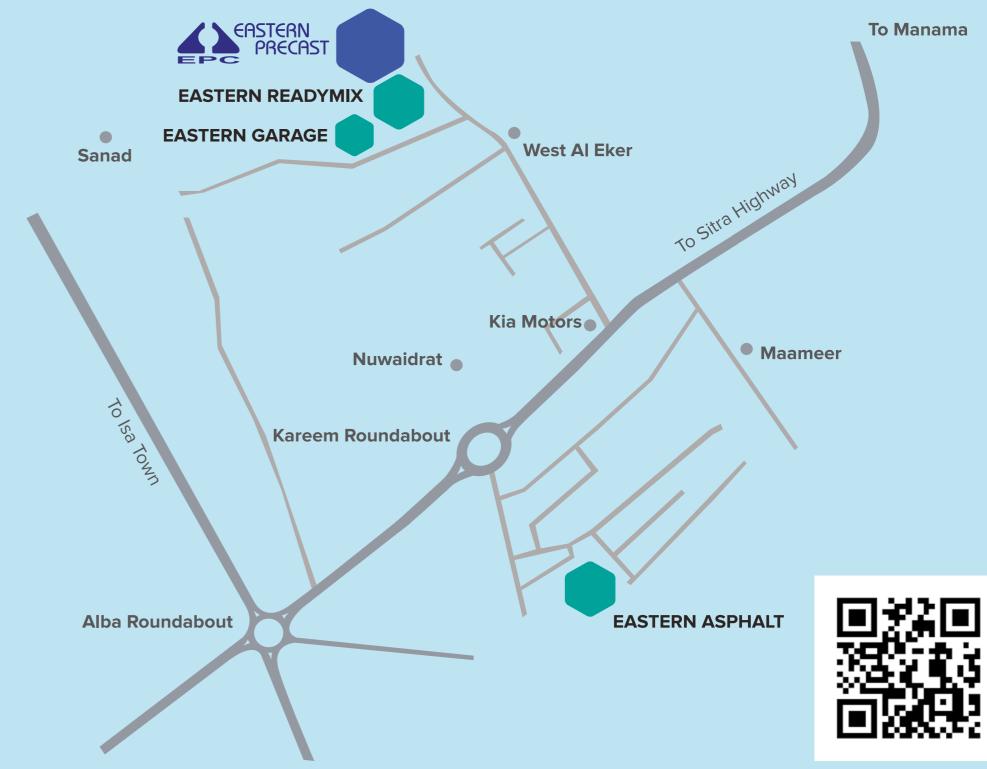
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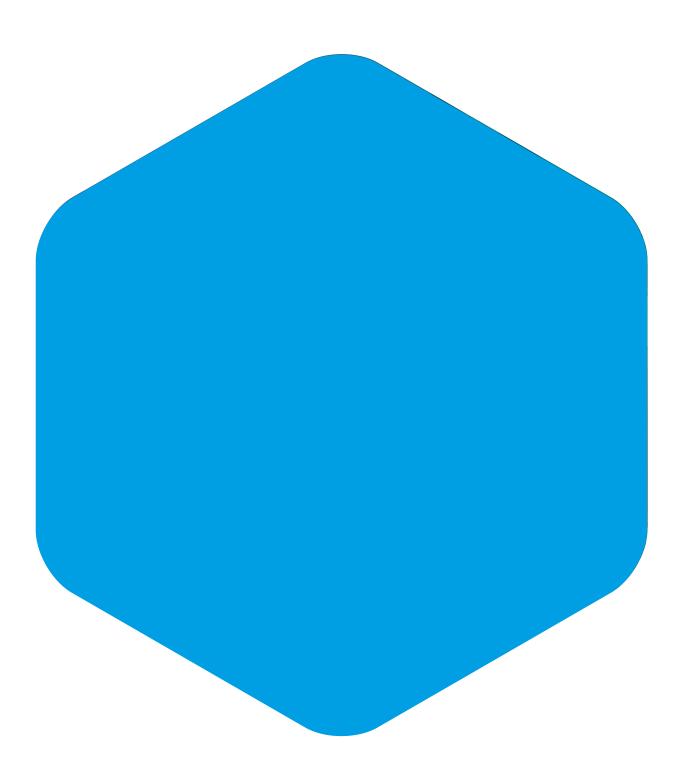


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#### EASTERN PRECAST

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