

COMPANY PROFILE 2023



About Us

ConsultantHSS (CHSS) is a professional establishment that offers a full spectrum of engineering , infrastructure solutions and provides a wide array of professional services such as architecture, planning, project management and all general and specialised engineering consultancy.

CHSS is in a partnership with **HSS Engineering Sdn Bhd, Malaysia**, which is the only listed engineering consultant on the Malaysian Stock Exchange.

The Group was one of the first leading ISO certified engineering consultancy firm in Malaysia.



40/20

YEARS EXPERIENCE
INTERNATIONAL / MENA



1500

STAFF &
PROFESSIONALS



2500+

PROJECTS
DEVELOPED



10

INTERNATIONAL
OFFICES

-
- **HSSE** – the only listed engineering consultant on Malaysian stock exchange.
 - **Since 2003 in the MENA Region .**
 - Integrated Multi-disciplinary Engineering Group.
 - **250 professionals** (BIM Specialists).
 - The group operates in MENA region under the name of **ConsultantHSS**.

Our Group

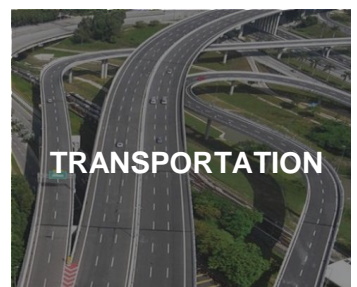
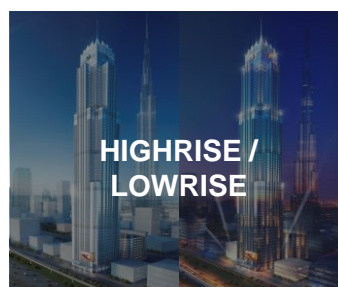
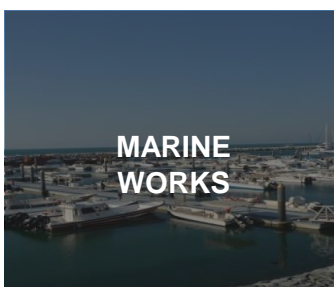
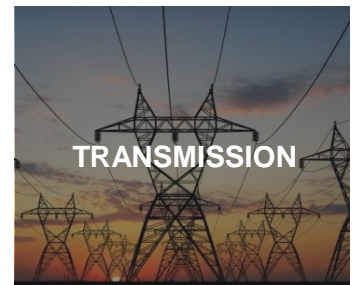
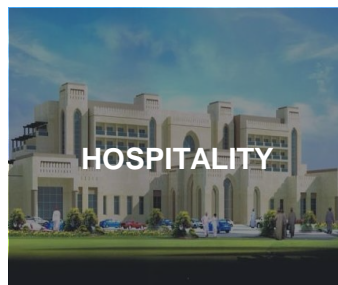
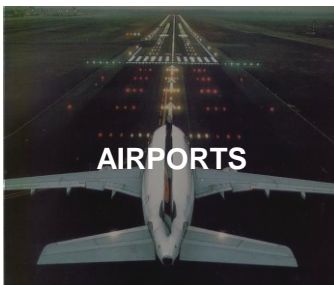
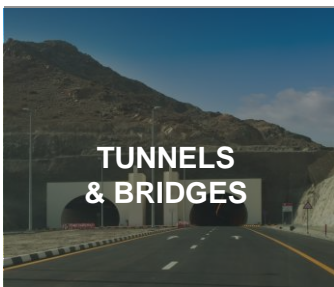
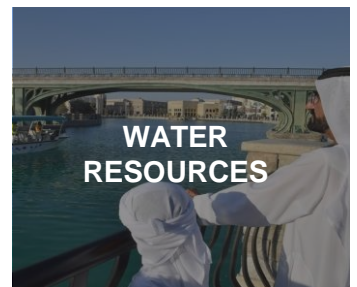
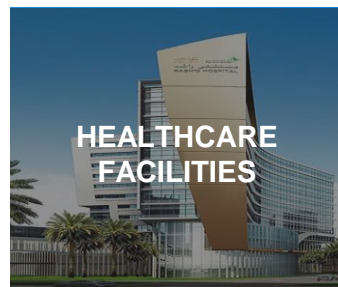
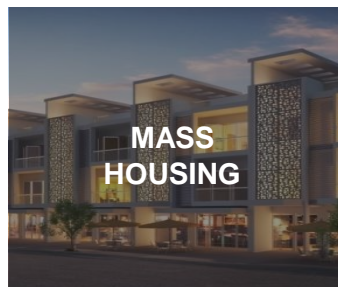
The Group has a long tradition of being involved in every aspect of multi-billion dollars worth of projects and has the capability and expertise in assembling a full project team and managing complex infrastructure projects – from initial planning phases through operations and commissioning. (Turnkey solution).

The Group is always focused on **ENGINEERING & BEYOND** and is continuously engaged in developing new strategies and boldly embarking on new creative and innovative initiatives in order to solve the complex challenges facing the engineering and building industry on a local and global level.



What We Do

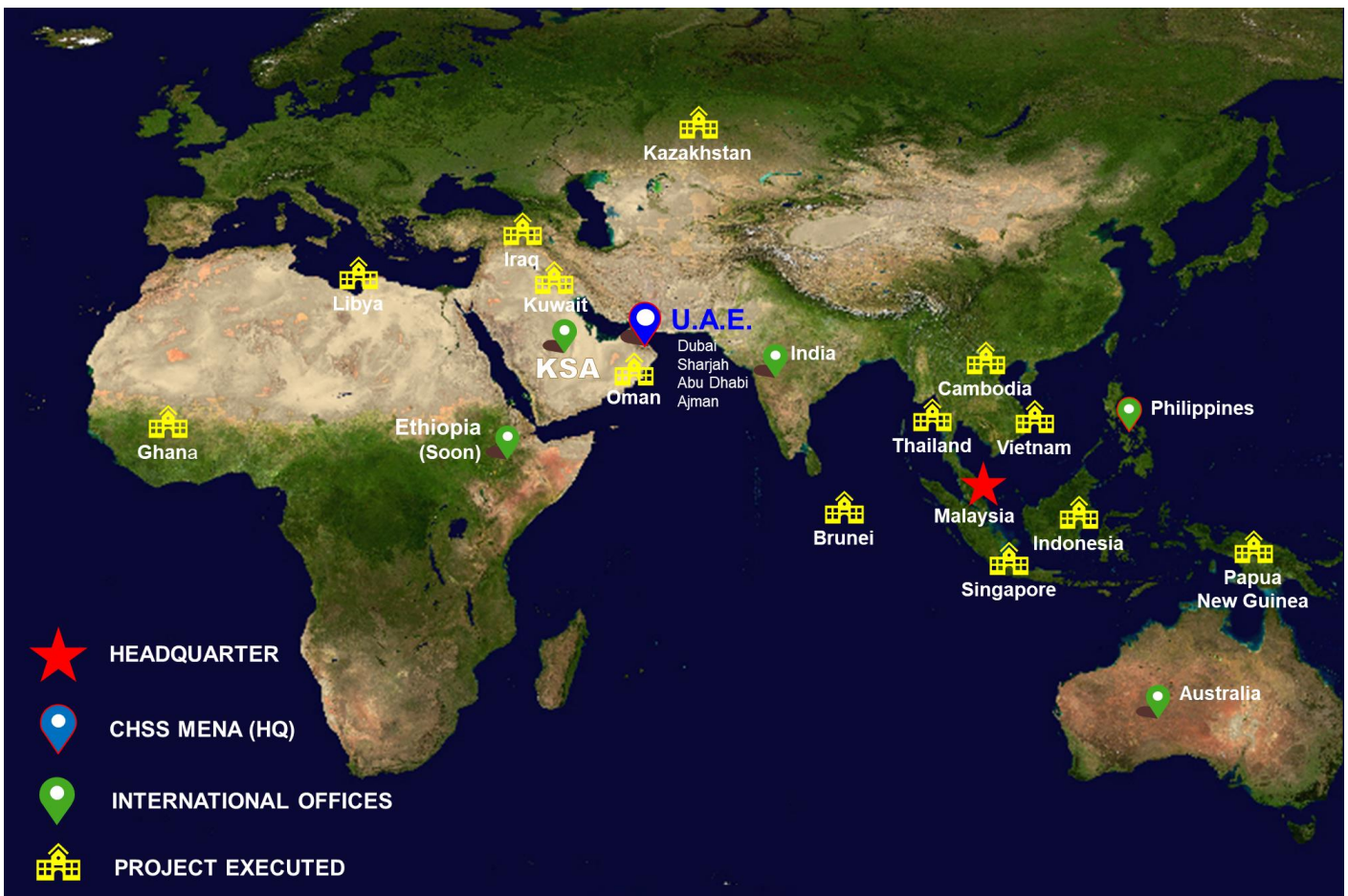
The Group provides a total engineering practice, from feasibility and planning studies, to design and construction through to the final commissioning of a project. The Group has earned the reputation for delivering professional yet efficient services to clients as exhibited through our track record of past performances in all disciplines of engineering. This stands as a testimony to our commitment and pride in professional excellence.



Our Expertise

- ❖ Infrastructure Engineering
- ❖ Civil & Structural Engineering
- ❖ Mechanical, Electrical & Plumbing
- ❖ Architecture Design
- ❖ Construction Engineering
- ❖ Transportation Planning
- ❖ Ports Engineering
- ❖ Project Management
- ❖ Quantity Surveying & Cost Control
- ❖ Hydraulics & Coastal Engineering
- ❖ Water Resources
- ❖ Water, Sewage and Irrigation
- ❖ Landscaping
- ❖ Urban Planning Engineering
- ❖ Strategic Planning & Feasibility Study

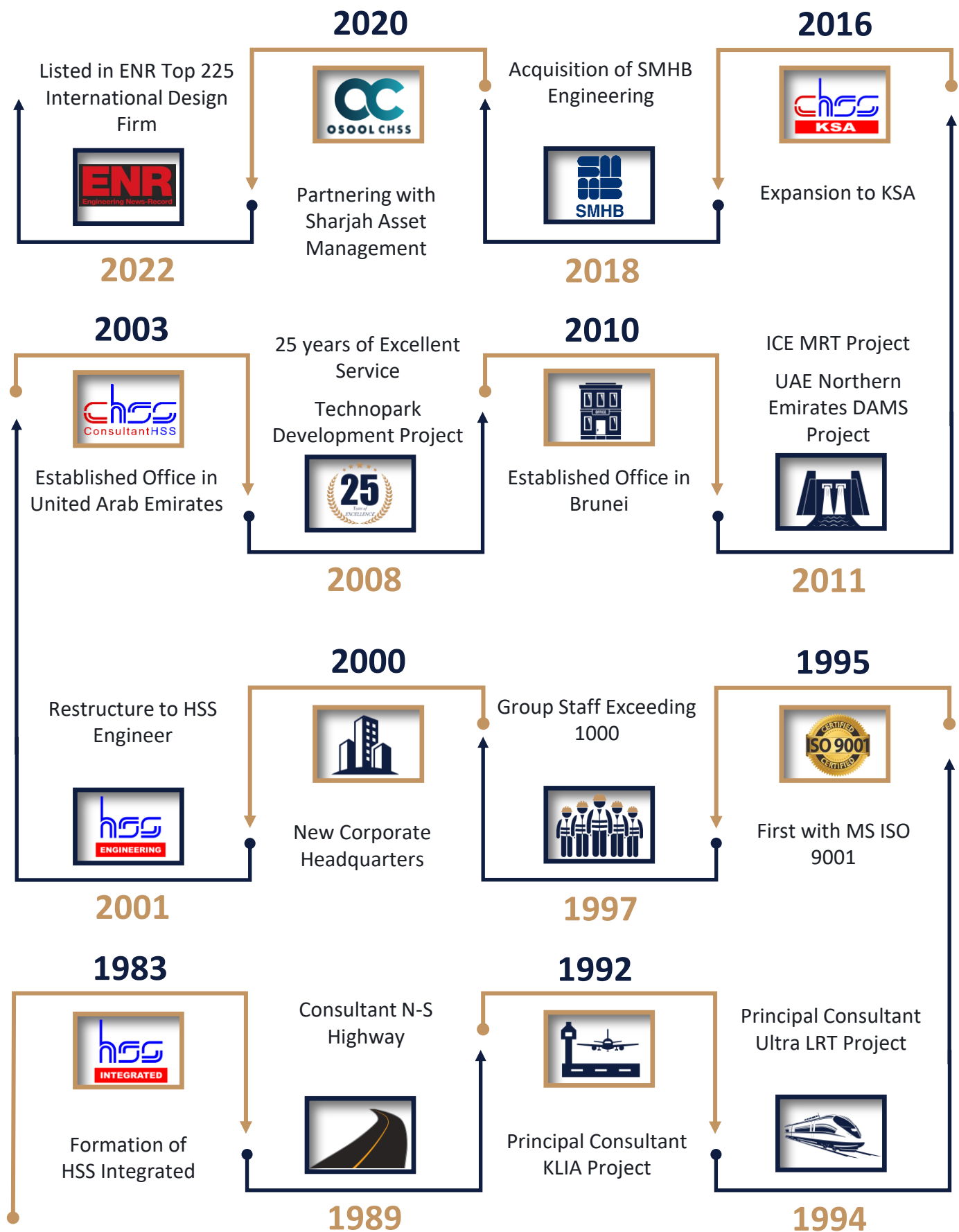
International Presence



Our Clients



The Group Key Milestones



ENR THE TOP 225

enr.com August 8/15, 2022

ENR THE TOP 225 INTERNATIONAL DESIGN FIRM

#213

We are proud to mentioned that Engineering News Record ENR has ranked HSS Engineering Sdn Bhd (HSSE) and its subsidiaries including Consultant HSS (CHSS) and SMHB at the list of the 2022 Top 225 International Design Firms as illustrated below.

RANK 2022	2021	FIRM	FIRM TYPE	2021 INT'L REVENUE		GENERAL BUILDING	MANUFACTURING	POWER	WATER SUPPLY	SEWER / WASTE	INDUS. / PETROLEUM	TRANSPORTATION	HAZARDOUS WASTE	TELECOM
				IN \$ MIL	% OF TOTAL REV.									
205	203	ME ENGINEERS, Golden, Colo., U.S.A.†	E	10.0	18	100	0	0	0	0	0	0	0	0
206	216	PINI GROUP, Lugano, Ticino, Switzerland†	E	9.4	22	0	0	0	0	0	0	100	0	0
207	201	DAR AL OMRAN PLANNING ARCHITECTURE ENG'G, Amman, Jordan†	AE	9.1	94	98	0	0	0	0	0	0	0	0
208	213	BEIJING INSTITUTE OF ARCHITECTURAL DESIGN, Beijing, China†	A	8.8	2	91	0	0	0	0	0	9	0	0
209	**	AYERS SAINT GROSS, Baltimore, Md., U.S.A.	A	8.5	16	100	0	0	0	0	0	0	0	0
210	119	ARCPLUS GROUP PLC, Shanghai, China†	AE	8.5	1	100	0	0	0	0	0	0	0	0
211	**	CHA CONSULTING INC. (CHA), Albany, N.Y., U.S.A.†	EA	8.1	3	86	0	14	0	0	0	0	0	0
212	217	SHEEHAN NAGLE HARTRAY ARCHITECTS LTD., Chicago, Ill., U.S.A.†	A	8.1	21	0	0	0	0	0	0	0	0	100
213	**	HSS ENGINEERS BERHAD, Kuala Lumpur, Malaysia†	E	8.0	18	0	0	0	38	0	0	63	0	0
214	212	ALVAREZ-DÍAZ & VILLALON I ARCH. & INT. DESIGN, San Juan, Puerto Rico	A	7.9	79	100	0	0	0	0	0	0	0	0
215	**	WISS JANNEY ELSTNER ASSOCIATES, Northbrook, Ill., U.S.A.	EA	7.7	4	64	3	3	1	0	6	22	0	0
216	**	CENTRAL SOUTH ARCH. DESIGN INSTITUTE CO. LTD., Wuhan, Hubei, China†	AE	7.6	3	100	0	0	0	0	0	0	0	0
217	220	HART HOWERTON, New York, N.Y., U.S.A.†	O	7.4	12	100	0	0	0	0	0	0	0	0
218	194	PRIMORIS, Dallas, Texas, U.S.A.	E	7.2	9	0	0	0	0	0	100	0	0	0
219	**	MAGNUSSON KLEMENCIC ASSOCIATES, Seattle, Wash., U.S.A.	E	6.5	14	100	0	0	0	0	0	0	0	0
220	**	SANBORN HEAD & ASSOCIATES INC., Concord, N.H., U.S.A.	E	6.2	16	0	0	0	0	0	0	0	100	0
221	214	WONG TUNG & PARTNERS LTD., Taikoo Shing, Hong Kong, China†	A	6.1	13	99	0	0	0	0	0	1	0	0
222	**	CANNONDESIGN, New York City, N.Y., U.S.A.	AE	6.0	2	100	0	0	0	0	0	0	0	0
223	**	HLW, New York, N.Y., U.S.A.	O	6.0	11	100	0	0	0	0	0	0	0	0
224	**	DEWBERRY, Fairfax, Va., U.S.A.†	EA	5.8	1	100	0	0	0	0	0	0	0	0
225	147	SHENYANG YUANDA ALUMINUM INDUS. ENG'G CO. LTD., Shenyang, China†	EC	5.5	100	100	0	0	0	0	0	0	0	0



Engineering News-Record is an American weekly magazine that provides news, analysis, data and opinion for the

construction industry worldwide. It is widely regarded as one of the construction industry's most authoritative publications and is considered by many to be the "bible" of the industry.

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2020 Top 225 International Design Firms – Subsidiaries

213 HSS Engineers Berhad

Consultant HSS
Consultant HSS
Consultant HSS
HEB Enegry Sdn Bhd
HSS BIM Global Ventures Sdn Bhd
HSS BIM Solutions Private Limited
HSS Engineering Sdn Bhd
HSS Integrated Sdn Bhd
HSS Mekanikal & Elektrikal Sdn Bhd
SMHB Engineering Sdn Bhd
SMHB Sdn Bhd



GULF NEWS



Sharjah Asset Management (SAM) has signed a Project Delivery Partnership (PDP) contract with Consultant HSS (CHSS), an international engineering consultancy firm, to provide the most cost-effective and best-in-class engineering solutions with innovative technical expertise.

The investment unit of the Sharjah government, SAM said it will act as a 'one stop solution providers' with a focus on major tasks such as project planning, engineering design, build and execution, supervision and project management. Additionally, PDP will also help provide procurement for the required financing of the projects, it added.

Consultant HSS, working closely with SAM, will co-ordinate and manage all the projects under the Sharjah group – with its full engineering expertise from project planning to construction and execution of the project, remarked CEO Waleed Al Sayegh after signing the deal with CHSS managing director George S. Khraish.

"Our mission is to develop state-of-the-art assets to achieve sustainability and enhance the economic development of Sharjah. The initiative of PDP is inline with our vision and objectives. The expertise of Consultant HSS and its team will further add value to our projects," stated Al Sayegh.

بدعم محمد بن زايد

وضع حجر الأساس لمستشفى للأطفال في مصر

سموه على «تويتر»: «بدعم سيدي الشيخ محمد بن زايد، أسهمت الإمارات عبر وزارة اللامستحيل بتصميم مستشفى رعاية الأطفال (بامبينو جيسو) في مصر الشقيقة، ووضع حجر الأساس، ليقدم خدماته إلى الأطفال في مختلف دول المنطقة، بالتعاون مع مؤسسة ديهاد للأعمال الإنسانية، وشركتي إندكس الوطنية، وCHSS الماليزية». (دبي، البيان)

بدعم صاحب السمو الشيخ محمد بن زايد آل نهيان رئيس الدولة، حفظه الله، أسهمت الإمارات بتصميم مستشفى رعاية الأطفال «بامبينو جيسو» في مصر، ووضع حجر الأساس، ليقدم خدماته إلى الأطفال في مختلف دول المنطقة، وقال الفريق سمو الشيخ سيف بن زايد آل نهيان نائب رئيس مجلس الوزراء وزير الداخلية، أمس، عبر حساب



Daily Al Bayan

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الرياضي 28

الاقتصادي 11

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@albayannews



His Highness Sheikh Mohamed bin Zayed Al Nahyan, President of the State

LAYING THE FOUNDATION STONE FOR A CHILDREN'S HOSPITAL IN EGYPT

With the support of His Highness Sheikh Mohamed bin Zayed Al Nahyan, President of the State, may God protect him, the UAE contributed to the design of the "Bambino Gesu" Children's Care Hospital in Egypt, and laid the foundation stone, to provided its services to children in various countries of the region. Yesterday, Deputy Prime Minister and Minister of the Interior, through His Highness's account on Twitter: "With the support of His Highness Sheikh Mohammed bin Zayed, the UAE, through the Ministry of Possibilities, contributes to the design of the Children's Care Hospital (Bambino Gesu) in sisterly Egypt, and laid the foundation stone, to provide its services to children. In various countries of the region, in cooperation with the DIHAD Humanitarian Foundation, the two national companies Index, and the Malaysian CHSS.



PROJECT EXPERIENCE

The following list of projects are several of our many project experiences. For the full listing of our experience, please log on to our website at www.chss.ae.





INFRASTRUCTURE CAPABILITY

CHSS is experienced in full spectrum of Infrastructure Development works encompassing Master Planning, Detailed Design, Project Management, Pre & Post Construction, etc.

CHSS involved in numerous projects throughout U.A.E. and Malaysia and are familiar with the Local Authorities / Service Providers requirement, design procedures, prevailing design standards and code of practise. Our engineering consultancy expertise is proven through successful completion of various sizes of projects since our establishment;

Pre-development Activities;

- Project initiation;
- Survey & Site investigation;
- Infrastructure Master Plan;
- Development Order & Building Plan Approvals; and
- Feasibility Studies.

Engineering Design & Construction of Engineering Disciplines;

- Geotechnical & Earthwork;
- Road;
- Drainage;
- Water Supply;
- Waste Water Engineering;
- Power Distribution Infrastructure System;
- Telecommunication Backbone Network;
- District Cooling Distribution Pipeline Network;
- Natural Gas/LPG Distribution Pipeline Network;
- Fire Hydrant System; and
- Road Lighting System.

INFRASTRUCTURE EXPERIENCE

MADINAT AL-ARAB, DUBAI, UNITED ARAB EMIRATES

Madinat Al-Arab, “City of Million” is the extension of Palm Jebel Ali (2nd Palm) and it covers an area of approximately 31,000 acres.

Services:

- Engineering Design of All Infrastructure; and
- Master Plan Review.

NAD AL SHEBA DEVELOPMENT, DUBAI, UNITED ARAB EMIRATES

The Project covers a total of 450 hectares & an additional 150 hectares of a supporting Mixed Use District to showcase Dubai’s high profile Horse Racing.

Services:

- Detailed Design for the Infrastructure Works; and
- Preparation of Contract & Tender Documentation.



TECHNO PARK DEVELOPMENT, DUBAI, UNITED ARAB EMIRATES

This Project covered approximately 1760 hectares and was developed as a “high tech hub” with clusters of similar technological industries.

Services:

- Concept and Detailed Engineering Design;
- Obtaining NOC’s from Various Authorities; and
- Project Management.



LAGOON FOR DUBAI PARKS & RESORT, DUBAI, UNITED ARAB EMIRATES

The lagoon is part of the attraction of the Theme Park within Dubai Parks and has an area of approximately 50,000 m² (Phase 1).

Services:

- Detailed Engineering Design of the Lagoon and related Services Buildings;
- Lagoon Ecosystem Modelling; and
- Construction Supervision.



INFRASTRUCTURE EXPERIENCE



SOUQ AL HARAJ PHASE 3, SHARJAH, UNITED ARAB EMIRATES

Souq Al Haraj Phase 3 is a mixed-use development that will be made up of mostly commercial and retail type spaces, with a part focus to residential and office spaces along with a star rated hotel complex.

Services:

- Project Delivery Partnership;
- Feasibility Study;
- Master Planning & Design;
- Architectural and Engineering Design; and
- Construction Supervision.

RASHID MEDICAL COMPLEX MASTER PLAN DEVELOPMENT, DUBAI, UNITED ARAB EMIRATES

The Rashid Medical Complex aims to provide world-class healthcare and to be the flag ship medical facility in the Gulf region. A 900 bed tertiary hospital, multispecialty outpatient facilities, a conference and educational center, research space, luxury hotels, villas, and a retail market are planned to be built around the existing facility which will later be demolished.

Services:

- Engineer-of-record for Master Planning; and
- Design Engineering Consultancy Services



DOHUK DESERT ROSE DEVELOPMENT , KURDISTAN, IRAQ

The project is a mixed used development of approximately one million sqm comprising of customs free zone area, distribution and logistics centre, retails centres, residential buildings, Agri production centre among others.

Services:

- Master Planning;
- Infrastructure Development; and
- Management and Preparation of Tender Packages.



KING SALMAN PARK, KINGDOM OF SAUDI ARABIA

CHSS has been appointed by NESMA, the main contractor, to spearhead this remarkable project, which covers an area of over 16Km², making it the largest urban park in the world.

Services:

- BIM Model;
- Design Review and Support; and
- Shop Drawings Production.





BUILDING CAPABILITY

CHSS specializes in managing and completing complex construction projects, such as administrative buildings, residential developments, and industrial facilities. We have the expertise and knowledge to ensure your project is completed according to your specifications and requirements. We approach each project with a focus on cost-efficiency and realism, in order to bring your vision to life, whether it be a new development, an expansion, or the renovation of an existing building.

We offer a wide range of services for all types of buildings, including hospitals, shopping centers, commercial properties, office buildings, and logistics centers. We also specialize in building housing projects and leisure properties. Our various service departments provide expert support for design and work planning. With efficient logistics and engineering, we ensure that your custom project is completed on schedule and with the highest quality.

BUILDINGS EXPERIENCE



LOGISTIC INSTITUTE (EXPO 2020 DP WORLD PAVILION), DUBAI, UNITED ARAB EMIRATES

The building is a modern rectangular box with an L-shape configuration wrapping around an Atrium with spiraling ramps. Arrival into the building is via escalators taking visitors directly to fourth floor and the spiraling ramps takes them down through the exhibit galleries.

Services:

- Design Review; and
- Construction Supervision.

EMIRATES YACHT CLUB AND WATER SPORTS ACADEMY, DUBAI, UNITED ARAB EMIRATES

Emirates Yacht Club (apprx.2,000sqm) 3 storeys building to be developed on an existing skeleton structure that requires a total interior and exterior feasibility design. Water sport Academy (apprx.880sqm) 2 storeys building on an existing shell and core structure that requires an interior fit out and some façade rendering.

Services:

- Engineering Consultancy Services
- Tender Services; and
- Construction Supervision.



ENOC PETROL STATIONS, UNITED ARAB EMIRATES

The Emirate National Oil Company (ENOC) requires Professional Consultancy Services to carry out the design and supervision of its filling stations located at various sites in the United Arab Emirates. These comprise of New To Industry (NTI) filling station of large and small capacities.

Services:

- Preliminary and Detail Design;
- Approvals from Authorities;
- Marine Design Services; and
- Construction Supervision.



COMMON BACK OF HOUSE (BOH) FACILITIES & CIVIL FACILITIES FOR DUBAI PARKS, DUBAI, UNITED ARAB EMIRATES

Civil Facilities & Common Back of House Facilities are all located within the greater Dubai Parks Project site consisting of 10 individual plots and occupying a total area of approximately 40,342 m².

Services:

- Detailed Engineering Design;
- Tender Services; and
- Construction Supervision.



BUILDINGS EXPERIENCE

DUBAI TRADERS MARKET / YIWU MARKET, DUBAI, UNITED ARAB EMIRATES

Dubai Traders Market is the next global destination for Wholesale and retail operations, with direct access to the fastest growing market in the Middle East, Asia and Africa. It will host the full spectrum of small and large commodity traders across nearly 800,000 sqm in the heart of Jebel Ali Freezone (Jafza).

Services:

- Architectural and Engineering Design;
- Tender Services; and
- Construction Supervision.

JAFZA SOUTH LOGISTICS PARK, DUBAI, UNITED ARAB EMIRATES

Warehouse development over 148,000 sqm including services and plant rooms 16 individual warehouse units 2,500 sqm each, under one building envelope, supporting amenities and mezzanine office space.

Services:

- Design Review; and
- Construction Supervision.



LIGHT INDUSTRIAL UNITS (PHASES 10, 11, 13, 14 & 15), JEBEL ALI, DUBAI, UNITED ARAB EMIRATES

Total area of the development approximately 139 acres. The project consists of 397 Light Industrial Units with Office / Reception area, 4 Food Court Buildings with Commercial Centre, and Services Reserve for Development.

Services:

- Master Planning;
- Architectural and Engineering Design; and
- Construction Supervision.

AJMAN FREE ZONE, PHASE 1, 2 & 3, AJMAN, UNITED ARAB EMIRATES

Massive multi-million-dirham development over a million square meter area at the Free Zone of Ajman, able to accommodate 4000 companies.

Services:

- Master Planning;
- Architectural and Engineering Design; and
- Construction Supervision.



BUILDINGS EXPERIENCE



PUTRAJAYA GOVERNMENT ADMINISTRATION CENTRE, PUTRAJAYA (4G8), MALAYSIA

The building is 32-storeys high and has four(4) levels of basement (car park and MEP facilities). The four level basement was constructed using top-down construction.

Services:

- Civil and Structural Design;
- Approvals from Authorities; and
- Construction Supervision.

STAFF ACCOMMODATION FOR AJMAN FREE ZONE, AJMAN, UNITED ARAB EMIRATES

The staff accommodation shall comprise 6 blocks building and common area for multiple facilities including Mosque.

Services:

- Architectural and Engineering Design;
- Tender Services; and
- Construction Supervision.



MIXED DEVELOPMENT AT PETALING JAYA (MYIPO – TOWER 6), MALAYSIA

The Group was appointed to manage the overall design and construction work for the Proposed Mixed Development of Tower 6 located in Petaling Jaya. 24+5 Storey Office Tower.

Services:

- Architectural and Engineering Design;
- Approvals from Authorities; and
- Construction Supervision.



JAFZA SOUTH ACCOMMODATION PHASE 3 (JUNIOR BLOCKS), DUBAI, UNITED ARAB EMIRATES

The Jebel Ali Freezone South Staff Accommodation, Phase-3 boasts a complex of mixed-use buildings featuring 13 staff accommodation towers; 10-storey each, recreational areas, food court, quarantine building, operation & security building, mosque and infrastructure.

Services:

- Master Plan;
- Concept & Preliminary Design;
- BIM Execution; and
- Tender Services.



BUILDINGS EXPERIENCE



UNIVERSITY TECHNOLOGY PETRONAS, MALAYSIA

The campus is built on 400 hectares of land at Seri Iskandar, Perak. The development is themed “the University in the Forest”. The university incorporates 23 academic blocks built around a crescent-shaped green park and an annexed ‘signature’ building housing the administration centre.

Services:

- Infrastructure Master Plan;
- Engineering Detailed Design; and
- Construction Supervision.

VICTORIA INTERNATIONAL SCHOOL OF SHARJAH – TILAL, UNITED ARAB EMIRATES

The project involves the construction of a school spread across an area of 55,742 square meters area in Tilal City, Sharjah, which includes the Construction (G+1) School Building, 1B+G+1GYM Building, Service Block & Compound Wall.

Services:

- Design Review and Implementation;
- Architect of Record;
- Approvals from Authorities; and
- Construction Supervision.



NATIONAL HEART INSTITUTE, MALAYSIA

The size of project site is about 5.5 acres and the total approximate built up area is 75,000 square metres. Houses 440 beds and one of the top Cardiology and Cardiothoracic Surgery specialist in Malaysia.

Services:

- Pre-Construction stage: Preliminary works co-ordination and Design Management ;
- Construction stage: Authority Submission monitoring, Site management (Cost, Time and Quality); and
- Post Construction stage: Defects coordination with Contractor, Accounts closing.



RC BUILDINGS AND CELLS ASSEMBLY WORKSHOP BUILDING EPC, RIYADH, KINGDOM OF SAUDI ARABIA

CHSS has been appointed by NESMA, the main contractor, to spearhead the construction of the RC buildings and facility building package for the groundbreaking Green Hydrogen Project in Neom City, the world’s largest utility-scale, commercially-based hydrogen facility powered entirely by renewable energy.

Services:

- Engineering Design for, Architectural, MEP and Structural.



TRANSPORTATION CAPABILITY

CHSS has wide-ranging experience in the provision of engineering services for the full range of transportation facilities, delivering economic, social and environmentally sustainable solutions.

Highways

- Roads and Highways
- Bridges and Tunnels
- Interchanges
- Toll Facilities

Railways (Light and Heavy)

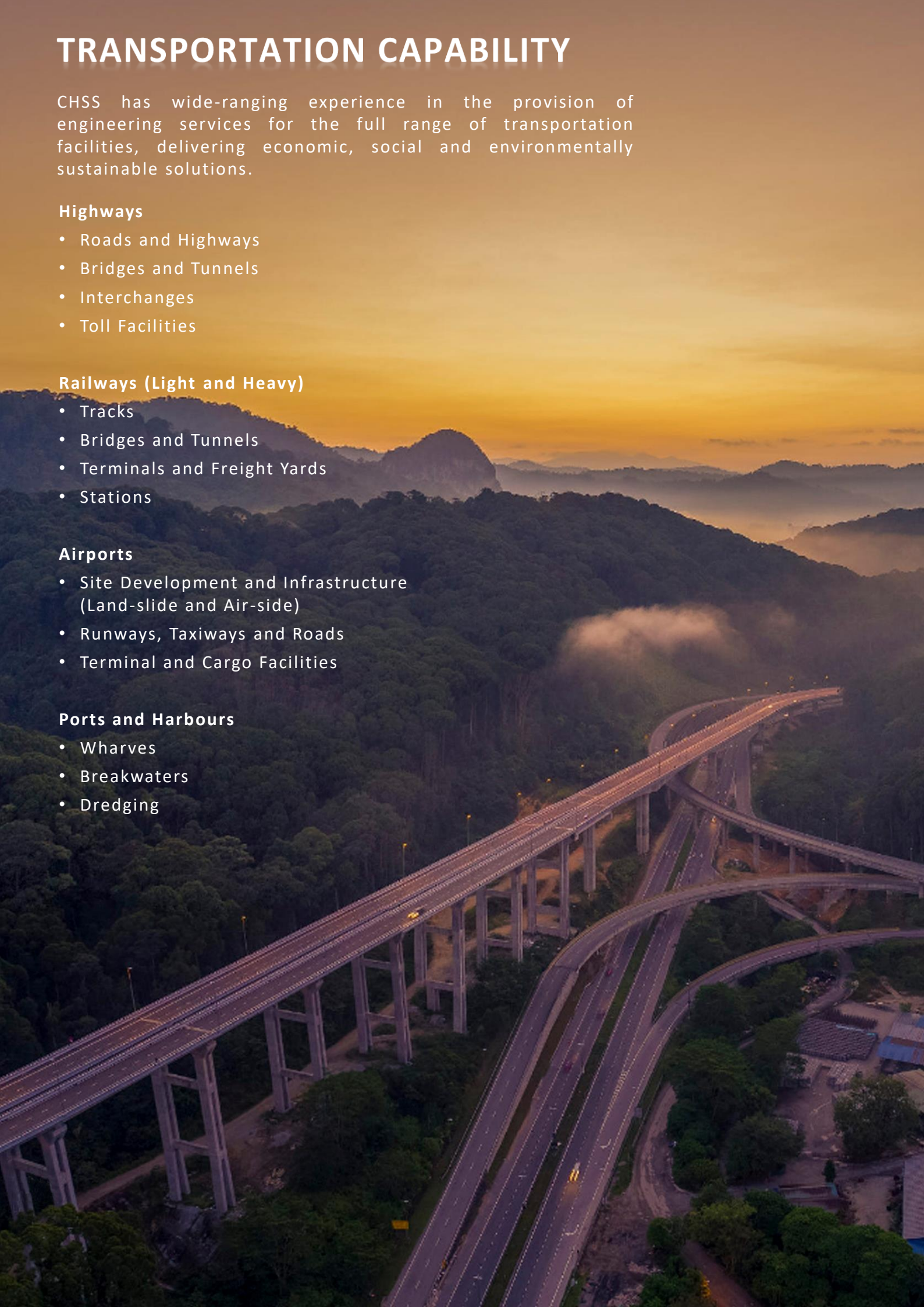
- Tracks
- Bridges and Tunnels
- Terminals and Freight Yards
- Stations

Airports

- Site Development and Infrastructure (Land-slide and Air-side)
- Runways, Taxiways and Roads
- Terminal and Cargo Facilities

Ports and Harbours

- Wharves
- Breakwaters
- Dredging





HIGHWAY CAPABILITY

The Group has been involved in the planning, design and supervision of construction of many major highways, tunnels and bridges structure in U.A.E. and Malaysia.

Today a multi-disciplinary involvement is necessary whereby engineering survey and other specialist skills are integrated to achieve consistent quality throughout the project.

A “**managed approach**” is taken to all aspects of the design process, allowing the practice to offer a comprehensive and selected range of services to suite client’s requirements.

We have undertaken assignments for a wide variety of clients, national government and for both the public and private sectors.

At CHSS, we recognize the need for strategic planning and the application of land use/transport planning methods. These can range from simple sketch planning tools to the utilization of sophisticated computer software. Whatever approach we take, the strategies will provide a clear framework for development, yet flexible enough to accommodate dynamic changing socio-economic conditions.

HIGHWAYS & ROADS EXPERIENCE



MISCELLANEOUS ROAD DESIGN WORKS FOR THE MINISTRY OF ENERGY & INFRASTRUCTURE, UNITED ARAB EMIRATES

CHSS has carried out various roads and street lighting projects within the Northern Emirates.

Services:

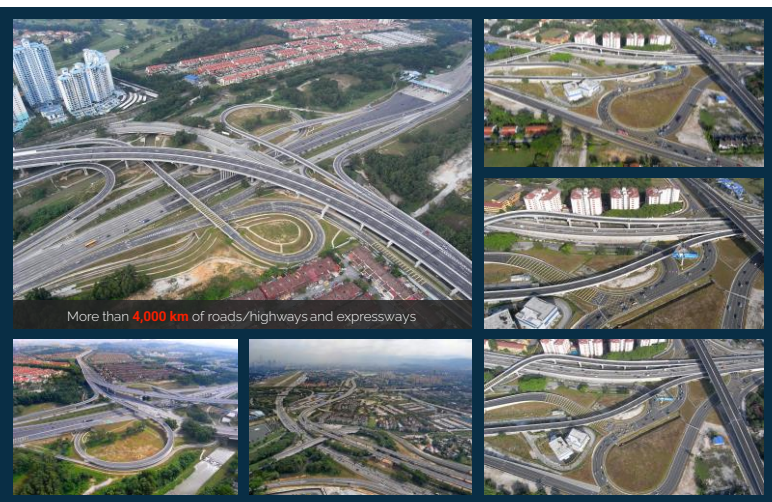
- Pavement Assessment;
- Engineering Design;
- Design Review; and
- Construction Supervision.

MISCELLANEOUS ROAD DESIGN WORKS FOR JEBEL ALI FREE ZONE, DUBAI, UNITED ARAB EMIRATES

CHSS has carried out various roads projects within the Jebel Ali Free Zone Area (JAFZA). The projects include: Design and Supervision of the Roundabout 13, 7 and 8; Design and Supervision of the Street Lighting works for JAFZA South; Rehabilitation and repair of the roads in JAFZA North and South; and CT1 Operations Parking Upgrade.

Services:

- Detailed Design;
- Design Review; and
- Construction Supervision.



More than 4,000 km of roads/highways and expressways

MAJU EXPRESSWAY, MALAYSIA

The Dedicated Highway initially started as a 42km of expressway that links Kuala Lumpur to the new KL International Airport in Sepang.

Services:

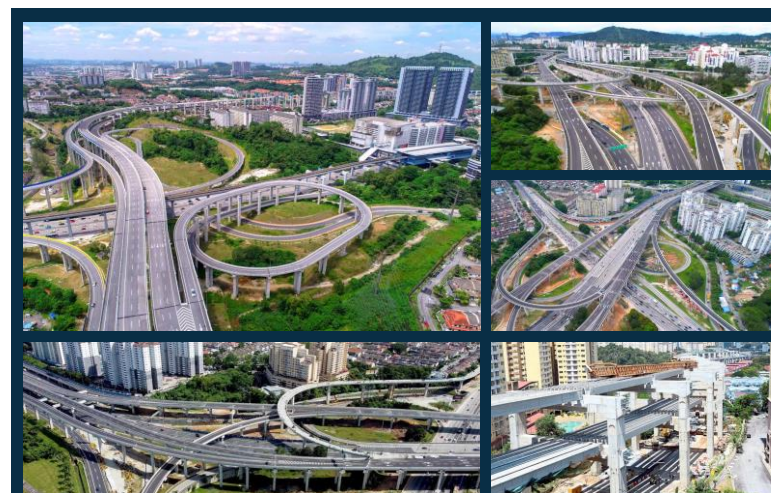
- Detailed design & head office support during construction;
- Construction Supervision; and
- Head office support during defects liability stage.

SG. BESI - ULU KELANG (SUK) ELEVATED EXPRESSWAY, MALAYSIA

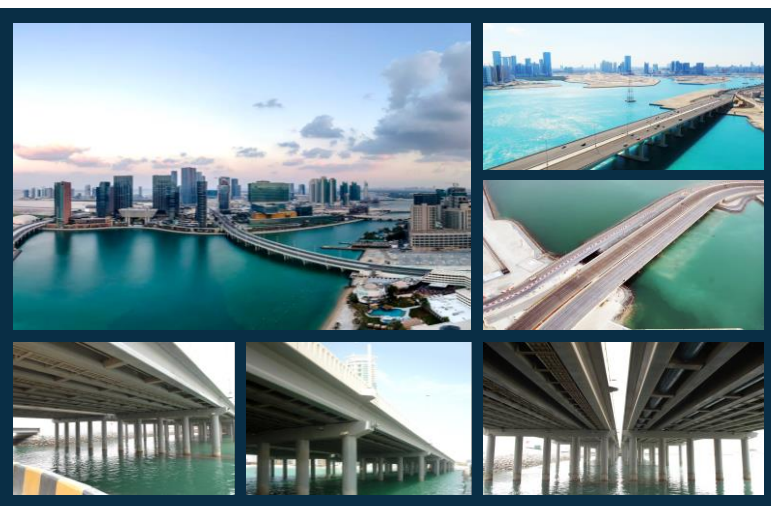
SUK is a 24.4-kilometre (15.2-mile) three-laned, dual carriageway, controlled-access highway that is being constructed in Kuala Lumpur and Selangor, Malaysia.

Services:

- Engineering Design; and
- Construction Supervision.



BRIDGES EXPERIENCE



AL REEM ISLAND BRIDGE, ABU DHABI, UNITED ARAB EMIRATES

CHSS was awarded the contract to Design and Supervise the construction of a bridge connecting the Island of Abu-Dhabi with the Island of Reem.

The bridge consists of 4 lanes plus and emergency road in each direction, two underpasses one on each side.

Services:

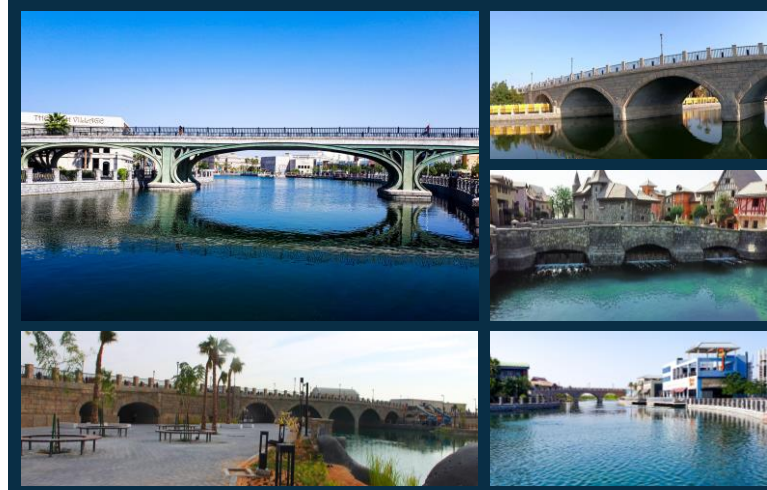
- Concept and Detailed Engineering Design;
- Obtaining NOC's from Various Authorities; and
- Project Management.

5 LAGOON BRIDGES FOR DUBAI PARKS & RESORTS, , DUBAI, UNITED ARAB EMIRATES

The lagoon bridges (5 bridges) and Water Wheel Pool are part of the lagoon project located within Dubai Parks, the new Themed Entertainment Resort in the UAE.

Services:

- Full Engineering Design; and
- Construction Supervision.



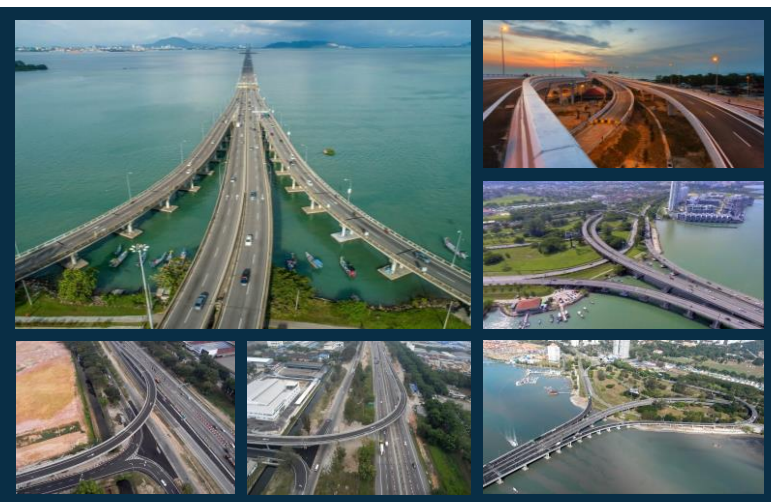
PENANG BRIDGE WIDENING, MALAYSIA

The 13.5km long Penang Bridge that connects the Penang Island to the mainland of Peninsular Malaysia.

Widening of the Bridge from dual two-lane to dual three-lane configuration.

Services:

- Preliminary Engineering Study;
- Traffic Studies;
- Preliminary Environmental Impact Screening Study;
- Detailed Engineering Design;
- Tender Documentation; and
- Construction Supervision.



MALAYSIA SINGAPORE 2ND CROSSING, MALAYSIA

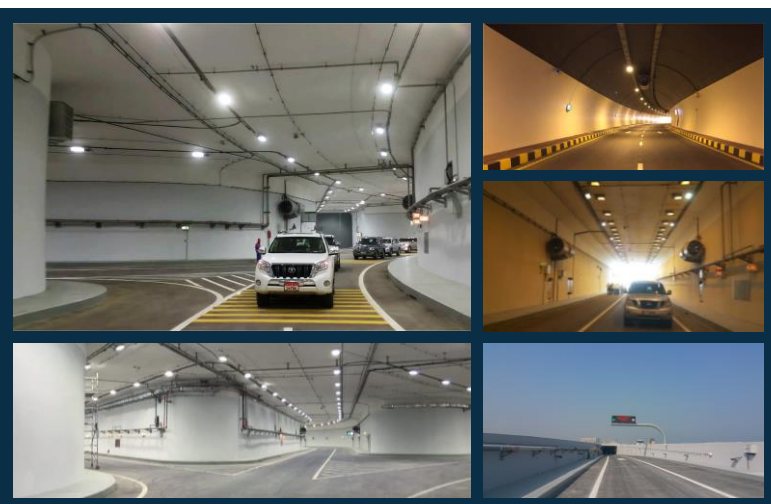
The bridge made of a prestressed concrete box girder carrying dual three-lane carriageways with two navigational spans of the Singapore side.

Services:

- Reviewed the joint Technical Design Brief;
- Carried out an independent design check on the structural elements;
- Reviewed the design specifications; and
- Checked and endorsed the calculations and structural drawings



TUNNELS EXPERIENCE



SAADIYAT ISLAND PROJECTS DESIGN / BUILD SERVICE TUNNEL, ABU DHABI, UNITED ARAB EMIRATES

1.2 km open cut service tunnel is located in the Cultural District on Saadiyat Island. The service tunnel extends from east to south, serving Guggenheim, Louvre, Zayed National Museums.

Services:

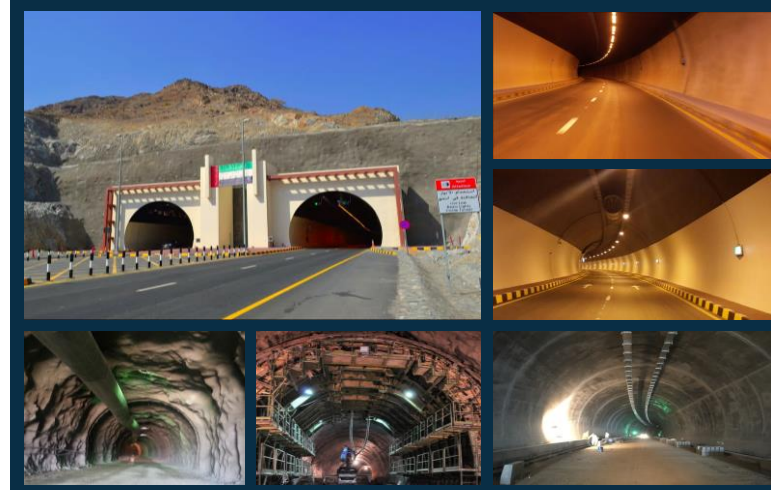
- Concept Design;
- Preliminary Design;
- Detailed Engineering Design; and
- Construction Supervision.

DIBBA KHORFAKKAN TUNNEL, UNITED ARAB EMIRATES

CHSS was appointed by Ministry of Energy and Infrastructure (MoEI) to provide Engineering Services for 1.1km road between Al Aqah and Sharm in Dibba, Northern Emirates. The road consist of a tunnel of 900 m.

Services:

- Review of Existing and Development of Final Study;
- Preliminary and Final Design Stage;
- Tender Services; and
- Construction Supervision.



MAIN ROADS AND TUNNEL PROJECTS IN THE STATE OF PENANG, MALAYSIA

Independent Consulting Engineer (ICE) for; Package 1 to Package 4 with a total of 31km Roads including 8km link tunnel.

Services:

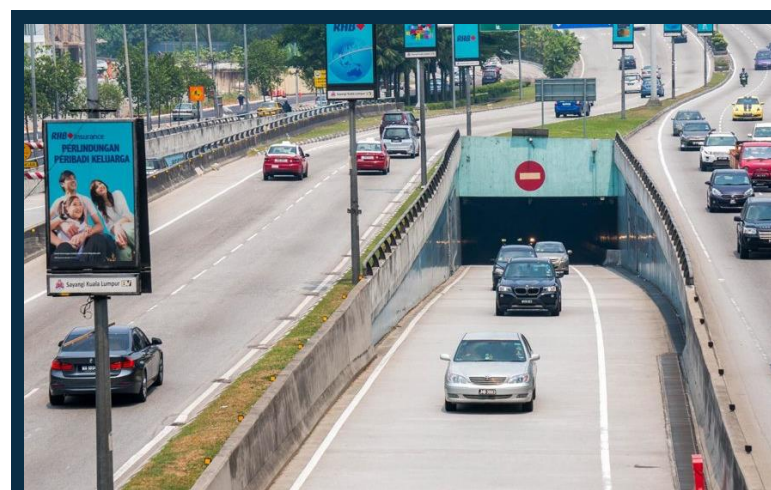
- Feasibility Study;
- Environmental Impact Assessment;
- Detailed Design; and
- Construction Management / Monitoring

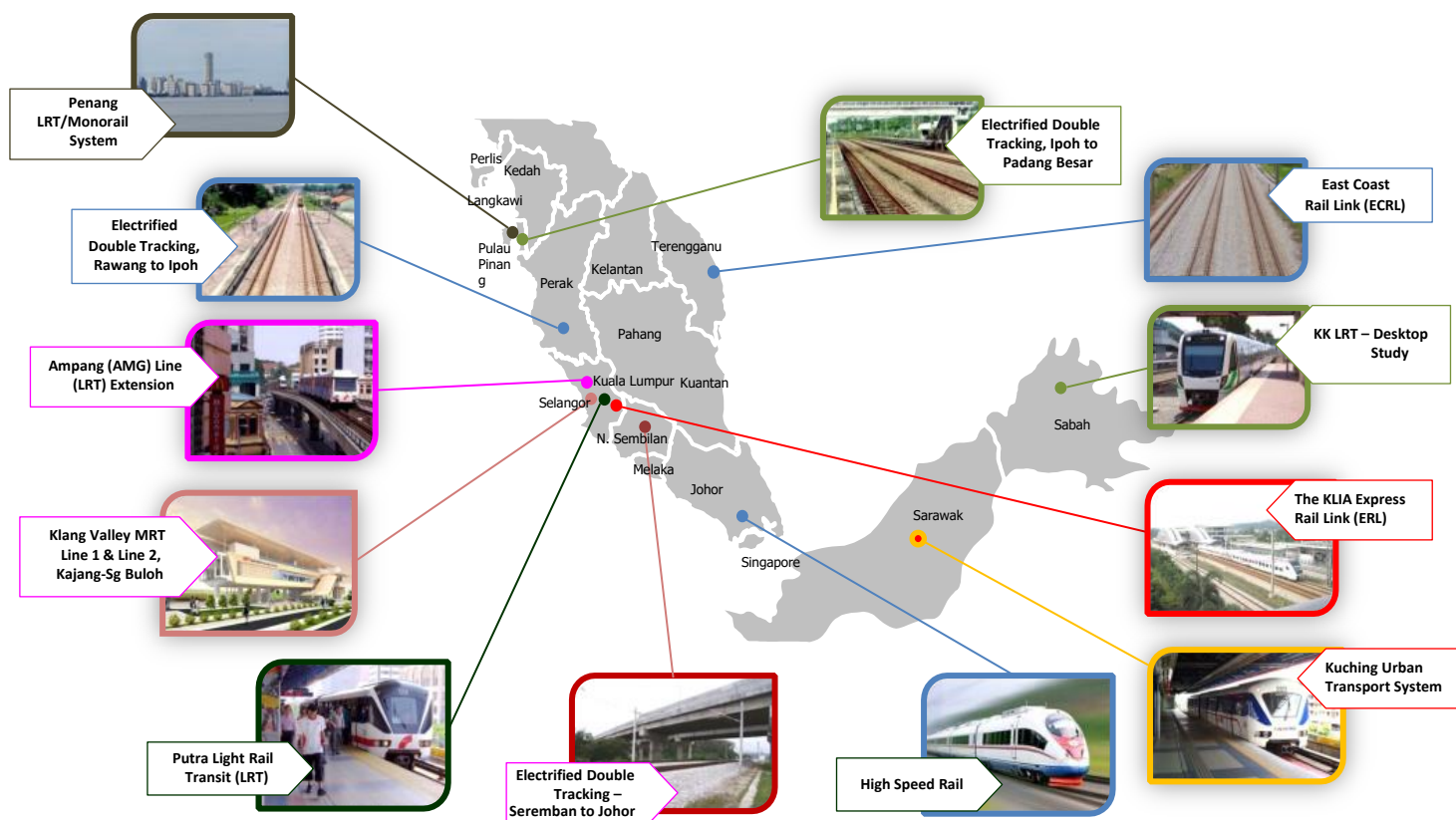
RAMLEE CAR RAMPS AND THE CONNECTING TUNNEL AT THE KUALA LUMPUR CITY CENTRE, MALAYSIA

The ramps and the 600m long tunnels provide ingress and egress to the basement carpark located at the Kuala Lumpur City Centre north west development. The ramps and tunnels provide several points of access at Jalan P. Ramlee and the Sungai Kelang Elevated highway.

Services:

- Design and costings;
- Tender and contract documentation;
- Traffic management; and
- Construction supervision.





RAILWAY CAPABILITY

A leader in state, regional, and multimodal planning, The Group aims for environmentally sound and cost efficient transportation solutions.

Design

The Group has designed more than 600km of heavy and light rail systems, guideways and commuter rail - more than any other firm, and integral to the Group's design portfolio is the full spectrum of transit facilities: numerous tunnels, bridges, bus shelters, intermodal terminals, transit maintenance facilities and transit stations throughout this region.

Program Delivery

Fully equipped to provide the project delivery system that best fits the client's needs, The Group has played a full range of roles on Design/Build, Design-Build-Operate-Maintain (DBOM) and Build-Operate-Transfer (BOT) projects.

Project Management

Assembling the full project team and managing complex transit programs - from initial planning phases through operations - is a particular strength.

Construction Services

The Group is focused on streamlining the construction process. Partnering, value engineering and The Group designed project control system for document management combined to facilitate project completions with minimal claims, delays and conflicts.

Operations and Maintenance

The Group has been involved in the design of numerous maintenance facilities in the region, all of which have met the requirements of the respective service operators.

RAILWAY EXPERIENCE



MASS RAPID TRANSIT (LINE 2) IN KLANG VALLEY, MALAYSIA

The total length of the project is 52.2 km (38.7 km elevated & 13.5 km underground). The line also includes 36 stations with two of these being underground. The Consultant is the Independent Consultant Engineer.

Services:

- Design Review;
- Certification of Progress Payments; and
- Oversight on Tendering Process, Construction Activities and Quality & Safety Assurance

EAST COAST RAIL LINK PROJECT, MALAYSIA

The Group was appointed by CCC to provide Preliminary Design Consultancy Services covering the Facilities works (i.e. Alignment, Earthworks, Viaduct and Bridges, Tunnels, Drainage and Culverts, Roads, Utilities and Station Buildings) from Ch. 0 – Ch. 220 of the ECRL.

Services:

- Management and Coordination of Sub-consultants and Service Providers; and
- Stakeholder Engagement.



KUALA LUMPUR – SINGAPORE HIGH SPEED RAIL PROJECT, MALAYSIA

The KL-SG HSR is a joint effort by Malaysia and Singapore to reduce travel time between the two capital cities to within 90 minutes. In line with Malaysia's Economic Transformation Programme, this link will improve connectivity between the two nations and boost economic activities. With an approximate total length of 335km, the HSR service will connect 7 major towns along its corridor.

Services:

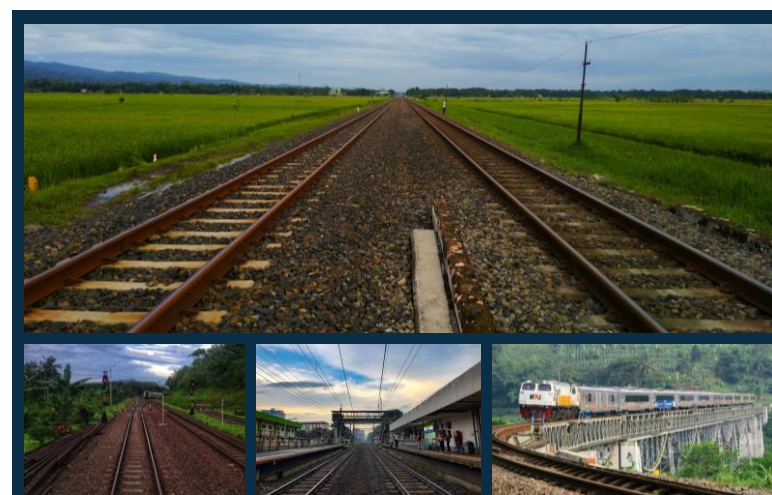
- Design Consultant

PROPOSED RIAU PALM OIL RAILWAY, INDONESIA

Feasibility Study for the development of a 150km Freight Railway between Dumai Port and Pekanbaru in Sumatra, Indonesia.

Services:

The Group were appointed by Halcrow to carry out site reconnaissance, route appraisal, data collection & review, alignment option study which included geotechnical, bridge, infra and utilities conceptual designs, and preparation of typical generic drawings and cost estimates for the above-mentioned study.





AIRPORTS CAPABILITY

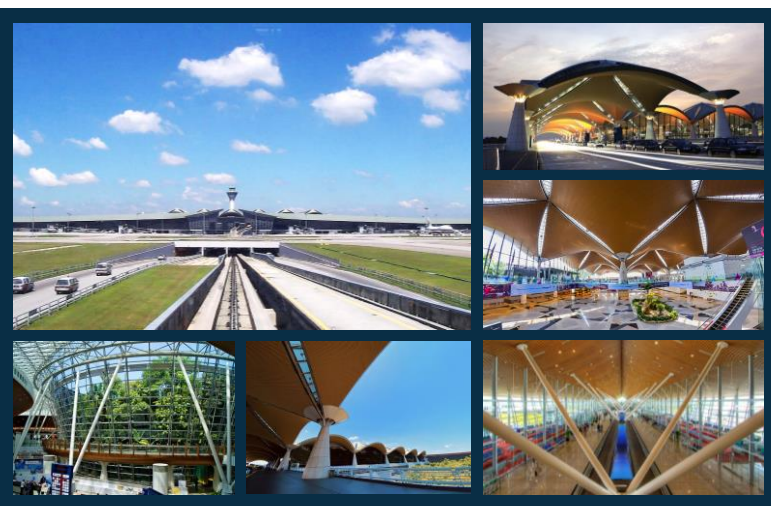
As one of the country's leading consulting engineering practice, The Group has been involved in the planning, design and construction supervision of major airport projects in Malaysia as well as in the Asia Pacific region.

The varied experience in the airport and aviation sector has enabled The Group to offer a wide range of skills required for the successful implementation of projects incorporating airport engineering.

The Group can provide a full range of disciplines from in-house supplemented where necessary by the expertise of sub-consultants who offer specialist input in various areas of a project.

- Planning & strategic studies;
- Feasibility studies;
- Master plan;
- Detailed design;
- Extension, refurbishment & upgrading;
- Engineering design & commissioning;
- Project management;
- Construction supervision;
- Quality assurance;
- Contract documentation; and
- Tender & contract management

AIRPORTS EXPERIENCE



KUALA LUMPUR INTERNATIONAL AIRPORT, MALAYSIA

Airport handling 25 million passengers per annum. It consisted of two runways, parallel taxiways, aprons, a main passenger terminal, a satellite terminal building plus essential landside and airside support facilities.

Services:

- Master-Planning; and
- Detailed Engineering Services.

KUALA LUMPUR INTERNATIONAL AIRPORT 2 (KLIA 2), MALAYSIA

Preliminary & Detail Design of the Bulk Earthworks (Package EW02) for the airside surfaces, ground improvement works and drainage works.

Services:

- Preliminary Design;
- Detail Design; and
- Construction Supervision.

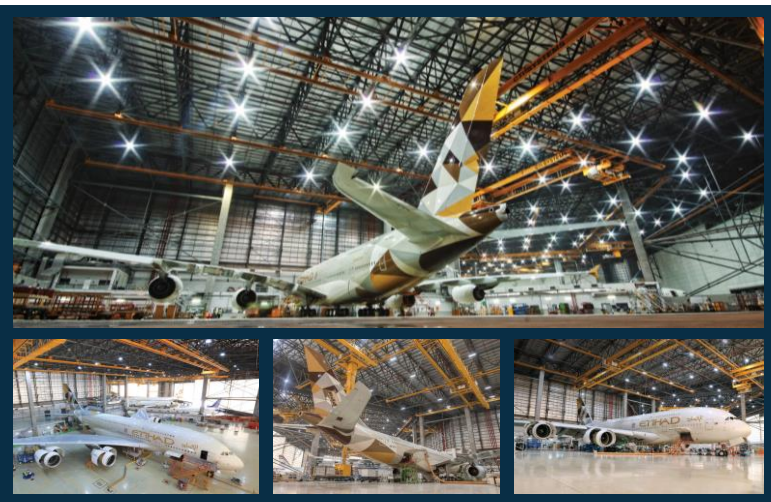


HANGAR FOR ABU DHABI AIRCRAFT TECHNOLOGIES, ABU DHABI, UNITED ARAB EMIRATES

The massive hangar was designed to house the A380 Aircraft by introducing large spans steel structure.

Services:

- Overall Project Management;
- Engineering Management;
- Planning and Cost Control;
- Construction Management; and
- Third Party Design Review.

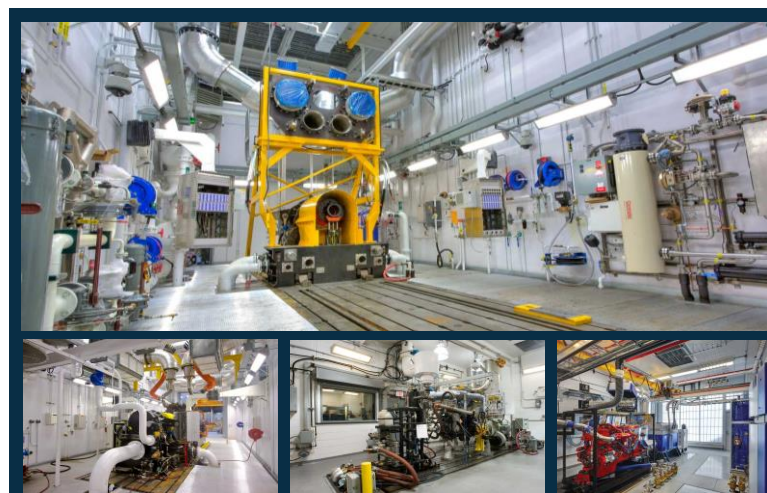


ENGINE TEST CELL BUILDING, ABU DHABI, UNITED ARAB EMIRATES

The engine test cell building is located in ADAT of an approximate size of 200sqm. The project is on a fast track basis of design and build in 6.0 months including obtaining all necessary NOC's.

Services:

- Detailed Engineering Design;
- Construction Management; and
- Obtaining NOC's.





PORTS AND HARBOURS CAPABILITY

Planning and design of port facilities have become a significant part of The Group's activities in recent years and The Group has embarked aggressively on building up a strong port and marine works and structural department to provide effective and efficient service to our client.

The firm's long term involvement and in some cases in association with reputable marine consultants, together with our proven track record means that the solution we provide to clients are cost-effective and efficient. Our level of technical expertise are tailored to suit projects of varying size and complexity.

The main feature of port development include:

Land reclamation through dredging operations.

Creation of additional container handling facilities to service even super post-panamax class vessels with associated infrastructure, which among others include:

Planning & strategic studies;

- Container park (storage facilities);
- Container Freight Station (CFS);
- Jumbo size quay crane;
- Rubber tire yard gantry cranes; and
- Other back-up facilities.

PORTS AND HARBOURS EXPERIENCE



WEST PORT DEVELOPMENT, MALAYSIA

Westport is one of the leading ports within the Peninsular Malaysia. The project involved the overall engineering master plan, construction of general cargo/container berths, dry bulk handling conveyor, storage facilities, container yards and others in different phases.

Services:

- Overall Engineering Master Plan, Feasibility and Privatization Concept; and
- Total Infrastructure and Services Design.

AL HAMRIYA PORT DEVELOPMENT, UNITED ARAB EMIRATES

The Al Hamriya Port Waterfront Development – Marine Works project was undertaken for Dubai Customs. This new marina is to cater for 328 fishing boats and 175 commercial boats.

Services:

- Detailed Design For the Structural Works i.e.
- Quay Wall (800 m), Pontoons, Boat Launching Ramp and Ancillary Facilities
- Construction Supervision



LEKIR BULK TERMINAL EXPANSION, MALAYSIA

The expansion of the terminal comprised extension of the existing jetty to provide two dedicated unloading berths and one dedicated loading berth and the provision of ship loading and unloading facilities on the extended jetty. In addition, the existing stockyard area required upgrading to handle the bulk material.

Services:

- Design and Construction of Jetty Expansion; and
- Design and Construction of Material Handling System.

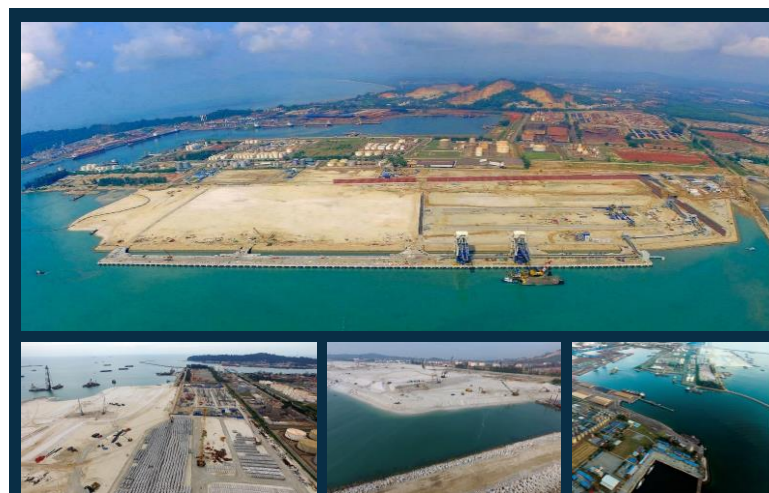


KUANTAN PORT DEVELOPMENT, MALAYSIA

The expansion would involve the excavation of approximately 15 million cubic metres of sand and clay to be disposed of in an offshore dumping ground. Suitable fill would be placed behind a constructed rock bund on the foreshore to create additional land for future port use.

Services:

- Detailed Engineering Design; and
- Construction Supervision.



MARINE WORKS EXPERIENCE

THE ISLAND PROJECT, DUBAI, UNITED ARAB EMIRATES

The Island is a luxury beachfront development which will include over 1400 hotel rooms, suites and apartments featuring the popular Las Vegas hotel brands MGM, Bellagio and Aria; retail and multiple dining options; and a number of entertainment destinations.

Project Size: 400,000 m²

Services:

- Review and development of the design;
- Obtain Statutory Authority design approvals; and
- Supervise the Marine Works during the construction and defect liability period.

THE ADDRESS, FUJAIRAH, UNITED ARAB EMIRATES

The Address Hotel Project is located in Sharm approximately 46Km North of Fujairah City in United Arab Emirates and has been constructed on a waterfront site located on the eastern coast line of UAE. The project included buildings on the sea side and associated marine works necessary to create a beach surrounded by a breakwater system comprising of Southern and Northern Groyne.

Services: Lead Consultant for Marine & Grading Works

- Design and Project Management;
- Authority Approvals; and
- Technical Support & Supervision during Construction.



DUBAI CUSTOMS CREEK QUAY WALL CONSTRUCTION AT MINA RASHID, DUBAI, UNITED ARAB EMIRATES

The Project involves the construction of a berth wall for the Dubai Customs Dhows, boats berthing purpose with 120 m of berthing length. The scope also includes the construction of aprons behind the berth wall.

Services:

- Review and development of the design of the project marine structures;
- Approvals from Authorities; and
- Construction Supervision.

AL GARHOUD MAINTENANCE FACILITY, DUBAI, UNITED ARAB EMIRATES

A routine maintenance facility located near the old Garhoud Bridge area. The maintenance facility will be required for routine maintenance and light repair works of abra, waterbus, water taxi with dry docking and routine maintenance of Creek Ferry without dry docking.

Services:

- Master Planning;
- Full Engineering Design;
- Tender Services; and
- Construction Supervision.



MARINE WORKS EXPERIENCE

NEW QUAY BERTHS AT MARINA HAMRIYA-PHASE 1, DUBAI, UNITED ARAB EMIRATES

The project comprises of construction of additional berths parallel to the existing Quay berths 8 & 9 and outside the Marina Hamriyah harbour basin. Design and Construction of 1,130m length Quay to accept General Cargo dhows / RORO vessels with 6m draft (max). Construction of apron including all the MEP facilities.

Services:

- Design Review;
- Approvals from Authorities; and
- Construction Supervision.

MARYAM ISLAND SHARJAH - MARINE ISLAND PACKAGE, UNITED ARAB EMIRATES

The project involves design and construction of new 790-meter quay wall and 120-meter-long revetment and crest wall. The area behind the wall and the revetment will be backfilled according to the design drawings. The 790-meter-long quay wall will be constructed in two phases cast on site block and precast capping beam.

Services:

- Design Review; and
- Construction Supervision.



THREE FISHING HARBOUR, DUBAI, UNITED ARAB EMIRATES

The three harbours are Jumeirah 1, Umm Suqeim 1 and Umm Suqeim 2. Each consist of a fish handling area, accommodation and facilities for fishermen, and a tourist area with shops and restaurants.

Services:

- Employer's Representative;
- Detailed Design for the Revetment and Boat Launching Ramp; and
- Construction Supervision.

JEWEL OF THE CREEK DEVELOPMENT, DUBAI, UNITED ARAB EMIRATES

The Project "Jewel of the Creek" is located at Port Saeed in Dubai. The site is bounded by Al Maktoum Bridge, Baniyas Road, the Floating Bridge and Dubai Creek.

Services:

- Design Review of Marina;
- Authority NOC application and approval from Dubai Coastal and Waterway Management; and
- Construction Supervision.





WATER RESOURCES CAPABILITY

CHSS has wide-ranging experience in the provision of engineering services for the full range of water resources development projects, delivering economic, social and environmentally sustainable solutions.

Dams and Water Conveyance Systems

- Dams: earthfill, rockfill, concrete, roller compacted concrete; canals, pipelines, aqueducts and tunnels.

Drainage and Flood Control

- Drainage master plan study;
- Urban drainage systems;
- Flood mitigation study / design; and
- Dykes, detention facilities and floodways.

Wastewater

- Reticulation systems;
- Treatment plants; and
- Outfalls.

Water Supply

- Headworks;
- Treatment plants;
- Reticulation systems; and
- Pumping stations.

Irrigation

- Intake structures;
- Conveyance systems and drainage; and
- Irrigation application systems.

WATER RESOURCES EXPERIENCE



DAMS & NEW BARRIERS IN THE NORTHERN EMIRATES, UNITED ARAB EMIRATES

The Northern UAE Cities and towns tend to be developed downstream of the Wadi's to make use of the flat, fertile ground. However, due to their location, these areas also prone to flooding.

Services:

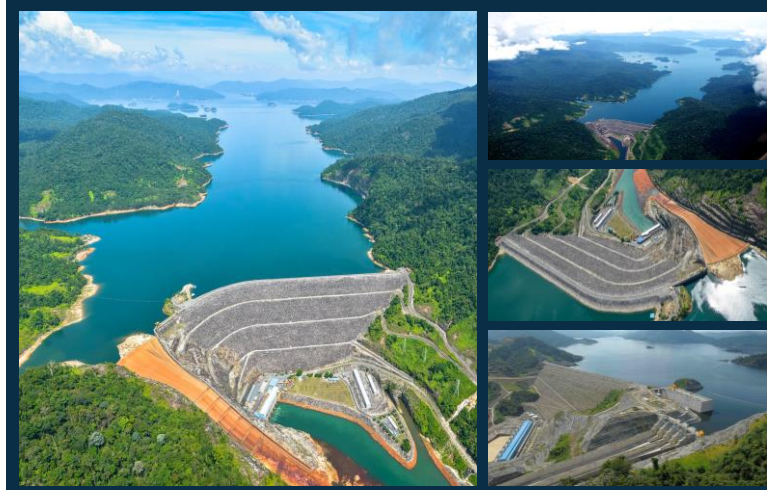
- Update Previous Studies & Designs (13 No. Basins);
- Preparation of Designs (Selected Locations);
- Preparation & Issue of Tender / Contract Documents; and
- Construction Supervision.

KENYIR DAM, MALAYSIA

Kenyir Dam is a 155m high rockfill dam on the Terengganu River. There are eight associated earthfill saddle dams (Dams A to H), located on ridges on the northern perimeter of the reservoir. Saddle Dam A is 2.25 km long and 52m high, whilst Dam F is 750 m long and 39m high. The main associated structures at Kenyir Dam are an uncontrolled spillway, inlet structure and pressure tunnel.

Services:

- Dam Safety Review; and
- Dam Safety Inspection and Training.

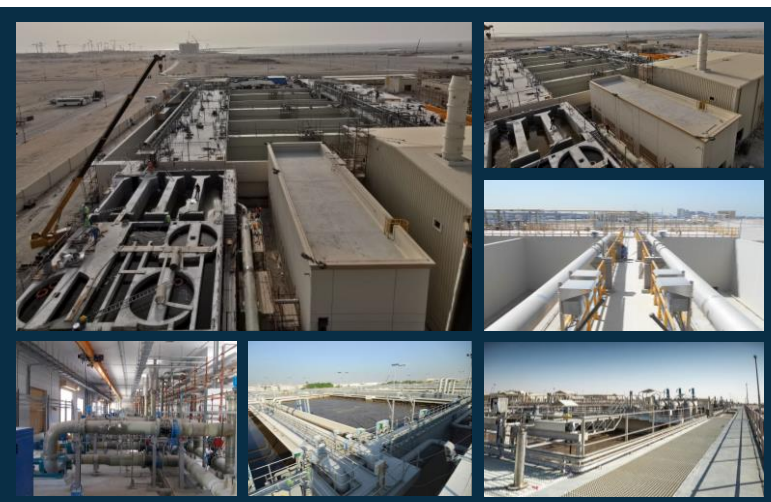


DEIRA ISLAND SEWAGE TREATMENT PLANT, DUBAI, UNITED ARAB EMIRATES

Deira Island Sewage Treatment Plant (DISTP) is a high-capacity but compact state of the art plant based on six membrane bioreactors (MBRs) – a new technology for water filtration. The Plant is capable of treating 36,000m³ of sewage per day and of accommodating a further future expansion up to 60,000m³ per day.

Services:

- Design Review;
- Approvals from Authorities; and
- Construction Supervision.



LANGAT REGIONAL SEWAGE TREATMENT PLANT, MALAYSIA

Many small scale sewage treatment plants serve the Langat catchment with inadequate performance and adversely affecting river water quality. A proposal to build a centralized sewage treatment plant able to cater for capacity of 920,000 population equivalent was accepted by the Government of Malaysia.

Services:

- Review of M&E and Process Design;
- Detail Design; and
- Construction Supervision of M&E works.





POWER CAPABILITY

The Group has wide-ranging experience in the provision of engineering services for the full range energy development projects, delivering cost efficient and environmentally sound solutions.

The Group has specialist capability in the engineering of control systems for the full range of energy development applications.

Thermal Power Stations

- Power Stations: Buildings and Plant;
- Fuel Conveyance, Handling and Storage Systems; and
- Emission Control/Reduction Systems.

Transmission Facilities

- Switchyards Transmission Towers Sub-stations.

Fuel / Gas Conveyance Systems

- Pipelines;
- Pumping/Booster Stations; and
- Corrosion Control Systems.

Refinery Facilities

Renewable Energy Systems:

- Hydropower;
- Solar; and
- Wind.

POWER EXPERIENCE



UNDERGROUNDING OF 400KV OVERHEAD LINES – MEYDAN DISTRICT ONE, UNITED ARAB EMIRATES

Overhead power lines, 400kV and 132kV, to be undergrounded and convert the area to high value real estate development.

Services:

- Design Review;
- A cost estimate based on the current tender design;
- Value Engineering solution to the current tender design on civil & structural, electrical and Transition Station components; and
- Developed an Alternative EHV Power Transmission Solution.

AL GARRAF OILFIELD DEVELOPMENT, IRAQ

The project is the development of the oil processing facilities in three sites in Iraq, namely Zubair IPF, Hammar IPF, and Rashidiya IPF.

Services:

- Detailed Design of Equipment 's Foundation;
- Earthworks Design;
- Roadworks Design; and
- Infrastructure Design.

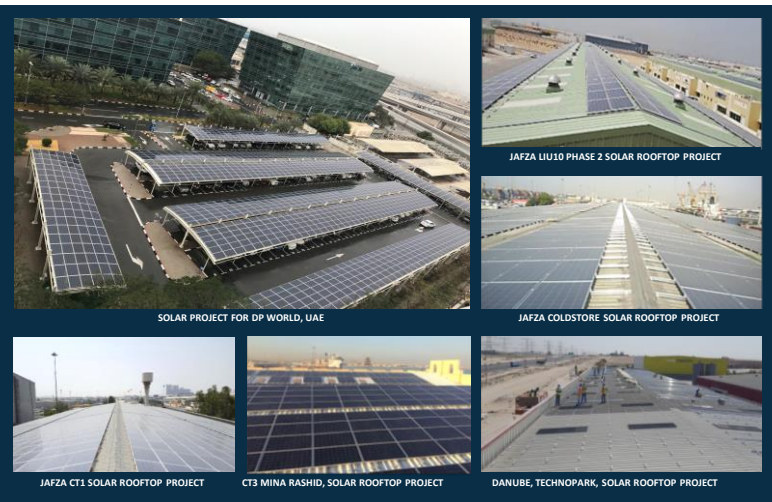


DP WORLD SOLAR PROJECT, DUBAI, UNITED ARAB EMIRATES

CHSS was appointed as the Consultant to provide structural verification and obtain authorities NOCs for the installation of the Solar Panels in around 30 number of buildings in Jebel Ali Free Zone.

Services:

- Structural Verification; and
- Authorities Approval.



CONSTRUCTION OF THE BALANCE OF PLANT (BOP) FOR THE 1000MW COAL FIRED POWER PLANT EXTENSION, MALAYSIA

The project consists of the design and construction of a 1000MW coal fired power plant for Tenaga Nasional Berhad.

Services:

- Geotechnical;
- Civil & Structural Design Engineer;
- Mechanical & Electrical Design Engineer; and
- Building MEP Services.





Engineering & Beyond

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