

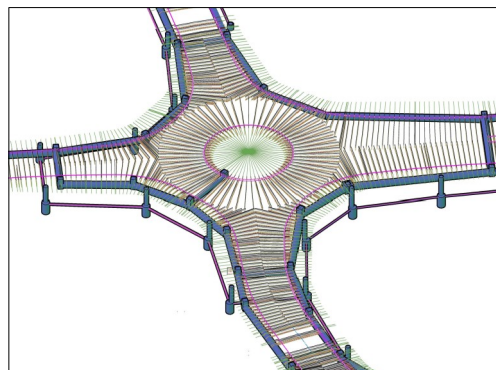
JEB SURVEYS & ENGINEERING

CIVIL ENGINEERING CONSULTANT

PRO-ACTIVE ENGINEERING

COMPANY PROFILE

mid-2020



WE ARE JEB !



Established in 2018 to support the development of the Cambodian infrastructures, we have local and international engineering skills in topography, soil investigation, airfield, railway and road construction design and supervision.

Our survey, lab, QA/QC and design teams are working to international standards in collaboration with Consultant engineers and Contractors for projects in Cambodia and all-over the SEA region.

TOPOGRAPHIC
SURVEYS

CONSTRUCTION
SUPERVISION

SOIL
INVESTIGATION

CIVIL WORKS
DESIGN

We also provide some of these services to International Consultant Engineers for their detailed design at home (**out-sourcing**) and we also help them to conduct projects in Cambodia as their **local partner**.

HOW CAN WE HELP YOU?

• PREPARING YOUR CONSTRUCTION PROJECT

Provide the best incoming data to your Architect or Structural consultant

TOPOGRAPHIC SURVEY

SOIL INVESTIGATION

• DESIGN YOUR INFRASTRUCTURE

Well planned and accurate drawings, BoQ, specification and cost estimate will save you time and money

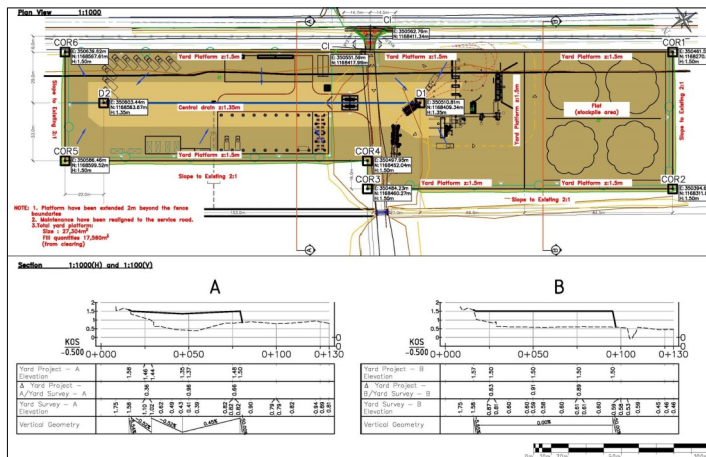
EARTHWORKS

ROAD

DRAINAGE

DESIGN

SHOP DRAWING



• BUILD TO THE HIGHEST STANDARD

If you are the Client, a Contractor or a Consultant Engineer, Quality Control and Construction Supervision on site bring value to your projects

PAVEMENT

GEOMETRY

TESTING

MANAGEMENT

HSE

QA/QC



A CAMBODIAN FRENCH AFFAIR...

In 2007, **Jeremy Berthelomeau**, a survey engineer arrived in Cambodia to participate to the French technical support for the renovation of the Khmer temple of Angkor.

After working for the Cambodia railway rehabilitation project and as a consultant engineer, he founded in 2018, JEB SURVEYS and ENGINEERING Co.,Ltd. with a Cambodian civil engineer, **Pheang Chanphirom** in order to provide much needed technical support to the Cambodia infrastructures development.

The Company is registered as number 00033571 at the ministry of Commerce of the Kingdom of Cambodia and hold a license to provide engineering consultation services and small construction.

DEDICATED

Our team includes 25 person from different background, from engineers to Workers, from Europe to South East Asia.

NETWORKED LOCALLY AND INTERNATIONALLY

Located in Cambodia for so long, the company key members have developed a very large network of clients, architects, consultants and contractors in Cambodia, which able us to advise on the services available locally.

Because we have worked for extended period of time with International Contractors and Consultants, we have access to professional advises from engineers and technicians who are world leaders in their specialty.

CLIENTS, FRIENDS AND PARTNERS...AMONG OTHERS...



KEY EMPLOYEES

Managing Director Mr. Jeremy Berthelomeau

Jeremy is a French engineer from the “Ecole Supérieure des Géomètres et Topographes (part of ENSAM)” with 14 years of experience in the field of:

- General topographic survey works
- General soil investigation works
- Earthwork, Road, drainage system design and supervision
- Railway and Airfield construction supervision
- Industrial and residential zone outdoor design



Survey manager Mr. Pheang Chanphirom

Chanphirom is a Cambodian engineer from the “Institut de Technologie du Cambodge” with 15 years of experience in the field of:

- Bathymetric and topographic survey works
- Structural design and construction supervision
- Road design and construction supervision
- Airport runway construction supervision
- Management of large engineering Cambodian team



Earthwork quantity survey, HSE, Civil Work Supervision Mr. Prak Nhort

Nhort is a civil engineer from the “Build Bright University” in Phnom Penh with about 19 years of experience in rural development. He especially contributed to the demining of Cambodia with CMAC but also in Erythrea (East Africa) during his youth and afterwards works in many projects related to rural development in Cambodia including of health center, electricity line, railways and roads.

Nhort, as a trained military medic, is also in charge of HSE.



Soil Investigation and Civil Work Supervision Mr. Teu Saroeun

Saroeun is a Cambodian engineer from the “Institut de Technologie du Cambodge” with 14 years of experience in the field of:

- Topographic survey
- Soil Investigation and laboratory testing
- Road design and construction supervision



Design manager: Mr. Leonidas Zeikos

Leonidas is a Greek engineer from the “National Technical university of Athens” with 10 years of experience in the field of:

- Topographic survey works with a specialty on high buildings
- Project Management
- Building Construction

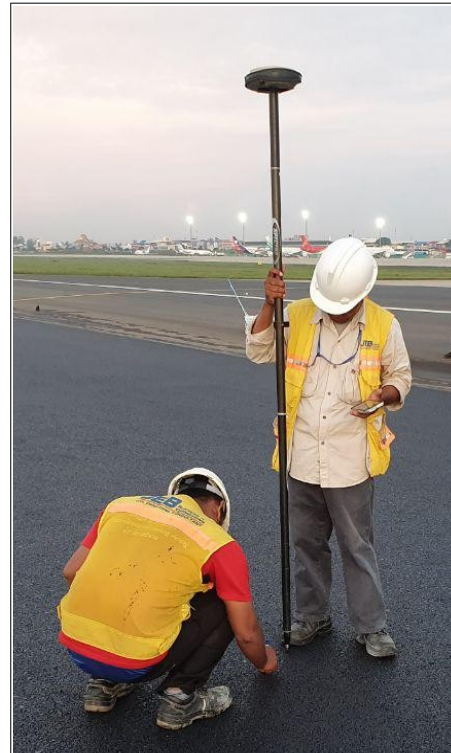


EQUIPMENT

Topographic Survey

The Company have enough survey equipment to work with 6 teams simultaneously or to conduct work with higher requirement of accuracy:

- 4 DGPS Antenna (SPECTRA 80)
- 2 1" Total Station (Leica / Sokkia)
- 1 2" Total Station (Sokkia)
- 4 Digital Level (SPECTRA)
- All necessary accessories



Bathymetric Survey

- The company owns a Single Beam Echo-sounder 200kHz and have experience to work with multi-beam equipment, mobilized from Singapore.
- Adapted survey vessel for bathymetric work
- Navigation software Hydro-magic able accurate survey line and to follows all survey requirement.



LiDAR and Photogrammetry

In collaboration with ATGT, the biggest French survey firm, JEB provides LiDAR and Photogrammetric survey at very competitive price.



- The Company owns drones DJI Mavic Pro2 / Phantom 4 to provide ortho-photography and photogrammetry. Data is process using Trimble professional software by ATGT to guarantee reliability of the surveys.

- Our LiDAR available in Cambodia is a AP-1000 "Clouds" mounted on a drone from SureStar,



Soil Investigation and Laboratory Testing

The Company owns:

- One XY drilling rig, used for SPT test, disturbed and undisturbed soil sampling. Drilling is possible up to 60m, mazier and piston sampler, double tube rock coring, casing up to 8m.
- One CPTu that are use for in-situ testing (SPT + physical parameters) using counterweight mobilized using a boom truck. The CPTu is able to carry investigation up to 25m with a maximum resistance of 60MPa.



All works are perform according to ASTM standards and our partner soil testing laboratory is regularly inspected by our engineers, who are also able to perform the tests by themselves if special methodology is required or for urgent works.

Resistivity Survey , Ground water research, Well test and monitoring

The company owns:

- Resistivity survey equipment, GD-10 from Geomative, with a 60 electrode switcher able to detect water table about 300m depth (using Schlumberger or Wenner configuration). The company is assisted by external international consultant for data processing.
- Pumps and Water depth data logger used for well testing



Structural Assessment

The company performs structural and survey assessment during building surveys and collaborate with reputable structural engineers to assess the buildings bearing capacity in case of transformation, renovation or certification are planned.

- Ferrometer (rebar locator)
- Sclerometer (Schmidt hammer)
- Ultra Sonic testing of concrete (UPV)
- Destructive equipment (Drilling, breaker)
- Measure device (Disto-meter, Vernier calliper)



Pavement Testing

JEB is able to perform pavement testing with the following equipment:

- Plate and Dial Gauge for plate bearing and deflection test
- Troxler (Nuclear Density Gauge)
- Sand cone test
- Field density and Macro-texture depth measure equipment
- Dynamic Cone Penetrometer (TRL and Light model)
- Thermometers, carpet test tray and lab weight scale.
- 2 Pavement coring machines for sample extraction



Miscellaneous equipment

The Company have at its disposal several transportation means:

- 2 Pick up
- 1 Light Truck, able to carry 2.5T of equipment.

Additionally, computers, printers and other necessary devices are available for all engineers.



PROJECTS

SIHANOUK INTERNATIONAL AIRPORT RUNWAY EXTENSION

Biggest infrastructure project in Cambodia in 2020, the Aiprot of Sihanoukville was upgraded with an extension of 800m of the runway, as well as a reinforcement of the existing runway structure to be able to receive class E aircraft.

JEB was survey contractor for the project and provided the following services:



- Design and Supervise the construction of all temporary access roads needed for the project
- Preparation of the Existing Runway Repair, Reprofilling and Overlay phase shop drawings
- Preparation of the Shop-drawing on the extension, and the extension of the turnpads
- Manage the handing over Survey of the final level provided by the Earthworks Contractor
- Shop drawings, Set out and Supervise the construction of all Civil Works: manholes, ducting, airfield lightings...
- Provide set out and survey to the contractor at all time to reprofile and built the runway to the correct geometry.
- Provide external laboratory test to check asphalt quality, base and sub-base material compliance to technical requirement and regulation.



MEKONG VIEW BATHYMETRIC SURVEY

2020 Properties along the Mekong in the north of Phnom Penh are subject to erosion and slope degradation. JEB provided bathymetric survey services and civil engineering design for the repair of several properties.

Key Words: Topographic Survey, Bathymetric Survey, Civil engineering design



EARTHWORKS DESIGN AND MATERIAL SURVEY

2020 JEB has been consulted for the earthworks design for a 220ha plantation in the south of Cambodia. To lower the cost photogrammetric survey is undertaken, and estimation of volume is prepared. Documents are used by the Contractor to organize its work plan and to adjust final level in this properties located at proximity of the sea.

2019 Several quarry owns by Muhibbah Masteron Corporation have been survey and studied to estimate the amount of material available.

Key Words: Photogrammetric Survey, Material survey, Soil investigation, Civil engineering design



SOIL INVESTIGATION AT SIHANOUKVILLE AIRPORT

2018 until 2020, JEB soil investigation team almost solely works on the preparation study and geotechnical investigation works for the development of the new terminal, aprons and runway of Sihanoukville airport.

The site is particularly challenging, as it is made of mangroves, swamp and have to be improved to carry massive loads.

A total of 147 CPTu, 68 Boreholes and 1000s of soil test have been performed in order to understand this very complicate and heterogeneous site.

Works has been done in cooperation with experts from France, Hong Kong and international field leaders such as Menard, Fugro and Vinci Terrassement.



Key Words: Soil investigation, CPTu, Boreholes, Soil testing, Soil improvement



TOPOGRAPHY AND SUPERVISION WORKS FOR LRU APRON

2019, JEB surveys, engineering and laboratory teams participated to the renovation of the LRU Apron Project at Phnom Penh International Airport. The LRU apron consists of 12 parking area for class C planes such as A320 or B737. The team conducted all necessary investigations in order to prepare design, develop the shop-drawings and guided the paving team to lay the 15,300Tonnes of Asphalt to the correct geometry and to the proper quality. The team was as well responsible of the marking and lighting stake out, to arrange the connection to the runway, as well as to the setting out of the drainage.

Key Works: Execution Drawings, Topographic Survey, Asphalt pavement works, Quantity control and Quantity Survey, As-Built



PHNOM PENH RUNWAY EMERGENCY REPAIR

2019, The team participate to a large repair on the central part of Phnom Penh International Airport runway. JEB was responsible for quality control and quantity survey. Work was done at night and with diligence to not disturb any runway operation.

Key Works: Topographic Survey, Asphalt pavement works, Quantity control and Quantity Survey, As-Built

FACTORY FLOOD PROTECTION CONCEPT DESIGN

2019, JEB provided the largest garment factory complex in Cambodia (15,000+ employees) with solutions to remedy to its chronological flooding problem. Using topographic, storm and sanitation modeling and analysis and our knowledge of the local hydrological context, we were able to identify the critical bottlenecks in the drainage system. We provided quick and affordable short term repair solution as well as longer term storm drainage concept design in account the compound future expansion.

Key Words: Topographic Survey, Hydrological Survey, Drainage modeling and design

PHNOM PENH TRAIN STATION

2019, JEB surveys & engineering provided an architectural and a non destructive structural survey work for Phnom Penh train station. We provided drawings with the exact building geometry and all the necessary documentation to conduct an up to date structural analysis.

It able the Architect to prepare the renovation and refurbishment to commercial use to one of the oldest and most iconic building of Phnom Penh.

Key Words: Topographic Survey, Photogrammetric Survey, Soil Investigation, Structural Assessment



TOPOGRAPHIC SURVEY AND HYDROLOGICAL STUDIES IN THE SOLOMON ISLANDS

2017, JEB employees worked together with the Ministry of Infrastructure Development of the Solomon Islands to implement topographic, bathymetric surveys and hydrologic studies needed to prepare construction of roads, bridges and wharves on 6 different provinces of this low populated archipelago.

Hydrologic studies are crucial for the long term sustainability of infrastructures in the islands, which are threaten by cyclones and other climatic problem.

Key Words: Topographic Survey, Bathymetric Survey, Hydrological survey and modeling



TOPOGRAPHY AND SOIL INVESTIGATION FOR MAFF BUILDING

2019, at the demand of the Architect “The Room Design Studio” JEB produce all necessary topographic survey and soil investigation data for the design of a governmental building at the Cambodia Ministry of Agriculture, Forestry and Fisheries. This FAO founded project was successfully done under intense scrutiny of the UNDP.

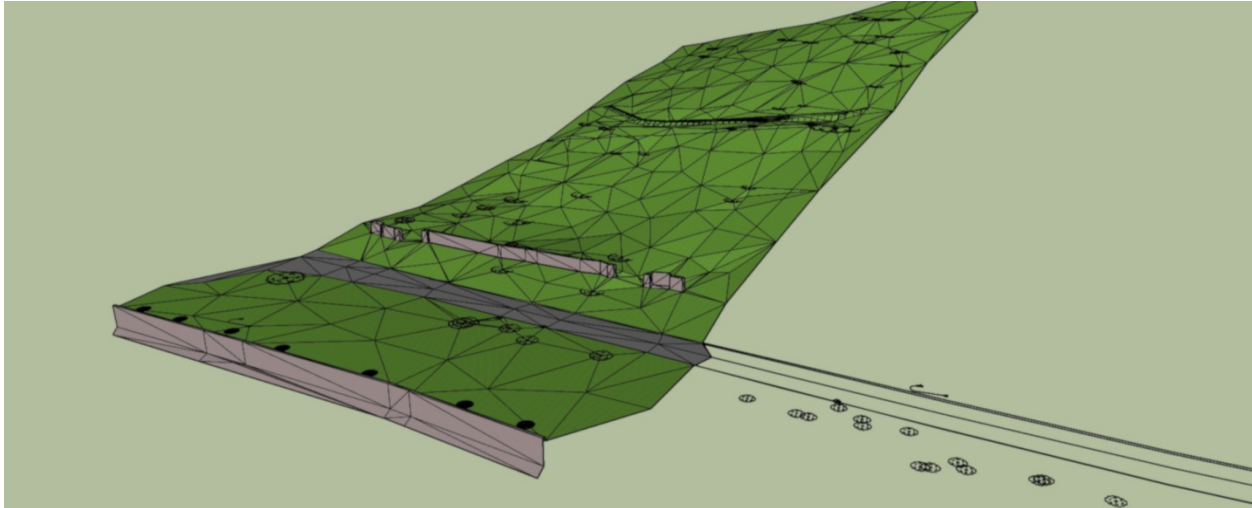
Key Words: Topographic Survey, Soil Investigation



TOPOGRAPHY AND SOIL INVESTIGATION FOR A VILLA IN KEP

JEB is of course providing services to private owners and land developers, especially for topographic survey and soil investigation. One of particularly challenging project was done at the demand of the Architect “Bloom Architecture” for a project located on a steep slope at the proximity of the sea, in Kep Province. JEB provided topographic survey, soil investigation as well as foundation advises.

Key Words: Topographic Survey, Soil Investigation



SURVEY WORKS MANAGEMENT FOR CAMBODIA RAILWAY REHABILITATION

Between 2010 and 2013, many employees of JEB participated to the Cambodian Railway Rehabilitation Project, 163km on the southern line and 80km on the northern line. The southern line is a 1m narrow gauge, single track line rehabilitated with concrete sleepers and the northern line was rehabilitated at low cost by keeping the existing steel sleepers. Jeremy was leading the 6 topographic survey teams, and followed the project through all the design, earthworks, structural works, track installation, tamping and as-built phases.

Key Words: Topographic Survey, Railway Construction management



RURAL IMPROVEMENT PROGRAM

Many employees of JEB Surveys and Engineering have participated to the Rural Improvement Program, a series of projects implemented by the Ministry of Rural Development of the Kingdom of Cambodia from 2005 to 2018 with the support of the German Government. Services provided by our employees included the survey, design and construction supervision of rural roads, water crossing structures and markets.

Key Words: Topographic Survey, Road Design, Pavement Investigation, Construction Supervision



CIVIL ENGINEERING DESIGN FOR POIPET ECONOMIC ZONE

2015, Jeremy designed the civil works for the Poipet Special Economic Zone, a 50ha industrial development at the Border with Thailand. The design included the earthworks, road, a separated storm and waste water drainage system as well as the electricity and water supply networks, a power room, a fresh water reservoir and the waste water treatment plant by aerated lagoons.

2019, JEB provided design services for one Residential and one Industrial Park, including roads, earthworks and drainage system.

Key Words: Topographic Survey, Earthworks, Road, Drainage, Miscellaneous networks design



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