

AT WORK

 TOPCON

KRIANGKRAI SURVEYING CO., LTD.



Reduce 50 % of Work Time

Complete staking out within 1 minute per point

- Please introduce your company.

KRIANGKRAI SURVEYING CO., LTD. have been performing stakeout and topographic mapping for construction projects for more than twenty years. We started our business in Samut Prakan. Eleven well trained engineers and staff were lead by Mr. Kriangkrai Kamrai. Layout Navigator (LN) was our first purchased Topcon product.

- Why did you choose the LN?

We are able to complete stakeout tasks much faster than before. When we stakeout for a basement with a LN, it takes less than 1 minute per point. In another word, we can complete staking out 50 points within an hour. 50 points are our average number a stakeout task for a jobsite. It used to take 2-3 hours when we used a conventional manual total station in that situation. With a conventional total station we needed to look into the telescope, measure and instruct each assistant to the stakeout point. We don't need to do this processes anymore with a



LN. In addition, LN's accuracy is the same when compared to a 5" total station which is fully acceptable for us. Our construction consultants also confirmed its accuracy at a jobsite after we completed a job. All in all, I'm very happy to use LN. I really enjoy doing my job using a LN and I don't get tired easily nowadays. Before we purchase the LN, survey work was really tiring.

- How do you use LN?

Before we go to a jobsite, first is to prepare coordinates from drawing file and convert it to a csv file on a PC. We send it to my smartphone by a messaging application and import it to the TopLayout; we don't use a USB stick anymore. At jobsite, we perform stakeout with 3 people. I, as a surveyor, hold prism pole with a 360 degrees prism and a smartphone with the TopLayout. The other two assist me by staking piles and marking points by a paint spray. We don't need any people at the LN anymore. All of us are at the prism side and simply following the point order showed on the TopLayout. In the past, I often need to switch with my survey assistant because looking into the telescope was tiring. I don't mind if I have to walk around jobsite holding prism pole. It can be a good workout for me as well.

- How much did productivity increased?

Work time has reduced to almost half compared to the conventional method with a manual total station. This is because we don't need communication between instrument side and prism side through a walkie-talkie anymore. People at the prism side don't have to wait for instructions from the surveyor to reach the correct position anymore. Also, when we use the LN, even my assistants with minimum surveying experience can complete stakeout

tasks fast and accurately. When we used manual total station in the past, how fast they reach the correct position was highly depending on their skill.

- What is your Return on Investment (ROI)?

We purchased the LN in December 2022, and the investment was paid off after just 2 months. The work time reduction contributed to our profit margin was a lot. I also tried one-man operation with the LN at 3 jobsites, and it reduced labor cost for assistants. The LN requires less labor, so if you are lacking manpower, a LN helps you a lot.



Company: KRIANGKRAI SURVEYING CO., LTD.

(บริษัท เกรียงไกร การสำรวจ จำกัด)

Address: 199/207, MOO 3, Phrueksa 15, Phraeksamai, Muang, Samut Prakan 10280, Thailand

Project Location: Nonthaburi, Thailand

Project: Construction of food factory, office, residence

Instrument: LN-100, TopLayout

Subsidiary: Topcon Positioning Asia (Thailand) Co., Ltd.