Talk on Experience Sharing on the Current Geotechnical Practice in Hong Kong

By Ir. Chow Chee Meng

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The evening talk given by Ir. Jack Pan on 26 January 2011 provided an overview of the current geotechnical practice in Hong Kong and highlighted some lessons learnt and good practice adopted by HK practitioners.

Broadly, the talk covered geotechnical practice in the following areas:

a) Foundation
b) Slope works
c) Excavation and lateral support

Some of the interesting practices in Hong Kong include the construction of bell-out bored piles as shown in Figure 1 where capacity is mainly derived from end-bearing.

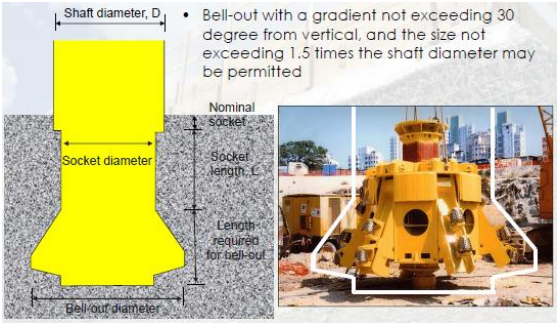

Figure 1: Bell-out construction of bored pile

Ir. Jack Pan also highlighted the stringent requirements for site supervision in Hong Kong through the introduction of Code of Practice for Site Supervision, 2005. Minimum supervision requirements are clearly spelt out and the supervision structure consists of Authorized Person (AP), Registered Structural Engineer (RSE) and Registered Geotechnical Engineer (RGE). Minimum supervision requirements for different types of building works or street works from ground investigation to building works are specified including the frequency levels of inspection by different parties, i.e. AP, RSE and RGE.

For slope works, Hong Kong is generally acknowledged as the leading authority in the subject and various publications are available to guide practising engineers, such as:

a) Geotechnical Manual for Slopes (2000)
b) Geoguide 5: Guide for Slope Maintenance (2003)
c) Geoguide 7: Guide to Soil Nail Design and Construction (2008)
d) Geo Publication No. 1: Prescriptive Measures for Man-made Slopes and Retaining Walls (2009)

An interesting development in Hong Kong is the green slope initiatives where the Hong Kong government is actively “greening” slopes such as soil nail slope with shotcrete surface to improve the slopes aesthetically, non-destruction testing technique to check as-built soil nail lengths and registration of slopes and retaining walls by HK GEO.

The author also presented some common embedded walls used in Hong Kong such as steel sheet pile, soldier pile, pipe pile, bored pile and diaphragm wall.

Finally, the author shared his personal experience of working in Hong Kong where he was fortunate to be involved in projects such as the Lok Ma Chau Spurline (HK), Ocean Park Funicular Tunnel (HK), CP LNG Gas Project (HK), Shangri-la Boracay (Philippines) and Marina Bay Sands (Singapore). The author summarised the working conditions as pressure cooker with tight time deadline but the experience gained, both professionally and personally, was priceless.

The presentation was informative to practising engineers and further demonstrated the versatility and adaptability of Malaysian engineers. It is hoped that our engineering practices would continue to learn from overseas practices and continue to develop our own state-of-the-art practices given the opportunity of upcoming projects such as MRT, Oil & Gas Development and various large scale developments by both government and private sectors.