April, 2022

To everyone

【Notice (Live Streaming)】

RRR Construction Method Technology Lecture

RRR (Reinforced soil Road structures with Rigid facing) construction method has become popularly used as earth reinforcement technology in common standard engineering practice, particularly for high-speed "bullet" train and conventional train lines construction in Japan. RRR earth retaining walls are constructed following a staged procedure that includes constructing first the embankment which is reinforced with planar reinforcements (geogrids), and then casting-in-place a full-height concrete structure facing on the vertical wall face of the embankment. These structures have been shown to exhibit excellent constructability and cost-effectiveness in comparison with conventional cantilever or gravity type retaining walls. Furthermore, even if walls are built on soft ground, negative effects of excessive settlements can be alleviated by preloading if sufficient time will be applied or by ground improvement (e.g., cement mixing) so that pile foundations become unnecessary.

The RRR structures have performed very well during the 1995 Great Hanshin Earthquake, the 2004 Chuetsu earthquake and the 2011 Great East Japan Earthquake among other major earthquakes in Japan, as well as during the extreme heavy rains of 1990 and 2012 in Kyushu-island (so-called guerilla rainstorms), with no failures were reported and observed so far. A number of conventional-type retaining walls that collapsed by tsunami, wave forces and associated scouring were also reconstructed by the RRR technology, including sea walls for National Road No.1, southwest Tokyo, following the 2007 Typhoon No.9.

A number of RRR bridge abutments placing one end of a simple girder via fixed bearing shoe on the top of the FHR facing of geosynthetic-reinforced soil retaining walls were constructed in place on conventional bridge abutments, because of high seismic and long-term stability and low maintenance cost. At intersections, bypasses and others for roads and/or waterways, newly developed geosynthetic reinforced integral bridges, which consist in the combination of a rigid frame bridge and a pair of RRR abutments, are gradually becoming the new standard bridge type for railways in Japan. Due to their high seismic stability and high resistance against tsunami associated with low maintenance costs for bridge frame because of no use of bearing shoes, they have been constructed to replace bridges that were washed away in the 2011 Tohoku tsunami struck areas in Japan. Similarly, geogrid-reinforced box culverts (RRR-Box) are regularly being used for high-speed trains as they also allow to reduce differential settlements and bumps.

This time, Assoc Prof. K. Watanabe (Tokyo University) and Emeritus Prof. F. Tatsuoka (Tokyo University) will conduct seminar on theoretical and actual design aspects and construction methodology of RRR structures. RRR-I Construction Method Association recommends and encourages all concerned agencies to participate in this seminar to make technical discussions among the attendees as well to know the beneficial advantages of RRR technology for construction projects.

Respectfully yours,

RRR Construction Method Association
(https://www.rrr-sys.gr.jp/en/)

To RRR-I Construction Method Association

Reply form（For non-Japanese people）

1. Notice： RRR Construction Method Technology Lecture (Live Streaming)

2. Time： **June 17th（Friday）2022　14：00～16：30（Japan time）**
(reference) Philippine time 13:00～15:30　Myanmar time 11:30～14:00
India time 10:30～13:00　Indonesia time 12:00～14:30

3. Attending fees： None (free)

4. How to Apply： Please fill in the application form below and send us it by email (RRR-I@igi.co.jp).
We'll send you back a ZOOM invitation. (Limited to the first 200 people)

5. Schedule：June 17th（Friday）2022

Time (Japan)	Contents (Live Streaming)	Speaker
14:00～14:05	Opening address	RRR-I Construction Method Association
14:05～15:05 (1 hour)	History and Development of Geosynthetics Reinforced-soil Structure for the Japan railway	Tokyo University Assoc Prof. Kenji Watanabe
15:05～15:15	Questions&Discussion	
15:15～16:15 (1 hour)	Geosynthetic-reinforced soil structures - Developments from walls to bridges -	Tokyo University Emeritus Prof. Fumio Tatsuoka
16:15～16:25	Questions&Discussion	
16:25～16:30	Closing address	RRR-I Construction Method Association

6. Application form：（If there are so many people would like to take part in, please copy and use this form.）

Company name・Department _____

Name _____ (TEL：) ☐
(Email：)

Name _____ (TEL：) ☐
(Email：)

Name _____ (TEL：) ☐
(Email：)

※ Please fill in the required number of ZOOM invitations in ☐.

【Contact information】

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