

PAN-UNITED ACHIEVES SINGAPORE'S LARGEST TWO CONTINUOUS CONCRETE POURS WITHIN A MONTH

- Record largest continuous concrete pour of 18,916 m³ in early November followed by continuous pour of 18,342 m³ two weeks later
- Sustainable Grade 55 temperature-controlled flowing concrete (PanU Cool) specially designed to prevent cracking during pour

SINGAPORE, 16 DECEMBER 2020 – Pan-United Corporation Ltd (“Pan-United” or “泛联集团” or the “Group”) has achieved Singapore’s largest two continuous ready-mix concrete pours in casting the raft foundation for a development project in the Labrador area.

The Group’s subsidiary, Pan-United Concrete, set a national record when it poured 18,916 cubic metres (“m³”) for 57 hours non-stop from 31 October to 2 November 2020. This first pour was followed by a second pour of 18,342 m³ of concrete in a shorter time of 42 hours non-stop, from 27 to 29 November 2020, to complete the raft foundation. The mixer truck convoys delivered one truckload of concrete non-stop every 60 seconds. The total concrete volume of the two pours, at 37,258 m³, is equivalent to filling 14 Olympic-sized swimming pools. The previous record of 18,000 m³ was in March 2015 for the Marina One raft foundation.

Ready-mix concrete is produced *just in time* and typically has a brief two-hour workable lifespan. Pan-United designed a special concrete that remained workable for six hours to ensure the layers bonded integrally to form a solid raft.

The complex logistics planning for the production, delivery and casting of the raft foundation stretched over several months in close collaboration with Hyundai Engineering & Construction (“Hyundai”), the main contractor of the development.

Mr Ken Loh (“羅嘉遜”), Chief Operating Officer of Pan-United, said: “We are thankful to Hyundai for taking all the measures necessary to ensure safe distancing and to greatly reduce any health risks to the teams handling the massive pours. Pan-United also used our contactless processes such as e-delivery orders, e-concrete sampling, e-sign-offs, and our customer portal to minimise physical interaction at the worksite.”

“Both mass pours went very smoothly, thanks to the excellent co-operation with Hyundai, and the tremendous team effort of all parties involved. We had full confidence of success in executing this feat, supported by our concrete innovation specialists and with the advanced logistics managed through our digital optimisation platform called AiR¹.”

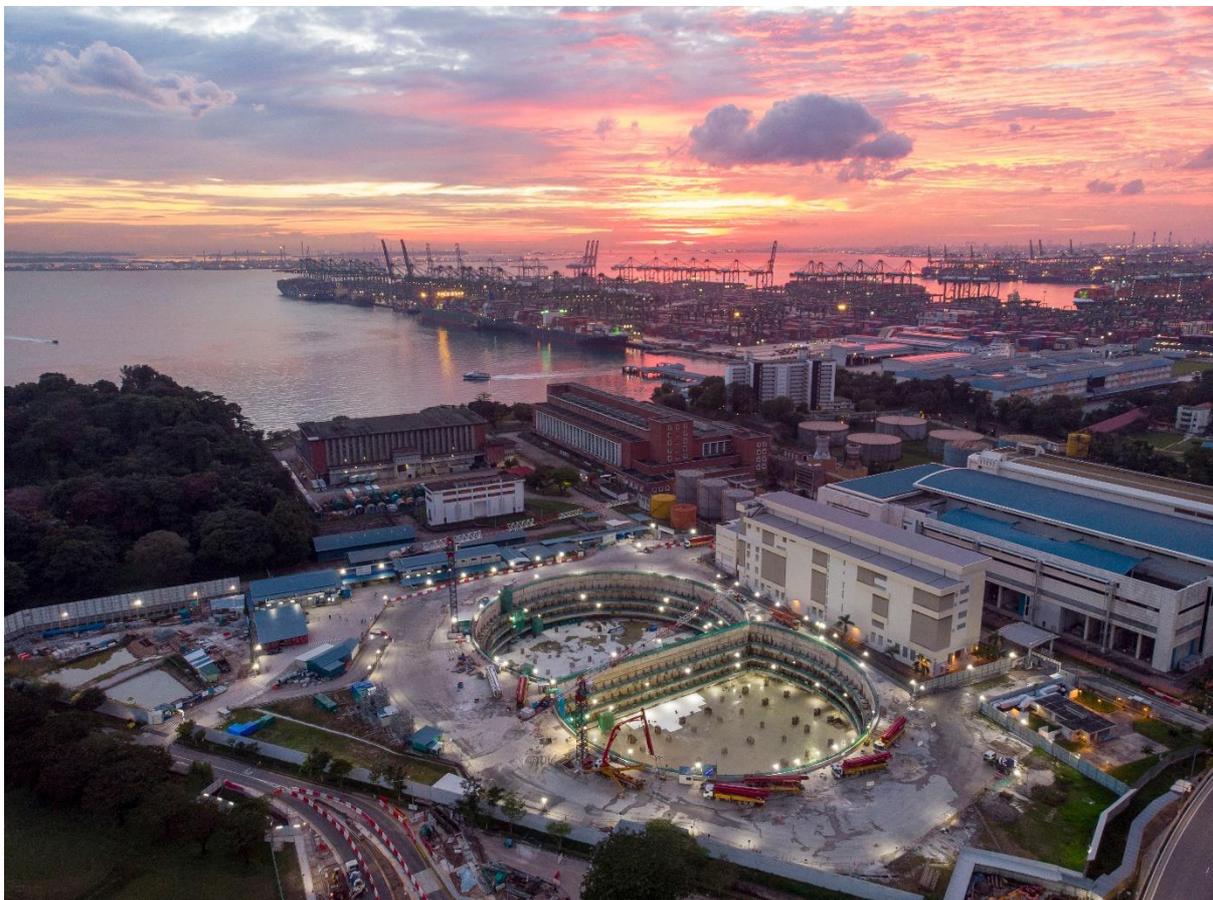
“AiR optimises our supply chain, managing the efficiency of our batching plants and ensuring a seamless relay of trucks delivering the concrete. Pan-United will continue to innovate concrete and logistics solutions that can address any complex challenge in building smart cities like Singapore.”

¹ Acronym for Artificial Intelligence for Ready-Mix Concrete

Mr Chan Wai Mun (“陳偉文”), Operations Director of Pan-United Concrete, said: “Technology-enabled precision was absolutely crucial in both mass pours to ensure zero disruptions to concrete placement. The continuous supply allows the concrete raft foundation to set uniformly within the required temperature properties.”

Highlighting the sustainable aspects of the massive operation, Mr Chan added: “A sustainable Grade 55 temperature-controlled flowing concrete (PanU Cool) was chosen to improve the structural integrity and durability of the raft foundation. Chiller systems developed in-house were used to maintain the low heat of this special flowing concrete so as to prevent cracking during the setting of the huge raft.”

“Our custom concrete ‘recipe’ for PanU Cool comprised sustainable raw materials, such as ground granulated blast furnace slag, a by-product of steel production. We also used silica fume, a by-product of silicon wafer production. Stringent durability requirements were designed to ensure the concrete met high performance criteria such as strength and water-tightness. Virtual quality testing was conducted remotely using e-sampling to ensure safe distancing,” emphasised Mr Chan.



Pan-United delivered a total of 37,258 m³ of concrete in two continuous mass pours – enough to fill 14 Olympic-sized swimming pools.

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ABOUT PAN-UNITED CORPORATION

panunited.com.sg

Concrete innovation company Pan-United Corporation Ltd (Pan-United) is the market leader in the supply of ready-mix concrete to Singapore's public and private sectors. It has operations in four Asian countries and a total workforce of more than 1,000 people. It is a global leader in concrete technologies harnessing innovation and cutting-edge digital platforms to develop industry-leading, sustainable solutions in the concrete and logistics space.

With a strong base as Singapore's largest concrete and cement company, Pan-United has extended into markets in Malaysia, Indonesia and Vietnam, where it is the top brand in Ho Chi Minh City. It is a renowned and trusted brand for high quality concrete solutions and excellent customer service.

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