Phnom Penh International Airport

CLIENT: Langan with Foster + Partners **LOCATION:** Cambodia **YEAR OF COMPLETION:** 2019

We were appointed by Langan to help develop the concept and base designs of a viaduct and approach ramp structures to facilitate vehicular access to the departure level of the new international airport at Phnom Penh in Cambodia.

The concept phase entailed working closely and collaboratively with Foster + Partners to develop a structural layout and aesthetic that worked with that of the main airport building, while meeting the highway design requirements developed by Langan. This design was based on an 18m grid, with tapered circular piers supporting voided reinforced concrete slab spans.

All piers were integral except those at the end of the spans where pot bearings and expansion joints were required. The approach ramp comprised seven spans supported by a single row of piers, the corner structures were five spans with two rows of piers where the deck tapered in width, and the main departure viaduct a further eleven spans.

We developed the base design concept to ensure feasibility and produced drawings for the construction tender, including reinforcement drawings and quantities. Our structural BIM model was federated into the global project model.

KEY FACTS:

- Elevated airport approach road
- Concept through to base design
- Voided slab & integral intermediate piers
- Cast-in-situ, reinforced concrete