

Hamilton Section

Waikato Expressway

Information sheet

ECMT RAIL BRIDGE (EAST COAST MAIN TRUCK RAIL BRIDGE)

WHERE IS THE BRIDGE LOCATED?

The Bridge crosses the East Coast Main Trunk Rail line and Ryburn Road at Ruakura.

WHEN ARE WE BUILDING IT?

Work began in late 2016 and it is expected to open to expressway traffic in 2020.

HOW ARE WE BUILDING IT?

This bridge will provide enough space for the existing rail line, a second future line and access for rail maintenance, plus Ryburn Road. The ground under the bridge has been strengthened to protect the bridge from damage caused

by liquefaction of soils during an earthquake. This involves drilling deep holes in the ground and backfilling them with concrete - to create concrete piles underground. Lines of underground piles are created to form a lattice formation that holds the ground in place to prevent liquefaction. The bridge abutments that support the bridge on either side are made from mechanically stabilised earth (MSE) walls. These are formed from layers of compacted sand, each layer reinforced with geotextile material. This forms a strong, earthquake resistant structure. These abutments are finished with interlocking concrete panels. This bridge is relatively wide and has a series of centre columns between the rail line

and Ryburn Road. These are supported by driven piles extending up to 40m into the ground. Bridge beams are manufactured off-site, then delivered and lifted into place between the abutments and the centre columns.

A reinforced concrete deck is laid on top of the beams before it is fitted with barriers, lights and hitumen

HOW WILL CONSTRUCTION AFFECT YOU?

While traffic is using the temporary road diversion there will be a limited space for lanes and cycle access, and a reduced speed limit.

We use a hollow auger (a drill bit that looks like a big



The auger drills down as far as we need to go. Typically 5-10 metres.



As the auger is slowly pulled out of the hole, soft concrete is pumped in to form a pile.



This makes a single lattice pile.



We repeat this process and link the individual piles together. This leaves a strong, interlocking concrete lattice that will keep sand and silt in place in case of an earthquake.



A view of the East Coast Main Truck Rail Bridge from Ryburn Road looking east to west

If you have concerns about noise levels, vibration or dust please contact us immediately.



Visit our website www.nzta.govt.nz/hamilton



Email us at info@cityedgealliance.co.nz



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