

PRECAST BYPASS

SUPPORTING LOCAL COMMUNITIES NOW AND INTO THE FUTURE

NATIONAL PRECAST, MASTER PRECASTER, STRESSCRETE WAS ENGAGED BY HIGHWAY CONSTRUCTION AND ALBEM OPERATIONS (HAJV) TO SUPPLY PRECAST CONCRETE STRUCTURAL ELEMENTS FOR A MAJOR BYPASS PROJECT IN SMITHFIELD, CAIRNS.

The \$164 million Smithfield Bypass project is funded by the Queensland Government. Project works will include building a new 3.8 kilometre road from the intersection of the Captain Cook Highway and Cairns Western Arterial Road to the McGregor Road roundabout, as an alternative to the Captain Cook Highway.

The bypass will provide a safer, more efficient travel route for motorists, and separate through traffic from local traffic movements. It will also improve traffic conditions on the local road network by addressing congestion.

A new four-legged signalised intersection at Cairns Western Arterial Road and Captain Cook Highway will replace the old roundabout at one end of the project.

An overpass at the other end of the project will reduce congestion at the McGregor Road roundabout, improving traffic flow.

Precast manufacturer Stresscrete has supplied structural precast elements to the bypass project, notably seven precast headstocks spanning 13 metres each, and weighing a total of 490 tonnes.

The headstocks are accompanied by sets of 25 metre and 15 metre deck units.

Each headstock will be used as part of two new bridges on the project and for entry and exit ramps.

So far, the new bridge over Avondale Creek has been completed. Crews will be working on the overpass bridge at McGregor Road and the reconstruction of Cairns Western Arterial Road and Captain Cook Highway intersection throughout 2021.



Stresscrete will create the precast elements for the bridges off-site.

With precast components being manufactured by Stresscrete this is expected to create more room on site.

As precast concrete elements are manufactured off-site in a factory-controlled environment, the typical congestion of trades and materials deliveries is also reduced on the construction site.

The off-site manufacturing process allowed Stresscrete to deliver precast elements with consistent strength and finish quality across the entire project.

When using precast concrete, the reduced congestion of on-site labour can improve access to the construction site and regulated precast factories can ensure the safest

possible working conditions.

The implementation of precast concrete elements can reduce the cost and time inefficiencies of on-site construction, and ensures a high quality, durable outcome that will be valued for many generations.

The Smithfield Bypass Project is expected to be completed late 2021, weather permitting. ■

Project: The Smithfield Bypass Project

Master Precaster: Stresscrete

Location: Cairns