

HOW WE BUILD A RAIL BRIDGE



L-beam installation at Manchester Road, Mooroolbark

We are removing the dangerous and congested level crossing at Coolstore Road, Croydon, which will pave the way for a new Croydon transport hub, with better road connections, a unified shopping precinct and a new bus interchange.

We'll also build a new, premium Croydon Station, with improved safety, two entrances, and modern facilities for passengers.

The rail bridge design we will use is similar to what we built at Manchester Road in Mooroolbark, Maroondah Highway in Lilydale and many of our other level crossing removals across Melbourne.

Early works for the project will start in 2023 and the project will be complete in 2025.

Why this level crossing needs to go



More than 10,000 vehicles travel over this road each day.



More than 100 trains pass through the level crossing every week day.



Removing this level crossing will connect the Croydon precinct, which is currently divided by the rail line.



With the boom gates gone, we can create safer and more efficient road connections for Croydon.

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Phase One

Preparing the site

Early works will start in 2023, with the relocation of underground utilities and services to prepare for the new rail bridge.

Some of the other works include temporary changes to local roads, site establishment, installation of fencing and barriers, and drilling activities to assess ground conditions.

Phase Two

Major construction

From mid-2023, you'll start to see more construction work in and around the rail corridor, with our piling rigs arriving on site.

Activities in this phase include:

- Temporary changes to local roads depending on where we work
- Temporary car park closures to allow works to go ahead safely
- Utility relocations and upgrades in local streets around the rail line
- Major water main works
- Installing critical new rail infrastructure like power, signalling and communications cables underground
- Installing large concrete columns, known as piles, that will form the foundations for the new rail bridge

Phase Three

Removing the level crossing

Hundreds of workers will work around the clock to complete the rail bridge, build the new station and remove the boom gates at Coolstore Road.

We'll need to shut the rail line for one extended closure to prevent rolling disruptions and ensure the job is done safely and as quickly as possible.

During this time, we'll also need to temporarily close Coolstore Road so we can build the new road under the rail bridge. The majority of structural works will be completed in this phase.

As part of the works, we will use large cranes to install the U-troughs and remove the boom gates.

Phase Four

Finishing works

We'll add the finishing touches to the project, reinstate local roads and plant new trees and vegetation around Coolstore Road. At this stage we'll also start landscaping the new walking and cycling paths and complete the details of the new Croydon Station.

In 2025, trains will be running along the new rail bridge and cars will be driving safely under it.

Locals can look forward to spending less time stuck at boom gates, and having safer and easier access to public transport, local shops and other services.

Piling works at Manchester Road, Mooroolbark

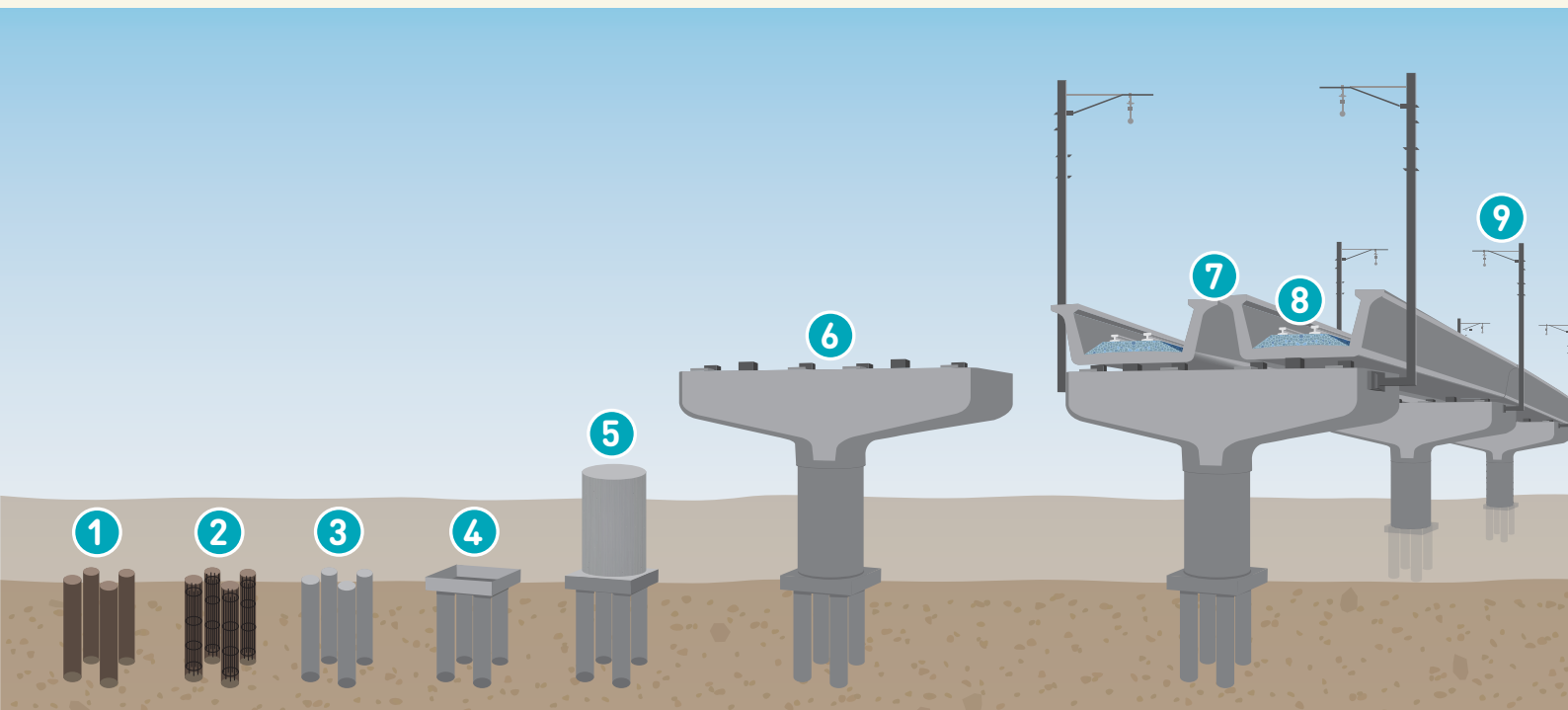




L-beam installation at Hallam Road, Hallam

Stages of building a rail bridge

1. To begin the foundations, we drill holes for the piles that will support the bridge. These can be as deep as 15 metres or more.
2. Steel reinforcement cages are lowered into the pile hole to help support the structure.
3. Concrete is poured into the piles to create a strong foundation.
4. A pile cap of concrete is placed on top of the pile to spread the weight of the rest of the structure.
5. The piers are built on top of the pile cap. These structures are made with steel reinforcement cages over which a 'form' is placed to hold the concrete until it hardens. The form is then removed, leaving the cylindrical pier in place.
6. The crosshead sits on top of the pier and supports the rest of the bridge superstructure.
7. We use two 'L-beams' to create one 'U-trough'. The L-beams are manufactured in Kilmore, Victoria, and travel to the site overnight on special oversized trucks. Once craned into place, they are connected using a concrete seam, called a 'stitch pour'. This forms the U-trough in which the trains will run.
8. New track is placed inside the U-troughs for the trains to run along.
9. The masts are attached to the bridge, providing power to the trains to keep them moving.



FAQS

How high will the rail bridge be from the ground to the base of the rail bridge?

The rail bridge will have a minimum clearance of 4.6 metres.

Will the works be noisy?

To build the rail bridge, specialised machinery is needed. As with any major construction, this can result in noise and vibration.

Prior to works starting, we undertake noise monitoring at different locations in the project area. This allows us to identify potential noise impacts of our works, and proactively work with affected residents to minimise noise impacts.

During construction, we continue to monitor noise levels to assess the impact to residents and respond to concerns.

Will there be 24-hour works during construction?

Yes, at times we'll need to work during the night. When 24-hour work is scheduled, we'll provide you with plenty of notice.

What are the respite and relocation options?

Our relocation team will work individually with impacted residents to provide detailed information about the relocation process and to discuss their needs. If you believe the works are too noisy and affecting your ability to sleep, please call a member of the project team on 1800 105 105.

Will the Lilydale line be closed during construction?

At times we will close sections of the Lilydale line, with buses replacing trains. We'll provide you with plenty of notice before any closures.

Will there be any further refinements of the rail bridge design?

Yes. There are some elements of the rail bridge that are being finalised. We will share this information with the community as soon as it is confirmed.

*Rail line raised to connect Croydon's town centre.
Artist impression – subject to change.*



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