

METRO LINE  
DELAY FAQ

**1. What's happened?**

We're in the home stretch—our signalling system contractor is making progress, but unfortunately won't be able to deliver the system in time to open the Metro Line this year. We now expect that trains will be running in early 2015.

We share in the disappointment of many Edmontonians that the line won't open in 2014, but it's going to take several more weeks to ensure that this complex system is working properly so it can safely manage the flow of trains and traffic.

**2. Why has the opening date for the Metro Line changed again?**

Although construction is complete and the infrastructure (tracks, stations etc.) is ready, it's taking longer than anticipated for the contractor to complete the signalling system.

In September 2013, the latest schedule from the signalling contractor had the Metro Line on track for an April 2014 opening date with reduced service. By December 2013, the contractor had updated their schedule for a June 2014 opening. By spring 2014, it became clear that this timeline wasn't workable and the City adjusted its plans. The City was aiming to open the Metro Line by the end of 2014 with reduced service. The contractor has now committed to delivering the signalling system so trains can begin revenue service by early 2015.

We are doing everything we can to help the contractor complete the signalling system and achieve the earliest possible opening. However, the City's priority is to make sure the CBTC can safely manage the flow of trains and traffic. We won't open the Metro Line until it's safe.

**3. Do you have any more details on the opening date?**

Our goal is to open the system as soon as possible. We'll have a better sense of when we can open the line once the contractor hands over the system. They've committed to doing that this year. Once we've received the system—provided we're confident that it's working properly and can safely manage the flow of trains and traffic—then we can complete our preparations for the opening, which includes training our operators and controllers on the actual system. We'll hold opening celebrations later on in the year. We'll provide an update to the public in early 2015 once we've had a chance to assess what the contractor has handed over.

**4. What does a signalling system do?**

It controls train traffic. Signalling systems track train movements to keep trains safe and on schedule.

These systems also manage intersections by triggering traffic signals and crossing warning systems (warning bells, flashing lights and gates) at exactly the right time so that trains, motorists and pedestrians can move through each intersection as quickly and safely as possible.

**5. Why is the City installing a new signalling system?**

As Edmonton grows, so does the need for mass transit like LRT. Signalling systems need to evolve and adapt to safely meet this increase in demand.

The City's current system controls trains using sections of track called blocks. Each block is protected by signals that prevent a train from entering an occupied block. The City is replacing this traditional fixed block system with a modern CBTC system.

The CBTC is a cutting-edge signalling system that uses computers on trains that report into a central controller to pinpoint the exact location of each train and constantly adjust the speed, spacing and routing of trains to keep trains safe and on schedule. It safely tightens up the spacing between trains so that Metro Line and Capital Line trains can share the same tracks between Health Sciences/Jubilee Station and Churchill Station. Edmonton Transit currently runs peak-time trains every 5 minutes through downtown, but this will have to be tightened up to every 2.5 minutes when the Metro Line is fully operational.

**6. Why is it taking the contractor longer than expected to complete the CBTC?**

The CBTC has proven to be particularly complex.

It's computer-based, so the contractor has to upgrade hardware (the 'muscle' of the CBTC) in the tracks and the trains. There have been logistical challenges because any upgrades or testing on the tracks have to happen late at night after LRT service has stopped.

Upgrading the trains has also taken longer than expected because Edmonton has a mixed fleet that was not designed for a CBTC. Some of the trains are more than 30 years old and have been upgraded many times already, while other trains are new, so the contractor has to treat each train as an individual case. In spite of these complexities, the hardware upgrades are on track. Our contractor has upgraded enough trains with new signalling system hardware to support the operation of the Metro Line.

The critical piece that has pushed the Metro Line opening is the software (the 'brains' of the CBTC). The software hadn't been performing as expected in simulation tests. Since then, the signalling contractor has completed their simulation tests, and has started to run tests on the trains and tracks in Edmonton. The majority of these tests have taken place outside of service hours. In an effort to expedite the process, the City has taken the unprecedented step of shutting down the LRT several times to provide the signalling system contractor with longer windows of time for testing.

**7. Who is the signalling contractor, and why were they selected?**

Thales Rail Signalling Solutions Inc. is a multi-national contractor with expertise in train control. They have completed systems in many cities including Vancouver (Canada Line). They're also currently working on Ottawa's LRT.

Thales was selected as the best team by an evaluation committee of City of Edmonton staff and signals experts through a competitive RFP process which included evaluation of the proponents, the

project teams, the proposed solution and the price.

**8. What exactly are you doing to meet this new opening date?**

We have increased our resources on the project. We provided more work space for train retrofits and more track shutdowns for testing. We streamlined our review and approval processes. We are helping the contractor in scheduling their work and in co-ordinating their subcontractors, particularly with train upgrades. We are tracking milestones on a weekly basis in an effort to keep the contractor moving forward.

We're working diligently to help our signalling contractor to meet this new opening date. However, our priority is to make sure our signalling system is working properly so we can safely manage the flow of trains and traffic. We won't open the Metro Line until it's safe.

We look forward to opening the Metro Line soon. It's going to take longer than initially planned, but the Metro Line will soon be up and running, and supporting Edmonton's growing transit needs for decades to come.

**9. Can you use people to manage train movements until the signalling system is ready?**

We've certainly explored that option, but it doesn't meet our requirements for cost, safety, reliability or efficiency. We would need flag people installed at any rail crossover where the Metro Line and Capital Line will overlap (between Health Sciences/Jubilee Station and Churchill Station), and at each intersection on the Metro Line (including 105 Street/105 Avenue, 105 Street/106 Avenue, 105 Street/107 Avenue, 104 Street/Kingsway, 106 Street/111 Avenue, 106 Street/Princess Elizabeth Avenue, and all pedestrian crossings). It would be resource-intensive and there would be higher risk of incidents due to human error.

**10. Can you use the old fixed block signalling system to manage train movements until the new CBTC system is ready?**

No. The City has installed the new CBTC signalling system hardware between Churchill Station and NAIT Station. This is new infrastructure, so there is no old system to fall back on between those stations.

We would have to install new fixed block signalling system hardware between Churchill Station and NAIT Station in order to use the old signalling system to manage Metro Line train movements. It would take time and money to design, install and test the new fixed block signalling system, so wouldn't help us to open the line sooner.

**11. Did the City manage this project properly?**

Yes. Construction was completed on time and under budget. The project has an impeccable safety record and has previously been commended for its project management, environmental management, and innovation (use of timber structures, integration with the EPCOR Tower).

**12. Will the delay affect the project's budget?**

No. The Metro Line is actually \$90 million under its \$755-million budget. These savings are being applied to the Valley Line project (\$81 million), with \$9 million remaining in a reserve fund for LRT projects.

**13. What happens to ETS service?**

Edmonton Transit (ETS) will continue to serve northwest Edmonton with buses. Current bus service will be maintained until the Metro Line is fully operational.

In order to open as soon as possible, Metro Line trains will initially run between Century Park Station and NAIT Station at a reduced frequency. Capital Line trains will continue to run between Century Park Station and Clareview Station, but their frequency will initially be impacted by the Metro Line opening. Further details will be available closer to the opening of the new line.

In the longer term, Metro Line trains will run between Health Sciences/Jubilee Station and NAIT Station. This longer-term plan best addresses network ridership needs.

There have been periodic service disruptions on the Capital Line to accommodate signalling system tests. These disruptions will continue as our contractor works to complete the signalling system. If there are any major disruptions, we will notify the public and provide extra ETS service (i.e. bus bridges).

**14. What about the rest of the Metro Line project? How's it going?**

Construction of the Metro Line is complete, as is testing and commissioning of the infrastructure (tracks, stations etc.). Our contractor is just putting the finishing touches on landscaping and other minor close-out work this month. The line is ready to go. Once the signalling system is delivered, we can complete training on the new system, and open the line to service.

**15. Are you feeling badly about the delay, City of Edmonton?**

Everyone involved with the Metro Line project regrets the delay of this exciting transportation project. We ask for your patience and hope you'll continue to bear with us as we work towards bringing the Metro Line into service in early 2015.