

BLE Underpass Update

The BLE includes 11 light rail bridges, but only one underpass! The light rail will exit the North Tryon median by travelling through the underpass beneath northbound North Tryon Street and onto UNC Charlotte campus. Just north of Institute Circle, a ramp has been built that descends to the underpass entrance. At its lowest point, the ramp is approximately 30 feet below the level of North Tryon Street. The underpass is 340 feet long – approximately 40 feet longer than the three-car trains that will run on the BLE.



Ramp to tunnel entrance



An elaborate formwork system was built in the underpass to support roof construction. Temporary wooden forms were installed on top of the metal formwork to hold up the bottom of the roof during construction.



Temporary supports for tunnel roof forms



Forming wing wall, left, opening of tunnel near Toby Creek

Upcoming BLE Meetings

The Blue Line Extension project team will hold a public meeting to inform the community on progress of the light rail extension, answer questions, and share the overall vision for the Blue Line Extension alignment.

CATS Bus Operations will also be in attendance to solicit feedback on the 2017-2022 Countywide Transit Services Plan, Coordinated Human Services Transportation Plan and Bus Rail Integration for the BLE.



Tuesday, May 3, 2016

6:00 p.m. – 8:00 p.m.

Sugaw Creek Church
101 W. Sugar Creek Road
Charlotte, NC 28213

Thursday, May 5, 2016

6:00 p.m. – 8:00 p.m.

The Oasis Shriners
604 Doug Mayes Place
Charlotte, NC 28262

*The public meeting will be open house forum style.
A presentation will be given at 6:15 p.m.*

For more information about the meeting please contact telltransit@charlottenc.gov or call 704-336-RIDE(7433).

Stay Connected

CATS has developed tools for you to stay informed about BLE construction updates. We want to hear from you! Your feedback is important to us. Let us know your questions or comments. Here are some ways to make your voice be heard:

Follow us on Facebook and Twitter:  www.facebook.com/CATSBLEExtensionUpdates

 [@BLEupdates](https://twitter.com/BLEupdates)

Register to Receive Updates:  www.charlottefuture.com

Crews installed a 652,000 pound web of rebar to reinforce 3,000 cubic yards of concrete for the underpass roof. Once the rebar was in place, a pump truck forced concrete through a long tube controlled by a crewmember on top of the roof. After a portion of concrete was poured, another crewmember immediately followed with a concrete vibrator. Concrete vibrators are plunged into freshly poured concrete to eliminate any air voids that would diminish the strength of the concrete. Crews completed the roof in early March. Now, it's ready to be backfilled!



Pouring concrete for tunnel roof and using vibrator to minimize voids in the concrete



Crew preparing for concrete pour for tunnel roof

Approximately 62,000 cubic yards of earth were excavated to build the ramp and underpass.

Once the walls of the ramp and the underpass are backfilled, work will begin on the northbound North Tryon travel lanes. The new northbound roadway will begin just north of JW Clay Boulevard and continue on the east side of the ramp until the lanes cross over the underpass. Sign up for Notify Me on ridetransit.org or follow us on Facebook and Twitter for traffic impacts and updates.



Completed tunnel roof

Final Rail Girders Set

The final light rail bridge girders have been set! In February, crews set 20 girders for the 550 foot long light rail bridge over WT Harris Boulevard. The girders range in weight from 70,000 to 105,000 pounds and in length from 99 to 123 feet. These enormous girders were delivered on trucks one at a time.



WT Harris girder on truck

Crews installed a metal cable, called a rat line, on top of each girder before lifting them into place. The rat line provides fall protection for crewmembers working on top of the girders as they begin forming the bridge deck. These crewmembers wear harnesses equipped with two clips. While working on top of the girder, one clip is always securely latched to the rat line.



Setting the girder in place

Over several nights in late February, crews set the girders that span over the North Tryon Street and WT Harris Boulevard intersection. A method called air splicing was used to install these girders. Air splicing is when two girders are bolted together with a steel plate while being held in the air by a crane. Normally girders would be spliced together on the ground and lifted into place together. However, the limited space at WT Harris Boulevard to store and assemble the girders necessitated the use of air splicing. That's why the rat line is so important for the crews working on the girders to keep them safe.

This bridge has 16 splices. Each splice has 480 bolts – that's 7,680 bolts total!

Check out the CATS Blue Line Extension Construction Updates Facebook for a time lapse video of the girder setting at the bridge!