中央地鐵

central T subway

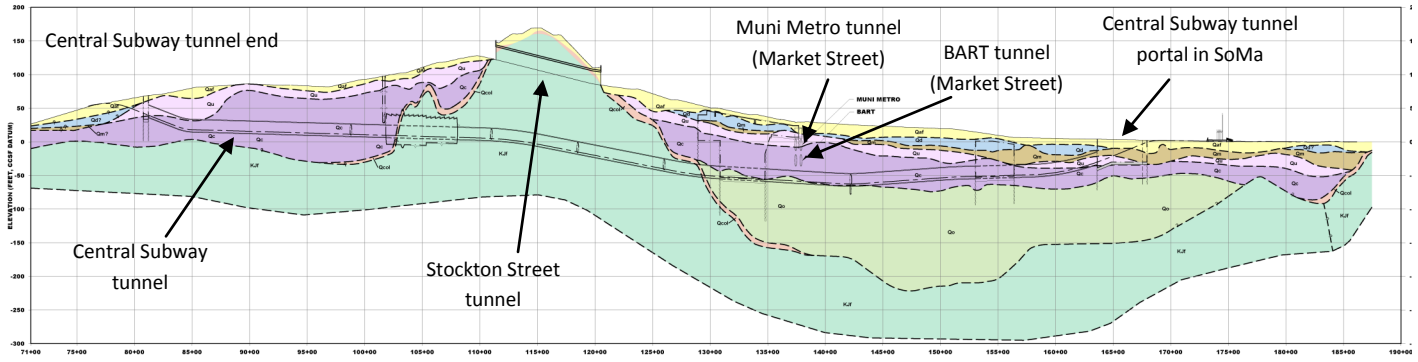
Connecting people. Connecting communities.

Community, Construction and Contract

Overview

The twin tunnels of the Central Subway run beneath downtown San Francisco, bypassing congested streets to quickly transport customers through some of the city's most bustling and heavily traveled areas. With subway stations in Chinatown, Union Square and SoMa, the Central Subway will connect transit customers with vibrant neighborhoods, crucial job centers, premier commercial districts and world-renowned tourist destinations.

Both tunnels are about 1.6 miles long and have been bored under 4th Street and Stockton Street between SoMa and North Beach. The backbone of the extension of Muni's T Third Line, the tunnel will provide a significant decrease in travel times for Muni riders. It will also facilitate increased transit use by providing rapid north-south rail service in contrast to the primarily east-west service currently in operation along Market Street. It will be a crucial artery for travel along this highly congested corridor that will also connect customers conveniently to the Bay Area's transportation network.



This topographical and geological map depicts the Central Subway tunnel's path beneath San Francisco.

Improving Public Transportation

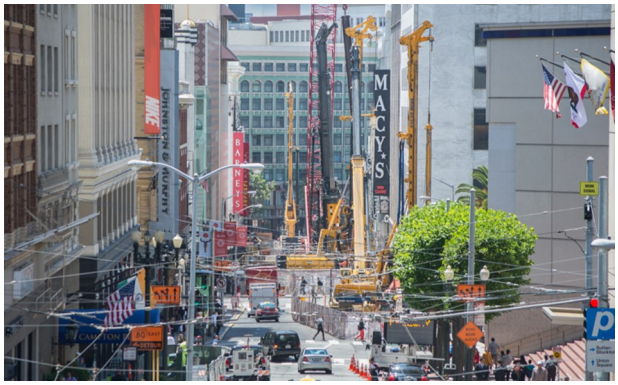
Currently, transit customers along this corridor rely on Muni trolley coach routes, such as the 30 Stockton and the 45 Union/Stockton, that have long been overcrowded and slow due to traffic congestion. The Central Subway will improve public transit by significantly speeding up travel through these busy neighborhoods:

- Peak-period travel times between 4th and King streets and Chinatown average more than 20 minutes on existing Muni trolley coach routes.
- When it opens in 2019, the Central Subway will take most of this route below ground, reducing travel times for the entire 1.7 -mile trip to an average of about eight minutes.

The Central Subway will also connect directly to the other Muni rail lines and bus routes and BART at the existing Powell Street Station, vastly improving transit connections to serve customers in reaching jobs, educational opportunities, retail locations and sporting and cultural venues along this densely populated corridor.

Central Subway Tunnel at a Glance

Contractor:	Barnard Impregilo Healy
Start of Construction:	2012
Expected Completion:	2015
Estimated Cost:	$233 million



The Central Subway pass beneath Stockton Street, shown here. Here, you see construction of the future Union Square/Market Street Station.

中央地鐵

central T subway

Connecting people. Connecting communities.

Stations and Alignment

The Central Subway Project will extend the T Third Line from the Caltrain station at 4th and King streets to Chinatown. After stopping at a surface-level station at 4th and Brannan streets, northbound trains will enter the tunnel beneath the I-80 overpass on 4th Street between Bryant and Harrison streets. The tunnel will travel north below 4th Street, continuing under Stockton Street after passing beneath Market Street and the existing Muni and BART tunnels. There will be three subway stations along the Central Subway route:

- Yerba Buena/Moscone Station at 4th and Folsom streets.
- Union Square/Market Street Station at Union Square.
- Chinatown Station at Stockton and Washington streets.

The Central Subway will extend Muni's T Third Line.

Tunnel boring machine Mom Chung is the first to arrive in San Francisco.

Tunneling beneath San Francisco

Two tunnels have been constructed for the Central Subway Project – one for northbound trains and another for southbound trains. To build the tunnels, twin tunnel boring machines (TBMs) were used simultaneously. Prefabricated concrete tunnel segments were put in place as the TBMs advanced. Each TBM had a crew of about seven workers operating the machines and welding the tunnel segments together.

TBMs excavate using a rotating cutting wheel, called a cutterhead, attached to a cylindrical steel shell. The shell supports the ground around the excavation until the concrete tunnel lining is constructed. Once completed, the tunnels measured in around 1.6 miles long and about 20 feet in diameter. Because the tunnels are far beneath the surface (their depth ranged from 40 to 120 feet) no vibration or noise were experienced above ground as the TBMs passed below.

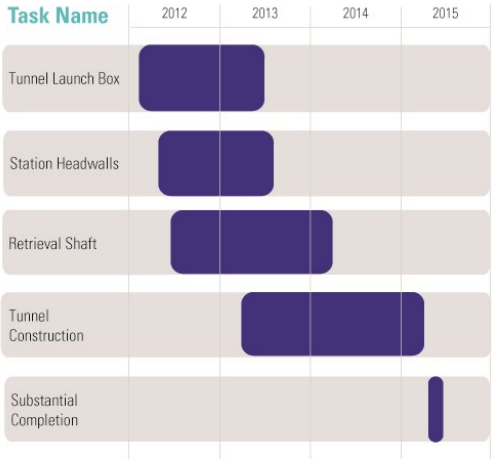
The Central Subway tunnel extends past the end of the line in Chinatown to North Beach, paving the way for a potential future extension of the line.

Construction Details

Work on the Central Subway tunnel began in March 2012. Along with excavation and construction of the tunnel, the contractor has:

- Constructed a launch box on 4th Street under the I-80 overpass to allow the TBMs to enter the ground and built a retrieval shaft in North Beach to remove them.
- Built below-ground walls (called headwalls) at two subway station sites.
- Relocated utilities and performed ground stabilization work.

The tunnel is expected to be completed in 2015. An approximate construction schedule is shown on the right.



821 Howard Street | 2nd Floor | San Francisco, CA 94103
Info line: 415.701.4371 | Email: central.subway@sfmta.com

www.centralsubwaysf.com | www.twitter.com/central_subway
www.facebook.com/centralsubway | www.centralsubwayblog.com

311: 中文 / Español / Français / 日本語 / 한국어 /
Italiano / русский / tiếng Việt / Tagalog / / عربي / ภาษาไทย

SFMTA