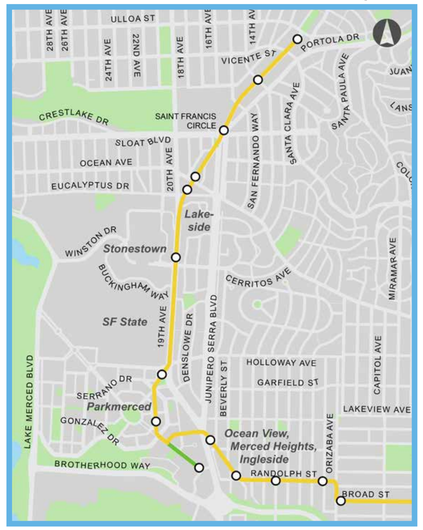
How Do the Alternatives Compare?

Both the **Partial Subway and Bridge** and **Full Subway** options address SFMTA's desire to improve travel time and safety, but the **Full Subway** provides superior transit performance.

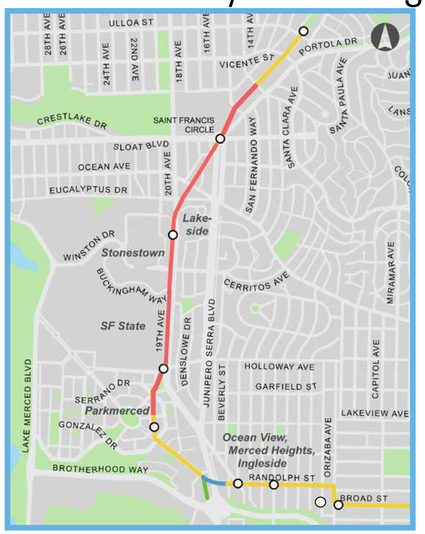
Track Configuration

- Surface
- Subway
- Bridge
- Tail Track
- Stop/Station

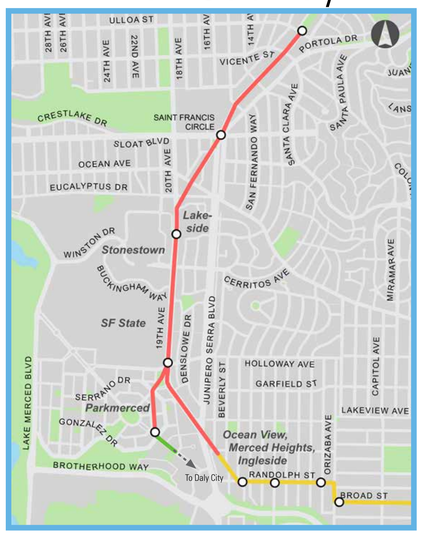
2011
Default Parkmerced Plan (all surface)



2014-2015
Partial Subway and Bridge



2016
Full Subway



	2011 Default Parkmerced Plan (all surface)	2014-2015 Partial Subway and Bridge	2016 Full Subway
Transit Performance	+ Designs new stations to serve 3-car trains + Adds new terminal in Parkmerced, which improves operations flexibility - - Adds two more intersection crossings for the M-line which would negatively affect on-time performance and reliability - Adds a sharp turn to the M route, which would slow travel time and wears out the train tracks more quickly	+ Places the M-line in its own subway tunnel from south of St. Francis Circle to Junipero Serra Blvd + Designs new stations to serve 4-car trains + Includes a new M-terminal in Parkmerced to improve operating flexibility - Remaining surface crossings on West Portal Avenue continue to limit reliability and capacity	+ + Places the M-line and part of the K-line in a subway from West Portal station to Parkmerced + Designs new stations to serve 4-car trains + Includes a new M-terminal in Parkmerced to improve operating flexibility + Shortest travel time + Maximizes subway reliability and capacity for the entire system
Transit Access	+ Adds new light rail station in Parkmerced - Moves the light rail to the west side of 19th Ave, which improves access to SF State and Parkmerced but doesn't help Muni riders who are on the east side of the street.	+ Creates new underground stations at Stonestown, SF State and Parkmerced. New stations on 19th Avenue would have multiple entrances on both sides of the street.	+ Creates new underground stations at Stonestown, SF State and Parkmerced. New stations on 19th Avenue would have multiple entrances on both sides of the street.
Safety and Walk/Bike Comfort	- A fourth southbound travel lane (from Holloway Ave) and fifth northbound turn lane (at 19th Ave/Junipero Serra Blvd) would replace Muni median right-of-way, making the street wider and more challenging for pedestrians and bicyclists to cross or walk along	+ Taking the M-line underground allows for a re-design of 19th Avenue to include wider sidewalks, new two way bike path and a landscaped median	+ Taking the M-line underground allows for a re-design of 19th Avenue to include wider sidewalks, new two way bike path and a landscaped median
Accomodate Planned Developments	+ Supports Parkmerced Vision Plan and SF State Campus Master Plan	+ Supports Parkmerced Vision Plan and SF State Campus Master Plan	+ Supports Parkmerced Vision Plan and SF State Campus Master Plan
19th Avenue Traffic Operations	- Adds traffic signal time at Holloway Ave and Junipero Serra Blvd that would increase delay	+ Removes at-grade crossings near Rosmoor Dr and at Junipero Serra Blvd which addresses some factors of 19th Avenue delay	+ Removes at-grade crossings near Rosmoor Dr and at Junipero Serra Blvd which addresses some factors of 19th Avenue delay

DISCLAIMER: This assessment is preliminary based on qualitative assessment and conceptual engineering. More rigorous analysis of quantified benefits and impacts would occur during the environmental review phase.

19th Avenue/M Ocean View Project

All aspects of the proposed project presented are preliminary and subject to refinement. Next steps would include environmental review, project approvals by regulatory agencies, identifying full funding, detailed design and others. Any potential construction activities would not happen for many years in the future.

FEBRUARY 2016
SAN FRANCISCO, CALIFORNIA

SFMTA
Municipal Transportation Agency

Implementation Considerations

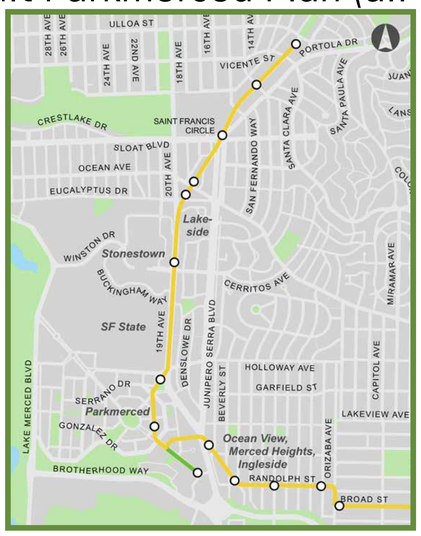
Full Subway avoids major potential constructability and property impacts that the **Partial Subway and Bridge** would likely create. Because the **Full Subway** entails a longer tunnel and more subway stations, it would cost more than twice as much as the **Partial Subway and Bridge**.

Track Configuration

- Surface
- Subway
- Bridge
- Tail Track
- Stop/Station

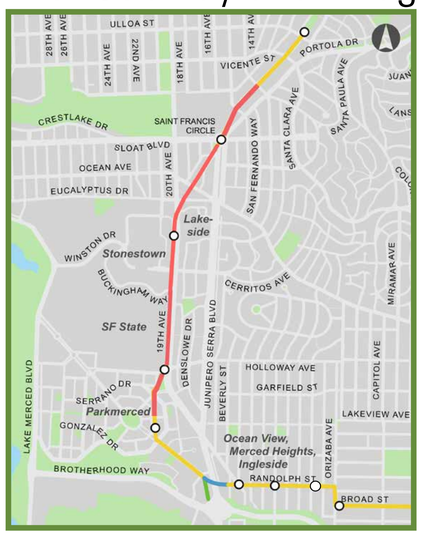
2011

Default Parkmerced Plan (all surface)



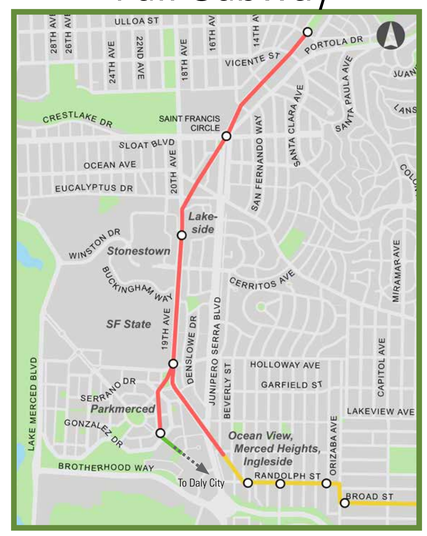
2014-2015

Partial Subway and Bridge



2016

Full Subway

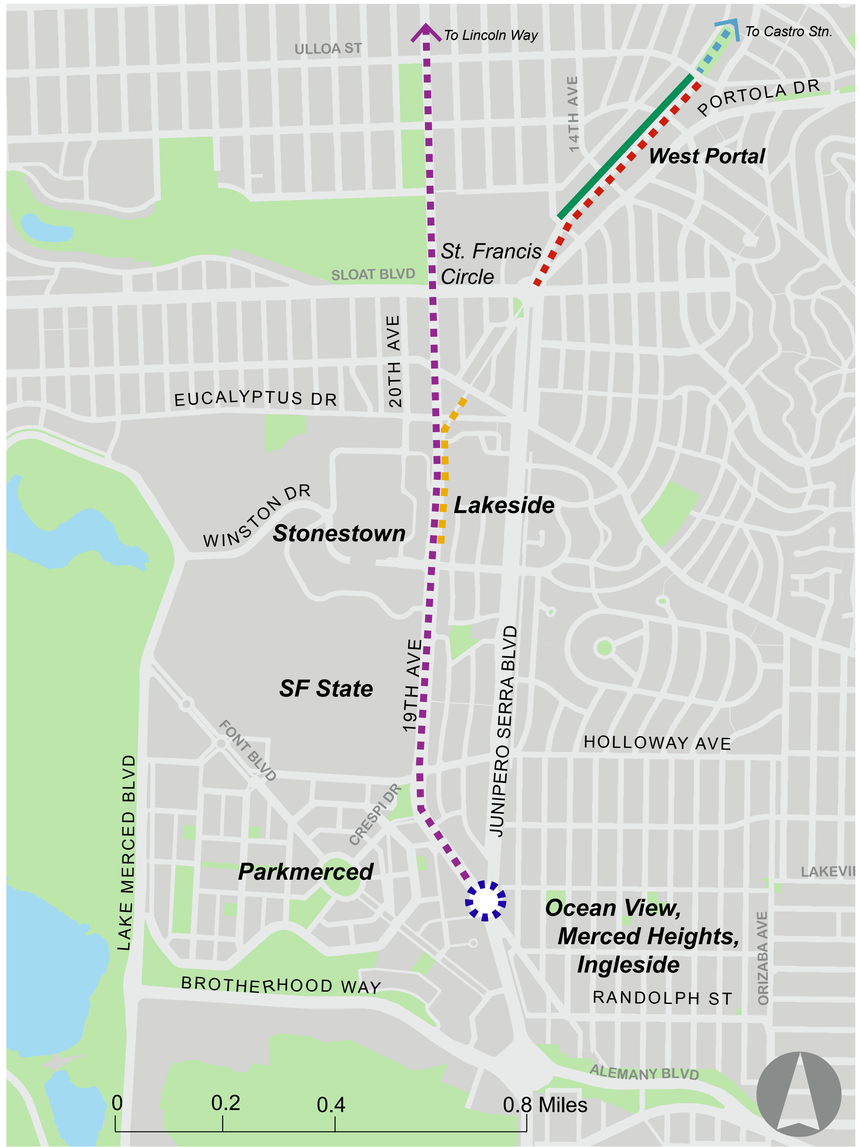


Capital Costs	To be designed and constructed by Parkmerced, an investment valued at $70 million	$1-1.25 billion (in 2016 dollars), could utilize Parkmerced funding but would require substantial additional funding from federal, state, regional, local and other private sources	$2.5-3 billion (in 2016 dollars), could utilize Parkmerced funding but would require substantial additional funding from federal, state, regional, local and other private sources
Operating & Maintenance Cost	• Increase in operating cost expected due to increase in M-line travel time created by re-alignment • Increase in rail vehicle wear and tear anticipated due to sharp curve	Operating costs expected to decrease as a result of decrease in rail vehicle travel time, but are likely to increase as a result of new station operation/maintenance, and tunnel maintenance needs	Operating costs expected to decrease as a result of decrease in rail vehicle travel time, but are likely to increase as a result of new station operation/maintenance, and tunnel maintenance needs
Constructability	• Impacts predominantly within Parkmerced site • Short-term disruptions to SR1 to demolish the existing Muni tracks and re-build new lanes	• Lowering of Junipero Serra for bridge between Font and Randolph would be a major challenge to navigate with 72,000 vehicles per day on SR 1. This would cause the bridge to be far more expensive than a similar bridge in a simpler construction environment. • Good candidate for tunnel boring, minimizing surface interruption • Short-term impacts most likely at station locations and portals	• Good candidate for tunnel boring, minimizing surface interruption • Short-term impacts most likely at station locations and portals • Tie-in to existing Twin Peaks tunnel likely to be implemented through short-term temporary service disruptions
Adjacent Property Impacts	Sharp curve in Parkmerced likely to create noise in surrounding area	• Major issues (during both construction and operation) with noise, visual, and property impacts surrounding bridge landing on Randolph Street • Portal on West Portal Avenue would change the look and feel of the street	Portal on 19th Avenue between Sargent Street and Byxbee Street would change the look and feel of the street
On-Street Parking	No change	Proposes removal of on-street parking on 19th Avenue between Eucalyptus Drive and Holloway Avenue	Proposes removal of on-street parking on 19th Avenue between Eucalyptus Drive and Holloway Avenue and between Sargent Street and Byxbee Street

DISCLAIMER: This assessment is preliminary based on qualitative assessment and conceptual engineering. More rigorous analysis of quantified benefits and impacts would occur during the environmental review phase.

Improvements Coming in the Next Two Years

While the 19th/M-line project is a long-term effort, SFMTA and partner agencies are moving forward with many near-term improvements that will bring incremental improvements to transportation conditions.



WEST PORTAL AVE. & QUINTARA ST. WATER MAIN, SEWER & PAVING PROJECT (In Progress)

Fall 2015 - Summer 2016 | West Portal Ave. from Ulloa St. to 15th Ave.
This multi-agency project includes water and sewer main replacements, street re-paving, and pedestrian safety elements, such as bulbouts and curb ramps.

WEST PORTAL AVE. TRANSIT & PLACEMAKING PROJECT

2016 | West Portal Ave. from Ulloa St. to St. Francis Circle
This project is intended to improve Muni Metro performance along West Portal Avenue and improve the public realm in the short term. Public meetings to share improvement options and seek input will be held prior to project implementation.

19th AVE. / JUNIPERO SERRA BLVD. IMPROVEMENTS

Spring 2016 - Summer 2016 | 19th Ave. at Junipero Serra Blvd.
This project will bring much-needed safety, transit, and accessibility improvements to the intersection by modifying the north crosswalk to include a pedestrian refuge area adjacent to the light rail tracks. In order to minimize transit delays caused by vehicle blockages and intrusion, transit signal priority will be installed and the entrance to the trackway will be treated with red paint and speed bumps.

TWIN PEAKS TUNNEL TRACKWAY IMPROVEMENTS

Summer 2016 - Fall 2017 | West Portal Station to Castro Station
Aging light rail tracks will be replaced along the entirety of the Twin Peaks Tunnel. To avoid future impacts to transit and the surrounding neighborhoods, additional work to the tunnel's infrastructure will take place at the same time as the track replacement. These projects include seismic upgrades, repairs to concrete reinforcements, and cleaning and repairing the tunnel drainage system.

M OCEAN VIEW TRACK REPLACEMENT PROJECT

Fall 2016 - Summer 2017 | 19th Ave. from Rossmoor Dr. to Winston Dr.
Aging light rail tracks will be replaced from the north side of the Winston Drive platform through the Rossmoor Drive Intersection. The Rossmoor Drive approach will be signalized with priority for transit vehicles, helping minimize blockages and conflicts between M Ocean View trains crossing 19th Avenue and vehicles using the corridor.

28 19th AVE. RAPID PROJECT

2016 - 2018 | 19th Ave. from Junipero Serra Blvd. to Lincoln Way
19th Avenue will receive pedestrian and transit improvements at every intersection between Lincoln Way and Junipero Serra Blvd., helping make the corridor--which saw about 400 collisions during a recent five-year period--safer for all users. The project will be coordinated with water and sewer upgrades and Caltrans repaving.

Year of Completion

2016

2017

2018

19th Avenue/M Ocean View Project

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