

Crush Capacity per Hour, AM Peak

August 2018

- existing vehicles, routes, and headways
- - - - - hypothetical maximum capacity

This diagram illustrates typical crush capacities of each mode. This information can be used to inform what mode of transit to prioritize along certain corridors based on the number of people that need to be moved along these corridors.

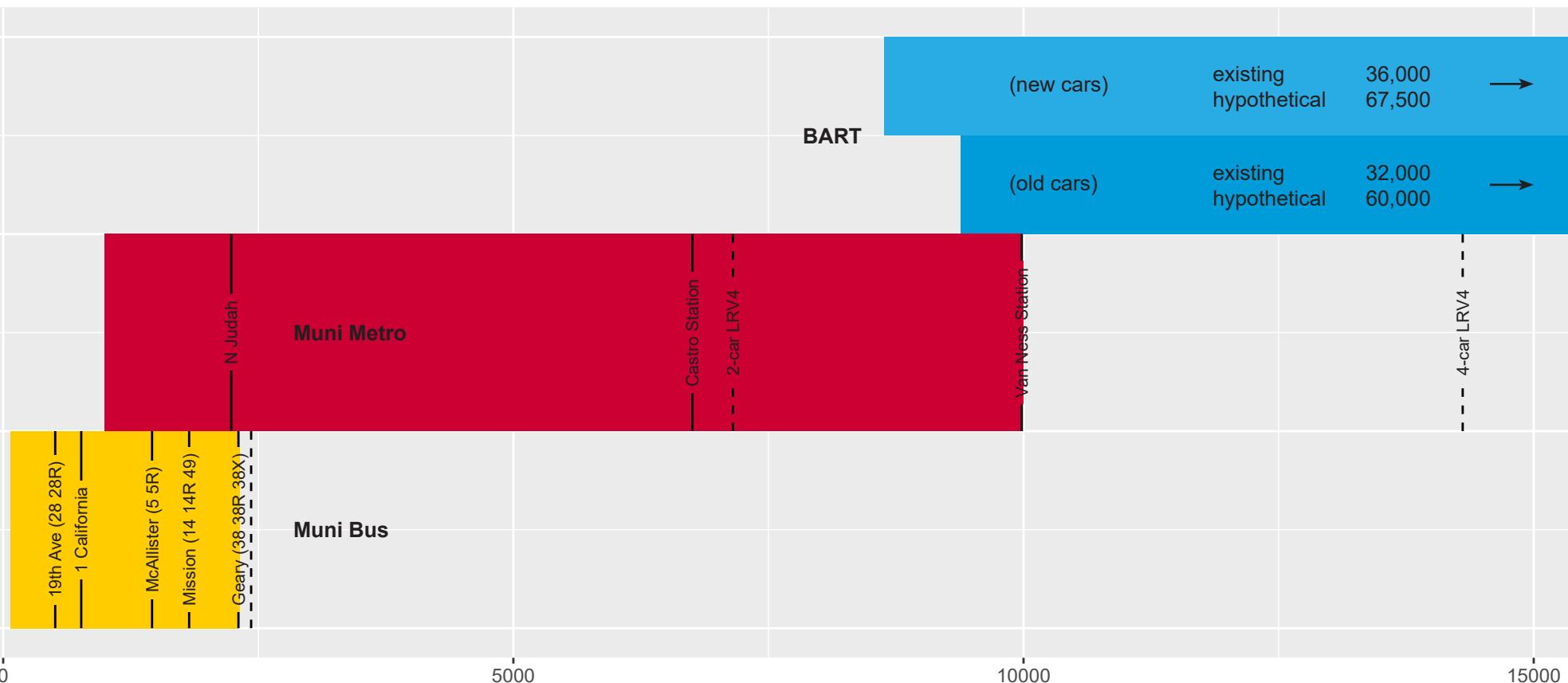
(pax/hr)	Existing	Hypothetical
BART	8,600 to 36,000	67,500
Muni Metro	1,000 to 10,000	14,300
Muni Bus	60 to 2,300	2,400

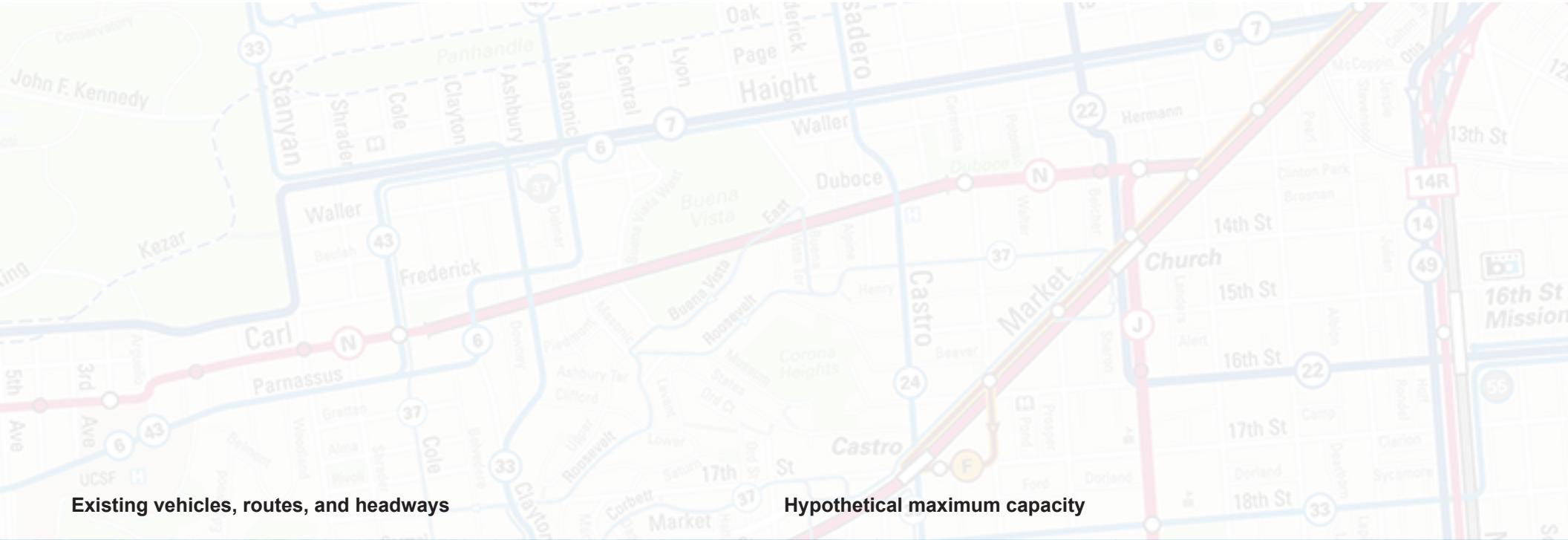
How to Read This Diagram

The bars below visualize the crush capacities of existing BART, Muni metro, and Muni bus routes and corridors during the AM rush hour from 8 to 9 AM.

The left end of each bar represents the lowest-capacity corridors, typically just one route. (For BART, it shows the seated capacity of an hour's worth of 10-car trains.)

The right end of each bar represents the highest possible crush capacity for each mode using existing vehicles, routes, and scheduled headways. A dashed line represents the hypothetical maximum crush capacity for each mode using the largest possible vehicles and minimum possible headways.





Existing vehicles, routes, and headways

BART

BART (new cars)

10-car D/E 225 pax/car
2.5 min headway 36,000 pax/hr

BART (old cars)

10-car A2/B2/C1/C2 200 pax/car
2.5 min headway 32,000 pax/hr

Muni Metro

N Judah

2-car LRV4 149 pax/car
8 min headway 1,987 pax/hr

Castro Station

1 and 2-car LRV4 149 pax/car
2.3 min headway 6,755 pax/hr

Van Ness Station

1- and 2-car LRV4 149 pax/car
1.5 min headway 9,983 pax/hr

Muni Bus

19th Ave

40' motor coach 51 pax/car
6 min headway 510 pax/hr

1 California

40' motor coach 51 pax/car
4 min headway 765 pax/hr

McAllister

40' and 60' coach
2.5 min headway

5 5R

51-81 pax/car
1,459 pax/hr

Mission

60' coach
2.7 min headway

14 14R 49

81 pax/car
1,823 pax/hr

Geary

40' and 60' coach
2 min headway

38 38R 38X

51-81 pax/car
2,306 pax/hr

Hypothetical maximum capacity

BART is currently testing and implementing both new types of train cars and an upgraded communications-based train control (CBTC) system. The new type D and E cars have expanded standing space and can fit up to 225 passengers per car. At the same time, the upgraded signal system, under ideal conditions, can direct trains to be close enough together to allow 2 minute headways.

Hypothetical

10-car D/E 225 pax/car
2 min headway 67,500 pax/hr

Hypothetical

10-car A2/B2/C1/C2 200 pax/car
2 min headway 60,000 pax/hr

Muni's new LRV4 light rail vehicles make it possible to connect four cars, typically only within the system's subsurface tunnels. Trains take five minutes to turn around using two pockets on each end of the subway. The existing Van Ness Station (left) has trains entering from both the Twin Peaks and Sunset Tunnels, resulting in a shorter headway than this hypothetical scenario.

Hypothetical

2-car LRV4 149 pax/car
2.5 min headway 7,152 pax/hr

Hypothetical

4-car LRV4 149 pax/car
2.5 min headway 14,304 pax/hr

Muni's Rapid Network already features buses timed just under two minutes apart. Replacing all vehicles on the Geary corridor with 60' motor coaches, as an example, would result in a slightly higher capacity.

The forthcoming Van Ness BRT and Geary Rapid projects, with advanced features such as signal priority and restricted transit lanes, are likely to produce corridors with similar or somewhat higher capacities than this hypothetical scenario.

Hypothetical

60' coach 81 pax/car
2 min headway 2,430 pax/hr