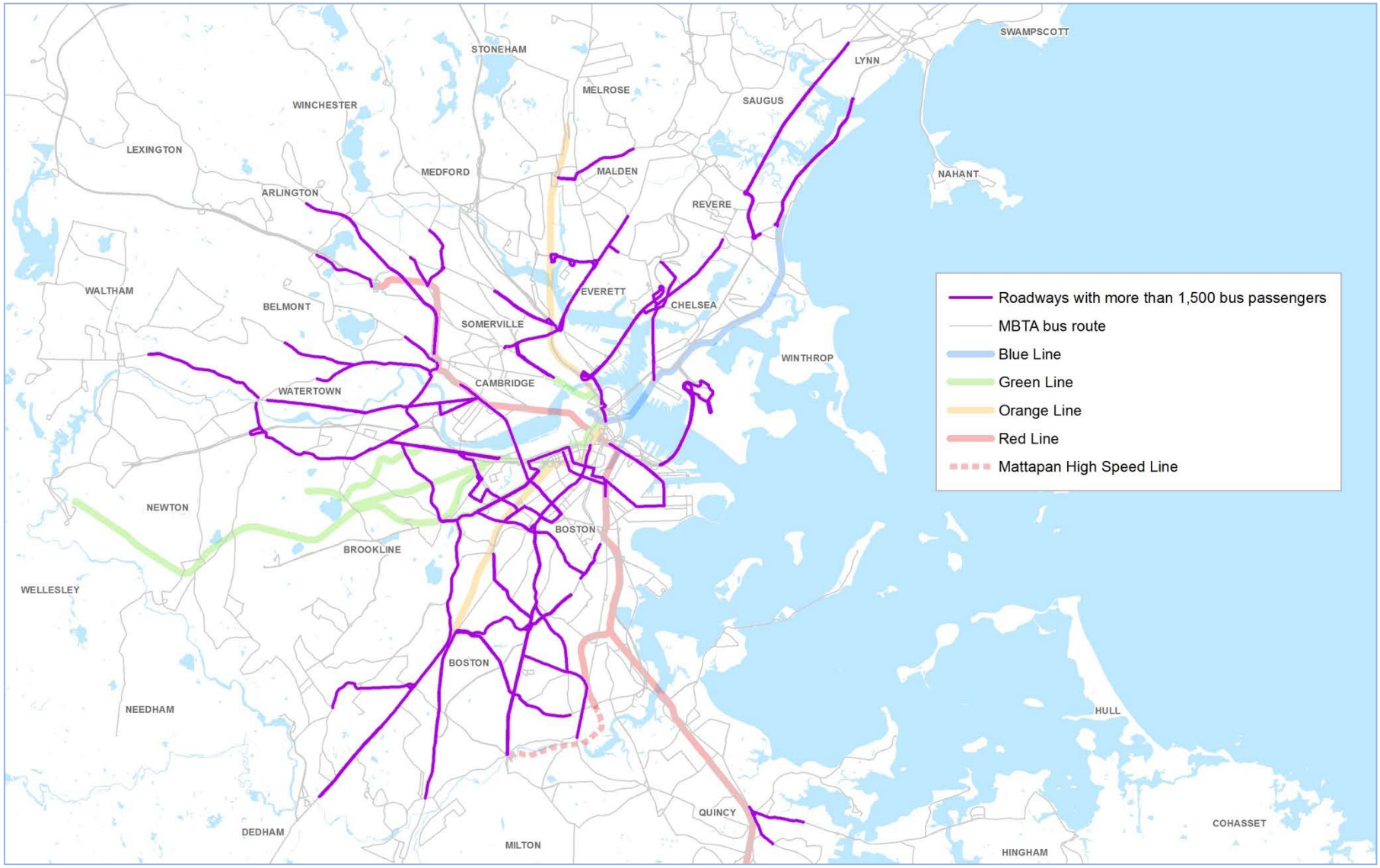
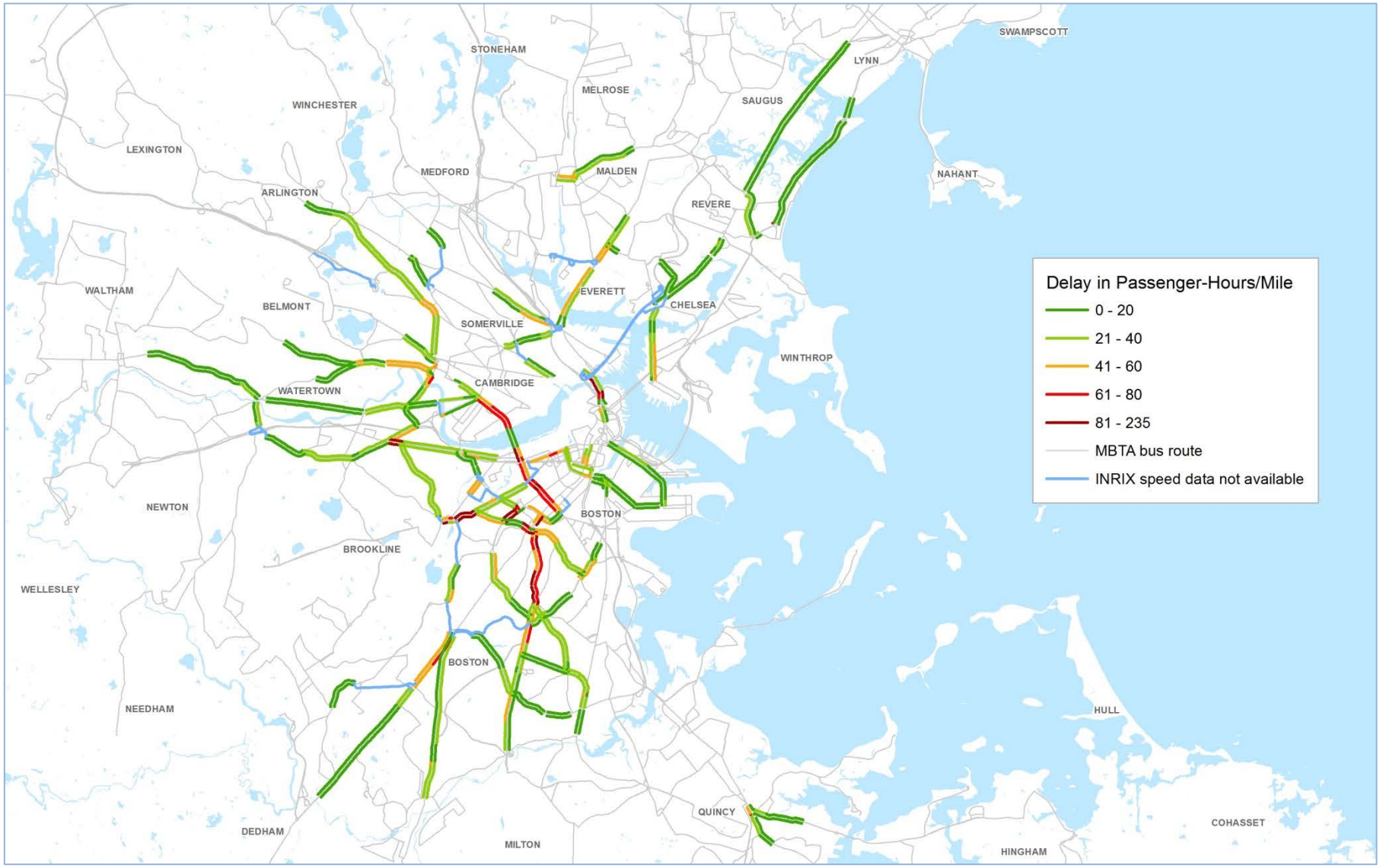
# Prioritization of Dedicated Bus Lanes

By Nicholas Hart and Jonathan Belcher
Central Transportation Planning Staff

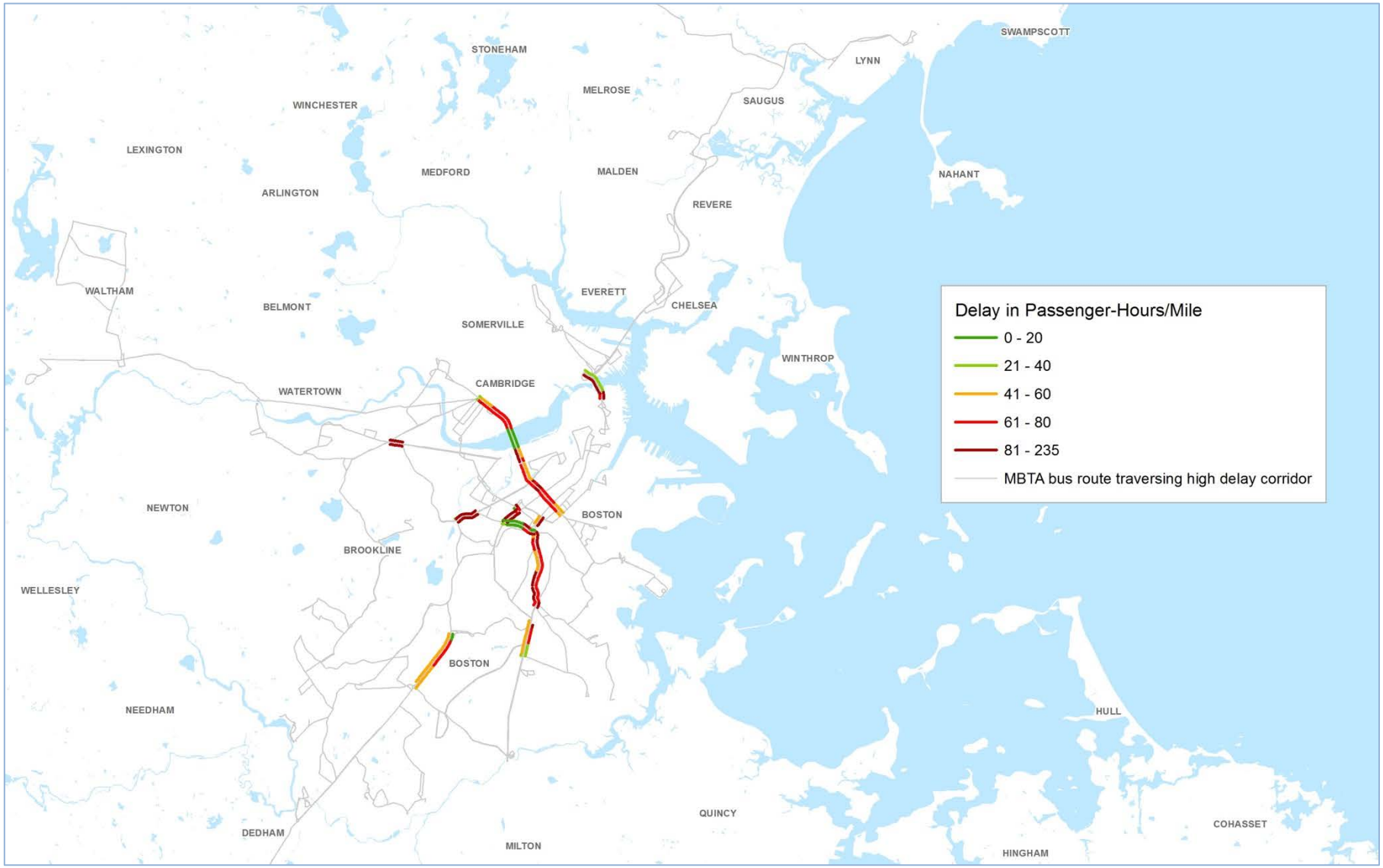
# CTPS staff considered roadways that carry on average more than 1,500 weekday MBTA bus passengers in one direction as candidates for dedicated bus lanes



# CTPS examined the average rates of weekday bus passenger delay on the identified roadways



# CTPS narrowed the focus of the study to corridors with a relatively high rate of weekday bus passenger delay



# Description of corridors with a relatively high rate of weekday bus passenger delay

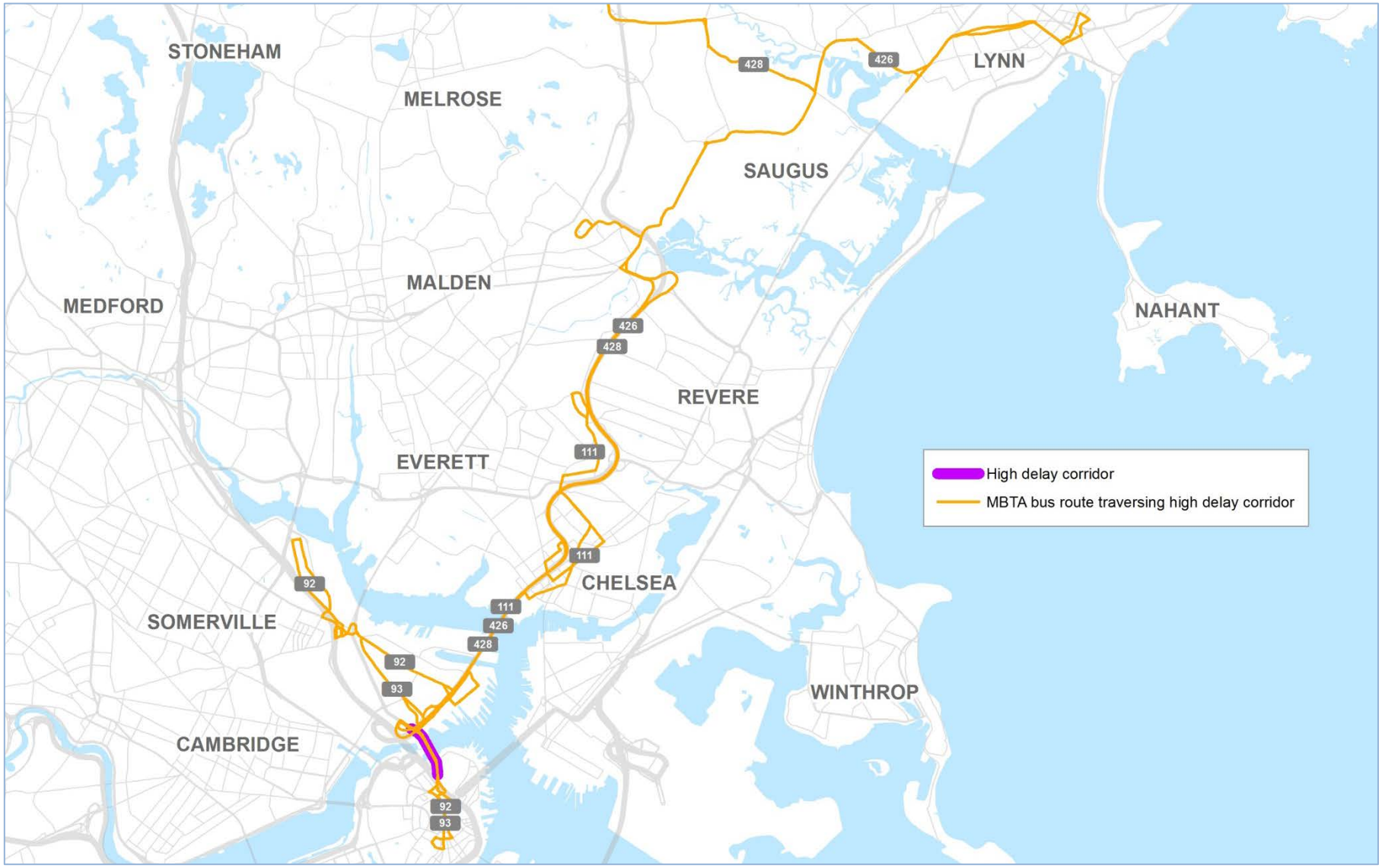
| Corridor | City | Bus Routes Affected |
|---|---|---|
| Between North Washington Street at the Route 1 off-ramp and North Washington Street at Valenti Way | Boston | MBTA Routes: 92, 93, 111, 426, 428<br>Partners Shuttle: Charlestown Navy Yard to MGH<br>Partners Shuttle: SRH to North Station |
| Between Massachusetts Avenue at Storrow Drive and Massachusetts Avenue at Albany Street | Boston | MBTA Routes: 1, CT1<br>MASCO Shuttle: Route M2 - Cambridge to HMS |
| Between Massachusetts Avenue at Western Avenue and Massachusetts Avenue at Memorial Drive | Cambridge | MBTA Routes: 1, CT1, 64, 70, 70A<br>MASCO Shuttle: Route M2 - Cambridge to HMS |
| Between Washington Street at Warren Street and Washington Street at Melnea Cass Boulevard | Boston | MBTA Routes: 1, 8, 19, 47, SL4, SL5 |
| Between Ruggles Street at Ruggles Station and Dudley Street at Warren Street | Boston | MBTA Routes: 14, 15, 22, 23, 28, 41, 44, 45, 66 |
| Between Warren Street at Dudley Street and Blue Hill Avenue at Geneva Avenue | Boston | MBTA Routes: 14, 19, 23, 28, 44, 45 |
| Between Blue Hill Avenue at Columbia Road and Blue Hill Avenue at Talbot Avenue | Boston | MBTA Routes: 14, 22, 28, 29, 45 |
| Between Washington Street at Forest Hills Station and Washington Street at Cummins Highway | Boston | MBTA Routes: 30, 34, 34E, 35, 36, 37, 40, 50, 51 |
| Between Huntington Avenue at South Huntington Avenue and Huntington Avenue at Tremont Street | Boston | MBTA Routes: 39, 66 |
| Between Brighton Avenue at Cambridge Street and Brighton Avenue at Harvard Avenue | Boston | MBTA Routes: 57, 57A, 66 |

MGH = Massachusetts General Hospital
SRH = Spaulding Rehabilitation Hospital
HMS = Harvard Medical School
MASCO = Medical Academic and Scientific Community Organization

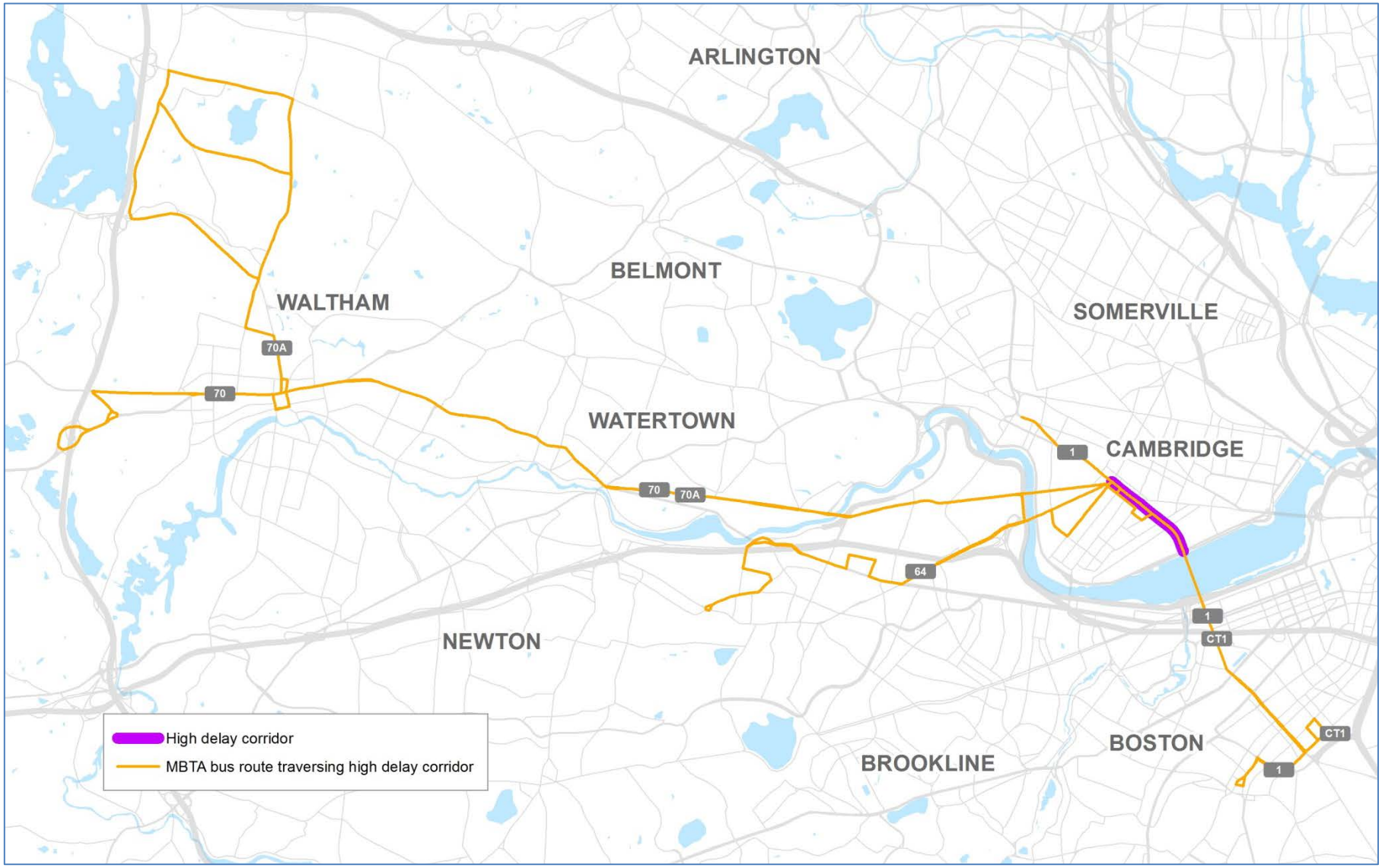
# Weekday bus passenger delay along the identified corridors

| Corridor | Length | Average Rate of Weekday Bus Passenger Delay Along the Corridor (Passenger-Hours/Mile) | Cumulative Weekday Bus Passenger Delay Along the Corridor (Passenger-Hours) |
|---|---|---|---|
| Between North Washington Street at the Route 1 off-ramp and North Washington Street at Valenti Way | 0.61 mile | Northbound: 55.5<br>Southbound: 99.0 | Northbound: 33.9<br>Southbound: 60.4 |
| Between Massachusetts Avenue at Storrow Drive and Massachusetts Avenue at Albany Street | 1.93 miles | Westbound: 58.6<br>Eastbound: 74.3 | Westbound: 113.1<br>Eastbound: 143.3 |
| Between Massachusetts Avenue at Western Avenue and Massachusetts Avenue at Memorial Drive | 0.79 mile | Westbound: 58.5<br>Eastbound: 70.1 | Westbound: 46.2<br>Eastbound: 55.4 |
| Between Washington Street at Warren Street and Washington Street at Melnea Cass Boulevard | 0.17 mile | Northbound: 124.7<br>Southbound: 52.5 | Northbound: 21.2<br>Southbound: 8.9 |
| Between Ruggles Street at Ruggles Station and Dudley Street at Warren Street | 0.99 mile | Westbound: 53.1<br>Eastbound: 73.7 | Westbound: 52.6<br>Eastbound: 72.9 |
| Between Warren Street at Dudley Street and Blue Hill Avenue at Geneva Avenue | 1.53 miles | Northbound: 74.7<br>Southbound: 67.2 | Northbound: 114.3<br>Southbound: 102.7 |
| Between Blue Hill Avenue at Columbia Road and Blue Hill Avenue at Talbot Avenue | 0.58 mile | Northbound: 60.4<br>Southbound: 51.9 | Northbound: 35.0<br>Southbound: 30.1 |
| Between Washington Street at Forest Hills Station and Washington Street at Cummins Highway | 1.14 miles | Northbound: 58.8<br>Southbound: 49.4 | Northbound: 67.1<br>Southbound: 56.3 |
| Between Huntington Avenue at South Huntington Avenue and Huntington Avenue at Tremont Street | 0.42 mile | Westbound: 103.2<br>Eastbound: 161.0 | Westbound: 43.3<br>Eastbound: 67.6 |
| Between Brighton Avenue at Cambridge Street and Brighton Avenue at Harvard Avenue | 0.23 mile | Westbound: 81.5<br>Eastbound: 89.4 | Westbound: 18.7<br>Eastbound: 20.6 |

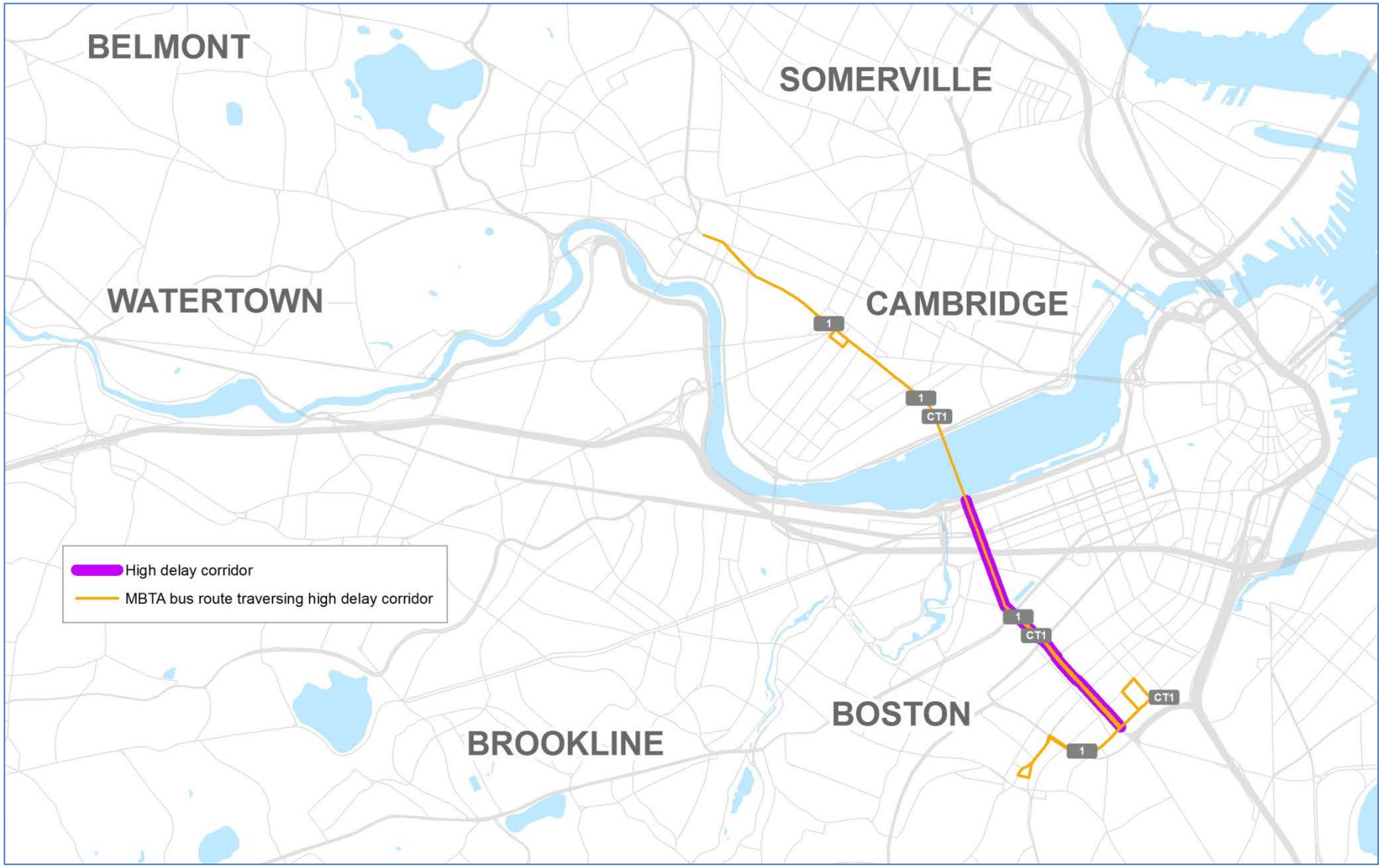
# Bus routes traversing high delay corridor between North Washington Street at Route 1 Off-Ramp and North Washington Street at Valenti Way



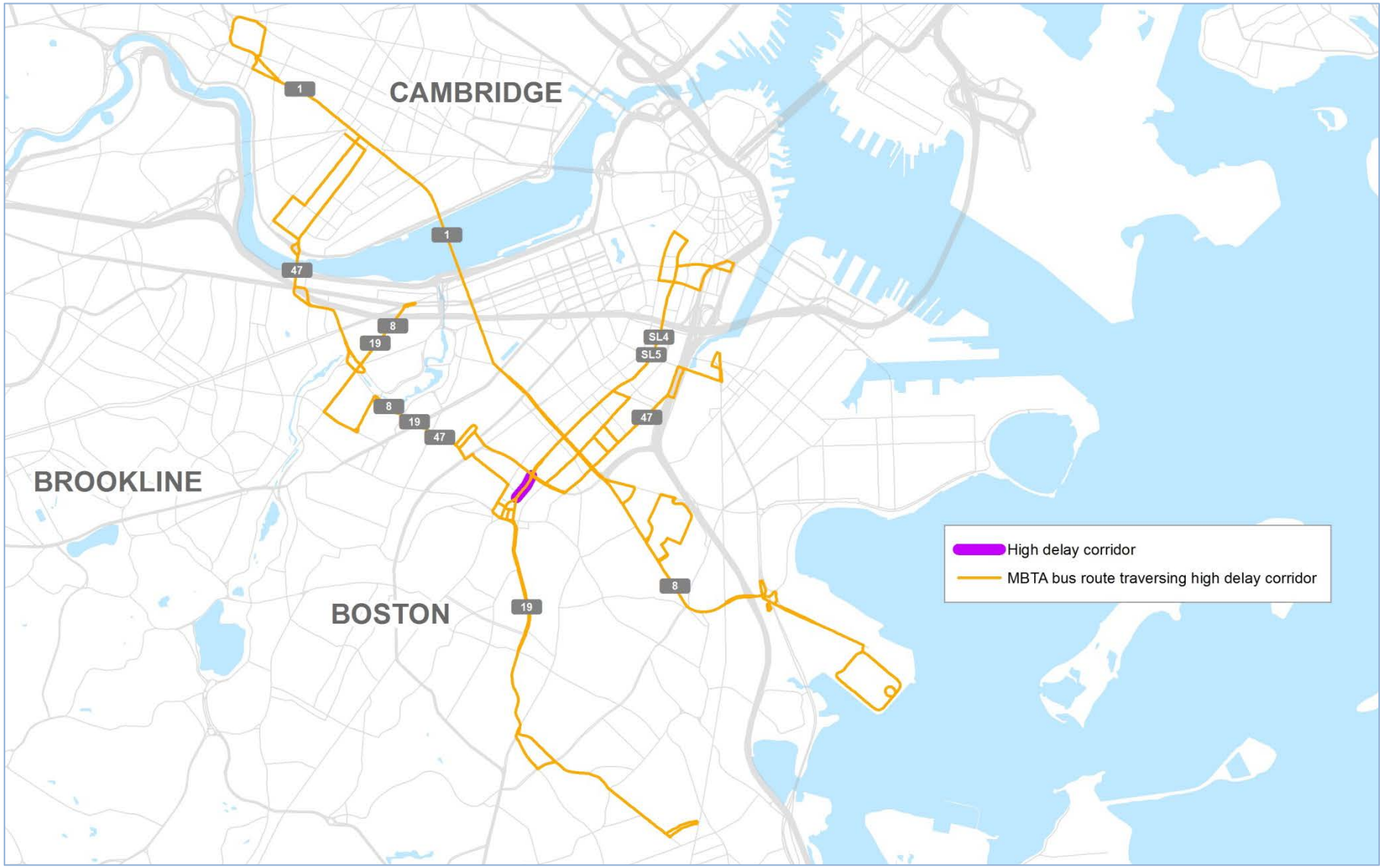
# Bus routes traversing high delay corridor between Massachusetts Avenue at Western Avenue and Massachusetts Avenue at Memorial Drive



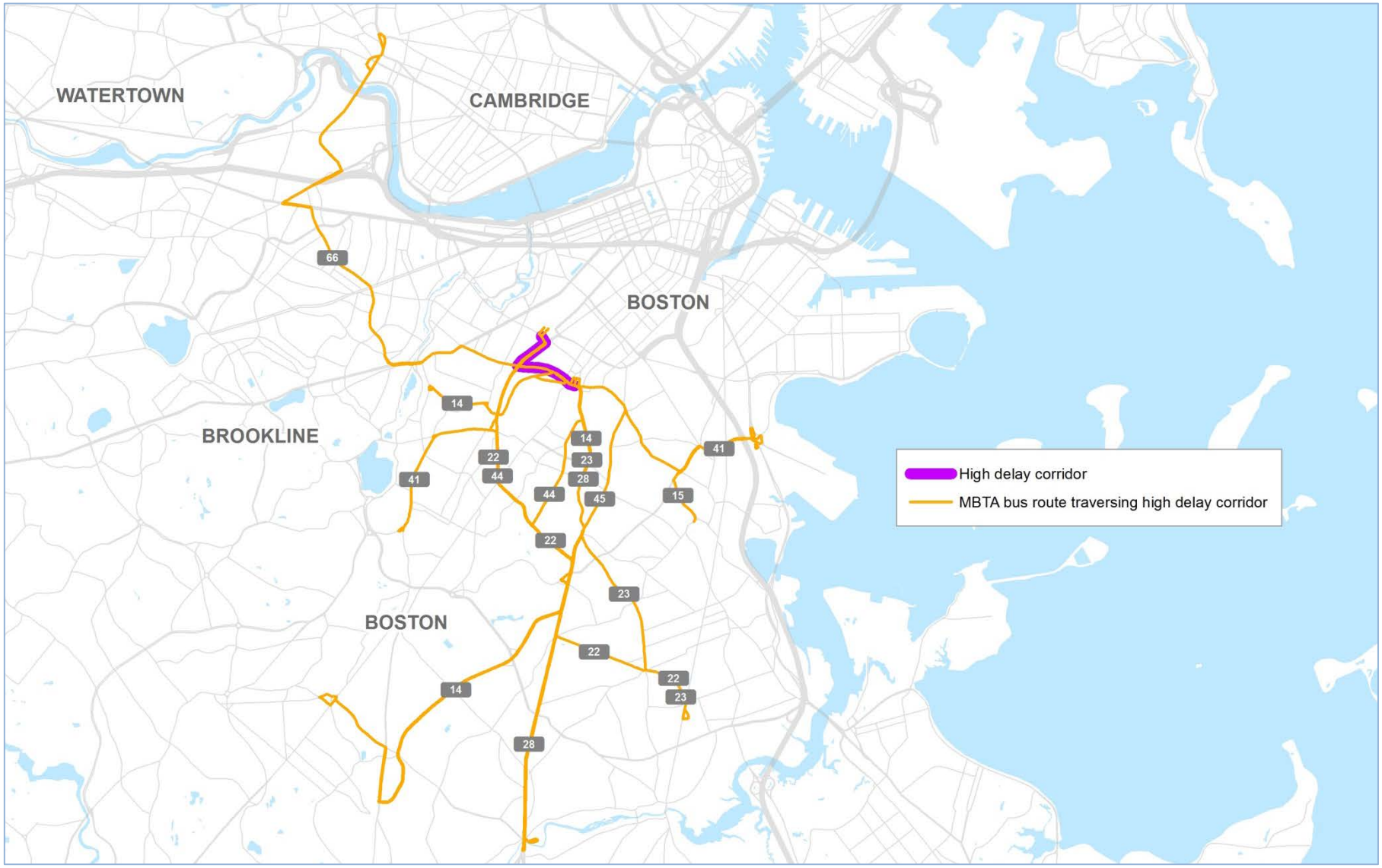
# Bus routes traversing high delay corridor between Massachusetts Avenue at Storrow Drive and Massachusetts Avenue at Albany Street



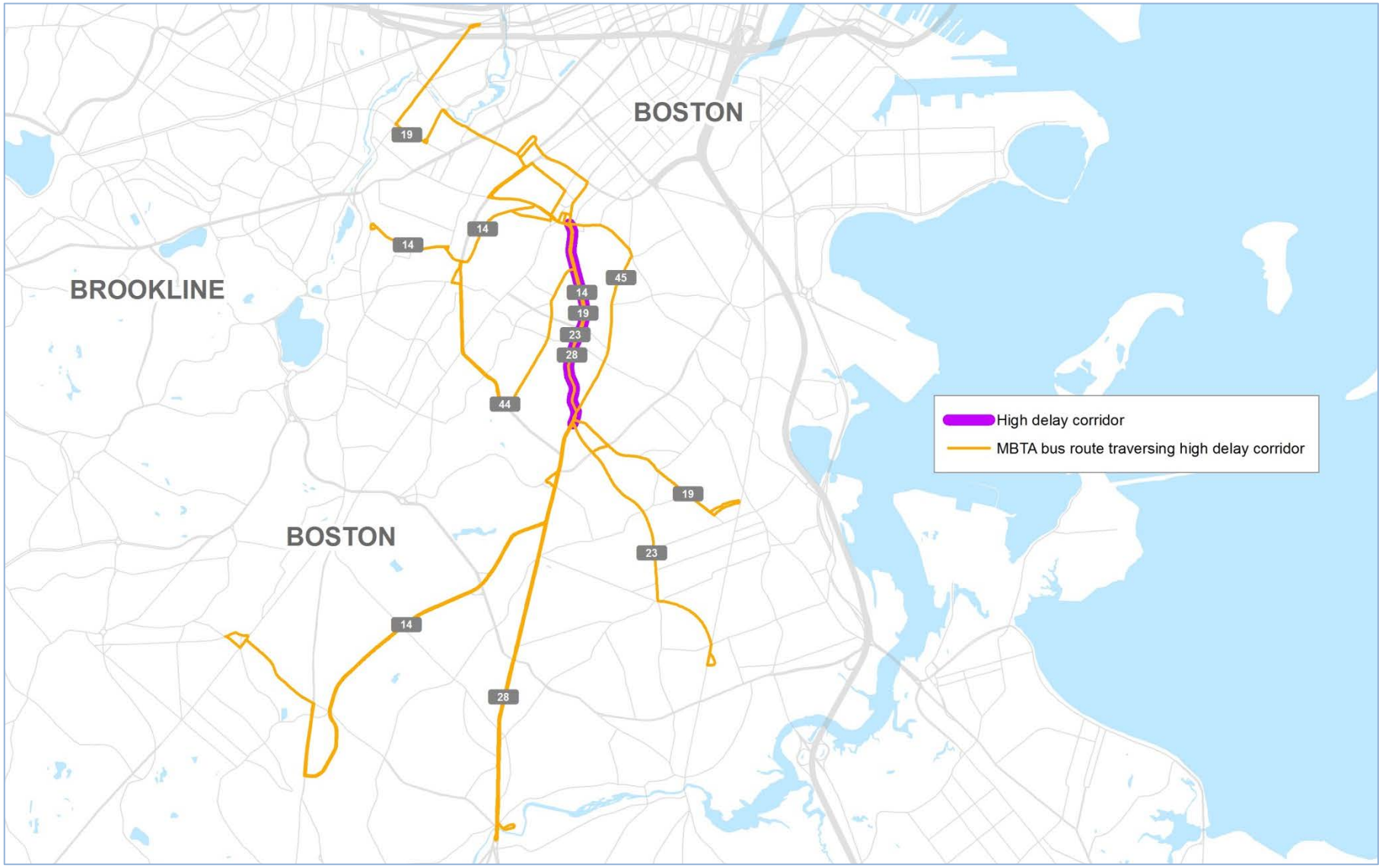
# Bus routes traversing high delay corridor between Washington Street at Warren Street and Washington Street at Melnea Cass Boulevard



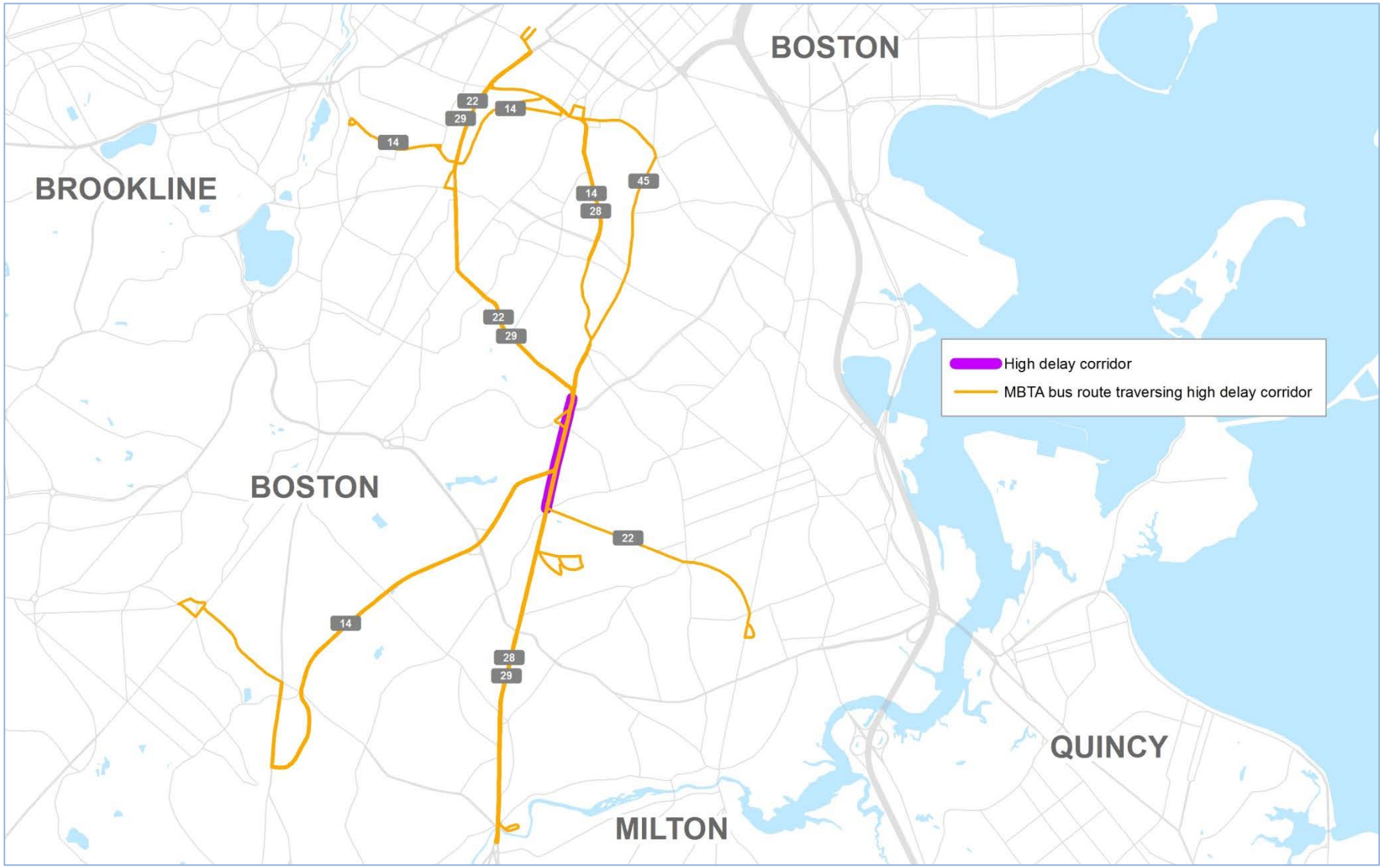
# Bus routes traversing high delay corridor between Ruggles Street at Ruggles Station and Dudley Street at Warren Street



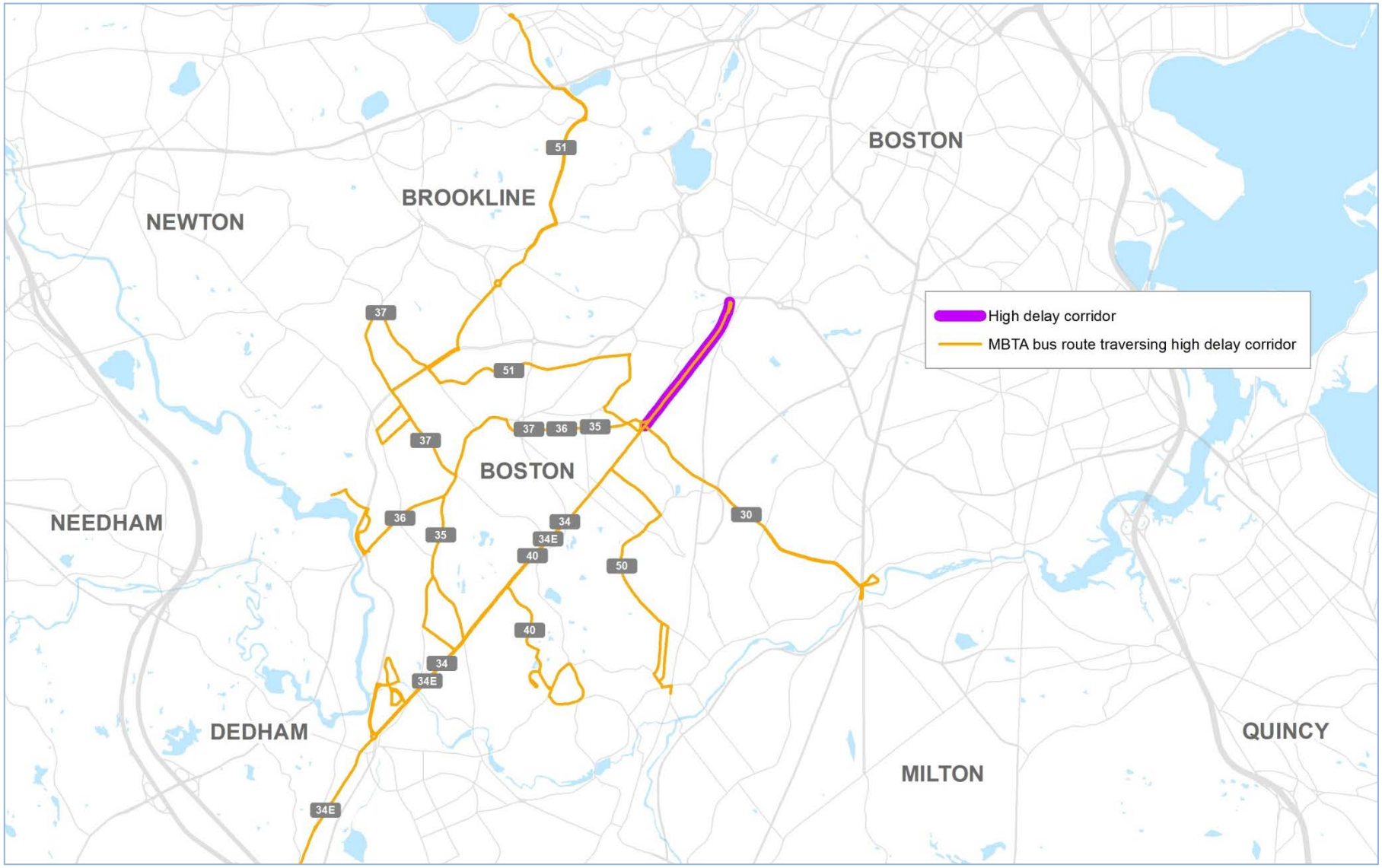
# Bus routes traversing high delay corridor between Warren Street at Dudley Street and Blue Hill Avenue at Geneva Avenue



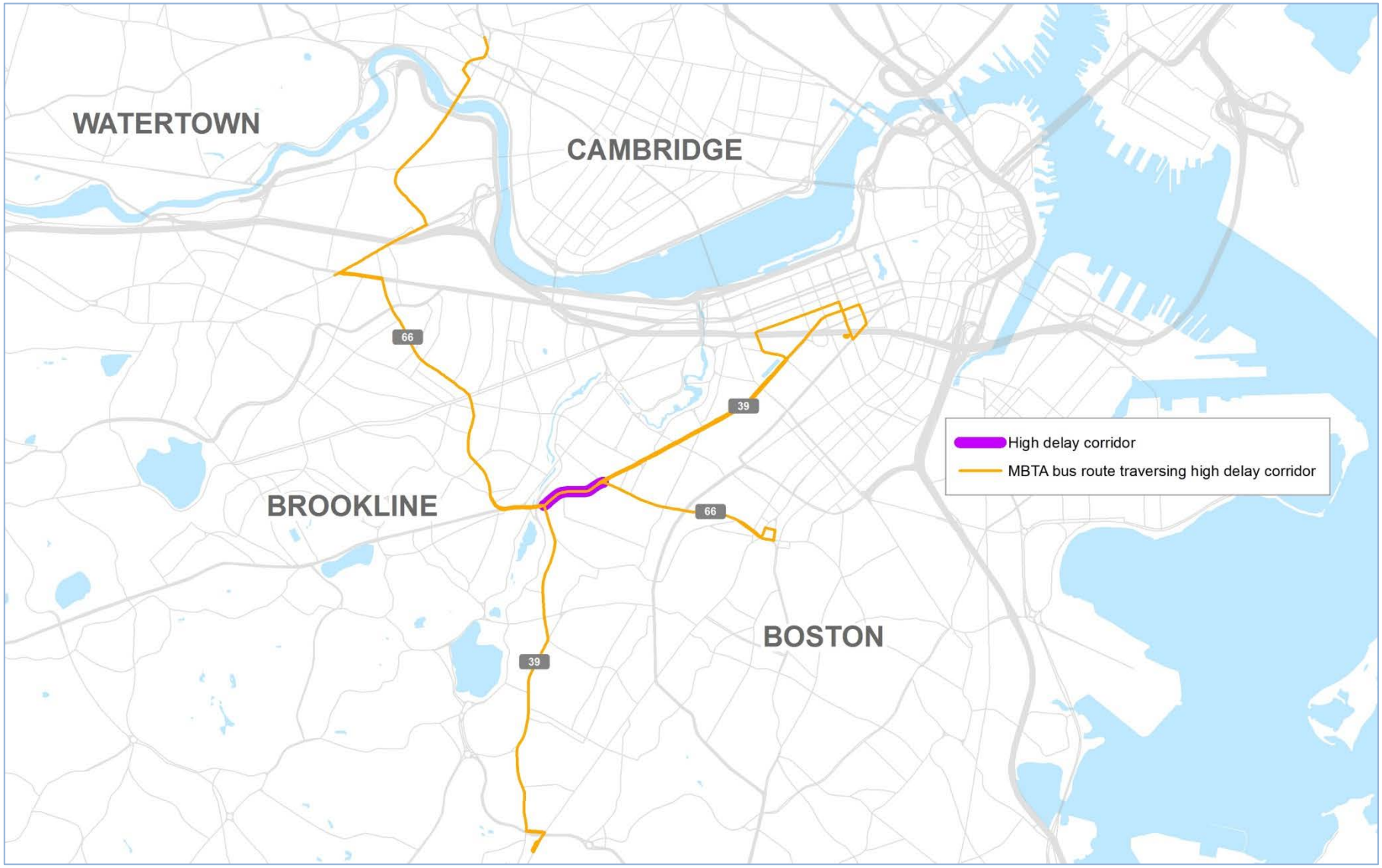
# Bus routes traversing high delay corridor between Blue Hill Avenue at Seaver Street and Blue Hill Avenue at Talbot Avenue



# Bus routes traversing high delay corridor between Washington Street at Forest Hills Station and Washington Street at Cummins Highway



# Bus routes traversing high delay corridor between Huntington Avenue at South Huntington Avenue and Huntington Avenue at Tremont Street

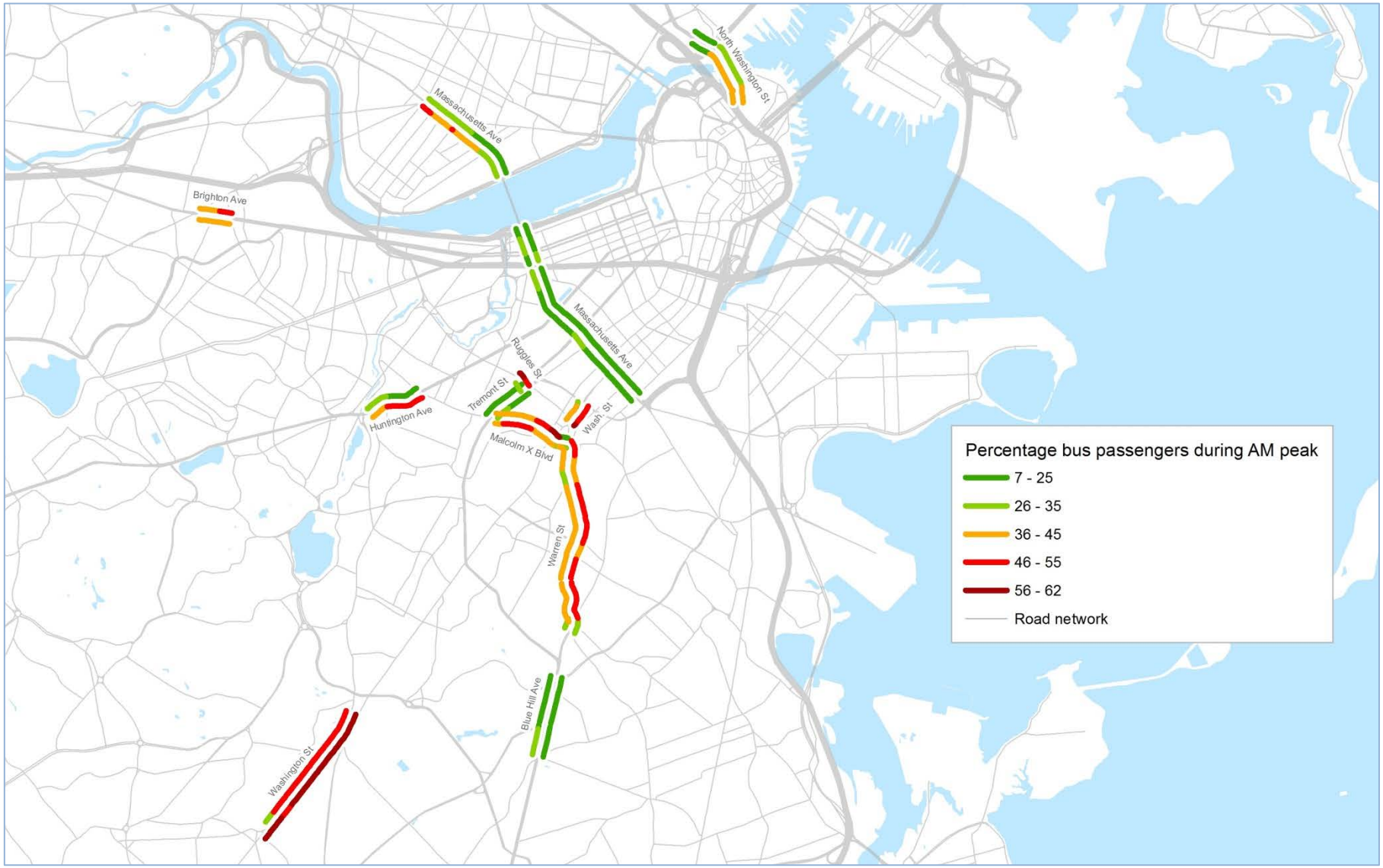
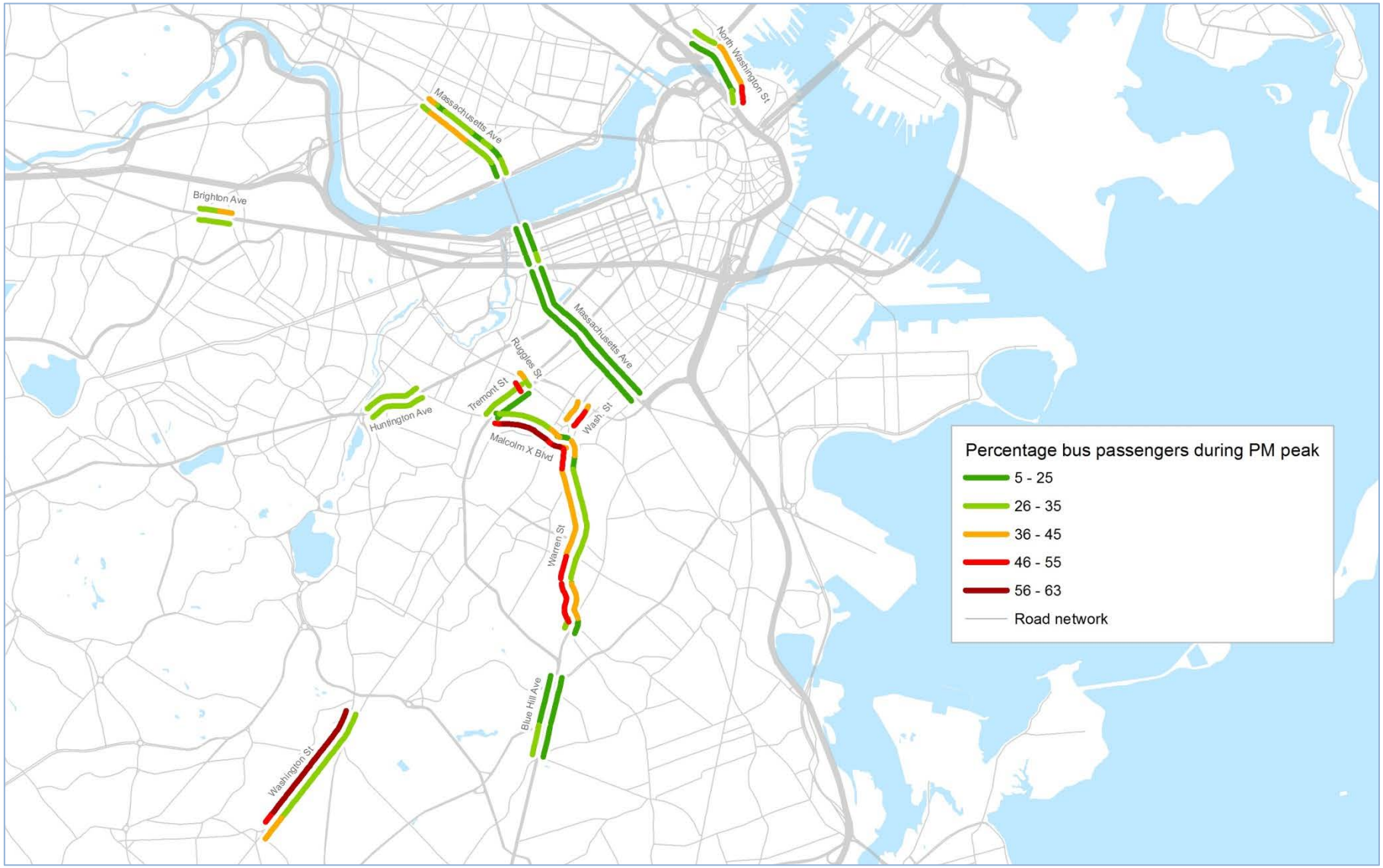


# Bus routes traversing high delay corridor between Brighton Avenue at Cambridge Street and Brighton Avenue at Harvard Avenue

# Average bus passenger percentage of motorized roadway users along identified corridors

| Corridor | Average Bus Passenger Percentage of Motorized Roadway Users Along the Corridor - AM Peak | Average Bus Passenger Percentage of Motorized Roadway Users Along the Corridor - PM Peak |
|---|---|---|
| Between North Washington Street at the Route 1 off-ramp and North Washington Street at Valenti Way | Northbound: 26.8%<br>Southbound: 35.6% | Northbound: 35.8%<br>Southbound: 23.4% |
| Between Massachusetts Avenue at Storrow Drive and Massachusetts Avenue at Albany Street | Westbound: 15.2%<br>Eastbound: 23.0% | Westbound: 19.2%<br>Eastbound: 15.9% |
| Between Massachusetts Avenue at Western Avenue and Massachusetts Avenue at Memorial Drive | Westbound: 24.6%<br>Eastbound: 38.7% | Westbound: 26.8%<br>Eastbound: 33.1% |
| Between Washington Street at Warren Street and Washington Street at Melnea Cass Boulevard | Northbound: 51.8%<br>Southbound: 36.5% | Northbound: 44.0%<br>Southbound: 39.7% |
| Between Ruggles Street at Ruggles Station and Dudley Street at Warren Street | Westbound: 37.1%<br>Eastbound: 34.2% | Westbound: 22.9%<br>Eastbound: 45.7% |
| Between Warren Street at Dudley Street and Blue Hill Avenue at Geneva Avenue | Northbound: 45.9%<br>Southbound: 39.1% | Northbound: 32.3%<br>Southbound: 44.7% |
| Between Blue Hill Avenue at Columbia Road and Blue Hill Avenue at Talbot Avenue | Northbound: 18.7%<br>Southbound: 18.6% | Northbound: 17.1%<br>Southbound: 19.6% |
| Between Washington Street at Forest Hills Station and Washington Street at Cummins Highway | Northbound: 58.4%<br>Southbound: 46.1% | Northbound: 32.4%<br>Southbound: 59.8% |
| Between Huntington Avenue at South Huntington Avenue and Huntington Avenue at Tremont Street | Westbound: 26.2%<br>Eastbound: 44.7% | Westbound: 32.7%<br>Eastbound: 29.1% |
| Between Brighton Avenue at Cambridge Street and Brighton Avenue at Harvard Avenue | Westbound: 42.3%<br>Eastbound: 39.6% | Westbound: 33.0%<br>Eastbound: 29.2% |

# CTPS calculated the bus passenger percentage of motorized roadway users on select roadway segments during the AM peak hour



# CTPS calculated the bus passenger percentage of motorized roadway users on select roadway segments during the PM peak hour