

Travel Demand Model Results for *Destination 2040* Needs Assessment

Table 1
Demographic Assumptions for the Boston Region MPO's
2016 Baseline and 2040 No-Build Scenarios

Variable	2016 Baseline	2040 No-Build	Percent Change from 2016 to 2040
Population	3,178,600	3,524,500	10.9%
Households	1,282,100	1,490,600	16.3%
Household Size	2.4	2.3	-4.4%
Total Employment	1,890,700	1,999,400	5.7%
Basic	357,100	302,700	-15.2%
Retail	308,800	318,100	3.0%
Service	1,224,700	1,378,600	12.6%
Households with Vehicles			
0 Vehicles	18%	20%	2%
1 Vehicle	38%	39%	1%
2 Vehicles	26%	24%	-2%
3+ Vehicles	18%	16%	-2%

Table 2
Daily Person-Trip Activity
2016 Baseline and 2040 No-Build Scenarios

Variable	2016 Baseline	2040 No-Build	Percent Change from 2016 to 2040
Eastern Massachusetts			
Person Trips	15,853,300	17,199,900	8.5%
Auto	13,276,400	14,198,500	6.9%
Transit	979,500	1,076,500	9.9%
Non-Motorized	1,597,500	1,924,900	20.5%
Boston Region			
Person Trips	10,991,400	12,012,000	9.3%
Auto	8,824,500	9,451,400	7.1%
Transit	821,100	908,800	10.7%
Non-Motorized	1,345,700	1,651,800	22.7%

Table 3
Mode Choice
2016 Baseline and 2040 No-Build Scenarios

Variable	2016 Baseline	2040 No-Build
Eastern Massachusetts		
Mode Share	100%	100%
Auto Share	84%	83%
Transit Share	6%	6%
Non-Motorized Share	10%	11%
Boston Region		
Mode Share	100%	100%
Auto Share	80%	79%
Transit Share	7%	8%
Non-Motorized Share	12%	14%

Table 4
Daily Transit-Trip Activity
2016 Baseline and 2040 No-Build Scenarios

Variable	2016 Baseline	2040 No-Build	Percent Change from 2016 to 2040
Eastern Massachusetts			
Transit Trips (linked)	979,500	1,076,500	9.9%
Transit Trips (unlinked)	1,322,300	1,453,200	9.9%
Bus	351,600	363,100	3.3%
Bus Rapid Transit	32,400	46,500	43.5%
SL1, SL2, SL4, SL5, 746	32,400	37,770	16.6%
SL3	0	8,730	--
Rapid Transit Lines	811,400	893,500	10.1%
Blue Line	70,400	72,000	2.3%
Orange Line	210,000	231,100	10.0%
Red Line	290,000	318,100	9.7%
Green Line	241,000	272,300	13.0%
Commuter Rail	104,400	126,800	21.5%
Ferry	6,400	7,000	9.4%
Express Bus	16,100	16,400	1.9%
Average Transfer Rate	1.35	1.35	

Table 5
Daily Highway-Trip Activity
2016 Baseline and 2040 No-Build Scenarios

Variable	2016 Baseline	2040 No-Build	Percent Change from 2016 to 2040
Eastern Massachusetts			
Vehicle Assignment	11,775,400	12,627,300	7.2%
Auto	10,134,400	10,845,400	7.0%
Trucks	1,641,000	1,781,900	8.6%
Vehicle-Miles Traveled	120,970,700	128,310,300	6.1%
Auto	108,508,000	113,314,300	4.4%
Trucks	12,462,700	14,209,400	14.0%
Vehicle-Hours of Travel	4,289,100	4,666,100	8.8%
Auto	3,843,300	4,125,200	7.3%
Trucks	445,800	518,800	16.4%
Average Speed	28.2	27.5	-2.5%
Auto	28.2	27.5	-2.7%
Trucks	28.0	27.4	-2.0%
Average Auto Trip Length	10.7	10.4	-2.8%
Boston Region			
Vehicle Assignment	7,813,800	8,377,600	7.2%
Auto	6,616,800	7,077,600	7.0%
Trucks	1,196,900	1,300,000	8.6%
Vehicle-Miles Traveled	76,519,600	86,050,100	12.5%
Auto	68,457,800	71,085,500	3.8%
Trucks	8,061,900	8,730,600	8.3%
Vehicle-Hours of Travel	3,002,400	3,524,800	17.4%
Auto	2,683,100	2,847,600	6.1%
Trucks	319,300	347,900	9.0%
Average Speed	25.5	24.4	-4.2%
Auto	25.5	25.0	-2.2%
Trucks	25.2	25.1	-0.6%
Average Auto Trip Length	10.3	10.0	-3.0%

Figure 1
Commuter Rail
2040 No-Build Scenario: Parking Demand over Existing Capacity

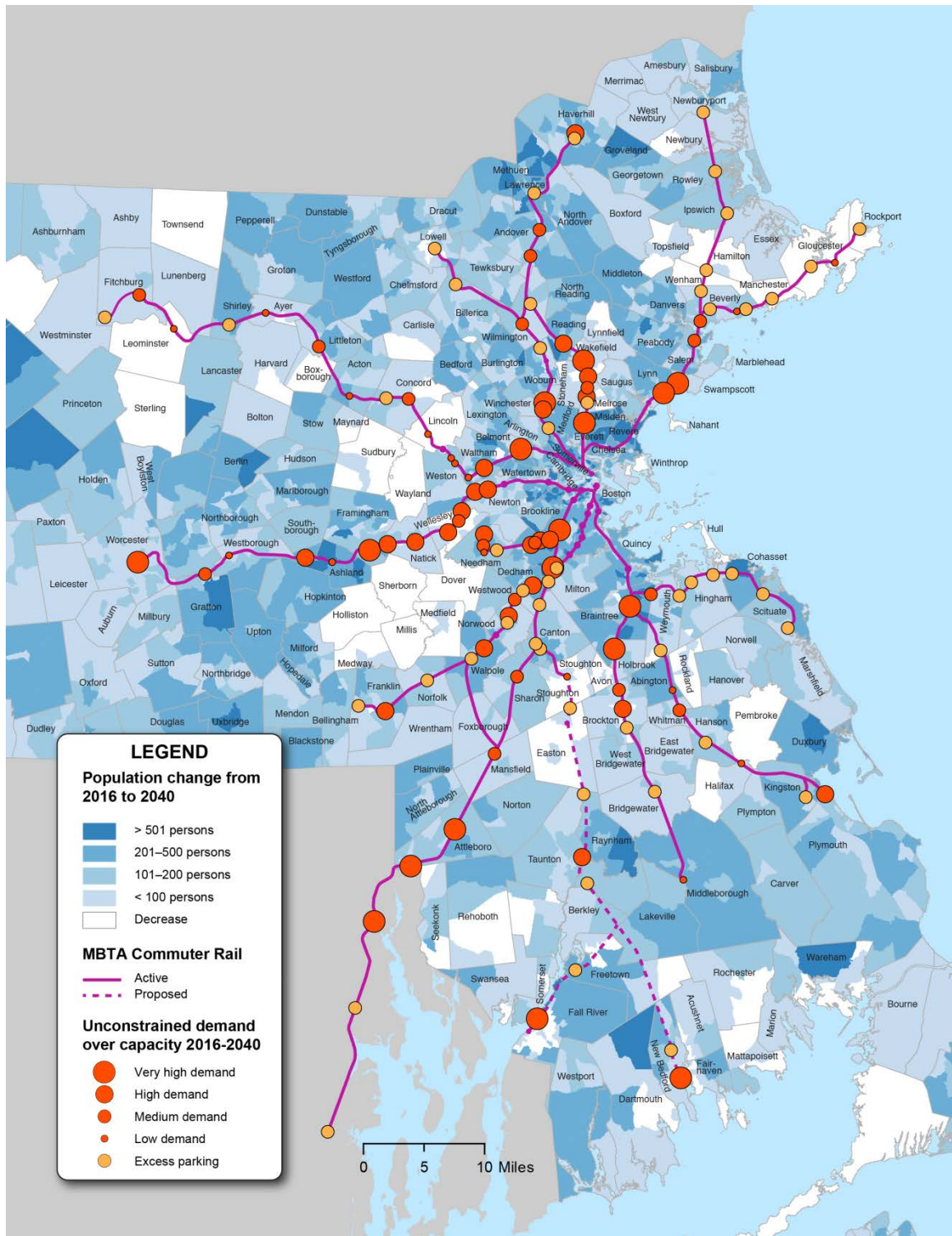


Figure 2
Rapid Transit
2040 No-Build Scenario: Parking Demand over Existing Capacity

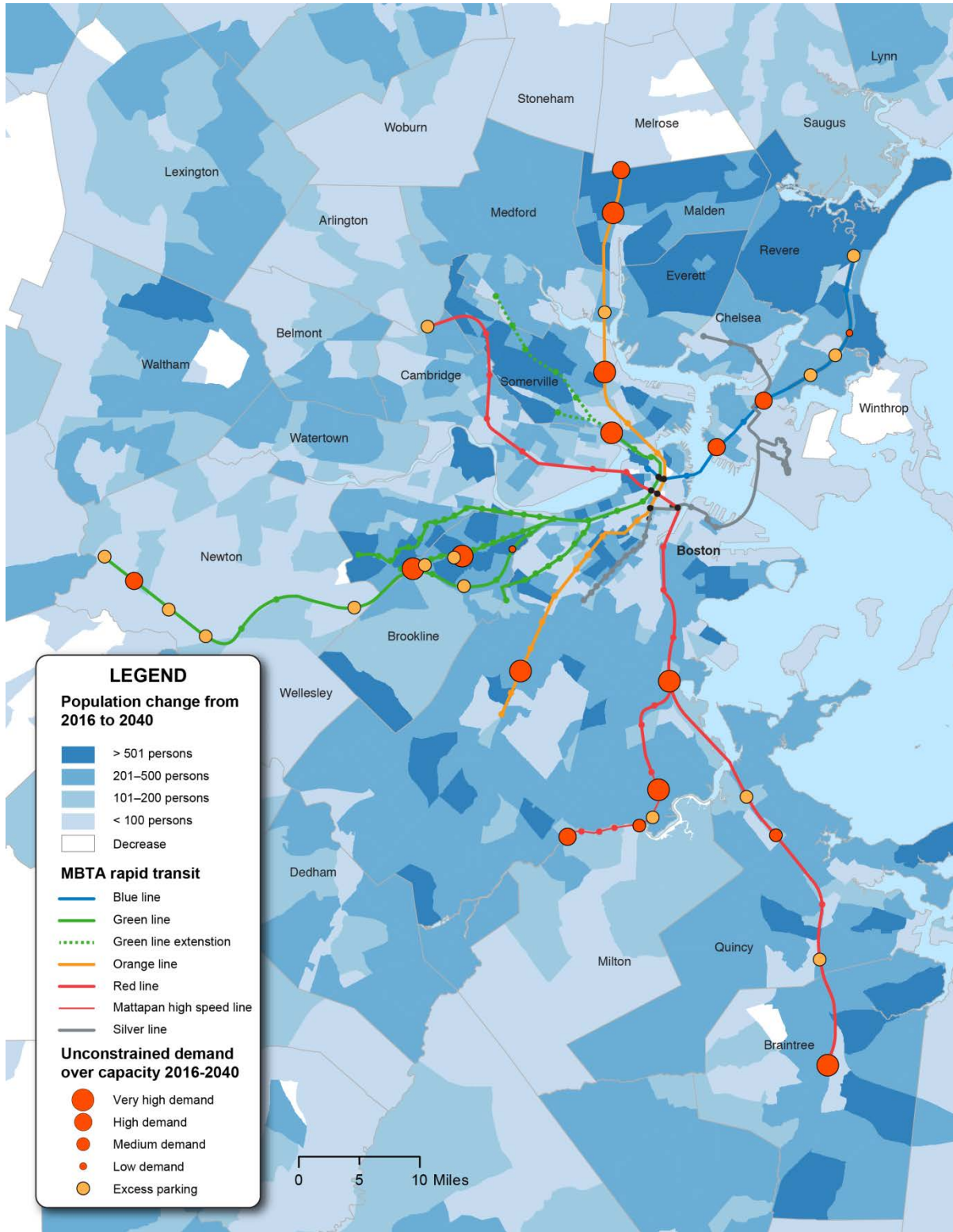


Figure 3
Priority Bus Study Corridors in the Boston Region

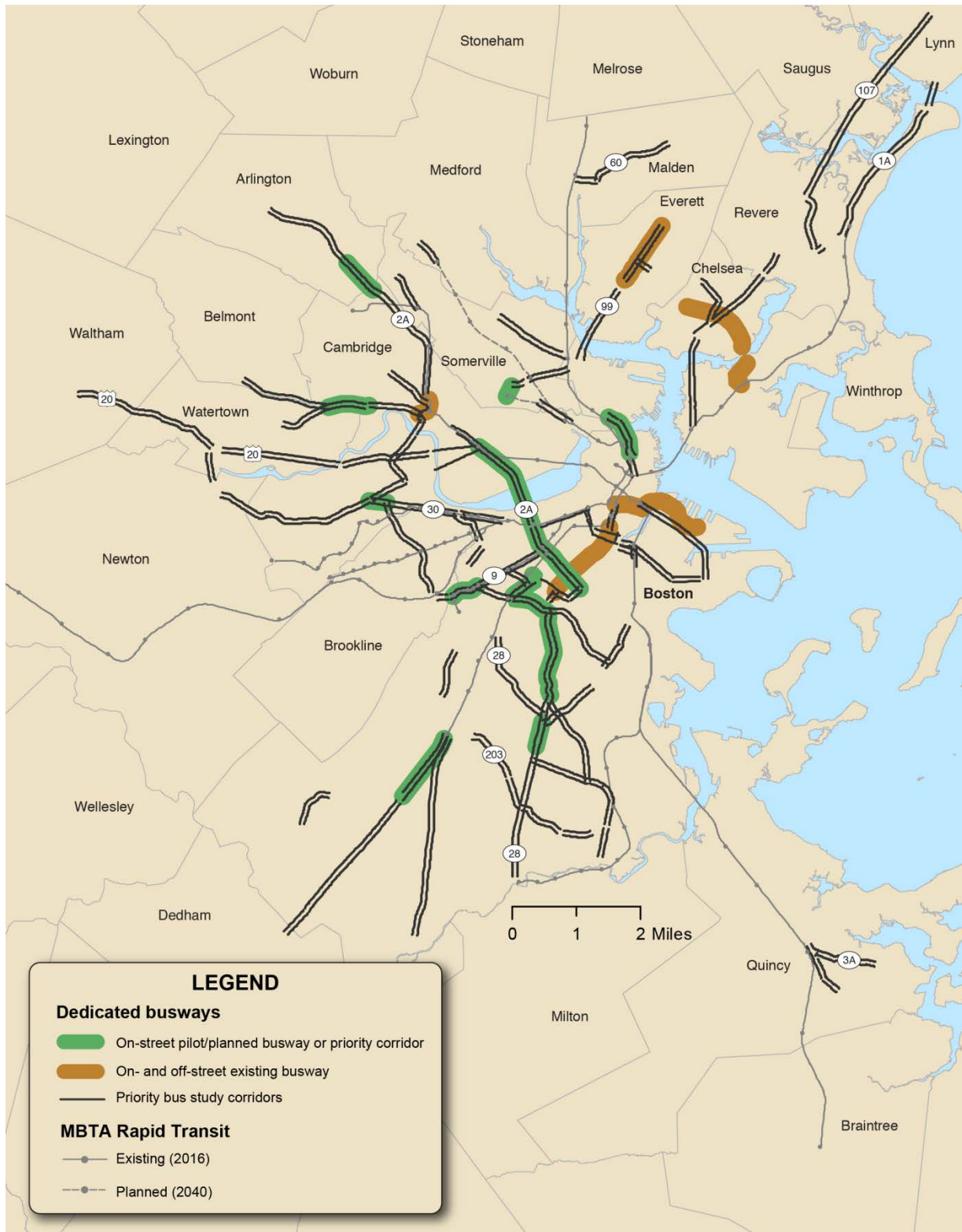


Figure 4
Change in Bus Run Times on High Ridership Routes
2016 Baseline and 2040 No-Build Scenarios

