

**Replacing the Washington Street Elevated:**

How the Orange Line turned Silver

By Joshua Javier Fabian

22 May 2013

11.026—Downtown

Professor Robert Fogelson

Massachusetts Institute of Technology

## Introduction

A pedestrian plaza playing host to workers as they leave their day jobs and walk and shop through Downtown Crossing. The medical center and school of Tufts University. A line of largely-ethnic shops, delis, and cafes beside the Cathedral of the Holy Cross. The historical and commercial center of the neighborhood Roxbury, Dudley Square. All of these are points along Washington Street, a thoroughfare that stretches nearly ten miles across the length of the City of Boston—from downtown through the South End, eventually meeting the Charles River and Route 128 in Dedham, just outside Boston’s city limits.<sup>1</sup>

## History of Washington Street

Indeed, Washington Street once used to physically define Boston. When Boston was first settled in the seventeenth century as a small peninsula, the town could only be reached via boat or by traveling on Orange Street over what was known as the Boston Neck.<sup>2</sup> After the American Revolutionary War, sections (and eventually the entirety) of the road were renamed after General George Washington.

Regular public transportation between Boston and Roxbury began in 1826 in the form of horse-drawn omnibuses. By the turn of the twentieth century, much of the River Charles and Boston Harbor had been filled in: the Boston Neck was no longer, and streetcar services connected all major streets in the ever-growing city. In 1904, the Boston Elevated Company opened an elevated rapid transit line over Washington Street, stretching from Downtown Crossing (then known as Summer and Winter Stations on opposite platforms) to Dudley Square.<sup>3</sup>

---

<sup>1</sup> See Figure 1, next page.

<sup>2</sup> See Figure 2, two pages over.

<sup>3</sup> *Washington Street Boulevard Study*. Boston Redevelopment Authority. 1990.



Figure 1—Map of Washington Street in Boston, Massachusetts. City limits are outlined in the outer-most red, and Washington Street is outlined in blue.<sup>4</sup>

<sup>4</sup> Adapted by Joshua Fabian. Bostonography.com. < <http://bostonography.com/wp-content/uploads/2012/06/hoods.png>>.



Figure 2—Map of Boston in 1723. The left end of the map (oriented properly) shows the Orange Street, now Washington Street, on the Boston Neck.<sup>5</sup>

<sup>5</sup> Bonner, John. "The town of Boston in New England." Norman B Leventhal Map Center at the Public Boston Library. 1723. <<http://maps.bpl.org/id/11122>>.

The line was extended southward to Forest Hills over the following five years.<sup>6</sup> Until the Great Depression, Washington Street around Dudley Square represented Boston's commercial hub outside downtown, until thereafter the Back Bay took much of Roxbury's business. Through the mid-1900s, the neighborhoods became known as the ethnic centers of Boston—especially for the African-American population—and most economic growth in the area was found in the immediate area of the four local Orange Line stations.<sup>7,8</sup>

Once completed, the elevated line over Washington Street would stand for seventy-eight years until its service was suspended on 29 April 1987 and the structure subsequently demolished.<sup>9</sup> The demolition of what was known as the Orange Line became a point of contention for residents and business along the El as the Massachusetts Bay Transportation Authority debated and planned new transit lines to service and compensate the people of Washington Street.

### **The story: the relocation of the Orange Line**

The story of the Orange Line's relocation begins in 1948, when then-commissioner of the Massachusetts Department of Public Works, William F. Callahan, proposes in his *Master Highway Plan for Metropolitan Boston* a set of new expressways extending radially outward from downtown and a new circumferential highway around the inner city.<sup>10</sup> The projects, while

---

<sup>6</sup> See Figure 3, next page.

<sup>7</sup> "A road's rebirth that never was: Washington Street waits on, long after great expectations." *The Boston Globe*. 25 April 1992.

<sup>8</sup> *Washington Street Boulevard Study*. 1990. (See 3.)

<sup>9</sup> Bartlett, Ellen J. "El riders savor last view." *The Boston Globe*. 1 May 1987.

<sup>10</sup> Callahan, William F. *Master Highway Plan for the Boston Metropolitan Area*. Massachusetts Department of Public Works. 1948.

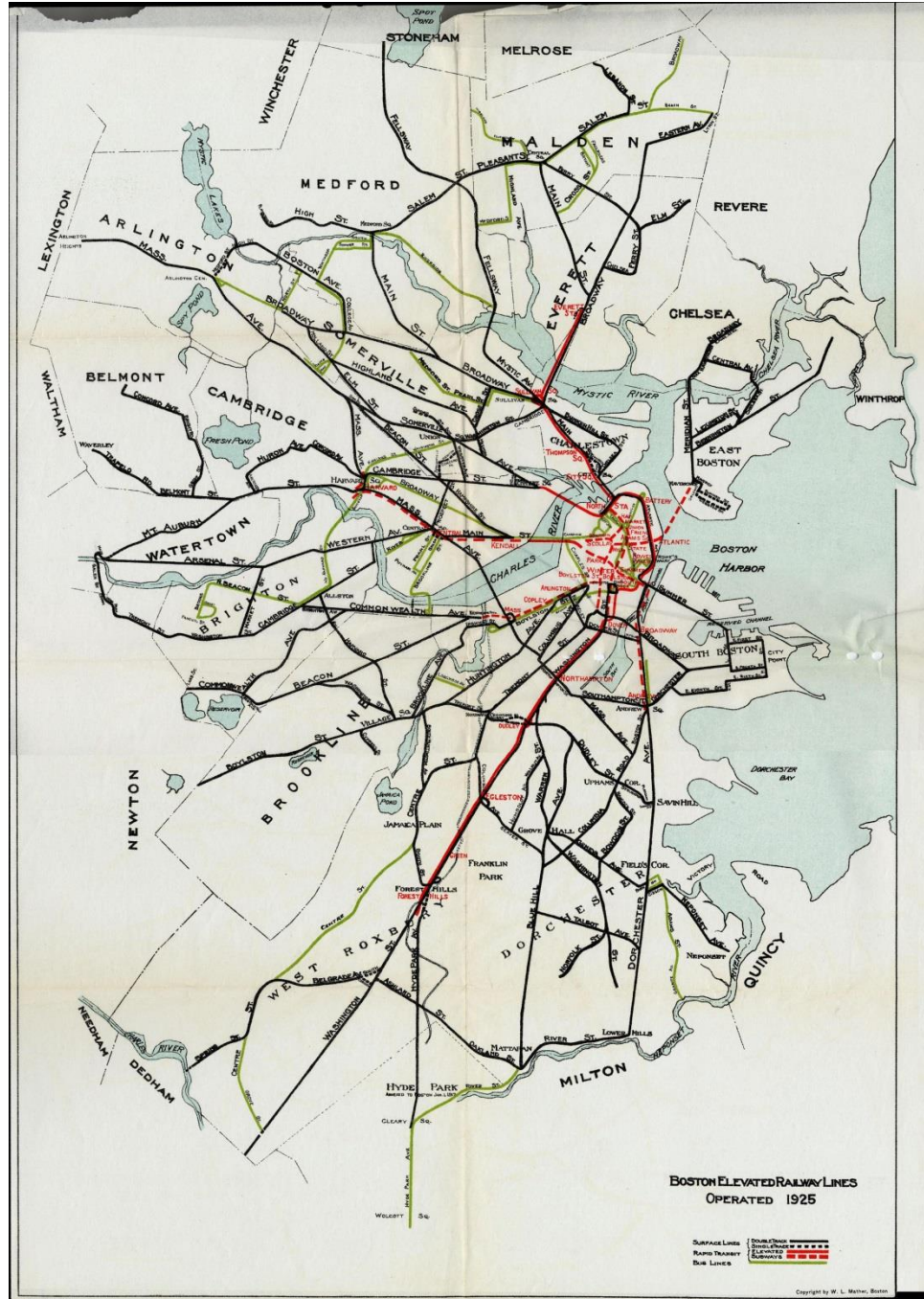


Figure 3—Operations of the Boston Elevated Railway Line, 1925. Rapid transit is designated in red, streetcar service in black, and bus lines in green.<sup>11</sup>

<sup>11</sup> 1925 map. Boston Elevated Railway Lines. Public domain.

<[http://en.wikipedia.org/wiki/File:BERy\\_1925\\_map.jpg](http://en.wikipedia.org/wiki/File:BERy_1925_map.jpg)>.

potentially relieving traffic in the city, would require the clearing of much land and the taking of many residences in the neighborhoods of Jamaica Plain and Roxbury. For twenty years, community activists and politicians fought against the new expressways; in 1970, Governor Francis Sargent ordered a moratorium on work for the Southwest Corridor, the first of the road projects.<sup>12</sup> While work would never resume on the highway, demolition had already taken place along many stretches of the project—which of course could not be undone.

On 29 November 1972, Governor Sargent addressed the Commonwealth, scrapping the Southwest Expressway through Jamaica Plain and Roxbury and instead proposing a slew of new transit expenditures, the “most ambitious” of which, according to the *Boston Globe*, being the “relocation of the Orange Line from South Cove [Tufts Medical Center] to Forest Hills [its terminal both then and now] and extension along the Penn Central tracks to Rte. 128 in Canton,” with provisions for an additional southern route splitting off at Forest Hills.<sup>13</sup> The project would end up being financially feasible due to the Federal-Aid Highway Act of 1973, which permitted states to shelve unpopular highway projects and instead recycle and spend the allocated federal funds on transit investments.<sup>14</sup> While the transformation of the Southwest Corridor from an expressway to a rapid transit project may have been music to the ears of many Bostonians, the *Boston Globe*, from the morning after the governor’s address, was quick to predict the controversy to come, reporting that “Roxbury residents have opposed demolition of the elevated structure unless replacement service is provided.”<sup>15</sup> The new alignment would add at least a half

---

<sup>12</sup> Plotkin, A S. “Sargent urges more public transit: asks US, State road funds for housing, mass transit.” *The Boston Globe*. 12 February 1970.

<sup>13</sup> Thomas, Jack. “More mass transit, no x-ways—Sargent.” *The Boston Globe*. 1 December 1972.

<sup>14</sup> “Turning roads into rails.” *The Washington Post*. 1 June 1974.

<sup>15</sup> “More mass transit.” 1 December 1972. (See 13.)

mile walk to the commute of many from their homes to the nearest Orange Line station into downtown if Washington Street was not provided a permanent, replacement transit line.<sup>16</sup>

### **The story: alternatives and struggles**

Replacement transit service along Washington Street was originally to be planned and implemented at the same time as the new Orange Line alignment was constructed. Early in the planning staging, Massachusetts Secretary of Transportation (and now-MIT research professor) Frederick P. Salvucci wrote in a memo of “the Commonwealth’s commitment to the South End Replacement Service which is intended to replace and improve the existing service provided by the Washington Street Elevated Orange Line between Dudley Station and Downtown Boston.”<sup>17</sup> This clearly implies that the state had the idea of building some sort of new rapid transit along Washington Street in addition to the new Orange Line route along the Southwest Corridor.

In 1978, the MBTA published the *Phase I Feasibility Report* for what was known as the Replacement/Transit Improvement Study for the neighborhoods of South End, Roxbury, Dorchester, and Mattapan. It cited the “Elevated’s blighting effect and structural problems” as having “long prompted consideration of demolishing the line,” and proposes that “some form” of transit should replace the El on Washington Street and be possibly extended to the south to Mattapan Square. The report is also detailed in laying out a framework of criteria with which to measure and compare the proposed replacement services; some of these criteria include community acceptance, the quality of service (serving as an adequate replacement of rail service, travel times, allowing for transfer to other lines, etc.), cost-effectiveness (capital costs and the

---

<sup>16</sup> See Figure 4, next page.

<sup>17</sup> “Title VI Compliance Review of the Massachusetts Bay Transportation Authority.” Federal Transit Administration, Office of Civil Rights. January 2006.



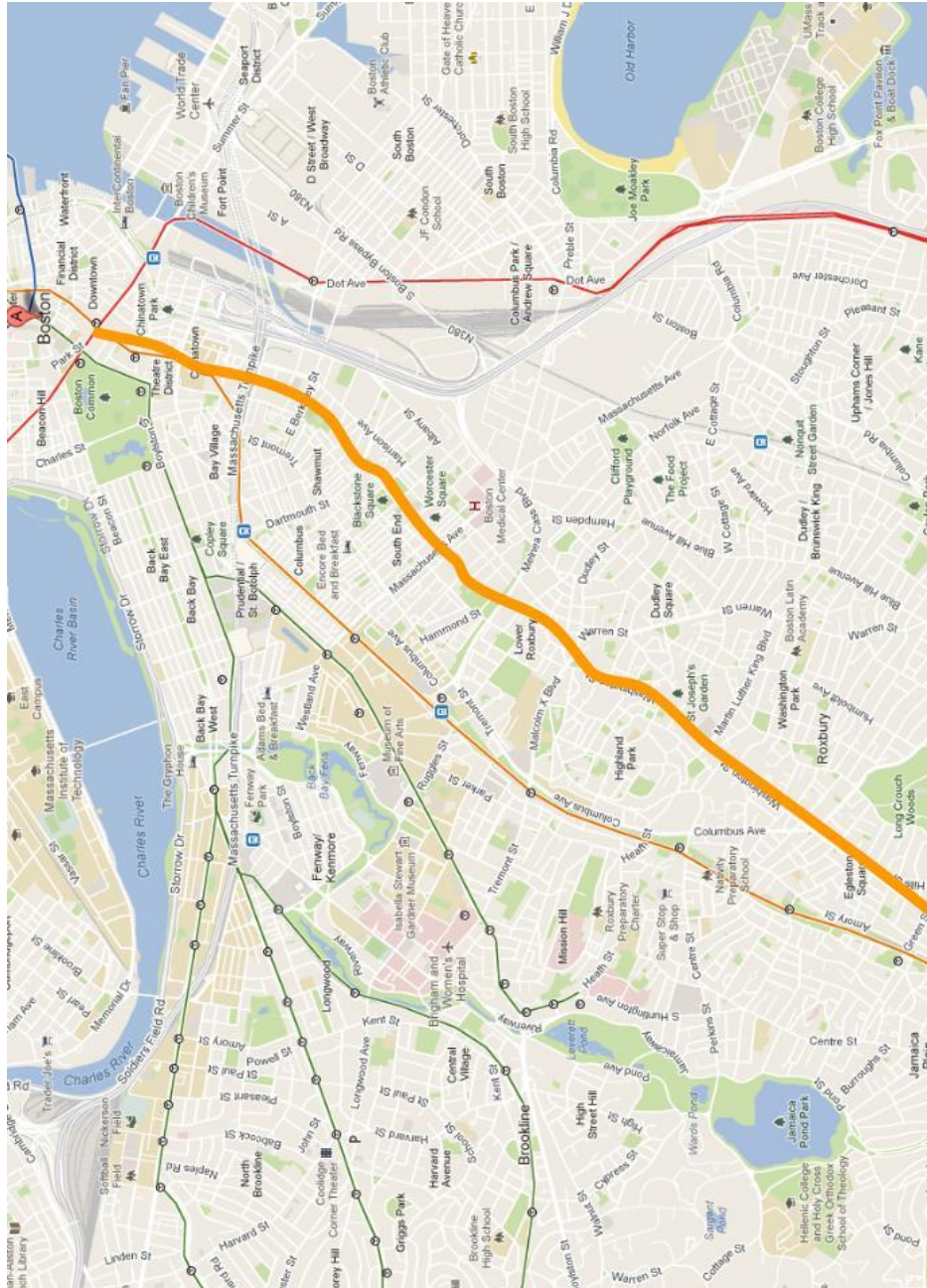


Figure 4—Map of the Washington Street Elevated (in thick orange), the Southwest Corridor Orange Line alignment (in thin orange), and the Red Line. (North is toward the top of the page held in landscape.)<sup>18</sup>

<sup>18</sup> Modified by Joshua Fabian. Google Maps. Google Incorporated. 2013.

full cost-per-rider), and environmental impacts (effects on pedestrians and cyclists, noise and air pollution to the affected neighborhoods).<sup>19</sup>

The neighborhoods through which the replacement service was studied were some of the most ethnically-diverse and lower-income areas of Boston, according to the feasibility report, with a median income 12% lower than the citywide average. The study area was also home to 90% of the city's black population and contained highly-concentrated pockets of Spanish-speaking households. With this in mind, the MBTA was quick to come up with a list of foreseeable issues with having the community participate in the planning process:

- Having to guide the community through the highly-technical details of selecting a mode of transportation.
- Requiring several (3-5) years of planning and engineering until a proposal is finalized.
- Including a study area of 200,000 in population, all with a wide mix of “ethnic, linguistic, and educational backgrounds”.
- Dealing with many government institutions and businesses along Washington Street.
- Contenting a significant portion of the population believing that the MBTA cannot or is not willing to do anything to improve transit in the area.

The last point involved a stigma against the MBTA that many people held dear to their hearts.

The feasibility report summed up the community's concerns—collected in the form of a survey mailer to local residents—with the idea to replace elevated service as follows:

- Some believed that existing schedules should be adhered to before adding new services.

---

<sup>19</sup> *Replacement/Transit Improvement Study: South End/Roxbury/Dorchester/Mattapan: Phase I Feasibility Report.* Massachusetts Bay Transportation Authority. March 1978.

- If the Orange Line were replaced by buses instead of rail, people would be skeptical of their reliability based on history (people generally believe that trains are superior to surface buses).
- Requiring people to pay to transfer to and from new routes is “an added economic hardship” to the low-income communities (the document notes that, at the time, transfers between bus lines or different transit modes required a new, full fare).
- A general belief that the MBTA will choose a replacement solution that is best for the Authority and its finances rather than one that encourages development and the creation of new jobs in the area.

While the MBTA did proceed in this report to provide a cost and feasibility analysis of providing new service on Washington Street via diesel bus, trackless trolley (electric bus), and light-rail vehicles (a la Green Line), it drew the conclusion that it would be cheaper, environmentally “cleaner,” and less disruptive to the community if it waited until the new Orange Line was completed and the elevated structure demolished in order to implement any new permanent service, with temporary bus service operating during the interim period.<sup>20</sup> The el, of course, would not be torn down until nearly ten years after the date of this report, and the problems that were foreseen would eventually come to fruit.

The early 1980s would prove to be slow-moving for the replacement transit study. Whilst the Final Environmental Impact Statement written in 1978 for the new Orange Line route as “two primary possibilities for replacement services [...] a reserved right-of-way light rail line and

---

<sup>20</sup> Ibid.

a reserved lane bus line,” the MBTA would get little help from the federal government.<sup>21</sup> The MBTA claimed in 1982 that a federal directive prohibited funding for new light-rail facilities<sup>22</sup>, and in August 1987 (three months after service ceased on the elevated) the Urban Mass Transportation Administration (UMTA) wrote to local officials and stated that “The results of these analyses are now in, and indicate that none of the light rail alternatives you have studied would be a worthwhile Federal investment.”<sup>23</sup> The opposition to funding new light-rail—especially less than a mile away from where a new heavy rail subway is being built simultaneously—led the MBTA to push to the community the choice between diesel buses and trackless trolleys.

As one might surmise, the idea of buses permanently replacing the Orange Line between Dudley Square and the downtown area was generally not well-received by the residents of Roxbury and the South End. Very mixed voices from the community were heard at public hearings on the matter: some said they would be satisfied by buses, others preferred electric buses, and still others demanded light-rail or suggested the Washington Street Elevated should not be torn down at all.<sup>24</sup> When looking at the pros and cons between bus-based service and light-rail, the decision in choosing a mode—at least in terms of service quality—is the balance between allowing for higher capacities and faster travel time versus more frequent stops and less walking distances and transfers to feeder services. The MBTA reported that light-rail would run the highest costs due to the construction involved in creating a median reservation on

---

<sup>21</sup> *Final environmental impact statement: Orange Line relocation and arterial street construction (Southwest Corridor Project)*. United States Department of Transportation: Urban Mass Transportation Administration, Federal Highway Administration. 1978.

<sup>22</sup> “Buses to replace Orange Line El?” *The Boston Globe*. 12 February 1982.

<sup>23</sup> “Title VI Compliance Review of the MBTA.” January 2006. (See 17.)

<sup>24</sup> “Orange Line replacement plan gets bumpy reception at S. End hearing.” *The Boston Globe*. 14 February 1982.

Washington Street for new tracks and in reopening an unused streetcar tunnel and portal on Tremont Street (the former of which can still be seen today from within Boylston Station, splitting off from the Green Line's Central Subway). A trackless trolley, on the other hand, would require the cost of stringing electric lines above the street but also that of a new facility (and land) to house and repair the trolleybuses.<sup>25,26</sup>

With no clear consensus from the community, 1987 came and went, and the Washington Street Elevated went out of use and was torn in sections by the of the year. From 30 April, buses carried displaced passengers up and down Washington Street from Dudley Square northward, a temporarily solution that the MBTA said "could last four years."<sup>27</sup> In an attempt to satisfy riders, the MBTA and the neighborhoods' state Representatives Byron Rushing (Democrat from the South End) and Gloria Fox (Democrat from Roxbury) jointly announced that new buses routes connecting Dudley and Egleston Squares to the new Ruggles Orange Line station would be fare-free in the direction of the new rail line, although the temporary line on Washington Street would still charge a bus fare and require a subsequent fare to transfer to subway lines in Boston.<sup>28</sup> It was around this time, when residents finally saw the El closed and replacement buses running, that community activism began to take shape over the debate for a new mode of transit.

In August 1987, the aforementioned Representatives and several other community leaders met with the general manager of the MBTA and presented a survey of transit riders living in Roxbury. The survey, conducted by the Greater Roxbury Neighborhood Authority, showed

---

<sup>25</sup> Pave, Marvin. "Metropolitan briefing; deciding Orange Line alternatives." *The Boston Globe*. 16 July 1984.

<sup>26</sup> The MBTA also explored the idea of, rather than building a new trackless trolley facility along Washington Street, to instead electrify the Massachusetts Avenue line (Route 1 between Dudley and Harvard Squares) and have maintenance conducted at the current car house in North Cambridge.

<sup>27</sup> Jordan, Robert A. "Getting plans on track." *The Boston Globe*. 21 March 1987.

<sup>28</sup> "Bus fare waived for some Roxbury riders." *The Boston Globe*. 28 April 1987.

that 71% of those surveyed took longer to get to their daily workplaces after the Orange Line was relocated to the Southwest Corridor, with nearly the same percentage rating Route 49—the replacement bus on Washington Street—as “fair or poor.” 75% of the surveyed riders also said that they preferred a light-rail trolley on Washington instead of a permanent bus or trackless trolley line.<sup>29</sup>

From this point it can be argued that there was a rift between the activists arguing for trolleys on Washington Street and the MBTA officials contending that the status quo—buses—were an effective means of transport for the area. Church Turner, chair of the transportation committee for the Neighborhood Authority, suggested that the majority of those surveyed desired buses because ““people do not trust the commitment of the MBTA to deal equitably with the community,”” and that only a new rail line would ensure permanent and rapid service for Roxbury. On the other hand, MBTA General Manager James F. O’Leary said that ““the transfer to the [Southwest] corridor has gone very, very well,”” and felt that the dissatisfaction shown on the survey results may have stemmed from simple ignorance of other service options in the area, such a free transfer from the Orange Line to Route 1 at the new Massachusetts Avenue station.<sup>30</sup> When the letter from UMTA denying federal funds for a new trolley line was publicized but three weeks later, Representative Rushing was quoted, saying:

“The average rider and average small businessman in Roxbury feels a promise has been broken. If we don’t have a permanent system along Washington Street, if the federal government pulls the rug from under the process, then people are going to rightly see this as being cheated and a real fraud. [...] All delays [to removing the temporary buses] at this point are going to create a considerable amount of tension, especially in the Roxbury community.”<sup>31</sup>

---

<sup>29</sup> Howe, Peter. “T riders seek better bus service near old El.” *The Boston Globe*. 1 August 1987.

<sup>30</sup> Ibid.

<sup>31</sup> Jones, David. “LRV’s nixed on Orange Line.” *The Boston Globe*. 21 August 1987.

Just two months earlier, UMTA had published an environmental impact statement and analysis on the possible alternatives for Washington Street service in which it had written that the primary goal of the replacement study was to satisfy the “highly transit-dependent population in the South End and Roxbury” by providing “a replacement service equal or better than the Washington Street elevated.”<sup>32</sup> To see the same agency subsequently reject what was popularly thought to be the solution most similar to rapid transit justified, in the minds of activists, the claims of a fraud being served to residents and resulted in neighborhood groups banding together to amplify their voices to the MBTA.

In December, the neighborhood councils from Chinatown and Roxbury jointly signed an agreement endorsing construction of a Green Line trolley extension down the main artery. The respective groups called it a major step forward because “for a decade the MBTA had said there was no consensus to build a trolley line because Chinatown residents had been opposed to it.”<sup>33</sup> Over the next several months, the Washington Street Corridor Coalition, encompassing neighborhood councils from Chinatown, South End, Roxbury, and Jamaica Plain forged together and held a hearing “to take testimony from two dozen trolley supporters.” GM O’Leary responded to the group by reiterated that the option for a new trolley would involve far more money and far more construction time and engineering than the other solutions on the table and noted that the agreement between the Chinatown and Roxbury groups contained conditions that would have been impossible to meet. These conditions maintained that no land should be taken via eminent domain and that the community of Chinatown be granted control over any

---

<sup>32</sup> *Replacement/Transit Improvement Study: Alternatives Analysis and Draft Environmental Impact Statement Evaluation, Draft*. Massachusetts Bay Transportation Authority. June 1987.

<sup>33</sup> “Washington Street Boston coalition in drive for trolley service unhappy with buses, neighborhood groups feel LRVs are best replacement for Orange Line.” *The Boston Globe*. 22 February 1988.

development that may take place on possible new decks over the Massachusetts Turnpike, which serves as a divider between Chinatown and the South End.<sup>34</sup>

At the time, the only notable and organized community opposition to the trolley option came from the Worcester Square Neighborhood Association, representing a small community due east of the intersection of Washington Street and Massachusetts Avenue; the group's president said a light-rail line running down the street would prohibit residents from easily accessing the amenities of the rest of the South End.<sup>35</sup> From an engineering standpoint, the MBTA and leaders such as Secretary Salvucci also opposed building a trolley because the reservation required to build the tracks would run the width of three vehicle lanes when accounting for staggered platforms (where platforms of oppositely-running trains would sit on opposite sides of intersection, reducing the amount of right-of-way needed).<sup>36</sup> The MBTA's 1978 study predicted that this would significantly decrease the capacity of vehicular traffic on Washington Street—though traffic demand would also decrease as trolleys have a higher capacity to buses.<sup>37</sup>

The alternative would be to narrow the street's wide sidewalks and remove street parking, which trolley-opposing leaders maintained would be detrimental to businesses and the general ambiance of especially the South End. Additionally, two small sections of Washington Street are very narrow, and adding a trolley reservation would necessarily reduce vehicular traffic to only one lane in each direction without any facilities for parking.

Keeping all of this in mind, the Massachusetts Bay Transportation Authority finally voted on 15 February 1989 to approve electric buses as the permanent replacement for service on the

---

<sup>34</sup> Ibid.

<sup>35</sup> Ibid.

<sup>36</sup> *Equal or Better: The Story of the Silver Line*, produced by Kris Carter. Small Craft Advisory Productions. 2012.

<sup>37</sup> *Replacement/Transit Improvement Study: Phase I Feasibility Report*. March 1978. (See 19.)



Elevated.<sup>38</sup> The Washington Street Corridor Coalition, as one could guess, was dissatisfied with the proposal and would go on to plead with the State government as it had approve of any capital projects by the MBTA. The coalition, along with city councilors and commissioners in Boston, believed that the studied conducted by the MBTA were not thorough enough and could not adequately prove that running electric buses would provide more benefits to the community than would light-rail streetcars.<sup>39</sup>

The MBTA then proceeds to spend the next eighteen months finalizing the plan for trolleybuses but also finding the money with which to build the new line. “The Massachusetts Bay Transportation Authority is becoming like the state Department of Public Works,” claimed one commentator in the *Boston Globe*, “lots of projects on the drawing boards but not enough money to build all of them.”<sup>40</sup> Nevertheless, the MBTA decided to press on and presented the final plans to the public. Pamphlets were even designed and distributed, heralding the future arrival of trackless trolley service to the South End and Roxbury.<sup>41</sup> Construction was to begin in 1991, with the first trolleybuses running between Downtown Crossing and Dudley Square in 1993—although this would ultimately be contingent on the MBTA’s budget which is primarily dictated by the state.<sup>42</sup>

As it would turn out, the replacement transit projected was stalled in the environmental approval process, and even though the MBTA again promised that construction would begin as soon as the stamps of approval were given, the Authority did not include the trolleybus project in its budget for the year 1993. The omission of the construction of the trackless trolley line led to

---

<sup>38</sup> “Electric trolleys OK’d despite some opposition.” *The Boston Globe*. 16 February 1989.

<sup>39</sup> *Ibid.*

<sup>40</sup> “Funds needed to jump-start trolley plan.” *The Boston Globe*. 5 March 1990.

<sup>41</sup> See Figure 5, next page.

<sup>42</sup> “Forecast foul for \$11M in fare boxes.” *The Boston Globe*. 5 November 1990.

## When will it happen?

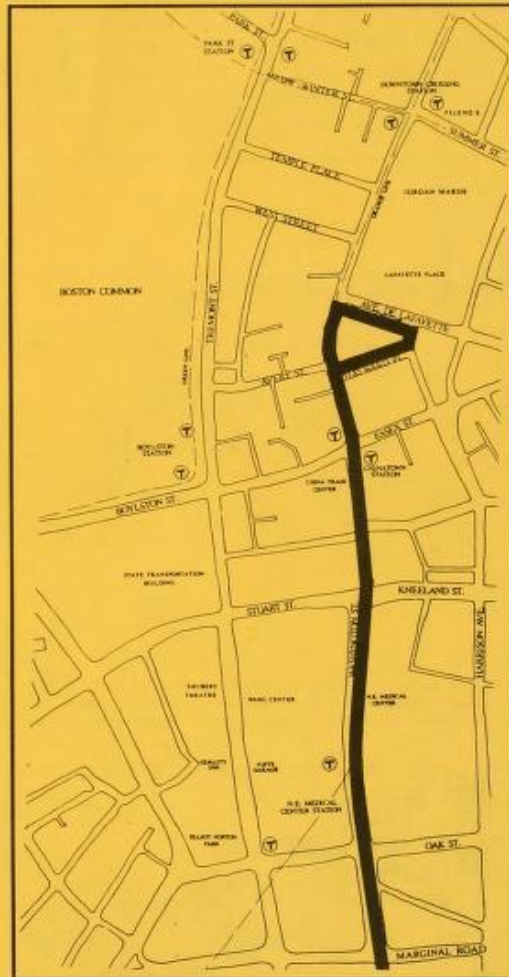
**Start construction 1991**

**Trolley bus service begins 1993**

**First Project:** Trolley bus service can be built quickly so that service can be implemented in a short time. Improvements to Washington Street—total reconstruction and landscaping—will take place quickly as part of this first project.

Design of the trolley bus service and street will begin after the State's public hearing on the proposed service, public review, and approval by the State's Executive Office of Environmental Affairs, expected before the end of 1990.

**Second Project:** The MBTA plans to expand the service in the future, running trolley buses into a new station under the Green Line at Boylston station. This second project could become part of a new service to the fast-growing South Boston piers area. If this service is implemented, trolley buses from Dudley Square would enter a new station under Boylston station on the Green Line instead of continuing downtown. Then, they would continue to South Station and the World Trade Center and Boston Marine Industrial Park in a new tunnel.



Trolley bus service from Dudley Square along Washington Street (first project) will make a loop at Lafayette Place mall and return via Washington Street. Free transfers will be available for the Red, Green, and Orange lines.



Figure 5—Excerpt of a pamphlet distributed by the MBTA to the general public, outlining the plan for trolleybuses on Washington Street and notifying those interested of a public hearing.<sup>43</sup>

<sup>43</sup> “Trolley Buses on Washington Street!” Massachusetts Bay Transportation Authority. 1990.

<<http://openlibrary.org/books/OL23350735M>>.

calls from the Dudley Street Merchants Association and city councilors to have the MBTA's budget rejected by an advisory board. The new State Secretary of Transportation, Richard L. Taylor, called completing the Washington Street project a “front burner priority.”<sup>44</sup> And while the pamphlets distributed in 1990 clearly provided dates as to when the new line would begin construction and operation, a spokesman for the MBTA said that “there never had been a timetable for implementing a permanent replacement for the EI, and denied that the agency is behind schedule”—which could help to explain why Boston Transportation Commissioner Richard Dimino blasted Secretary Taylor's commitment as “bogus.”<sup>45,46</sup>

While the MBTA dealt with finding the funds for the replacement transit line, it also faced pressure to begin construction from another, unexpected party: the Department of Environmental Protection (MassDEP). A review of the Central Artery-Third Harbor Tunnel project (the Big Dig), of which construction had broken ground in 1991, found that it would not have a dramatically positive impact on air quality or traffic flow.<sup>47</sup> As a result, the DEP, also in settling charges by the Conservation Law Foundation, provided in a report a set of requirements that the state would have to complete as a means of mitigation. These requirements consisted largely of transit projects designed to reduce demand on the new Central Artery when completed, and one of them mandated that a trackless trolley line be up and running on Washington Street before 1995—or else risk having construction of the underground projects shut down.<sup>48</sup> The state was caught in a massive shortfall of funds to pay for the Big Dig and it was estimated that it

---

<sup>44</sup> Blake, Andrew. “T gets heat over budget proposal.” *The Boston Globe*. 6 November 1992.

<sup>45</sup> “A road's rebirth that never was: Washington Street waits on...” 25 April 1992. (See 7.)

<sup>46</sup> “T gets heat over budget proposal.” 6 November 1992. (See 45.)

<sup>47</sup> Howe, Peter J. “Artery job faulted on deadlines: Environmental group cites pooling, parking.” *The Boston Globe*. 17 February 1992.

<sup>48</sup> *Ibid.*

would need to come up with an additional \$3 billion to complete the mitigation projects. With the state strapped for cash and the public's eyes on the Central Artery, the trolleybus project was set aside for several years with little planning completed.

The year 1995 came and went, and despite state's failure to fund and complete most of the transit improvements outlined in the mitigation agreement, construction continued. A suit against the state—claiming that it was in violation of the federal Clean Air Act by missing several mitigation deadlines—would only come in 1998, led again by the Conservation Law Foundation.<sup>49</sup> This suit resulted in intervention by the state Attorney General, Scott Harshbarger in form of his own suit against state transportation officials. The idea was that the Attorney General's suit in would supersede the CLF's suit—which would have gone to a federal court—thereby allowing any possible rulings to be made within the state court system.<sup>50</sup> This suit would go on to be settled with the DEP showing that it had granted extensions to the transit deadlines.

By this time, the MBTA had finally drawn a updated plan for transit on Washington Street. In 1996, the MBTA appropriated funds for the trolleybus line and gave the City of Boston an ultimatum, saying it would not proceed with the project without Mayor Tom Menino's support.<sup>51</sup> Forced to side between moving on with and finally completing the project or continuing to fight with community groups for light-rail while keeping diesel buses on the road for a longer amount of time, the city chose to support the MBTA. Coupled with the ongoing troubles involving the Central Artery project, one commentator summed up the city's view, holding that “The T's recent cost-cutting proposals suggest that this may not be the best time to hold out for ideal, light-rail solutions. Pragmatists talk. Idealists walk, or get consigned to a

---

<sup>49</sup> Howe, Peter J. “MBTA could face a lawsuit over uncompleted work.” *The Boston Globe*. 2 July 1998.

<sup>50</sup> “Changing direction on the T.” *The Boston Globe*. 3 October 1998.

<sup>51</sup> Palmer, Thomas C, Jr. “MBTA proposing electric buses on old Orange Line route.” *The Boston Globe*. 28 February 1996.

fume-choked future on diesel buses.”<sup>52</sup> Even the Washington Street Corridor Coalition, while still writing to Mayor Menino urging continued support for a light-rail line, seemed to have felt that the debacle was approaching an end, calling the plan for electric buses “a step in the right direction.”<sup>53</sup>

Still frustrated with the delays and red tape involved in starting Washington Street, Mayor Menino and other city officials, in early 1997, wrote a joint letter under the banner “Washington Street Design Oversight Committee” to state transportation officials, asking them and the MBTA to use available funds to immediately begin the project while planning an eventual underground connection for the new line to the rest of the rapid transit system. It is also at this point that the term “Silver Line” was coined—an attempt to make the new line operate and appear to the public as much like the subway lines as possible, something of importance to the city as it originally told the community it supported the resistance and thought a full-fledged trolley would suit Roxbury and the South End best.<sup>54</sup> Simultaneously, the lack of construction on Washington was believed to have been hampering economic growth along its stretch. Extensive sewer and road work was delayed, along with likely the remodeling of many façades, due to the uncertainty of what mode of transit would permanently replace the old El and what sort of land would be taken in the process.<sup>55</sup> The city officials’ petitions were detailed in a report by the Boston Redevelopment Authority that called for, among other things, appointing citizens oversight committee to help make decisions, improving local parks, and redeveloping vacant and

---

<sup>52</sup> “Easier riding on Washington St.” *The Boston Globe*. 2 March 1996.

<sup>53</sup> “T plan for buses on Washington St. conditionally OK’d.” *The Boston Globe*. 22 March 1996.

<sup>54</sup> Mooney, Brian C. “Officials push fast link to Dudley: Menino leads group seeking overhaul of Washington St.” *The Boston Globe*. 23 February 1997.

<sup>55</sup> “Three for the road toll booth tie-ups.” *The Boston Globe*. 2 September 1989.

underutilized land to help create new jobs and businesses.<sup>56</sup> The caveat: the MBTA was uninformed about the BRA's Washington Street plan *despite* the fact that the BRA publicized the document as “jointly announcing progress” with the transportation authority.<sup>57</sup>

The MBTA, not to be out-surprised, also soon announced a major change in the project plan: that it would no longer use electric buses but instead a fleet of new, low-emissions vehicles as part of a then-experimental mode of transit known as “bus rapid transit” (BRT).<sup>58</sup> As defined by the Federal Transportation Administration, BRT a system of enhanced public bus service that provides the flexibility of trackless buses operating primarily in their own right-of-way. The idea is to provide a service quality akin to that present in rail rapid transit systems. Because these types of transit lines require no new tracks or overhead wire, they are less costly than standard rapid transit and can therefore be implemented in a wider range of areas in less time.<sup>59</sup> As part of the FTA's Bus Rapid Transit Initiative, the MBTA received major funding for the Silver Line in exchange for converting the project the line into a demonstration project for BRT so that it could be studied and evaluated for potential use in other cities.<sup>60</sup> The proposed amenities included low-floor buses (for ADA-compliance), enhanced bus stops featuring digital displays showing real-time information, eliminating 40% of the stops from Route 49 (the “temporary” replacement bus), and dedicating one lane of traffic on each side of Washington Street—including one

---

<sup>56</sup> “Final report and recommendations.” *A New Washington Street: Boston's Main Street for the New Century*. Boston Redevelopment Authority/Economic Development and Industrial Corporation. May 1997.

<sup>57</sup> Palmar, Thomas C, Jr. “Difference surface on Washington St. plan.” *The Boston Globe*. 13 May 1997.

<sup>58</sup> Carter, Kris. “Equal or Better: The Story of the Silver Line.” MA thesis, Tufts University. November 2011.

<sup>59</sup> “Chapter 1: Creating Better Bus Systems.” *Bus Rapid Transit: FTA Role and Guidance*. Federal Transportation Administration. <<http://www.fta.dot.gov/4393.html>>.

<sup>60</sup> *Boston Silver Line Washington Street Bus Rapid Transit (BRT) Demonstration Project Evaluation*. Federal Transportation Administration. September 2005.

contraflow lane on a one-way stretch of the thoroughfare—exclusively to the new buses.<sup>61</sup> This is the Silver Line that would ultimately come to serve the South End and Roxbury in 2002, and today serves as the permanent replacement to the Washington Street Elevated.

### **Further analysis: money, voices, and race**

After tracing the many events that finally led to a permanent transit line on Washington Street, one could come up with an array of reasons as to why it took the MBTA fifteen years after the El's closure to build it, and why this line takes the shape of a bus rather than a light-rail or trackless trolley.

The most-justified of these possible reasons is simple: money. The MBTA just didn't have the money to build light-rail through Washington Street. In the preliminary feasibility report, reviving a nearby commuter rail alignment or building a heavy-rail line above or below the ground level were briefly considered before they were deemed far too costly. Caution was even thrown against trackless trolleys for the requirement of building a new power substation or extending trolley wires from Harvard to Dudley Squares, and even then, the MBTA calculated an operation cost of \$3.40 per vehicle mile on trolleybuses, versus \$2.70 per vehicle mile on buses running on diesel.<sup>62</sup> The T's fiscal problems were perhaps at their worst during the early 1980s when it considered draconian service cuts in order to balance its budget. In January 1981, the MBTA strongly considered shuttering all of its services on Sundays to save \$3.3 million per year.<sup>63</sup> The plan drew quickly fire and MBTA backed away from cutting all Sunday services, instead cutting many unprofitable bus routes, curtailing the close of Sunday service from

---

<sup>61</sup> Ibid.

<sup>62</sup> *Replacement/Transit Improvement Study: Phase I Feasibility Report*. March 1978. (See 19.)

<sup>63</sup> Radin, Charles. "Sunday T runs? Yes and no." *The Boston Globe*. 7 January 1981.

12:45am to 10:45pm, and replacing portions of some rapid transit routes with buses on Sundays.<sup>64</sup> Clearly, the state and the MBTA did not have the funds before the EI's closing to pay for the construction of the replacement service, and opted instead to wait until the new Orange Line was operating before taking on an additional project.

It is also important to note again that the new Orange Line alignment along the Southwest Corridor was being funded primarily by federal funds originally earmarked for building new highways. The MBTA claimed that the only feasible means of building light-rail on Washington Street would be with federal support. When the MBTA submitted to UMTA a proposal in 1987 to do just that and was refused funds, MBTA General Manager O'Leary "expressed surprise and disappointment at the rejection," and suggested that UMTA focused its attention on the projected costs and ridership figures.<sup>65</sup> Indeed, Richard Doyle, UMTA's regional administrator, would go on to say years later that it would have been unreasonable to have the federal government pay for a rail corridor only half a mile away from the Southwest Corridor, and suggesting that the proposal stood no chance of obtaining the funds.<sup>66</sup> In the end, construction would only be jump-started when the project was given federal funds as part of both the FTA's BRT Initiative and its News Starts program, which sponsored construction of new or extended rapid transit right-of-way under certain requirements. The Washington Street Silver Line project was combined with a previously-unrelated project in South Boston to connect the neighborhood with South Station and Logan Airport.<sup>67</sup> Today both projects operate as separate and unconnected branches of the Silver Line. Had federal support for replacement transit appeared earlier in the planning process,

---

<sup>64</sup> "Sunday shuttle, subway will close at same time." *The Boston Globe*. 22 January 1981.

<sup>65</sup> "LRV's nixed on Orange Line." 21 August 1987. (See 31.)

<sup>66</sup> *Equal or Better: The Story of the Silver Line*. 2012. (See 36.)

<sup>67</sup> "Boston, Massachusetts/South Boston Piers Transitway - Phase II." Federal Transportation Administration.

<[http://www.fta.dot.gov/12304\\_2917.html](http://www.fta.dot.gov/12304_2917.html)>.



for either a light-rail extension of the Green Line or trolleybuses, it would appear likely that construction could have completed much earlier, perhaps as early as the early 1990s with the failed trackless trolley proposal. Without the FTA's BRT Initiative, it is also quite possible that Washington Street service would have been delayed years more.

Another oft-cited explanation for the delays and uncertainty over replacement service is race. As the MBTA itself noted in its preliminary report, the neighborhoods it was studying for a new transit line had very high minority population, with 90% of the city's black residents living within the study area. The report also listed the community's general distrust of the T as a possible obstacle the MBTA would have to face, and while this is of course not necessarily tied to race, it is likely that the majority of people surveyed were of a minority race.<sup>68</sup> To hurt things further, the MBTA did not have a good track record with the issue racial equality. The MBTA spent much of the 1990s attempting to clean up allegations of racism within the agency. The local branch of the NAACP claimed that the T was "adrift, mistreating black employees and poorly serving the city's minority neighborhoods."<sup>69</sup> As one bus driver accounted, "Black guys who've been on the job for 10, 20 years can lose their jobs if someone 'says' they ran a red light [...] someone called MBTA police to say I was driving drunk, I was accused of going down the wrong street."<sup>70</sup> Stories such as these prompted the MBTA to spend more than \$5 million on anti-discrimination training for employees, dedicating more man-hours on investigating racial complaints, and formulate a lottery procedure for new hires.<sup>71</sup>

---

<sup>68</sup> *Replacement/Transit Improvement Study: Phase I Feasibility Report*. March 1978. (See 19.)

<sup>69</sup> Farragher, Thomas. "Running the T—and taking the heat despite a busload of critics, Prince keeps things moving." *The Boston Globe*. 1 February 1998.

<sup>70</sup> Smith, Patricia. "Racism thrives at the MBTA." *The Boston Globe*. 15 April 1996.

<sup>71</sup> "Running the T." 1 February 1998.

As a whole, the black community in the Roxbury and South End areas also felt slighted after learning that, of a set of several community hearings on the MBTA's *1998 Annual Service Plan*, "none were scheduled in areas easily accessible to the black community."<sup>72</sup> And after hearing of many service cuts proposed for Roxbury at one of these newly-scheduled hearings, the Bay State Banner, a black-oriented newspaper, wrote:<sup>73</sup>

According to state Representative Byron Rushing, the only route that runs through the black community that is being improved is the 1 Bus. "And we all know that the 1 runs to Harvard," Rushing said.

"We should have more of the buses that run in the black community run to Harvard, that way we'll be sure to get decent service," Rushing added, eliciting laughter and applause.

[...] "It really is appropriate that you not answer any questions tonight because it serves as a metaphor for the T," he said.

Testimony such as the Representative's shows the black community's deep-rooted distrust of Boston's transportation authority. Hearings concerning the Washington Street replacement service shared no lack of name-calling, with Secretary Salvucci recalling a couple of hundred in attendance who "would've shot us if they had guns" and accused the MBTA and state board of being "white-honky racists for proposing this silly electric bus."<sup>74</sup> Seeing the MBTA struggling to find \$50 million to pay for the Washington Street project while it committed three times the amount to South Boston Transitway route to Logan Airport and ten times the amount on initiating Commuter Rail service to Weymouth and Greenbush—both projects focusing on predominantly-white communities—it is easy to see why members of the community may felt that the MBTA was not working toward a product "equal or better than the Washington Street elevated," as they believed they were promised.<sup>75</sup>

---

<sup>72</sup> "Black community left out of hearings." *Bay State Banner*. 27 November 1997.

<sup>73</sup> "MBTA officials get earful in Roxbury." *Bay State Banner*. 11 December 1997.

<sup>74</sup> *Equal or Better: The Story of the Silver Line*. 2012. (See 36.)

<sup>75</sup> Moskowitz, Eric. "Greenbush line falling short of expectations." *The Boston Globe*. 31 October 2010.

A year before the Silver Line began running through the South End and Roxbury, the Washington Street Corridor Coalition filed a complaint with the FTA, accusing the MBTA of violating Title VI of the Civil Rights Act of 1964 (on discrimination based on race, color, and national origin) by failing to follow through its promise of service “equal or better than” the dismantled Elevated.<sup>76</sup> An official *Compliance Review* largely threw out the allegations, declaring that, while the first phase of the Silver Line was to only connect Dudley Square and Downtown Crossing, “When fully implemented, the Silver Line could be considered as being a replacement service ‘as good or better’ as envisioned during the relocation of the Orange Line.” It called the first phase “an interim BRT service” that could not yet be fairly compared to a rapid transit service. Interestingly enough, the review creates a table comparing the Orange Line and the Silver Line services (See figure), in which it notes a vehicle capacity of 120 passengers for the Silver Line and 131 passengers for the Forest Hills service on the Southwest Corridor. What the report appears to neglect is the fact that the Orange Line runs in six-car trains for the frequencies listed—the Orange Line’s true capacity per frequency approaches 800, far higher than that attainable on the Washington Street BRT. Furthermore, the report considered a full implementation of the Silver Line to include a one-seat ride from Dudley Square to Logan or South Boston via a tunnel between Boylston Street and South Station. The building of this tunnel is considered Phase III of the Silver Line, and while possible alignments of the new downtown tunnel have been drawn up for years, little progress has been made. As of 2009, the MBTA wrote in its [ ] that, due to a lack of federal funding and emphasis on other transit projects, “the design and project development for the Silver Line III project has been terminated,” and that no further

---

<sup>76</sup> “Title VI Compliance Review of the MBTA.” January 2006. (See 17.)

design work would be done without the appropriate funding.<sup>77</sup> To sum it up, the Title VI complaint was dismissed by FTA, but on questionable grounds, including the assumption that Phase III of the Silver Line would be completed—something that has been shelved indefinitely.

While it impossible to truly know whether any of the MBTA board members had racial motivations behind the decisions (or lack thereof) made during the multi-decade effort to replace transit service on Washington Street, it at least seems likely that race relations had at least some role in the large community activism to fight for the construction of a light-rail trolley line. The struggle between the pro-trolley group, led by the Washington Street Corridor Coalition, and the pro-trolleybus group, led by the state, MBTA, and the Worcester Square Neighborhood Association, undoubtedly led to delays as both sides seemed unwilling to make concessions. As UMTA's Richard Doyle said in an interview, it makes a much better case for the federal government to fund a project if it has the complete support of the impacted communities.<sup>78</sup> It is not impossible to imagine trackless trolleys zipping up and down Washington Street today had groups such as the WSCC been quick to embrace the plan instead of continuing to insist on light-rail. What occurred in the process of this project could perhaps be best described as a cycle of a lack-of-funds leading to community activism, resulting in no decisions made, after which the cycle begins again. It took until around the year 1999 for the opposition groups and local politicians to come to terms with the MBTA, right as the agency jumped on an opportunity to help fund the project with federal dollars through the FTA's BRT Initiative.

---

<sup>77</sup> *Transit Commitments Amended Administrative Consent Order, Annual Status Report*. Department of Environmental Protection/MassDOT. 9 July 2010.

<sup>78</sup> *Equal or Better: The Story of the Silver Line*. 2012. (See 36.)

## Conclusion and remarks

In July 2002, the Washington Street portion of the Silver Line ran for the first time, led by a police motorcade both celebrating the new bus route and handing out tickets to vehicles either parked or traveling in the new, dedicated transit lanes.<sup>79</sup> Many activist groups, the local branch of the Sierra Club among them, have written critiques of the new line, calling the “Silver Lie” a cover for what is nothing more than a glorified bus.<sup>80</sup> When one looks at the Silver Line today, one sees a confusing map of what are actually four routes, two serving the Dudley area and two serving portions of South Boston. All but one of the lines appear to connect at South Station, but in truth, passengers wanting to ride from the South End to Logan Airport must pay a local bus fare to get on the Washington Street Silver Line, get off the bus just outside the main terminal at South Station, and enter the subway system underground, upgrading to a subway fare before waiting for a Logan-bound trolleybus at the appropriate platform. Plans to connect the two halves of the Silver Line via an underground bus tunnel have been put on hold, likely for many years to come. And while most of the bus stops on Washington Street have a number of amenities when compared to regular MBTA routes, a recent study by the Institute of Transportation and Development Policy rated BRT systems in the US based on how well they kept to international best practices and concluded the Silver Line should not even be considered BRT (giving it 37 out of 100 points).<sup>81</sup> Common BRT features that the Washington Street line

---

<sup>79</sup> Lewis, Raphael. “No Silver Polish: bus service gets escort, mixed review.” *The Boston Globe*. 23 July 2002.

<sup>80</sup> “MBTA’s Silver Line: Taxpayers Get Less for More.” Sierra Club/Washington Street Corridor Coalition. Spring 2005.

<sup>81</sup> *Recapturing Global Leadership in Bus Rapid Transit: A Survey of Selected US Cities*. Institute of Transportation and Development Policy. May 2011.

lacks include barrier-separated lanes<sup>82</sup>, priority at traffic signals, elevated platforms, and pre-boarding fare collection.

While it is true that the community waited far too long for the permanent replacement service to the El to be finalized and implemented, it also appears from many angles that the community received something that it did not ask for. Most appeared to have wanted light-rail to run down Washington and connect to the Green Line at Boylston Street, and some supported a trackless trolley line running down the length. What no one appeared to have wanted was expanded bus service—though this is what anyone will see if they travel to Dudley Square today, the result of a sad story involving unfortunate forces, mainly monetary, coming together against the groups and activists pushing for the more rapid-like services. Yet, despite all the obstacles faced, the Silver Line has been a success among the people of the South End and Roxbury; ridership has doubled compared to that of the former Route 49, and the addition of the line to the MBTA's map of rapid transit lines has spurred economic development in the area.<sup>83</sup> And while it is possible that the MBTA did all it could with the money it could spend, I don't believe that Silver Line could be considered a true replacement for the old Elevated, and that this story will forever be a sore eye in the relationship between the affected communities and the T. Having personally rode on the line a couple of times, I can say that it looks and feels nearly identical to any other bus route, making fewer stops but also getting stuck in traffic when approaching the downtown area. Perhaps the struggle to build this replacement transit line may serve as lesson to transit officials on how not to proceed with promised projects and how to deal with a community standing up in arms for a cause.

---

<sup>82</sup> While the Silver Line Washington Street does have dedicated lanes for most of its stretch, private vehicles are allowed onto the lanes to cross over to curb-side parking or to make right-hand turns onto cross-streets.

<sup>83</sup> *Ridership and Service Statistics, Thirteenth Edition 2010*. Massachusetts Bay Transportation Authority. 2010.

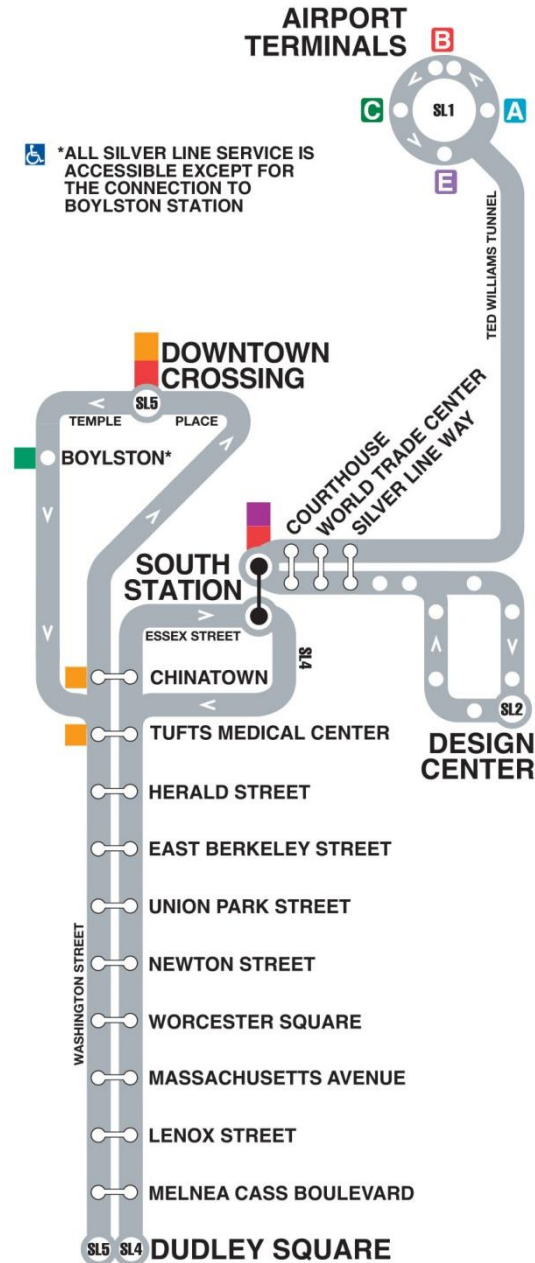


Figure 6—MBTA schematic of current Silver Line service. Dudley Square and Washington Street is served by the SL4 to South Station and the SL5 to Downtown Crossing and Boylston Street.<sup>84,85</sup>

<sup>84</sup> SL3, not shown on this map, was a short-turn of the South Boston routes and was discontinued in 2009.

<sup>85</sup> Silver Line timetable. Massachusetts Bay Transportation Authority. March 2013.

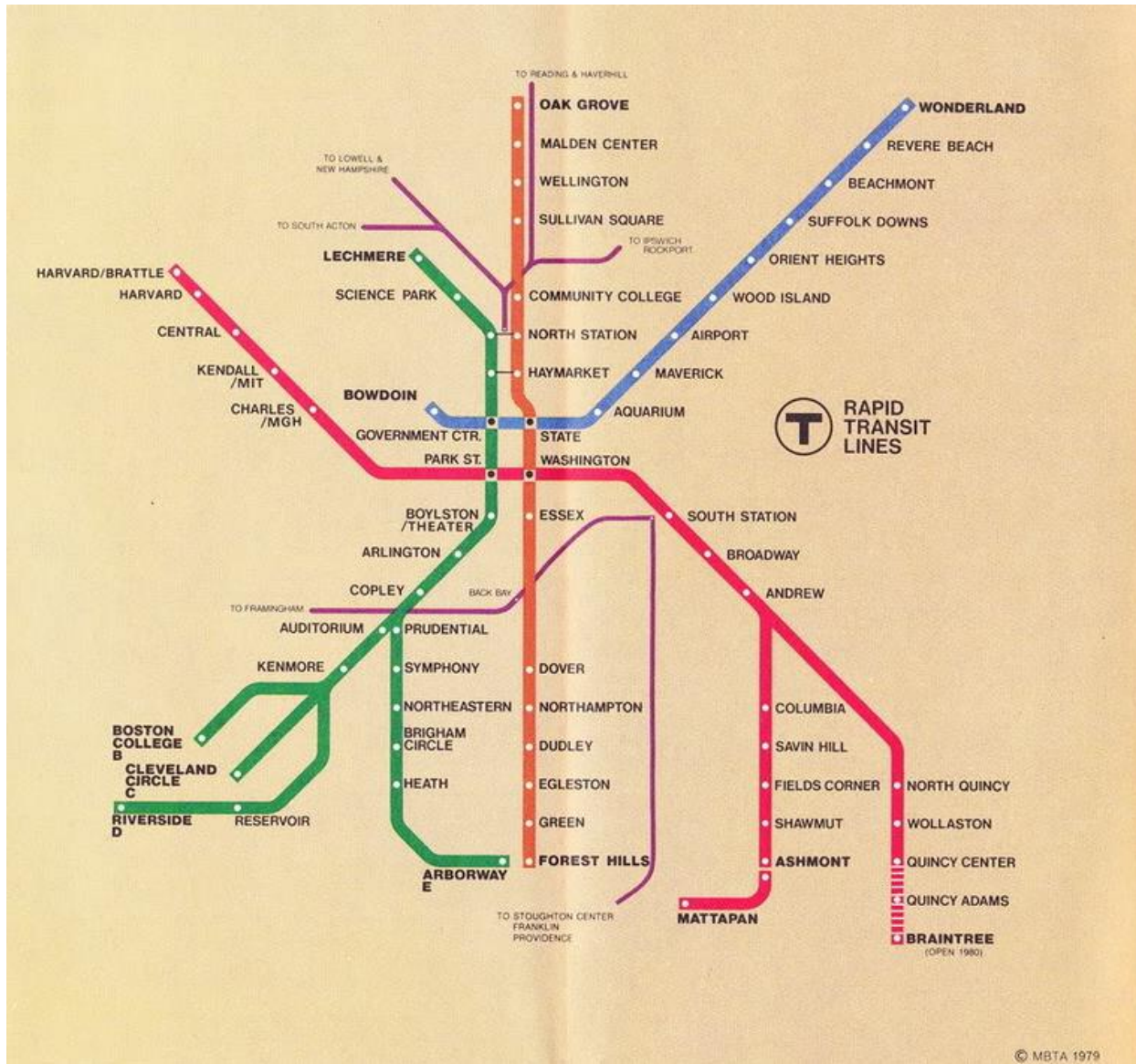


Figure 7—MBTA map of rapid transit, 1980.<sup>86</sup>

<sup>86</sup> *Metropolitan Boston Transportation Map*. Massachusetts Bay Transportation Authority. 1979.





Figure 8—Current MBTA rapid transit map. Includes the Silver Line and major bus routes.<sup>87</sup>

<sup>87</sup> Rapid Transit/Key Bus Route Map. Massachusetts Bay Transportation Authority. 2010.

## List of sources used, in order of appearance

- Washington Street Boulevard Study*. Boston Redevelopment Authority. 1990.
- Bostonography.com. < <http://bostonography.com/wp-content/uploads/2012/06/hoods.png>>.
- Bonner, John. "The town of Boston in New England." Norman B Leventhal Map Center at the Public Boston Library. 1723. <<http://maps.bpl.org/id/11122>>.
- "A road's rebirth that never was: Washington Street waits on, long after great expectations." *The Boston Globe*. 25 April 1992.
- Bartlett, Ellen J. "El riders savor last view." *The Boston Globe*. 1 May 1987.
- Callahan, William F. *Master Highway Plan for the Boston Metropolitan Area*. Massachusetts Department of Public Works. 1948.
- 1925 map. Boston Elevated Railway Lines. Public domain.  
<[http://en.wikipedia.org/wiki/File:BERy\\_1925\\_map.jpg](http://en.wikipedia.org/wiki/File:BERy_1925_map.jpg)>.
- Plotkin, A S. "Sargent urges more public transit: asks US, State road funds for housing, mass transit." *The Boston Globe*. 12 February 1970.
- Thomas, Jack. "More mass transit, no x-ways—Sargent." *The Boston Globe*. 1 December 1972.
- "Turning roads into rails." *The Washington Post*. 1 June 1974.
- "Title VI Compliance Review of the Massachusetts Bay Transportation Authority." Federal Transit Administration, Office of Civil Rights. January 2006.
- Google Maps. Google Incorporated. 2013.
- Replacement/Transit Improvement Study: South End/Roxbury/Dorchester/Mattapan: Phase I Feasibility Report*. Massachusetts Bay Transportation Authority. March 1978.
- Final environmental impact statement: Orange Line relocation and arterial street construction (Southwest Corridor Project)*. United States Department of Transportation: Urban Mass Transportation Administration, Federal Highway Administration. 1978.
- "Buses to replace Orange Line El?" *The Boston Globe*. 12 February 1982.
- "Orange Line replacement plan gets bumpy reception at S. End hearing." *The Boston Globe*. 14 February 1982.
- Pave, Marvin. "Metropolitan briefing; deciding Orange Line alternatives." *The Boston Globe*. 16 July 1984.

Jordan, Robert A. "Getting plans on track." *The Boston Globe*. 21 March 1987.

"Bus fare waived for some Roxbury riders." *The Boston Globe*. 28 April 1987.

Howe, Peter. "T riders seek better bus service near old El." *The Boston Globe*. 1 August 1987.

Jones, David. "LRV's nixed on Orange Line." *The Boston Globe*. 21 August 1987.

*Replacement/Transit Improvement Study: Alternatives Analysis and Draft Environmental Impact Statement Evaluation, Draft*. Massachusetts Bay Transportation Authority. June 1987.

"Washington Street Boston coalition in drive for trolley service unhappy with buses, neighborhood groups feel LRVs are best replacement for Orange Line." *The Boston Globe*. 22 February 1988.

*Equal or Better: The Story of the Silver Line*, produced by Kris Carter. Small Craft Advisory Productions. 2012.

"Electric trolleys OK'd despite some opposition." *The Boston Globe*. 16 February 1989.

"Funds needed to jump-start trolley plan." *The Boston Globe*. 5 March 1990.

"Forecast foul for \$11M in fare boxes." *The Boston Globe*. 5 November 1990.

"Trolley Buses on Washington Street!" Massachusetts Bay Transportation Authority. 1990.  
<<http://openlibrary.org/books/OL23350735M>>.

Blake, Andrew. "T gets heat over budget proposal." *The Boston Globe*. 6 November 1992.

Howe, Peter J. "Artery job faulted on deadlines: Environmental group cites pooling, parking." *The Boston Globe*. 17 February 1992.

Howe, Peter J. "MBTA could face a lawsuit over uncompleted work." *The Boston Globe*. 2 July 1998.

"Changing direction on the T." *The Boston Globe*. 3 October 1998.

Palmer, Thomas C, Jr. "MBTA proposing electric buses on old Orange Line route." *The Boston Globe*. 28 February 1996.

"Easier riding on Washington St." *The Boston Globe*. 2 March 1996.

"T plan for buses on Washington St. conditionally OK'd." *The Boston Globe*. 22 March 1996.

Mooney, Brian C. "Officials push fast link to Dudley: Menino leads group seeking overhaul of Washington St." *The Boston Globe*. 23 February 1997.

"Three for the road toll booth tie-ups." *The Boston Globe*. 2 September 1989.

“Final report and recommendations.” *A New Washington Street: Boston’s Main Street for the New Century*. Boston Redevelopment Authority/Economic Development and Industrial Corporation. May 1997.

Palmar, Thomas C, Jr. “Difference surface on Washington St. plan.” *The Boston Globe*. 13 May 1997.

Carter, Kris. “Equal or Better: The Story of the Silver Line.” MA thesis, Tufts University. November 2011.

“Chapter 1: Creating Better Bus Systems.” *Bus Rapid Transit: FTA Role and Guidance*. Federal Transportation Administration. <<http://www.fta.dot.gov/4393.html>>.

*Boston Silver Line Washington Street Bus Rapid Transit (BRT) Demonstration Project Evaluation*. Federal Transportation Administration. September 2005.

Radin, Charles. “Sunday T runs? Yes and no.” *The Boston Globe*. 7 January 1981.

“Sunday shuttle, subway will close at same time.” *The Boston Globe*. 22 January 1981.

“Boston, Massachusetts/South Boston Piers Transitway - Phase II.” Federal Transportation Administration. <[http://www.fta.dot.gov/12304\\_2917.html](http://www.fta.dot.gov/12304_2917.html)>.

Farragher, Thomas. “Running the T—and taking the heat despite a busload of critics, Prince keeps things moving.” *The Boston Globe*. 1 February 1998.

Smith, Patricia. “Racism thrives at the MBTA.” *The Boston Globe*. 15 April 1996.

“Running the T.” *The Boston Globe*. 1 February 1998.

“Black community left out of hearings.” *Bay State Banner*. 27 November 1997.

“MBTA officials get earful in Roxbury.” *Bay State Banner*. 18 December 1997.

Moskowitz, Eric. “Greenbush line falling short of expectations.” *The Boston Globe*. 31 October 2010.

*Transit Commitments Amended Administrative Consent Order, Annual Status Report*. Department of Environmental Protection/MassDOT. 9 July 2010.

Lewis, Raphael. “No Silver Polish: bus service gets escort, mixed review.” *The Boston Globe*. 23 July 2002.

“MBTA’s Silver Line: Taxpayers Get Less for More.” Sierra Club/Washington Street Corridor Coalition. Spring 2005.

*Recapturing Global Leadership in Bus Rapid Transit: A Survey of Selected US Cities*. Institute of Transportation and Development Policy. May 2011.

*Ridership and Service Statistics, Thirteenth Edition 2010.* Massachusetts Bay Transportation Authority. 2010.

Silver Line timetable. Massachusetts Bay Transportation Authority. March 2013.

*Metropolitan Boston Transportation Map.* Massachusetts Bay Transportation Authority. 1979.

*Rapid Transit/Key Bus Route Map.* Massachusetts Bay Transportation Authority. 2010.