ON THE RIGHT TRACK

Meeting Greater Boston's Transit and Land Use Challenges

Report and Recommendations of the

Urban Land Institute Boston District Council

with support from

The Boston Foundation

and from

The Center for Urban and Regional Policy

Northeastern University

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Urban Land Institute Boston District Council

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Cover Illustration

The cover illustration is from the Metropolitan Area Planning Council's publication *A Decade of Change: Growth Trends in the Greater Boston Area—1990 to 2000.* In this map of regional employment proximity to transit, the red circles are MBTA stations, each shown with a one-quarter mile buffer; the color gradients represent employment density in jobs per acre, with darker colors indicating greater jobs density.

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Finally, this report—like so many other important research and policy reports that are shaping Greater Boston's civic agenda—would not have been possible without the support of The Boston Foundation. In addition to serving as Greater Boston's community foundation, The Boston Foundation also serves as a major civic leader, provider of information, convener, and sponsor of special initiatives designed to address the community's and region's most pressing challenges.

Preface

The first step to finding the right answers is to ask the right questions. The Boston District Council of the Urban Land Institute (ULI Boston) set out ten months ago to address what seemed to be a relatively simple question: what set of credible criteria should the Massachusetts Bay Transportation Authority (MBTA) use to prioritize investment in the regional transit system?

The question was prompted by the Commonwealth's release of a draft 20-year Transportation Plan in March 2005. When final, the plan will serve as the blueprint for $30 billion in transportation spending over the next two decades. This investment will shape not only the region's transportation systems, but also its land use patterns and economic development for years to come.

Consistent with its mission to provide responsible leadership in the use of land to enhance the total environment, ULI Boston sought to ensure that this massive investment would be focused to advance important regional objectives including urban revitalization, smart growth, housing production, environmental protection and regional equity.

To inform its thinking on this important topic, ULI Boston (with support from The Boston Foundation) brought together a wide range of stakeholders under the umbrella of the Transportation Priorities Task Force. The Task Force brought together many people who have not necessarily participated in transportation policy or planning in the past, from fields such as housing, land use and real estate development. These diverse perspectives proved to be critical in shaping the conclusions and recommendations presented in this report.

At the Task Force's two plenary sessions and half-dozen working group meetings, it soon became clear that the issues facing metropolitan Boston and its transit system were both critical and complicated. Together, Task Force participants and ULI Boston leadership realized that the questions to be addressed went well beyond the original inquiry.

Prioritizing opportunities for system expansion, for example, first requires determining what kind of transit system metropolitan Boston will need twenty years from now. And the answer to that question depends, in turn, on a still more fundamental question: what kind of place do we want metropolitan Boston to be in twenty years?

That is why a report on transit investment begins by looking at issues of land use, housing production and economic development. ULI Boston is not advocating for transit for the sake of transit. Instead, ***this report views the MBTA transit system as a regional asset and critical piece of economic development infrastructure that anchors regional efforts to increase housing production, create jobs, grow smart and embrace diversity and inclusion.***

Having gained a better sense of how the transit system might best serve the region's needs, ULI Boston leadership and Task Force members turned to another critical question: is

the MBTA, as currently structured and financed, positioned to support the region's current and future transit and development needs? Any system expansion seemed a distant challenge for a transit agency struggling with far more immediate concerns including flat and sometimes declining ridership and a structural operating deficit that has generated a proposal for a massive fare increase.

ULI Boston came to realize that there is no responsible way to prioritize transit expansion opportunities without first ensuring that both the existing system, as well as any expanded system, is financially stable and viable. That is why the report next focuses on how best to ensure that the MBTA can reliably and responsibly operate its existing system—along with future enhancements and expansions.

But a re-framed version of the original question remained: should the regional transit system expand and, if so, what set of credible criteria should be used to prioritize investments?

For ULI Boston, the answer to the first part of the question is clear. From a regional economic and development perspective, a moratorium on system enhancement and expansion projects is not an option. The MBTA must change and grow to meet the transportation and economic development needs of metropolitan Boston in the decades to come. And so the final section of the report addresses the challenges of how to establish a strategic transit investment plan that realizes regional benefits in a financially sustainable manner.

On the Right Track thus ends up addressing many more questions than ULI Boston originally set out to answer. Yet this re-framing of the issues is a testament to the success of the initial decision to broaden the range of stakeholders engaged in talking about the future of regional transit investment. Bringing new perspectives to the table not only changed the answers to the question ULI Boston set out to answer—it changed the questions themselves. And the first step to finding the right answers is to ask the right questions.

Executive Summary

The Massachusetts Bay Transportation Authority's regional transit system may be one of greater Boston's least acknowledged regional assets. The MBTA is a critical piece of the region's economic development infrastructure, one that supports metropolitan Boston's efforts to produce housing, create jobs, and grow smarter and more equitably.

Although transit ridership has declined in recent years, this report highlights two trends that point toward a future of growing demand for high quality transit. First, residents are reconsidering the "housing-transportation cost trade-off" that has driven many to live farther from Boston's urban core in order to find affordable housing. Second, demographic changes—including the aging of the Commonwealth's population—are driving demand for housing in walkable, mixed-use communities near transit and generating a growing number of such "transit-oriented development" projects throughout the region.

The MBTA will not, however, be able to focus on these opportunities without immediate debt relief to close a growing operating deficit and stabilize the Authority's finances. Only then will the T be able to redefine its mission from that of *operating* its trains and buses to that of *filling* those trains and buses with satisfied, paying customers. Working together, cities and towns, developers and the MBTA can catalyze transit-oriented development, thereby increasing the number of potential transit riders. The T must then develop aggressive ridership growth strategies and provide excellent service to transform these potential riders into regular transit users.

The Housing-Transportation Cost Trade-Off

Individual and families in greater Boston households have responded to high housing costs in part by "moving to affordability": looking farther away from high cost city neighborhoods or closer-in suburbs until they find a community where they can afford to rent an apartment or buy a home.

Moving to affordability may not, however, decrease the cost of living when both housing and transportation costs are factored in. Households that spend less on housing consistently spend more on transportation. Longer commutes and more traffic congestion are also part of the price for moving to areas where housing is less expensive but driving is the only option.

The calculus that governed the housing-transportation cost tradeoff during the recent run-up in housing prices may, however, be changing. The new factor in the equation is higher gasoline prices.

Living near and using transit allows households to moderate the combined cost of housing and transportation. The MBTA's extensive transit system provides residents with choices about places to live—in Boston and nearby cities, in the suburbs or in mid-size and smaller cities—and allows them to control transportation costs without losing access to jobs, services and amenities throughout the region. Without the T and the diverse communities that it serves, Boston would be an even less affordable place to live.

Development and Transit in Greater Boston

The streetcars of the 19th century and transit and commuter rail expansions of the 20th century helped shape Boston and the surrounding region. The Commonwealth's anticipated $30 billion in transportation spending over the next two decades will similarly affect where people live and private development is built in the greater Boston region of the 21st century.

The Metropolitan Area Planning Council's MetroFuture project recently completed projections of what the region could be like if current trends continue until the year 2030. Some of the projections raise important questions. Should an aging population remain dependent on automobile travel? Will people of color continue to live in only a handful of communities? The MBTA's regional transit system can help ensure that metropolitan Boston in 2030 is a more accessible, affordable and inclusive region.

Cities and towns and developers are already responding to changing demographic patterns and growing demand for transit-accessible homes with more "transit oriented development" or TOD. The City of Boston's development pipeline currently includes more than 40 projects near T stations that could produce more than 9,000 new housing units. Another 40 such projects, involving 15,000 additional housing units, have been completed, are under construction or are being planned in mid-size and smaller cities and suburban communities across the region. Well-planned TOD can substantially increase MBTA ridership and revenues, while generating many benefits for cities and towns, area residents and real estate developers.

Trouble at the T

Greater Boston will not, however, realize the full potential of smart growth housing production and transit-oriented development unless the region has a financially stable transit system to anchor and serve that development. Yet six years after the reconfiguration of the MBTA under "forward funding", the T is struggling with a daunting set of challenges.

The T's most pressing problems are financial. The revenue generated by forward funding has fallen more than $100 million short of projections. And too much of this limited revenue—over one-quarter of the operating budget—pays the interest on bonds, the majority of which were for transit projects built before the T was restructured by forward funding in 2000.

The MBTA has proposed raising fares for the third time in six years, an action that could well exacerbate persistent ridership losses. Unfortunately, raising fares is one of a handful of strategies that the T can use to balance its expenses and revenues. The other choices are no better: cutting service, deferring maintenance, limiting expansion and selling off land for one-time infusions of operating funds.

More riders generating more fare revenue could help stabilize the MBTA's financial situation, but ridership has declined every year since 2001. The good news is that the MBTA has begun to focus on service quality and regaining ridership, strategies essential to the system's success and financial stability.

One final issue for the T is planning for and prioritizing future transit expansion projects. The Romney Administration has agreed to pay

for future transit expansion projects, allowing the MBTA to devote its capital resources to much-needed maintenance. But the issue of how Massachusetts determines its transit investment priorities remains complicated. Planning efforts seem to have slowed or stalled and many stakeholders are confused about the respective responsibilities of the Executive Office of Transportation and the MBTA. Few understand what process and criteria will be used to decide how—or even whether—the Commonwealth will invest in expanding the regional transit system.

Recommendations: Getting on the Right Track

There is no "silver bullet" solution to the transit and land use challenges outlined in this report. The first step, however, is to acknowledge what many know but few have been willing to say: *the MBTA transit system is an essential regional asset whose future is in danger*.

Recommendation 1: Everyone with a stake in the future of the MBTA and the communities that it serves must participate in addressing the region's land use and transit challenges. All of the key stakeholders—Massachusetts' transportation agencies, cities and towns, employers and developers, community groups and residents and advocacy and policy organizations—must work together.

Transit Supportive Growth

While the MBTA transit system needs to support regional land use objectives, it is equally true that development needs to support the transit system by generating riders and revenue. Transit cannot cost-effectively serve sprawling, low-density development. While denser transit-oriented development (TOD) is occurring in many places, the challenge is to build more and better TOD projects and bring them online sooner.

Recommendation 2: A majority of the housing units that will be built in the greater Boston region during the next decade should be concentrated within reasonable walking distance of existing and planned MBTA rapid transit and commuter rail stations. Residents of station-area housing get more than a home – through the MBTA's extensive transit network, they are connected to jobs, services and amenities throughout the region. Communities, businesses and the T all benefit from concentrating residential development around MBTA stations. ULI Boston's goal is both to accelerate the pace of housing production and to concentrate such housing closer to transit. One important tool will be Massachusetts' new smart growth housing laws, Chapters 40R and 40S.

Recommendation 3: Metropolitan Boston cities and towns should plan, zone and permit denser transit-oriented development around existing and planned MBTA stations. The 175 cities and towns in the MBTA's service area can make a substantial financial contribution to the T without any increase in their assessment payments. Instead, they can rezone, improve access and otherwise help generate more riders and revenue. Cities and towns that support transit-oriented development are also helping themselves, because such development increases property values and property tax collections.

Recommendation 4: Developers should plan and build more and better transit-oriented development near existing and planned MBTA stations, working in collaboration with the MBTA, cities and towns

and community residents and groups. Transit-oriented development or TOD is a growing phenomenon in Boston and throughout the region. Unfortunately, not all development located near MBTA stations takes advantage of the transit system, nor is enough station area housing and mixed-use development being built. Developers need to produce both more and better transit-oriented development.

A Financially Stable MBTA

The MBTA and the Executive Office of Transportation (EOT) share responsibility for planning, building and operating the regional transit network. Despite good intentions and hard work by both agencies, it has become clear that the MBTA—as currently structured and funded—cannot support the region's current or future transit and development needs. Changes must be made before the transit system is pushed into full-blown crisis by its growing debt load, flat or declining ridership, fare increases and the inability to adequately fund maintenance, enhancement and expansion projects.

Recommendation 5: *The Commonwealth should relieve the MBTA of the responsibility for paying off bonds that were issued to fund transit projects undertaken before "forward funding" took effect in 2000.* The MBTA's current debt load (both interest and principle) amounts to a staggering $8 billion. Debt service payments now account for more than a quarter of the operating budget. And because more debt is being issued just to keep up with maintenance needs, debt service payments will remain high for decades to come. The legislature and Governor should relieve the MBTA of responsibility for paying off bonds that were issued prior to forward funding. The Commonwealth could either resume reimbursements to cover such debt service payments or pay off the bonds under a one-time program. Revenues freed up by such debt relief could be used to balance the MBTA's budget, reducing or even eliminating the need for the proposed fare hike.

Recommendation 6: *The MBTA should adopt a proactive approach to maximizing riders and revenues over the long run by supporting transit-oriented development in areas around its stations and joint development of its real estate holdings.* The MBTA should capitalize on the growing interest in transit-oriented development in greater Boston and nationwide. Well-planned TOD can generate more riders and revenues for the MBTA. The T should therefore work proactively with cities and towns and developers to catalyze well-planned TOD, not just on MBTA-owned land but all around its stations. In addition, the MBTA should change its practice of selling off real estate assets and using the money to plug current year operating deficits. Instead, the authority should develop a real estate strategy for each surplus parcel that maximizes both revenue and ridership over time.

Recommendation 7: *The lynchpin of the MBTA's revenue growth strategy should be increasing its ridership by setting and tracking both ridership targets and service quality standards.* Total farebox revenue depends on the number of riders and the fares paid. Instead of repeatedly increasing fares, the T needs to focus on increasing farebox revenues by increasing ridership. The new "Charlie card" automated fare collection system will allow the MBTA to track detailed ridership data for the first time ever. The time is right for the MBTA to set specific ridership growth targets and track its ability to meet them. To support this ridership growth strategy, the T should also establish service quality standards and issue an annual

"report card" on progress toward meeting both ridership targets and service quality standards.

Strategic Investment and Expansion

The MBTA's financial situation appears so bleak that some have suggested that no additional expansion be undertaken. From a regional economic development perspective, however, such a moratorium is not an option. Instead, the Commonwealth needs a transit investment strategy that realizes the benefits of expansion in a financially sensible manner. This strategy should address enhancement projects (which upgrade existing stations and corridors) and expansion projects (which extend transit to new locations). It is past time for the Commonwealth to establish a clear framework and timetable under which transit investment priorities will be established and implemented.

Recommendation 8: *The Secretary of Transportation should coordinate with the MBTA, metropolitan planning organizations and regional planning agencies to reach consensus on a transit investment strategy for the Commonwealth.* With different agencies leading different planning processes at different times, many stakeholders are unsure how the state's transit investment priorities are established. The Secretary of Transportation, advised by an Office of Transportation Planning, is responsible for coordinated planning for all transportation modes, including transit. But regional planning agencies, metropolitan planning organizations and the MBTA all continue to have important planning responsibilities under state and federal law. As the operator of the transit system, the MBTA has a particularly important role to play in the planning, design, construction and operation of expansion projects.

Recommendation 9: *Transportation planning agencies should establish specific criteria for evaluating and prioritizing potential transportation investments that recognize the importance of land use objectives including housing production and transit-oriented development.* The Executive Office of Transportation and metropolitan planning organizations have made significant process in establishing objective criteria for prioritizing transportation projects. While land use factors are now considered, however, more needs to be done. Land use evaluation criteria need to be specific and, wherever possible, quantitative. Density, availability of station area housing, and the potential for transit-oriented development should be factored in before deciding which transit projects should proceed. Later in the process, land use considerations should shape decisions about routes and station locations.

Recommendation 10: *The EOT and the MBTA need to collaborate with cities and towns and developers to identify new ways to finance transit expansion projects.* Massachusetts has largely relied on state bonds and federal New Starts funding to pay for transit projects. These two options alone are unlikely to provide sufficient resources to finance desirable enhancement and expansion projects. One possibility involves "value capture" or taking advantage of the fact that new transit increases property values and property tax collections along the transit corridor. Public-private partnerships can also be used to pay for enhancement projects and part of the cost of expansion projects. Any decision as to whether new revenue streams are needed must, however, await the report of the Special Transportation Finance Commission.

The Housing-Transportation Cost Trade-Off

Greater Boston continues to struggle with high housing costs that are driving up the cost of living for residents and making it difficult for employers to attract and retain workers. As has been documented by the Commonwealth Housing Task Force,[1] high housing prices for both renters and homeowners have precipitated a crisis that is affecting the region's affordability, livability and economic competitiveness. While many policy reports have focused on ways to increase housing production in order to moderate prices, this analysis begins with a different question: how have individuals and families responded to the region's high housing costs?

Moving to Affordability

Faced with high housing costs, individuals and households have adapted in many ways, large and small. Some, according to recent census data, have moved out of the region and even the state. But many more have stayed. Some of those who have remained in metropolitan Boston have found a way of trying to moderate housing costs that has important implications for understanding the complicated relationship between housing, transportation and land use in the region.

Both nationally and in Massachusetts, experts who have looked at areas with expensive housing markets have reached the same conclusion: in many instances, households "move to affordability". In other words, they keep looking farther and farther away from high cost city neighborhoods or closer-in suburbs until they find a place where they can afford to rent an apartment or buy a home.

> "Many Massachusetts workers and families face a difficult set of choices. For many, living in a relatively lower cost area of the state means tolerating long commute times, while for others, living in Greater Boston often means spending a large portion of their income to afford the region's high cost of living, especially the cost of housing."
>
> MassINC[2]

After examining 2000 census data on commuting patterns, for example, MassINC concluded that residents in greater Boston and throughout Massachusetts are trading lower housing costs for longer commutes. The average commuting distance in Massachusetts increased approximately 10% from 1990 to 2000. More commuters were found to be living in one region of the state and commuting to another region for work. Every day, more than 45,000 workers in metropolitan Boston are commuting in from New Hampshire and Rhode Island.[3]

Additional evidence that residents of greater Boston are living farther from the urban core comes from the Neighborhood Change Database, as analyzed by the Joint Center for Housing Studies of Harvard University. The Joint Center looked at the issue of "decentralization" or how housing is distributed around a metropolitan area's central business district (CBD). Boston was one of only two of the nation's top 100 metro areas (the other was Greensboro North Carolina) where *half* of all households lived

more than 20 miles from the CBD in 2000. And nearly one in five households, the most of any metropolitan area studied, lived more than 40 miles away.[4] The issue of housing affordability, then, is strongly to the issue of sprawl, another issue of regional concern.

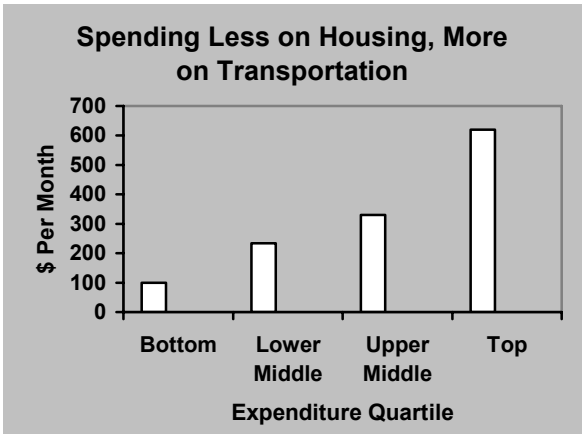
Redefining Affordability

"Moving to affordability" may not, however, decrease a household's total cost of living. Families may not consider overall affordability—factoring in both housing and transportation costs—when making housing decisions. Yet for the average household, transportation is the second largest monthly expenditure after housing. In metropolitan Boston, households spend 15.2% of their annual budget on transportation and more than half of their budget on the combined cost of housing and transportation.[5]

Data on how Americans spend their money is collected as part of the federal government's Consumer Expenditure Survey, last conducted in 2002. The Joint Center for Housing Studies at Harvard looked at the housing and transportation cost data for households across all income quartiles. For each income quartile, they compared expenditures by households spending less than 30% of their income on housing—who are not considered to have a housing affordability problem—to those spending more than 50% of their income on housing. At every income level, households spending less on housing had significantly higher monthly transportation costs than households in "unaffordable" situations.

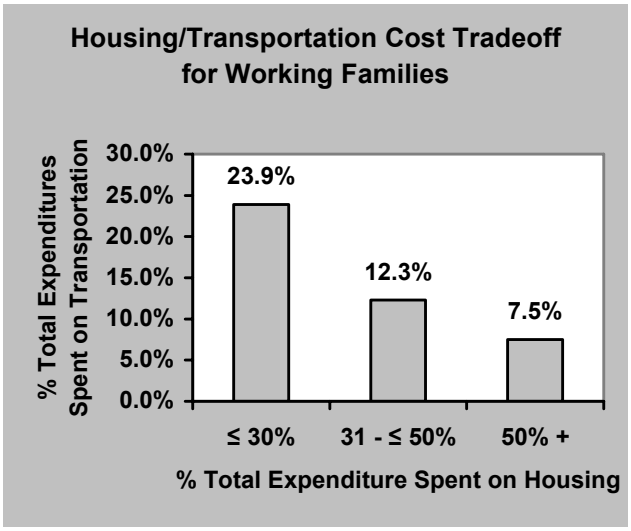
> "Even these sobering statistics understate the true magnitude of the affordability problem because they do not capture the tradeoffs people make to hold down their housing costs [like] the growing number of households that move to distant locations where they can afford to pay for housing, but must spend more for transportation to work."
>
> The State of the Nation's Housing 2005[6]

In the lower middle income group, for example, the price to be paid for more affordable housing was spending an extra $234 per month on transportation. These households are not considered to have a housing affordability problem, but they may well have a problem affording their combined housing and transportation costs. The Joint Center calls this phenomenon "the housing-transportation cost tradeoff."[7]



Joint Center for Housing Studies[8]

The Center for Housing Policy looked at a subset of the same data, focusing on "working families" earning between the minimum wage and 120% of local median income. They found that lower housing costs were frequently offset by higher transportation costs. Working families spending more than 50% of their budget on housing spent only 7.5% on transportation, for example, while those spending less than 30% on their income on housing spent 23.9% of their monthly budget -- three times as much——on transportation.



Center for Housing Policy[9]

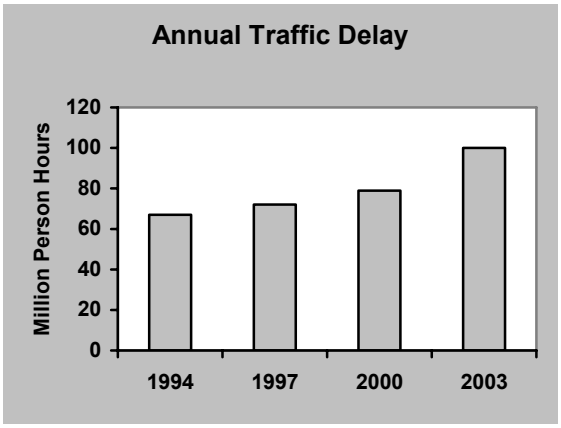
In other words, both groups of households spent a total of 50 -- 60% of their monthly budget on housing and transportation costs combined. Looking only at housing affordability, 8.3% of working families spend more than half of their monthly budget on housing. But 44.3% of working families spend more than half of their monthly budget on the combined cost of housing and transportation.[10] The issue for these working families—and, indeed, for families at every income level—is not just housing affordability, but affordability.

Factoring In Other Costs

In evaluating the viability of trading off lower housing costs for higher transportation costs, there are non-monetary costs to be factored in as well. Longer commutes and more trips made in congested traffic are also part of the price that households pay for moving out to places where housing is less expensive and driving is the only way to travel.

Traffic congestion makes longer commutes and more driving less pleasant, more time consuming and more expensive. And traffic congestion in metropolitan Boston continues to get worse. Two-thirds of vehicles on the roads in metropolitan Boston during peak commuting hours travel in congested conditions. Between 2001 and 2003, the number of person-hours spent in metropolitan Boston traffic delays rose from 81 million person-hours per year to just over 100 million.[11]

Boston-area drivers are becoming frustrated with the growing congestion. In a MassINC quality-of-life poll conducted in 2003, 55% of Greater Boston residents identified traffic as one of their top three issues needing major improvement, second only to housing affordability as a major concern.[12]



Texas Traffic Institute[13]

To date, traffic concerns alone have apparently not changed the willingness of metropolitan Boston households to live with higher transportation costs and longer commutes in exchange for more affordable housing. Nevertheless, the calculus that governed the housing-transportation cost tradeoff during the recent run-up in housing prices may be changing. The new factor in the equation is higher gasoline prices.

"The significant increase in recent gas prices has important impacts on affordability. At $3.00 per gallon, double the price of just two years ago, the average household will increase its total transportation expenditures by 14 percent, or $1,200 per year."

Center for Transit Oriented Development and Center for Neighborhood Technology [14]

Persistently higher gasoline prices may cause individuals and families to rethink the choice between less expensive, more remote housing and more expensive housing that is closer to transit, jobs and services. Putting up with traffic and spending more time in the car may be worthwhile in order to find an affordable home. But not if gasoline costs rise to the point where living farther out costs more than living closer in, at least when both housing and transportation costs are factored in.

Choosing Transit

"Moving to affordability" becomes a less attractive proposition once the challenge is redefined as controlling combined housing and transportation costs, rather than just finding affordable housing,. What can be done to provide greater Boston households with better choices for minimizing combined housing and transportation costs?

Answers can once again be found in the federal government's consumer expenditure data. How do some households keep their transportation costs so much lower than others? The answer, in many cases, is that they live in places where there is public transportation. These households can lower their transportation costs either by using transit exclusively or by having only one car (rather than one car per worker or even one per driver, which has become the norm). The transportation cost savings for regular transit users can be significant.

The Center for Neighborhood Technology and Surface Transportation Policy Project looked at the transportation expenditures of all households of two persons or more. They found that households that own either one or two vehicles and do not use transit regularly spend between 16 and 19% of their household budget on transportation. Households identified as "heavy transit users", on the other hand, spend only 10% of their monthly budget on transportation. Transit-using households save more than $3,000 annually on transportation costs compared to households with comparable income who have one (or no) vehicle but do not use transit.[15]

"The ability to modify transportation costs through the use of transit and lower vehicle ownership can make the combined costs of housing and transportation lower in even the most expensive [housing] markets."

Driven to Spend[16]

Not everyone will want to live near or use transit. But providing residents with real choices for moderating the combined cost of housing and transportation is an important way to keep metropolitan Boston more affordable.

The MBTA's extensive transit system provides residents with choices about places to live—in Boston and nearby cities, in the suburbs or in the region's mid-size and smaller cities—and allows them to moderate their transportation costs without losing access to jobs, services and amenities throughout the region. Without the T and the many neighborhoods and communities that it serves, Boston would be an even less affordable place to live.

Development and Transit In Greater Boston

Greater Boston has many competitive advantages around which the region can build a thriving future. Perhaps one of the least recognized is the Massachusetts Bay Transportation Authority's regional transit system and the diverse network of neighborhoods and communities that it serves.

The MBTA is a critical piece of the region's economic development infrastructure that can underpin efforts to produce housing, create jobs, and grow smarter and more equitably. These goals will not be achieved, however, without making better connections between this transit system and the development—particularly residential development—that it supports. The MBTA needs to support regional land use objectives; at the same time, development needs to support the MBTA by generating riders and revenue.

Shaping the Region

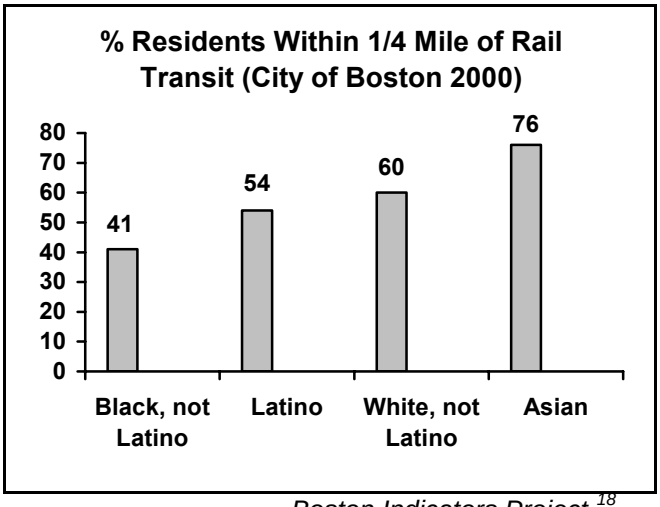
The streetcars of the 19th century and the rapid transit and commuter rail expansions of the 20th century helped shape Boston and the surrounding region. In the same way, the Commonwealth's anticipated $30 billion in transportation spending over the next two decades will affect where people live and work in the greater Boston region of the 21st century.

"Boston is an ideal transit story, with a long, rich tradition of transit-shaped development and a healthy present-day economy that is receptive to [Transit Oriented Development]. . . . This is a city that has grown up around public transportation, so TOD is not considered something particularly novel, but rather business as usual."[17]

The City of Boston is the economic capital of the region and the "hub" of the radial transit and commuter rail lines that form much of the MBTA's regional transit system. Boston has very good transit "coverage", a term that refers to the proportion of a city or region that is well-served by transit. In Boston, within one-quarter mile of a commuter rail, bus or subway stop are located:

- 80% of the city's jobs;
- 56% of the city's homes; and
- 51% of the city's schools.

Even a city like Boston, however, has gaps in its transit coverage. As noted in the Appendix, neighborhoods such as Allston, Charlestown and Roxbury are seeing fewer transit-oriented development projects than neighborhoods like downtown and Back Bay, because large areas of the former neighborhoods are not well served by rapid transit. In addition, because Boston's neighborhoods do not all have equally good transit coverage, access to transit also varies by race.



Boston Indicators Project [18]

While Boston is the hub of the regional transit network, transit use and transit-oriented development extend throughout the MBTA's service area of 175 cities and towns. The subway or rapid transit system, for example, has nearly 150 stations and serves not only neighborhoods in Boston but also parts of surrounding cities including Braintree, Brookline, Cambridge, Malden, Newton, Quincy and Somerville.

Metropolitan Boston is also blessed with an extensive commuter rail network. The more than 125 stations on the MBTA's eleven commuter rail lines serve both suburbs and many smaller and mid-sized cities from Brockton to Haverhill to Lawrence to Weymouth to Worcester. Indeed, with the opening of new service to Newburyport, Worcester and the South Shore, commuter rail ridership doubled between 1991 and 2004.[19]

Transit is important not only to commuters but to communities. For many cities and towns throughout the region, transit is not only a mode of transportation but a magnet for development. Studies have shown that residential and commercial development served by high quality public transportation commands higher rents and maintains value better than similar properties that are not as well served by transit. These premiums attract private capital and investment to communities near transit stations. Higher property values, in turn, mean more property taxes for financially challenged cities and towns.[20]

Cities and towns throughout metropolitan Boston understand the economic development value of transit. Communities with MBTA stations are increasingly putting station areas at the center of their development strategies. Communities with limited or insufficient transit service—from Lynn to Worcester to Dorchester to Longwood Medical Area—are demanding higher quality service. And cities and towns without little or no transit—from Allston to Somerville to New Bedford and Fall River—are calling for the MBTA system to be extended. These communities want transit in no small part because they want the economic development that transit can support and attract.

Looking to the Future

The MBTA's transit network will shape greater Boston's future just as surely as it has shaped the region's past and present. Before deciding how to invest public infrastructure dollars in that system, however, it is worth asking what kind of transit will be needed by those who will live and work in the region ten or twenty years from now.

Thanks to the Metropolitan Area Planning Council (MAPC), the regional planning agency for metropolitan Boston, we know something about what the region will probably be like in the year 2030 if current trends continue. As part of MAPC's effort to develop a comprehensive plan for the region, MAPC's MetroFuture project developed a scenario that projects current trends into the year 2030.[21]

One trend is that Bostonians in 2030 will be older. As the baby boomers move into their 60s and beyond, the proportion of the region's population that is over 55 will increase 75%. By 2030, MAPC projects that one in three metro Boston residents will be 55 or older. This aging trend may in turn drive demand for transit. AARP polling data indicates that 71% of older households would prefer to live within walking distance of a transit station.[22]

MAPC also projects that the regional population will become more racially diverse. By 2030, 31% of regional residents will be Black, Hispanic, Asian or another non-white race. In addition, nearly one-quarter of metropolitan Boston residents will have been born in another country.

MetroFuture [23]

Unfortunately, just because the region will be more diverse does not necessarily mean that it will be more integrated or inclusive. MAPC also projects that the region's non-white population could mostly live in only fourteen communities, mostly cities. At the same time, the population of more than half of the region's communities could be more than 95% white.

These projections raise important questions. Should an aging population remain dependent on automobile travel? Will people of color continue to live in only a handful of communities?

If metropolitan Boston in 2030 is to be an accessible, affordable and inclusive region, strategic investments in transit can help achieve those objectives. Such investments can help greater Boston shape a future in which:

- Everyone—including youth, seniors, the disabled and those without cars—has real transportation choices;
- Everyone—including young singles and families, immigrants and retiring baby boomers –can find more affordable housing in cities and towns throughout the region;
- Development is clustered in "smart growth" locations to minimize the economic, environmental and equity consequences of low-density sprawl; and
- An affordable and reliable transit network connects the region's thriving cities and towns to each other and to the region's cultural and recreational amenities.

Orienting Development to Transit

One way to shape the region that greater Boston will be in a decade or two is to concentrate development into places where residents, workers and visitors have real choices about how to get from place to place and where to live, work and shop.
This concept is known as "smart growth." When smart growth development is concentrated near an existing or planned transit station, the concept is often called transit oriented development or TOD.

Transit Oriented Development:

Compact, walkable development centered around transit stations that includes a mix of uses, such as housing, shopping, employment, and recreational facilities within a design that puts a high priority on serving transit and pedestrians.

In some ways, TOD is no different from any other kind of smart growth development. There is, however, one major difference. All development is about creating great places.

With TOD, the area around the station needs to function as both a place and as a "node"— a link in a chain of transit stations. Good TOD projects "orient" themselves to the transit station, ensuring potential transit riders will good access to the station on foot, by bike or by bus or shuttle. Many TOD projects also restrict the amount of parking to make it more likely that those who live, work or visit there will use transit rather than drive.

Perhaps the biggest difference between "regular" smart growth and TOD is that TOD projects generate a substantial number of transit trips. A study conducted for the Transit Cooperative Research Program cited research finding that "residents living near stations are five to six times more likely to commute via transit than are other residents in a region." And not only commuting trips are affected—a California study concluded that living in a TOD neighborhood can "lower annual rates of driving by 20 to 40 percent." [24]

Transit-oriented development is a growing phenomenon nationwide and in metropolitan Boston. For example, as documented in the Appendix to this report, the City of Boston's development pipeline currently includes nearly 50 projects within ¼ mile of existing rapid transit, commuter rail and Silver Line stations. Together, these projects could create more than 9,000 new housing units and 22 million square feet of development.

"You can't reverse the tide of history and bring back the area's manufacturing businesses, but you can transform peoples' lives through smart growth and TOD."

Bob Ansin,
Developer of Wood Mill in Lawrence[25]

Many smaller and mid-sized cities in greater Boston are also encouraging and attracting transit oriented development. The Appendix also includes a partial listing of non-Boston development projects located within one-half mile of a transit station. Projects are complete or underway in Brockton, Haverhill, Lawrence, Malden, Quincy, Somerville and Worcester.

"The idea of transit-oriented development is to build housing close to mass transit lines, as cities have done for decades. Now the concept is expanding into suburbs where underdeveloped sites – such as parking lots, old furniture warehouses, vacant industrial plants and gravel pits – offer prime opportunities to increase housing stock, reduce congestion and create new neighborhoods where none existed."

Boston Business Journal[26]

Suburban communities along the MBTA's commuter rail lines are also beginning to embrace TOD. TOD projects have been built or are planned in Canton, Dedham, Franklin, Plymouth and Westborough. And, at a time when Massachusetts needs cities and towns to permit housing in order to moderate unaffordable home prices, almost all of the suburban TOD projects include housing. The non-Boston TOD projects listed in the Appendix could generate an additional 15,000 residential units and 14 million square feet of retail, office and mixed-use development.

Just as metropolitan Boston needs more housing, the MBTA needs more paying riders—and TOD can generate significant numbers of new transit riders. A review of the state environmental impact reports for a number of the larger TOD projects planned for the region confirms that the ridership potential is significant. The 5 million square foot North Point mixed use project in Cambridge

projected that, at full build, it would generate more than 12,000 daily transit trips. The 2.2 million square foot CitySquare project in Worcester projected that it would generate more than 1,000 daily commuter rail trips. And the 800,000 square foot Clippership Wharf residential development on the East Boston waterfront projected more than 3,700 daily transit trips.

No two of these TOD projects are alike and there is no single "cookie cutter" approach to ensuring that the region will see "good" transit-oriented development. Like all well-planned development, TOD should be appropriate to its setting and responsive to the community in which it is located.

There are, however, principles or "rules of thumb" for shaping TOD based on experience to date. The Urban Land Institute has produced both a detailed volume on Developing Around Transit[27] and a more succinct booklet entitled Ten Principles for Successful Development Around Transit.[28] Reworded to reflect the spirited discussions that took place in the Transportation Priorities Task Force's working group on development and transit, the ten principles are summarized in the adjacent box.

One word notably absent from this list is "density." Density—the amount developed on a given area of land—is an important characteristic of smart growth in general and TOD in particular. Density is one of the "3Ds" (the other two being diversity of uses and design) that have been shown to increase transit ridership. As one literature review concluded, "building housing around rail stops is positively associated with transit commuting; doing so at higher densities bumps up transit's market share even more."[29]

Urban Land Institute's Ten Principles for Successful Development Around Transit

1. Create a vision for what the community needs and wants.
2. Build partnerships to make the vision a reality.
3. Build a place, not a project.
4. Contribute to a mix of uses that makes sense for the area.
5. Ensure that there is housing for people of all income levels available near transit.
6. Employers and jobs are an important part of transit oriented development.
7. Get the parking right.—do not have too much.
8. Retail can be part of transit-oriented development only if there is a market.
9. Buses are an important kind of transit—make sure they are great.
10. Plan ahead for development when planning for transit enhancements or expansion.

Transit supportive development needs to be "dense enough" to generate transit riders and allow for cost-effective transit service. TOD projects do not, however, all need to have urban densities. There is no single magic number that defines the "right" density for transit-oriented development. Instead, the key is to find an appropriate level of density for the community, site and proposed mix of uses.

Density is one of a number of characteristics that can help determine whether a TOD project will succeed. Station areas vary greatly with respect to what type of community they are in, what the land use mix is and what kind of transit service there is. The Center for Transit

Oriented Development has created one "typology" of TOD, presented in this chart accompanied by examples of Boston-area projects in each category. It should be emphasized, however, that it is difficult to make neat generalizations about TOD. The minimum densities listed, for example, may be too low or high. In addition, there are TOD sites that do not fall neatly into any category. The CitySquare project in Worcester, for example, does not qualify as an urban downtown site (because it is not located at the hub of a radial transit system), yet can support many of the uses associated with such sites.

As this chart and the Appendix demonstrate, there are many kinds of TOD that can succeed in many different kinds of communities. All, however, depend on proximity to transit. Unfortunately, however, the MBTA—and its regional transit system—is in trouble.

Typology of Transit-Oriented Development[30]

TOD Type	Land Use Mix	Min. Housing Density	Regional Connectivity	Transit Service Frequencies	Greater Boston Examples
Urban Downtown	Office Center Urban Entertainment Multifamily Housing Retail	> 60 units per acre	High Hub of radial system	< 10 minutes	South Station air rights (Boston) Columbus Center (Boston) North Point (Cambridge)
Urban Neighborhood	Residential Retail Class B Commercial	> 20 units per acre	Medium Access to Downtown Subregional Circulation	10 minutes peak 20 minutes off peak	Jackson Square (Boston) Davis Square (Somerville) CitySquare (Worcester)
Suburban Center	Primary Office Center Urban Entertainment Multifamily Housing Retail	> 50 units per acre	High Access to Downtown Subregional Hub	10 minutes peak 10-15 off peak	University Avenue Redevelopment (Westwood) The Village Center Plan (South Weymouth) Quincy Center (Quincy)
Suburban Neighborhood	Residential Neighborhood Retail Local Office	> 12 units per acre	Medium Access to Suburban Centers Access to Downtown	20 minutes peak 30 minutes offpeak	Station Landing (Medford) Lofts at SoCo (Brockton) Franklin Center Commons (Franklin)
Neighborhood Transit Zone	Residential Neighborhood Retail	> 7 units per acre	Low Access to a center	25-30 minutes Demand responsive	Canton Center (Canton) Arbor Point at Woodland Station (Newton)

Trouble At The T

Greater Boston will not realize the full potential of smart growth housing production and transit-oriented development unless the region has a financially stable transit system to anchor and serve that development. Yet six years after the reconfiguration of the MBTA under "forward funding", the T is struggling with a daunting set of challenges.

Restructuring the T

While the MBTA was an independent authority prior to July 1, 2000, it had a unique financial structure. On the operating side, the MBTA was entitled to a retrospective state subsidy at the end of each year to cover its operating deficit. With respect to capital spending, the Commonwealth would guarantee the MBTA's bonds and reimburse the T in full for all debt service on those bonds.

That structure changed when the legislature adopted new enabling legislation for the MBTA as part of the fiscal year 2000 state budget. This restructuring is generally called "forward funding" because the MBTA was required to set a budget at the beginning of its fiscal year and operate within that budget going forward. The legislation dedicated the revenue generated by one cent of the state's five cent sales tax to the MBTA. While sales tax revenues were expected to rise steadily, the legislation did provide a "floor" or guaranteed annual level of funding.

At the same time, all reimbursement for debt service costs was eliminated. The expectation was that the MBTA would be able to pay off the prior bond obligations using a portion of the sales tax revenue. Indeed, it was projected that the T would increasingly be able to generate an annual surplus to pay for some capital projects with "pay as you go" funding rather than with bonds.

The forward funding legislation also included provisions to ensure the MBTA would provide high quality service to an expanded ridership. The law requires the MBTA's revenue strategy to focus on "improving service quality, expanding transit service where appropriate, establishing fare policies that promote ridership growth, marketing its transit services and fare media and providing desirable services and benefits to transit riders."[31]

Unfortunately, despite good intentions on the part of everyone involved, forward funding has not unfolded as expected. Six years after the new structure took effect, the MBTA is facing a daunting set of operating, maintenance and expansion challenges.

> "Despite major steps taken by the T to implement the [forward] funding reforms and live within its new fiscal constraints, the costs of system expansion and difficulty building ridership are undercutting the ability of forward funding to improve the quality of transit services and put the T on a sound financial footing."
>
> *Massachusetts Taxpayers Foundation (2003)*[32]

Balancing Revenues and Expenses

The MBTA has limited control over its sources of revenue. Cities and towns in the MBTA service area pay an assessment, but the amount

is capped by Proposition 2 ½ and provides only 10% of revenues. Sales tax revenues, which pay for 55% of the MBTA's operating costs, depend largely on the economy. Due to an economic downturn that began shortly after forward funding took effect, the MBTA estimates that it has received $113 million less than had been projected.

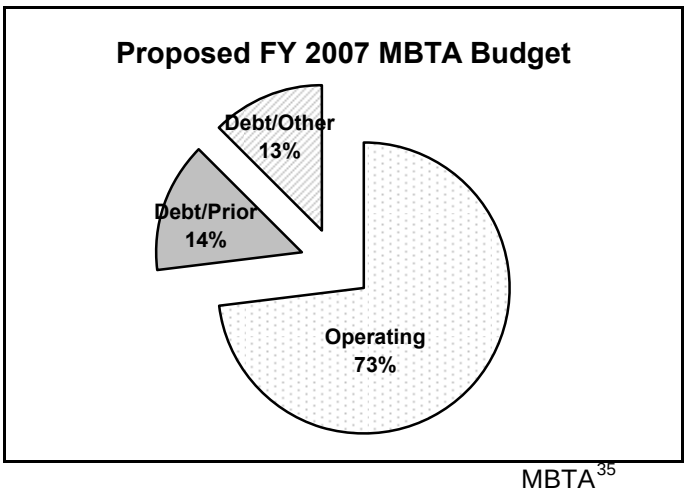
The MBTA's other revenues sources are fares (28% of revenues) and non-fare revenues such as advertising and leases (7% of the budget). As the comparison chart shows, the MBTA gets less revenue from fares and more from the state than most other big city transit agencies.

	Weekday Trips (mil)	Fares %	Local %	State %
NY MTA	8.59	57	17	20
Chicago	1.52	43	29	22
LA County	1.34	24	61	1
Wash DC	1.36	40	22	19
MBTA	**1.27**	**28**	**12**	**55**
S. Penn.	1.09	39	8	44
NJ Transit	0.79	37	1	33
San Fran Munic Rlwy	0.67	25	53	15
Atlanta	0.44	25	57	0
Maryland	0.38	31	0	55
Top 50 Aggregate		36	28	23
Avg of Agencies Serving Metro Areas ≥ 1 mil.		36	20	23

National Transit Database[33]

Benchmarking the MBTA's financial structure against other big city transit agencies is not always straightforward, however. Debt service costs, in particular, are treated differently from agency to agency. Some do not issue their own bonds or pay their own debt; others pay debt service but are reimbursed dollar-for-dollar (as had been the case for the MBTA until 2000). Budget data obtained for a number of big city transit agencies, however, indicates that they spend roughly 10-15% of their operating budget on debt service payments.[34]

The MBTA spends more of its budget on debt service than any other transit agency in the United States. In recent years, between 25% and 30% of the MBTA's operating budget has been spent on debt service. The majority of the interest paid is for bonds issued before the T was restructured in 2000. Unfortunately, the revenue that would have allowed the MBTA to support this level of debt service has not materialized as expected.



MBTA[35]

Given limited revenues and enormous debt service obligations, the MBTA has only a handful of tools at its disposal to balance its budget. The T recently proposed a fare increase for the third time in six years, in part because raising fares is one of a handful of strategies that the T can use to balance its expenses and revenues. The other choices are little better:

- cutting service;
- using rainy day funds from the "deficiency fund";
- reducing debt service by deferring maintenance or limiting expansion; and/or
- selling off land for one-time infusions of operating funds.

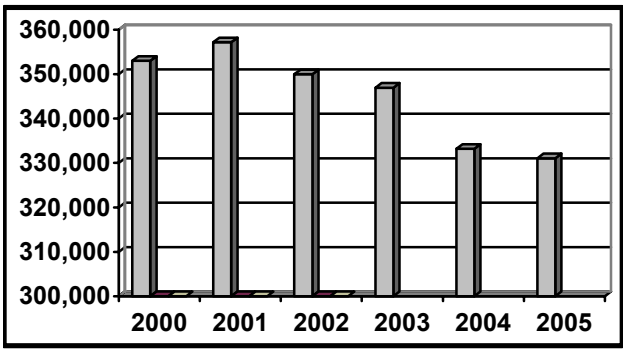
Further, without "pay as you go" funds available for maintenance and capital projects, the MBTA plans to issue nearly $400 million in new bonds in fiscal year 2007 alone to pay for its maintenance and system enhancement needs.[36] According to the T's proposed five year capital investment program, the Authority will not have any substantial ability to rely on "pay as you go" capital funding any time in the near future.[37]

> "The MBTA's financial difficulties in FY2006 are not the result of isolated circumstances, but rather continuing problems with larger revenue trends. Five years after its inception, Forward Funding has not resulted in a larger Pay-Go Capital Fund and greater stability in the operating budget."
>
> *MBTA Advisory Board Finance Committee (June 2005)*[38]

Increasing transit ridership would, of course, be the preferred revenue strategy: more riders would not only mean more revenue but less traffic and air pollution. The MBTA has recently begun to focus on service quality, a strategy that should help retain and attract riders.

The MBTA's daily ridership has, however, declined every year since 2001. Ridership counts are notoriously inaccurate, as they are largely based on dividing monthly revenues by an average fare which in turn is derived from periodic fare mix studies. Indeed, one of the

MBTA Annual Ridership (000 trips)



MBTA[39]

major advantages of the new "Charlie Card" automated fare collection system will be its ability to generate accurate ridership information. Nevertheless, the MBTA's data indicate that ridership has been in steady decline for four years. While ridership for the second half of 2005 increased about 1% over the same period in 2004, ridership for the entire year still fell slightly.

Much of the ridership loss has been on the bus and rapid transit lines. Due to system expansion and service improvements, commuter rail use actually doubled between 1991 and 2004. Because the commuter rail system is so small compared to rapid transit, however, the decline in subway, bus and trolley passengers from 2001 to 2005 offset the entire gain in commuter rail ridership.[40]

The T's budget woes have created one final problem. Because of the MBTA's strained operating budget and high debt load-- $8 billion including principle – the MBTA has no capacity to fund any system expansion projects. Indeed, the T and cannot even generate enough bond revenue and "pay as you go" funds for maintenance projects to meet all of the authority's goals for achieving a State of Good Repair.

Because of these debt problems, the Romney Administration agreed to take on the costs of any future transit expansion projects, including those required as mitigation for the Central Artery project. That commitment, however, only involves capital spending. Because fares cover less than one-third of system costs, the MBTA may not be able to afford to operate an expanded system.

Planning for a 21st Century T

The issue of how Massachusetts determines its transit investment priorities is quite complicated. Recently, planning efforts seem to have slowed or stalled and many stakeholders are confused about the respective responsibilities of the Executive Office of Transportation and the MBTA.

The 2000 forward funding legislation required the MBTA to create a "program for mass transportation" or PMT, which in turn shapes a rolling five-year capital investment program. The MBTA prepared a PMT in 2003 and is planning to complete a revised plan by 2008, since the legislation requires the PMT to be reviewed not less than every five years.

> "The capital investment program and plans of the authority shall be based on an evaluation of the impact of each proposed capital investment on the effectiveness of the Commonwealth's transportation system, service quality standards, the environment, health and safety, operating costs, the prevention or avoidance of deferred maintenance, and debt service costs."
>
> *Forward funding legislation* [41]

Four years later, Massachusetts adopted transportation restructuring legislation, Chapter 196 of the Acts of 2004. That law established an Office of Transportation Planning within the Executive Office of Transportation. This planning office is responsible for the preparation of a comprehensive and coordinated intermodal transportation plan for Massachusetts. EOT is expected to release a state transportation plan later this spring, based on the draft plan issued in March 2005.

The restructuring legislation envisions the Office of Transportation Planning coordinating planning across transportation modes. It provides that the office will be "the principal source of transportation-planning for state-level transportation projects" but also requires that the planning office "work in coordination with regional planning agencies in the commonwealth, which shall serve as the principal source of transportation planning for local and regional transportation projects." [42] In preparing the comprehensive plan, EOT must coordinate with all relevant agencies including the MBTA, the regional planning agencies and the metropolitan planning organizations, which are responsible for federally-required transportation planning.[43]

The Romney Administration's announcement that it would fund future expansion projects occurred after the restructuring legislation was enacted. While an appropriate response to the MBTA's debt overload, that decision has raised many questions about the respective planning and decisionmaking responsibilities of the Commonwealth and the MBTA. At the moment, few understand what process and criteria will be used to decide how—or even whether—the Commonwealth will invest in expanding the regional transit system.

Recommendations – Getting On the Right Track

There is no "silver bullet" solution to the complicated and important transit and land use challenges presented in this report. The first step, however, is to acknowledge what many know but few have been willing to state clearly and publicly: *the MBTA transit system is an essential regional economic development asset whose very future is in danger*.

The MBTA, acting alone, cannot address all of greater Boston's inter-related transit and land use challenges, although as the regional transit authority it has a critical role to play. Everyone with a stake in the future of the region and its transit system needs to be part of the solution. Indeed, bringing more stakeholders to the table and enlisting them as problem-solvers will likely generate more ideas and solutions. For this reason, the first recommendation is one of the most important.

Recommendation 1: Everyone with a stake in the future of the MBTA and the communities that it serves must participate in addressing the region's land use and transit challenges.

Key stakeholders include the Commonwealth and its transportation agencies, cities and towns, private sector employers and developers, community groups and residents and advocacy and policy organizations. All must all work together to ensure that metropolitan Boston is a place where vibrant, diverse cities and towns are linked by a reliable and financially sound regional transit system that supports smart growth, housing production and job creation.

In addition to this call for broad stakeholder participation, the remaining recommendations fall into three categories:

- Planning and zoning for transit-supportive growth;
- Stabilizing the MBTA's financial situation; and
- Investing strategically to enhance and expand the regional transit system.

Transit Supportive Growth

Policymakers and planners have increasingly recognized the need for the regional transit system to support the kind of smart growth development called for by the Commonwealth's Sustainable Development principles. Less attention has been paid to the other side of the coin: the need for development patterns and individual projects to support the region's transit system. Transit needs to support regional land use objectives, but development patterns and projects also need to support the transit system by generating riders and revenue.

Neither the MBTA nor any other transit system can cost-effectively serve sprawling, low-density development. How the region grows will therefore affect how well that growth can be served by transit. The good news, documented in the Appendix to this report, is that such transit supportive or "transit-oriented development" is occurring in many of

metropolitan Boston's cities and towns. The City of Boston's development pipeline currently includes more than 40 projects near T stations that could produce more than 9,000 new housing units. More than 40 other projects, involving 15,000 additional housing units, have been completed or are under construction or in planning in mid-size and smaller cities and suburban communities across the region.

Such projects, however, are often complicated to plan, finance and build and require collaboration among the MBTA, the community and the developer. The challenge, then, is to build more and better TOD projects and to bring them online sooner through better planning and coordination that addresses the interests of all stakeholders.

Station Area Housing

While many kinds of development can thrive in neighborhoods near transit stations, building more homes near transit should be a regional priority. Station-area housing creates more affordable options for households and families by lowering the combined costs of housing and transportation. Residents of pedestrian-friendly neighborhoods near transit have been shown to use transit more frequently, not only to commute to work but for many other types of trips. Residential development near stations therefore generates riders and revenue for the transit system.

Perhaps most importantly, residents get more than a home – through the MBTA's extensive transit network, they are connected to jobs, services and recreational and cultural offerings throughout the region. The next recommendation therefore calls for concentrating residential development in transit zones around MBTA commuter rail and rapid transit stations.

Recommendation 2: A majority of the housing units that will be built in the greater Boston region during the next decade should be concentrated within reasonable walking distance of existing and planned MBTA rapid transit and commuter rail stations.

ULI Boston's goal is both to accelerate the pace of housing production and to concentrate such housing closer to transit. It is based on a number of recent studies and forecasts demonstrating that the region needs more housing and that there is unmet market demand for modestly-priced housing in transit-accessible locations.

How much housing might the region need over the coming decades? The Metropolitan Area Planning Council (MAPC), the regional planning agency for metro Boston, projects that by 2030 the greater Boston region could need 300,000 new housing units to accommodate modest population growth and the continuing decline in household size. MAPC projects that 120,000 new housing units could be needed by 2030 in Boston, nearby inner core communities and the region's mid-size cities, most of which have MBTA rapid transit or commuter rail service. Another 100,000 new housing units could be needed in maturing suburbs, some of which are served by transit. The remainder would be in less developed suburbs at the region's periphery. [44]

Whatever the future demand for new housing may be, one challenge for the region right now is increasing housing production in order to moderate metropolitan Boston's continuing

high housing costs. Analyses done for the Commonwealth Housing Task Force by Northeastern University's Center for Urban and Regional Policy demonstrate that housing prices would moderate if the region were producing approximately 15,000 new housing units annually. Yet the 2004 Greater Boston Housing Report Card finds that the region is producing only 11,000 new housing starts annually. The Report Card further found that because much of current housing production is age-restricted or high end single family detached homes, "simply achieving these [numerical] targets is not sufficient to meet the challenge of housing a growing workforce in the region." [45]

A final issue involves where in the region housing is being built. Studies have found unmet demand for more housing in transit-accessible locations. Such "transit zones" are usually considered to be within one-half mile of a station. Reconnecting America's Center for Transit-Oriented Development found a potential demand for more than 350,000 new households to move into metropolitan Boston transit zones between 2000 and 2030. Extrapolating from the demographic characteristics of the more than 380,000 metropolitan Boston households currently living near transit, the Center estimates that one-quarter of the region's households in 2030 could prefer living near transit.[46]

Massachusetts cities and towns have a new tool for both increasing housing production and concentrating it closer to transit: the new smart growth housing laws, Chapter 40R and Chapter 40S. The Commonwealth Housing Task Force's original report predicted that an effort to rezone land in smart growth locations could redirect a considerable portion of regional housing production. Over ten years, the Task Force estimated, 33,000 new housing units could be built within smart growth overlay districts.

The Commonwealth Housing Task Force's figure represents only a fraction of the total housing production that could be concentrated in transit-accessible locations over the next decade. It does not, for example, include nearly 25,000 station area housing units listed in the Appendix to this report as recently constructed, under construction or in planning. Nor does it include housing that could be built under existing zoning or homes built in communities that choose to create station-area zoning without use of 40R overlay districts. While it will involve a concentrated effort by cities and towns and the development community, the region can both accelerate the rate of housing production and ensure that at least half of all units produced are located near existing or planned MBTA stations.

The Role of Cities and Towns

Housing is not the only kind of development that should be located near transit. Mixed-use development, commercial and job-generating development and other land uses that address community needs can all benefit from proximity to transit. Whether and where such development gets built depends on the actions of cities and towns, which control zoning and land use within their borders. The next recommendation therefore focuses on the role of cities and towns in enabling transit-oriented development.

Recommendation 3: Metropolitan Boston cities and towns should plan, zone and permit denser transit-oriented development around existing and planned MBTA stations.

Every city and town in metropolitan Boston is a beneficiary of the regional transit network, whether or not it is served directly by commuter rail or rapid transit. The 175 cities and towns within the MBTA's service district currently play an important but limited role in providing financial support for transit, with 10% of fiscal year 2007 MBTA budget projected to come from local assessments. While it would be difficult to ask financially-strapped communities to increase their assessment payments to the MBTA, there is another way that cities and towns can make a substantial contribution to the T's finances: by helping to generate riders and revenue.

As the primary regulators of land use in Massachusetts, cities and towns play a critical role in enabling or limiting transit-supportive development. While a growing number of communities are embracing denser, transit-oriented development around T stations, others have stifled ridership by rejecting zoning changes and limiting on-street and off-street parking near stations.

Metropolitan Boston cities and towns can take advantage of new planning and zoning tools that support denser development in smart growth locations, including those adjacent to transit. One such tool is District Increment Financing (DIF), which can help fund necessary infrastructure improvements. Another is smart growth housing overlay districts under Chapter 40R, which generate density bonus payments and insure against the costs of educating school-age residents who live in those districts. Cities and towns can also work with the MBTA and developers to improve pedestrian, bicycle and shuttle bus access to MBTA stations to support greater ridership. At some stations, it may also be appropriate to provide for more on- and off-street parking.

Cities and towns that enable more transit use and transit-oriented development are not only serving the needs of the region and the MBTA, but helping themselves. Well-planned transit-oriented development increases property values and property tax collections.[47] Cities and towns that embrace transit riders and transit-oriented development can benefit from both higher local revenues and better transit service for their residents and businesses.

"Development around the five Metrorail stations in the Rosslyn-Ballston transit corridor in Arlington Virginia has an assessed value of more than $9 billion and generates roughly one-third of the county's real estate tax revenue from less than 8% of its land area, giving Arlington County the lowest real estate property tax rates of any county in northern Virginia."[48]

Developers and TOD

While cities and towns can plan and zone for transit-oriented development, the development community is ultimately responsible for financing and constructing such developments. As documented in the Appendix to this report, transit-oriented development or TOD is a growing phenomenon throughout the region, with nearly 25,000 housing units and more than 35 million square feet of commercial development recently constructed or being planned near MBTA transit and commuter rail stations.

There are many different kinds of TOD projects underway: infill projects near rapid transit stations in Boston and other inner core cities; infill projects near commuter rail stations in mid-sized and smaller cities including Worcester, Lawrence, Haverhill and Brockton;

and both mixed-use and station-area housing projects near commuter rail stations in suburbs such as Canton and Attleboro. But not all development located near transit is truly transit-oriented, nor is enough station area housing and mixed-use development being built to achieve smart growth and housing production objectives. The region needs both more and better transit-oriented development and so that is the object of the next recommendation.

Recommendation 4: Developers should plan and build more and better transit-oriented development near existing and planned MBTA stations, working in collaboration with the MBTA, cities and towns and community residents and groups.

A number of real estate developers have done an exemplary job of orienting their projects toward nearby transit stations with projects large and small, in inner core cities, mid-sized cities and suburban locations. Some projects, however, have simply been sited in transit-accessible locations with little thought given to how the development could benefit from proximity to transit and a support the MBTA by generating more transit riders. Both non-profit community development corporations and for-profit developers can help to step up the performance and pace of genuinely transit-oriented development in greater Boston.

Developers, along with those who purchase or lease TOD properties, should work closely with cities and towns and the MBTA to maximize both the benefits of locating near transit and the likelihood that TOD projects will generate riders (and therefore revenue) for the MBTA. Many "transportation demand management" programs already help increase transit ridership by providing reduced-cost transit passes and limiting parking. But TOD developers needs to go beyond existing practice and become more aggressive about planning for and achieving greater transit use by residents, employees and patrons of TOD developments. Such measures could include limiting parking to encourage transit use; improving pedestrian, bicycle and shuttle bus access to the nearby transit station; providing signage to direct riders to the station; and assisting the MBTA in marketing transit use to residents and employees. The Urban Land Institute, the Center for Transit-Oriented Development and others have documented numerous "best practices" that can be incorporated into metropolitan Boston area TOD projects.

"Mixed-use projects in walking-friendly settings served intensively by transit produce healthy real-estate results. . . When combined with higher-than-typical densities, consumer retail and services, and pedestrian amenities, proximity to transit can confer land-value benefits that are well above those of competitive markets. TOD's synergy of proximity, density, mixed uses, and walking-friendliness, under the right conditions, gets expressed through geometric gains in property values and overall real-estate market performance."[49]

Well-executed TOD projects can generate many benefits for developers. Especially for denser projects, developers need to be able to demonstrate that many of the people who live, work and/or shop in their TOD projects will use transit rather than drive automobiles and generate traffic congestion. This in turn can reduce community opposition and expedite permitting and entitlements. TOD projects can also, over time, generate premium rents and sales prices. In general, proximity to transit is

associated with land-value premiums for both residential and commercial projects; there is growing evidence that TOD projects can generate even higher returns.[50] Like cities and towns, developers have much to gain by embracing transit riders and transit-oriented development.

A Financially Stable MBTA

Metropolitan Boston will not experience robust smart growth housing production or transit-oriented development unless the region has a financially stable transit system to anchor and serve that development. The MBTA and the Executive Office of Transportation (EOT) share responsibility for planning, building and operating that regional transit network. Despite good intentions and hard work by both agencies, however, it has become clear that the MBTA—as currently structured and funded—cannot support the region's current or future transit and development needs. Changes must be made before the transit system is pushed into full-blown crisis by a growing debt load, declining ridership, rising fares and the inability to fund maintenance, enhancement and expansion projects.

Debt Relief

Perhaps the most daunting problem facing the MBTA is the need to devote a large share of its limited operating revenues to pay off the debt service on bonds, the majority of which paid for transit expansion projects before the Authority was reorganized in 2000. Roughly 27% of the MBTA's annual operating budget is devoted to paying debt service, a total of $345 million in fiscal year 2006. The MBTA has a much greater debt service burden than other big city transit agencies, many of which either have no debt service costs (because they have dedicated funding streams for paying off bonds) or devote only 10-15% of their operating budget to interest payments. The next recommendation proposes a strategy for bringing the MBTA's debt service payments in line with other systems by addressing debt service on bonds issued before the MBTA was reorganized in 2000.

Recommendation 5: The Commonwealth should relieve the MBTA of the responsibility for paying off bonds that were issued to fund transit projects undertaken before "forward funding" took effect in 2000.

The MBTA's current debt load (both interest and principle) amounts to a staggering $8 billion. This debt load is creating two related problems for the T. First, debt service payments now account for more than a quarter of the operating budget. To find the revenue to cover debt service and other operating costs, the MBTA is forced to rely on fare increases, one-time asset sales and withdrawals from its "rainy day" deficiency fund. Second, more debt is being issued just to meet maintenance objectives under the State of Good Repair program, guaranteeing that debt service payments will remain high for decades to come. The Romney Administration has agreed to support funding for future expansion projects, because the MBTA's debt load precludes the issuance of bonds to support future expansion. But this pledge, welcome as it is, does not address the MBTA's existing debt load.

Much of the responsibility for spiraling debt service costs is outside the control of the MBTA. The majority of the current debt load existed before 2000, when the legislature

adopted the changes to the MBTA's structure collectively referred to as "forward funding." MBTA documents indicate that the T will have to pay at least $200 million in debt service on such prior obligations every year until fiscal year 2014 and will continue to have debt service obligations in excess of $100 million annually for years thereafter.[51]

The Governor and legislature should therefore relieve the MBTA of the responsibility for paying off bonds--which are guaranteed by the Commonwealth's full faith and credit—for transit projects issued prior to the start of forward funding. Without these prior obligations, the MBTA's debt service would be reduced to 10-15% of its operating budget, comparable to the proportion paid by other large transit systems.

Such debt relief could take one of two forms. The Commonwealth could resume reimbursements to the MBTA for the roughly $200 million in annual debt service payments currently attributable to pre-forward funding obligations. Alternatively, the Commonwealth could reduce the interest payments by paying off some or all of the MBTA's $3-4 billion in "prior obligation" bonds.[52]

If such debt relief could be implemented in time to affect the MBTA's budget for fiscal year 2007, the benefits would be immense. The fiscal year 2007 budget submitted to the MBTA advisory board assumes $363 million in debt service payments—nearly 27% of the proposed $1.35 billion budget. The majority of these payments, $192 million, are to pay off bond obligations dating from before forward funding.[53] If debt service on pre-forward funding obligations were completely eliminated as an MBTA responsibility, debt service costs would drop to $172 million or just under 15% of a reduced fiscal year 2007 budget of $1.18 billion.

	Proposed FY07 Budget	**Alternative FY07 Budget**
Debt Service—Prior Oblig.	191,652,099	0
Debt Service – Other	171,769,743	171,769,743
Debt Service – Total	363,421,843	171,769,743
Total Budget	1,348,739,971	1,176,970,228
Debt Service as % of Budget	26.9%	14.6%

Revenue freed up by such debt relief could be used to balance the MBTA's operating budget in fiscal year 2007 (and beyond) in a variety of ways, including:

- reducing or eliminating the need for the proposed fare hike; and/or
- reducing or eliminating nearly $5 million in withdrawals from the MBTA's deficiency fund; and/or
- relieving pressure on the MBTA to undertake one-time asset sales; and/or
- allowing increased investment in improving operations to grow ridership; and/or
- allowing the MBTA to increase or expedite capital investment in enhancement projects using pay-as-you-go financing; and/or
- reducing the need for the MBTA to issue nearly $400 million in bonds in fiscal year 2007 to pay for existing expansion projects and State of Good Repair maintenance efforts.

In every case, use of the revenue for purposes other than debt service payments would help to stabilize the MBTA's finances, improve service quality and support ridership growth. These would likely not be the outcomes of the currently proposed fiscal year 2007 revenue strategy, which is built largely around a fare increase, asset sales and deficiency fund withdrawals.

Transit-Oriented Development

The MBTA can and should capitalize on the growing interest in transit-oriented development in greater Boston and nationwide. More and better transit-oriented development will generate more riders and revenues for the MBTA. The T should therefore work proactively with cities and towns and developers to catalyze well-planned TOD, not just on MBTA-owned land but all around its stations.

"Transit agencies are not just about running trains and buses—they are also in the business of creating markets that will fill those trains and buses, largely through cutting deals with private developers to build trip-generation near train stops."[54]

A recent literature review on TOD and joint development (which is development that takes place on transit agency-owned land) concluded that the most successful agencies had redefined what it means to run a transit system. The MBTA, too, must do more than operate the trains and buses: it must fill them with satisfied, paying customers. The first step in that process is to maximize the number of *potential* customers by influencing land use near stations. The second step, discussed in the next recommendation, is to transform these potential customers into actual customers with reliable, high quality service.

Recommendation 6: The MBTA should adopt a proactive approach to maximizing riders and revenues over the long run by supporting transit-oriented development in areas around its stations and joint development of its real estate holdings.

A number of transit agencies in the United States have taken a proactive and strategic approach to influencing station-area land use, on both land that they own (through a process called "joint development") and on other privately-owned land near transit stations. Transit-oriented development at and near stations creates a double benefit for the regional transit agency. If the developer makes use of any of the transit agency's assets, there are opportunities for joint development that generate lease and other revenues. In addition, transit systems receive significant revenue from increased ridership associated with well-planned TOD. Indeed, a statistical analysis of joint development projects in Washington DC and Atlanta found that the farebox revenue spurred by such projects exceeded the direct lease and other payments to the transit agencies. [55] This result suggests that the MBTA has much to gain from potential riders attracted by TOD, whether on private or MBTA-owned land.

The vast majority of TOD projects in greater Boston will be built on non-MBTA land. The T therefore needs to take a more active role in shaping private development near its stations. The MBTA should work closely with the city or town, developer, and community residents to help shape development plans that maximize the likelihood that residents, employees and visitors will use transit. All residents and employees in TOD projects should be viewed as potential riders and, as

part of its ridership growth strategy, the T should work hard to attract and retain those riders.

The MBTA also has real estate assets that could support development near transit stations. The MBTA is currently working on potential projects on MBTA-owned surplus land at several sites in Boston as well as in communities from Revere to Newburyport.[56] Maximizing long-term gain from these assets will, however, require policy change.

In recent years the MBTA has more aggressively pursued real estate revenue, but its practice has been to sell the assets and then use the resulting one-time payments to meet annual operating expenses. For fiscal year 2007, for example, the proposed budget includes $95 million in "non-fare" revenue. This figure assumes $15 million from the sale of MBTA parcels in Boston's Bulfinch Triangle. Although the MBTA is the second largest property owner in the Commonwealth (after the Commonwealth itself), selling off real estate assets and using the money to plug current year operating deficits is not a sustainable revenue strategy.

Transit systems around the country have used a variety of strategies for "joint development" on land owned by the transit agency.[57] Many transit agencies took a greater interest in joint development beginning in the late 1990s, after the Federal Transit Administration changed its regulations to allow transit agencies to use development proceeds for a broader range of operating and capital purposes.[58] Joint development may involve co-venturing with a developer; executing long-terms ground leases that provide for both a base rent as well as a percentage rent that allows the transit agency to benefit from more successful projects; or writing down of land costs in return for future cash flow (for example, from futures sales of condominium homes). [59]

Even when the MBTA chooses to sell its land, the transaction can be structured to provide other benefits to the transit system. In Portland, Oregon, for example, federal funds are used to purchase station sites for expansion projects and portions of the sites are thereafter resold to developers. The sales price is calculated in part based on projected future ridership: developers get an up-front discount if their project will ultimately generate more transit riders.[60]

Rather than using asset sales to reduce its operating deficit, the MBTA should develop a real estate development strategy for each of its surplus parcels that maximizes both revenue and ridership over time. Such strategies should ultimately be developed for any MBTA-owned property that can be used for joint development, including station air rights and MBTA-owned parking lots and structures.

Ridership Growth and Service Quality

If the MBTA's job is not just to operate transit but to fill up the trains and buses, then the authority also needs to take a more strategic approach to growing its ridership. Total farebox revenue depends on both the number of riders and the fares paid by those riders. While increasing fares will increase total farebox revenue, fare increases can spur short-term ridership losses and do not necessarily create long-term revenue stability. (The losses may not be entirely short-term, as the MBTA has yet to return to its pre-2004 fare increase level of ridership.) The next recommendation therefore focuses on the need for the MBTA to increase its ridership.

Recommendation 7: The lynchpin of the MBTA's revenue growth strategy should be increasing its ridership by setting and tracking both ridership targets and service quality standards.

One of the key requirements of the forward funding legislation was that the MBTA would work to increase revenues by "improving service quality, expanding transit service where appropriate, establishing fare policies that promote ridership growth, marketing its transit services and fare media and providing desirable services and benefits to transit riders."[61] The key to financial stability, in other words, was not cost efficiencies or fare increases but ridership growth based on improved service quality.

Six years later, the MBTA is beginning to take this mandate more seriously. The new "Charlie card" automated fare collection system will allow the MBTA to track and analyze detailed ridership data for the first time ever. The time is therefore ripe for the MBTA to set specific ridership growth targets and track its ability to meet them. In order to maximize ridership and revenues, separate targets should be set for buses, trolleys, subways and the commuter rail system.

"The T needs a comprehensive program to improve services and attract riders. Without riders, nothing the T can do will keep the Authority afloat."

Massachusetts Taxpayers Foundation[62]

At the same time, the MBTA should finally establish the service quality standards anticipated in the forward funding legislation. That legislation required the T to set standards for the effectiveness and quality of each transit mode and to measure and report on comfort, communication, convenience, rider satisfaction, reliability, security and environmental benefits. These required standards have never been established. Setting service quality standards, along with ridership targets, would focus the T on service quality and ridership growth as its primary mechanisms for increasing farebox revenues. Systems would need to be implemented to monitor performance on a regular basis. To ensure accountability and transparency, the MBTA should also issue an annual "report card" on progress toward meeting its ridership targets and service quality standards.

Strategic Investment and Expansion

The MBTA's current financial situation appears so bleak that some have argued that the MBTA should halt system expansion projects and focus exclusively on maintaining and operating the current transit system. But from a regional economic and development perspective, a moratorium on system enhancement and expansion projects is not an option. The MBTA must change and grow to meet the transportation and economic development needs of metropolitan Boston in the decades to come. As the Transit Subcommittee of the Transportation Finance Commission recognized in its interim report last year, "continued expansion of the T promises a host of transportation, economic and environmental benefits. Extending the reach of the T's services should remain a major focus of the state's transportation planning and capital spending." [63]

While system expansion is appropriate, not every proposed project is necessarily a good

investment. One critic has noted that advocates of transit expansion "offer no way at all to distinguish between worthwhile transit investments and boondoggles."[64] The challenge for the MBTA and the Commonwealth is to create a transit investment strategy that establishes which projects are worthwhile and realizes the benefits of expansion in a financially sensible manner.

Numerous planning efforts have identified many opportunities to enhance and expand the MBTA system. Enhancement projects are investments in the existing system that improve service for existing riders and attract more riders. These can include station modernization projects (now underway at North Station and along the Blue and Red lines), corridor upgrades (such as double-tracking the commuter rail line to Worcester or improving service on the Fairmount Line) and parking projects.

Expansion projects involve extending the current system. The Commonwealth's draft 20-year statewide transportation plan identified a number of transit expansion or "megaprojects":

- the Urban Ring circumferential transit project;
- extension of the Blue Line to connect with the Red Line at Charles/MGH station;
- further extension of the Blue Line to Lynn;
- extension of commuter rail service to Fall River and New Bedford;
- extension of the Green Line to Somerville/West Medford; and
- conversion of the Fairmount Commuter rail line into a more rapid transit-like service with new stations.

The last two projects, the Green Line extension and Fairmount Line, are expected to be included in the soon-to-be-revised set of transit commitments required as mitigation for the Central Artery project.

The upcoming Commonwealth transportation plan is not, however, expected to establish which projects should be built and in what order. The plan is not likely to specify which projects should receive state bond funding, which should be built only if they can qualify for federal New Starts discretionary funding or—critically—which should be next in line as Massachusetts' candidate for New Starts funding.

As noted in the Preface, one of the reasons that ULI Boston initiated this report was to determine how the Commonwealth should prioritize investment in the regional transit system. Clearly it would be premature for this report to recommend a specific investment strategy that assigns priorities and timelines to the various enhancement and expansion opportunities. Too many pieces are still missing from a very complicated puzzle.

It is past time, however, for the Commonwealth to establish the framework and timetable under which such prioritization decisions will be made and implemented. If the regional transit network is to support regional housing production and smart growth objectives, a series of questions need to be answered. What planning process will the Commonwealth use to establish its transit investment strategy? How will the Commonwealth revise and then apply its project selection criteria to decide which projects should be built and in what order? And how will the priority investments be financed?

Coordinated Transit Planning

The seemingly straightforward issue of how to establish Massachusetts' transit investment priorities has become complicated in recent years. In 2000, the forward funding legislation required the MBTA to create a "program for mass transportation" or PMT to prioritize transit capital investments based on statutorily specified criteria. Four years later, Massachusetts adopted transportation restructuring legislation, Chapter 196 of the Acts of 2004, which established an Office of Transportation Planning within the Executive Office of Transportation (EOT) and required that planning office to coordinate intermodal transportation plan for Massachusetts. The respective planning and decisionmaking responsibilities of EOT and the MBTA were further complicated when the Romney Administration accepted financial responsibility for future MBTA expansion projects, including those required as mitigation for the Central Artery project.

As required by federal law, the Boston Metropolitan Planning Organization (MPO) and many of the state's other MPOs are now embarking on long-range planning processes that determine how federal transportation dollars will be invested. Yet it is not clear how these MPO plans will or will not be influenced by the Commonwealth's comprehensive plan. Many stakeholders are understandably confused about which planning process or processes will ultimately establish the Commonwealth's transit investment priorities. The next recommendation therefore focuses on how best to coordinate the various transportation planning processes.

Recommendation 8: The Secretary of Transportation should coordinate with the MBTA, metropolitan planning organizations and regional planning agencies to reach consensus on a transit investment strategy for the Commonwealth.

With different agencies leading different planning processes at different times, many stakeholders are understandably unsure how Massachusetts' transit investment priorities are established.

Recent transportation restructuring legislation makes the Secretary of Transportation, advised by a newly-established Office of Transportation Planning, responsible for coordinating and integrating planning for all of the Commonwealth's transportation needs, including but not limited to transit. The Office of Transportation Planning has also begun to take responsibility for planning and environmental review for individual expansion projects, such as the Urban Ring and Green Line extension. Whether creating a comprehensive plan or advancing specific expansion projects, the challenge for EOT will be to ensure that its planning efforts closely coordinate with those of regional planning agencies, metropolitan planning organizations and the MBTA, all of whom continue to have important planning responsibilities under state and federal law.

The restructuring legislation provides that the Office of Transportation Planning will be "the principal source of transportation-planning for state-level transportation projects" but also requires that the planning office "work in coordination with regional planning agencies in the commonwealth, which shall serve as the principal source of transportation planning for local and regional transportation projects." [65] In preparing the plan, EOT must also coordinate with metropolitan planning

organizations, which are responsible for federally-required transportation planning.[66] Finally, the planning office must coordinate with the MBTA which, as the operator of the transit system, has a particularly important role to play in the planning, design, construction and operation of expansion projects.

Transit projects present a complicated relationship between capital and operational planning. Operational considerations need to be taken into account in many aspects of capital planning; choices about routes, station locations and technology (bus rapid transit vs. light rail, for example) need to balance many considerations, including how those choices will affect future operation of the new transit line. In addition, once transit expansion projects are financed and built they need to be operated—and farebox revenues cover considerably less than half of those operating costs. For this reason, the forward funding legislation requires the MBTA to weigh many different factors—including operating costs—when setting capital spending priorities.

Even though the MBTA cannot afford to issue bonds and pay the debt service to support transit expansion projects, the Authority needs to continue playing a critical role in transit capital planning—as well as in the design, construction and eventual operation of expansion projects. Similarly, regional planning agencies are responsible for planning for local and regional transportation priorities and metropolitan planning organizations are responsible for preparing federally-required transportation investment plans.

While each of these different planning processes must be respected, the Commonwealth needs to establish an overall transit investment strategy. EOT and the Office of Transportation Planning can play a critical role in coordinating the different required planning efforts to reach consensus on a Commonwealth transit investment strategy.

Better coordination among agencies and planning processes would also help advance individual expansion projects after they have been determined to be priority projects. EOT could, for example, establish coordinating committees that include the MBTA and all appropriate regional planning agencies and metropolitan planning organizations to work together on planning for specific expansion projects.

Finally, all of the Commonwealth's transportation agencies and authorities need to work together to make all decisionmaking and planning processes comprehensible and transparent. Any interested stakeholders should be able to understand how and when important decisions are being made and how to weigh in on those decisions.

Land Use Evaluation Criteria

The Commonwealth and its Metropolitan Planning Organizations have made significant process in recent years in making transportation investment decisions based on objective criteria designed to ensure that the best projects are selected through a transparent process. But more needs to be done, especially to ensure that transportation investments support state and regional land use objectives. The next recommendation therefore focuses on how the Commonwealth can improve its prioritization criteria to maximize the land use benefits of these investments.

Recommendation 9: Transportation planning agencies should establish specific criteria for evaluating and prioritizing potential transportation investments that recognize the importance of land use objectives including housing production and transit-oriented development.

While land use as a topic is now routinely considered in transportation decisionmaking in Massachusetts, the evaluation and project selection criteria need to address many land use issues. Will planned highway projects exacerbate or mitigate sprawl? How much existing and planned housing will be served or leveraged by the proposed investment? For transit projects, will the density of housing and/or employment in a community support cost-effective transit service? If not, what is the status of plans to enact transit-supportive zoning changes in conjunction with the planned transit project?

Every agency with decisionmaking authority over investment of federal, state or local funds in transportation infrastructure should develop and apply specific criteria that address land use issues. This includes the Executive Office of Transportation (for use with the comprehensive plan and in its work on individual transportation projects), the MBTA (for enhancement and expansion projects included in the Program for Mass Transportation) and the Metropolitan Planning Organizations (for use in both long-range plans and shorter-term planning documents).

The criteria should be specific and, wherever possible, quantitative. Massachusetts should consider following the lead of the Metropolitan Transportation Commission (MTC), the metropolitan planning organization for the San Francisco Bay Area. In 2005, MTC adopted a "TOD Policy for Regional Transit Expansion Projects" providing that transit expansion projects would not be funded unless they meet corridor-level thresholds for minimum levels of housing either through existing development or through adopted station area plans. For example, the threshold for a light rail expansion is a corridor-wide average of 3,300 housing units per station, meaning that a light rail expansion involving five new stations would have to demonstrate that it would serve 16,500 existing or committed housing units.[67]

Land use considerations should be factored in at every step of the transportation planning and investment process. Highway, transit and other transportation projects should not receive state funding unless existing or planned land use regulation and zoning is designed to ensure that the public investment will also leverage desirable private investment in housing production or other transit-oriented development. "Corridor planning" needs to occur before, not after, decisions are made about which projects to prioritize (whether highway or transit projects). As required by Chapter 40R, all planning should prioritize transit and other infrastructure investments that would serve smart growth housing overlay districts.

For transit expansion projects, far more attention needs to be paid to land use considerations—and as early in the planning process as possible. Density, zoning, availability of station area housing, and the potential for transit-oriented development near stations and throughout the corridor should be factored in before deciding which transit projects to prioritize. Later, once projects are in the design phase, density and other land use considerations should be incorporated into

determinations about routes and station locations.

Such a heightened emphasis on transit-supportive land use criteria could help the Commonwealth secure federal New Starts funding for expansion projects. The Federal Transit Administration's "project justification criteria" for the discretionary New Starts program treat issues of transit supportive land use in the same manner as more conventional transportation considerations such as mobility improvements. New Starts candidates are evaluated based on existing land use, what transit supportive plans and policies have been put in place in the corridor and near transit stations and the performance and impact of those policies.[68] With Massachusetts counting heavily on receipt of New Starts funding for multiple transit expansion projects over a period of years, the state should be placing more emphasis on land use criteria when setting its transit expansion priorities.

Financing Strategies

There is no reason to devote time and resources to prioritizing transit expansion projects if there is no money to pay for any such projects. As noted repeatedly, the MBTA is not in a position to issue any additional debt to support new transit expansion projects. Clearly significant state and federal funding will need to be available for transit investment. If transportation planning is done well, the MBTA should be competitive in trying to secure discretionary New Starts funding from the federal government for some expansion projects. And the Commonwealth has committed to investing state capital funds on transit—although no general revenue funds or bond proceeds have actually been spent on the MBTA transit system since forward funding was enacted in 2000.

Massachusetts has largely relied on two ways of generating funds for transit expansion – issuing state bonds and securing federal New Starts funds whenever possible. These two options alone are unlikely to provide sufficient resources to pay for the lengthy list of potential enhancement and expansion projects included in recent planning documents. State bonds are precious commodities--every year the Commonwealth is faced with vastly higher demand for capital spending than is permitted by its self-imposed bond cap. And even if Massachusetts succeeds in securing New Starts funds, these provide only half of project costs—the state must develop a finance plan to match the federal funds. The next recommendation therefore focuses on developing a toolkit of ways that Massachusetts can finance transit investments.

Recommendation 10: The Executive Office of Transportation and the MBTA need to collaborate with cities and towns and developers to identify new ways to finance transit expansion projects.

As with all of the other challenges addressed in this report, there is no single "silver bullet" approach for financing transit expansion projects. Transportation officials instead need to explore in greater detail the options available for supplementing state bonds and federal New Starts funds to increase the revenue pool available to finance transit enhancement and expansion projects.

While there are a limited number of so-called innovative financing mechanisms currently in

use,[69] there are at least two approaches that should be explored. One financing mechanism involves "value capture" or taking advantage of the fact that new transit increases property values and property tax collections along the transit corridor. One value capture mechanism is tax increment financing, which in Massachusetts is called District Increment Financing or DIF. Communities can establish a DIF and issues bonds to pay for infrastructure improvements, dedicating future property tax revenues to pay off those bonds. To date, only two Massachusetts communities have approved DIFs (one in Quincy and one in Worcester specifically designed to support the transit-oriented CitySquare development). But if Massachusetts decides to require a "local" contribution toward the cost of transit expansion projects, as has been suggested, DIFs could be an important tool to generate the needed local funds.

Public-private partnerships are another approach that warrants further investigation. Private developers can, for example, contribute part of the cost of more modest transit investments, such as enhancement projects to upgrade stations or improve access to stations. For more capital-intensive expansion projects, some transit systems have begun using public-private partnerships with the companies constructing the transit expansion. In Portland, Oregon, for example, the firm building a light rail extension to the airport reduced the project's $125 million price tag by $28 million in return for the rights to develop a 120 acre site at a light rail station. In Pasadena, California, a construction authority franchised to build a new transit line plans to recoup up to $30 million of the capital cost by redeveloping excess property obtained for this reason during acquisition of the transit right-of-way.[70] The possibilities for public-private partnerships should be evaluated in conjunction with opportunities for revenue-generating joint development projects on land that will be acquired for rights-of-way and stations in connection with proposed expansion projects.

Even with existing and innovative sources, it may be that Massachusetts needs new revenue streams to finance needed transportation infrastructure. The 2004 transportation restructuring legislation established a Special Transportation Finance Commission to develop a long-range transportation finance plan for the Commonwealth.[71] The Commission is looking at both the Commonwealth's needs and at potential new revenue streams to support increased investment in transportation infrastructure. The Commission's report is expected by the end of the year. While Massachusetts waits for this important analysis, however, EOT and the MBTA should be working with cities and towns and private developers to explore both value-capture strategies and public-private partnerships that could help finance the capital costs of needed transit enhancement and expansion projects.

Endnotes

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[52] The MBTA's first Official Statement, issued in connection with its first issuance of assessment bonds in August 2000, stated that the outstanding aggregate principal amount of bonds issued prior to forward funding was $3.8 billion.
[53] All figures in this section and the accompanying table are from FY2007 Budget Request: Presentation to the MBTA Advisory Board (March 31, 2006). The "prior obligations" figure actually understates the proportion of the MBTA's operating budget devoted to paying off pre-forward funding debt. A complete accounting would also include $3 million for Boston Metropolitan District debt, nearly $18 million for long-term leases entered into before forward funding and some share of the interest on the assessment bonds and sales tax bonds, some of which have been used to refinance and restructure prior obligation debt.
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Appendix

The MBTA and Development in Greater Boston

As background for the work of the Transportation Priorities Task Force, the Center for Urban and Regional Policy at Northeastern University surveyed the extent of development projects near greater Boston transit stations. Two different research projects were conducted. The first was an analysis of the spatial distribution of projects in the development pipeline in the City of Boston relative to MBTA stations. The second was a less formal survey undertaken to identify potential transit-oriented development projects outside the City of Boston but within the service area of the Massachusetts Bay Transportation Authority.

As explained in the report, not every development project located in close proximity to a transit station qualifies as transit-oriented development (TOD). Without assessing whether a project is pedestrian-friendly, how much parking is provided and other factors it is inaccurate to label developments as TOD. These projects are therefore referred to as "station area" projects. Although "transit oriented development" is sometimes defined as including projects within ½ mile of a station, a more conservative definition for a "station area" project was used for the City of Boston given its extensive transit network. In the City of Boston, therefore, only those projects located within ¼ mile of a station were included; outside Boston, development was included if located within ½ mile of a station.

City of Boston

The data on the City of Boston's development pipeline was obtained from the Boston Redevelopment Authority's website listing of development projects, as the website appeared on May 1, 2006. The first step was to narrow the list to projects that could be considered to be significant projects in the development "pipeline" that might ultimately impact MBTA ridership. The following standards were applied:

- Projects were included as being in the "pipeline" if they had 100,000 square feet or more of built space.
- Inactive projects were excluded, as were projects in which construction was complete.
- To be conservative, all institutional projects were excluded because the location of the project would seem to be determined by the location of the existing educational or medical institution, rather than any consideration of transit proximity.
- Two projects were included although they are not yet listed on the BRA website because they involve projects where the MBTA has designated a developer for land owned by the MBTA near a transit station. The projects are Bullfinch Triangle and Jackson Square; both are listed in italics in the Boston table.

- Each of these projects was then assessed for its proximity to an MBTA rapid transit, commuter rail or Silver Line station. The table on the next page lists all of the pipeline projects located within ¼ mile of a transit station.

Forty six station area projects were identified in 15 of Boston's 19 neighborhoods. These station area developments represent a pipeline of more than 9,000 residential units and more than 23 million square feet of development.

Neighborhood	# of "Pipeline" Projects	# within ¼ mi of transit station
Allston/Brighton	5	1
Back Bay	3	3
Beacon Hill/West End	2	2
Charlestown	5	1
Chinatown/Leather District	4	4
Dorchester	3	1
Downtown	7	7
East Boston	3	3
Fenway/Kenmore	3	3
Hyde Park	0	0
Jamaica Plain	1	0
Mattapan	2	2
Mission Hill	4	3
North End	3	2
Roslindale	0	0
Roxbury	4	2
South Boston	10	6
South End/Bay Village	4	4
West Roxbury	0	0
TOTAL	63	44

One issue of interest is the distribution of station area projects by neighborhood. The proportion of total pipeline projects in a neighborhood that are within ¼ mile of a transit stop varies, in part because transit coverage varies by city neighborhoods. Neighborhoods such as Allston, Charlestown and Roxbury have more projects outside station areas because large areas of these neighborhoods are not currently well served by rapid transit. (Note that this table includes 44 projects, rather than the 46 listed in the Boston table on the next page, because it does not include the two designated projects not yet listed on the BRA website.)

MBTA Communities Excluding Boston

No comprehensive database exists of either development projects in greater Boston or of station area or transit-oriented development projects throughout the MBTA system. Until such a database can be developed, a more anecdotal approach must be taken.

For these non-Boston projects, no specific size cut-offs were used and proximity to transit is defined to include sites within ½ mile of an MBTA commuter rail or rapid transit station (or, in the case of one project in Hingham, of a ferry terminal). Because the known "pipeline" is relatively small, completed projects were included as well.

Many of the projects were identified with the assistance of the Office for Commonwealth Development, which was simultaneously in the process of assembling a similar list of projects. Others were identified through websites. This list should in no way be considered complete or comprehensive but is meant only to be illustrative of the kind of station area projects that are increasingly to be found in greater Boston.

Station Area Projects in the City of Boston's Development Pipeline

#	Project Name	Address	Neighborhood	Closest Station	Project Type	Bldg Sq Ft	Res Units	Status
1	Albany Fellows Mixed-Use	817 Albany St.	Roxbury	Silver Line	Retail/Office/Resid	426,000	265	Board approved
2	Ashmont Station TOD	1950 Dorchester Ave.	Dorchester	Ashmont	Retail/Resid	n/a	105	Under review
3	Basilica Court	80-100 Smith Street	Mission Hill	Longwood Med Area	Residential	142,500	218	Board approved
4	Boylston St Mixed-Use	800 Boylston St.	Back Bay	Hynes ICA	Hotel/ Retail/Resid	450,000	105	Under construc
5	*Bullfinch Triangle*	183 Canal Street	North End	North Station	Resid/Mixed Use	51,750	397	Designated
6	Charles St Jail Hotel	215 Charles ST.	Beacon Hill/West End	Charles St	Hotel	239,000	0	Under construc
7	Chestnut Hill Waterworks	2400 Beacon St	Allston/Brighton	Reservoir	Office/Resid/Cult	260,000	108	Board approved
8	Clippership Wharf	25-65 Lewis St.	East Boston	Maverick	Retail/Resid	778,250	400	Board approved
9	Columbus Center	101 Clarendon St.	South End/Bay Village	Copley	Hotel/ Retail/Resid	1,302,000	343	Board approved
10	Copley Residences	441 Stuart St	Back Bay	Copley	Retail/Office/Resid	152,000	111	Board approved
11	Court Square Press Phase II	8 Greenbaum St	South Boston	Broadway	Residential	350,121	143	Under construc
12	Emerson Place	Blossom St. (near Charles)	Beacon Hill/West End	Charles St	Residential	855,960	320	Board approved
13	Fan Pier	28 Old Northern Ave.	South Boston	Silver Line	Hotel/ Retail/Resid/Office	3,034,000	675	Board approved
14	Fenway Mixed Use	1365 Boylston St.	Fenway/Kenmore	Kenmore Square	Retail/Resid	651,000	580	Under construc
15	Forsyth Dental	140 The Fenway	Fenway/Kenmore	Hynes ICA	Office	150,000	0	Under review
16	Gateway Terrace	Harrison Ave/E Berkeley St	South End/Bay Village	Silver Line	Retail/Resid	199,940	133	Under construc
17	Harrison Commons (BC High)	761 Harrison Ave	South End/Bay Village	Silver Line	Residential	372,000	190	Under construc
18	Hayward Place	580 Washington St	Downtown	Chinatown	Retail/Office	373,000	0	Under review
19	Hodge Boiler Works	111 Sumner St	East Boston	Maverick	Residential	196,633	116	Board approved
20	*Jackson Square*	1 Centre Street	Roxbury	Jackson Square	Resid/retail/recreation	97,000	430	Designated
21	Kasanof Bakery	233 Blue Hill Avenue	Roxbury	Ruggles Station	Retail/Residential	102,275	70	Board approved
22	Kensington Place	659 Washington St.	Chinatown/Leather Dist	Chinatown	Retail/Office/Resid	457,700	346	Board approved
23	Liberty Place	640-680 Washington St.	Chinatown/Leather Dist	Chinatown	Retail/Resid	650,341	440	Under construc
24	Lincoln Plaza	1-2 Lincoln St	Chinatown/Leather Dist	South Station	Retail/Office/Resid	227,000	n/a	Under construc
25	Loews Boston Hotel	Stuart & Tremont	Chinatown/Leather Dist	Boylston	Hotel/Retail	350,580	0	Board approved
26	Lovejoy Wharf-Hoffman Bldg	160 N Washington St	North End	North Station	Retail/Resid	458,134	260	Under review
27	Massport Parcels (Seaport Park Lane)	Northern Ave (@ D St)	South Boston	Silver Line	Hotel/ Retail/Resid	836,950	465	Under construc
28	Mattapan Heights II	249 River St	Mattapan	Central Ave.	Residential	133,000	83	Under construc
29	Mattapan Heights III	249 River St	Mattapan	Central Ave.	Residential	240,000	73	Board approved
30	Nashua St. Residences @ the Fleet Cente	Causeway St	North End	North Station	Residential	577,331	375	Under review
31	North Point	Monsignor O'Brien Highway	Charlestown	Lechmere/Comm Coll.	Office	325,000	0	Board approved
32	One Brigham Circle (Ledge Site)	1 Brigham Circle	Mission Hill	Brigham Circle	Retail/Office	155,000	0	Under construc
33	Pier 4	136 Northern Ave.	South Boston	Courthouse	Hotel/ Retail/Resid/Office	1,001,700	200	Board approved
34	Portside at Pier One	29 Marginal St.	East Boston	Maverick	Retail/Resid	881,000	490	Board approved
35	Russia Wharf	530 Atlantic Ave.	Downtown	South Station	Hotel/ Retail/Resid/Office	1,015,000	50	Board approved
36	South Station Air Rights	Atlantic Ave @ Summer	Downtown	South Station	Hotel/Office/Med Res	2,150,000	n/a/	Under review
37	Terrace St-Pickle Factory	17 Terrace St	Mission Hill	Roxbury Crossing	Residential	145,000	175	Board approved
38	The Clarendon	131 Clarendon St.	Back Bay	Back Bay	Retail/Resid	395,300	400	Board approved
39	The Residences at 50 W Broadway	50-72 West Broadway	South Boston	Broadway	Retail/Resid	148,904	127	Board approved
40	Two Financial Center	201 Essex St	Downtown	South Station	Retail/Resid	214,200	162	Board approved
41	Waterside Place	Summer/ Congress/ WTC	South Boston	Silver Line	Retail/Resid	1,100,000	209	Under review
42		500 Atlantic Ave	Downtown	South Station	Hotel/ Retail/Resid	729,200	140	Under construc
43		1330 Boylston St	Fenway/Kenmore	Yawkey	Retail/Office/Resid	340,000	210	Board approved
44		80 Broad St	Downtown	Aquarium	Retail/Resid	128,521	95	Under construc
45		301 Columbus Ave	South End/Bay Village	Back Bay	Residential	102,160	50	Board approved
46		45 Province St	Downtown	Park St	Retail/Resid	337,098	150	Board approved
	TOTAL					23,282,548	9,209	

Station Area Development Projects In Metropolitan Boston (Excluding the City of Boston)

#	City/Town	Project Name	Closest Station (Transit/Rail Line)	Project Type	Bldg Sq Ft	Res Units	Status
1	Abington	The Woodlands at Abington Station	Abington (Plymouth)	Resid		192	Complete
2	Attleboro	Attleboro Station TOD	Attleboro (Attleboro)	Mixed use	35,000	310	In planning
3	Braintree	The Residences At Union Station	Braintree (Plymouth)	Resid/recreation		304	Complete
4	Braintree	Weymouth Landing	South Weymouth (Plymouth)	Resid		25	In planning
5	Brockton	Lofts at SoCo	Brockton (Middleborough)	Resid		64	Complete
6	Brockton	Walkover Commons	Campello (Middleborough)	Resid		80	Complete
7	Camb/Somerville	North Point	Lechmere (Green)	Resid/office/retail	2,100,000	2,700	Under construction
8	Cambridge	Cambridge Park Place	Alewife (Red)	Resid		311	Complete
9	Camb/Somerville	Porter Square/Air Rights	Porter Square (Red)	Institutional			In permitting
10	Canton	Washington Place	Canton Center (Attleboro)			29	Complete
11	Canton	Village at Forge Pond	Canton Center (Attleboro)			35	Complete
12	Chelsea	Atlas/Janus Housing	Chelsea (Newburyport)	Resid		42	In permitting
13	Concord	Concord Common	Concord Center (Fitchburg)	Mixed use		20	Complete
14	Dedham	Jefferson at Dedham Station	Dedham Corporate (Franklin)	Resid		300	Complete
15	Dedham	Readville	Readville (Franklin)	Resid		72	In permitting
16	Franklin	Franklin Center Commons	Franklin (Franklin)	Mixed use		57	Under construction
17	Gloucester	Station Place	Gloucester (Rockport)	Resid/commercial		7	Under construction
18	Haverhill	Haverhill Lofts	Haverhill (Haverhill)	Resid		32	Under construction
19	Hingham	Hingham Shipyard	Water Shuttle Service	Mixed use		500	In permitting
20	Lakeville	Residences at Lakeville Station	Lakeville (Middleborough)	Resid		192	Proposed
21	Lawrence	Monarch on the Merrimack	Lawrence (Haverhill)	Resid/retail/recreation	1,300,000	200	Under construction
22	Malden	Pleasant Street Apartments	Malden Center (Orange, Haverhill)	Resid/retail	12,000	204	Under construction
23	Malden	Ten Florence at Central Place	Malden Center (Orange, Haverhill)	Resid		60	Complete
24	Manchester	10 and 12 Summer Street	Manchester (Newburyport)	Resid		39	Under construction
25	Mansfield	Mansfield	Mansfield (Attleboro)	Mixed use	160,000	100	In planning
26	Medford	Station Landing	Wellington (Orange)	Resid/hotel/retail/office	265,000	650	Phase One under construc
27	Medford	Wellington Place	Wellington (Orange)	Resid/recreation	166,223	137	Complete
28	Milton	The Residences at Milton Landing	Milton (Red)	Retail/Resid	500,000	73	Complete
29	Newburyport	Little River Transit Village	Newburyport (Newburyport)	Mixed use		600	In planning
30	Newton	Arbor Point at Woodland Station	Woodland (Green)	Residential		180	Under construction
31	Norwood	Residences at Norwood Crossing	Norwood Depot (Franklin)	Resid		105	Complete
32	Plymouth	Cordage Park	Cordage (Plymouth/Kingston)	Resid/retail/office	300,000	671	In planning
33	Quincy	The Residences At Munroe Place	Qunicy Center (Red)	Resid/retail	10,000	111	Complete
34	Quincy	Granite Lofts Condominiums	North Quincy (Red)	Resid/retail	10,000	74	Complete
35	Quincy	Ten Faxen Apartments	Quincy Center (Red)	Resid/office/retail	35,000	200	Complete
36	Revere	Parcel H and North Lot	Wonderland (Blue)	Mixed use			In planning
37	Salem	Jefferson at Salem Station	Salem (Rockport)	Resid		266	Complete
38	Somerville	Assembly Square	Proposed Orange Line stop	Mixed use	1,000,000	1,332	In permitting
39	Westborough	Westborough Village	Westborough (Worcester)	Resid		324	In permitting
40	Westwood	University Avenue Redevelopment	Route 128 (Attleboro)	Mixed use	2,900,000	1,000	In planning
41	Weymouth	Village Center Plan	South Weymouth (Plymouth)	Resid/retail/commer	2,000,000	2,855	Under review
42	Worcester	CitySquare	Union Station (Worcester)	Resid /retail/commer	1,407,000	900	In planning
43	Worcester	Gateway Park	Union Station (Worcester)	Commer/indus/lab	1,564,800		In planning
		TOTAL			13,765,023	15,353	


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