

Greater Boston Massachusetts

October 1–6, 2017



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Unified Rail for a Unified Region

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About the Urban Land Institute

THE URBAN LAND INSTITUTE is a global, member-driven organization comprising more than 40,000 real estate and urban development professionals dedicated to advancing the Institute's mission of providing leadership in the responsible use of land and creating and sustaining thriving communities worldwide.

ULI's interdisciplinary membership represents all aspects of the industry, including developers, property owners, investors, architects, urban planners, public officials, real estate brokers, appraisers, attorneys, engineers, financiers, and academics. Established in 1936, the Institute has a presence in the Americas, Europe, and Asia Pacific regions, with members in 80 countries.

The extraordinary impact that ULI makes on land use decision making is based on its members sharing expertise on

a variety of factors affecting the built environment, including urbanization, demographic and population changes, new economic drivers, technology advancements, and environmental concerns.

Peer-to-peer learning is achieved through the knowledge shared by members at thousands of convenings each year that reinforce ULI's position as a global authority on land use and real estate. In 2017 alone, more than 1,900 events were held in about 290 cities around the world.

Drawing on the work of its members, the Institute recognizes and shares best practices in urban design and development for the benefit of communities around the globe.

More information is available at uli.org. Follow ULI on Twitter, Facebook, LinkedIn, and Instagram.

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About ULI Advisory Services

THE GOAL OF THE ULI ADVISORY SERVICES program is to bring the finest expertise in the real estate field to bear on complex land use planning and development projects, programs, and policies. Since 1947, this program has assembled well over 600 ULI-member teams to help sponsors find creative, practical solutions for issues such as downtown redevelopment, land management strategies, evaluation of development potential, growth management, community revitalization, brownfield redevelopment, military base reuse, provision of low-cost and affordable housing, and asset management strategies, among other matters. A wide variety of public, private, and nonprofit organizations have contracted for ULI's advisory services.

Each panel team is composed of highly qualified professionals who volunteer their time to ULI. They are chosen for their knowledge of the panel topic and screened to ensure their objectivity. ULI's interdisciplinary panel teams provide a holistic look at development problems. A respected ULI member who has previous panel experience chairs each panel.

The agenda for a five-day panel assignment is intensive. It includes an in-depth briefing day composed of a tour of the site and meetings with sponsor representatives, a day of hour-long interviews of typically 50 to 75 key community representatives, and two days of formulating recommendations. Long nights of discussion precede the panel's conclusions. On the final day on site, the panel makes an oral presentation of its findings and conclusions to the sponsor. A written report is prepared and published.

Because the sponsoring entities are responsible for significant preparation before the panel's visit, including sending extensive briefing materials to each member and arranging for the panel to meet with key local community members and stakeholders in the project under consideration, participants in ULI's five-day panel assignments are

able to make accurate assessments of a sponsor's issues and to provide recommendations in a compressed amount of time.

A major strength of the program is ULI's unique ability to draw on the knowledge and expertise of its members, including land developers and owners, public officials, academics, representatives of financial institutions, and others. In fulfillment of the mission of the Urban Land Institute, this Advisory Services panel report is intended to provide objective advice that will promote the responsible use of land to enhance the environment.

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The panel would also like to thank the many stakeholders from the Boston region. This group of interviewees included elected officials, local business owners, community members, transit advocates, and municipal and state staff members. Finally, the panel would like to say thank you to Michelle Landers and Manikka Bowman from ULI Boston for making this panel a success!

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Background and Key Recommendations

THE GREATER BOSTON REGION comprises 164 cities and towns throughout eastern Massachusetts, which are home to more than 4.45 million people.

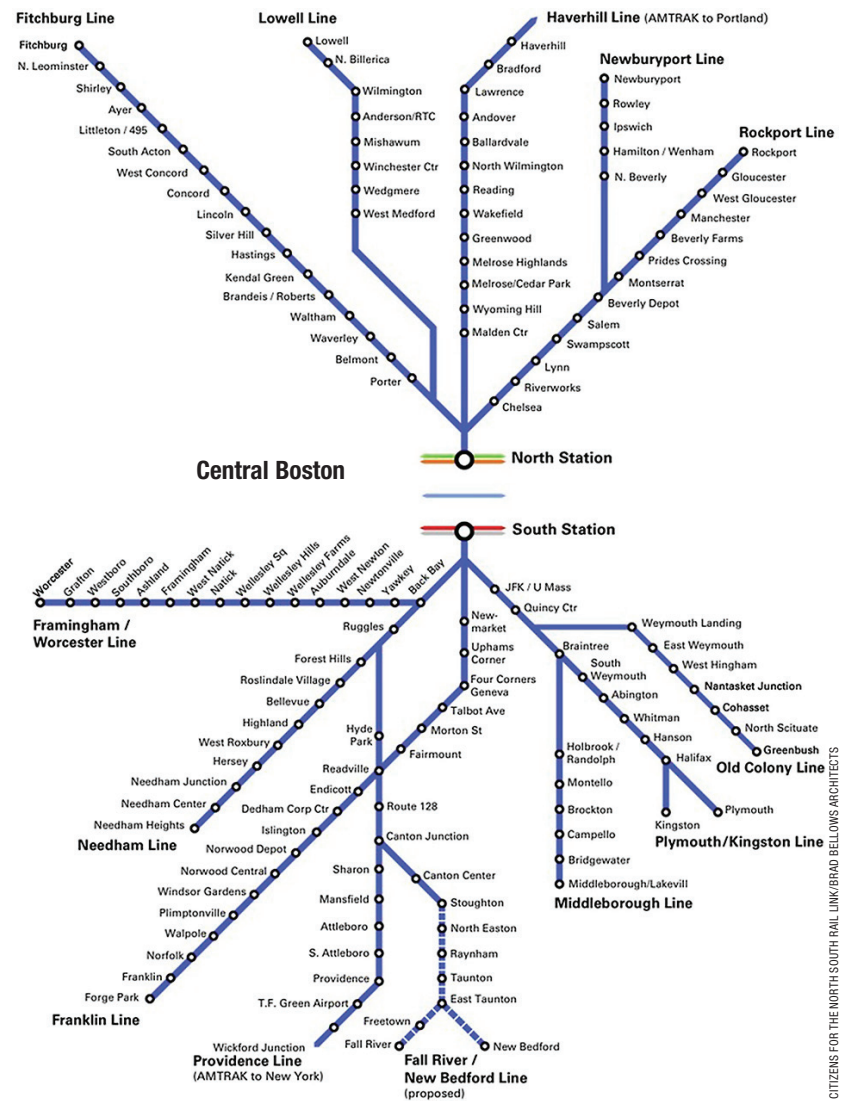
During the late 19th century, the region's rail systems were privately built with multiple terminals and few connections between the lines. The private lines were consolidated into two separate stub-end stations—the North and South stations. North Station services Amtrak lines to Maine and the northern division of the Massachusetts Bay Transportation Authority (MBTA), and South Station services Amtrak's Northeast Corridor intercity transit to New York City and the MBTA's southern division. These two stations are located on the north and south side of Boston Harbor.

The placement of the two stations of the railroad network and the level of interconnection between them have very real modern-day consequences, such as efficiency of daily operations, fluidity of network traffic, and underlying capacity of the system to provide better service to customers. In Boston today, commuter and intercity rail service levels are sharply limited by capacity constraints at both of its unconnected passenger railroad terminals. These bottlenecks in turn impair the reliability of existing services while largely foreclosing the possibility of providing higher-frequency services in the future. To solve this issue, the North South Rail Link (NSRL) is proposed to forge a unified regional rail network. The NSRL would be a 2.8-mile tunnel to connect the fragmented northern and southern commuter-rail systems with through-running service.

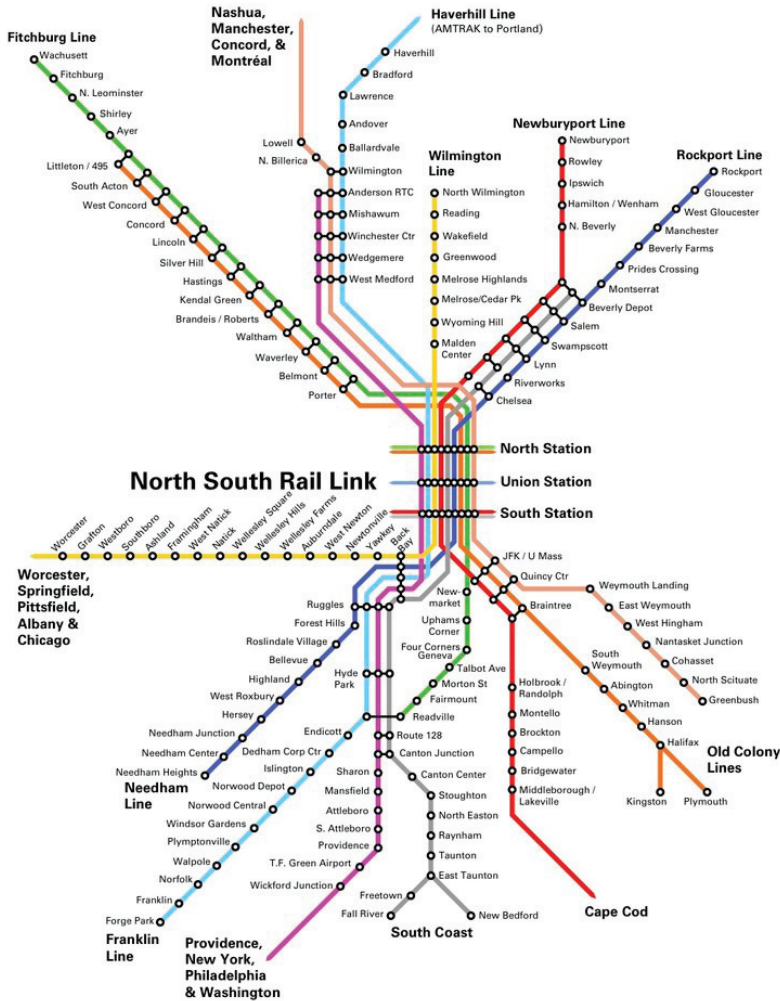
Transportation bottlenecks within the Greater Boston region are growing in profile and raising questions about the ability of existing infrastructure to support current needs, let alone future growth. Since the Central Artery/Tunnel Project, also known as the Big Dig, no large-scale transportation projects have been completed in Greater Boston.

Although diminished political appetite for ambitious projects following the Big Dig's exorbitant costs are partially to blame, the absence of a broader vision for the future of transportation in Greater Boston is just as responsible.

Non-Unified Rail Network



Unified Rail Network



CITIZENS FOR THE NORTH SOUTH RAIL LINK/BRAD BELLOWES ARCHITECTS

Impacts of the rail link to downtown Boston:

1. Analyze downtown real estate development possibilities enabled by construction of the NSRL.

- a. U.S. Postal Service (USPS) Fort Point Station Site Vision
 - i. Potential developed value without railroad impairment?
 - ii. Integration with Dorchester Avenue?
 - iii. Conduit to South Boston?

b. Widett Circle Vision

- i. Potential developed value without railroad impairment?
- ii. Integration with Dorchester Avenue/USPS Fort Point Station site?
- iii. Conduit between South Boston/Downtown Boston?

2. Analyze possibilities for development in the vicinity of NSRL stations.

- a. North Station
 - i. Real estate impacts
- b. Central Station
 - i. Area real estate impacts
 - ii. Airport access impacts
- c. South Station
 - i. Area real estate impacts

Longer-term regional rail implication of NSRL:

3. How would the city of Boston benefit from unified regional rail in the long term?

- Ultimately, how might commuter-rail ridership change?
- How would the city's labor shed/access to talent/employees change as a result of unified regional rail?

The Panel's Assignment

The Advisory Services panel was asked how NSRL would affect regional transportation and real estate values within the Boston region and downtown specifically. In addition, the panel was asked to consider how a South Station expansion would affect real estate development and values.

The questions were divided into two sections. The first focused on how the NSRL would affect downtown Boston and the second section focused on more regional rail implications of the NSRL.

- How would the city's real estate market respond to Boston's greater connectivity to regional urban centers with ample affordable housing?
- What would the estimated mode share be among inbound/outbound commuters with unified regional rail?
- What urban infill station possibilities might there be?
- How might land use and transit-oriented development (TOD) opportunities within the city of Boston and adjacent cities (Cambridge/Somerville/Everett, etc.) arise with the introduction of unified regional rail, its portals at North and South station, and its potential urban infill stations?
- How would unified regional rail impact the Fairmount line corridor?

4. How would the Greater Boston region benefit from unified regional rail in the long term?

- **Edge Cities**—Quincy/Woburn/Framingham/Lynn case study?
 - Ultimately, how could edge cities' access to employment opportunities change?
 - How would the real estate markets of edge cities respond to the greater connectivity to Boston afforded by unified regional rail?
 - What land use changes/TOD opportunities might arise?
- **Gateway Cities**—New Bedford/Fall River/Lowell/Lawrence/Brockton case study?
 - Ultimately, how could edge cities' access to employment opportunities change?
 - How would the real estate markets of edge cities respond to the greater connectivity to Boston afforded by unified regional rail?
 - What land use changes/TOD opportunities might arise?

■ Regional Changes

- How might regional population distributions change with unified regional rail?
- How might population/growth/development trends change regionwide?
- How much would unified regional rail do to ease congestion?
- How would unified regional rail change regional land use patterns?
- How would additional affordable housing access drive regional economic/population growth?
- How might unified regional rail drive greater integration between Boston and Providence/Worcester?

Key Recommendations

The panel made the following key recommendations, addressing the impacts of the NSRL on downtown Boston real estate and more broadly the regional implications of a unified regional rail system:

- **The panel's guiding principles for investment should be one set of criteria applied for any major transportation project decision-making process.** The key principles—including linking housing to jobs; ability to leverage public/private resources; increasing social equity; preserving core, high-value land for real estate development; and building climate resilience—need to be applied consistently. Following these principles will ensure that the Greater Boston region remains economically competitive and the transportation system meets the growth projections for the next 30 years.
- **The regional rail network is an invaluable regional asset that should be viewed as a comprehensive system, requiring—and worthy of—substantial coordinated and prioritized investments over time.** This will ensure that the NSRL will have positive future real estate impact by mitigating the loss of at-risk real estate near South Station or Widett Circle and facilitate

regional economic development opportunities. The NSRL could have significant real estate impacts surrounding South Station and within Widett Circle, whereas minimal real estate impacts would occur surrounding North Station and the proposed Central or Union Station because of the amount of development that has already occurred in these areas.

- **The South Station expansion's environmental impact statement (EIS) should be amended to ensure a substantial real estate component is considered as a complement to a future NSRL.** Doing so ensures a more systematic regional approach to transportation planning. Planning for complementary projects may eliminate, or alleviate, the need for increased layover capacity within Widett Circle while still enabling increased regional transportation capacity that will be required over the long term. Temporary tracks may be required within Widett Circle if both projects are to move forward.
- **TOD station area plans should be developed to provide a framework for real estate development to occur along all MBTA "T" and commuter-rail lines.** Core land within the city of Boston is precious and will soon be built out and already boasts incredibly high land values (e.g., too expensive). Transit and subsequently the development opportunities it can create will create access for more affordable choices, which is critical to continued regional economic vitality. TOD station area plans should include a clear vision that identifies local champions, opportunities for development, clear articulation of necessary entitlements and incentives, and collaborative strategies to develop first mile/last mile connections. Simply having access to a station is not enough to ensure that the right development happens. A regional approach to TOD is required.

- **Housing supply should be greatly increased to meet the projected regional growth anticipated over the next 30 years.** This will require increased density for housing within the Greater Boston region. More than 300,000 to 400,000 units are projected to be required, but only 10,000 to 13,000 units are being created annually, thus increasing the cost of housing and threatening the region's future prosperity.

- **To remain economically competitive, the Greater Boston area needs to cooperate regionally to compete globally.** Partnerships between the state, the Metropolitan Area Planning Commission's Metro Mayors coalition, regional planning groups, business groups, and advocates will need to be strengthened and expanded. So many governmental and nongovernmental organizations are in the Greater Boston area that a stronger coordination and communication strategy is necessary to attract maximum investment from the federal government and private infrastructure investors. This will enable Boston to compete against regions such as London, Tokyo, and Washington, D.C., rather than the North Shore competing against the South Shore.

The State of the Region

IN THE PANEL'S OPINION, the Boston region is the envy of the nation, especially coming out of the last recession. Phenomenal job growth is focused on education, technology, and life science innovation industries, leading to the commonwealth of Massachusetts having the second-highest median hourly wage in the nation (\$22.45). These jobs are locating and clustering around education and medical institutions in areas such as Cambridge, Seaport, Back Bay, Kendall Square, downtown, and the Longwood Medical Area.

This growth is centered on the following four pillars of prosperity:

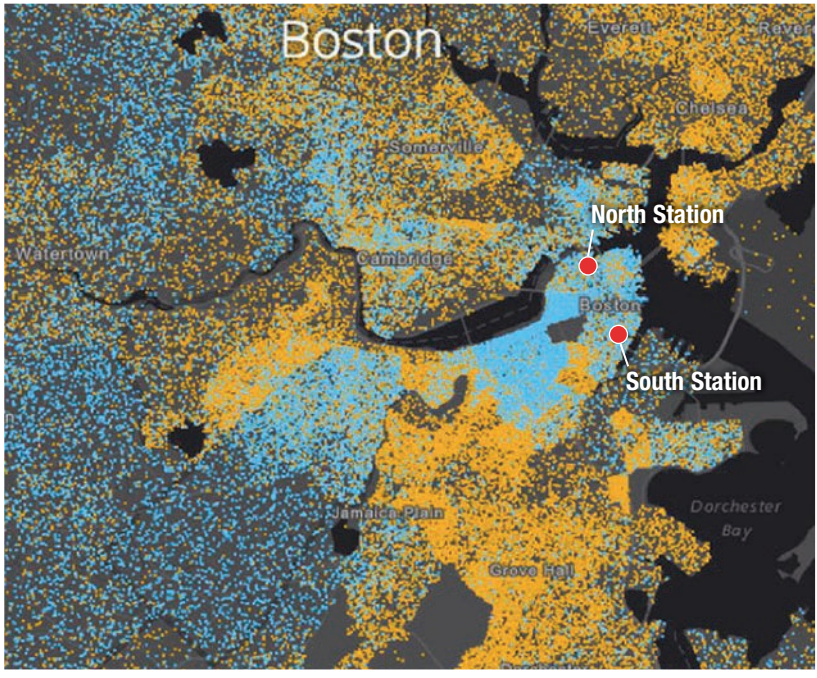
- **Educational institutions:** The Boston region has more than 52 educational institutions, including world-renowned entities such as Harvard, MIT, Tufts, and Boston College. Firms want to be near this talent.
- **Medical research and development:** Five of the top ten employers in the Boston region are hospitals, which equates to about 19 percent of total jobs within the city of Boston. This has spurred spin-off businesses that give the Boston region the largest concentration of life sciences jobs in the nation.
- **Entertainment:** Boston boasts a rich arts and cultural scene, a diverse and multicultural heritage, world-class parks, and five professional sports leagues. This attracts more than 20 million visitors to the region annually.
- **Multimodal transportation network:** This is a well-connected region that includes buses, bus rapid transit, the T, commuter-rail lines, ferries, freeways, domestic and international flights, and trains. Moreover, it is very walkable. The central element of this transportation system is rail (more than 340 miles). Only a few U.S. cities have a comparable system.

The Boston Region Is On Fire

Unprecedented capital flow is pouring into the Boston region. In 2015 alone, more than \$6.7 billion in venture capital was invested, which is 5.3 percent of global total investment. This inflow has been instrumental in lowering the unemployment rate to 3.4 percent, compared with the national 4.4 percent average, and decreasing the office vacancy rate to a low of 6.8 percent, versus a national average of 13 percent. Lease rates are up by 30 percent since 2011 to an average of \$60 per square foot with some newer buildings fetching upward of \$90 per square foot.

The real estate market is responding. Nearly 2.6 million square feet of office space, or 62 percent of the region, and 4,800 apartment buildings, or 36 percent of the region, are under development. This will increase the residential rental supply by nearly 11 percent. The region is growing by 1.3 percent, which is two times the national average and faster than the peer cities of San Francisco and New York. The demographics of this growth is primarily millennials and baby boomers who are moving into the Boston region's core. Fifty percent of the growth has been in the cities of Boston and Cambridge, despite their having only 19 percent of the region's overall housing stock. Rents within Boston and Cambridge reflect this surge in demand with median rents of \$3,050 per month. The average home price is \$553,000.

However, this rapid growth is causing problems. Even for those earning the median income of \$76,000 per year within Boston and Cambridge, 40 to 50 percent of their pretax income needs to be dedicated to housing costs. Since 2010, more than 271,000 new jobs have been added to the Boston region, but only 67,000 new housing units have been built. This is a four-to-one jobs-to-housing ratio. By 2040, between 290,000 and 395,000 households are projected to be added, resulting in a need for



The blue dots represent households making more than \$200,000 per year, and the orange dots represent households making less than \$25,000 per year.

Inequality Ratio, Boston versus Other Major U.S. Cities

| City | 2014 household income | | Inequality ratio |
|-------------------|------------------------|---------------------|------------------|
| | Bottom 95th percentile | Top 20th percentile | |
| Boston, MA | \$14,942 | \$266,224 | 17.8 |
| New Orleans, LA | \$11,466 | \$203,383 | 17.7 |
| Atlanta, GA | \$16,057 | \$281,653 | 17.5 |
| Cincinnati, OH | \$10,454 | \$164,410 | 15.7 |
| Providence, RI | \$12,795 | \$196,691 | 15.4 |
| New Haven, CT | \$12,293 | \$187,984 | 15.3 |
| Washington, DC | \$21,230 | \$320,679 | 15.1 |
| Miami, FL | \$12,262 | \$184,242 | 15.0 |
| San Francisco, CA | \$26,366 | \$383,202 | 14.5 |
| New York, NY | \$17,691 | \$249,609 | 14.1 |

Sources: Brookings Institution; U.S. Census Bureau; ULI.

between 300,000 and 400,000 units. However, only between 10,000 and 13,000 units per year are being added. This means that prices and rents are only going to go up. This situation is not sustainable, and the housing affordability crisis will get worse.

Furthermore, not everyone is benefiting from the growing prosperity. According to the Brookings Institution, the Boston region has one of the largest shares of inequality in the entire nation. The top 5 percent of income (\$266,224) is about 18 times the bottom 20 percent income (\$14,942). In addition, geographic clustering is occurring, further entrenching enclaves of high wealth and of extreme poverty. The communities that have lower incomes are underserved by transit, such as Dorchester and Roxbury within the city of Boston along the Fairmont Line; the inner-ring or edge cities of Revere and Everett; and the outer-ring or Gateway cities of North and South Shore, Lowell, Lawrence, and Worcester.

Finally, transportation is getting worse. Nearly 70 percent of Boston-region residents commute to their jobs by automobile, thereby contributing to making drive times the third worst in the nation. And the region has very little ability to add additional road capacity because of land constraints. The T system is at capacity and prone to frequent delays. The commuter-rail network, while not at capacity, is inefficient and slow; its sporadic commuter-rail service does not operate as a unified regional rail network.

The core capacity of the existing T system must be increased and improved. The panel acknowledges that the Baker administration is cognizant of this issue and taking steps to improve the T system, but it has a long road ahead. Improving the core system is critical because it will maximize the market potential of existing developable land within the urban core and enable the redevelopment of underperforming land uses near T stations within the inner ring (e.g., Wonderland). Denser, market-rate, and affordable housing should be built outside the inner ring that is accessible by commuter rail and transit. This growth should be linked to job centers that will largely remain within the inner ring and urban core.

Leverage the Transit System to Grow Housing Capacity

Ultimately, transportation is about providing access and connectivity. Access has value for business when making locational decisions that in turn affect economic growth. It also has value to a community and to people by providing access to jobs, housing, education, and recreation. Transport is not just about getting from point A to point B but about providing connectivity between and within communities through integration with land use.

Challenges and Opportunities

Underinvestment and underuse plague the regional commuter-rail network. Though the system is growing in terms of passenger numbers, it still lags the other modes offered by the T and is only 10 percent of MBTA's total ridership. Its lower frequency of service lessens the seamless travel experience that is available on other parts of the MBTA system.

The good news is that the system has large potential to grow ridership. This will be accomplished by creating a regional commuter-rail network that includes the following characteristics:

- Metro-style train sets with longitudinal seating and walk-through carriage interiors;
- Paperless ticketing with no need for a conductor;
- Complete electrification of the lines;
- High frequency of service; and
- NSRL/unified regional rail.

An upgraded commuter-rail network could be the jewel in the crown for the Boston region, and a higher level of ridership would increase revenues and lessen the subsidy required, which could then be allocated to other transit needs. The NSRL could greatly enhance this regional asset. It could also help unlock economic development potential through a coordinated strategy for TOD.



Commuter riders on the London Overground.

Case Studies: Enhancing Regional Rail

Following are some examples of successful models for enhancing regional rail.

The London Overground. Transport for London (TfL) took over the concession to operate the London Overground network in November 2007 from a traditional rail operator. Since then, TfL has transformed the network from a neglected railway into the best-performing train operator in Great Britain. This success has been achieved through a major infrastructure upgrade to deliver increased train frequency, new trains with longitudinal seating and increased standing room and walk-through carriage interiors, station enhancements, better management, and service quality improvements. Passenger volumes are now three times the level they were when TfL took over management of the line and converted it from commuter-rail service to metro-style service.



The Southeastern Pennsylvania Transportation Authority's Market East Station was built as part of Philadelphia's Center City commuter tunnel.

Philadelphia Center City Commuter Connection. In Pennsylvania, the Philadelphia Center City Commuter Connection, known as the commuter tunnel, integrates the former Reading Railroad and Penn Central Railroad

lines into a unified system via a tunnel link. It has spurred downtown development such as the Comcast Tower and the current boom in mixed-use projects. The project created greater access to universities on the rail network—for Temple, Penn, and Drexel, among others. University City is now a major employment generator with research and health care jobs. The commuter tunnel has also provided greater access to the airport from across the region for workers to get to jobs and for airport passengers.

New Jersey Transit's Secaucus Junction. This \$450 million, 321,000-square-foot station sits where the New Jersey Transit Main Line tracks pass under the Amtrak Northeast Corridor, thereby allowing passengers to transfer between trains to and from Hoboken Terminal and trains to and from New York's Penn Station. It is used primarily for transferring passengers between trains on nine commuter-rail lines. Before Secaucus Junction was built, commuters

on nonelectrified lines to Hoboken Terminal used PATH trains or ferries to reach Manhattan and other points in New York City. Commuters whose trains terminated at Penn Station could connect to subway services but had to go to a PATH station to reach Hoboken. Secaucus Junction has created efficiencies in service in and out of Manhattan.



RYAN KELLY/FUCKER

The Secaucus Junction station.

Taking a Systematic Approach

TAKING A SYSTEMATIC APPROACH—not tailored toward individual projects—is a difficult proposition, given the age of the T and commuter-rail systems and the funding challenges the commonwealth of Massachusetts faces in trying to address a backlog of deferred infrastructure maintenance needs. Even with these limitations, a comprehensive process of system improvements should include simultaneous initiatives that provide cumulative and synergistic benefits to city and regional mobility. This will help divorce the decision-making process from a political process and instead make it data-driven and ensure continued regional prosperity.

To implement a systematic approach, individual projects should be evaluated through a set of guiding principles for investment as well as how the project more broadly fits into the region's overall transportation system and planning process. Then how the near-, medium-, and longer-term capital planning process builds the business case—or proof of concept—for each project that improves mobility and connectivity for Greater Boston should be evaluated.

Guiding Principles for Investment

The first step is establishing what are the main goals, objectives, and principles for these investments. The panel identified five key principles to evaluate the projects:

- Increases access to employment, education, and social opportunities;
- Maximizes opportunities to leverage public/private resources;
- Provides improved access to transit in underserved areas;
- Preserves core, high-value land; and
- Incorporates climate resilience in design.

Major Employment Center

According to the Medical Academic and Scientific Community Organization, the Longwood Medical Area (LMA) employs more than 46,000 people and has about 21,000 students. More than 110,000 people commute to or visit LMA every day; they include employees, students, volunteers, patients, and visitors. The city of Boston's *Go Boston 2030* transportation plan recommends creating this critical crosstown connection.

Increases Mobility and Access for Residents

A key factor to consider when evaluating a transit investment must be the potential for the area to attract and support new commercial development. An investment in transit should be a catalyst for additional development activity proximate to the station. Major employment centers need all kinds of workers.

The transit system should optimize the options available to people coming to these areas by providing a comprehensive, multimodal platform that could include ferry service, ride-share, and bicycle rental services. Providing people with choices that are readily available, easy to use and understand, and seamlessly connected as part of a broader transit system could encourage people to use an alternative mode of transportation in a proactive manner.

Maximizes Opportunities to Leverage Public/Private Resources

Transit investments should maximize the ability to leverage investment and financing opportunities from anchor institutions, companies, and other potential stakeholders. Potential investment partners that will benefit from the public investment in the station should be willing to invest in projects as part of the capital stack. These partners could include universities, hospitals, cultural institutions or sports

franchises, as well as private companies with facilities located proximate to stations targeted for improvement. The local jurisdiction, as well, should be a potential funding partner. These parties have a vested interest in the success of the transit system and the improved connectivity of citizens, visitors, and the workforce to vital services, employment centers, and entertainment and cultural venues.

Provides Improved Access to Transit in Underserved Areas

Lower-income residents tend to move to lower-cost areas, which are often underserved by transit and thus burdened by high transportation costs. Transit investments should be prioritized in the region to ensure they bridge transportation gaps and provide communities underserved by transportation with better access, one of the guiding principles of *Go Boston 2030*, the city’s mobility plan. Investments should go toward reducing the transportation cost burden and increasing mobility in the Greater Boston area, especially where those investments can eliminate the need for a personal vehicle. According to the report *Boston’s Workforce: An Assessment of Labor Market Outcomes and Opportunities*, residents with a high school degree or less are concentrated in a few neighborhoods, including areas of Dorchester, Mattapan, and East Boston, that have the longest commutes in the city of Boston.

Transit infrastructure should look further than just rail engineering but also evaluate social, economic, and environmental impacts.

Preserves Core, High-Value Land

Transit investments should ensure that core, high-value land serves its highest uses. Historically, transit infrastructure and undesirable uses were often located in downtowns and along waterfront areas. Now those areas are highly desirable for both residential and commercial development. Technological and urban design solutions should be employed to avoid exacerbating historic undesirable land uses in core areas like downtowns and waterfronts. Projects such as Chicago’s Millennium Park, covering the Randolph Street Station tracks, and Brooklyn’s Barclay Center, covering the Atlantic Yards, cost millions of dollars to enable use of air rights above rail yards.

Ensures Climate Resilience in Transit Investments

Transit investments must protect assets from risks associated with sea-level rise and climate change and increase public transit use to reduce greenhouse gas emissions. Risks associated with major infrastructure investments along the shoreline must be considered, and climate resilience must be incorporated into the design of transit infrastructure. This is especially true since the NSRL is

Example of Equitable Economic Investment

The 11th Street Bridge Park is a multimillion-dollar park that will bridge the east and west banks of the Anacostia River within Washington, D.C. West of the river is whiter and wealthier, and east of the river is more African American with low homeownership, high poverty, and high unemployment rates. To help ensure that residents and small businesses nearby will continually benefit from the success of the park, an equitable development plan was developed focused on workforce development, small business enterprise, and housing within a mile radius of the park. This plan serves as a model for how communities should be engaged when large infrastructure investments occur within traditionally underserved neighborhoods. More information can be found at <https://www.bridgepark.org/>.

11th Street Bridge Impact Area

| | West of Bridge Park | East of Bridge Park |
|--|----------------------------|----------------------------|
| Population | 22,194 | 21,007 |
| Median value of owner-occupied housing | \$648,249 | \$255,553 |
| Renter-occupied units | 50% | 73% |
| Unemployment | 7% | 21% |
| Child poverty | 20% | 53% |

The inequalities within the U.S. census tracts a mile west and east of the Anacostia River in Washington, D.C.

Sources: Building Bridges across the River; U.S. Census Bureau; ULI.

proposed near the Boston Harbor. With more extreme weather, Boston has seen delays and cancellations with significant economic impacts. Resilience is about creating the ability to prepare and plan for, absorb, recover from, and more successfully adapt to adverse events.

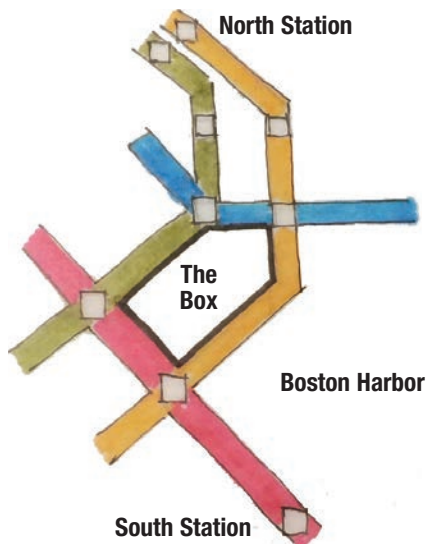
Although the urgency of acting now to prepare for the future is difficult to communicate, severe climate change events in recent years show the need to start making infrastructure, planning, and investment decisions that will lead to a more resilient Greater Boston. At a minimum, Boston should prioritize ensuring a communication and implementation plan for maintaining service during severe weather that includes potential alternative emergency routes to key sites such as hospitals.

Understanding the Priorities in Context

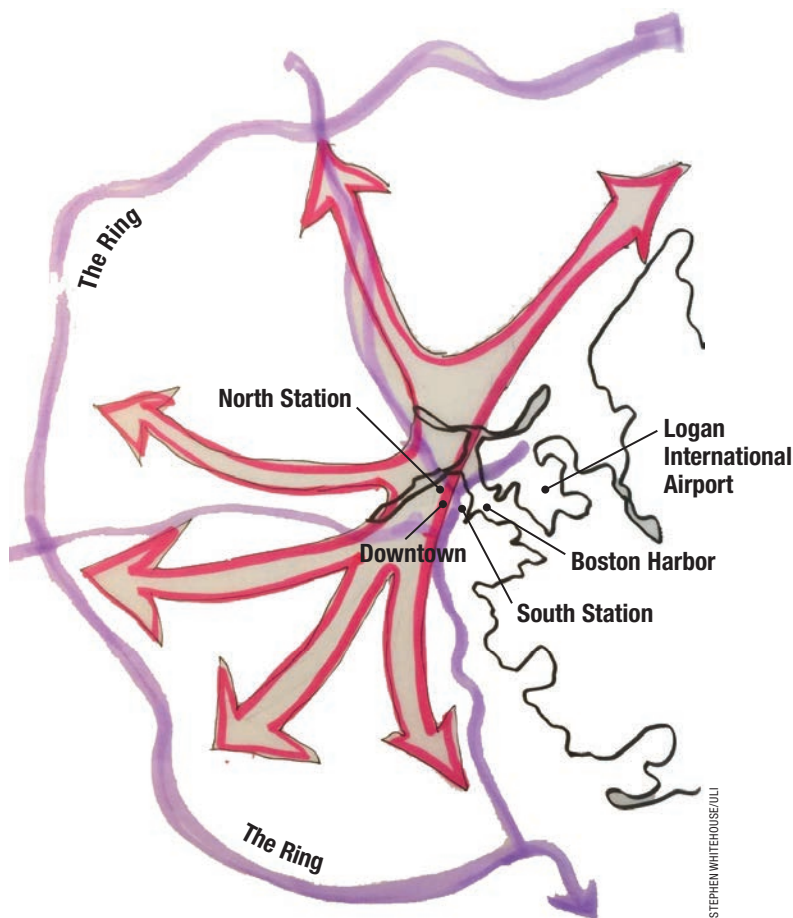
The planning and management of the regional transportation system is complex. Major initiatives to transform the rail transit infrastructure, such as the NSRL, are long-term commitments that start with concept planning, evaluation, and public engagement. However near- and medium-term improvements should not be viewed as in competition with long-term initiatives. Instead these improvements can advance the feasibility and benefits of the longer-term improvements. Several of the following factors may determine how quickly or slowly a project may move to completion:

- Operational or equipment upgrades versus new construction;
- Status in pipeline;
- Rights-of-way in place;
- Complexity of engineering and design;
- Permitting process;
- Funding availability; and
- Community support.

Based on the panel's interviews with stakeholders and review of documentation, viable near-term improvements



STEPHEN WHITEHOUSE/ULI
Representation of the need for multiple transfers within the core of MBTA's T system downtown: NSRL could reduce the required number of transfers, thus freeing capacity.

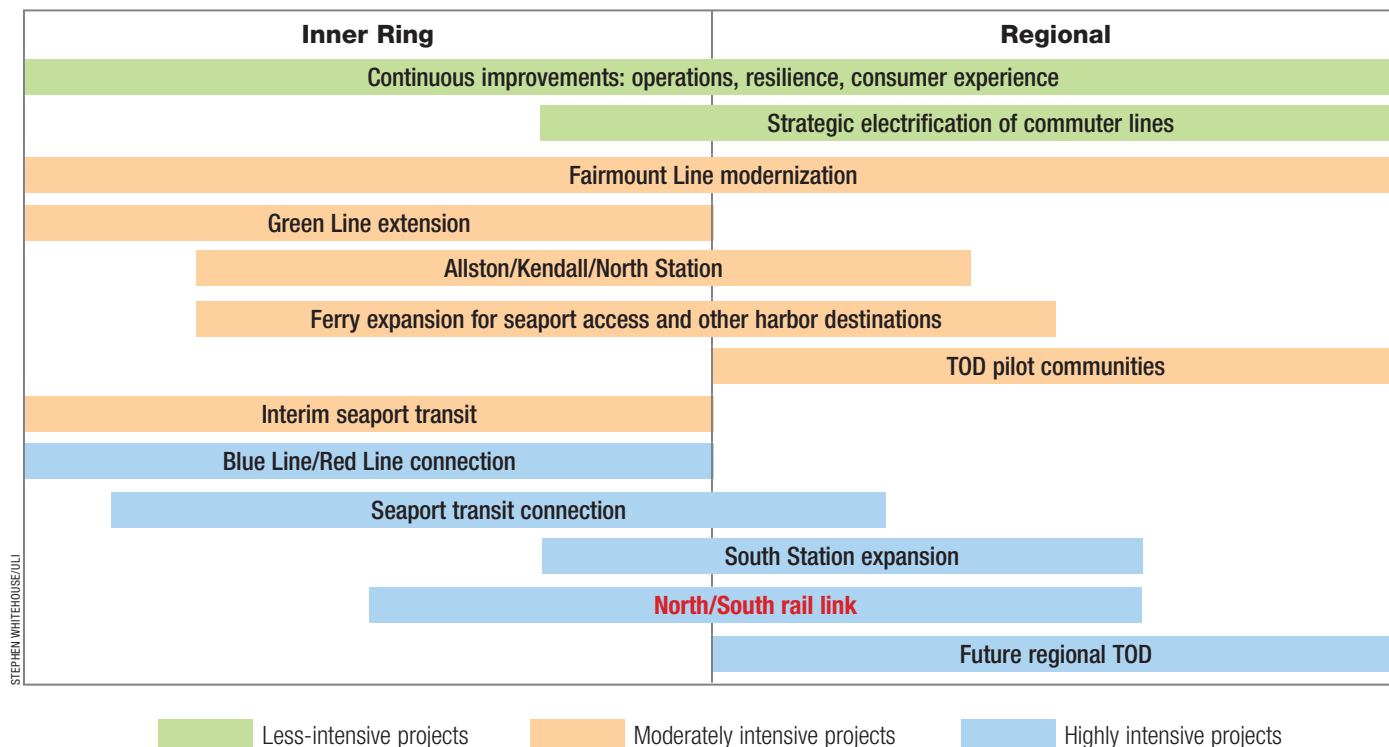


for operations, customer experience, equity, and equipment exist that can be progressively advanced as ongoing annual appropriations. In the time frame of two to eight years, near- and medium-term actions can provide strategic system expansion and mobility improvements to

STEPHEN WHITEHOUSE/ULI
Representation of the ring that surrounds Boston (I-495): better public transit that connects areas outside downtown could provide alternatives to driving on the arterial highways.

- "Free the box" to reduce movement and multiple transfer through the center of the T system; and

Project Examples and Geographic Focus



STEPHEN WHITEHOUSE/ULI

- “Break the ring” to provide attractive choices to not drive the arterial highways.

The following categorization of transportation projects includes initiatives and concerns that were raised as significant through the panel’s stakeholder interview process. Discussion of these projects is not intended to be comprehensive or definitive. The examples given are among those with potential to expand transit mobility generally and complement a more connected north–south commuter system.

Similarly, the projections of time frames are offered as a relative scale, not as a summary of published project schedules.

Ultimately, the NSRL offers the potential for significant improvements in transportation capacity but needs other contributing elements to be successful.

Capital Planning Process: Building the Business Case

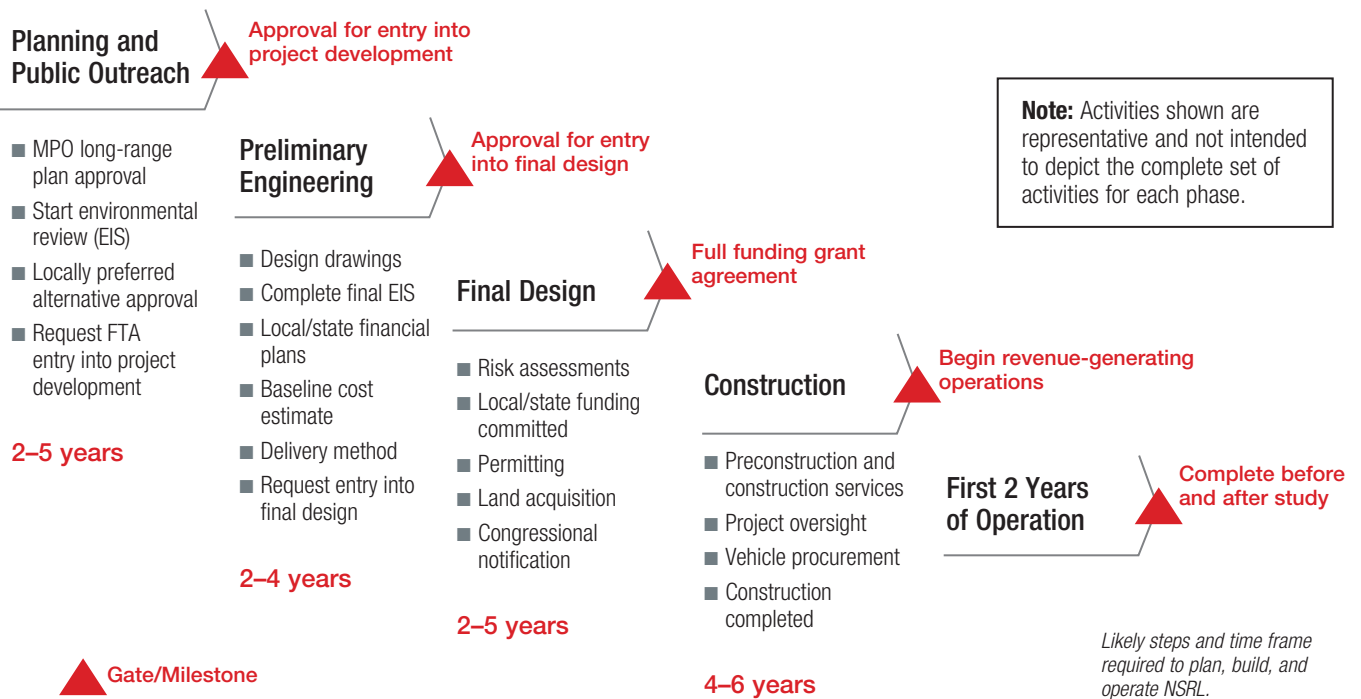
The formulation and adoption of a transportation program is mainly coordinated through the Massachusetts Department of Transportation (MassDOT), with the involvement of citizens, local government, and federal agencies. The overall plan includes all modes of movement and identifies operational and capital improvements. Once a project is identified, project development and implementation follow a multistep process.

Just like any private investment seeking venture capital or a construction loan, a rigorous proof of concept for the NSRL is needed to gain widespread public, private, and government advocacy for this project. An important first step in evaluating the viability of the NSRL has been started by MassDOT. Since the last detailed analysis of the NSRL was completed in 2003, project objectives, technical feasibility, cost estimates, projected ridership, and benefits

Conceptual Sequencing



Capital Planning Process



must be updated. MassDOT has awarded a contract to consulting firm ARUP to analyze changed conditions and identify what are the next actions if decisions are made to continue with further project development.

Given current commonwealth and federal investments in the Green Line extension, understanding the factors and criteria that would be needed to support future regional transportation investments such as the NSRL is critical. After the ongoing MassDOT study, additional commitments to an ongoing planning, environmental review, and design process would be required to engage the public in a dialogue on the benefits of the NSRL and other near-term local actions and transportation investments to justify and meet state and federal criteria for such a large-scale capital project.

For instance, additional planning and alternative analyses may be needed to support inclusion of the NSRL in the Long-Range Transportation Plan of the Boston Regional Metropolitan Planning Organization (MPO). This is a critical step because the project is required to be included in this plan, the MPO's Transportation Improvement Program and State Transportation Improvement Program, to be eligible for Federal Transit Administration (FTA) funding. Even if no federal funds are required for the project, inclusion in the MPO's long-range plan is also necessary because the NSRL would likely affect regional air quality.

Once proof of concept for the NSRL is validated, and if decisions are made to support further project development, then the next action would be to initiate an environmental impact statement and conceptual design for NSRL. Further coordination with the potential lead federal funding agencies, FTA and the Federal Railroad Administration, would be ongoing at this stage to support capital grant applications as project development continues.

Because the proposed project has both commuter and intercity rail components, any grant application would need to be able to meet federal criteria for funding including, but not limited to, the following:

- Mobility improvements;
- Environmental benefits;

- Congestion relief;
- Economic development effects;
- Land use;
- Cost-effectiveness;
- Availability of reasonable contingency amounts; and
- Availability of stable and dependable capital and operating funding sources that will not compromise ongoing transit services.

If the FTA Capital Investment Grant Program is supported in the future by the current administration and by Congress as a source of funding for transit expansion projects, it would be critical for the region to demonstrate its commitment to other related transportation improvements along with increased economic development and housing density along the revitalized commuter-rail alignments. The planned buildout of regional gateway cities and other towns would generate substantial ridership increases needed to justify and prioritize this project as it competes nationally with other transit investments.

Once FTA evaluates and rates the project as to how it meets the grant criteria, then funding proposals could be included in the federal budget, if the Capital Investment Grant program is continued, and then Congress would evaluate its choices for a multiyear federal appropriation. This is the same process that the Green Line project was required to go through to secure its Full Funding Grant Agreement.

If the environmental review and grant process are favorably received by the public, elected officials, and funding agencies, detailed design, evaluation of project delivery methods, and permitting for the NSRL would continue. As federal grants, state matching funds, and other public/private partnerships are secured, construction and vehicle procurement would start. Detailed construction phasing and operating plans would be needed to minimize impacts on existing rail service.

Real Estate Implications of Decisions

DECISIONS MADE REGARDING longer-term transportation have real estate implications for the city of Boston and the region as a whole. Some of these impacts for how the NSRL might change development potential can be identified now, whereas others will require additional work by regional towns and cities. Of course, cyclical real estate market demand can change eventual impact. Some of the sites are seeing significant redevelopment under the current cycle whereas other sites likely will see development in future cycles.

City of Boston

Within the city of Boston, the panel evaluated five development sites to determine the potential impacts of the NSRL as a catalyst for development. These sites were the redevelopment sites of (a) the U.S. Postal Service Fort Point Station and (b) Widett Circle and the NSRL station areas of

Study sites evaluated by the panel.



(a) North Station, (b) Central or Union Station (proposed), and (c) South Station.

North Station

North Station has seen significant development activity over the past ten years. This renaissance was kicked off with the opening of the new TD Garden in 1995, but development momentum has accelerated in recent years. Among these projects, Boston Properties and Delaware North have recently begun construction on the initial phases of their redevelopment of the former Boston Garden Redevelopment—dubbed “The Hub on Causeway.” At full buildout, the project will consist of over 1.5 million square feet of mixed-use retail, office, hotel, residential, and an expansion of TD Garden on the 2.5-acre site. The project is a transformative TOD that will also include improvements to North Station, and it will create major economic impact for the surrounding area.

NSRL Implications: The development that has taken place at North Station has been catalyzed by the area’s proximity to the new TD Garden as well the nearby Charles River, Partners Healthcare/Mass General, Beacon Hill, and other anchors. With this in mind, the advisory panel does not anticipate that the NSRL would catalyze further development beyond that which would naturally occur in the market. One major catalytic site remains in the area: a



North Station study site.

parking lot controlled by Partners Health. This site would be expected to benefit from the NSRL.

Central or Union Station

The area is significantly built out already within the Financial District. As part of the central business district, the NSRL will not drive significant new development but may support a slight premium in rents. The area is within easy walking distance (15 minutes) of both the North and South stations.

NSRL Implications: The NSRL will have little impact in this area. Improved airport access and interconnectivity can be achieved at South Station.



Central Station study site.

South Station/U.S. Postal Service Fort Point Station

Boston's South Station is the last of the great American train stations to be revitalized. Union Station in Washington, D.C., 30th Street Station in Philadelphia, and Grand Central and Moynihan Stations in New York have either undergone major renovations or are in the process of doing so. The third phase of the renovations, the air rights development, has been approved by both city and state authorities and is prepared to start construction. The air rights are being developed by a joint venture consisting of Tufts Urban Development Corporation and Hines Interests. The Hines project includes 2.1 million square feet of development in three buildings: a 47-story office tower, a 500-room hotel, and a nine-story office/research and development building.

The U.S. Postal Service site comprises 1.3 million interior square feet located in two connected buildings on 16

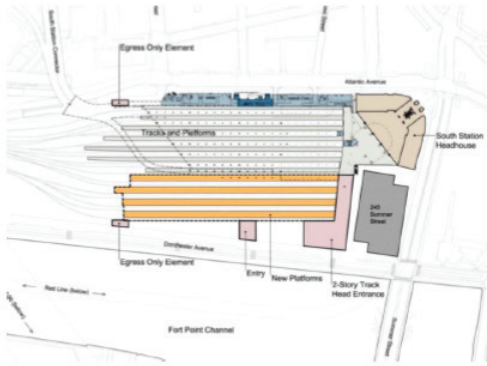


South Station and U.S. Postal Service study site.

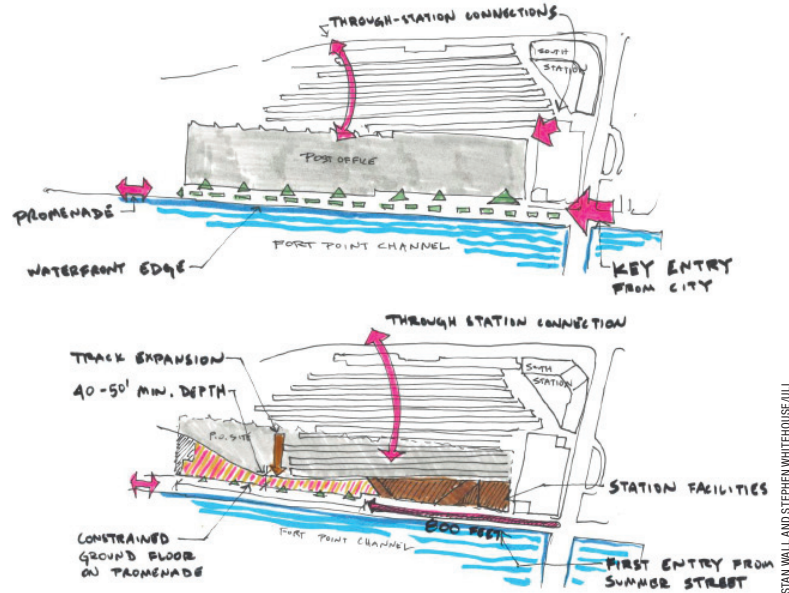
acres. The property sits along Dorchester Avenue, stretching from Summer Street to the Dorchester Avenue Massachusetts Turnpike Authority Central Artery vent building. The property is bordered by South Station, 245 Summer Street, and the Fort Point Channel. The Postal Service site sits at a premier location adjacent to the largest intermodal transit hub in the region and within blocks of both the Rose Kennedy Greenway and the booming Seaport District.

South Station Expansion Project: MassDOT has initiated an environmental assessment to explore alternatives for expansion of the South Station headhouse facility. The goal of this study is "blending the future station expansion with the existing station while creating an integrated facility that improves multimodal links and transfers for all users." These goals align with creating a more integrated, efficient, and higher-capacity transportation network for the city of Boston and the broader region. However, although the study acknowledges and seeks to accommodate the South Station air rights project over the existing railyard, no discussion, design alternatives, or provisions address additional air rights above the expanded station. The alternatives proposed in the analysis will need to be revisited or risk precluding any development potential on the current U.S. Postal Service facility footprint.

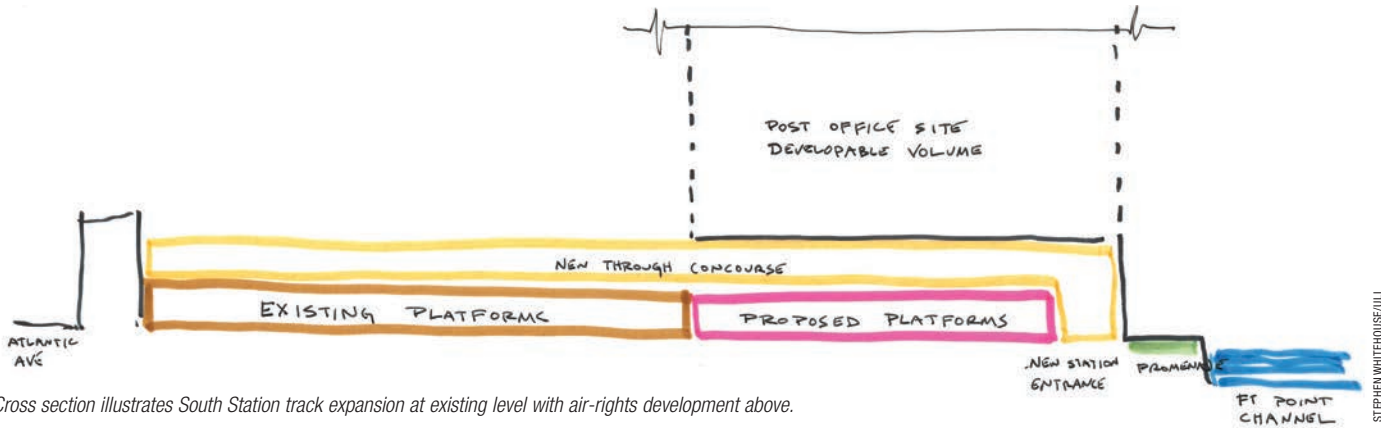
NSRL Implications: As described, the expansion project could significantly affect the site's development potential by precluding or significantly constraining development. The proposed NSRL could mitigate these impacts by greatly reducing or even eliminating the need for station



Existing environmental assessment plan for expansion of the South Station headhouse facility. The panel presents two alternative plans to expand the South Station, thus allowing for a substantial real estate component.

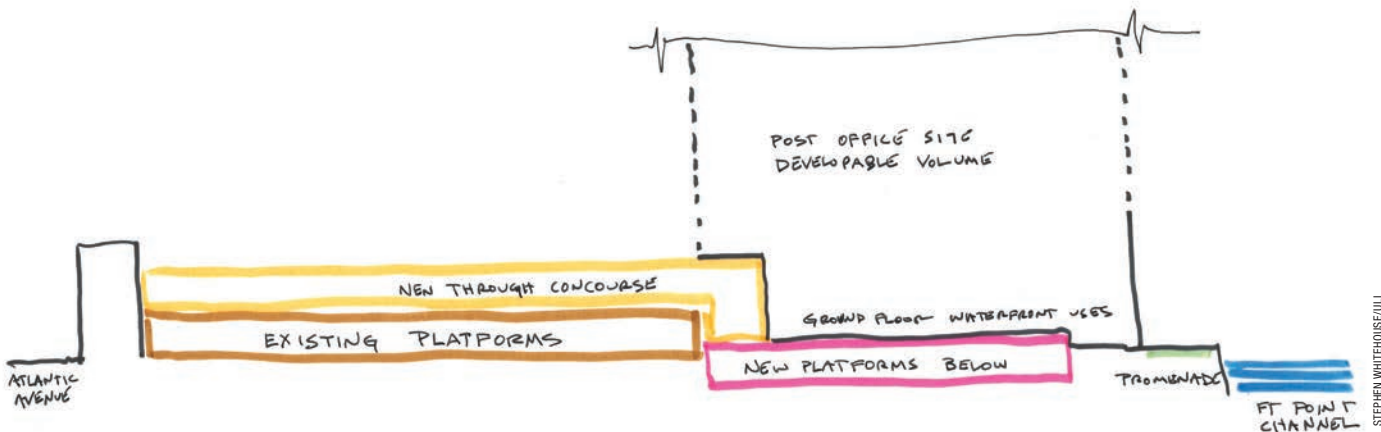


STAN WALL AND STEPHEN WHITEHOUSE/ULI



Cross section illustrates South Station track expansion at existing level with air-rights development above.

STEPHEN WHITEHOUSE/ULI



Cross section illustrates South Station track expansion below ground with air-rights development above.

STEPHEN WHITEHOUSE/ULI

expansion. However, an alternative approach would be to redesign the expansion project to facilitate future vertical development in the same manner as was done for the original South Station Air Rights project. This approach would enable advancing the station expansion to mitigate near- and medium-term capacity constraints, while also setting the stage for future development. Although this vertical development would come at a cost premium to building on a completely clean, unencumbered site, the site's premier location would enable an accommodation of such costs.

Widett Circle

Widett Circle is an 83-acre parcel located just south of downtown Boston and currently home to a wholesale food market. It has been labeled one of the most promising areas for new development in the city of Boston. MBTA's attempts to secure the property for layover facilities have long met with local resistance. The mayor of Boston has expressed reservations about potential transit impairment of the site, which he hopes will be used instead for mixed-use development that would help integrate South



GOOGLE MAPS/STAN WALL/ULI

Widett Circle study site.

Boston with downtown. Such hopes, however, might now be eclipsed by MassDOT's plans to support future train operations. If they are, the forgone development potential would be significant. Based on an analysis produced for Boston's 2024 Olympic bid, the potential developed value of the site would be as much as \$8 billion.

Additional sites near Widett Circle include the New Boston Food Market (16.4 acres), Americold (4.7 acres), and the

Setting Industrial Land Use Policy

In Washington, D.C., the Ward 5 Industrial Transformation Land Study and Task Force developed a strategic plan for the modernization and adaptive use of industrial land within an area where nearly half of all existing production, distribution, and repair (PDR) businesses were located. The city recognized that PDRs contribute to the local economy and provide well-paying entry-level, low-barrier employment to District residents. This plan is now helping guide development in a rapidly redeveloping area, including a large wholesale market that is seeing thousands of new residential units and hundreds of thousands of square feet of new office space. A lesson learned from Philadelphia was that the term "industrial" should be redefined to include a wide range of maker, creative, start-up, and research and development businesses. In San Francisco, industrial space was found to be countercyclical and continued to be in demand during and immediately following the Great Recession. In Pittsburgh, gaining site control was found to be critical, requiring land swaps of other publicly controlled land.

Where appropriate within Widett Circle, surface lots and underused land could be combined. Surplus land could then be used for expanded office, retail, or residential uses as well as green space to create a mixed-use area that includes industrial uses. Additional information about the Ward 5 plan and case studies from high-growth regions can be found here: <https://planning.dc.gov/publication/ward-5-industrial-land-transformation-study>.

Widett Circle warehouse and distribution facility.



STEPHEN WHITEHOUSE/ULI

MBTA Cabot Bus Facility (25 acres). In all cases, these existing warehouse, distribution, and maintenance facilities would need to identify relocation sites to facilitate redevelopment.

NSRL Implications: The proposed South Station expansion project will require additional space for layover tracks for staging trains when they are not in service. Current plans envision transforming the Widett Circle area into a large layover facility, in addition to adding additional layover space to the western part of Boston in the Beacon Park Yard area. Using the circle in this manner would result in significant negative economic impact—displacement of the existing, vibrant warehouse and distribution facilities and the employees who work there and precluding or significantly increasing the cost of redeveloping the area into a new mixed-use neighborhood for the city. As currently envisioned, the NSRL is expected to eliminate the need for this layover space, because trains will run through South Station to points north.

Greater Boston Region

The Boston region has the potential for using TOD to address regional issues such as accommodating housing demand and creating development opportunities for new job creation. The NSRL project will be a key element in helping the integrated transit network reach its full potential; however, TOD does not have to wait for the full operation of a fully unified system.

Additional regional benefits for regional rail include the following:

- Increased ridership and fare-box revenues to the MBTA to maximize use of the commuter rail system;
- Joint development opportunities at stations to leverage private investment;
- Increased housing opportunities;
- Increased property and sales tax revenues; and
- Reduction of sprawl and conservation of open space by concentrating development into activity centers with public gathering places.

Principles of Station Area Planning: The Successful Netherlands Approach

- **Accelerate:** reduce the journey time for passengers.
- **Condense:** locate urban facilities such as housing, working places, and leisure centers closer to a station.
- **Enhance:** provide an attractive environment with services and facilities that enhance the least-valued element of any journey—the waiting and transfer time.

Preparing Communities for TOD

A TOD station area plan should be developed for each town and city served by rail. The MBTA, along with towns and cities, should continue to prioritize work to identify landownership around stations (particularly those that are public or are expected to receive or require major investment in near future). The MBTA should ensure that new stations include provision for applicable over-, under-, or around station development to facilitate TOD. For existing stations, the MBTA, the regional MPO, and local towns and cities should define “station intensification areas” within the regional plan as a strategic priority around key stations, setting higher minimum density and design standards in these areas. Local champions should then be identified within each TOD station area plan to ensure the plan gets implemented.

Towns such as Revere, Brockton, Fall River, New Bedford, Lynn, Lawrence, and Lowell could be ideal pilot candidates for new TOD station area plans. The panel applauds the city of Boston and the MBTA for identifying stations along the expanded Fairmount Line for TOD station area plans within the *Go Boston 2030* report. The MBTA should encourage the use of review mechanisms to ensure viability and share value created in redevelopment. MassDevelopment already has programs (e.g., Infrastructure Investment Incentive Program [or I-Cubed], District Improvement Financing, and Local Infrastructure Development Program [or 23-L]) for infrastructure financing that can be tapped to facilitate TOD projects.

To address the region's housing affordability issue, the MBTA, state, and local municipalities should adopt a tailored approach to affordable housing in TOD-style developments to reflect the value of station improvements. Using publicly owned land as a vehicle for increasing housing affordability can be a powerful tool.

Case Studies: TOD Component of Rail Expansion

The following cases studies are examples of rail expansion projects that have included TOD as a major component.

Crossrail 2 London. The London Crossrail project is a new north–south rail line that is anticipated to increase the Underground network's capacity by 10 percent. The project will provide access to parts of London and the region that are currently underserved. The project is anticipated to stimulate the building of more than 200,000 homes and create more than 60,000 jobs. The project was sold as an economic development tool to access affordable housing locations. To fund the project, a framework was created in 2007 in which London businesses within the zone impacted by the proposed Crossrail contributed to the cost of constructing the project. This strategy of “monetizing” the future value created by the transit investment to leverage additional capital for construction should be considered for the Boston region. Approximately 60 percent of the construction funding ultimately came from the Greater London region's residents and businesses. The funds are managed by Transport for London and the Greater London Authority.

Moscow Suburban Railway Corp. Transport Hubs

Program. The railway corporation realized that development around station areas it owned was a source of revenue and additional passengers. Analysis and calculation of the commercial potential of railway stations and railway-owned land around the stations was conducted. This helped identify stations to be targeted for TOD plans that would have a high return on investment.

Transbay Transit Center. The Transbay Transit Center is a modern, multimodal transit hub that connects 11 transit systems in downtown San Francisco, including a next-phase 1.3-mile extension of the Caltrain commuter rail and space for the future high-speed-rail project. The project area encompasses about 40 acres of redevelopment sites and a 5.4-acre park on the roof of the transit center. The vision for this \$6 billion project, which is now under construction, has been evolving for 30 years and is financed by a variety of federal grants, loans, private investments, local and state funding. The first phase of the project will create a new five-story Transit Center with one above-grade bus level, ground-floor, concourse, and two below-grade rail levels serving Caltrain and future California high-speed rail.



Construction of the Salesforce Tower above the Transbay Transit Center.

CHRISTOPHER MICHEL/FELCKR

Action Plan

MUCH NEEDS TO BE DONE to ensure that the Boston region remains economically competitive and it needs to be a regional effort. Partnerships between the commonwealth, the Metro Mayors Coalition, regional planning groups, business groups, and advocates will need to be strengthened and expanded. This action will, in turn, help convince the private sector to invest in infrastructure and transit projects across the region. In addition, it will show that the Boston region is united to compete against not only peer U.S. cities such as Atlanta, Seattle, Denver, San Francisco, Washington, D.C., and Chicago but also global cities such as London, Frankfurt, Tokyo, Bangkok, Hong Kong, and Toronto. This competition will only get more intense as emerging global cities such as Nairobi, Johannesburg, Mexico City, Wuhan, and Hanoi grow their influence and attractiveness.

To compete at the global stage, infrastructure and transportation improvements need to occur. This growth requires action by jurisdictions on federal, commonwealth, MBTA, and local levels to address some of the problems and recommendations outlined in this report.

Federal

A lot of uncertainty exists at the federal level. Although the Trump administration has not stopped current transit projects, new projects have been halted by the U.S. Department of Transportation. In addition, President Trump's budget (*America First: A Budget Blueprint to Make America Great Again*) has outlined steep cuts to public infrastructure spending. Whereas support for private investment to fund new infrastructure projects seems to exist, little has been done to facilitate this investment. The federal role should be as follows:

- Support the congressional reauthorization of the Fixing America's Surface Transportation (FAST) Act in 2020.
- Continue to appropriate annual funding for the FTA's Capital Investment Grant program for future transit expansion projects.
- Allow flexibility in the use of Community Redevelopment Block Grants for affordable housing and planning grants.

Commonwealth

The commonwealth of Massachusetts can play a large role in stabilizing some of the uncertainty caused by the federal government. This will require changing somewhat the culture of how large-scale infrastructure projects are funded and implemented. The Big Dig was funded primarily by the commonwealth but also received substantial funds from the federal government due to an earmark. The commonwealth also needs to provide the certainty and flexibility required by the private sector to serve a larger role in infrastructure investment. This means expanding the ability for public/private partnerships.

Support for Transit Investment

Luckily, public support exists for improving and expanding rail transit, as found in the recently released *MassMoves* report commissioned by the Massachusetts Senate. Commonwealth residents rated this as the most important statewide action that should be undertaken related to transportation. The next most important cluster of actions included improving and expanding bus service and encouraging land development to facilitate walking, biking, and transit.

The commonwealth should take the following actions:

- **Synthesize regional transit plans into a single vision, timeline, and action plan.** This could involve convening a working group with representatives from all the parties doing relevant plans, with each participant contributing to funding for a contractor project manager responsible for managing the process, identifying and aligning inconsistencies among the plans, and writing the compilation document. Establishing an accessible repository for all pertinent documents could also be important. This is intended to be at a broader level than the long-range transportation plan managed by the MPO.
- **Formulate and execute a regional communications strategy.** With a single, combined vision and action plan, design and implement a communications strategy targeted primarily to the public. Community outreach, digital communications, web page, neighborhood meetings, and street fair booths could be considered.
- **Assist gateway and edge cities with TOD planning, technical assistance, and redevelopment tools.**

MBTA

The MBTA is the most critical player in implementing the NSRL project and broader regional transportation goals. Stumbles and gaps in recent years were mentioned during the panel's interviews. But the panel is pleased by the changes that are occurring and thinks the MBTA should stay the course in rebuilding trust with its riders, leadership, operational capacity, and restoring fiscal solvency. The MBTA should take the following steps:

- **Build credibility through Fiscal and Management Control Board leadership and initiatives.** Several efforts are underway to add accountability and more efficient operations. These should be continued.
- **Deliver the Green Line extension on time and on budget.** This is a demonstration project to additionally strengthen confidence and trust in the organization. It is a needed investment and must be realized and set a new standard of excellence for project delivery.

- **Find some visible quick wins (wayfinding, customer service, Internet upgrade, integrated fare system, etc.).** Projects that can be delivered within 24 months in heavily used locations should be prioritized to maximize benefit and brand building for MBTA.
- **Enhance service levels (i.e., hours of service and frequencies).** Select a well-performing commuter-rail line to evaluate a pilot program of enhanced service.
- **Pilot electrification on selected lines.** Identify a corridor for a pilot project to enhance service levels and reduce operating expense.
- **Do a proof of concept study on the NSRL.** Many questions remain on the operational impacts and design feasibility of the NSRL as a strategic element of a regional system. Accordingly, initiate the study as a way to address questions and determine whether it should be a centerpiece of long-term planning. This effort should include the guiding principles for investment as part of the criteria and be complementary to the ongoing Arup study.
- **Commence South Station expansion efforts with revised design to include a real estate wrap and component.** The South Station expansion addresses current demand and will be important as other core sites develop over time. Nonetheless, its premier location dictates that it be designed in a manner so the waterfront exposure is wrapped with development and as much density as possible is accommodated. This is an exceptionally valuable site that should accommodate people uses as well as transit uses.

Local Jurisdictions

Ultimately, land use decision making occurs at the local level. Cities and towns have the power to set zoning and development guidelines, and this is one of most important roles they play. Local jurisdictions should work together with commonwealth agencies such as MassDOT, MPO, and the Metro Mayors Coalition or an appropriate entity

to establish a regional framework for TOD. This framework should support local jurisdictional decision making but implemented in a systematic and strategic approach for TOD. Creating inclusive, denser, and more walkable neighborhoods will spur economic development, increase mobility, and ensure a stronger region. These benefits will be enhanced by transit but are still beneficial even without transit. This power of land use decision making should also be used to help fund infrastructure investments to assist the commonwealth through TOD planning and development as well as other contributions. Local jurisdictions should undertake the following actions:

- **Create TOD action plans.** Local jurisdictions need to earn MBTA investment in transit by creating supportive land use. The first step is to lead the visioning and entitlements for transit districts around the station areas. The effort should focus on actionable short-term moves as well as the longer-term evolution so the community is enhanced beyond the transit benefits. Landowners, businesses, users, neighborhood representatives, and the MBTA should all be part of the process.

- **Secure TOD zoning around station areas.** With a community vision in place, secure zoning and establish development incentives as needed. Brownfield assistance and other grants should be pursued in this effort.

- **Collaborate to develop first mile/last mile connection strategies.** Communities around the country are doing test programs with buses, Lyft, Uber, bike sharing, and the like. Sidewalks and paths leading to transit stations should be enhanced with lighting, landscaping, and retail uses as possible.

Conclusion

THE WORLD OF INFRASTRUCTURE and transportation is complex at every level: technology, decision making, financing, governance, operations, and more. It mixes together all layers of government players, processes and timelines, specialized financing tools and sources, multiple technologies, and dynamic markets and political cycles. It is hard to understand in the first place, and even harder to communicate—especially to nonexperts in the field. Yet the projects it involves are expensive and nearly always involve expenditure of public funds, which requires aligned public support. To earn this support, a credible and understandable narrative is needed on who is doing what, when it will be happening, why it is important, how it will be funded, and who is in charge.

This is difficult in any city, but Boston seems to be a champion here. Transportation and mobility are very top of mind in the region, with ongoing efforts taking place. Accordingly, the city of Boston, MassDOT, MBTA, the Federal Railroad Administration, universities, and more are carrying out multiple plans, studies, and analyses, all of which have varying time horizons, scopes, constituencies, and objectives, making who is doing and recommending what and why hard to track. The discussion has no clear resource or leader, giving rise to rumors, false conflicts, and credibility gaps.

Equally difficult to access are the underlying technical facts and assumptions that drive the recommendations. This kind of data is essential for many of the important advocates and thought leaders in the community. The panel heard comments like, “I haven’t seen the data or the analysis on this project, so it’s hard for me to support it” or “I’m not confident that this problem has been looked at comprehensively, so how do we know the best course of action?”

In such an educated and sophisticated community, the communication must be stronger, simpler, and more transparent. At the very least, a common vision and rationale need to be articulated and advocated by the elected leaders at the federal and commonwealth levels, the MBTA, and other transit authorities in the region. Ideally, mayors and local officials would also be included in the processes, knowledgeable about the direction, and supportive of the action being taken.

Aligning so many parallel efforts and players is a big order, but with the heightened public interest and importance of these decisions, a focused communication strategy is essential. Ultimately, however, the panel was impressed with the region’s quality, passion, expertise, and good judgment. The Boston region has a bright future if it can pull together; otherwise, it is headed toward further gridlock and will fall behind other emerging global cities.

About the Panel

Marilee Utter

Panel Chair

Denver, Colorado

Utter is president and founder of Citiventure Associates LLC, a real estate advisory firm focused on development strategy and offering particular expertise in public/private partnerships, TOD, and transformational real estate.

Previously, she was executive vice president of the Urban Land Institute, a Washington, D.C.–based global nonprofit of more than 40,000 members known for real estate best practices and cutting-edge thinking. Her responsibilities included oversight of staff, operations, and local impact for offices in 75 cities around the world.

Before ULI, Utter's experience included being managing partner for P3 West LLC; regional vice president with Trillium Corporation, managing the land development revitalization of Denver's Central Platte Valley rail yards; mayoral-appointee director of the Office of Asset Management for the city and county of Denver; first manager of the Department of Transit-Oriented Development for the (Denver) Regional Transit District; and vice president with (now) Wells Fargo Bank. With this unique background, she has become a nationally known speaker, writer, and adviser on innovative approaches to community redevelopment and urban issues.

Utter holds an MBA from UCLA's Anderson School, a certificate in State and Local Public Policy from Harvard's Kennedy School, and a designation from the Counselors of Real Estate (CRE). She is a past national trustee for the Urban Land Institute and chair of the Colorado District Council. Currently, she is chair for the Metropolitan State University of Denver Foundation Board, serves on the

National Charrette Institute board of directors, and is a member of the International Women's Forum.

Mary Campbell

St. Louis, Missouri

Campbell manages all aspects of Washington University's off-campus real estate, including operating more than 1,300 housing units and about 1 million square feet of administrative and academic space and community-based retail. She plays a critical role in shaping the university's real estate portfolio by participating in long-range planning and by leading deal flow, transaction management, and operations. Campbell is actively engaged in development efforts in the Cortex Innovation District, Delmar Loop Commercial District, and neighborhoods near the university.

Before joining Washington University, Campbell held various roles at Bank of America in commercial real estate banking. She managed teams that originated community development loans; invested equity in private equity funds and properties eligible for the historic and New Markets Tax Credit programs; and acquired or developed housing in St. Louis and Kansas City, Missouri.

Campbell also held key policy and administrative positions in local government, including director of neighborhood development for the city of St. Louis and director of the Office of Community Development for St. Louis County. Her responsibilities ranged from operating the city's housing production programs to administering the county's disaster recovery program in the aftermath of the Midwest Floods of 1993 and 1995.

Campbell received her law degree from Washington University and her bachelor's degree from Kenyon College. She attended the program for senior executives in state

and local government at the John F. Kennedy School at Harvard University. She is a member of the Urban Land Institute, serving on the Responsible Property Investing Council.

Richard F. Krochalis

Seattle, Washington

Krochalis is a member of the Seattle Design Commission. This commission reviews Seattle projects with public funding and advises the mayor and City Council on those developments that seek to use public rights-of-way.

He was the regional administrator of the Federal Transit Administration's Region 10 office in Seattle, Washington, from May 2002 until he retired from federal service in June 2016. In this position, Krochalis was responsible for the administration of FTA's capital, operating and planning grant programs, totaling over \$700 million annually in the four-state Western region.

Before joining FTA, Krochalis served as director of design, construction, and land use for the city of Seattle for ten years. In that position, he established performance measures as a part of a multiyear major regulatory reform action agenda and implemented a program for neighborhood design review.

Krochalis served as a career officer in the U.S. Navy in a series of facilities construction and management positions, including program manager for the new Navy homeport at Everett, Washington, and planning and real estate director for the Navy's West Coast operations.

He obtained a master's degree from Harvard University in city and regional planning and a bachelor's degree from Cornell University in environmental systems engineering. His current memberships include the University of Washington's College of the Built Environment Planning Professionals Council, the Urban Land Institute, the American Institute of Certified Planners, and the American Planning Association.

Robert Ravelli

London, United Kingdom

Ravelli has a master's degree in city planning from the University of Pennsylvania and brings over 30 years of international best practice project management and land use planning experience in the areas of development incentives for regeneration around transport stations, transport-oriented development, urban mobility plans, travel demand management, and funding transport improvements. He has been a frequent panelist and speaker on these topics at conferences and universities.

He has completed master-planning projects in both the public and private sectors in the United States, the United Kingdom, Eastern Europe, Russia, China, and Australia. He is an expert evaluator for transport projects for the European Commission.

Ravelli was a deputy mayor for the city of Philadelphia Mayor's Office of Transportation where he coordinated with various agencies to create and implement transport policy and projects. Also in Philadelphia, he was the executive director of a business improvement district along a commercial corridor. He has participated in past ULI Advisory Services panels dealing with developing around transport and transport corridor analysis in Charlotte, North Carolina; Broward County, Florida; Atlantic City, New Jersey; Harrisburg, Pennsylvania; and Moscow, Russia.

Michael Reynolds

Newport Beach, California

Reynolds is a principal of the Concord Group, a real estate advisory firm with offices in northern and southern California and Boston, Massachusetts. The Concord Group provides strategic advice for acquisition and development of residential, commercial, retail, and industrial real estate projects. Clients include land developers, homebuilders, institutional investors, public agencies, and universities throughout the nation.

Reynolds has expertise in market, economic, and financial analyses associated with existing properties as well as development opportunities. He has provided consultation to owners and operators of real estate for the past 12 years, completing more than 750 projects locally and nationally. His extensive experience in the industry provides invaluable insight for clients seeking to establish programming criteria that maximize the market and financial opportunity represented by real estate.

He specializes in the programming and valuation of the following real estate types: urban mixed use; master-planned residential and commercial land; multifamily apartments; and seniors' congregate housing. He has lectured at numerous professional industry groups, including the Urban Land Institute Real Estate School, Pacific Coast Builders Conference, Southern California Appraisal Institute, and University of California—Irvine.

Originally from Connecticut, Reynolds moved to southern California to attend Claremont McKenna College, where he graduated cum laude with a degree in economics and government.

Stan Wall

Washington, D.C.

Wall is a senior real estate executive with over 20 years of experience across the entire real estate project life cycle, including strategy, planning, finance, development, and construction. He is a partner with HR&A Advisors Inc., an economic development strategy, real estate development advisory, and program design and implementation firm. At HR&A, Wall leads the firm's Washington, D.C., office, working with public and private sector clients in the areas of transit-oriented development, urban regeneration, affordable housing, and economic development.

Wall's career experiences have focused on improving the built environment—including his role as director of real estate and station planning at the Washington Metropolitan Area Transit Authority, where he focused on implement-

ing TOD projects across the Washington region. Other previous experiences include Arup, Jones Lang LaSalle, Deloitte Consulting, and Lend Lease.

He received a bachelor of architectural engineering (construction management emphasis) from Pennsylvania State University and an MBA in finance and real estate from the Wharton School at the University of Pennsylvania. He is a registered Professional Engineer in the District of Columbia, is a member of the Urban Land Institute, and serves on the Responsible Property Investment Council; and he previously served as a commissioner for the Maryland Sustainable Growth Commission. In 2013, Wall was recognized by the *Washington Business Journal* as one of the region's Minority Business Leader Award winners.

Theresa Ward

Hauppauge, New York

Ward serves as the deputy county executive and commissioner of economic development and planning for Suffolk County (New York) executive Steve Bellone. She oversees all economic development initiatives for the county with a focus on transit-oriented development such as Wyandanch Rising and the Ronkonkoma Hub, in addition to planning for three bus-rapid-transit routes and overall mobility planning—key to Suffolk County's long-term revitalization and growth.

Before joining Suffolk County, Ward led her own consulting firm advising developers, nonprofits, and public entities on real estate development projects, restructuring, and public/private partnerships. Earlier, she was the senior vice president of real estate for Steiner Studios, the nation's largest film studio outside Hollywood and located in the Brooklyn Navy Yard. She oversaw the implementation of a \$400 million campus master plan and studio expansion and creation of the Brooklyn College Feirstein Graduate School of Cinema. She represented Steiner Studios in China for a successful EB-5 fundraising of \$80 million.

She has 25 years of experience in real estate, government, and corporate leadership and is trained as an urban planner and real estate adviser. Her real estate and development management experience exceeds 40 million square feet and includes a wide variety of public and private property types and uses. She has been an adviser to three urban mayoral administrations in New York City and Baltimore, corporations, public school systems and private universities, real estate developers, a global real estate firm, and numerous nonprofit organizations. She is recognized for her expertise in real estate development strategies for vacant, abandoned, and underused properties.

Ward is a Rutgers University graduate with highest honors in urban studies and real estate development. She also participated in coursework toward the master's in real estate at New York University.

Stephen Whitehouse

New York, New York

Whitehouse is a landscape architect and planner who focuses on the environmental quality and social vitality of places. With Laura Starr, he founded Starr Whitehouse, an interdisciplinary practice in New York that is committed to making urban density livable.

His award-winning work includes the LEED-Platinum Bushwick Inlet Park on the East River in Brooklyn; Southwest Park in Hoboken, which combines public space with stormwater management; outdoor social spaces at new urban residential communities; and public space and resilience planning on the Rebuild by Design BIG U plan for Lower Manhattan.

As chief of planning at New York City Parks in the 1990s, Whitehouse acquired new parks, launched the city's Greenway and Green Streets programs, negotiated park improvements by major development projects, and coordinated the expansion of the USTA National Tennis Center.

A ULI Advisory Services Panel Report



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