APPENDIX G. LAND USE AND ECONOMIC DEVELOPMENT ASSESSMENT
Land Use & Economic Development Assessment

Plaistow
Commuter Rail Extension Study

Plaistow, New Hampshire

January 19, 2015
Land Use & Economic Development Assessment

Executive Summary

The introduction of commuter rail service has numerous potential benefits to the Town of Plaistow. This technical memorandum provides an overview of these benefits related to the potential extension of MBTA commuter rail service to the Plaistow area. Described in more detail later in the memorandum, these benefits could include the following:

- Transit Oriented Development (TOD) in and around the proposed Plaistow station may be supportable, based on a relatively low residential vacancy rate in the Plaistow area as well as the community’s close proximity to the Boston/Cambridge metro area. Older and less mobile adults, as well as younger residents of a community who may not own a car, often support TOD. The impact of TOD on jobs could vary considerably depending on the goals of the community and the mix of uses at the TOD site.

  1. Relatively greater commercial development: One development scenario proposed provides for 20-25 retail and outlet stores, restaurants and office buildings with residential units over ground floor retail. This mixed residential/retail district would border a 24-acre parcel supporting more intensive commercial use, estimated at approximately 750,000 square feet of retail and office space. Envisioned development at the site could support approximately 1,070 long-term jobs at full build-out.¹

  2. More residential development, on a smaller scale: A second development scenario focused on residential development and only 25,000 square feet of commercial development suggests that 36 jobs could be supported at full build out.²

- For every $76,923 of government spending, one job year is created. Assuming an investment of $50 million in capital expenditures to expand passenger rail service to Plaistow, this would suggest that 650 job years would be created as a result of this investment. A job year is one job lasting 12 months, which means that a two-year construction project would generate roughly 325 full-time-equivalent jobs per year on average. These estimates are national; most of these jobs would not accrue to Plaistow residents because the materials and labor required to expand a rail system and its facilities would likely not be available in Plaistow.

- Evidence from property price analyses suggests that proximity to transit tends to increase property prices, especially within one quarter-mile of a station, but this increase depends on a variety of site-specific conditions such as attributes of the transit system, the surrounding neighborhood, and the municipalities. For properties located within one quarter-mile to one half-mile of a commuter rail station, property value premiums in a number of studies were in the 10 percent range. In some conditions, this property value premium has been seen as high as 23 percent for residential properties in close proximity to commuter rail.

¹ Haverhill MA – Plaistow NH MBTA Commuter Rail Extension, TIGER II Discretionary Grant Application – NH Department of Transportation; The analysis assumes 700 square feet per employee is required.
² This scenario assumes 700 square feet per employee is required, consistent with the TIGER analysis.
 Other studies have found that properties near commuter rail stations maintain their value as compared to those without similar rail service. Between 2005 and 2011, residential sales prices in areas of the Boston region that are not near transit stations fell by almost 50 percent. In contrast, those near commuter rail stations dropped only 8.4 percent. The Bradford commuter rail transit zone on the Haverhill Line performed 1,090.8 percent better than the Boston region with respect to the change in average residential sales prices between 2006 and 2011.3

Close proximity and better transportation access to labor may support expansion of existing businesses and impact locational decisions of new businesses. Access to a large and diverse labor pool is highlighted in several studies as an important consideration when companies make locational decisions.

Improved transportation also provides greater access to jobs for Plaistow residents. Currently 4.2 percent of Plaistow residents commute to the Boston/Cambridge metro area. After commuter rail service is extended to Plaistow, this share may increase to 5.2 percent4 based on experiences of communities located similar distances from Boston/Cambridge as Plaistow.

Plaistow’s relatively lower housing costs, as compared to communities similarly distanced from the Boston/Cambridge metro area, combined with improved transportation access to Boston, may support residential growth in Plaistow.

Based on a TIGER application completed by the State of New Hampshire, every dollar spent on developing passenger rail service in Plaistow is estimated to yield $2.30-$4.90 in public benefits.5 Most of these benefits are related to traffic congestion reductions, which is not surprising given expectations that traffic in the Boston metro area is expected to increase over time.6

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3 Ibid.
4 Based on experiences of other commuter rail served communities in the region.
5 The actual estimation of the benefit-cost ratio is dependent on the discount rate, which reflects the time value of money.
6 TIGER II discretionary grant application submitted by the State of New Hampshire.
Introduction

Plaistow commuter rail service will offer more transportation options to current and future residents and businesses, potentially triggering economic opportunities that might otherwise not be available. Studies have found that households choose locations and make tradeoffs between the combined cost of housing and transportation and the value of living near high-quality amenities. An improved transportation system in Plaistow, combined with its relatively affordable housing stock, may make the town an attractive choice for new residents who, for example, work in Boston or Cambridge.

In addition, with a new passenger rail service, there is the opportunity for transit-oriented development (TOD) near the new station. This development could enhance existing housing options, provide new office space and retailers, and create a more pedestrian-oriented, more densely populated neighborhood option in Plaistow. The new amenities that TOD could generate might further support increased economic activity in the station area, potentially benefiting the entire town.

Plaistow businesses may benefit as well from the new passenger rail service. Expanded public transportation links people with jobs, employers to a larger and potentially more diverse labor pool. It can benefit employees and employers in urban, suburban, and rural areas. In fact, most suburbanites who take public transportation are headed to their jobs, and for service or entry-level employees with limited mobility options, public transportation is an important link to suburban-based employers.7

To better understand how Plaistow can position itself to take advantage of the new passenger rail service to help spur economic development, this task describes TOD and identifies success factors. It also assesses the local real estate and economic condition of Plaistow and discusses Plaistow’s strengths and weaknesses for encouraging TOD. Discussion is also provided that relates to the potential benefit to businesses with the expanded rail service, and some of the public transportation benefits that are likely to be generated with the initiation of passenger rail service in Plaistow are also highlighted.

Potential Benefits of Plaistow Commuter Rail

The following describes the types of benefits that could be generated by passenger rail service and station area development in Plaistow. Commuting impacts, as well as potential economic development, is discussed. Transportation benefits anticipated when there are more options available to Plaistow residents are also detailed, as are jobs benefits generated by the capital investment in the rail infrastructure itself.

Commuting Considerations

Currently, the closest rail service available to Plaistow and other area residents is in Haverhill (4.6 miles or 11 minute drive with no traffic according to Google Maps or Bradford (5.0 miles

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7 Public Transportation Means Business, American Public Transportation Association (APTA).
and a 13 minute drive) to the south and Exeter to the north (14.8 miles and 26 minute drive). In part because of limited transportation options, almost all Plaistow households report that they have access to an automobile. While access to a car may not be a limiting factor to Plaistow residents, in terms of reaching their current jobs and services, passenger rail to this New Hampshire community would provide an alternative to car ownership. This could translate into substantial household budget savings for people who opt to take the train rather than drive. According to the American Public Transportation Association (APTA), a two-person household can save, on the average, more than $10,174 a year by downsizing to one car.

In addition to the potential for household budget savings, rail service in Plaistow may expand the radius of consideration for employment, shopping, medical care and so forth for residents. It also expands the employment base that is accessible to Plaistow businesses. Traffic congestion in the metro Boston area is a reality and is expected to increase, but roadway traffic does not impact the train. As a result, a 45-minute train ride may cover more distance than a similarly timed automobile trip. This means that employment centers that are currently beyond a 45-minute driving distance, for example, may be an option for some residents who opt for the train. Currently 4.2 percent of Plaistow residents commute to the Boston/Cambridge metro area. After commuter rail service is extended to Plaistow, this share may increase to 5.2 percent based on experiences of communities located similar distances from Boston/Cambridge as Plaistow. Similarly, Plaistow businesses may have access to employees who would consider taking the train but would not drive to access a job in Plaistow. This has implications for existing Plaistow businesses, but also companies that may consider locating to Plaistow.

Currently, only four percent of Plaistow residents commute to Boston, as compared to 7 to 11 percent of residents in Ayer, Shirley, and the Newbury area in Massachusetts, communities that are located approximately as far away from Boston as Plaistow (see table below). A key difference between the Massachusetts communities and Plaistow is the presence of MBTA commuter rail service in these towns.

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8 Google Maps
11 Based on experiences of other commuter rail served communities in the region.
Table 1: Commuting Patterns for Comparator Towns to Plaistow

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<thead>
<tr>
<th>Table 1: Commuting Patterns for Comparator Towns to Plaistow</th>
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<tbody>
<tr>
<td><strong>Approximate Distance from Boston - North Station</strong></td>
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<tr>
<td>Ayer, MA</td>
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<tr>
<td>36 miles</td>
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<table>
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<tr>
<th><strong>Weekday MBTA Commuter Rail Round Trips</strong></th>
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<tr>
<td>13</td>
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<tr>
<th><strong>Average Trip Time on Commuter Rail (minutes)</strong>*</th>
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<tr>
<td>68 min.</td>
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<tr>
<th><strong>Typical Inbound Weekday Boardings</strong>**</th>
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<tr>
<td>435</td>
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<tr>
<th><strong>Average Trip Time in Passenger Car (minutes)</strong>*****</th>
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<tr>
<td>51 min. (80+ in traffic)</td>
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<tr>
<th><strong>Total Population (2010)</strong></th>
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<td>7,427</td>
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<th><strong>Total Workers (2010)</strong></th>
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<td>3,687</td>
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<table>
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<tr>
<th><strong>% Work in Boston/Cambridge</strong></th>
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<tr>
<td>7.6%</td>
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<table>
<thead>
<tr>
<th><strong>% Boston/Cambridge Workers Commute by Commuter Rail</strong></th>
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<tr>
<td>63%</td>
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</table>

Source: MBTA Fitchburg/South Acton Line Commuter Rail Schedule (Effective August 4, 2014), U.S. Census Bureau, 2006-2010 American Community Survey.
* Newbury Area includes Newburyport, Newbury, and Rowley, MA.
** Plaistow Area includes Plaistow, Atkinson, Kingston, Hampstead, and Newton, NH.
*** Average commuter rail trip time for Plaistow/Plaistow Area is based on average peak trip time from Haverhill, MA to Boston - North Station. plus additional 10 minutes. Average trip time for Newbury Area is based on average peak trip time from Rowley, MA to Boston - North Station.
**** Typical inbound weekday boardings for Newbury Area include Newburyport and Rowley Stations.
***** Passenger car trip time calculated from existing stations in Ayer, Shirley, and Rowley, MA to Boston - North Station based on 7:00 am departure. Trip time for Plaistow calculated from Plaistow Town Hall (145 Main Street).

The Boston regional core – which includes Downtown Boston, Cambridge, and Somerville – contains approximately 445,000 jobs. These jobs are easily accessed via commuter rail and MBTA rapid transit; however, due to high parking costs and roadway congestion, jobs in the regional core are not easily accessible by private automobile. As a result, it is reasonable to expect that the share of Plaistow residents who would consider commuting to Boston for employment would increase with the initiation of passenger rail service. If comparator communities are any indicator, the share of residents commuting to Boston could potentially double from 4 percent, as shown in the table above.

Creating a direct connection to the Boston regional core job market will provide residents with vastly increased employment opportunities. Currently, Plaistow residents have relatively easy access to jobs in New Hampshire (668,268 in total) and the northern Interstate 495 belt.

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12 2012 Average Employment and Wages, Massachusetts Labor and Workforce Development
13 State of New Hampshire Economic and Labor Market Information Bureau, *New Hampshire Employment Projections by Industry and Occupation, Base Year 2012 to Projected Year 2022*, June 2014,
(252,000\textsuperscript{14} in total) via private automobile; providing a direct transit connection to the Boston regional core will effectively increase job access to Plaistow residents by 50 percent. Access to more and potentially higher paying jobs are significant benefits generated by commuter rail for the residents of Plaistow. Likewise, this connection can expand access to employment centers for people who might consider a reverse commute to a job in Plaistow from Boston and other communities in Massachusetts. This is a benefit to businesses in Plaistow too, as they will have greater access to potential employees.

The table below presents the top places for employment in comparator communities and Plaistow. As shown, Boston is not currently a top location for employment of Plaistow residents. Haverhill and Andover, however, are. With expanded commuter rail service, these communities would be accessible by automobile and also rail via the Haverhill Line, providing another transportation option for Plaistow residents to not only access jobs in Boston, but also communities located nearby.

Interestingly, five to eight percent of Newbury area, Ayer, and Shirley employees currently work in Boston, but the city is not presently one of the top employment centers for Plaistow residents. Given Plaistow's proximity to the Boston metro area, it is not unreasonable to expect that the share of Plaistow residents commuting to Boston would increase and more closely approach the share of residents who are Boston-employed in these comparable communities.

Plaistow provides quality of life attributes important to many people; for example, its housing stock is relatively affordable, and recreational and natural resources are easily accessible. The introduction of passenger rail would further enhance Plaistow's overall quality of life by providing an additional means of transportation to the town's residents. This transportation flexibility can be an important factor when determining where to live. Currently, a two-wage-earner family would likely need two automobiles. With passenger rail service available, this family may only need one vehicle for commuting purposes. This not only reduces household expenditures, but it also offers a "draw" to people who prefer to have transportation options to sole reliance on an automobile. It may be the case that only one family member actually uses the train to get to work, but this transportation flexibility may make Plaistow a more desirable community overall, encouraging new residents to locate there, and further supporting the town's overall economic growth.

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Table 2: Top Places for Employment, Plaistow, and Comparator Communities

<table>
<thead>
<tr>
<th>Top Places for Employment</th>
<th>Ayer, MA</th>
<th>Shirley, MA</th>
<th>Newbury Area, MA*</th>
<th>Plaistow Area, NH**</th>
<th>Plaistow, NH</th>
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<tbody>
<tr>
<td>1 Ayer, MA – 18%</td>
<td>Shirley, MA – 15%</td>
<td>Newburyport, MA – 27%</td>
<td>Plaistow, NH – 8%</td>
<td>Plaistow, NH – 21%</td>
<td></td>
</tr>
<tr>
<td>2 Harvard, MA – 7%</td>
<td>Ayer, MA – 10%</td>
<td>Boston, MA – 8%</td>
<td>Haverhill, MA – 6%</td>
<td>Haverhill, MA – 9%</td>
<td></td>
</tr>
<tr>
<td>3 Groton, MA – 6%</td>
<td>Cambridge, MA – 6%</td>
<td>Newbury, MA – 6%</td>
<td>Salem, NH – 5%</td>
<td>Salem, NH – 6%</td>
<td></td>
</tr>
<tr>
<td>4 Boston, MA – 5%</td>
<td>Boston, MA – 5%</td>
<td>Rowley, MA – 6%</td>
<td>Andover, MA – 4%</td>
<td>Andover, MA – 6%</td>
<td></td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau, 2006-2010 American Community Survey.

The State of New Hampshire’s Transportation Investment Generating Economic Recovery (TIGER) grant application analysis, which was submitted to the U.S. Department of Transportation, found that a Plaistow commuter who currently drives the 80-mile round trip to Boston in a single occupancy vehicle incurs monthly commuting expenses estimated at $665. This compares to an estimated monthly commute cost of $294 using commuter rail service, assuming MBTA Zone 8 monthly pass cost of $250 and daily parking cost of $2.00\(^\text{15}\). This equates to an annual savings per daily commuter of $4,453. These costs have certainly increased since the 2010 grant application was submitted, but it gives a sense of the magnitude of savings that may be realized by a Plaistow commuter who switches from driving to taking the train to access his or her job in Boston.

Transit-Oriented Development (TOD)

Beyond the expanded access to employment options afforded by commuter rail service, there are other benefits that may occur as well. It is generally accepted that improvements in transportation can support development, but the type of development can vary depending on the transportation enhancement that is put in place. For example, this project is more likely to support transit-oriented development, which is characterized by compact, walkable communities centered on high-quality train service, rather than traditional development.

TOD is pedestrian-friendly and intended to create a “village-like” environment around a station. This is quite different from some forms of traditional development experienced by Plaistow in recent years. Safety is important and scale and planning is geared toward pedestrians first. For example, buildings along TOD streets are oriented so that doors and windows face the sidewalk, which are usually wider. Public spaces, landscaping, lighting and narrow streets are part of the development plan and help to create an atmosphere that is clearly designed for pedestrians and cyclists. Taller buildings are typically located closest to the transit station, with the density of development tapering off farther from the station. Parking is carefully designed.

\(^{15}\) Haverhill MA – Plaistow NH MBTA Commuter Rail Extension, TIGER II Discretionary Grant Project Application, Submitted by New Hampshire Department of Transportation in cooperation with the Town of Plaistow, Rockingham Planning Commission-MPO, Massachusetts Bay Transit Authority, August 23, 2010.
and managed to reduce any negative impact on the quality of the place, and the number of parking spaces is limited. In many cases, shared parking between compatible land uses that utilize the parking at different times of day or at different times of the week is encouraged.

Across the region and country, improved mobility and accessibility due to transit have helped spur TOD around rail stations, including those stations that serve commuter rail. Many communities that become accessible by rail benefit from transit-related development opportunities within one-half-mile of a rail station, with development increasing along with property values. Some examples of towns in New England that have experienced TOD around rail stations are provided in the Appendix.

A recently conducted survey found that the top predictor of whether a person uses transit is the type of neighborhood in which they live. This is especially interesting given that the study also found that many Americans would prefer to live in a different type of neighborhood than they do now. Suburban, residential neighborhoods are the most common type of neighborhood that survey respondents live in, but mixed-use suburban neighborhoods (with a mix of housing, shops, and businesses) were the most desired. In fact, the survey indicates that there is unmet demand for mixed-use urban, suburban, and small-town neighborhoods across all age groups. This is an important finding for a community like Plaistow. In short, the study found that while not all Americans want to move into the urban core, there is widespread demand for walkable cities, suburbs, and towns with more variety of residential and retail. Plaistow already offers a walkable town center, and mixed-use TOD around a new commuter rail station may further enhance the town’s desirability and encourage economic growth.

These studies and others support efforts to promote mixed use development and utilize transit service as a potential catalyst for doing so, but it is necessary to understand whether there is a market in Plaistow for any type of new development. To make this determination, interviews were held with real estate development professionals familiar with Plaistow. While some types of development may be limited due to a lack of public water and sewer in the town, there appears to be a market for new residential development. According to local real estate professionals interviewed for this study, rental unit vacancy rates in Plaistow are exceedingly low, two to three percent. Five percent is generally considered to be a healthy vacancy rate, reflecting sufficient supply but also the transitory nature of the rental market.

Other factors also suggest a potential market for new residential development. Based on the interviews, housing suited for the over-age-55 population, representing 28 percent of Plaistow’s population, is in short supply. While population aging is occurring across the country, the New England states are generally older and aging more rapidly than the U.S. average. In addition, the “empty nester” is frequently highlighted as potentially more transit dependent and interested in more compact living, both attributes consistent with TOD. As the population in New Hampshire and in New England generally, continues to age, the demand for housing geared

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16 “Who’s On Board 2014, Mobility Attitudes Survey,” prepared for TransitCenter by RSG.
toward this demographic is likely to increase and may be an opportunity for new development in Plaistow.

In addition to the state’s and region’s aging populations, key populations are expected to increasingly drive less and rely on transit more over time. For example, people born between 1982 and the early 2000s drive significantly less than other cohorts of the population do. Between 2001 and 2009, vehicle miles traveled (VMT) among 16-34 year olds declined 23 percent, public transportation use rose 40 percent, and bicycling rose 24 percent. Trends were consistent among income groups, with even well-off young Americans driving less and using alternative transportation more.

Given the relatively high cost of living in Boston and its nearby suburbs, this population is likely to be interested in more affordable housing options. Without an automobile, this population would be unlikely to consider Plaistow as a place where they could live. With good commuter rail service, combined with affordable housing and some new amenities, however, it may become an option for people employed in Boston and interested in a reverse commute.

The Chicago-based Center for Neighborhood Technology has developed a Housing+Transportation Affordability Index (CNT H+T Index), which considers the combined costs for major cities around the country, including the Boston metropolitan area. They suggest that combined housing and transportation expenses should consume no more than 45 percent of household income. For the census block groups surrounding the Plaistow station area, a median income household pays 24 to 27 percent of its income for housing based on analysis conducted for the State of New Hampshire’s TIGER II grant application. Adding transportation costs, however, pushes the combined index to 46 to 49 percent of total household income, exceeding the affordability threshold.

This is consistent with the fact that much of the economic development in southern New Hampshire has been Boston area workers seeking more affordable housing choices, but accepting a long commute, often using a single occupancy vehicle, due to lack of public transportation options. Housing in much of central Rockingham County is affordable for median income households based on the traditional measure that housing expenses should consume no more than 30 percent of household income.

For a moderate-income household making 80 percent of area median income, current housing costs in the Plaistow station area consume 30 to 33 percent of household income – close to the affordability threshold. If transportation costs are added, however, this combined cost increases to 56 to 59 percent of household income, far exceeding the affordability threshold. Commuter rail and the regional transit connections that are a part of that transportation improvement may help address this gap, offering affordable commuter transit options as well as local connections.

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19 Ibid.
20 Haverhill MA – Plaistow NH MBTA Commuter Rail Extension, TIGER II Discretionary Grant Project Application, Submitted by New Hampshire Department of Transportation in cooperation with the Town of Plaistow, Rockingham Planning Commission-MPO, Massachusetts Bay Transit Authority, August 23, 2010.
21 Ibid.
Development experts familiar with the impact that commuter rail service can make on a community believe that an older demographic, along with a younger generation interested in flexible, affordable housing that is comfortable using public transportation, could support significant growth in rental units within one-half to one mile of a new station.\textsuperscript{22} New residents from other parts of New Hampshire and Massachusetts who do not fall into either of these age groups may also make housing choices that factor in proximity to commuter rail service to and from Boston. These new residents may demand new or potentially infill residential development within a mile or so of the rail station. With these new residents may also come an increase in demand for new retail in Plaistow, which could further promote economic growth in the area.

Experiences of other communities that initiate or expand rail service and put in place policies to support higher density TOD suggest that there are benefits that are accrued to the public beyond the mobility and accessibility improvements typically expected with a transit investment. These include various features of neighborhood form such as retail establishments, entertainment services, and public infrastructure and services, as well as social capital, and are indirectly attributable to transit development. This suggests that even residents of and employees who work in Plaistow may benefit from the introduction of commuter rail to the community and the subsequent TOD this new service generates, regardless of whether they actually take the train. For example, new retail is often included in TOD planning, which could grow quality of life by providing increasing numbers and diversity of amenity options to Plaistow residents and their visitors. These benefits accrue to transit users, but also people who never intend to use the train but enjoy the TOD atmosphere near the train station.

**Property Value Impacts**

Numerous studies have found that “consumers are willing to pay more for housing located in areas that exemplify new urbanist principles or are ‘traditional neighborhood developments.’ These neighborhoods are walkable, higher density, and have a mix of uses as well as access to jobs and amenities such as transit.”\textsuperscript{23}

These findings extend to the Boston metro area. For example, between 2005 and 2011, residential sales prices in areas of the Boston region that are not near transit stations fell by almost 50 percent. In contrast, those near commuter rail stations dropped only 8.4 percent.\textsuperscript{24} These property value differences were observed across all types of residential properties in the Boston area.

Even more relevant to Plaistow, the study examined specific communities along commuter rail lines. The Bradford commuter rail transit zone on the Haverhill Line, for example, performed 1,090.8 percent better than the Boston region with respect to the change in average residential sales prices between 2006 and 2011.

\textsuperscript{22} State of NH USDOT TIGER Application, “Haverhill-Plaistow MBTA Commuter Rail Extension.”
\textsuperscript{24} Ibid.
Evidence from property price analyses also suggests that proximity to transit tends to increase property prices, especially within one quarter-mile of a station, but this increase depends on a variety of site-specific conditions such as attributes of the transit system, the surrounding neighborhood, and the municipalities. For properties located within one quarter-mile to one half-mile of a commuter rail station, property value premiums in a number of studies were in the 10 percent range. In some conditions, this property value premium has been seen as high as 23 percent for residential properties in close proximity to commuter rail.25

**Employer Impacts**

In addition to the potential for TOD around the station area, the expansion of commuter rail service to Plaistow may impact existing businesses as well by providing access to a larger and more diverse employee base, the Boston-Cambridge metropolitan area. It would also provide another means of transportation to people currently employed, or interested in employment, in communities along the Haverhill Line. For example, both Andover and Haverhill are currently top employment centers for Plaistow residents. Passenger rail service between Plaistow and these communities could further support employment between these towns and others located along the rail line.

As noted earlier in this memorandum, people born between 1982 and the early 2000s drive significantly less than other cohorts of the population do. While these individuals would be unlikely to consider employment opportunities in Plaistow today, public transportation would enable them to expand their reach when looking for a job. This means that employees who were not previously available to Plaistow businesses now are.

In addition to Plaistow residents having greater access to employment centers with the expansion of passenger rail, employers also have access to a wider labor pool. A community like Plaistow offers many things that appeal to businesses choosing to expand or locate to an area. These include relatively low housing costs, access to recreational facilities, overall quality of life, among others. With demand for skilled labor so high today, access to a large labor pool is often critical when a business considers where to locate. In fact, 72 percent of businesses surveyed, as part of a larger study on business location decision making, cited workforce suitability as the top criterion in the selection of a location.26 Passenger rail, and access to a wider labor pool, can help employers reach suitable employees and vice versa.

Commuter rail service provides greater access to a larger and more diverse pool of labor; thus, enhancing Plaistow’s position in attracting new business based on the selection criteria highlighted as most important to companies. However, much of the recent commercial development in Plaistow has been retail. If the community is interested in drawing office or industrial development, there are issues unrelated to transportation that would need to be evaluated. For example, the lack of public water and sewer is a factor that many businesses would need to resolve if they were to locate a new business or expand an existing business in Plaistow.

25 Sources for this information are provided at the end of this technical memorandum.
Another issue that should be considered is how to transport people who take the train to businesses in Plaistow that may not be walkable from the station. Many of the larger employers in Plaistow, particularly retailers, are not within walking distance of the proposed train station areas. It is possible that some of the larger retailers could consider providing a shuttle between the train and their businesses, but this is not guaranteed.

Despite some limitations to development, a strong transportation system is important to businesses in their location decisions and may help support existing businesses expand. Access to a wider labor pool is afforded by rail service because it makes it possible for people who do not have access to a car to reach their jobs. It may also offer travel time savings to commuters by making it possible for people to take the train and avoid congested roadways during rush hour. This is a benefit to commuters on the train whose commute time may be reduced, but it may also expand the geography considered reasonable for a person looking for a job.

Transportation Benefits
The expanded commuting options, personal budget implications, employer benefits and TOD opportunities afforded by rail service in Plaistow are potentially significant, but there are other benefits as well. For example, a reduction in traffic congestion particularly during rush hour, emissions reductions, pavement maintenance savings when there are fewer cars on the road are all benefits of passenger rail. These benefits are recognized by the US Department of Transportation and estimation of these benefits is required for some types of federal funding.

The State of New Hampshire completed a TIGER application in 2010. As part of this application development, many transportation benefits (e.g., congestion, emissions, pavement maintenance) were quantified and several challenges were identified that could be mitigated by passenger rail service in Plaistow:

- Improving mobility for residents of Plaistow and southern New Hampshire to access the Greater Boston job market, as well as reverse commute opportunities for residents of northern Massachusetts.
- Reducing vehicle miles traveled, and associated pollutant emissions, on heavily congested segments of Route 125 in Plaistow and Haverhill and major commuter routes further south approaching Boston.
- Supporting economic development and job creation in Plaistow and surrounding communities, including potential reuse of two large industrial brownfield sites.
- Improving operational efficiencies and reducing adverse environmental impacts related to the location of the MBTA’s current layover facility in Bradford, Massachusetts.

While the details of the TIGER II project and the current effort are slightly different, many of the identified public benefits remain relevant. As determined by the application’s benefit-cost analysis, the public benefits of passenger rail service in Plaistow exceed the costs of the investment. Specifically, the analyses found that for every dollar spent on developing passenger rail service in Plaistow, $2.30-$4.90 in public benefits would be generated.27 Most of

27 The actual estimation of the benefit-cost ratio is dependent on the discount rate, which reflects the time value of money.
the benefits were related to traffic congestion reductions, which is not surprising given expectations that traffic in the Boston metro area is expected to increase over time.\(^{28}\)

**Construction Benefits**

For every $76,923 of government spending, one job year is created. Assuming an investment of $50 million in capital expenditures to expand passenger rail service to Plaistow, this would suggest that 650 job years will be created as a result of this investment. A job year is one job lasting 12 months,\(^{29}\) which means that a two-year construction project would generate roughly 325 full-time-equivalent jobs per year on average. These estimates are national; most of these jobs would not accrue to Plaistow residents because the materials and labor required to expand a rail system and its facilities would likely not be available in Plaistow.

**Existing Development in Plaistow and TOD**

While the opportunity for TOD in Plaistow exists, projecting the amount of development that may be catalyzed by a rail improvement is challenging. The existing real estate condition of the region, experiences of other communities, and other factors can help inform expectations. The TOD impact area tends to encompass land and ownership parcels within approximately one-half-mile of the proposed transit improvement, as this is considered to be a walkable distance. For Plaistow, the one-half-mile radius falls on either side of Main Street in general, as shown in light orange on Figure 1.

It is important to note that one-half-mile may be a reasonable distance to walk, but the infrastructure to support and encourage walking in and around the proposed station areas in Plaistow is not yet in place. To encourage walkability, and ultimately TOD, sidewalks and other pedestrian-friendly improvements would need to be made.

Today, Plaistow’s commercial development is primarily centered along New Hampshire Route 125, a north-south road that connects the town with Haverhill, MA, to the south and Kingston, Epping, and Rochester, NH, to the north. Route 125 is also known as Plaistow Road and Main Street, and local businesses and numerous large chain stores are located along it. The proposed station areas generally lie north of Chandler Avenue, south and west of Main Street, and east of Plaistow Road. As shown in Figure 2, the stations for Alternatives 1 and 2 are located in commercial areas of Plaistow. Alternative 3 is zoned industrial. The Alternative 1 Layover Facility across the Massachusetts border is located in an industrial park area of Haverhill.

\(^{28}\) TIGER II discretionary grant application submitted by the State of New Hampshire.

\(^{29}\) The Executive Office of the President, Council of Economic Advisers (CEA), issued a memorandum in May 2009 on “Estimates of Job Creation from the American Recovery and Reinvestment Act of 2009.” That memorandum provided a simple rule for estimating job-years created by government spending, which is that $92,000 of government spending creates one job-year (or 10,870 job-years per billion dollars of spending). More recently, in September 2011, based on further analysis both of actual job-creation experience from transportation projects under the Recovery Act and on further macroeconomic analysis, the CEA determined that a job-year is created by every $76,923 in transportation infrastructure spending (or 13,000 job-years per billion dollars of transportation infrastructure spending). This figure can be used in place of the earlier $92,000/job-year estimate. Applicants can use this estimate as an appropriate indicator of direct, indirect and induced job-years created by TIGER Discretionary Grant spending, but are encouraged to supplement or modify this estimate to the extent they can demonstrate that such modifications are justified. However, since this guidance makes job creation purely a function of the level of expenditure, applicants should also demonstrate how quickly jobs will be created under the proposed project.
Figure 1. Alternative Station One-Half Mile Walking Distance Map
Figure 2. Plaistow and Haverhill Zoning Map
Much of the recent development in Plaistow has been commercial in nature, particularly along Route 125. Existing, but older, retail space is being demolished and replaced with newer buildings and similar uses. While development has occurred in Plaistow, the town does not provide town water and sewer service, which limits development according to real estate experts in the area. In fact, one developer suggested that the relative lack of restaurants in Plaistow is, in part, due to no city-provided utilities. Private septic and well infrastructure must be put in place, which places an additional cost on developers. This could affect the ability of higher-density TOD to occur in and around the station and is an important issue if residential or retail (e.g., restaurant) development is the type of use that is desired around the station area.

Another factor that should be considered when contemplating TOD is the zoning that is currently in place. While the station development would be acceptable in the currently zoned commercial and industrial spaces, TOD may not be. Mixed-use development is preferable for TOD and an understanding of whether non-commercial uses, such as residential, would be allowable given the existing zoning is critical.

On a positive note, interviews with real estate professionals familiar with Plaistow indicate that the real estate market is stable. The summer of 2013 was particularly active, and this summer has also been relatively busy according to individuals who were interviewed. Single-family home sellers in the Plaistow area are generally receiving 90 percent of their asking price, and houses are taking between 30 and 90 days to sell. For rental housing, vacancy rates are extremely low at 2 to 3 percent. Five percent is generally considered “healthy” with enough supply to meet demand, which suggests that Plaistow may have a lack of supply in residential rental units.

It is worth noting that, with the exception of Shirley, the median housing value in Plaistow is lower than comparator communities with MBTA rail service. Specifically, median housing values in Littleton and Ayer are $343,300 and $322,200, respectively, compared to Plaistow’s $274,500. Shirley reported a median housing value of $245,500. These relatively lower housing values, combined with a new rail transportation option in Plaistow, further enhances Plaistow’s competitive position in the region as a community worth considering when evaluating towns within commuting distance of metro Boston.

In addition to the residential development that may be generated, and based on location criteria identified as important to businesses, expanded rail service may also support new business interest in the Plaistow area. It should be noted, however, that people who travel to Plaistow by rail to access their jobs may also need transportation from the rail station to their employers. Non-transportation considerations that also impact development in Plaistow include a lack of public water and sewer, as well as a limited inventory for quality light assembly space in the 15,000 to 30,000 square foot range. These factors have been noted previously to economic development professionals as limitations to Plaistow business growth.

Assuming that zoning and utility factors are mitigated, new development may be supportable and commuter rail service between Boston and Plaistow may help catalyze and sustain this...
development. A key location for new development identified in the Plaistow Commuter Rail Transportation Investment Generating Economic Recovery (TIGER) grant application is the Testa Realty, Inc. and Chart Inc. site (Alternative II and III sites). The TIGER application discussed the development potential of this site in support of a commuter rail station at the Westville Road park-and-ride (Alternative I station). The site consists of three parcels with a total of 60.1 acres, with access to both Route 125 and Route 121A (Main Street). While currently zoned for industrial development, the Town of Plaistow and the Rockingham Planning Commission have long identified the site as a potential TOD district. These three properties abut an additional 7.5 acres of Town-owned land, which, if combined for development purposes, would yield a parcel of 67 acres. One development scenario proposed for the site provides for 20 to 25 retail and outlet stores, restaurants, and office buildings with residential units over ground floor retail. This mixed residential/retail district would border a 24-acre parcel supporting more intensive commercial use, estimated at approximately 750,000 square feet of retail and office space. Assuming 700 square feet per employee, envisioned development at the site could support approximately 1,070 long term jobs at full build-out.31

The existing real estate market appears healthy, but well-positioned to take advantage of TOD opportunities, particularly with respect to residential. Business development is less certain, based on other factors that would impact a company’s decision to expand or relocate to Plaistow (e.g., lack of public water and sewer). If the experience of other commuter rail served towns is any indication, however, new mixed residential/retail use in the station area may be supportable if some of these other limitations to development are resolved.

**Site Development Potential**

It is expected that the type of development that would be generated by passenger rail service would be transit-oriented, characterized by a mixed-use, high density, and pedestrian-friendly environment around a new rail station. Experiences in other transit-served towns and cities suggest that the concentration of residential and business activity around a station has the potential to translate into economic gains due to increased accessibility and the introduction of new development into the community.

Assuming that mixed use development (e.g., residential, commercial and/or industrial in the same area) is allowable within one-half-mile of the proposed station locations in Plaistow, the experiences of other communities suggest that TOD can occur, even around a rural/suburban commuter rail station. A review of experiences of commuter rail served communities was conducted as part of the economic development task. Complete case study findings are provided as an appendix to this document, but there are a few experiences that are particularly relevant to Plaistow. Along with these specific observations, information obtained through interviews with real estate professionals familiar with Plaistow and/or TOD is provided. Finally, general observations of success factors for TOD are detailed below.

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31 *Haverhill MA – Plaistow NH MBTA Commuter Rail Extension, TIGER II Discretionary Grant Application – NH Department of Transportation*
TOD Success Considerations
Transit has been credited with increasing development and property values across the country. For example, from 2006-2011, residential property values performed 42 percent better on average if they were located near public transportation with high-frequency service.32 While this is a significant statistic, experiences are mixed when it comes to transit premiums – or the value added to property because of proximity to high-speed transit. In reality, the magnitude of a transit premium depends on a number of factors, including location, transit type, land use, regional and national economies, regulatory environment, and regional transportation connectivity.

To reconcile and standardize the experiences of communities across the country, researchers have applied statistical meta-analyses on a wide range of results. In one study, Debrezion et al. (2007) analyzed over 60 different transit proximity premiums from research in the United States. Factors considered as potentially impacting the premium included:

- Type of property (i.e., commercial, residential);
- Type of transit system (i.e., heavy rail/Metro, commuter rail, bus rapid transit and light rail); and
- A series of categorical variables related to how the study was conducted and if certain types of variables were included (e.g., distance to highways).

The results indicated that on average, transit proximity premiums within one-quarter-mile of a station are higher for commercial (16.4 percent) than for residential properties (4.2 percent). In addition, premiums from heavy and commuter rail transit are higher than from light rail transit – property premiums near commuter rail stations are about 14 percentage points larger than those near light rail stations.

A more recent meta-analysis conducted by Mohammad et al. (2013) supplements this work with additional data, including a broader range of methods and contexts. The main results are largely similar but with different estimates across property and transit types. Findings include:

- Property values are about nine percent higher within one-third- and one one-half-mile from a station;
- Retail properties have significantly higher premiums (by over 25 percent) compared to residential and office properties; and
- Commuter rail exhibits significantly higher premiums (by about 25 percentage points) compared to other transit types.

The inconsistency of empirical results complicates the process of drawing conclusions from this work to assess value creation at a new site. While the two meta-analyses arguably provide the best overall perspective on the value of a property’s proximity to a transit station, these results are still only applicable on average. For any one particular site, an increase in property value depends on many factors (e.g., property type, transit type, proximity of other transportation

32 American Public Transportation Association, [http://www.apta.com/mediacenter/ptbenefits/Pages/default.aspx](http://www.apta.com/mediacenter/ptbenefits/Pages/default.aspx)
systems, neighborhood characteristics), and these are not adequately accounted for in meta-analyses that produce average values.

Studies have found that local regulations, regional connections and the regional and national economies in particular play a part in the success of economic development near train stations and can impact the magnitude of development as well as property values. Each of these factors is discussed in greater detail below.

**Local Regulations**
Local government zoning ordinances, subdivision regulations and other administrative requirements affect what can and cannot be developed in and around a rail station. For example, single use districts can limit TOD. As a result, many towns and cities interested in benefiting from proximity to transit have rewritten their zoning ordinance or created a TOD overlay district to develop mixed use zones that support a range of development and are generally the basis for TOD. Other regulatory barriers may also exist. For example, auto-oriented streets with higher speeds are not appropriate for transit-served, pedestrian oriented development, and the local parking ordinance can influence TOD success. When these issues are not addressed, the viability of TOD development patterns is likely to be limited.

**Regional Connectivity to Other Transportation Systems**
How connected a region is from a transportation perspective also influences TOD. Studies have found that as the size of the area and population directly connected by transit to a given station location increases, the potential value added to nearby property increases. As a result, single transit lines serving a small city or a small portion of a metro region would be expected to have less impact on property values than an extensive network of transit lines connecting an entire metro region. In the case of Plaistow, MBTA commuter rail connectivity would provide access to numerous transit systems across the region, including Amtrak intercity passenger rail service, other commuter lines, bus service, light rail service, as well as bicycle and pedestrian networks not presently accessible to many Plaistow residents.

**State of the Regional and National Economies**
A final factor in TOD is the regional and national economy. While transit adds property and economic value in strong markets, the health of the national and regional economies is critical to the timing of TOD land acquisition and TOD development projects. A recession, as the country faced in 2008 and 2009, will impact the viability of TOD. Similarly, transit cannot overcome the condition of a regional economy or the local real estate market. If office space is overbuilt in a community, it may not perform well even in a TOD. It might outcompete other new office space, but the amount of the transit premium may be small and the viability of the development may be questionable.33

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33 Transportation and Real Estate, Making the Connection, “Public Transit Boost Property Values if Conditions are Right,” National Association of Realtors.
Conclusion

The real estate and economic condition of Plaistow suggests that there may be a market for residential development, particularly for rental and over-55 housing, even without commuter rail service and the addition of new residents who may use the train and be interested in housing nearby the station. The precise type and size of that development is uncertain, but a preliminary TOD concept suggests that 240-260 residential units in two-story buildings and approximately 25,000 square feet of commercial development could be accommodated on one of the potential rail station sites. For Plaistow to establish an environment that is conducive to TOD, however, the following actions are recommended:

- Study the availability of utilities that can support dense development in and around the proposed stations. The extent to which the limited utility service in Plaistow is likely to impact TOD should be well understood and mitigated if feasible.
- Coordinate commuter rail service from Plaistow with other regional transportation systems to ensure that passengers can access as much of the existing transit network in and around Boston as possible.
- Timing of the development is important. To the extent possible, commuter rail service initiation, station construction, and associated real estate development should be conducted when the economy is strong.
- Based on the experiences of other commuter rail-served communities, a key to successful TOD (even for residents who do not use the transit service) is that the design and location of the facilities used to support commuter rail are linked to other town purposes.
- Review existing zoning to determine whether mixed-use development would be allowable near the proposed station area locations.
- Examine speed limits in and around the proposed TOD to determine if they are supportive of a pedestrian-oriented environment.

While expanded passenger rail service to Plaistow is not guaranteed to generate new business interest in the area, the ability of passenger rail to connect employers in Plaistow to a larger labor pool available in metro Boston-Cambridge is a potential advantage when businesses are considering expansion or relocation to the area. To promote this business development, however, other issues would need to be addressed. For example, the lack of public sewer and water, limited types of space in Plaistow but required by some businesses, and connectivity between the rail station and employers would need to be considered.
Appendix

Case Study Findings

Every community is unique, but it is generally accepted that better transportation supports economic growth and improved livability for residents and visitors. While economic development can occur organically when the local transportation system is enhanced, it is more often part of a larger development and planning effort.

The following section highlights several communities that are comparable to Plaistow in some way, and their experiences may be useful in better understanding the type and magnitude of development that can be generated by passenger rail service. Many of these communities conducted significant planning efforts that involved rezoning and other initiatives intended to support development around rail stations; their experiences and best practices are included below.

Canton, MA

Located southwest of Boston in Canton, MA, the town developed a vision plan and action strategy for the revitalization of Canton Center in the late 1990s that viewed the Canton Center commuter rail station a key catalyst for downtown redevelopment. The revitalization strategy led to the town’s adoption of the Canton Center Economic Opportunity District Bylaw in 2000, the intent of which was to directly encourage TOD and better connect the station to the downtown.

Before the bylaw was adopted, Canton’s downtown was divided into three distinct zoning districts. Overall, mixed uses were not encouraged, and residential development was limited to one or two apartments above retail uses. The new bylaw increased allowable densities to one unit per 2,000 square feet and 3,000 square feet of commercial development per 10,000 square feet of land area; thus, encouraging a mix of residential and commercial uses. It also allowed for shared parking for two or more uses that were able demonstrate different peak demand.

The zoning changes helped to catalyze new housing development in Canton, concentrated around the transit station. Since 2000, five new housing developments totaling 207 new residential units have been built within a five-minute walk of the train station. Three of the projects are directly adjacent to the train station and include landscaped walkways between the station and the residential developments. Two others, located within a few minutes walk, include ground floor retail. Several more projects are in the planning stages and will include several units for low- and moderate-income residents. All of these projects have been built on underutilized sites, and one of the planned projects will be built on an existing brownfields site. The town also improved streetscapes in and around the station area to further support their TOD goals.

34 http://www.mbta.com/about_the_mbta/t_projects/projects_tod/?id=7020
Concord, MA\textsuperscript{35}

The Town of Concord, located 15 miles west of Boston, was established in 1635 as a farming community. Train service first arrived in the late 1860s, with stations built in Concord Center and West Concord. The Concord Center station is located about one-third-mile from the historic business center of Concord, which today is recognized as a major tourist destination. The station serves commuters heading to jobs in Boston as well as tourists headed to historic sites in Concord.

Before the advent of the automobile, the train stations played a central role in shaping development patterns in Concord. Businesses and residents were built in close proximity to the stations, which provided direct access to downtown Boston. After automobiles became widespread, development in Concord became more dispersed, and locations around the stations became less desirable. A 2.71 acre site directly across the train tracks from the original station building was converted to a lumber yard, which operated on the site until the early 1990s. Small retail businesses were located along Thoreau Street across from the station, and other sites surrounding the station were converted to a range of uses including a gas station, a supermarket, and a Friendly's Ice Cream restaurant.

In 1987, the Town prepared a long range plan intended to direct development in Concord. The long range plan identified the Concord Center station as an important node for future higher density commercial and residential development. The Town particularly recognized the potential to redevelop the lumber yard site with uses that might benefit from a location in close proximity to the commuter rail station.

The resulting Concord Common development comprises three mixed use buildings with retail space, office space, a 180-seat restaurant, and 20 rental apartments. The Town strongly urged the developer to include two affordable units at the site, although the final agreement required that he provide four affordable units at another location in the Town, allowing all the units at the station to be rented at market rates. The zoning required 146 parking spaces for the mix of uses proposed. However, the developer negotiated a reduction of 20 spaces by demonstrating that shared parking could be successful in meeting demand. The project included 15 spaces dedicated to commuter parking.

The Planning Board negotiated a reduction in the impervious lot area from 2.15 acres to 1.93 acres, and the inclusion of a landscaped garden area for residents. The developer also agreed to provide a landscaped pathway from Sudbury Road to the platform, creating a pleasant pedestrian accessway. Finally, because the Concord Common development directly abuts an established residential neighborhood, the developer designed the building facing the residential street at a scale that blended well with the existing housing, and provided a vegetative screen between the parking lot and the neighborhood.

The Concord Common development is just one element of a vibrant mixed use neighborhood surrounding the Concord Center commuter rail station. The old station building represents a stunning example of historic train stations of the mid-1800s. The building has been meticulously

\textsuperscript{35}Ibid.
preserved and now houses an upscale general store on the ground floor and a sit down restaurant on the second floor. Two corner lots at the intersection of Sudbury Road and Thoreau Street have undergone several transformations and now are home to a Dunkin' Donuts and a Starbucks. A mix of retail and office uses line both Thoreau and Sudbury Road within an easy walk to station.

**Cranford, NJ**[^36]

Cranford, NJ, is a bedroom community located 35 miles from New York City and like many other communities, its retail core was historically the backbone of its economy. With the introduction of the shopping mall, that downtown main street shopping area was essentially replaced and Cranford needed a strategy to rebuild its downtown and bring residents and shoppers back. As part of its strategy, the town decided to use its train station as a catalyst for growth.

Twenty-five trains travel to midtown New York each weekday with 1,300 passengers boarding in Cranford. Over the past 10 years, ridership has grown nearly 32 percent. The trip takes about 50 minutes and requires changing trains at Newark Penn Station.

As a first step, Cranford chose to focus on streetscape improvements and promotions as a way to increase interest and cultivate private investment, beginning in the 1980s. It established a Special Improvement District (SID) and was the first town in New Jersey to take advantage of this program. Cranford’s special assessment on property owners generated more than $2 million in investment, feeding the resurgence of the downtown business district. This initial investment spurred additional private investment throughout the downtown and created a market for first-floor retail and upper floor residential. Cranford was New Jersey’s first town to take advantage of the Special Improvement District program, which enabled it to raise $2 million for improvements.

In addition, the town is designated a Transit Village by NJ Transit and New Jersey Department of Transportation (NJDOT). The Transit Village Initiative creates incentives for municipalities to redevelop or revitalize the areas around transit stations using design standards. As a New Jersey Transit Village, Cranford receives priority for funding from state agencies for transportation and other improvements. For example in 2011, NJDOT awarded Cranford a $500,000 grant for pedestrian and landscape improvements along North Avenue at the station. In 2012, the Township financed an additional $1.3 million for pedestrian and other transportation improvements at the station and other locations in Cranford.

Through its new Master Plan – updated in 2009 – Cranford has implemented new zoning that demonstrates its commitment to TOD. The Master Plan designates two redevelopment districts that allow for exceptional or complex land use combinations that might otherwise clash with the separated land uses typical of the zoning plan. Both the Cranford Crossing and the Riverfront Development districts were planned to allow for the township’s two TOD projects. These districts facilitated additional housing and retail close to the train station.

A major project that helped jumpstart the revitalization was Cranford Crossing, built in 2006. The development offers 50 luxury rental apartments as well as 22,000 square-feet of ground-
floor retail in two buildings – one three-story and one four-story – on either side of South Union Avenue. In the taller structure, housing and retail wrap a 310-space parking garage.

The Riverfront Project was recently completed and is now available for lease. The new development includes 127 luxury one- and two-bedroom rentals located a very short walk from the Cranford Station. There are five buildings that make up this development and all are located a block from the train station. In addition to housing, the buildings also include 20,000 square-feet of retail at ground level and 20,000 square-feet of office space. According to the Office of Business & Economic Development, Cranford is experiencing an influx of young people moving here from places like Hoboken because of access to transportation, a pedestrian-oriented town center, and excellent schools. In addition, it now has a 1.9 percent vacancy rate in the business district.

**Brunswick, ME**

Brunswick is a coastal village in the Portland-Biddeford metropolitan area of southern Maine. The town is home to Bowdoin College, along with its Museum of Arts, the Maine State Music Theater, and the Midcoast Hospital, one of the state’s newest full-service hospitals.

The intercity rail station is located in downtown Brunswick, and was opened in November 2012. The station serves as the northern terminus for Amtrak’s regional intercity Downeaster train service, which connects Boston to Maine. Although track had previously existed, there was no station in Brunswick, and the immediate area had been without regular train service for over 50 years. Due to its central location, the station is also within walking distance to Bowdoin’s campus.

The project began in 1998, when the Town of Brunswick acquired the land parcel where the station would ultimately be built for $655,000. With the advent of the Downeaster service in 2004, the town planning board approved a master plan in 2008, incorporating the station as a key downtown feature. The station was located on a former brownfield site, allowing for the redevelopment of a central town land parcel, as well as unique federal funding opportunities. The development and construction of the station was funded through a mix of federal, state, and local sources. Federal stimulus funding, municipal bonds, EPA brownfields grants, Maine Municipal Investment Trust Fund, and Community Development Block Grants were used to put together the roughly $42 million needed to rehabilitate existing tracks, build new platforms, and construct the new station.

As part of a town master plan, the station project included a number of supporting developments that provided new commercial opportunities in town. The station itself is a mixed-use complex, featuring new office space, apartments, two restaurants, a local Visitor’s Center, and an inn. By incorporating a majority of the town’s amenities and easy walkability to other local retailers and points of interest, the Brunswick station has become a lively community focal point that has revitalized the town center, while also providing new opportunities for future growth.

While not a commuter rail station, Brunswick’s rural character is somewhat comparable to Plaistow. In and around the train station, 97 new full-time jobs have been added from existing business, which is a very significant number considering that there are less than 25 firms in the
town. The land parcel on which the station sits has gained a nearly tenfold increase in assessed value since the beginning of the project: its value was $676,700 in 2008, and shot up to $6,725,400 in 2011 as the project’s completion came into view. More than $25 million in new private investment has already been leveraged. Projections expect a further $300 million+ in new construction investment, 800 jobs, and $7 million in saved transportation costs by 2030. Annual station revenue for FY2013 was $620,125.

Interviews with Real Estate and Economic Development Experts

To better understand the potential for economic development due to passenger rail service in Plaistow, interviews were held with real estate development professionals familiar with the town and surrounding communities. While commercial development was discussed, most real estate experts focused more on the residential opportunities associated with a new commuter rail station. According to these experts, the current residential real estate condition in Plaistow is stable, after two years of significant real estate activity. While not all real estate experts felt that TOD was feasible, several felt there was an opportunity given the current real estate condition of the Plaistow area and their understanding of the experiences of other rail-served communities.

Assuming that the zoning and utility issues highlighted previously are mitigated, there appears to be an opportunity for new residential development in the town even without a commuter rail station. For example, housing suited for the over-age-55 population, representing 28 percent of Plaistow’s population, is in short supply and was highlighted as a potential market by real estate professionals. While population aging is occurring across the country, the New England states are generally older and aging more rapidly than the U.S. average. In addition, the “empty nester” is frequently highlighted as potentially more transit dependent and interested in more compact living, both attributes consistent with transit-oriented development (TOD). As the population in New Hampshire, and in New England generally, continues to age, the demand for housing geared toward this demographic is likely to increase and may be an opportunity for new development in Plaistow.

In addition to the state’s and region’s aging population, demographics in New Hampshire and Massachusetts are changing and key populations will increasingly drive less and rely on transit more. For example, people born between 1982 and the early 2000s drive significantly less than other cohorts of the population do. Between 2001 and 2009, vehicle miles traveled (VMT) among 16-34 year olds declined 23 percent, public transportation use rose 40 percent, and bicycling rose 24 percent. Trends were consistent among income groups, with even well-off young Americans driving less and using alternative transportation more.

39 Ibid.
Reasons for the decline in driving among young Americans vary, but potential attributes include the cost of driving having risen, more young people living in transit-oriented areas, the 2008-09 Recession, and the impact of technology.\textsuperscript{40} Regardless of the rationale for the trend, it presents an opportunity for Plaistow. Given the relatively high cost of living in Boston and its nearby suburbs, this population is likely to be interested in relatively more affordable housing options. Without an automobile, this population would be unlikely to consider Plaistow as a place where they could live. With good commuter rail service, combined with affordable housing, however, it may be a realistic alternative for people employed in Boston and interested in a reverse commute.

Development experts familiar with the impact that commuter rail service can make on a community believe that this older demographic, along with this younger generation that is interested in flexibility in their housing and is comfortable using public transportation, could support significant growth in rental units within one-half to one mile of a new station. With an already low vacancy rate in rental units of two to three percent in the Plaistow area, new development of rental units would likely be demanded first, should commuter rail service be initiated.

New residents from other parts of New Hampshire and Massachusetts who do not fall into either of these age groups may also make housing choices that factor in proximity to commuter rail service to and from Boston. These new residents may demand new or potentially infill residential development within a mile or so of the rail station. With these new residents may also come an increase in demand for new retail in Plaistow, which could further promote economic growth in the area.

Experiences of other communities that initiate or expand rail service and put in place policies to support higher density TOD suggest that there are benefits that are accrued to the public beyond the mobility and accessibility improvements typically expected with a transit investment. Wider community benefits are often generated. These include various features of neighborhood form such as retail establishments, entertainment services, and public infrastructure and services, as well as social capital, and are indirectly attributable to transit development. This suggests that even residents of and employees who work in Plaistow may benefit from the introduction of commuter rail to the community and the subsequent TOD this new service generates, regardless of whether they actually take the train.

\textbf{TOD Development Option for Plaistow Commuter Rail Station}

In addition to the development concept presented in the TIGER II application and described previously, an additional TOD design concept was developed for the Alternative III site in Plaistow to analyze the development capacity and to support some of the development demand discussed above. It is important to note that the size of the design was determined based on parking requirements, assumptions related to building height, and available land near the

station. Additional considerations should also be made as planning continues. For example, wetlands concerns, abutting properties, building size and style will all impact the number of units and commercial square footage that may be available near the new station.

Based on very general assumptions, the design option shown below could provide approximately 240-260 residential units in two-story buildings with at least two parking spaces per unit on site, along with guest parking. Commercial development would also be feasible; approximately 25,000 square feet could be accommodated, based on this preliminary design.

The preliminary plan calls for 12-foot sidewalks with planter strips and trees along the streets, and parallel parking would be available on both sides of the street in the area of the development. An additional 300 spaces would be available for station area parking. The entire residential and commercial development would be walkable to the station, as shown in the figure below.
Figure A1. Option for TOD in Plaistow