# AMTRAK DOWNEASTER:

## Overview of Projected Economic Impacts

A Report to Northern New England
Passenger Rail Authority (NNEPRA)

By the Center for Neighborhood Technology

March 2008

CNT

## About the Center for Neighborhood Technology

The Center for Neighborhood Technology (CNT) was founded in 1978 to research, adapt and test new community revitalization strategies relevant to urban communities, especially strategies that harnessed the environmental and economic value of the more efficient use of naturalresources. Over the years, CNT has worked to disclose the hidden assets of the Chicagoland economy and urban areas more broadly; demonstrate the multi-bottom line benefits of more resource-efficient policies and practices; and show how the value of what we demonstrated could be captured to benefit communities and their residents inclusively. CNT's work, especially in the areas of energy, transportation, materials conservation and housing preservation, helped fuel a generation of community development institutions and learning, garnering us a reputation as an economic innovator and leader in the field of creative sustainable development.

CNT serves as the umbrella for a number of projects and affiliate organizations, all of which help the organization fulfill its mission: to promote the development of more livable and sustainable urban communities. CNT's transportation work is focused on using transportation assets to serve both the environmental and economic development goals of regions and communities. CNT works to boost demand for clean, efficient and affordable mass transit; increase the supply of traditional and non-traditional mass transit services; disclose the linkages between transportation costs and housing affordability; create model value-capture mechanisms that take advantage of the intersection of efficient transportation networks with community economic development programs; and promote policy initiatives that increase public participation in investment decisions and make more resources available for sustainable investments.

More information about CNT is available at www.cnt.org.

For further information, please contact
**David Chandler, Senior Business Analyst**
Center for Neighborhood Technology
2125 W. North Avenue, Chicago, IL 60647
(773) 269-4023
david@cnt.org

Cover photo by Bläck Döve

## TABLE OF CONTENTS


Executive Summary ..... 1
Introduction ..... 4
Transit Oriented Development (TOD): a Model for Maine & New Hampshire ..... 4
The Market Attraction of Green, Transit Oriented Development (TOD) ..... 5
Population Shifts to Transit Oriented Development (TOD) ..... 6
TOD as a Strategy for Meeting Maine's Sustainable Growth Challenge ..... 9
TOD Underway along the Downeaster & Rockland Branch ..... 12
Projected Impacts of Existing and Expanded Downeaster Service ..... 14
- Projected Population Growth ..... 14
- Projected Property Development and Job Creation ..... 17
- Projected Household Transportation Cost Savings ..... 18
- Visitor Spending and Public Revenue Contributions ..... 20
- Projected Economic Benefits by Service Area ..... 22

Return on Investment ..... 23
Further Analysis ..... 24
Appendix: Development Projections & Assumptions ..... 26

## EXECUTIVE SUMMARY

***Current passenger rail operations are generating new ridership and economic development.***

In 2005 a study prepared for the Maine Department of Transportation predicted that service improvements on the Downeaster and service extensions to additional Maine destinations would lead to increased ridership and the beginning of economic benefits for communities served by passenger rail. Three years later:

- Downeaster ridership rose 32% in Fiscal Year 2006, 5% in FY 2007, and 20% already in FY 2008. On the Rockland Branch ridership rose 26% from 2006 to 2007.
- In Old Orchard Beach two hotels and a $20 million residential & retail complex have been constructed within two blocks of the train station.
- In Saco developers have broken ground on a renovation of old mill property by the station into a $110 million retail, office, and residential development.
- A thirty-acre site next to the Portland station is for sale for $12 million, with mixed housing and commercial development as the intended use.
- In Brunswick developers are seeking Planning Board approval for a $30 million hotel, retail, office, and residential complex that is projected to create 200 jobs and $500,000 in annual tax revenues.

***Powerful demographic and market forces are driving the national growth of transit oriented development (TOD).***

While the current level of service is generating increased usage and economic benefits, the 2005 study noted that with further service and connectivity improvements the Downeaster and connected railroads could provide the basic infrastructure for extensive transit oriented development (TOD). A TOD is a compact and integrated development of homes, retail, and service businesses, public park space and other amenities that create an inviting atmosphere for pedestrians in the area that surrounds a public transit station. TOD provides major savings for residents who can conveniently walk or take public transit to their regular destinations and so own fewer cars and drive fewer miles than residents of most US communities. When these benefits are multiplied for hundreds or thousands of households, TOD becomes an important strategy for improving the economies of transit-served communities and the natural environment.

In its authoritative guide to the real estate development industry, *Emerging Trends in Real Estate 2008*, PricewaterhouseCoopers (PWC) describes TOD as an important element of a current paradigm shift to green development. PWC warns developers that for the foreseeable future companies seeking office and retail locations, as well as many home buyers and renters, will prefer green properties and TOD locations particularly. During the last three years studies commissioned by the Federal Transportation Administration and the Ford Foundation have demonstrated that a large latent demand exists for homes in TOD areas, based of the preferences and buying patterns of young professionals, empty nesters, and some middle-aged workers with children. While approximately 6 million American households lived in TOD areas in 2006, that number is expected to rise to 16 million by 2030. The main constraint on the number of TOD residents is the pace at which transit systems can be expanded and surrounding developments

built. In the Boston metropolitan area alone over 344,000 households are expected to locate in TOD zones between 2006 and 2030. Approximately 27.4% of the population that moves into or within US metropolitan areas with small but growing public transit systems is expected to settle in TOD areas.

***TOD is particularly valuable as a development strategy for Maine.***

These national trends of population shift to TOD areas are of particular importance in the state of Maine. Moody's investment service describes in-migration from other states as the primary bright spot in Maine's economy. The Maine State Planning Office has documented recent significant population growth in the coastal counties of Maine (those served by the Downeaster or the Rockland Branch) and projects that this growth will continue, at least through the Year 2020. A 2006 study by the Brookings Institution for GrowSmart Maine found that the population growth of Maine's coastal counties is due to in-migration from other states, that this rate of in-migration is among the highest in the nation, and that it is having major impacts on the counties of southern Maine, not all of which are positive. Because much of this growth is in the form of suburban sprawl, it is making minimal contributions to the coffers of municipal governments, placing inordinate demands on state and county resources, and gradually degrading the qualities of Maine's countryside and environment, which are among its most precious assets.

A program of optimizing growth in TODs built around the stations of the Downeaster and Rockland Branch would hold several strategic economic advantages for Maine communities. It would capitalize on Maine's capacity to attract immigrants from other states (particularly, some of the 344,000 Boston households that will want to move into TOD areas before 2030), and concentrate growth in the centers of existing towns.

***Proposed investments in passenger rail service will sustain TOD in currently served communities and lay the ground work for TOD across mid-coastal Maine.***

The current proposal of the Northern New England Passenger Rail Authority (NNEPRA) is to:

(1) Maintain the annual Downeaster operating subsidy, projected to be $8 to $10 million in 2010, so that TOD on the line between Boston and Portland will be sustained and continue to unfold.

(2) Make a capital investment of $31.5 million to extend Downeaster service from Portland to Brunswick and to establish a rail service connection between the Downeaster and the Rockland Branch. This investment is the key capital improvement that will make extensive TOD throughout southeast and mid-coastal Maine practicable.

***By 2030 economic benefits from the proposed investments include:***

- ***Cumulative construction investments of approximately $7.2 billion***
- ***Construction/rehabilitation of over 42,000 housing units and 6.8 million sq ft of commercial space,***
- ***Creation of over 17,800 jobs,***
- ***Generation of $244 million per year in transportation cost savings for resident households,***
- ***Generation of $2.4 billion per year of increased resident and visitor purchasing power,***

- ***Generation of $75 million per year in state and local tax revenue,***

In this analysis the Center for Neighborhood Technology (CNT) has projected the scale of economic benefits that can be expected to follow from approving NNEPRA's proposal. We think it is predictable that with current service levels maintained, the proposed capital improvements in place, and sustainable development policies adopted by Maine and New Hampshire communities, private investments will build out TOD projects in northern New England at the same scale as in other metropolitan areas with small transit systems. This will mean that TOD areas in Maine and New Hampshire will attract approximately 6.4% of the greater Boston area households that are projected to move into TOD zones and 27.4% of the projected population increase in counties served by the Downeaster or Rockland Branch. This rising population within TOD areas will entail the addition of retail and service businesses to meet its needs. The major projected economic consequences of these developments by the Year 2030 are summarized in the following table (with monetary projections stated in 2008 dollars):

**Summary of Key TOD Impacts by Passenger Rail Service Area, 2001 to 2030**

| Impact | NH Communities | Maine Current Svc Communities | Maine Expanded Svc Communities | Total Impacts |
|---|---|---|---|---|
| Cumulative Construction Investment | $2,938,439,551 | $3,276,321,653 | $981,859,483 | $7,196,620,687 |
| Housing Construction In Place by 2030, units | 17,230 | 19,211 | 5,757 | 42,199 |
| Commercial Construction In Place by 2030, sq ft | 2,778,869 | 3,098,403 | 928,540 | 6,805,812 |
| Office, sq ft | 694,717 | 774,601 | 232,135 | 1,701,453 |
| Retail, sq ft | 2,084,152 | 2,323,802 | 696,405 | 5,104,359 |
| New Jobs in Place by 2030 | 7,308 | 8,149 | 2,442 | 17,899 |
| Office | 2,316 | 2,582 | 774 | 5,672 |
| Retail\Personal Service | 2,977 | 3,320 | 995 | 7,292 |
| Construction | 2,015 | 2,247 | 673 | 4,936 |
| Household Transportation Cost Savings, Per Annum by 2030 | $151,611,022 | $71,376,989 | $21,390,505 | $244,378,516 |
| Additional Community Purchasing Power, Per Annum by 2030 | $1,164,749,545 | $971,135,249 | $291,033,194 | $2,426,917,987 |
| Additional Tax Revenues, Per Annum by 2030 | $4,730,380 | $54,033,722 | $16,591,128 | $75,355,229 |

From the projected state and local tax revenues alone, public investments in Downeaster and Rockland Branch service will be repaid with a significant return on investment by the Year 2030. Several of the other economic impacts summarized in Table 3 may provide sufficient public benefit to justify the proposed investment in passenger rail service. These economic benefits will be distributed among the town centers of the communities served by passenger rail, where they will provide optimal support for existing local business and public services and have minimal negative impact on the natural environment.

## INTRODUCTION

The February 2005 report titled "Economic Benefits of Amtrak Downeaster Service" thoughtfully projected a number of economic benefits that could be expected to flow from continuing and expanding Downeaster rail service, including impacts from visitor spending, development projects that were in process or planned in 2004, and transportation cost savings for Downeaster passengers.[1] The study's authors repeatedly noted that the Downeaster's 2005 operations did not constitute a commuter rail service, and they pointed out that if the Downeaster took on the frequency of commuter rail, additional economic growth associated with building transit oriented developments (TOD) could be projected. Today the Downeaster has taken major steps to establish itself as a commuter line and is on the verge of taking others:

- Increased frequency of weekday service between Boston and Portland from 4 to 5 daily round trips, with scheduling better suited to commuting workers and weekend visitors;
- Established interlinking connections with bus services;
- Achieved dramatic ridership increases including 32% in Fiscal Year 2006, 5% in FY 2007, and 20% already in FY 2008.
- Proposed extension of Downeaster service to Freeport and Brunswick, and linkage at Brunswick with the Rockland Branch, which will expand access to regular rail service to a wider network of Maine communities and an additional 300,000 residents.

So at this time it is appropriate to plan for a future of TOD in communities served by the Downeaster. Some tasks of forecasting can be performed by updating the previous study. However, all aspects of current planning for passenger rail's impact on the New Hampshire and Maine economies should be informed by a consideration of TOD, which figured only speculatively in the earlier economic analysis. The following pages provide a broad preliminary overview of the outcomes from TOD that can be achieved by capitalizing on the opportunities created by enhanced Downeaster service.

## TRANSIT ORIENTED DEVELOPMENT (TOD): A MODEL FOR MAINE & NEW HAMPSHIRE

A TOD is a compact and integrated development of homes, retail, and service businesses, public park space and other amenities that create an inviting atmosphere for pedestrians in the area that surrounds a public transit station and lies within a comfortable 20 minute walk of that station. TODs come in a variety of sizes and levels of development intensity, but a TOD typically includes three or four story buildings at the center, with offices or apartments placed above retail, then townhouses and single family homes as one walks away from the station. A TOD also routes cars to limited convenience parking and landscaped shared parking. Small town main streets with a rail station at the center are classic TODs.

In densely developed urban areas, a TOD will ordinarily occupy a ¼ mile to ½ mile radius around its central transit station, in an area that includes several blocks of interconnecting bus

[1] Economic Development Research Group in association with KKO and Associates, *Economic Benefits of Amtrak* Downeaster *Service*, prepared for the Maine Department of Transportation, February 2005.

lines. In the smaller and less densely built communities of Maine and New Hampshire, we would expect a TOD to occupy a circle of ¾ to 1 mile radius around a transit station and reach out for two additional miles along the corridors of bus routes that connect to the station.

TODs entail a number of complimentary economic, personal and environmental benefits. Because they are places where people congregate in a pleasant atmosphere, they are attractive locations for retail and office businesses. People who live and\or work in a TOD can accomplish many of the daily errands of life without driving to every stop. For this reason, as well as because they often commute on public transit, residents of TOD areas own fewer cars and drive fewer miles than other residents of the same region. For example, a TOD household with two or more adults might be comfortable with one car, while the same household without the public transit and town center conveniences of a TOD would be more likely to need a car for every adult. Transportation is the second largest expense for most American households, so saving the cost of a car is substantial (a national average of approximately $6,800/car/year[2]); even if gas and upkeep are the only savings, these are significant with current commodity prices. A TOD household's transportation savings makes more money available to improve housing or support local business, so that its advantage becomes a benefit to the community, particularly when hundreds or thousands of households are achieving the same increase in disposable income.

Because of their conveniences and inherent savings, TOD properties have a premium value relative to homes or commercial buildings of the same type and size in other locations. The gradually broadening experience of TOD projects over the last 20 years shows that TOD properties hold their value well. In the current housing recession there is evidence that TOD projects are proceeding while conventional subdivision tract developments are stopped dead.

TOD workers, commuters, and residents drive less than most Americans, so they cause less fuel consumption, air pollution, and traffic congestion. They also require less land and infrastructure to support their lifestyle. For these reasons TOD is an important strategy for controlling global warming and protecting the environment.

Because TOD homes include a wide variety of housing stock -- from apartments to townhouses and single family homes -- their residents make up economically and socially diverse populations. Families with children and large households live in virtually all TODs. But smaller households compose a larger share of TOD households than the general population. These smaller households commonly include striving young professional singles and couples, as well as older middle-aged couples and seniors moving to smaller homes.

## THE MARKET ATTRACTION OF GREEN, TRANSIT ORIENTED DEVELOPMENT (TOD)

The inherent qualities of TOD make it an important current in a trend to seek and build green development that has become a paradigm shift in the national property development industry. The Urban Land Institute (the leading professional and trade association of property developers) now hosts an annual conference on sustainable development and publishes a regular "Green

[2] S.C. Davis and S.W. Diegel, *Transportation Energy Data Book: Edition 25* (Oak Ridge, TN: Oak Ridge National Laboratory, 2006), Table 3.4.

Magazine" newsletter on the internet. In its authoritative report *Emerging Trends in Real Estate 2008*, PricewaterhouseCoopers (PWC) describes the movement to green as a fundamental and permanent change that is felt in every segment of the development industry, especially housing, office, and commercial building development. For example, PWC quotes a leading developer, "You're stupid not to build green office…Tenants want it. Their employees are happier, healthier, and more comfortable. It gives you a big competitive advantage." Or even more bluntly, PWC quotes a pension fund manager, "Stay on top of green or eat everyone's dust. Over the long term, adopt or get crushed."[3]

And PWC is explicit in recommending transit oriented development as a basic green strategy. In its summary of key points regarding green development PWC recommends:

"**Focus on Mixed Use and Infill**
Fringe subdivisions without amenities lose appeal. Increasingly people want 24-hour residential environments closer to where they work. Inspired by new Urbanist concepts, these projects have pedestrian-friendly layouts, offering varied living options – condo, single family, apartments – and service retail, including grocery stores, pharmacies, cleaners, and restaurants. The move back in continues – especially among empty nesters and career starters." [4]

"**Build Transit Oriented Development**
Congestion mounts everywhere and people get sick of losing time in traffic jams and car-dependent lifestyles. Higher gas prices, global warming issues, and pollution just add to frustration levels. Condominiums, apartments, and retail near light rail or subway/train stops become increasingly attractive." [5]

Given such advice from industry leaders, New Hampshire and Maine communities will need to offer transit oriented development alternatives as they seek to attract development investments in the competitive northeast region of the country.

## POPULATION SHIFTS TO TRANSIT ORIENTED DEVELOPMENT (TOD)

The market viability of TOD, which is now recognized by opinion setters in the development community, rests on some of the most basic demographic trends in America: the types of smaller households that predominate in TOD are growing segments of our population. As awareness of the benefits of living in TOD spreads, these types of households are creating a huge latent demand for housing in TOD. In studies commissioned by the Federal Transportation Administration and the Ford Foundation, the Center for Neighborhood Technology (CNT) and its partners in the Reconnecting America project have demonstrated that more than 6 million American households live in TOD zones today and that this number will grow to over 16 million

[3] PricewaterhouseCoopers, *Emerging Trends in Real Estate 2008* (Washington, DC: Urban Land Institute, 2008), 12-13.
[4] Ibid, 15.
[5] Ibid, 15.

households by the Year 2030.[6] The growth of TOD residences is limited largely by the pace at which transit systems can be expanded and TODs built. To take cases that are comparable to the Downeaster service area, Table 1 on the following page summarizes data for US metropolitan areas that have small transit systems which are either growing or static. For these areas, the data show:

- The number of households that resided in TOD zones in 2000 and the area's total number of households,
- The number of households projected to reside in TOD zones by the Year 2030, the total projected population in 2030, and
- The percentage of all household growth projected to locate within TOD zones.

For these cities the average percentage of total growth in the number of households that is projected to locate in TOD zones is 27.4%.[7]

[6] Center for Transit-Oriented Development, "Preserving and Promoting Diverse Transit-Oriented Neighborhoods," for the Ford Foundation (November 2006): 2.

[7] Data from Center for Transit-Oriented Development, *National TOD Database*, version 1.0, December 2006, produced for the Federal Transit Administration (FTA). This database has been used in a number of reports, including:

•Reconnecting America's Center for Transit-Oriented Development, "Realizing the Potential: Expanding Housing Opportunities Near Transit," for the Federal Transit Administration (FTA) and the US Dept. of Housing and Urban Development (HUD) (April 2007).

• Center for Transit-Oriented Development, "Preserving and Promoting Diverse Transit-Oriented Neighborhoods," for the Ford Foundation (November 2006).

•Center for Transit-Oriented Development, "Hidden in Plain Sight: Capturing the Demand for Housing Near Transit," (September 2004, revised April 2005).

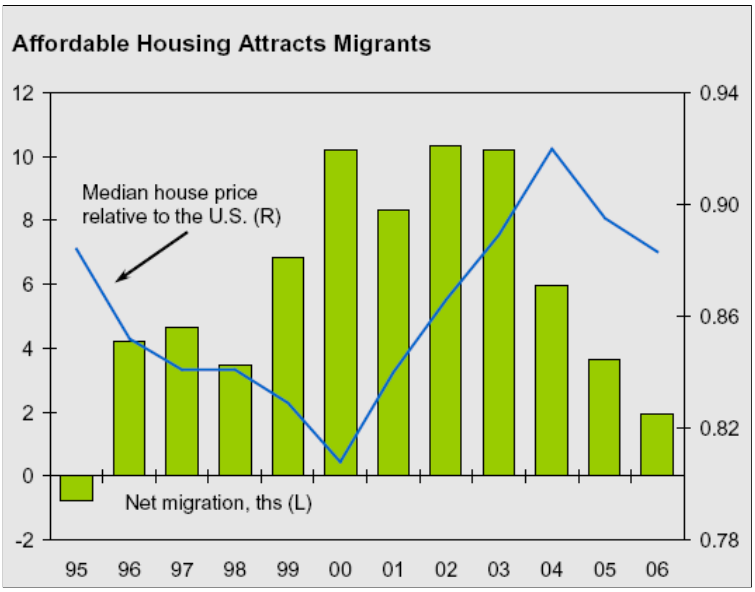
**Table 1. Total Households and Households Living Near Transit in U.S. Cities with Small Transit Systems, 2000-2030**

| | | | 2000 | | | 2030 | | | 2000-2030 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Region** | **System size, 2005** | **System size, 2030** | **Households near transit** | **MSA households** | **% near transit** | **Demand near transit** | **MSA households** | **% near transit** | **Change, transit households** | **Change, all households** | **Transit as % total change** |
| Buffalo | Small | Small Static | 19,242 | 468,767 | 4.1% | 32,616 | 480,429 | 6.8% | 13,374 | 11,662 | 115% |
| Syracuse | Small | Small Static | 6,438 | 282,875 | 2.3% | 10,147 | 296,739 | 3.4% | 3,709 | 13,864 | 27% |
| Galveston | Small | Medium | 5,736 | 94,840 | 6.0% | 12,029 | 142,935 | 8.4% | 6,293 | 48,095 | 13% |
| Houston | Small | Medium | 12,168 | 1,463,983 | 0.8% | 181,331 | 2,558,060 | 7.1% | 169,163 | 1,094,077 | 15% |
| Las Vegas | Small | Medium | 12,689 | 588,822 | 2.2% | 79,448 | 1,081,936 | 7.3% | 66,759 | 493,114 | 14% |
| Memphis | Small | Medium | 14,193 | 424,498 | 3.3% | 56,303 | 621,504 | 9.1% | 42,110 | 197,006 | 21% |
| Minneapolis-St. Paul | Small | Medium | 22,502 | 1,137,313 | 2.0% | 123,776 | 1,712,316 | 7.2% | 101,274 | 575,003 | 18% |
| New Orleans | Small | Medium | 41,203 | 505,778 | 8.1% | 64,160 | 603,265 | 10.6% | 22,957 | 97,487 | 27% |
| Salt Lake City | Small | Medium | 24,492 | 432,113 | 5.7% | 63,328 | 769,046 | 8.2% | 38,836 | 336,933 | 12% |
| Tampa Bay Area | Small | Medium | 29,125 | 1,009,792 | 2.9% | 117,012 | 1,539,351 | 7.6% | 87,887 | 529,559 | 17% |
| | | | | Average | 3.7% | | Average | 7.6% | | Average | 27.4% |

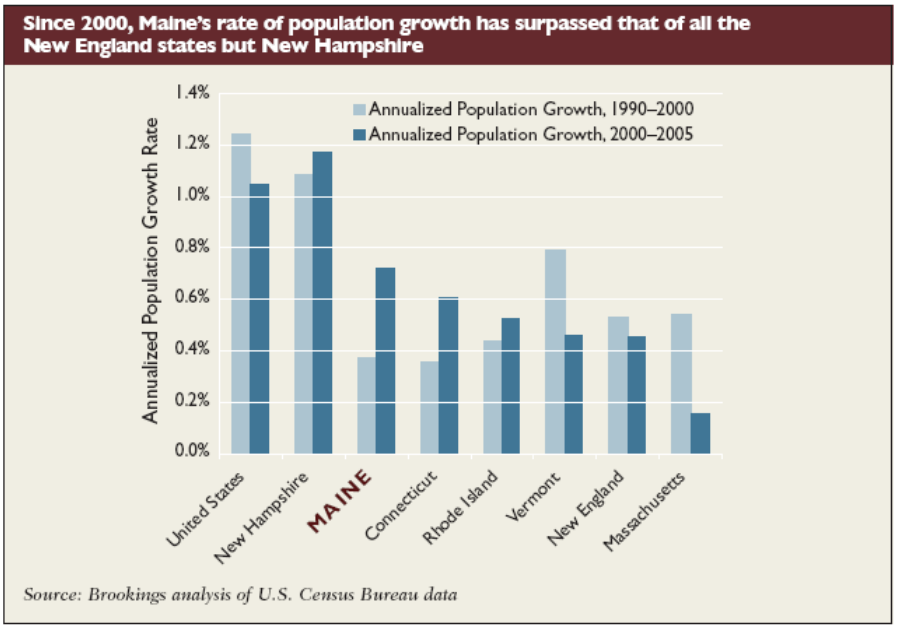
Sources:
Center for Transit-Oriented Development, *National TOD Database*, version 1.0, December 2006.
2030 projection data from Woods & Poole Economics, *2005 MSA Profile*.

## TOD AS A STRATEGY FOR MEETING MAINE'S SUSTAINABLE GROWTH CHALLENGE

The trend to invest in building TOD and the demographic shift to live in TOD communities may be at least as significant for Maine as for any other state. In its market assessments of Portland, Maine and the state of Maine, Moody's investment service is flatly negative. Citing state-wide data and data for the Portland metropolitan statistical area data, Moody's describes Maine as a low-growth and low-potential state. However, Moody's does note that over the past ten years Maine has been successful in attracting migrants from other states, an accomplishment which Moody's attributes to relatively low housing prices in Maine. [8]



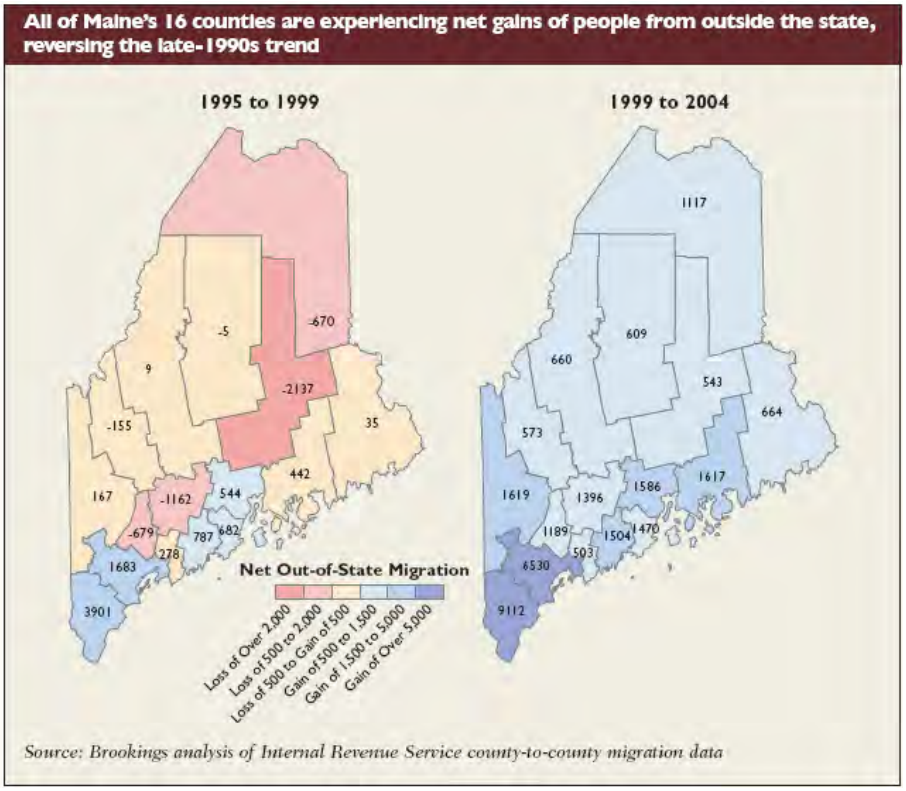

A far more in-depth and comprehensive study of the phenomena of in-migration and changing development patterns in Maine is provided by the Brookings Institution in its 2006 paper, "Charting Maine's Future: An Action Plan for Promoting Sustainable Prosperity and Quality Places." The Brookings study points out that Maine's "domestic in migration rate of 6.3% residents per 1,000 since 2000 ranks fifth in the country, behind the popular Sun Belt and Rocky Mountain destinations of Nevada, Arizona, Florida, and Idaho, and just ahead of New Hampshire, which is ranked sixth."[9]




[8] "Maine, Moody's Economy.com, Inc. www.economy.com, September 2007, and "Portland, Moody's Economy.com, Inc. www.economy.com,, January, 2007.

[9] Brookings Institution Metropolitan Policy Program, "Charting Maine's Future: An Action Plan for Promoting Sustainable Prosperity and Quality Places," (2006): 24.

The Brookings study also draws on county-wide data analyzed by Maine's State Planning Office, to describe a pattern that is familiar to virtually all Maine residents: growth in population (driven by in-migration) is not even; it is concentrated in Maine's southern and coastal counties. "Within Southern Maine, York County is now increasing its population by 1.6 percent per year, over 50% as fast as the nation. For their part, the Mid-Coast counties of Lincoln, Sagadahoc, and Waldo are all meeting or exceeding the U.S. growth rate with gains at or above 1.0 percent per year."[10] As the accompanying map demonstrates Maine's belt of growth, particularly since the Year 2000, is concentrated in the service area of the Downeaster and the Rockland Branch to which the Downeaster will be connected per the pending proposal.[11]



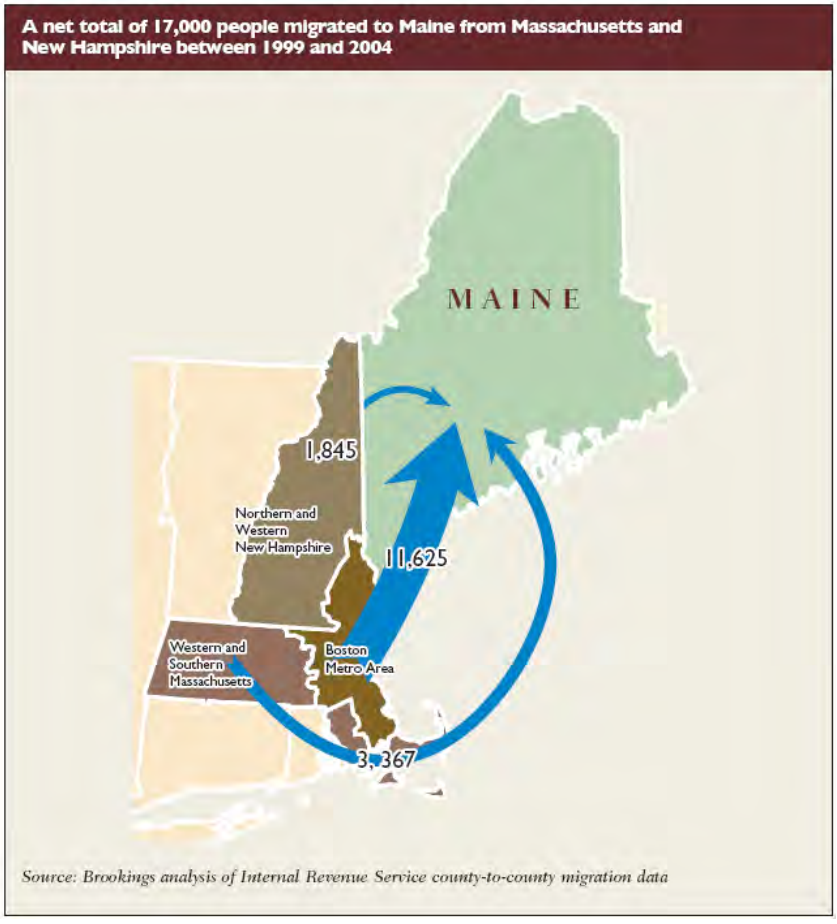

This inflow of new residents is predictably having powerful positive impacts on the Maine economy. New residents create construction work and build the base for Maine retail and service businesses. Maine's migrants from other states also appear to be upgrading the economy. As a group they have higher levels of household income and higher levels of educational attainment than native Mainers. The percentage of in-migrants in the 25- to 44-year-old age group is higher than the national average, helping to compensate for Maine's recent loss of population in these critical earning years. And at higher percentages than the national average they work out of state, suggesting that significant numbers of them are commuters or flexibly based knowledge workers who are bringing earned incomes home to Maine.[12]

[10] Ibid, 23.
[11] Ibid, 25.
[12] Ibid, 25-28, 32, 60.

However, Maine's growth to date has also created serious problems, due largely to development patterns of "suburbanization". As in many other sections of the country, new growth in Maine during the past fifteen years has tended to occur outside of the boundaries of established towns, filling in formerly unincorporated areas between Maine's small cities. Consequently, the costs of providing infrastructure, schools, and other basic services for the swelling suburban population has been disproportionately high and piled onto Maine's general problem of containing public sector costs. Residents of Maine's southern counties are experiencing problems of traffic congestion, air and noise pollution, loss of farm and forest land, and loss of scenic views, to the extent that some residents feel that the characteristics of town and outdoor places that have made their homes attractive are in danger of being submerged in unplanned growth.[13]

The Brookings study offers a set of recommendations for meeting the challenge of desirable and sustainable growth in Maine, which have been championed by the new civic organization GrowSmart Maine. The essence of the Brookings-GrowSmart Maine program is to concentrate growth in planned developments in the centers of Maine's existing cities. At such locations new residents use existing infrastructure and public services, have minimal negative impact on the environment, support established business districts and contribute to the tax rolls of established local governments.[14]

TOD around the stations of the Downeaster, and later the Rockland Branch, offers a virtually optimal strategy for achieving the growth and smart growth objectives of many thoughtful Maine residents. TOD provides a proven model with strong market demand for building the attractive, compact, town center development that is necessary to realize Maine's growth potential and to make this growth truly desirable for local communities. As noted above, the in-migrants who will be the primary market to these TOD projects are settling primarily in the communities served by the Downeaster and the Rockland Branch. Approximately half of these new residents are from the states of Massachusetts or New Hampshire, and they are predominantly from metropolitan




[13] Ibid, 60-67.
[14] Ibid, 68-9, 118-129; and see GrowSmart Maine www.growsmartmaine.org regarding current activities to implement sustainable growth proposals.

Boston. These residents effectively come from "up the line" of Downeaster service. They have ties and frequently existing employment that make convenient travel between Maine and Boston important to them. As immigrants from a metropolitan area well-served by public transportation, these new residents are also familiar with public transportation; the pattern of commuting on a convenient train is a family tradition for many of them.

In the preceding section on "Population Shifts in Transit Oriented Development" we noted that by the Year 2030 approximately 27% of the US population will want to be located in TOD communities, that the primary obstacle to fulfilling this demand will be the availability of developments in transit-served locations. Given:

- these powerful demographic and market patterns;
- Maine's unique position as an active attractor of migrants from a neighboring, major transit region; and
- the location, performance record, and service potential of the Downeaster and the Rockland Branch,

A program to channel 27% of the net population by 2030 in Maine counties served by the Downeaster and Rockland Branch to TODs around rail stations would appear to be practical. By achieving this objective Maine would go far toward realizing its growth potential and ensuring that this growth contributed to the quality of life and unique assets of Maine communities.

## TOD UNDERWAY ALONG THE DOWNEASTER & ROCKLAND BRANCH

TOD is more than an emerging market trend and a good idea for Maine and New Hampshire. It is a pattern of development that is already occurring along the Downeaster and Rockland Branch lines, in response to market opportunities, even in anticipation of rail service improvements and before government policies to foster such development have been formed. The 2005 report on the *Downeaster* service describes a number of developments in progress or planned along the route. As the report noted at the time, *Downeaster*-related development was furthest along in Dover, NH and lagging somewhat in Maine communities. Since that time, the Maine communities have, as predicted, begun to take advantage of the train's economic potential.

In Saco, Maine, the $110 million mixed-use Island Point development is rehabilitating old mill buildings near the train station for commercial and residential uses. The whole project is scheduled for completion in 2010 and the developers plan to have 300,000 sq ft of office space and 42 condos finished by the end of this year. A restaurant and brew pub are expected be open early this year. When completed, the project will also include 30 luxury waterfront townhouses and a marina. In focus groups conducted by the developers, proximity to the station was identified as a major attraction to potential customers and the ads for the development tout the station's proximity. In addition, the money the municipality received from the sale of land to the developers is being used to help build a new green train station.[15]

Developments in Old Orchard Beach, a seasonal stop, are taking advantage of the visitor market, augmented by train service. A developer there has built a $20 million condominium and retail

[15] Seth Harkness, "Saco Island project on fast track," *Portland Press Herald* (Portland, ME), 21 October 2007: B1.

complex a block and a half from the station in 2006. Two hotels have also been built in the area since train service began.[16]

In Portland, a 30 acre site next to the train station is up for sale for $12 million. The seller would like to see a developer come in and build a New Urbanist-type development that would take advantage of the proximity to intercity rail and bus service. In addition to the nearby Transportation Center, the site is now served by an exit from Interstate 295 and enjoys high visibility to passing motorists. Local realtors consider it one of the best sites in the area for development.[17]

Along the Rockland Branch, local economies are benefiting from the seasonal passenger service from Brunswick to Rockland. After three years in operation, the influx of tourists on the train has led many local businesses to offer package deals linked to the train and highlight rail access in their marketing.

Towns along the Rockland Branch are also seeing development that is poised to take advantage of improved rail access and service. In Brunswick, plans are being finalized for a $30 million hotel, retail, office and residential complex in the downtown at the site of the potential passenger station. The development is projected to create 200 jobs and generate up to $500,000 in tax revenue. The developers are currently in the process of obtaining Planning Board approval for their plans.[18]

In Wiscasset, one of the communities along the line, there are plans to convert an abandoned power station into a mixed-use complex with restaurants, offices and a hotel along with waterfront housing and a marina Pointe East Maritime Village is located about 2 miles from the train station.[19] Such development shows the growth potential of the region, which could capitalize on improved train service and create more development closer to the downtown.

The Rockland Branch limited to a seasonal excursion service, but ridership has been increasing since service began three years ago, with 2007 showing a 26 percent increase in ridership over 2006.[20]

---

[16] Ibid, "Hotel proposal for OOB given mixed reception," *Portland Press Herald* (Portland, ME), 4 October 2006: B1; "Downeaster rail success inspires 'smart growth' along the way," *Boston Globe*, 11 January 2007: 3.
[17] Tux Turkel, "Thompson's Point: A site to behold," *Portland Press Herald* (Portland, ME), 26 June 2007: C1.
[18] Dennis Hoey, "Developer: Brunswick complex in good shape," *Portland Press Herald* (Portland, ME), 15 November 2007: B1; Maine Street Station Implementation Committee, "Maine Street Station – Enhancing Downtown Brunswick, Maine as a Place to Live, Work or Visit," accessed 8 February 2008, http://www.brunswickme.org/ecdev/mssic/index.htm
[19] Dennis Hoey, "Wanted: Operator for marina, boatyard," *Portland Press Herald* (Portland, ME), 11 June 2007: B1.
[20] "Maine Eastern Railroad sees passenger increase," *Bangor Daily News* (Bangor, ME), 28 November 2007: 8.

## PROJECTED IMPACTS OF EXISTING AND EXPANDED DOWNEASTER SERVICE

The current proposal of the the Northern New England Passenger Rail Authority (NNEPRA) is to:

(1) Maintain the annual Downeaster operating subsidy, projected to be of $8 to $10 million in 2010 so that TOD on the line between Boston and Portland will be sustained and continue to unfold.

(2) Make a capital investment of $31.5 million to extend Downeaster service from Portland to Brunswick and to establish a rail service connection between the Downeaster and the Rockland Branch. This investment is the key capital improvement that will make extensive TOD throughout southeast and mid-coastal Maine practicable.

What quantifiable consequences would the states of Maine and New Hampshire expect if they support this proposed rail service expansion so that TOD can take place in rail served communities? In brief, we suggest that by the Year 2030, approximately 27% of the projected net increased population for the rail served counties, will locate in TOD areas in the communities with rail stations.[21] TOD projects will ensure that this percentage of the increased population will actually be attracted to move to or remain in Maine. This large concentration of new or relocated residents in existing town centers will have profound positive impacts on the construction, personal and professional service, and retail industries of Maine. It will generate large household savings for Maine residents contribute substantially to the tax base of state and local governments. In Table 2 on the accompanying pages, we present a spreadsheet that projects the scale of these economic outcomes

### *Projected Population Growth*

In Table 2.A. the initial columns, ending in Column A, we report the growth in household population projected by the State of Maine and the State of New Hampshire through 2020.[22] In Column B we take the counties' growth as projected by state planning agencies and assume that the percentage of this additional population that will reside in TOD areas is the same percentage as in comparable US metropolitan areas, 27.4%. (Projections of development in later columns of Table 2 assume a development process that is ongoing through 2030. In this initial analysis we have not estimated continued population beyond 2020, because our sources of data (state projections) stop at this time. Accordingly, the projected scale of development is extremely conservative in that it does not project further population increase between 2020 and 2030.)

In Column C we consider an additional source of growth in the number of TOD households, which is the large and overlapping Boston metropolitan area. In this metropolis with a mature transit system, many residents who are aware of transit benefits, and a strong pattern of

---

[21] Per the preceding section on "Population Shifts to TOD Zones", we project that Maine's TOD areas rail- served counties will capture approximately the same percentage of net population growth as other US urban areas with small public transit systems.

[22] Maine State Planning Office, *Maine County Economic Forecast*, September 2005, http://www maine.gov/spo/economics/projections/
New Hampshire Office of Energy & Planning, *Population Projections*, November 2006, http://www nh.gov/oep/programs/DataCenter/Population/PopulationEstimates htm

migration to New Hampshire and Maine, the projected growth in the number of TOD households is 344,754.[23] Realism requires that we expect some percentage of this Boston area TOD population to settle in the Downeaster and Rockland Branch service areas. To estimate this percentage we considered that the Maine counties served by he Downeaster constitute 12.8% of the population of an area that includes these counties and metropolitan Boston.[24] We assumed that half of this percentage, or 6.4%, of Boston area households projected to live in TOD zones by 2030 would reside in Downeaster community TODs. This is a total of 22,064 households, which we distributed over the Downeaster station areas, according to the percentage of growth that they are expected to achieve by state population projections. (Some allowance for immigration from the Boston area is made in the state projections that are the source of TOD household estimates in Column B. However, these conservative projections do not take account of the specific phenomenon of large numbers of households inclined to move into TOD, as documented by research after the Year 2000. To compensate for any possible double counting of Boston area immigrants, projections for Column C did not consider the substantial New Hampshire population and considered only half the percentage of households from metropolitan Boston that would have been justified on the basis of the population of Maine counties served by the Downeaster.)

Column D in Table 2.A. provides the total number of households projected to move into Downeaster TOD zones by the Year 2030 considering net population growth in the New Hampshire and Maine counties of the service area and the additional inflow of Boston area households seeking homes in TOD communities, which is a net increase of $42,199 households.

[23] *National TOD Database*
[24] Census 2000

**Table 2. Projected Transit Oriented Development in Downeaster and Rockland Branch Communities, 2000-2030**

**A. Projected Population Growth**

| | | | | | | A | B | C | D |
|---|---|---|---|---|---|---|---|---|---|
| **County** & Stations | **2000 Population** | **2000 HHs*** | **2020 Population** | **Population Change, 2000-2020** | **% Change** | **Total New HHs, 2020** | **New TOD HHs** | **Boston HHs** | **Total TOD HHs** |
| **Maine** | | | | | | | | | |
| **Cumberland** | 265,612 | 107,989 | 299,983 | 34,371 | 12.9% | 14,688 | 4,027 | 4,413 | 8,440 |
| Portland | 64,249 | 29,714 | | | | | | | 5,817 |
| Brunswick | 21,172 | 8,150 | | | | | | | 1,917 |
| Freeport | 7,800 | 3,065 | | | | | | | 706 |
| **Knox** | 39,618 | 16,608 | 45,291 | 5,673 | 14.3% | 2,424 | 665 | 728 | 1,393 |
| Rockland | | | | | | | | | |
| **Lincoln** | 33,616 | 14,158 | 40,706 | 7,090 | 21.1% | 3,030 | 831 | 910 | 1,741 |
| Damariscotta-Newcastle<br>Waldaboro<br>Wiscasset | | | | | | | | | |
| **York** | 186,742 | 74,563 | 241,286 | 54,544 | 29.2% | 23,309 | 6,391 | 7,003 | 13,394 |
| Old Orchard Beach | 8,856 | 4,294 | | | | | | | 2,117 |
| Saco-Biddeford | 37,764 | 15,437 | | | | | | | 9,029 |
| Wells | 9,400 | 4,004 | | | | | | | 2,247 |
| **Totals Maine** | 525,588 | 213,318 | 627,266 | 101,678 | 19.3% | 43,452 | 11,914 | 13,055 | 24,969 |
| **New Hampshire** | | | | | | | | | |
| **Strafford** | 112,233 | 42,581 | 134,273 | 22,040 | 19.6% | 8,711 | 2,388 | 2,617 | 5,006 |
| Dover<br>Durham/UNH | | | | | | | | | |
| **Rockingham** | 277,359 | 104,529 | 331,181 | 53,822 | 19.4% | 21,274 | 5,833 | 6,392 | 12,224 |
| Exeter | | | | | | | | | |
| **Totals New Hampshire** | 389,592 | 147,110 | 465,454 | 75,862 | 19.5% | 29,985 | 8,221 | 9,009 | 17,230 |
| **TOTAL** | **915,180** | **360,428** | **1,092,720** | **177,540** | **19.4%** | **73,437** | **20,135** | **22,064** | **42,199** |

*HH = Households

### *Projected Property Development and Job Creation*

Columns E – N of Table 2.B. summarize the projected economic consequences of the large population of new residents locating in Downeaster and Rockland Branch community TODs between now and 2030.

Column E notes the need of households moving into the TOD areas for new housing units. Assuming that these areas currently do not have large blocks of vacant housing in good condition, the net increase in new households will require a roughly equivalent number of new built or gut rehabilitated units, for which we estimate that the costs will be approximately the same. (While some housing units may be recycled to new households several times over the 22-year development period, estimated housing construction needs are for the net increase in population at the end of the development period.) Column F projects the number of square feet of housing that will need to be built for some 42,000 households. Reflecting the small size of many of the households that will be located in the TODs, the average size of the newly built housing units is projected to be 1,200 square feet.

In keeping with the basic principles of TOD, the new developments are assumed to be of mixed use, integrating housing with retail and office-based businesses. In the relatively small communities of New Hampshire and Maine the planned TODs will be predominantly for housing use. We project that the average usage in the service area's TOD will be: 88% housing use, 9% for ground floor retail, 3% for office. These assumptions generate the estimates of built space in Columns G and I.

Estimates for the cumulative number of new office jobs to be developed by the Year 2030 are given in Column H. These estimates are tied to building projections. We assume that 300 square feet of office space will be required for the average office worker in these developments. (In a major metropolitan market 250 square feet would be assumed.) The projected 5,600 office workers will be predominantly the Realtors, accountants, doctors, lawyers, and other professionals, with their support staffs, who will serve the 42,000 new households of the new TODs and the existing surrounding communities, as well as consultants and other professionals who will serve larger markets from their Downeaster or Rockland Branch communities. Medium and even large corporations may choose to locate their headquarters or processing divisions in Downeaster\ Rockland Branch TODs, but with the projected growth in population, such corporate users would not be required to account for the addition of 5,600 office workers.

Similarly, estimates for the cumulative number of new retail jobs to be developed by the Year 2030 are given in Column J. These estimates assume that the average retail worker will use 700 square feet of shop space. (In larger markets, 600 square feet of space per worker would be assumed for neighborhood retail centers.) The businesses located in the TODs will be convenience retail and service providers: specialty clothing stores, restaurants, cleaners, fresh food markets, with pharmacies and supermarkets among the largest retail uses. The buying power of the 42,000 additional households will not be absorbed by the 5.1 million square feet of retail space (projected in Column J) or the ministrations of some 7,300 retail and service employees projected in Column K). The residents of TOD will patronize other community businesses including big box stores and automotive service businesses that will generally be too land- intensive to fit comfortably within the TODs.

Column K shows the total of new square feet of construction from housing, office and retail uses in the projected TOD development, over 57 million square feet of new construction. Much of this construction will occur in mixed use buildings and in townhouses and some single family homes. Column M projects the total investment required to build all of these buildings at the current average construction rate of $125.28 per square foot to build multi-story buildings in Portland, Maine.[25] Column N projects the number of construction workers employed in these projects during an average year of the 30-year development period, assuming an average cost of $48,600 per year per worker.[26]

Considering professional, personal service, retail, and construction jobs created by the new TOD, an increase of about 17,900 total permanent jobs is projected by the Year 2030.

### *Projected Household Transportation Cost Savings*

Another dimension of the economic impacts of the planned development is the household savings from reduced transportation costs discussed earlier in the basic explanations of TOD. Frequently replicated research has demonstrated that households in TOD areas own fewer cars and drive fewer miles than other residents of their regions. In cooperation with the Center for Transit-Oriented Development, the Center for Neighborhood Technology (CNT) has created the Housing + Transportation Index to estimate this available savings based on the extent to which any particular place incorporates features of a TOD. CNT has also created a web site tool, available at www.cnt.org/ht/map-phase2 through which a user may select a point on a map and see the transportation savings available from characteristics of location efficiency at that location in 52 metropolitan regions. This tool is currently functional for the New Hampshire and Cumberland County, Maine portions of the Downeaster service area, and CNT is working to expand the tool to other areas.

Column O shows the savings documented by the Housing + Transportation Index that is available for each of the Downeaster and Rockland Branch service counties for the projected number of households. By the Year 2030, these savings will total $244 million per year for the residents of developed TODs. Transportation savings will be available to pay for housing or purchases in the local economy. They may be as significant in strengthening local economies as the land use, construction, and direct job creation benefits of planned TOD.

[25] New construction investments are estimated from the RSMeans QuickCost Calculator, for a 1-3 story apartment building in Portland, ME ($120/sq ft). This is approximately 20% cheaper than in Chicago. As we have average land costs around transit stations in Chicago (approx. $10/sq ft), land costs here were calculated to also be about 20% less. Total construction cost is therefore $125.28 per square foot

[26] Economic Development Research Group, *Economic Benefits of Amtrak* Downeaster *Service*, 45-47. Updated with current U.S. Department of Labor statistics.

**Table 2. Projected Transit Oriented Development in Downeaster and Rockland Branch Communities, 2000-2030**

**B. Projected Property & Job Development & Household Savings**

| | D | E | F | G | H | I | J | K | L | M | N | O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **County** & Stations | **Total TOD HHs** | **New Housing Units** | **New Housing Sq Ft** | **New Office Sq Ft** | **New Office Jobs** | **New Retail Sq Ft** | **New Retail Jobs** | **Total New Sq Ft** | **New Construction Investment** | **Con-struction Jobs** | **Total Jobs Created** | **Annual Transportation Cost Savings** |
| **Maine** | | | | | | | | | | | | |
| **Cumberland** | 8,440 | 8,440 | 10,128,412 | 340,315 | 1,134 | 1,020,944 | 1,458 | 11,489,670 | $1,439,425,872 | 987 | 3,580 | $31,358,913 |
| Portland | 5,817 | 5,817 | 6,980,619 | 234,549 | 782 | 703,646 | 1,005 | 7,918,815 | $992,069,092 | 680 | 2,467 | $21,612,928 |
| Brunswick | 1,917 | 1,917 | 2,300,326 | 77,291 | 258 | 231,873 | 331 | 2,609,490 | $326,916,945 | 224 | 813 | $7,122,117 |
| Freeport | 706 | 706 | 847,466 | 28,475 | 95 | 85,425 | 122 | 961,365 | $120,439,834 | 83 | 300 | $2,623,867 |
| **Knox** | 1,393 | 1,393 | 1,671,714 | 56,170 | 187 | 168,509 | 241 | 1,896,392 | $237,580,023 | 163 | 591 | $5,175,849 |
| Rockland | | | | | | | | | | | | |
| **Lincoln** | 1,741 | 1,741 | 2,089,274 | 70,200 | 234 | 210,599 | 301 | 2,370,072 | $296,922,680 | 204 | 739 | $6,468,671 |
| Damariscotta-Newcastle<br>Waldaboro<br>Wiscasset | | | | | | | | | | | | |
| **York** | 13,394 | 13,394 | 16,072,971 | 540,052 | 1,800 | 1,620,155 | 2,315 | 18,233,178 | $2,284,252,561 | 1,567 | 5,681 | $49,764,061 |
| Old Orchard Beach | 2,117 | 2,117 | 2,540,918 | 85,375 | 285 | 256,125 | 366 | 2,882,417 | $361,109,259 | 248 | 898 | $7,867,021 |
| Saco-Biddeford | 9,029 | 9,029 | 10,835,053 | 364,058 | 1,214 | 1,092,173 | 1,560 | 12,291,284 | $1,539,852,083 | 1,056 | 3,830 | $33,546,769 |
| Wells | 2,247 | 2,247 | 2,697,000 | 90,619 | 302 | 271,858 | 388 | 3,059,477 | $383,291,219 | 263 | 953 | $8,350,271 |
| **Totals Maine** | 24,969 | 24,969 | 29,962,370 | 1,006,736 | 3,356 | 3,020,207 | 4,315 | 33,989,313 | $4,258,181,136 | 2,921 | 10,591 | $92,767,494 |
| **New Hampshire** | | | | | | | | | | | | |
| **Strafford** | 5,006 | 5,006 | 6,006,979 | 201,834 | 673 | 605,503 | 865 | 6,814,317 | $853,697,605 | 586 | 2,123 | $39,978,947 |
| Dover<br>Durham/UNH | | | | | | | | | | | | |
| **Rockingham** | 12,224 | 12,224 | 14,669,129 | 492,883 | 1,643 | 1,478,648 | 2,112 | 16,640,660 | $2,084,741,946 | 1,430 | 5,185 | $111,632,075 |
| Exeter | | | | | | | | | | | | |
| **Totals New Hampshire** | 17,230 | 17,230 | 20,676,108 | 694,717 | 2,316 | 2,084,152 | 2,977 | 23,454,977 | $2,938,439,551 | 2,015 | 7,308 | $151,611,022 |
| **TOTAL** | **42,199** | **42,199** | **50,638,479** | **1,701,453** | **5,672** | **5,104,359** | **7,292** | **57,444,290** | **$7,196,620,687** | **4,936** | **17,899** | **$244,378,516** |

### *Visitor Spending and Public Revenue Contributions*

In Column P estimates of visitor spending per year by the Year 2030 are based on ridership projections and spending amounts assumed in the 2005 study of the economic impacts of Downeaster. To project ridership through 2030, we used projections through 2015 for current and planned Amtrak stations given in the earlier report and applied a 2% growth rate (the projected average annual growth rate for the Rockland Branch). We then assumed that approx. 22% (22.1% in ME and 22.7% in NH) of riders would be visitors coming because of the presence of the train, as determined in the 2005 study. These numbers were halved to account for roundtrips. For each station we multiplied visitors by the amount they might be assumed to spend, using the amounts from the 2005 study: $124 for NH Downeaster stations, $277 for existing ME Downeaster stations, $302 for Brunswick and the Rockland Branch stations, and $451 for Freeport (higher retail sales expected). Visitor spending projected through these conservative assumptions is less than 2% of the total projected retail sales growth, which is achieved largely by the purchases of permanent TOD zone residents and workers.

In Column Q increased purchasing power is the annual aggregate income of the new households added to the community by the Year 2030. For new TOD households we applied the state median income ($43,439 in ME and $59,683 in NH). We also calculated purchasing power for new jobs added, assuming that of the new jobs created, half might be filled by new TOD households or current residents. The other half would be new households or new workers and we added this to the total purchasing power using wages from the May 2006 Occupational Employment Statistics Survey. In Maine, annual average wages are $33,860 for construction, $29,960 for retail and $37,832 TOD-type office occupations (business and financial operations; computer and mathematical; architecture and engineering; community and social services; legal, arts, design, entertainment, sports, and media; healthcare; personal care and service; and office and administrative). In NH, these numbers are $36,940, $33,710, and $42,318 respectively.

For Column R estimates of annual visitor tax contributions by the Year 2030 were based on visitor spending. We used the 2005 study's spending breakdowns and applied the appropriate tax rate: 5% for general, service provider, and use; 7% for food and lodging; and 10% for auto rental. New Hampshire does not have state sales taxes, so there are no projected sales taxes for those stations. Visitor tax contributions were somewhat more significant as a percentage of tax revenues that they were of retail sales

Column S, estimates the state and local taxes paid annually by the Year 2030 by additional households. These estimates were calculated conservatively by multiplying TOD households by the average personal current taxes for each state (including income and licensing taxes). Estimates of personal current taxes come from the Bureau of Economic Analysis, State and Personal Income. This rate was 3.61% in Maine and 0.46% in New Hampshire.

To project annual Total Retail Sales by the Year 2030, for Column T, we considered that nationally, convenience shopping centers, the type most commonly associated with TODs, earn $201.78 per sq ft gross leasable area.[27]We multiplied this average number times the number of retail square feet projected for development (Column I).

[27] Dollars and Cents of Shopping Centers, 2007, Urban Land Institute,

**Table 2. Projected Transit Oriented Development in Downeaster and Rockland Branch Communities, 2000-2030**

**C. Visitor Spending and Public Revenue Contribution**

| | P | Q | R | S | T | U | V |
|---|---|---|---|---|---|---|---|
| **County** & Stations | **Visitor Spending** | **Increased Purchasing Power** | **Visitor Taxes** | **Increased Resident Taxes*** | **Retail Sales** | **Retail Sales Tax** | **Total Tax Contributions** |
| **Maine** | | | | | | | |
| **Cumberland** | $11,187,681 | $426,660,551 | $712,893 | $13,235,706 | $206,006,058 | $10,300,303 | $24,248,902 |
| Portland | $5,950,949 | $294,059,426 | $384,556 | $9,122,203 | $141,981,777 | $7,099,089 | $16,605,848 |
| Brunswick | $2,541,514 | $96,901,526 | $165,788 | $3,006,043 | $46,787,315 | $2,339,366 | $5,511,197 |
| Freeport | $2,695,217 | $35,699,599 | $162,550 | $1,107,460 | $17,236,966 | $861,848 | $2,131,858 |
| **Knox** | $1,728,593 | $70,421,149 | $112,759 | $2,184,579 | $34,001,698 | $1,700,085 | $3,997,423 |
| Rockland | | | | | | | |
| **Lincoln** | $1,466,716 | $88,010,919 | $95,677 | $2,730,242 | $42,494,631 | $2,124,732 | $4,950,650 |
| Damariscotta-Newcastle<br>Waldaboro<br>Wiscasset | | | | | | | |
| **York** | $1,209,032 | $677,075,823 | $78,129 | $21,003,996 | $326,914,970 | $16,345,748 | $37,427,874 |
| Old Orchard Beach | $194,440 | $107,036,478 | $12,565 | $3,320,446 | $51,680,810 | $2,584,040 | $5,917,052 |
| Saco-Biddeford | $364,287 | $456,427,908 | $23,541 | $14,159,138 | $220,378,738 | $11,018,937 | $25,201,616 |
| Wells | $650,304 | $113,611,438 | $42,023 | $3,524,412 | $54,855,422 | $2,742,771 | $6,309,206 |
| **Totals Maine** | $15,592,022 | $1,262,168,443 | $999,458 | $39,154,524 | $609,417,356 | $30,470,868 | $70,624,849 |
| **New Hampshire** | | | | | | | |
| **Strafford** | $482,333 | $338,391,816 | | $1,374,306 | $122,178,489 | | $1,374,306 |
| Dover<br>Durham/UNH | | | | | | | |
| **Rockingham** | $484,246 | $826,357,728 | | $3,356,074 | $298,361,644 | | $3,356,074 |
| Exeter | | | | | | | |
| **Totals New Hampshire** | $966,579 | $1,164,749,545 | $0 | $4,730,380 | $420,540,133 | $0 | $4,730,380 |
| **TOTAL** | **$16,558,601** | **$2,426,917,987** | **$999,458** | **$43,884,904** | **$1,029,957,490** | **$30,470,868** | **$75,355,229** |

*State and Local taxes

For Column U, annual Retail Sales Tax to be paid by the Year 2030, we calculated Maine's tax at the state's standard rate of 5% of retail sales (Column T). New Hampshire has no sales tax. Notably, while visitor spending is extremely small in comparison to all retail sales, visitor taxes is a larger figure in comparison to retail sales tax, because of higher Maine sales tax levels on some of the products and services commonly used by visitors.

Column V simply sums Columns R, S, and U, to provide an estimate of total annual tax contributions to state and local government, to be paid by the Year 2030. Per these projections, the local and state total tax benefit to Maine from rail service and TOD development is approximately $70.6 million in 2030. New Hampshire's total benefit for that year is $4.7 million.

In this overview analysis we did not attempt to quantify some of the more subtle public benefits that will follow from developing in a transit oriented pattern, in the center of established cities, in comparison to sprawl development. These benefits include reduced costs through the more efficient use of infrastructure, school systems, police and fire services; reduction of car use, which will mitigate traffic congestion and air pollution; and increased revenues to established local governments, within whose jurisdictions TODs will sit.

### *Projected Economic Benefits by Service Area*

Tables 2 A, B, & C project economic impacts for each county in the Downeaster and Rockland Branch service areas. Impacts are also projected for individual towns in Cumberland County, where Portland is currently served by the Downeaster while Freeport and Brunswick will be served only after the proposed expansion. The preceding discussions of Table 2 projections generally comment on impacts to be felt throughout the passenger rail service area. But for some purposes it may be useful to consider impacts on portions of the service area, i.e.:

- New Hampshire service communities
- Maine communities currently served by the Downeaster (the communities of York County and Portland)
- Maine communities to be connected to the Downeaster by the proposed expansion (Freeport and Brunswick in Cumberland County and the communities served by the Rockland Branch.)

Major projected economic impacts for these portions of the service area are summarized in Table 3 on the following page.

From Table 3 we may note that projected impacts by the Year 2030 are more concentrated in the current service areas of the Downeaster where current population is higher, where major TOD projects are already underway, and where commuters to Boston are more likely to reside. However, substantial growth is also projected for the expanded service area particularly Freeport and Brunswick which will also benefit from direct service to Boston. The Cumberland County and Rockland Branch communities in the expanded service area may expect continuing TOD growth beyond 2030, as their development catches up with older TODs to the west and south.

**Table 3: Summary of Key TOD Impacts by Passenger Rail Service Area, 2001 to 2030**

| Impact | NH Communities | Maine Current Svc Communities | Maine Expanded Svc Communities | Total Impacts |
|---|---|---|---|---|
| Cumulative Construction Investment | $2,938,439,551 | $3,276,321,653 | $981,859,483 | $7,196,620,687 |
| Housing Construction In Place by 2030, units | 17,230 | 19,211 | 5,757 | 42,199 |
| Commercial Construction In Place by 2030, sq ft | 2,778,869 | 3,098,403 | 928,540 | 6,805,812 |
| Office, sq ft | 694,717 | 774,601 | 232,135 | 1,701,453 |
| Retail, sq ft | 2,084,152 | 2,323,802 | 696,405 | 5,104,359 |
| New Jobs in Place by 2030 | 7,308 | 8,149 | 2,442 | 17,899 |
| Office | 2,316 | 2,582 | 774 | 5,672 |
| Retail\Personal Service | 2,977 | 3,320 | 995 | 7,292 |
| Construction | 2,015 | 2,247 | 673 | 4,936 |
| Household Transportation Cost Savings, Per Annum by 2030 | $151,611,022 | $71,376,989 | $21,390,505 | $244,378,516 |
| Additional Community Purchasing Power, Per Annum by 2030 | $1,164,749,545 | $971,135,249 | $291,033,194 | $2,426,917,987 |
| Additional Tax Revenues, Per Annum by 2030 | $4,730,380 | $54,033,722 | $16,591,128 | $75,355,229 |

## RETURN ON INVESTMENT

As noted earlier, the public investments in Downeaster operations needed to trigger projected economic benefits from TOD are:

(1) The annual Downeaster operating subsidy, project to be $8 to $10 million in 2010 so that TOD on the line between Boston and Portland will be sustained and continue to unfold.

(2) A capital investment of $31.5 million to extend Downeaster service from Portland to Brunswick and to establish a rail service connection between the Downeaster and the Rockland Branch. This investment is the key capital improvement that will make extensive TOD throughout southeast and mid-coastal Maine practicable.

If we calculated the return on this investment only from the projected tax benefits, we would consider the following factors:

- Maine's estimated contribution to Downeaster operations between 2010 and 2030 is anticipated to be $255 million over a 21 year period.
- To estimate long-term state and local tax revenues stemming from the Downeaster's operations, we can begin with the 2005 study of the Downeaster's economic benefits. The authors of that study estimated that state and local tax revenues directly attributable to the Downeaster's operations were $380.000 in 2004, and they projected that such revenues would fall within a range of $5.4 to $5.9 million by 2015, an annual rate of increase of approximately 28%. In the accompanying Table 4, we begin with the same base and project a somewhat lower rate of increase (22.56% per year) which would bring tax revenues resulting from passenger rail service and TOD to our projected level of over $75 million in 2030.

- At this projected rate of growth, tax revenues exceed public subsidies in the Year 2022, and in the Year 2030, total tax revenues would provide a ROI of 160% on Maine funds invested over 26 years.

So anticipated tax revenues alone offer a sound argument for providing the funding requested by NNEPRA. Any of the other public benefits summarized in Table 3 above might also provide ample justification for the requested public investment.

## FURTHER ANALYSIS

This report applies information about TOD that has been developed from the experiences of other regions and national research to a consideration of opportunities created by enhancements of Downeaster and Rockland Branch service. It does not reflect an in-depth analysis of data particular to Downeaster or Rockland Branch communities, or discussions with officials or stakeholders of these communities. Further investigation would allow the Center for Neighborhood Technology or another analyst to refine the broad projections presented here and determine the range of opportunities that are available to particular communities through TOD. Further analysis might also permit quantification of some of the less obvious benefits of expanded rail service and TOD in New Hampshire and Maine, including value from the preservation of farm and forest land, the reduction of congestion and air pollution, and reduced public expenditures through the more efficient use of infrastructure and public services.

**Table 4: Return on Investment, Maine Funding of Downeaster Service and Expansion, 2004 Through 2030**

| Year | Maine Investment | Tax Benefits |
|---|---|---|
| 2004 | 0 | $380,000 |
| 2005 | 0 | $465,728 |
| 2006 | 0 | $570,796 |
| 2007 | 0 | $699,568 |
| 2008 | 0 | $857,390 |
| 2009 | 0 | $1,050,818 |
| 2010 | $8,900,000 | $1,287,882 |
| 2011 | $9,167,000 | $1,578,428 |
| 2012 | $9,442,010 | $1,934,522 |
| 2013 | $9,725,270 | $2,370,950 |
| 2014 | $10,017,028 | $2,905,836 |
| 2015 | $10,317,539 | $3,561,393 |
| 2016 | $10,627,065 | $4,364,843 |
| 2017 | $10,945,877 | $5,349,552 |
| 2018 | $11,274,254 | $6,556,410 |
| 2019 | $11,612,481 | $8,035,537 |
| 2020 | $11,960,856 | $9,848,354 |
| 2021 | $12,319,681 | $12,070,142 |
| 2022 | $12,689,272 | $14,793,166 |
| 2023 | $13,069,950 | $18,130,505 |
| 2024 | $13,462,049 | $22,220,746 |
| 2025 | $13,865,910 | $27,233,747 |
| 2026 | $14,281,887 | $33,377,680 |
| 2027 | $14,710,344 | $40,907,685 |
| 2028 | $15,151,654 | $50,136,458 |
| 2029 | $15,606,204 | $61,447,243 |
| 2030 | $16,074,390 | $75,309,741 |
| **Totals** | **$255,220,723** | **$407,445,120** |
| **ROI** | | **159.64%** |

## APPENDIX: DEVELOPMENT PROJECTIONS & ASSUMPTIONS

**Projected Transit Oriented Development in Downeaster and Rockland Branch Communities, 2000-2030, and Assumptions**

**Table 2. Projected Transit Oriented Development in Downeaster and Rockland Branch Communities, 2000-2030**

**A. Projected Population Growth**

| | | | | | | A | B | C | D |
|---|---|---|---|---|---|---|---|---|---|
| **County** & Stations | **2000 Population** | **2000 HHs*** | **2020 Population** | **Population Change, 2000-2020** | **% Change** | **Total New HHs, 2020** | **New TOD HHs** | **Boston HHs** | **Total TOD HHs** |
| **Maine** | | | | | | | | | |
| **Cumberland** | 265,612 | 107,989 | 299,983 | 34,371 | 12.9% | 14,688 | 4,027 | 4,413 | 8,440 |
| Portland | 64,249 | 29,714 | | | | | | | 5,817 |
| Brunswick | 21,172 | 8,150 | | | | | | | 1,917 |
| Freeport | 7,800 | 3,065 | | | | | | | 706 |
| **Knox** | 39,618 | 16,608 | 45,291 | 5,673 | 14.3% | 2,424 | 665 | 728 | 1,393 |
| Rockland | | | | | | | | | |
| **Lincoln** | 33,616 | 14,158 | 40,706 | 7,090 | 21.1% | 3,030 | 831 | 910 | 1,741 |
| Damariscotta-Newcastle<br>Waldaboro<br>Wiscasset | | | | | | | | | |
| **York** | 186,742 | 74,563 | 241,286 | 54,544 | 29.2% | 23,309 | 6,391 | 7,003 | 13,394 |
| Old Orchard Beach | 8,856 | 4,294 | | | | | | | 2,117 |
| Saco-Biddeford | 37,764 | 15,437 | | | | | | | 9,029 |
| Wells | 9,400 | 4,004 | | | | | | | 2,247 |
| **Totals Maine** | 525,588 | 213,318 | 627,266 | 101,678 | 19.3% | 43,452 | 11,914 | 13,055 | 24,969 |
| **New Hampshire** | | | | | | | | | |
| **Strafford** | 112,233 | 42,581 | 134,273 | 22,040 | 19.6% | 8,711 | 2,388 | 2,617 | 5,006 |
| Dover<br>Durham/UNH | | | | | | | | | |
| **Rockingham** | 277,359 | 104,529 | 331,181 | 53,822 | 19.4% | 21,274 | 5,833 | 6,392 | 12,224 |
| Exeter | | | | | | | | | |
| **Totals New Hampshire** | 389,592 | 147,110 | 465,454 | 75,862 | 19.5% | 29,985 | 8,221 | 9,009 | 17,230 |
| **TOTAL** | **915,180** | **360,428** | **1,092,720** | **177,540** | **19.4%** | **73,437** | **20,135** | **22,064** | **42,199** |

*HH = Households

**Table 2. Projected Transit Oriented Development in Downeaster and Rockland Branch Communities, 2000-2030**

**B. Projected Property & Job Development & Household Savings**

| | D | E | F | G | H | I | J | K | L | M | N | O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **County** & Stations | **Total TOD HHs** | **New Housing Units** | **New Housing Sq Ft** | **New Office Sq Ft** | **New Office Jobs** | **New Retail Sq Ft** | **New Retail Jobs** | **Total New Sq Ft** | **New Construction Investment** | **Con-struction Jobs** | **Total Jobs Created** | **Annual Transportation Cost Savings** |
| **Maine** | | | | | | | | | | | | |
| **Cumberland** | 8,440 | 8,440 | 10,128,412 | 340,315 | 1,134 | 1,020,944 | 1,458 | 11,489,670 | $1,439,425,872 | 987 | 3,580 | $31,358,913 |
| Portland | 5,817 | 5,817 | 6,980,619 | 234,549 | 782 | 703,646 | 1,005 | 7,918,815 | $992,069,092 | 680 | 2,467 | $21,612,928 |
| Brunswick | 1,917 | 1,917 | 2,300,326 | 77,291 | 258 | 231,873 | 331 | 2,609,490 | $326,916,945 | 224 | 813 | $7,122,117 |
| Freeport | 706 | 706 | 847,466 | 28,475 | 95 | 85,425 | 122 | 961,365 | $120,439,834 | 83 | 300 | $2,623,867 |
| **Knox** | 1,393 | 1,393 | 1,671,714 | 56,170 | 187 | 168,509 | 241 | 1,896,392 | $237,580,023 | 163 | 591 | $5,175,849 |
| Rockland | | | | | | | | | | | | |
| **Lincoln** | 1,741 | 1,741 | 2,089,274 | 70,200 | 234 | 210,599 | 301 | 2,370,072 | $296,922,680 | 204 | 739 | $6,468,671 |
| Damariscotta-Newcastle<br>Waldaboro<br>Wiscasset | | | | | | | | | | | | |
| **York** | 13,394 | 13,394 | 16,072,971 | 540,052 | 1,800 | 1,620,155 | 2,315 | 18,233,178 | $2,284,252,561 | 1,567 | 5,681 | $49,764,061 |
| Old Orchard Beach | 2,117 | 2,117 | 2,540,918 | 85,375 | 285 | 256,125 | 366 | 2,882,417 | $361,109,259 | 248 | 898 | $7,867,021 |
| Saco-Biddeford | 9,029 | 9,029 | 10,835,053 | 364,058 | 1,214 | 1,092,173 | 1,560 | 12,291,284 | $1,539,852,083 | 1,056 | 3,830 | $33,546,769 |
| Wells | 2,247 | 2,247 | 2,697,000 | 90,619 | 302 | 271,858 | 388 | 3,059,477 | $383,291,219 | 263 | 953 | $8,350,271 |
| **Totals Maine** | 24,969 | 24,969 | 29,962,370 | 1,006,736 | 3,356 | 3,020,207 | 4,315 | 33,989,313 | $4,258,181,136 | 2,921 | 10,591 | $92,767,494 |
| **New Hampshire** | | | | | | | | | | | | |
| **Strafford** | 5,006 | 5,006 | 6,006,979 | 201,834 | 673 | 605,503 | 865 | 6,814,317 | $853,697,605 | 586 | 2,123 | $39,978,947 |
| Dover<br>Durham/UNH | | | | | | | | | | | | |
| **Rockingham** | 12,224 | 12,224 | 14,669,129 | 492,883 | 1,643 | 1,478,648 | 2,112 | 16,640,660 | $2,084,741,946 | 1,430 | 5,185 | $111,632,075 |
| Exeter | | | | | | | | | | | | |
| **Totals New Hampshire** | 17,230 | 17,230 | 20,676,108 | 694,717 | 2,316 | 2,084,152 | 2,977 | 23,454,977 | $2,938,439,551 | 2,015 | 7,308 | $151,611,022 |
| **TOTAL** | **42,199** | **42,199** | **50,638,479** | **1,701,453** | **5,672** | **5,104,359** | **7,292** | **57,444,290** | **$7,196,620,687** | **4,936** | **17,899** | **$244,378,516** |

**Table 2. Projected Transit Oriented Development in Downeaster and Rockland Branch Communities, 2000-2030**

**C. Visitor Spending and Public Revenue Contribution**

| | P | Q | R | S | T | U | V |
|---|---|---|---|---|---|---|---|
| **County** & Stations | **Visitor Spending** | **Increased Purchasing Power** | **Visitor Taxes** | **Increased Resident Taxes*** | **Retail Sales** | **Retail Sales Tax** | **Total Tax Contributions** |
| **Maine** | | | | | | | |
| **Cumberland** | $11,187,681 | $426,660,551 | $712,893 | $13,235,706 | $206,006,058 | $10,300,303 | $24,248,902 |
| Portland | $5,950,949 | $294,059,426 | $384,556 | $9,122,203 | $141,981,777 | $7,099,089 | $16,605,848 |
| Brunswick | $2,541,514 | $96,901,526 | $165,788 | $3,006,043 | $46,787,315 | $2,339,366 | $5,511,197 |
| Freeport | $2,695,217 | $35,699,599 | $162,550 | $1,107,460 | $17,236,966 | $861,848 | $2,131,858 |
| **Knox** | $1,728,593 | $70,421,149 | $112,759 | $2,184,579 | $34,001,698 | $1,700,085 | $3,997,423 |
| Rockland | | | | | | | |
| **Lincoln** | $1,466,716 | $88,010,919 | $95,677 | $2,730,242 | $42,494,631 | $2,124,732 | $4,950,650 |
| Damariscotta-Newcastle<br>Waldaboro<br>Wiscasset | | | | | | | |
| **York** | $1,209,032 | $677,075,823 | $78,129 | $21,003,996 | $326,914,970 | $16,345,748 | $37,427,874 |
| Old Orchard Beach | $194,440 | $107,036,478 | $12,565 | $3,320,446 | $51,680,810 | $2,584,040 | $5,917,052 |
| Saco-Biddeford | $364,287 | $456,427,908 | $23,541 | $14,159,138 | $220,378,738 | $11,018,937 | $25,201,616 |
| Wells | $650,304 | $113,611,438 | $42,023 | $3,524,412 | $54,855,422 | $2,742,771 | $6,309,206 |
| **Totals Maine** | $15,592,022 | $1,262,168,443 | $999,458 | $39,154,524 | $609,417,356 | $30,470,868 | $70,624,849 |
| **New Hampshire** | | | | | | | |
| **Strafford** | $482,333 | $338,391,816 | | $1,374,306 | $122,178,489 | | $1,374,306 |
| Dover<br>Durham/UNH | | | | | | | |
| **Rockingham** | $484,246 | $826,357,728 | | $3,356,074 | $298,361,644 | | $3,356,074 |
| Exeter | | | | | | | |
| **Totals New Hampshire** | $966,579 | $1,164,749,545 | $0 | $4,730,380 | $420,540,133 | $0 | $4,730,380 |
| **TOTAL** | **$16,558,601** | **$2,426,917,987** | **$999,458** | **$43,884,904** | **$1,029,957,490** | **$30,470,868** | **$75,355,229** |

*State and Local taxes

**Assumptions**

| | |
|---|---|
| A. | Households in 2020 calculated by multiplying population by average household size for each state (Census 2000): 2.34 persons per household in Maine and 2.53 persons per household in New Hampshire |
| B. | Percentage of additional households locating in TOD area assumed to be the same as in comparable US metropolitan areas, 27.4% (CTOD Database, version 1.0, Dec. 2004). |
| C. | Additional Growth Attracted. For the Boston MSA counties (as figured in the CTOD database, which include the NH counties) and the Maine counties combined, 12.8% of households live in the Maine counties. Assume that half of this percentage, 6.4%, of Boston area households projected to live in TOD areas by 2030 will locate in Downeaster communities. 6.4% of 344,754 total new transit households in metropolitan Boston is 22,064 households, which are distributed over the Downeaster station areas according to their percentage of total (ME+NH) projected growth. |
| D. | Sum of projected TOD growth (B) and additional attracted Boston TOD growth (C ) |
| E. | Every new TOD Zone household requires a new housing unit |
| F. | The average TOD Zone housing unit occupies 1200 sq ft. |
| G. | In a standard ratio of office to housing space in a non-intensive TOD Zone, where housing is 88% of the development and office space 3%, (Housing Space* 1.12) *.03 = Office Space, or Office Space = 3.36% of Housing Space |
| H. | Each 300 sq ft of office space typically supports an office worker in smaller US markets |
| I. | In a standard ratio of retail to housing space in a non-intensive TOD Zone, where housing is 88% of the development and retail space 9%, (Housing Space* 1.12) *.09 = Retail Space, or Retail Space = 10.08% of Housing Space |
| J. | Each 700 sq ft of neighborhood retail space typically supports a shop worker in smaller US markets |
| K. | Total new construction is the sum of housing + office + retail construction, generally in the same mixed use buildings. |
| L. | New construction investments are estimated from the RSMeans QuickCost Calculator, for a 1-3 story apartment building in Portland, ME ($120/sq ft). This is approximately 20% cheaper than in Chicago. As we have average land costs around transit stations in Chicago (approx. $10/sq ft), land costs here were calculated to also be about 20% less. Total construction cost is therefore $125.28 per square foot |
| M. | Each $48,600 in construction investment generates 1 construction job per year |
| N. | Sum of office (H), retail (J), and construction (M) jobs |
| O. | Savings per household calculated by comparing worst transportation costs in a county to the best transportation costs, from the Housing + Transportation Affordability Index, with vehicle costs of $5068 per vehicle and $0.09 per mile traveled, per household, per year. Maine county values were based on Cumberland County, which had savings of $3,715. Strafford County, NH had savings of $7,987 and Rockingham County, NH was $9,132. |

**Assumptions, continued**

| | |
|---|---|
| P. | Visitor spending calculated from 2030 ridership projections and spending amounts assumed in 2005 report. To get 2030 ridership, we used the 2015 data for current and planned Amtrak stations given in the earlier report and applied a 2% growth rate (the projected growth rate for the Rockland Branch). We then assumed that approx. 22% (22.1% in ME and 22.7% in NH) of riders would be visitors coming because of the presence of the train, as determined in the 2005 study. These numbers were halved to account for roundtrips. For each station we multiplied visitors by the amount they might be assumed to spend, using the amounts from the 2005 study: $124 for NH Downeaster stations, $277 for existing ME Downeaster stations, $302 for Brunswick and the Rockland Branch stations, and $451 for Freeport (higher retail sales expected). |
| Q. | Purchasing power is the aggregate income of the new households added to the community. For new TOD households we applied the state median income ($43,439 in ME and $59,683 in NH). We also calculated purchasing power for new jobs added, assuming that of the new jobs created, half might be filled by new TOD households or current residents. The other half would be new households or new workers and we added this to the total purchasing power using wages from the May 2006 Occupational Employment Statistics Survey. In Maine, annual average wages are $33,860 for construction, $29,960 for retail and $37,832 TOD-type office occupations (business and financial operations; computer and mathematical; architecture and engineering; community and social services; legal, arts, design, entertainment, sports, and media; healthcare; personal care and service; and office and administrative). In NH, these numbers are $36,940, $33,710, and $42,318 respectively. |
| R. | Visitor tax calculations were based on visitor spending. We used the 2005 study's spending breakdowns and applied the appropriate tax rate: 5% for general, service provider, and use; 7% for food and lodging; and 10% for auto rental. New Hampshire does not have state sales taxes, so there are no projected sales taxes for those stations. |
| S. | State and local taxes from additional households were calculated conservatively by multiplying TOD households by the average personal current taxes for each state (including income and licensing taxes). Estimates of personal current taxes come from the Bureau of Economic Analysis, State and Personal Income. This rate was 3.61% in Maine and 0.46% in New Hampshire |
| T. | Nationally, convenience shopping centers, the type most commonly associated with TODs, earn $201.78 per sq ft gross leasable area. |
| U. | Retail sales tax calculated in ME at 5% of retail sales |
| V. | Sum of taxes from visitors (R), new households (S), and retail sales (U). |


Center for Neighborhood Technology
2125 W. North Avenue
Chicago, IL 60647
(773) 278-4800  cnt.org