

The Impact of Light Rail Transit on Low-Income Households and Neighbourhoods

Prepared by Sarah V. Wayland, PhD
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Research on public transit points to economic, environmental, and personal benefits, especially for low income people unable to afford private transportation. Much less has been written about the impact of specific types of public transit such as light rail transit (LRT). In light of recent public discussion, the Hamilton Roundtable for Poverty Reduction has commissioned this briefing paper to examine existing knowledge about this type of public transit and its impact on lower-income households and neighbourhoods. How would creation of LRT impact low income households within close proximity to LRT lines?

Based on a search of scholarly literature and publicly-available research on urban or light rail transit, a small body of articles was found that focus on the economic impact of LRT, including the stimulation of development in the city centre, the stimulation of development in declining areas, and changes in urban development patterns. Only a handful of studies focus on the economic impact on the populations living near LRT.

Much of the literature on LRT focuses on regional lines and suburban-urban commuter lines. In contrast, the proposed B line in Hamilton is strictly urban, running approximately 10 km across existing residential and commercial areas. Given the vastly disparate settings in which LRT has been developed, it is difficult to compare impacts of LRT on urban environment and residents. Keeping this caveat in mind, below are some research results, with place and type of research described.

Widely-reported findings

LRT is said to increase connectivity of riders, particularly when coordinated with bus and other forms of public transit. The City of Hamilton literature states: “LRT will connect Hamilton’s priority neighbourhoods to more employment, educational, healthcare, recreational and cultural opportunities.”

LRT attracts transit-oriented development, including housing, retail, and other commercial development. Because it is of a more permanent nature, LRT spurs

investment along rail lines in a way that buses do not. Such development often creates more accessible, mixed-use communities that benefit non-drivers.

Rail-based transit attracts new riders, especially higher income individuals who would not otherwise use transit. Thus, rail serves a broader population, including but not limited to low income riders. This increased ridership can have a positive impact on existing transit users: the growth of rail transit systems can lead to increased demand for bus services, and increasing funding for services as well.

LRT is quiet, energy-efficient, has greater carrying capacity than buses, and it can be powered using renewable energy sources. By taking cars off the road, it reduces air pollution, congestion, and greenhouse gas production.

Access to labour

Proximity to light rail stations increases accessibility to employment for working families.

- In a study of the Hiawatha LRT Line in the Twin Cities, Minnesota, proximity to light rail stations and bus stops offering direct rail connections are associated with large, statistically significant gains in accessibility to low-wage jobs. These gains stand out from changes in accessibility for the transit system as a whole. After light-rail construction, low-wage workers are locating near station areas. The number of low-wage jobs also increased near station areas. These previously underserved areas of the Twin Cities have benefited from frequent, all-day transit service.¹
- Case studies of 25 Transit-Oriented Development (TOD) projects were conducted to show how TOD helped enhance the well-being of working families by providing for increased transit access, good jobs, and affordable housing to low- and moderate-income people, including many who cannot afford to own a car. Incentive concepts can encourage location-efficient development, for example, not providing subsidies to employers unless jobs are transit-accessible and within a reasonable commuting distance from affordable housing.²

1 Fan, Yingling, Andrew Guthrie, and David Levinson , Impact of Light Rail Implementation on Labor Market Accessibility: A Transportation Equity Perspective. Presented at the 90th Annual Transportation Research Board Conference, January 23-27, 2011. 11-2765. *Journal of Transport and Land Use* (in press), also Understanding the Impacts of Transitways: How Light-Rail Transit Improves Job Access for Low-Wage Workers, A Transitway Impacts Research Program (TIRP) Research Brief (University of Minnesota, Center for Transportation Studies, 2010).

<http://www.cts.umn.edu/Research/Featured/Transitways/documents/lowincome.pdf>

2 Good Jobs First, *Making the Connection: Transit-Oriented Development and Jobs* (2006).

<http://www.goodjobsfirst.org/sites/default/files/docs/pdf/makingtheconnection.pdf>

Health and well-being

Light rail transit users report higher levels of neighbourhood satisfaction and have lower obesity rates than non-users.

- A qualitative study in an inner-city, revitalizing neighbourhood Salt Lake City found study participants who used a new light rail stop reported higher "place attachment" and greater "neighbourhood satisfaction" than did non-riders, suggesting that the transit stop improved their feelings about their community. Those who did not use the new transit stop at all were substantially more likely to be obese and to take more car trips than either new riders or existing riders.³
- "For a given particular group or neighbourhood, smart growth policies that improve walkability and land use mix probably increase overall community cohesion, all else being equal. Practices that decrease time spent driving and increase pedestrian activity, social interactions and commercial activity in a neighbourhood can probably also increase social capital."⁴

Property values

Proximity to transit often increases residential property values overall, though there can exist a "nuisance effect" of declining values on property that are too close to a rail line or station.

- A review of more than 100 studies concerning the impacts transit service has on nearby property values found that proximity to transit often increases property values enough to offset some or all of transit system capital costs.⁵
- A multi-city and multi-study review conducted by PriceWaterhouse Coopers in 2001 found that residential properties near a station see a positive premium of 0-5% following the arrival of a transit system. The premium is highest for those properties located between ¼-1 mile from a station. However, for residential properties along segments between stations there is a potential negative valuation

3 Barbara B. Brown and Carol M. Werner, Before and After a New Light Rail Stop: Resident Attitudes, Travel Behavior, and Obesity. *Journal of the American Planning Association* 75, 1 (Winter 2009), pp. 5-12. http://www.scag.ca.gov/pptac/pdfs/other/JAPA_LRT.pdf

4 Lawrence Frank, Sarah Kavage and Todd Litman, *Promoting public health through Smart Growth: Building healthier communities through transportation and land use policies and practices* (Victoria: SmartGrowth BC), p.35. http://www.vtppi.org/sgbc_health.pdf

5 Jeffery J. Smith and Thomas A. Gihring with Todd Litman, *Financing Transit Systems Through Value Capture: An Annotated Bibliography* (Victoria: Victoria Transport Policy Institute, 9 May 2011). <http://www.vtppi.org/smith.pdf>

of 5-10%. Thus, some property owners benefit from a public transit project while others will not.⁶

- A comparison of the actual LRT corridor with two others that were ultimately not selected in Charlotte, North Carolina in 2000 found that LRT provided a neighbourhood increase of 4.0% for single-family properties and 11.3% for condominiums sold within 1 mile of LRT stations. The article looked strictly at property values, noting that other benefits such as reduced pollution, attraction of employers, reduced congestion were not captured in his numbers. The author went on to state: “cities may be using public investment in LRT to target neighborhoods for residential and commercial redevelopment. This effect may even outweigh any potential benefits of LRT as a transportation improvement in cities with lower density land use such as Charlotte, NC.”⁷

Dislocation and inequality

If not mediated by inclusive transit-oriented development policies and plans, the cumulative effect of increased property values along LRT lines may gradually displace poorer populations.

- A comparison of 1981 to 2006 census tracts where Vancouver SkyTrain stations are located found “a rising disparity of income levels between wealthier and poorer residents [and] ... an increasing level of high educational achievement of residents and a relative decline of less-educated residents in comparison to Vancouver CMA’s trends.” Over time, wealthier residents moved to areas once home to lower-earning, less-educated occupants.⁸
- In Vancouver, neighbourhood change came about due to the building of relatively expensive new housing near transit stations. The displacement of the working poor, students, and low income seniors likely reduced their ability to access transit. The city did try to create some equity for lower-income residents through affordable housing requirements, but this was only a small proportion of total development.⁹

6 Lee Cockerill and Denise Stanley, Institute of Economic and Environmental Studies California State University-Fullerton, *How will the Centerline affect Property Values in Orange County?* October 28, 2002. <http://playingwithpolitics.files.wordpress.com/2011/08/csu-f-study-on-oc-lrt.pdf>

7 Stephen B. Billings, Estimating the Value of a New Transit Option, *Regional Science and Urban Economics*, Article in Press (2011). <http://clas-pages.uncc.edu/stephenbillings/files/2011/06/PropertyValuesLRTFinalRSUE.pdf>

8 Nicole M. Foth, Long-Term Change Around SkyTrain Stations in Vancouver, Canada: A Demographic Shift-Share Analysis, *The Geographical Bulletin*, 51 (2010), pp. 37-52. <http://www.gammathepsilon.org/the-geographical-bulletin/2010s/volume51-1/article3.pdf>

9 Foth, 2010, p. 48.

Urban revitalization

Addition of LRT can be an important component of an economic development strategy for a region, city, or neighbourhood.

- LRT can reinforce positive economic trends, but a rail transit system alone does not create development.¹⁰
- Similarly, LRT cannot reverse the economic decline of an area. An oft-cited case of this phenomenon is the Buffalo Light Rail Rapid Transit in New York: the transit system did not create the anticipated development needed to revitalize Buffalo's city centre and reverse its population drain.¹¹

Discussion and recommendations for social inclusion

Research indicates that new LRT lines can improve access to jobs, increase sense of attachment to a neighbourhood, and even reduce obesity rates. These are all highly relevant to low-income households.

Understanding the impact of LRT on property values is more complicated in that research results depend on neighbourhood characteristics and the length of time studied. Research of census tracts along the SkyTrain route in Vancouver looked at change over 25 years period during which the city had enormous population growth and development overall, whereas shorter-term studies found modest increases in housing prices brought on by LRT.

As Hamilton considers building LRT, decision-makers can use research findings to inform the planning that promotes social inclusion. These should include:

- creating opportunities for mixed income housing, so that renters and low-income households are not displaced by any ensuing gentrification
- promoting a mix of residential, commercial, and civic uses within walking distance of transit stops
- maintaining affordable transit fares
- ensuring strong connectivity between LRT and other forms of public transit, namely HSR buses and GO Train service
- explore the creation of community coalitions to negotiate agreements with developers or government entities on transit-oriented development projects
- require city-subsidized employers to create jobs that are accessible by public transportation

10 D. Banister and J. Berechman, *Transport Investment and Economic Development* (London: UCL Press, 2000).

11 D.B. Hess and T.M. Almeida, Impact of Proximity to Light Rail Rapid Transit on Station-area Property Values in Buffalo, New York. *Urban Studies*, 44(2007): 1041-1068.

Appendix A

Executive Summary of *Making the Connection: Transit-Oriented Development and Jobs* (2006), by Sarah Grady with Greg LeRoy, Good Jobs First, written with support from the Ford Foundation.

<http://www.goodjobsfirst.org/sites/default/files/docs/pdf/makingtheconnection.pdf>

Transit-oriented development (TOD) is growing in popularity, but most of the focus of such projects is on environmental benefits and innovative design. This report takes another approach. We look at the ways TOD can serve the needs of working families—particularly those with low and moderate income—by providing affordable housing and/or better access to jobs. This is done through an examination of 25 TOD projects around the country that to varying degrees meet the housing and employment needs of those with limited means.

TOD projects, by definition, improve transit options, in two senses. The housing components of such projects give residents easy access to trains, streetcars and buses for commuting to work elsewhere. The commercial components create jobs that people living in other places can more easily reach by public transportation. All this is laudable, but it does not help working families if the housing is upscale and the jobs are polarized between well-paying professional positions and minimum-wage service jobs.

We sought out projects that are trying to bridge the gap. The best ones incorporate a large portion of affordable housing and/or make a substantial attempt to create good jobs that can be filled by people from working families. In other cases, these components are more limited but still significant. Overall, the case studies show that TOD does not have to be an innovation that serves only the affluent or environmentally conscious.

Looking at the 25 projects overall, we found that certain types were more likely to address the needs of working families. These were:

- Projects in which a community coalition negotiated for a Community Benefits Agreement with a private developer for guaranteed concessions such as local hiring, living wages and affordable housing set-asides. We cite examples from Los Angeles, San Diego, Denver, and Milwaukee.
- Those in which a community development corporation (CDC) initiated the project and made it integral to the organization's neighborhood improvement mission. In Columbus, Ohio, for example, a transit agency working with CDCs developed an entire jobs-access program after helping to develop a mixed-use TOD.

- Cases in which an exceptional private developer intentionally designed a project for the benefit of low-income families and/or commuters. The Tom Hom Group, for example, sited an affordable housing development in Las Vegas by first consulting bus-route maps and identifying job centers.

The Potential of Economic Development Subsidies

In every case of CDC-led TOD and in most cases of developer-led TOD documented here, economic development subsidies helped make the project happen. However, in only a few cases—such as those involving the Transit-Oriented Development Property Tax Exemption in Portland, Oregon— were these subsidies awarded through programs that explicitly tied the assistance to the project’s transit accessibility. In other cases, the subsidies were necessarily meant to promote TOD.

This did not come as a surprise to us. Our 2003 report *Missing the Bus: How States Fail to Connect Economic Development with Transit* found that not a single state required that subsidized projects be transit accessible. It appears that localities, with few exceptions, are also failing to make that connection. We believe that in urban areas with transit systems, companies should not be eligible for subsidies unless the jobs are transit-accessible and within a reasonable commuting distance from affordable housing. Legislation that would give preference to such deals is now being debated for the third year in a row in the Illinois legislature. Transit linkage is already well established in affordable housing construction: 28 states already impose such a preference or requirement.

With “location-efficient job incentives,” many benefits will accrue: low-income families will gain more access to economic opportunity, helping to reduce poverty and dependence; more commuters will gain a choice about how to get to work, reducing traffic congestion and improving air quality; and taxpayers will realize better returns on their infrastructure investments through more efficient land use.

The projects detailed here are, we believe, proof that the economic development goal of poverty reduction can be integrated with public transit, especially when leaders are intentional. Reforming job subsidies to make them location-efficient is a way to codify that intentionality.

Appendix B

Findings from Todd Litman. *Rail Transit In America: A Comprehensive Evaluation of Benefits* (Victoria: Victoria Transport Policy Institute, 8 June 2011).

<http://www.vtpi.org/railben.pdf>

A study of two dozen U.S. cities comparing cities where some form of rail transit is a major component of the local transportation system to cities with no rail transportation system found that, compared with Bus Only cities, Large Rail cities have:

- 400% higher per capita transit ridership (589 versus 118 annual passenger-miles).
- 887% higher transit commute mode split (13.4% versus 2.7%).
- 36% lower per capita traffic fatalities (7.5 versus 11.7 deaths per 100,000 residents).
- 14% lower per capita consumer transportation expenditures (\$448 average annual savings), despite residents' higher incomes.
- 19% smaller portion of household budgets devoted to transport (12.0% versus 14.9%).
- 21% lower per capita motor vehicle mileage (1,958 fewer annual miles).
- 33% lower transit operating costs per passenger-mile (42¢ versus 63¢).
- 58% higher transit service cost recovery (38% versus 24%).

According to the authors: “Many of these benefits result from rail’s ability to create more accessible land use patterns and more diverse transport systems, which reduce per capita vehicle ownership and mileage. These additional benefits should be considered when evaluating rail transit.”