

East Side Airport Metro Rail Extension Analysis



CITIZENS FOR REGIONAL TRANSIT, 2021

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EXECUTIVE SUMMARY

Transportation access is one of the most important components of escaping poverty, and transportation is ranked as the primary need by service providers and the second-ranked need by residents in the Buffalo region.

The East Side Airport Extension would consist of 13 miles of new track with estimated construction costs of between \$559 million and \$806 million for the state and local government.

Buffalo's Light Rail Rapid Transit (Metro Rail/LRRT) system is more easily accessible than Metro buses for those with physical disabilities and requires less assistance to use.

Buffalo's Metro Rail system performs better than its bus system on affordability [*speed*] and safety, but similarly for efficiency (proportion of on-time arrivals). The Metro Rail system meets regional demands for efficiency.

Light Rail systems have a positive impact on public health, which is particularly important for Buffalo's East Side, where data show poorer health outcomes among residents than the rest of the city on average.

Improved public transit connectivity between Buffalo's inner city and suburbs would improve access to fresh food, education centers, healthcare, shopping, and cultural/recreational amenities. All are top considerations for improving transportation access for East Side residents.

57 hours, \$965, and 23 wasted gallons of fuel per car are lost by commuting per year in Buffalo. *[This is in addition to the time, money and gas that would be spent commuting without the congestion. That is, it is the additional time and money spent because of the congestion.]*

Households in the East Side Airport Corridor spend an average of 12% of their income on local mobility needs, making transportation the second-largest household expense after housing.

Just over 28 percent of Buffalo households on the East Side do not have access to a car. The East Side Airport Corridor has twice the rate of car inaccessibility than the City of Buffalo at large.¹

[While this report] uses 2010 census data, the 2020 Census findings show a reversal in the City of Buffalo and Town of Cheektowaga's long-term trend of population loss, but the East Side Airport Corridor has experienced a higher rate of population loss than the rest of Buffalo and Cheektowaga.

The East Side Airport Corridor's population density lands at 5,182, below Buffalo's density of 6,436 people per square mile when the area surrounding the airport is not incorporated, and 4,416 when the airport area is incorporated. The corridor comprises 12% of the region's population and has a higher vacancy rate than the rest of Buffalo and Cheektowaga.

The East Side Airport Corridor has a poverty rate well above that of Cheektowaga as a whole and in line with Buffalo's poverty rate, although these rates vary by community along the corridor.

The East Side Airport Corridor follows similar patterns to the rest of Buffalo and Cheektowaga regarding employment rate, but three of the four communities examined along the corridor fall below the regional average.

¹ Maciag, M. (2021, June 14). *Vehicle ownership in U.S. Cities data and map*. Governing. <https://www.governing.com/archive/car-ownership-numbers-of-vehicles-by-city-map.html>

The East Side Airport corridor has a racial composition like that of Buffalo at large. Residents within the East Side Airport Corridor have a high school graduation rate 7% lower than Buffalo at large and a 48% lower rate of degree attainment. Metro Rail would link community members to many educational resources.

Rapid transit investment on the East Side would capitalize on *[and enhance]* the East Side Avenues Initiative, an ongoing investment of \$65 million in Buffalo's East Side by New York State. Master Plans for major institutions along the corridor, like the Broadway Market and Central Terminal, add momentum to the potential for private investment, as Larkin Development Group's initial investments in the Larkin District became the catalyst for the node of redevelopment that would become "Larkinville".

ACKNOWLEDGEMENTS

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COMMUNITY STAKEHOLDER INTERVIEWEES

The following is a list of community stakeholders interviewed for the purpose of this report about Equitable Transit-Oriented Development (eTOD) and equitable mobility on Buffalo's East Side. Their input was invaluable for guiding the focus and input of this report. No individual listed below is responsible for the content or findings of the following analysis.

Dena Belzer, Founding President, Strategic Economics

Paul F. Ciminelli, President and Chief Executive Officer, Ciminelli Real Estate Corporation

Brian Conley, Senior Planner, University of Buffalo Regional Institute (UBRI)

Donna Edwards, Community Activist, Fillmore Forward

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Howard Zemsky, Founder and Director Emeritus, Larkin Development Group

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ABBREVIATIONS AND TERMINOLOGY

CBB: Census Business Builder

eTOD: Equitable Transit-Oriented Development

GBNRTC: Greater Buffalo Niagara Regional Transportation Council, MPO

LRRT: Light Rail Rapid Transit

MPO: Metropolitan Planning Organization

Grade Crossing: The crossing point between a railroad and a street

TOD: Transit-Oriented Development (see eTOD above)

Wildroot: For *[the purpose of]* this report the Walden-Bailey-Broadway community is referred to as “Wildroot”, in reference to the landmark Wildroot Building adjacent to a proposed station on the corridor

REGARDING CENSUS DATA

The report is based on 2010 U.S. Census data because 2020 granular data has not been released as of this analysis. The Census bureau has released general data from the 2020 census that will show population increases, but the granular data needed is not yet available. Citizens for Regional Transit plans to address updated changes in a revision to this report when the data becomes available.

INTRODUCTION

This report quantifies the economic, demographic, and social composition of the East Side Airport Corridor. It evaluates the area's needs and potential through the lens of Equitable Transit-Oriented Development (eTOD). This report provides an overview of the NFTA's planned East Side Airport Metro Rail Extension and its considered stops in the Larkinville, Broadway Fillmore, Wildroot², and Walden Park communities. The analysis considers the economic, social, and environmental impact of an LRRT investment *[that would serve Buffalo's most disinvested neighborhoods while]* connecting Buffalo's downtown Metro Rail stations to the Buffalo Niagara International Airport, serving two of the region's most vital employment centers.



Figure 1: East Side Airport Corridor Map

² For *[the purposes of]* this report the Walden-Bailey-Broadway community is referred to as Wildroot in reference to the Wildroot building adjacent to the proposed station

EQUITABLE TRANSIT-ORIENTED DEVELOPMENT



Figure 2: CRT Proposed LRRT Full System Build

Throughout the history of American cities, low income and minority-majority communities have struggled under targeted disinvestment. This conscious neglect of the past requires more than a move away from discriminatory policies; active steps must be taken to advocate for the special needs of historically disadvantaged communities. A major component of achieving economic and racial justice is equitable access to fast, efficient public transportation.

Equitable Transit-Oriented Development (eTOD) focuses on providing *[affordable housing, amenities, and]* transportation services to communities with the greatest need rather than prioritizing immediate returns on investment. Expanding Buffalo's Metro Rail Rapid Transit from downtown to the airport would provide an efficient, timesaving means of getting to essential destinations to positively impact residents' quality of life.

USING TRANSIT TO STIMULATE THE ECONOMY AND IMPROVE MOBILITY

Transportation access is a vital component of equity. The 2020 Buffalo Niagara Regional Report by Numbers in Need identified transportation as a pressing barrier for residents with lower incomes. [29] The lowest earning fifth of Americans spend 40.2% of their take-home pay on transportation, primarily due to the expense of owning and maintaining private vehicles. [40]³ Cities with effective and expansive access to public transportation dramatically lower the share of earnings spent on transportation for the average-earning family: from 25% of total income to as little as 9%.[41]⁴ Studies find that commute time is one of the most significant factors in an individual's chances of escaping poverty, as poor transportation options impede an individual's access to employment opportunities, healthcare, and education centers. [41]

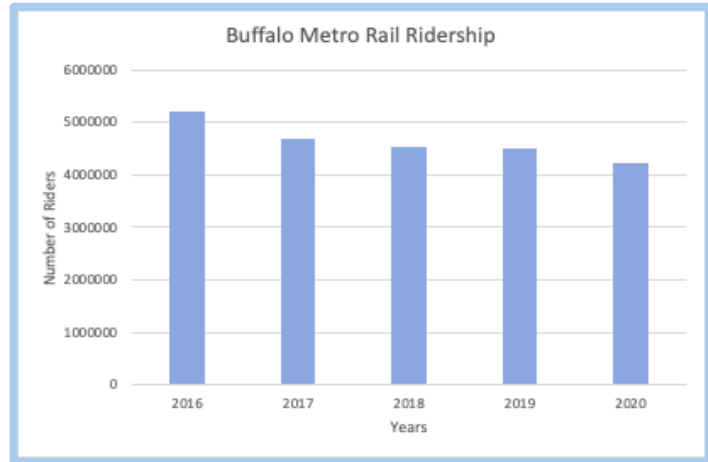


Figure 3: Rail ridership in Buffalo, NFTA metro (2020)

Lower income populations are more likely to use public transportation, and thus depend on its reliability to access jobs, the wider community, and educational opportunities. Nonetheless, Buffalo's East Side, home to a disproportionately large share of Buffalo's lower income and minority population, has poorer access to multimodal transportation than Buffalo at large. The East Side is less easily walkable, has less access to bicycle infrastructure, sees poor transit service because urban sprawl has thinned population and siphoned transit funds from the city to suburban sprawl. Buffalo's Metro Rail does not have an East Side line. Residents must rely on buses that are slow and require many transfers. Therefore, improving access to *[rapid]* public transportation would improve the accessibility of employment centers, healthcare institutions, education, *[recreation]*, and entertainment centers for the region's most disadvantaged residents.

³ Surface Transportation Policy Project. (2003). Why a Lack of Transportation Choices Strains the Family and Budget and Hinders Home Ownership. Smart Growth America. Retrieved from <http://old.smartgrowthamerica.org/documents/transportation-costs-and-the-american-dream.pdf>, on August 3, 2017

⁴ Chetty R. & Hendren N. (2015) The Impacts of Neighborhoods on Intergenerational Mobility. Harvard University. Retrieved from http://www.equality-of-opportunity.org/images/nbhds_exec_summary.pdf on November 2, 2017.

Transportation is ranked as the *[number one community need]* primary need by providers of community services such as medical institutions, libraries, and social *[service]* organizations. Transportation needs are ranked second by residents in the region. [29]⁵ In discussions with community leaders conducted for the purpose of this report, improved access to fresh foods, education centers, and improved connectivity between the suburbs and Buffalo's downtown were cited among top considerations for public transportation expansion.

Beyond connecting citizens to resources, investment in public transportation is linked to regional economic growth. Strategic public transportation investment promotes the upward mobility of low-income residents while benefiting the economy as a whole. [1] Research finds that every \$1 invested in public transportation yields a \$4 return. Investment in public transportation is also a means of placemaking. [6] This is emphasized by Buffalo's One Region Forward report, which pointed towards the need to shift the focus of transportation funding towards stimulating growth rather than rewarding it. [13]

Buffalo's current Metro Rail consists of 6.4 miles of track running from the Erie Canal Station to the University Metro Station. Much of the line and its 15 stations are underground (See Figure 1). Initial LRRT plans for Buffalo detailed a far more extensive system. However, the city's population loss during construction alongside a costly change of plans from elevated construction of the Main Street line to a more expensive tunneling option prevented these plans from being realized. [39] The train system costs the NFTA \$26,709,509 to operate yearly as compared to the far more expansive bus system *[over 1,000 services miles]* which costs \$107,653,826 a year to operate⁶. [26]

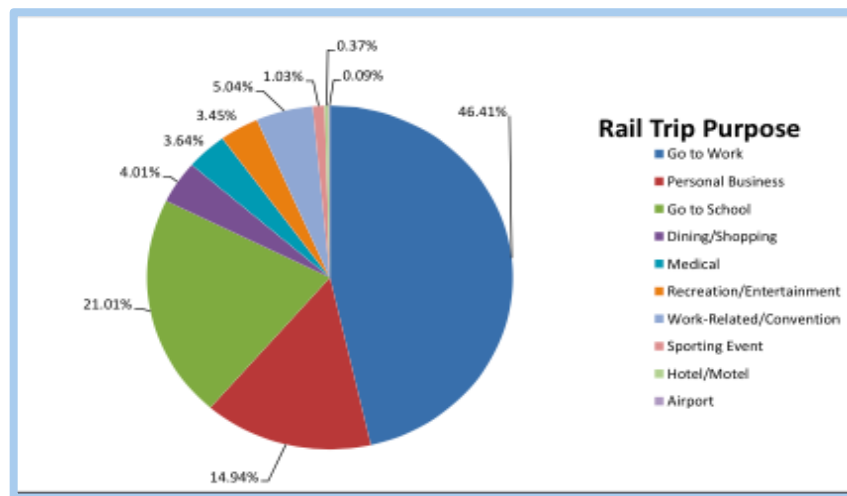


Figure 3: Transit use purpose, GBNRTC (2015)

⁵ Numbers in Need. (2020). The Buffalo Niagara Regional Report. <http://regional-institute.buffalo.edu/wp-content/uploads/sites/3/2020/07/NumbersInNeed.pdf>

⁶ NFTA-Metro (2020). NFTA 2019-2020 Annual Performance Report. <https://www.nfta.com/media/1dubj5z3/metroperformancereport2020.pdf>

Currently, the NFTA is conducting the required environmental impact reports for an extension of the line northward to the UB Amherst campus. This line would add 6.5 miles of rail and ten stops to the line. Analysis of the extension followed criteria listed in Table 1 of the appendices. [24] Despite Buffalo's population loss the metro rail has 5,058,300 annual passengers. Ridership has declined slowly since that point with a dramatic drop in 2020 to 4,213,189 because of pandemic conditions [26]⁷. However, while it runs only for 6.4 miles as compared to over a hundred miles of bus services LRRT carries 20% of all NFTA transit.

[Prior to the recession, Metro Rail carried 5,058,300 passengers annually, ranking it among the most-ridden light rail transit systems in the U.S. by passenger mile. Even though Metro Rail currently covers only 6.4 service miles, (6% of total service miles) compared to Metro Bus's 1,075 service miles (94.4% of total service miles), Metro Rail carries 18% of all NFTA transit riders, making it the real workhorse of Buffalo's transit system.]

TRANSPORTATION IN BUFFALO

In Buffalo 38,789 hours are lost to commute time every year; that's 57 hours per year per commuter. This costs the city \$652 million in lost time *[on top of the time commuting without congestion]* and fuel annually and costs the individual \$965 and 23 wasted gallons of gasoline. [34]⁸ Nonetheless, Buffalo's public transportation system is underutilized (as it is in many mid-size U.S. cities) because of the higher proportion of car owners and the difficulties associated with using public transportation, including the time it takes to complete one's journey compared to driving. Most of Buffalo's frequent public transit passengers don't have access to a personal vehicle. However, the Metro Rail rapid transit attracts a greater proportion of discretionary riders, possibly due to the speed and comfort advantage it offers over travel by bus. As such, an expanded train system may attract more car owners to choice-riders of public transit. [35]

⁷ NFTA Metro, (2019). Metro Rail Expansion Project. Locally Preferred Alternative Refinement Technical Report. https://www.nftametrorailexpansion.com/pdfs/LPA_refinement_technical_report_012019.pdf

⁸ Texas A&M Transportation Institute (2021). Roadway Traffic Congestion by Urbanized Area: 2017 [Vehicle Miles Traveled, Hours of Delay, And Congestion Cost] ProQuest Statistical Abstract of the U.S. 2021 Online Edition.

Twenty-eight percent of Buffalo residents do not have access to an automobile, and thus are limited in their ability to fully participate in the community. [17]⁹ Residents dependent on Buffalo's public transportation report that it is difficult to use. In interviews conducted for this report, community leaders noted that transportation gaps exist in the bus running times and the routes available for residents to access job opportunities in the suburbs. In a One Region Forward survey of Western New Yorkers, 40% ranked Buffalo's public transportation at 4 out of 5 in difficulty of use for reaching work or school. [13]¹⁰ This is significant as the majority of those using Buffalo's public transportation use the system to get to work or school: 46.41% for work; 21% for school. The next-most relevant use was for personal business at 15%¹¹. Respondents to the One Region Forward transportation survey also ranked improving transit far above prioritizing driving, biking, or walking, and indicated that they would like to see that public transportation prioritize connecting to new places. [10, 13]

⁹ Maciag, M. (2021, June 14). *Vehicle ownership in U.S. Cities data and map*. Governing. <https://www.governing.com/archive/car-ownership-numbers-of-vehicles-by-city-map.html>

¹⁰ Greater Buffalo-Niagara Regional Transportation Council, Niagara Frontier Transportation, Buffalo Niagara Partnership Authority, School of Architecture and Planning, University at Buffalo, . (2015). *Making connections survey results (MARCH-APRIL)*. One Region Forward. <http://www.oneregionforward.org/data-tools/making-connections-survey-results-march-april/>

¹¹ GBNRTC. (2010). *Erie County Transit Service Restructuring and Fare Study—Strategic Assessment*. Final Report 2010. <https://app.box.com/s/vhju03f9iqrwnl91mc9439k53xd5xm1n>

EAST SIDE AIRPORT EXTENSION

OVERVIEW

The proposed East Side Airport Extension would extend from the downtown end of Buffalo's existing light rail line through Buffalo's East Side, terminating at the Buffalo-Niagara International Airport or slightly beyond at a Park-&-Ride close to the I-90, where it could serve suburban commuters and visitors arriving via the NYS Thruway. This above ground rail rapid transit would operate on disused legacy railroad rights-of-way, crossing from Buffalo's downtown into the Town of Cheektowaga, linking several of the highest demand destinations in the Buffalo Niagara region. As part of One Region Forward's public outreach, Western New York residents were asked what destinations were in greatest need of public transportation service. [14]

The public ranked the Buffalo Niagara International Airport number 1 for needed transit service, and Larkinville, Central Terminal and Walden Galleria Mall (ranked 6, 7, and 8) were all ranked among the top ten in-demand destinations. Nonetheless, Transit Investment Project locations for the upcoming years (to 2024) don't prioritize these locations and show a continued lack of investment in the East Side. [11]



Figure 4: One Region Forward Mobile Transportation Survey



Figure 5: CRT Proposed East Side Airport Extension - Stations

Expanding the light rail rapid transit system would increase the utility, speed, and value of the transit system, including the bus lines and bikeways that augment it. As an addition to the existing Metro Rail system, the East Side Airport Extension would build on Buffalo's existing rail investment (worth \$2 billion in today's dollars) and create a one-seat ride from the Buffalo Niagara International Airport to Amherst. This would rapidly connect those visiting Buffalo to its growing downtown while connecting Buffalo's underserved East Side communities to employment, education, and other amenities all along the existing system – with even more connectivity possible as the originally-planned system is built out incrementally in future years. Buffalo's East Side has the highest number of residents at or near the poverty level: 78,982 people. [29] These residents have the greatest potential to benefit from *[rapid transit]* investment and have a higher potential for transportation-related economic growth in their neighborhoods. According to an earlier NFTA commissioned study (2010), the East Side Airport Corridor was also found to have higher development potential and market intensity greater than that of the Amherst Corridor now moving forward *[now slated for transit extension]*. [10]

The East Side Airport Extension corridor has a lower population density than Buffalo at large: 4,193 residents per square mile, whereas Buffalo has a density of 6,351.02 residents per square mile.¹² As such, plans for the line would limit initial stops to increase rail speed and decrease costs, given the lower density of the region. But the proposed line with all possible future stations is pictured above in figure six to illustrate its full potential. For the purposes of this report, five station locations will be examined in detail: Larkinville, Broadway Fillmore, Wildroot, and Walden. The area surrounding the proposed East Side Airport Extension comprises 12.3% of the population of both City of Buffalo and Town of Cheektowaga, based on the census tracts within a half mile of the proposed route. [36] Both the city of Buffalo and Cheektowaga had been losing population, but this trend was reversed as of the 2020 census; Buffalo's population grew by 6.75% to 278,379 – faster than the region [*as a whole*]. Cheektowaga also reversed its decline, growing 1.9% to 89,877.¹³

Nonetheless, the corridor and communities examined continued to show population decline, except for the area surrounding the Walden stop, which shows less decline. The highest population density along the route occurs surrounding the proposed Walden stop and thins to its lowest point in the area surrounding the Airport. When the airport is removed from density estimates, the corridor's population density lands at 5,182 people per square mile still well below Buffalo's of 6,436 people per square mile. When the area surrounding the airport is included, the corridor's population density falls to 4,460. [37]¹⁴

Community	Occupied Residences	Growth Rate	Vacancy Rate	Unoccupied Housing	Home Ownership Rate
Buffalo	110,427	-0.91%	3.30%	22,094	40.50%
Cheektowaga	35,424	-1.24%	2.30%	1,983	68.50%
East Side Airport Corridor	18,486	-0.68%	18.20%	4,111	53.40%

Table 1: Residential Statistics, CBB

Community	Number of Residents 2015-2019	Number of Residents 2010-2014	Share of Community	Population Growth
Buffalo and Cheektowaga	344,875	349,383	100%	-1.29%
East Side Airport Corridor	42,284	43,429	12.30%	-2.65%

Table 2: Population, CBB

¹² Open Data Network, 2018, [The population density of Buffalo, NY](#)

¹³ Bureau, U. S. C. (2021, June 21). [Census Business Builder \(CBB\). Consumer/Residents, Demographic Characteristics](#)

¹⁴ Bureau, U. S. C. (2021, June 21). [Census Business Builder \(CBB\). Consumer/Residents, Demographic Characteristics](#)

The proposed East Side Airport corridor, which includes the census tracts in the half mile surrounding the proposed line, has 18,486 occupied residences and 4,111 unoccupied units (See Table 2). [36] The corridor's vacancy rate is well above Buffalo's, which both raises concerns and provides opportunity for growth. If LRRT is placed in a *[sparsely populated corridor]*, the growth in both housing and business associated with such investments has space to expand without displacing locals. Likewise, the region has above average homeownership rates, protecting residents from concerns regarding rising rents because of investment. On the other hand, the Buffalo-Cheektowaga region is experiencing a decrease in the number of occupied housing units; while the East Side Airport Corridor is no exception, its loss is occurring at a slower scale. [36]

TRANSPORTATION ACCESS AND USE IN THE CORRIDOR

The area surrounding the proposed East Side Airport Corridor has poorer access to transportation infrastructure than much of the Buffalo area. There are few bike paths on the East Side of Buffalo, and community leaders cite walkability as a prime concern (See Figure 9). There are, however, two Park-&-Rides within the corridor and space for more at the proposed stations, especially at Central Terminal with its above-ground and below-ground parking. There are 18 bus lines, out of Buffalo's 47, which cross through the corridor. These lines include 5 core routes, 10 secondary routes and one express route. [26] These bus lines have farebox revenue of 28.8%, which is above the bus system's average of 21.5%, and have 26 passengers per revenue hour, above the system, which has 24.6 passengers per revenue hour. The three bus routes that most closely follow the route of the proposed rail extension are 4, 6, and 24. These routes have even higher farebox revenue, 29%, and passenger per revenue hour rates, 28 passengers per hour, than the region at large. These *[high ridership]* figures point to the region's potential for TOD, especially as rail transit can attract discretionary riders at a higher rate than buses.

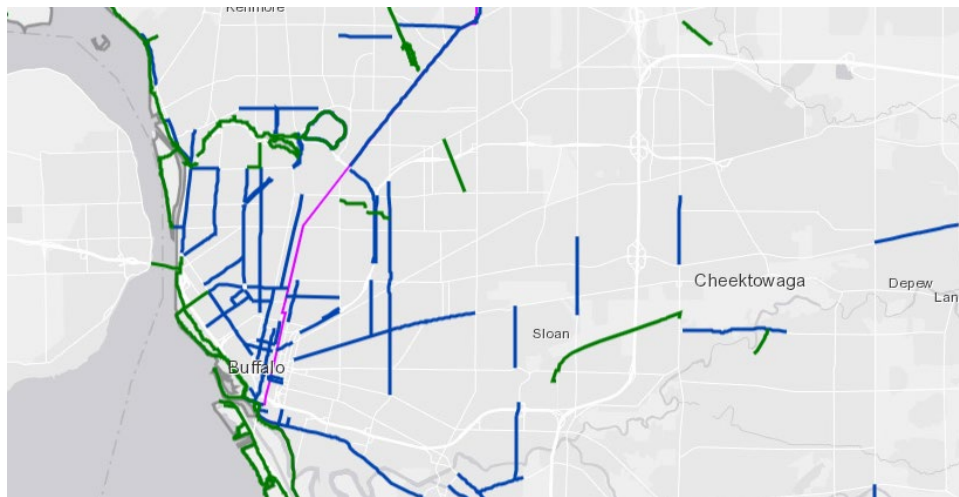


Figure 6: Bicycle Infrastructure Map (N. D.), GBNRTC¹⁵

¹⁵ ARCGIS Web Application

<https://www.arcgis.com/apps/webappviewer/index.html?id=5568FE1B05484D4BBD723DCB84EA692c> Bike infrastructure Layer List

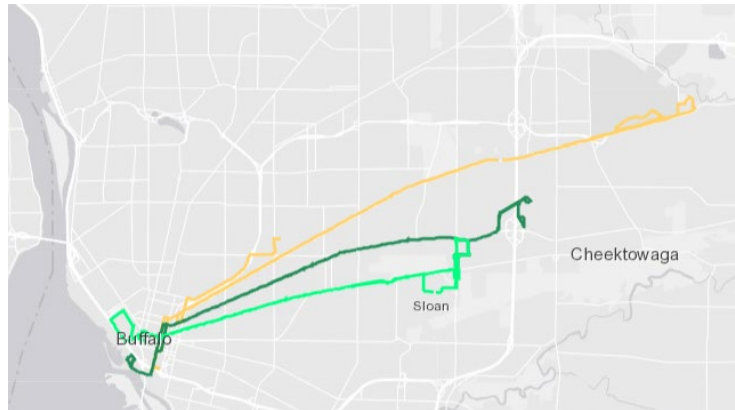


Figure 7: Bus Lines Running Along Proposed Corridor, GBNTRC (2020)¹⁶

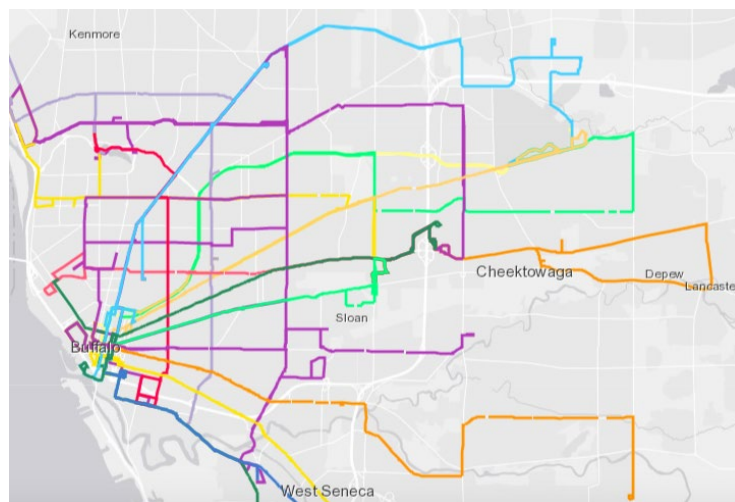


Figure 8: Bus Routes That Intersect Proposed Corridor, GBNTRC (2020)

Most residents in the East Side Airport Corridor, 83.9%, use a car to commute to work. [37]¹⁷ This is greater than the proportion for the City of Buffalo at large and just slightly below the commuter trends in the Town of Cheektowaga. Use of public transit is on par with the Buffalo average and significantly above Cheektowaga's. [37] Like the region at large, nearly the entire corridor commutes by car to work. Commute times are on par with the Buffalo average at 20.5 minutes.

One example of car travel time verses public transit in the Broadway-Fillmore Neighborhood: Travel to Veterans Hospital on Main Street/Bailey Avenue: Car: 15 mins, Public Transit: 45 to 50 minutes. Wait times between buses and trains above 15 minutes are found to be prohibitively high for individuals who require public transportation

¹⁶ Maps and Data, GBNTRC, <https://www.gbnrtc.org/maps>

¹⁷ Bureau, U. S. C. (2021, June 21). *Census Business Builder (CBB)*. The United States Census Bureau. <https://www.census.gov/data/data-tools/cbb.html>

(10)¹⁸. Additionally, the proportion of the population who do not own vehicles is well above the regional average at 26.7% compared to 11.79% in Buffalo and 3.17% in Cheektowaga.¹⁹ [37]

Community	% Who drive alone to work	% Who carpool	% Using public transit	% Who walk to work	% Working from home	% Using other means to commute
Buffalo	65.70%	10.50%	11.30%	5.70%	2.30%	2.70%
Cheektowaga	88.30%	6.40%	1.40%	1.20%	0.80%	1.80%
Eastside Airport Corridor	73.10%	10.80%	10.60%	4.60%	1.80%	2.00%

Table 3: Transportation Accessibility, CBB, Percent of Workforce

Community	Average Travel Time	% Having no vehicle available	% Having one car available	% Having two or more cars available
Buffalo	21.0 minutes	11.79%	35.20%	53.01%
Cheektowaga	19.2 minutes	3.17%	27.80%	69.10%
East Side Airport Corridor	20.5 minutes	26.70%	41.40%	31.80%

Table 4: Transportation Use, CBB

ESTIMATED EXTENSION COST

The East Side Airport rail extension in full would include 13 miles of new track. The cost of this expansion is estimated between \$559 million and \$806 million for the state and local government under current funding formulas, with the federal government picking up the remainder of the cost. Two factors may place this figure towards the lower end in Buffalo compared to light rail systems elsewhere: the line's right-of-way is owned primarily by the NFTA, eliminating the massive land acquisition costs that typically face other locales; secondly, because the trains would run on disused legacy railway, this portion of the system would run almost entirely aboveground at high speed (50mph), with minimal tunneling required.

¹⁸ GBNRTC. (2010). *Erie County Transit Service Restructuring and Fare Study—Strategic Assessment*. Final Report 2010. <https://app.box.com/s/vhju03f9igrwnl91mc9439k53xd5xm1n>

¹⁹ Bureau, U. S. C. (2021, June 21). *Census Business Builder (CBB)*. The United States Census Bureau. <https://www.census.gov/data/data-tools/cbb.html>

Mode	Cost per Mile \$ Million	Distance Miles	Total Cost \$ Million	% Federal Share	\$ Million Federal Share	\$ Million Local Share
LRRT Top Estimate	\$100	13	\$1,300	0.5	\$650	\$650
LRRT Low Estimate	\$70	13	\$910	0.5	\$455	\$455
Highways	\$177	13	\$2,301	0.8	\$1,841	\$368

Table 5: CRT Cost Estimation

EAST SIDE AIRPORT CORRIDOR SOCIAL CHARACTERISTICS

The East Side Airport Corridor has a poverty rate well above that of Cheektowaga *[as a whole]*. The poverty rate is in line with Buffalo's, although it falls only slightly below due to the area surrounding the Walden stop. The Walden Neighborhood is wealthier with a median household income of \$77,953.

Community	Poverty Rate	Employment Rate	Median Household Income	% Of Population with a Bachelor's Degree or Higher	% Of Population with a Diploma
Buffalo	30.10%	55.60%	\$37,354	27.60%	84.60%
Cheektowaga	10.70%	62.9%	\$54,002	23.60%	93.20%
East Side Airport Corridor	28.20%	54.9%	\$49,101	15%	84.90%

Table 6: Social Statistics, Census Business Builder (CBB)

The other three communities examined have poverty rates more closely resembling the East Side at large, the highest being in the area surrounding the Broadway Fillmore Station at 46.1% of the population living at the poverty level.²⁰ The corridor follows similar patterns regarding employment rate and levels of educational attainment: three of the four communities examined fall below the regional average, but the rates are bolstered by above-average performance in the area surrounding the proposed Walden Station. Unsurprisingly, below-average outcomes throughout much of the corridor coincide with poor accessibility of educational and employment opportunities.

The East Side Airport Corridor has a racial composition like that of Buffalo at large. The three primary racial groups in the corridor are: White, Black, and Asian. The demographic makeup of the corridor varies significantly by community. The area surrounding the Wildroot station has the highest proportion of Black residents at 47.45%, and the Broadway Fillmore community has the highest proportion of Asian residents at 16.78%. [36]

²⁰ Bureau, U. S. C. (2021, June 21). *Census Business Builder (CBB)*. The United States Census Bureau. <https://www.census.gov/data/data-tools/cbb.html>

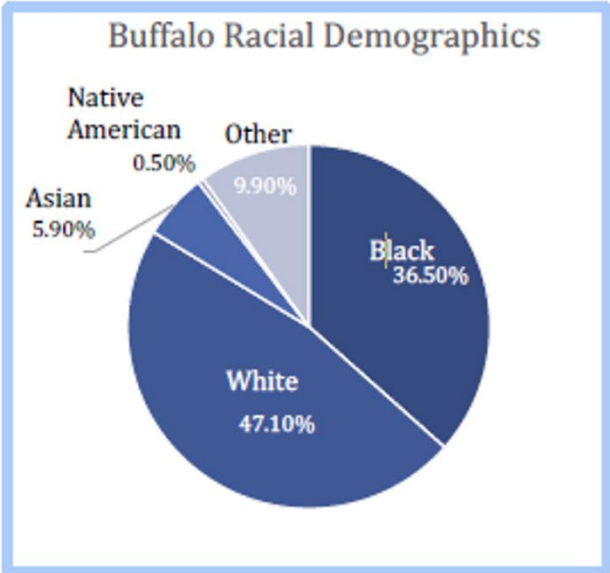


Figure 9: Buffalo Racial Demographics, CBB

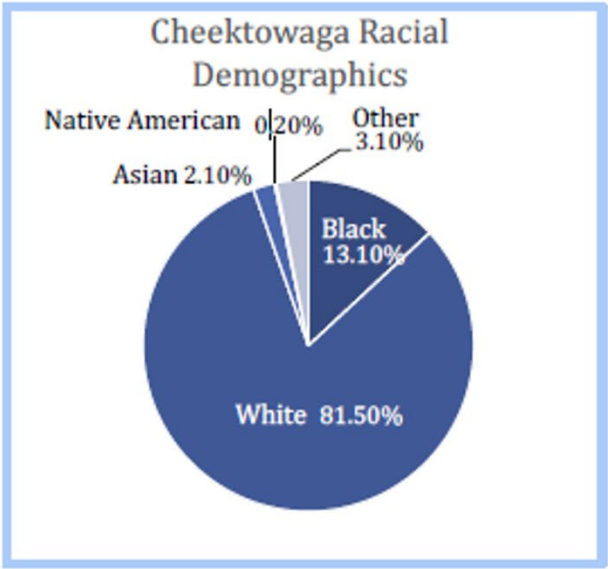


Figure 10: Cheektowaga Racial Demographics, CBB

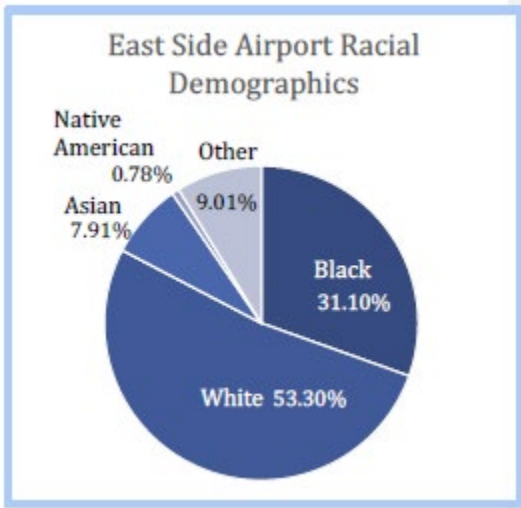


Figure 9: East Side Airport Corridor Racial Demographics, CBB

EQUITABLE TRANSIT-ORIENTED DEVELOPMENT (ETOD) TRANSPORTATION ACCESSIBILITY ANALYSIS

PRINCIPLES OF EQUITABLE TOD

The implementation of eTOD aims to provide underserved communities the opportunity for growth that they would otherwise lack the resources to achieve, harnessing the housing and economic benefits of development spurred by proximity to transit for people of modest means, especially those already living in a project area. The key principles which underlie eTOD, as outlined by the Greenlining Institute, are social equity and community power, which translates into local residents having a say in what goes into their neighborhood and for whose benefit.

Mobility equity is measured through three primary criteria: increase in access to mobility, reduction in air pollution, and the enhancement of economic opportunity. [3] These measures are used below to evaluate the eTOD potential of the proposed East Side Airport light rail extension.

12 Mobility Equity Indicators		
Goal #1 Increase Access to Mobility	Goal #2 Reduce Air Pollution	Goal #3 Enhance Economic Opportunity
1. Affordability	6. Clean Air and Positive Health Benefits	9. Connectivity to Places of Employment, Education, Services, & Recreation
2. Accessibility	7. Reduction in Greenhouse Gases	10. Fair Labor Practices
3. Efficiency	8. Reduction in Vehicle Miles Traveled	11. Transportation-Related Employment Opportunities
4. Reliability		12. Inclusive Local Business & Economic Activity
5. Safety		
Addressing the needs of communities of color with clean, sustainable mobility options provides innumerable societal benefits, including positive health impacts, increased quality of life, and greater employment and education opportunities. When low-income communities of color prosper, this benefits our entire economy.		

Figure 10: eTOD Mobility Equity Indicators, Greenlining Institute

SOCIAL ASPECTS

Affordability

The Greenlining Institute recommends that households spend no more than 20% of their budgets on transportation costs. [3]²¹ Households in the East Side Airport Corridor spend an average of 12% of their income on local transportation. While this is below the 20% figure, transportation is the second largest household expense after housing. Additionally, the average corridor resident spent \$637.53 on car maintenance and repairs. [37]²² Less than half of Buffalo residents surveyed felt confident that they could handle a \$500 emergency cost. Car dependence [therefore] puts them at risk. [21]²³ Additionally, the average annual expense of \$4,847 for transportation is well above 20% of the income for a two-person family (the average family size for the corridor) at the poverty line – making the 28.2% of the corridor's population that lives at or near the poverty line below the affordability threshold.²⁴ By contrast, the average passenger fare expended for Buffalo's Metro Rail is \$1.15 (2019) just below the \$1.53 average expenditure for Metro Bus. [23]

Accessibility

Community	Total Consumer Expenditures per Household	Consumer Expenditures on Local Transportation	Consumer Expenditures on Gasoline	Consumer Expenditures on Vehicle Maintenance and Repair
East Side Airport Corridor	\$40,345.19	\$4,847.17	\$1,261.73	\$637.53
Larkinville Station	\$32,100.38	\$3,888.25	\$931.96	\$465.37
Broadway Fillmore Station	\$29,780.58	\$3,557.33	\$931.96	\$465.37
Wildroot Station	\$34,464.78	\$4,172.54	\$1,098.74	\$542.51
Walden Station	\$49,426.51	\$6,104.41	\$1,575.36	\$789.32

Table 7: Transportation Expenses, CCB

²¹ Creger, H., Sanchez, A., & Espino, J. (2019, November 20). *Mobility equity: Turning theory into reality*. The Greenlining Institute. <https://greenlining.org/blog-category/2018/mobility-equity-theory-reality/>

²² Bureau, U. S. C. (2021, June 21). *Census Business Builder (CBB)*. The United States Census Bureau. <https://www.census.gov/data/data-tools/cbb.html>

²³ A Mobile Safety Net Team. (2020). *The Buffalo Niagara Region*. <http://regional-institute.buffalo.edu/wp-content/uploads/sites/3/2020/07/NumbersInNeed.pdf>

²⁴ Bureau, U. S. C. (2021, June 21). *Census Business Builder (CBB)*. The United States Census Bureau. <https://www.census.gov/data/data-tools/cbb.html>

Accessible public transportation should strive to provide services for the differently abled, the elderly, those with language and cultural barriers, and those without phone or bank access. [3] Table 8 below, compares the accessibility of Buffalo's rail and bus system. [19] Buffalo's rail system is more easily accessible than its bus system for those with physical disabilities and requires less assistance to use. [7] Both systems provide options for those dependent on cash or without smartphones, although the rail system is more easily navigable without use of a digital mapping service. Neither system provides much assistance for those with linguistic or cultural barriers, although the rail system more effectively provides services for individuals with visual or hearing impairments with the inclusion of Braille and consistent announcements. As Buffalo's East Side currently lacks Metro Rail service, it is more difficult to navigate for differently-abled individuals. [7, 9]

Metro Rail	Metro Bus
Accommodations for the differently abled	Accommodations for the differently abled
<ul style="list-style-type: none"> • All Metro Rail trains and stations are designed to be accessible to differently abled riders. • Train cars are accessible for wheelchair riders through the first door of the first railcar • Two wheelchair securement locations in each railcar • Every train stops at every station and each stop is called. • Metro offers free Park & Ride lots strategically located around the region • Service animals are permitted • Ticket vending machines are equipped with Braille and raised letters and have Wheelchair height options. • Many stations provide Telecommunication Devices, volume control telephones and video monitors to assist riders who are deaf or hearing impaired. 	<ul style="list-style-type: none"> • All vehicles have wheelchair lifts or ramps. • Vehicles have a kneeling feature which lowers the bus. • One to two wheelchair tie-down positions. • Operators are required to announce major stops and to provide assistance to disabled passengers where necessary or upon request. • Service animals and personal oxygen supply are permitted. • In the event the wheelchair lift is not working and the next bus is not due to arrive for over 30 minutes, riders are entitled to alternative transportation upon request.
Accommodations for those without access to cellphones	Accommodations for those without access to cellphones
<ul style="list-style-type: none"> • Cash payment options available • Posted schedule and map at stations and route mapped within rail cars 	<ul style="list-style-type: none"> • Cash payment options • Clear signage, full routes at central station as well as online
Cultural and linguistic accommodations	Cultural and linguistic accommodations
<ul style="list-style-type: none"> • English speaking signage and drivers, considered a concern by some community leaders spoken to for the purpose of this report 	<ul style="list-style-type: none"> • English speaking signage and drivers, considered a concern by some community leaders spoken to for the purpose of this report

Table 8: Metro and Bus Accessibility, NFTA

The East Side Corridor has a population of individuals with disabilities proportionally slightly above Buffalo's. The Wildroot Station area has the highest proportion of residents with disabilities at 21.5%²⁵. The corridor has a higher population of English-speaking residents than Buffalo, but a higher proportion than Cheektowaga (See Figures 13, 14 and 15). Spanish is the largest single primary language group for community members besides English. The corridor has a similar elderly population to Cheektowaga and Buffalo and a larger youth population than either community.

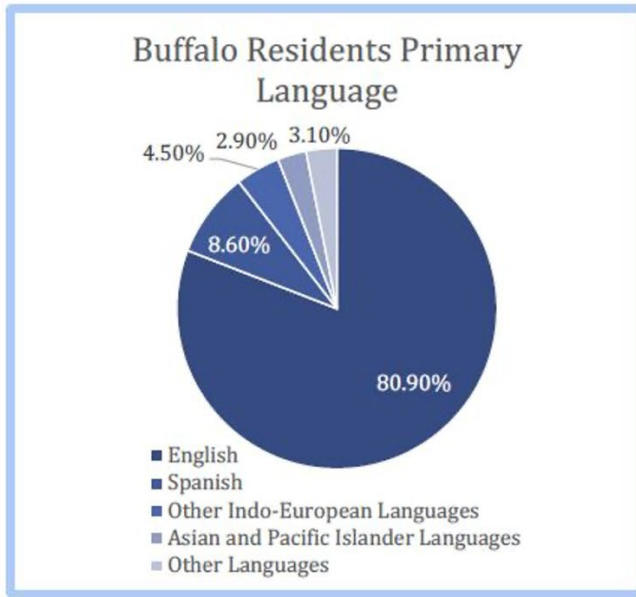


Figure 11: Buffalo Residents Primary Language, CBB

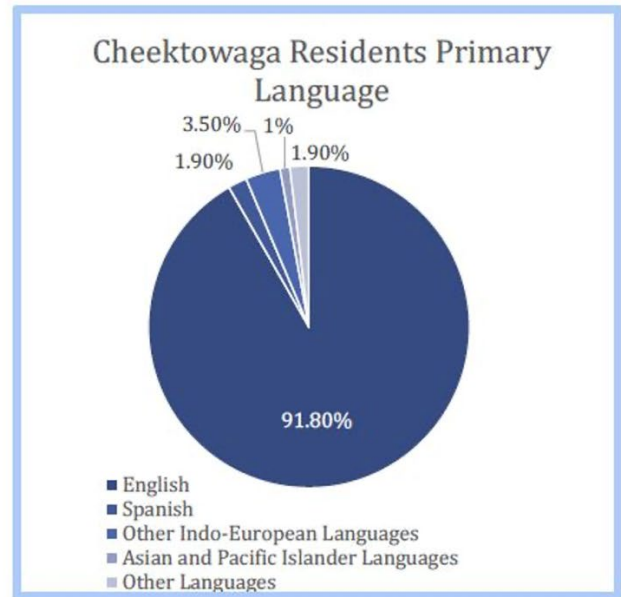


Figure 12: Cheektowaga Residents Primary Language, CBB

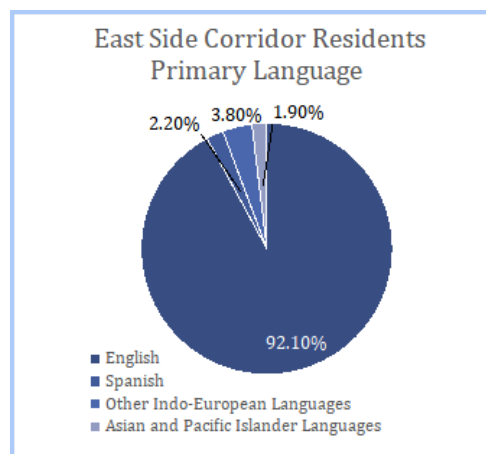


Figure 13: East Side Corridor Residents Primary Language, CBB

²⁵ Bureau, U. S. C. (2021, June 21). *Census Business Builder (CBB)*. The United States Census Bureau. <https://www.census.gov/data/data-tools/cbb.html>

Community	Percent of Population with a Disability	Percent of Population that is Foreign-Born	Age
Buffalo	16.3%	11.3%	Over 65: 12.4% Under 18: 22.6%
Cheektowaga	13.4%	5.8%	Over 65: 19.4% Under 18: 17.4%
East Side Airport Corridor	17.5%	9.1%	Over 65: 14.9% Under 18: 24%

Table 9: Special Requirement Populations, CBB

Efficiency and Safety

Research on the Buffalo-Niagara region has pointed to the need to limit headways (wait times between transit conveyances such as buses and trains) to 15 minutes during weekday peak and midday to maximize ridership. [10] The current Metro Rail line runs once every ten minutes at rush hour and slows to no less than once every 20 minutes during operational hours of 5:10 pm-12:50 am Monday through Friday, and 8:00 am to 11:50 pm on Sundays. [25] The current Metro Rail is on time 84.7% of the time, on par with the Buffalo bus system, and has the highest rates of on-time arrival on Sundays and between 5pm and 12am, when ridership is lower. [25] As the East Side Airport line would be an extension of this line, the on-time percentages and wait times can be presumed to be similar.

These statistics fulfill the requirements of the Buffalo-Niagara report. Running the rail line through the East Side Corridor may decrease passengers per revenue mile as the corridor has a lower population density than Buffalo as a whole. However, placement of a Park-&-Ride at the eastern terminus of the East Side Airport rail extension could help to maximize ridership by encouraging long-distance commuters to rely on public transit rather than *[subject themselves to city traffic]*, contribute to city traffic, and costly parking].

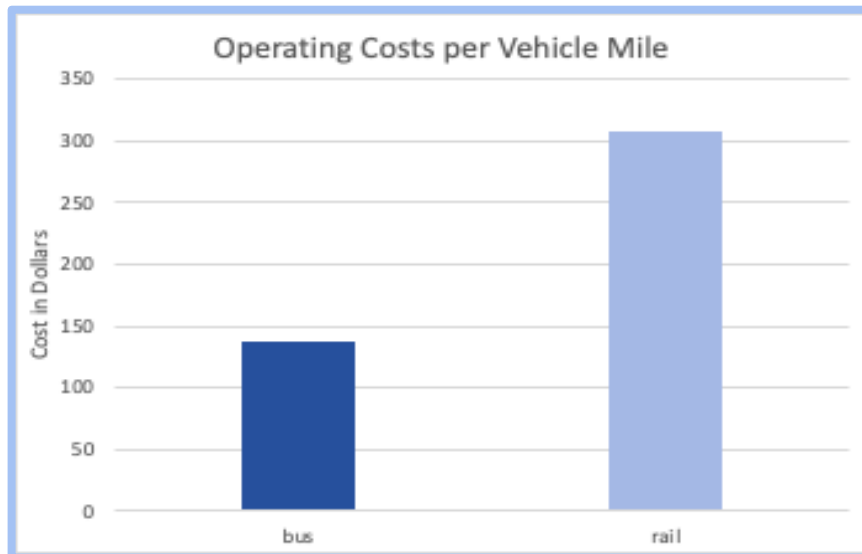


Figure 14: NFTA Operating costs

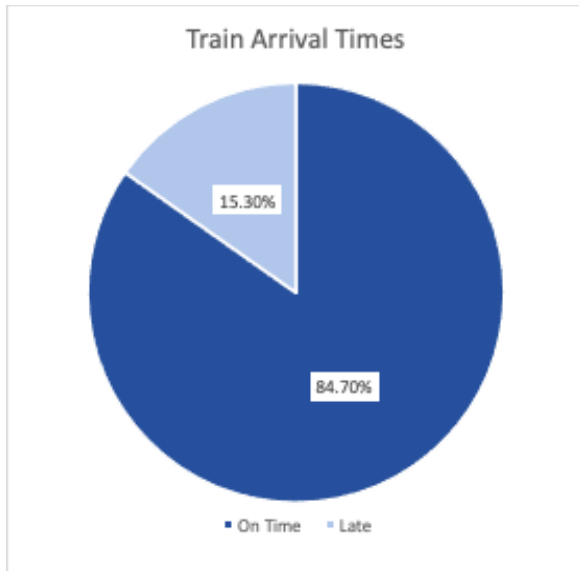


Figure 15: LRRT Arrival Times

Nonetheless, the Buffalo Metro Rail system has twice the passengers per revenue mile the bus system has.

However, the Metro Rails operating costs are nearly three times that of the bus system per mile. [10] The extension's placement over old rail line, limiting the need to cross traffic as well as the initially reduced number of stops, would allow it to move rapidly through the corridor, aiming to prevent delays and lower wait times.

In 2019 the NFTA reported over 250 avoidable collisions in its public transportation system. The proportion of Buffalo bus collisions is well above the American Bus Benchmarking Group average. [27] The rail system in comparison has seen only six collisions since 2002, including one grade crossing incident. [22] The system has had no derailments, no passenger fatalities, and only one evacuation. Traveling on Buffalo's LRRT system is proven to be safe for passengers, and with minimal road crossings, the East Side Airport Extension would minimize grade crossing incidents.

ENVIRONMENTAL

Positive Health Benefits

Environmental concerns are a primary argument for public transportation investment. This rationale is particularly relevant for Buffalo and Cheektowaga as their populations have significantly higher rates of colorectal, esophageal, kidney, lung, oral cavity (mouth and throat) and prostate cancer than the surrounding area. While smoking is key among these causes, traffic is also listed as a potential cause for these elevated rates. [38] East Side residents are subjected to the emissions fumes of approximately 70,000 cars a day that ply the expressways dividing the neighborhood, chiefly the Kensington Expressway (Rt.33) and some measure of the Scajaquada (Rt.198) and NYS Thruway (I-90). Accordingly, Buffalo's East Side has higher rates of childhood asthma than Buffalo at large. [20]

Access to fresh foods was a primary concern for community leaders interviewed; an expanded public transportation system might help to connect residents to fresh food centers. There are four farmers markets along Buffalo's existing LRRT line, and the East Side Airport Extension would add the Broadway Market to the list of easily accessible fresh food centers available to riders. Additionally, studies have pointed to LRRT having a positive effect on Body Mass Index and recommended physical activity levels. This is an issue especially relevant to Buffalo's East Side, which sees high rates of obesity and obesity-related illnesses. [18] The extension would also link East Side residents to major medical centers, including the Buffalo General Medical Center, Gates Vascular Institute, Roswell Park Comprehensive Cancer Center, and other clinics at the Buffalo Niagara Medical Campus (Allen Medical Campus Station), and to Sisters of Charity Hospital (at Humboldt Hospital Station).

CLEAN AIR AND REDUCTION IN GREENHOUSE GASES

Using public transportation to reduce greenhouse gas emissions can take many forms from expanding bus services to investing in bike paths; however, there is evidence that rail systems may be one of the most sustainable investments because they carry more people for the energy expended and attract choice riders at higher rates. The emissions from light rail transit systems across the world vary greatly dependent on the source of the electricity they run on. However, Buffalo's Metro Rail is run primarily on clean, renewable hydroelectricity generated by Niagara Falls, resulting in close to net-zero greenhouse gas emissions. This *[clean]* power is *[further]* supplemented by clean electricity recaptured from the train's braking action. LRRT systems continue to produce less regional and urban emissions than Bus Rapid Transit systems. [34] (See Appendix) A typical passenger vehicle emits about 4.6 metric tons of carbon dioxide per year, assuming the average combustion-engine vehicle on the road today has a fuel economy of about 22.0 miles per gallon and drives around 11,500 miles per year. Every gallon of gasoline burned creates about 8,887 grams of climate-warming carbon dioxide.²⁶ Buffalo's light rail has the capacity to carry up to 720 passengers, each full 4-car train capable of replacing between 175 and 720 cars every ten minutes. [28]²⁷

Reduction in Vehicle Miles Traveled

Studies have shown reductions in car use between 30% and 49% within one-half mile surrounding a light rail corridor. [9]²⁸ There are about 8,869 car users in the half mile surrounding the East Side Airport corridor. [36] If the corridor saw a 30% reduction in driving, residents would save a collective \$2.5 million in car-related expenses and save the 11,250 gallons of fuel wasted [spent] annually because of transportation delays and the 7,800 fewer gallons of gasoline burnt daily by car commuters. This would likewise result in annual reductions of 160,800 lb. of VOC, 167,400 lb. of THC, 1,459,800 lb. of CO, 108,000 lb. of NOX and 57,222,000 lb. of CO₂.²⁹ While these figures are promising, some studies place the effect of LRRT on car ridership lower. [9] Additionally, the low density of stations in the corridor, as well as the region's tendency to locate even new employment centers far from the urban center, may decrease an expansion's effectiveness in reducing vehicle miles traveled.

[In order to reap the full potential benefits of the light rail extension for the environment, smart-growth anti-sprawl policy principles outlined in the One Region Forward report would need to be adhered to, preserving farmland and greenspace in the process.]

²⁶ Greenhouse Gas Emissions from a Typical Passenger Vehicle, US EPA, Nov 29, 2021
<https://www.epa.gov/greenvehicles/greenhouse-gas-emissions-typical-passenger-vehicle#burning>

²⁷ NFTA Metro. (2021). *Service Design Guidelines & Delivery Standards, Revision*. nfta.com.
https://www.nfta.com/media/k2yhjha4/metro_service_guidelines.pdf

²⁸ Ewing, R., Tian, G., & Spain, A. (2014). *Effect of Light-Rail The effect of Light-Rail Transit on Transit on Traffic in a Traffic in a Travel Corridor*. Portland State University.
https://pdxscholar.library.pdx.edu/cgi/viewcontent.cgi?article=1060&context=trec_reports

²⁹ Ewing, R., Tian, G., & Spain, A. (2014). *Effect of Light-Rail The effect of Light-Rail Transit on Transit on Traffic in a Traffic in a Travel Corridor*. Portland State University.
https://pdxscholar.library.pdx.edu/cgi/viewcontent.cgi?article=1060&context=trec_reports

FINANCIAL IMPACT

Fair Labor Practices and Transportation-Related Employment Opportunities

Buffalo's Metro Rail employees are employed through the NFTA. The NFTA has around 1,800 staff. [33] A rail extension would add both temporary and permanent jobs in the region. Initial construction would require contract workers; however, this industry does not make up a large proportion of the region's jobs. Long term however, there may be growth in the Administration & Support industry, which is already strong in the region. (See Table 10) NFTA employees are unionized under three primary unions: ILA Local 1949, the Police Benevolent Association, [and the largest union is the Amalgamated Transit Union Local 1342.] [33]

East Side Airport Corridor Job Sectors	<ul style="list-style-type: none"> ● Retail Trade 12.9% ● Accommodation and Food Services 11.3% ● Health Care and Social Assistance 10.1% ● Professional, Scientific, and Technical Services 8.9% ● Manufacturing 6.9% ● Administration & Support, Waste Management and Remediation 6.9%
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Table 10: East side airport corridor job sectors, CBB

Connectivity to Places of Employment, Education, Services, and Recreation

Extending Buffalo's LRRT system to the East Side would connect Buffalo's downtown to its airport. This would connect two vital employment hubs as well as provide an easier inflow of visitors and guests into Buffalo. When the extension comes online, it would provide residents of Buffalo's East Side with an immediate rapid connection to several employment, education, and recreation opportunities outside of their neighborhoods without the need for a car. In the East Side Airport Corridor presently, 26% of households do not have access to a car, which is over twice the rate for Buffalo households citywide. [37] Community stakeholders listed job access as prime among their concerns regarding gaps in transportation efficiency in the region. An LRRT system could help to link the residents of the East Side to educational opportunities at the University of Buffalo (all three campuses), Erie County Community College's Downtown Campus, and Canisius College with reasonably quick connections to Medaille, Daemen, and D'Youville colleges. Residents of the corridor graduate from high school at a rate .7% lower than Buffalo at large and have a 12.6% lower rate of degree attainment.³⁰ Improved access to these educational resources would have a disproportionately positive effect on the residents of the corridor. The LRRT system would also link East Side residents to recreational opportunities at the waterfront and Fountain Plaza, professional sports venues such as Sahlen Field, and KeyBank Arena.

Besides connecting the residents of the East Side to Buffalo's city center and points to the north and south of it, the extension would connect *[other parts of]* Buffalo to the unique destinations on the East Side. A detailed breakdown of local businesses and resources near the anticipated Metro Rail stations along the East Side Airport Corridor is included below in the neighborhood profiles.

³⁰ Bureau, U. S. C. (2021, June 21). *Census Business Builder (CBB)*. The United States Census Bureau.
<https://www.census.gov/data/data-tools/cbb.html>

Inclusive Local Business & Economic Activity

New York State is investing \$65 million in Buffalo's East Side by way of the East Side Avenues Initiative. Directing TOD at the region may help to capitalize on these investments. The East Side Avenues Initiative includes several general efforts which will likely impact the corridor's growth and characteristics. These investments include a \$10 million Buffalo Neighborhood Stabilization Fund aimed at increasing home ownership and decreasing vacant properties, and a \$5 million Commercial Building Stabilization Fund aimed at historic preservation. The corridor would also benefit from funds such as the \$10 million Infrastructure to Support and Enhance Investments, the \$7.4 million Direct Project Assistance to encourage business growth and support community projects, and the \$5 million Community-Based Real Estate Development Training course to enable East Side residents to undertake their own development projects. [31]³¹

There is considerable evidence that LRRT expansion would positively influence economic growth in the corridor and thus that eTOD has potential to take hold on the long-disinvested East Side. A 2010 NFTA-commissioned study stated the East Side Airport Corridor had the highest development potential of the potential Metro Rail extensions considered, including the Amherst Extension now under advanced stages of pre-construction study. Managed to include affordable housing and business and employment opportunity for people of color, Transit-Oriented Development can capitalize on these investments and yield the positive effects associated with LRRT on business growth and housing value. [2,4] Studies have found that the rail's construction increased property values, especially in wealthier neighborhoods. This impact resulted in premiums of around \$1,300-\$3,000 in Buffalo: 2-5 percent of the city's median home value. [32] *Additionally, residential commercial and office sales per square foot within the existing Metro Rail corridor compared to the proposed Amherst Corridor are found to be growing at higher margins. This points to the potential greater growth impact of rail investment in Buffalo.* Finally, the NFTA Amherst Light Rail Extension Study also anticipated LRRT would encourage the redevelopment of underutilized and vacant land. [15, 30] There is no reason to think it would not also encourage development on vacant land within the city limits, given existing trends to "return to the city" and One Region Forward's directive to reverse sprawl, increase density, and build on existing infrastructure in the name of sustainability and other positive economic and environmental impacts.

³¹ NYS. (2019). East Side Corridor Economic Development Fund | Buffalo Billion. <https://buffalobillion.ny.gov/east-side-corridor-economic-development-fund>

NEIGHBORHOOD PROFILES

LARKINVILLE NEIGHBORHOOD PROFILE

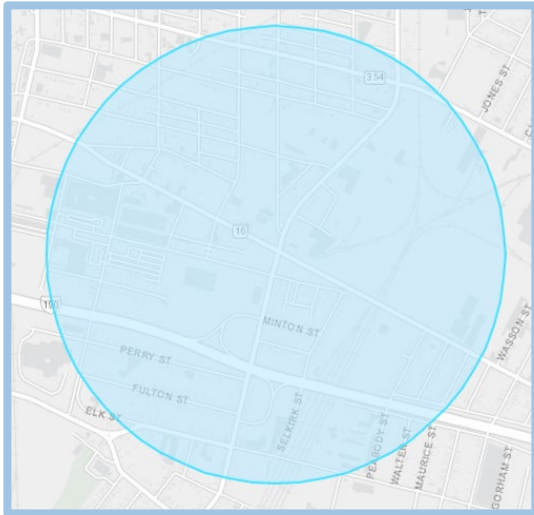


Figure 16: 1/2 mile around proposed Larkinville station, Street Map, ArcGIS



Figure 17: 1/2 mile around proposed Larkinville station, Satellite Map, ArcGIS

The area surrounding the proposed Larkinville Station has a population of 8,133 and has experienced an overall population decline of 10% since 2010, which is considerably above the regional decline. The area around the proposed Larkinville Station has a poverty rate well above the regional average. The poverty rate is 9% higher than in Buffalo at large. The employment rate is 5% lower than that of Buffalo.³² The main employment sector in the region is finance and insurance. However, the region also has significantly lower educational attainment, both regarding high school graduation rates and college degrees, which is 65% lower than the Buffalo average. The region is more diverse than Buffalo with a larger Black population.

Larkinville Station Employment Sectors	<ul style="list-style-type: none">● Finance and Insurance 19.2%● Health Care and Social Assistance 16.6%● Administration & Support, Waste Management and Remediation 15.4%● Manufacturing 11.1%● Professional, Scientific, and Technical Services 11.1%
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Table 11: Larkinville Station Employment Sectors, CBB

³² Bureau, U. S. C. (2021, June 21). *Census Business Builder (CBB)*. The United States Census Bureau. <https://www.census.gov/data/data-tools/cbb.html>

Community	Poverty Rate	Employment Rate	Median Household Income	% of Population with a Bachelor's Degree or Higher	% of Population with a High School Degree
Buffalo	30.1%	55.6%	\$37,354	27.6%	84.6%
Cheektowaga	10.7%	62.9%	\$54,002	23.6%	93.2%
East Side Airport Corridor	28.2%	54.9%	\$51,588	15.0%	84.9%
Larkinville Neighborhood	38.8%	49.6%	\$40,558	9.6%	77.2%

Table 12: Larkinville Social statistics, CBB

Community	Number of Residents 2015-2019	Share of Community	Population Growth
Buffalo and Cheektowaga	344,875	100%	-1.3%
East Side Airport Corridor	42,284	12.3%	-2.7%
Larkinville Neighborhood	8,133	2.4%	-10.2%

Table 13: Larkinville population, CBB

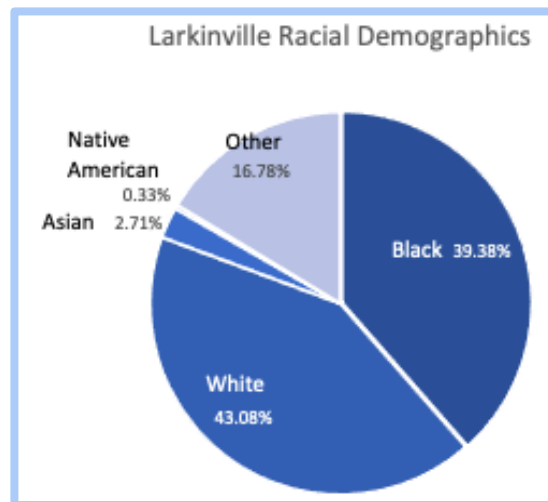


Figure 18: Larkinville population, CBB

Growth Potential

As a result of investments over the past 20 years, Larkinville has grown to be a hub for cultural activities and local businesses centered around Larkin Square, which sits close to the proposed Metro Rail station. [16]

Community	Businesses	Out of Business	Vacancy Rate	Share of Community	Growth 2010-2019
Buffalo & Cheektowaga	20,887	6,084	22.6%	100%	7.6%
Larkinville Neighborhood	282	42	13.0%	1.4%	45.9%

Table 14: Larkinville Business Statistics, Ada Axle

Nonetheless, the Larkinville area has a residential vacancy rate considerably above the city's and even above the *[rest of the]* corridor. There are 1,211 unoccupied residences in the area surrounding the stop, meaning there is plenty of room for newcomers to the neighborhood without displacing local families. [37]³³ Vacant lots in need of infill and buildings in need of rehab provide ample opportunity for both market rate and eTOD *[affordable living]*.

Community	Jobs in Community 2018	Job Growth between 2008 and 2018	Number of Residents who Work Within the Corridor
Larkinville Neighborhood	5,647	27.40%	1,911

Table 15: Larkinville Jobs Statistics

Larkinville has seen considerable development because of the Larkin Development Group's efforts to resurrect the district. While the area has experienced population loss, it has seen significant business growth: 45% between 2010 and 2019. This has been accompanied by job growth of 27% in the district. [5] Nonetheless, the Larkin District has a vacancy rate of 13% and 42 closed businesses, allowing room to grow in the form of TOD. [5]³⁴ The region will see continued investment because of the East Side Avenues Initiative, especially because of the investment on Fillmore Avenue.

³³ Bureau, U. S. C. (2021, June 21). *Census Business Builder (CBB)*. The United States Census Bureau. <https://www.census.gov/data/data-tools/cbb.html>

³⁴ Data Axle. (2021, August 18). *Helping businesses make money through data, technology, & services*. <https://www.data-axle.com/>

Community	Occupied Residences 2015-2019	Growth Rate	Vacancy Rate	Unoccupied Housing	Home Ownership Rate
Buffalo	110,427	-0.9%	3.3%	22,094	40.5%
Cheektowaga	35,424	-1.2%	2.3%	1,983	68.0%
East Side Airport Corridor	18,486	-0.7%	18.2%	4,111	53.4%
Larkinville Neighborhood	3,652	-8.0%	24.9%	1,211	42.1%

Table 16: Residential Statistics, CBB

Points of Interest within ½-mile of prospective stop*Arts and Entertainment*

- The Birds Nest Circus Center
- Larkin Building Wal-l Frank Lloyd Wright [12]

Religious and Cultural Centers

- Try Jesus Ministries
- St Patrick Friary

Groceries

- B Rite Supermarket

Educational Resources

- Buffalo Academy of Science Charter School
- Bilingual Center

Local Businesses

- Ricota's Center
- Tully's Tavern
- Marinaro's Larkin Tavern
- Kornerstone Cafe and Juice Bar Larkin
- Swan Street Dinner
- Hydraulic Heath
- Smokey Tavern
- Flying Bison Brew
- Buffalo Distilling Company
- Metro Pizza

Community Centers

- Larkin Square
- Seneca Babcock Community Center
- Boys and Girls Clubs of Buffalo
- Three parks available

Transportation Accessibility

28 bus stops within ½ mile of the proposed stop

Transportation use

In the Larkinville neighborhood 99% of workers commute. Nonetheless, the corridor has a lower car access rate. Many in the corridor depend on carpooling to get to work, and the average commute time is below the corridor average at around 19 minutes. [36]

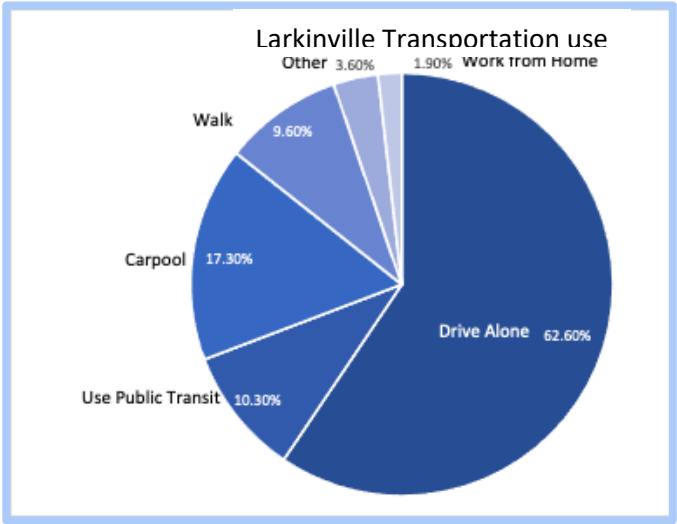


Figure 19: Larkinville commuter transportation statistics, CBB

Community	Average Travel Time	Percent of Population with no Vehicle Available	Percent with One Car Available	Percent with Two or More Cars Available
East Side Airport Corridor	20.5 minutes	26.7%	41.4%	31.8%
Larkinville Neighborhood	18.7 minutes	36.1%	40.7%	23.2%

Table 17: Larkinville commuter transportation statistics, CBB

BROADWAY FILLMORE PROFILE

The proposed station in the Broadway Fillmore neighborhood would be placed at the Central Terminal. The area surrounding the Terminal has the highest density of the four proposed stops with a population of 13,096. However, the community has seen a population decline greater than that of the Greater Buffalo region between 2014 and 2019 at -3.73%. The area has a poverty rate over 50% above Buffalo's overall at 46.1%. Likewise, the employment rate and educational attainment is below Buffalo's. [37] The employment rate of 48.6% is 12.5% lower than Buffalo's, and only 74% of the population has a high school diploma compared to 85% in Buffalo at large. [36] The main employment sector in the neighborhood is Health Care and Social Assistance. The region has a smaller Black population and a larger Asian population than Buffalo as a whole. [37]

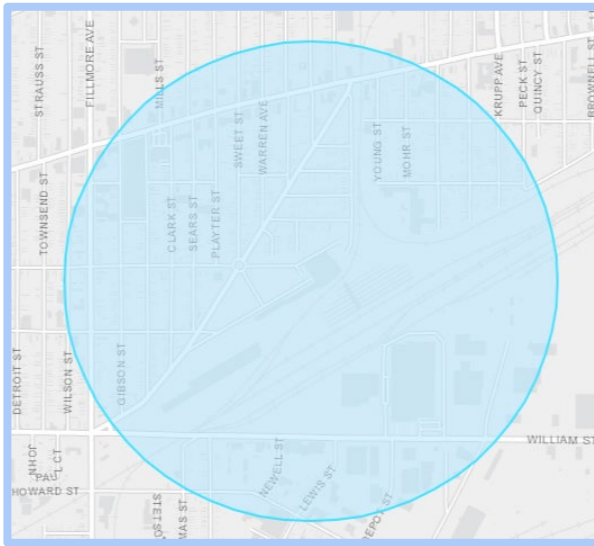


Figure 21: 1/2 Mile Around Proposed Broadway Fillmore Station, Street Map, ArcGIS



Figure 20: 1/2 Mile Around Proposed Broadway Fillmore Station, Satellite Map, ArcGIS

Community	Number of Residents 2015-2019	Share of Community	Population Growth
Buffalo and Cheektowaga	344,875	100%	-1.3%
East Side Airport Corridor	42,284	12.3%	-2.7%
Broadway Fillmore Neighborhood	13,096	3.8%	-3.7%

Table 18: Broadway Population Statistics, CBB

Neighborhood	Poverty Rate	Employment Rate	Median Household Income	% of Population with a Bachelor's Degree or Higher	% of Population with a High School Diploma
Buffalo	30.1%	55.6%	\$37,354	27.6%	84.6%
Cheektowaga	10.7%	62.9%	\$54,002	23.6%	93.2%
East Side Airport Corridor	28.2%	54.9%	\$51,588	15%	84.9%
Broadway Fillmore Neighborhood	46.1%	48.6%	\$36,669	10.5%	74.2%

Table 19: Broadway Population Statistics, CBB

Broadway Fillmore Stop Job Sector	<ul style="list-style-type: none"> Health Care and Social Assistance 35.2% Retail Trade 16.6% Wholesale Trade 11.3% Accommodation and Food Services 10.5% Manufacturing 9.6%
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Table 20: Broadway Fillmore Station Job Sector

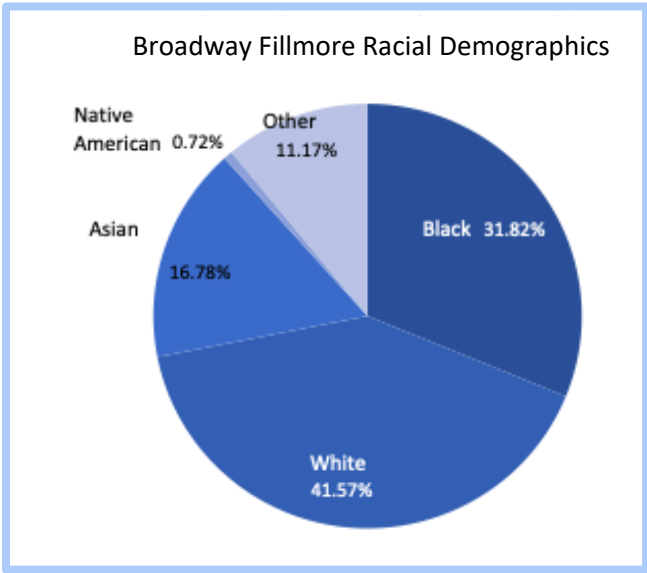


Figure 22:Broadway Filmore Racial Demographics, CBB

Growth Potential

The area surrounding the proposed Broadway Fillmore stop is expecting considerable investment. The Central Terminal, a regional landmark and event venue where an LRRT stop would be located, is due to see a \$5.4 million investment as part of the East Side Avenues Initiative [this has been distributed]. The Broadway Market, a local food-shopping center and cultural attraction within half a mile of the proposed station, is expecting a \$4 million state investment. Fillmore Avenue is one of the four selected East Side thoroughfares which will see investment from the initiative. Broadway Fillmore has additionally been selected as one of four neighborhoods to receive a share of the East Side Commercial District Investment of \$2.6 million. [31] Broadway and William Streets also provide opportunity for potential investment and growth.

Community	Businesses	Out of Business	Vacancy Rate	Share of Community	Growth 2010-2019
Buffalo & Cheektowaga	20,887	6,084	22.6%	100%	7.6%
Broadway Fillmore Neighborhood	183	39	17.6%	0.9%	35.6%

Figure 23: Broadway Fillmore Business Statistics, Data Axle

Even prior to these East Side Avenues investments, the Broadway Fillmore District has seen significant business growth of 35.6% between 2010 and 2019. Nonetheless, the region has seen an overall decline in number of jobs. However, most residents do not work in the area surrounding the proposed station.

There is a business vacancy rate of around 26.4%, well above Buffalo and Cheektowaga's: 2.3%. [5] While above Buffalo's, this vacancy rate is space to accommodate business expansion because of eTOD. Like Larkinville, Broadway Fillmore has a residential vacancy rate well above Buffalo's, granting the region space to grow into with eTOD. Some of the most promising growth opportunities in the region are the Schreiber Brewery and the Broadway Market, which sit within a half mile of the proposed station. There are several buildings in the region which are prime for development, including the Eckhardt Building, 998 Broadway, Buffalo Central Terminal, and 59 Memorial Drive. While over half a mile from the proposed station, Martin Luther King, Jr. Park is a vital community center for this area's residents. This historic Olmsted Park is significant to Buffalo as a whole and has seen significant recent investment.

Community	Occupied Residences 2015-2019	Growth Rate	Vacancy Rate	Unoccupied Housing	Home Ownership Rate
Buffalo	110,427	-0.9%	3.3%	22,094	40.5%
Cheektowaga	35,424	-1.2%	2.3%	1983	68.5%
East Side Airport Corridor	18,486	-0.7%	18.2%	4111	53.4%
Broadway Fillmore Neighborhood	5,498	-0.8%	26.4%	1973	37.1%

Table 21: Broadway Fillmore Residential Statistics, CBB

Community	Jobs in Community 2018	Job Growth Between 2008 and 2018	Number of Residents who Work Within the Corridor	Number of Workers who Work inside the Corridor but Live Outside
Broadway Fillmore Neighborhood	754	-12.5%	23	731

Table 22: Broadway Fillmore Job Statistics

The area surrounding the proposed Broadway Fillmore Metro Rail station is expecting considerable investment, which may help to reverse the business and job loss that occurred in the neighborhood between 2008 and 2018. The Central Terminal *[which could host]* an LRRT station has already seen a \$5.4M investment under the East Side Avenues Initiative. The Broadway Market, which sits within a half mile of the proposed station, is due to see a \$4M investment. Fillmore Avenue is one of the four selected East Side Avenues which will receive New York State investment.³⁵

³⁵ East Side Avenues, <https://eastsideavenues.org/>

Points of Interest within ½-mile of prospective stop

Community centers

- Lincoln Park
- FeedMore WNY Community Garden
- Bricklayers Local 3-NY
- Matt Urban Hope Center

Local Businesses

- Twilight Grill
- Alibaba Kebab
- Father Sam's Bakery
- Amana Plaza Halal Food
- R&L Lounge
- Al Cohen's Famous Rye Bread
- Golden Garden
- The Groove Lounge & Cafe
- Goodwill
- Shys Original Steak House
- Hot Spot
- Bobs Wholesale Meats

Religious and Cultural Centers

- Corpus Christi Church
- St. Stanislaus B&M Roman Catholic Church
- Adam Mickiewicz Library and Dramatic Circle, Inc
- Chua Tu Hieu Buddhist Cultural Center
- Soul Saving Revival Center

Educational Resources

- Buffalo Academy of Science Charter School
- Darul Khalil Religious School
- Darul Uloom Al-Madania Religious School
- King Urban Life Center
- Madinatul Uloom
- PS-59 School. Charles R. Drew Magnet School

Groceries

- Yen Pao
- Save a Lot
- Broadway Convenience Deli
- Price right
- Broadway mart
- Aldi
- Buffalo Fresh

Arts and Entertainment

- Normel Paintball

Health and Childcare

- Ladies of Charity
- Counseling Services of Upstate New York [12]

Transportation Accessibility

27 bus stops within ½ mile of the proposed stop

Transportation use

In the Broadway Fillmore neighborhood 72% of workers get to work by automobile. Nonetheless, the corridor has three times lower car access than the city. Many in the neighborhood depend on public transit to get to work, and the average commute time is longer than most have in the East Side Airport Corridor and slightly above the city average at around 22 minutes.

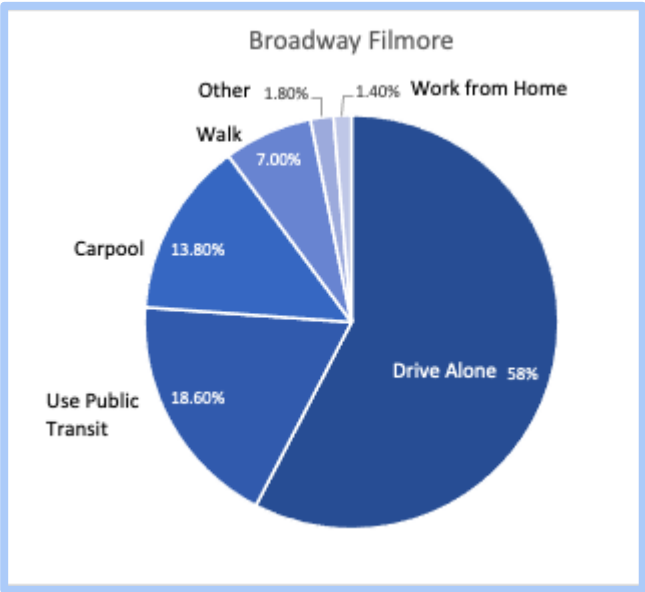


Figure 24: Broadway Fillmore Commuter Transportation Statistics, Census Business Builders

Community	Average Travel Time	Percent of Population With no Vehicle Available	Percent with One Car Available	Percent with Two or More Cars Available
Buffalo	21.0 Minutes	11.8%	35.2%	53.0%
East Side Airport Corridor	20.5 minutes	26.7%	41.4%	31.8%
Broadway Fillmore Neighborhood	22.3 minutes	38.5%	40.6%	20.8%

Table 23: Broadway Fillmore Commuting Statistics, CBB

WILDROOT NEIGHBORHOOD PROFILE

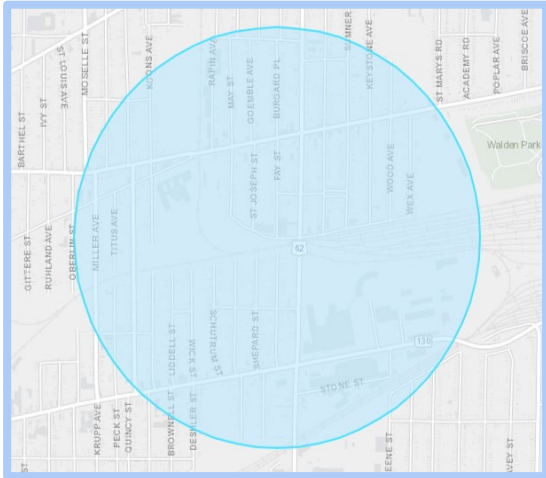


Figure 25: 1/2 Mile Around Proposed Wildroot Station, Street Map, ArcGIS



Figure 26: 1/2 Mile Around Proposed Wildroot Station

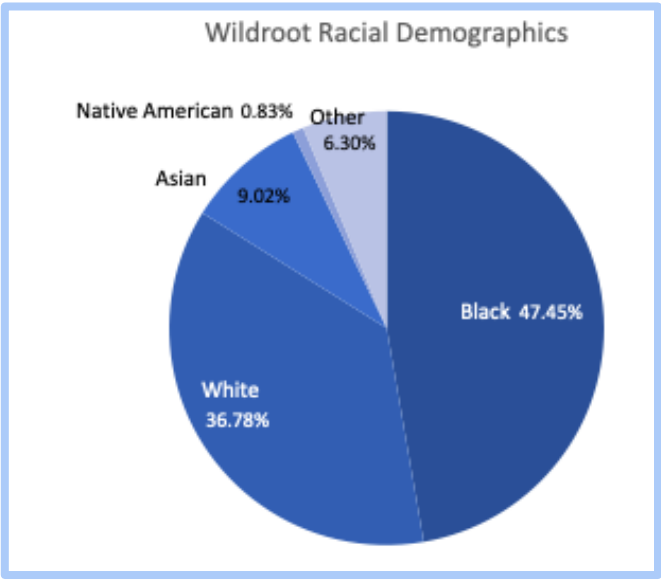


Figure 27: Wildwood Racial Demographics

The area surrounding the proposed Wildroot stop has a population of 10,081. The community has seen a population decline above that of the East Side Airport Corridor at large of -9.5% between 2014 and 2019. The Wildroot area has a poverty rate 5% above Buffalo's at 35.6%. Like the other stops examined, the population in the Wildroot neighborhood has lower levels of educational attainment, particularly college education, which is 17% lower here than in Buffalo at large. The employment rate is 7.3% below Buffalo's, perhaps reflecting poor access to job centers and lower levels of education. The main employment sector in the area is educational services, likely due to Harvey Austin Elementary School. The neighborhood's Black population is 11% higher than Buffalo's and likewise has a larger Asian population.

Community	Number of Residents 2015-2019	Number of Residents 2010-2014	Share of Community	Population Growth Region
Buffalo and Cheektowaga	344,875	349,383	100%	-1.3%
East Side Airport Corridor	42,284	43,429	12.3%	-2.7%
Wildroot Neighborhood	10,081	11,144	2.9%	-9.5%

Table 24: Wildroot population statistics, CBB

Community	Poverty Rate	Employment Rate	Median Household Income	Percent of Population with a Bachelor's Degree or Higher	Percent of population with a High School Diploma
Buffalo	30.1%	55.6%	\$37,354	27.6%	84.6%
Cheektowaga	10.7%	62.9%	\$54,002	23.6%	93.2%
East Side Airport Corridor	28.2%	54.9%	\$51,588	15%	84.9%
Wildroot Neighborhood	35.6%	48.3%	\$41,555	10.6%	79.8%

Table 25: Wildroot Social Statistics, CBB

Wildroot Stop Job Sector	<ul style="list-style-type: none"> • Educational Services 22.2% • Wholesale Trade 20.1% • Retail Trade 18.3% • Health Care and Social Assistance 16.3% • Administration & Support, Waste Management and Remediation 13.2%
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Table 26: Wildroot Station Job Sector

Growth Potential

Within the community there also sit several development opportunities, including the landmark Wildroot Building, Buffalo Business Park, 629, 630, 631, 634 Walden Avenue, 1947 Bailey Avenue, and 22 West Shore Avenue.

Community	Occupied Residences 2015-2019	Growth Rate	Vacancy Rate	Unoccupied Housing	Home Ownership Rate
Buffalo	110,427	-0.9%	3.3%	22,094	40.5%
Cheektowaga	35,424	-1.2%	2.3%	1,983	68.5%
East Side Airport Corridor	18,486	-0.7%	18.2%	4,111	53.4%
Wildroot Neighborhood	4,466	-3.1%	23.8%	1,394	42.2%

Table 27: Wildroot Residential Statistics, CBB

Investment Buffalo's Wildroot District has seen significant business growth of 35.6% between 2010 and 2019. Nonetheless, the region has seen a decline in jobs. However, most residents do not work in the area surrounding the stop. There is a business vacancy rate of around 24%, above Buffalo's: 22.6%.

While below Buffalo's, this vacancy rate indicates room for business expansion via eTOD investment. [5] Like Larkintown, this region has a residential vacancy rate well above Buffalo's, granting the region space to grow into with TOD. The region is already home to many local businesses, the local elementary school, and Walden Park, which provides recreation for local families.

Community	Jobs in Region 2008	Jobs in Region 2018	Job Growth Between 2008 and 2018	Number of Residents who Work Within the Corridor
Wildroot	1,568	1,618	3.20%	146

Table 28: Wildroot job statistics

Community	Businesses	Out of Business	Vacancy Rate	Share of Region	Growth Rate 2010-2019
Buffalo & Cheektowaga	20,887	6,084	22.60%	100%	7.6%
Wildroot	114	36	24.00%	0.5%	-9.5%

Table 29: Wildroot business statistics, data Axle

Points of Interest within ½-mile of prospective stop

Local Businesses

- Amthor Glass Inc.
- Yemen Cafe and Bakery
- Club 77 Bar & Grill
- China Kitchen
- Bonetti's Pizzeria
- Happy Swallow Restaurant
- Smiling Teds's Used Cars
- Signature Apparel & Footwear
- Hahalapenios Mexican-American Deli
- Powerflow, Inc.
- Big Moe's Tires
- Linde Welding Gas and Equipment Center
- As-Salam Diner & Kabob House
- Buffalo Goldrush
- Tripi Foods
- Federal Baking Supply
- B&L Wholesale Supply
- International Paper
- American Douglas Metals
- Father Sam's Bakery
- Laser Ship, Inc.
- Imperial Textile
- GoodNature Products

Groceries

- Aden Mini Mart
- Community Food Market
- Sam's Quick Stop

Religious and Cultural Centers

- Madinah Masjid Mosque
- Baitul Mamoor Jam-E-Masjid
- St John Kanty Church
- Catholic Charities
- Buffalo Islamic Cultural Center At Masjid Baitul Aman
- Church of God in Christ
- Thankful Missionary Baptist
- St. Luke's Mission of Mercy

Arts and Entertainment

- Softball Center

Health and Childcare

- Hennepin Senior Center
- Kimmycakes Daycare
- Rite-Aid [12]

Points of Interest with half mile of Wildroot Station

- Buffalo Fire Historical Society
- Hennipin Park
- Iron Island Museum
- Scheu Park (Mary Jean Sloan Park)
- Softball Center

Educational Resources

- Mathclub by Apian Tutorial
- Harvey Austin Elementary School
- Public School 43 Discovery Elementary School

Transportation Accessibility

20 bus stops within ½ mile of the proposed stop

Transportation use

Of the 99% of working residents who commute in Wildroot, 40% have no access to cars. Car access is nearly 4 times lower than that of Buffalo at large. As such, this neighborhood has the highest use of public transportation of the neighborhoods examined. On par with this trend, residents in the neighborhood have the longest commute times of neighborhoods examined and 5 minutes longer than the corridor at large. [36] Despite the higher rate of dependence on public transportation in this neighborhood, Wildroot has the lowest number of bus stops.

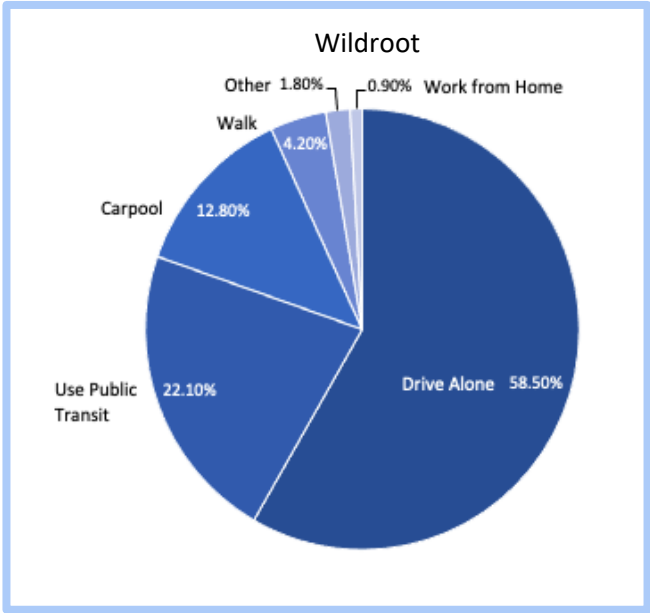


Figure 28: Wildroot Commuter Transportation Statistics
CBB

Community	Average Travel Time	% of Population With No Vehicle Available	% With One Car Available	% With Two or More Cars Available
Buffalo	21.0 Minutes	11.8%	35.2%	53.0%
Cheektowaga	19.2 Minutes	3.2%	27.8%	69.1%
East Side Airport Corridor	20.5 Minutes	26.%	41.4%	31.8%
Wildroot Neighborhood	25.2 Minutes	40.2%	36.6%	23.2%

Table 30: Wildroot Commuting Statistics, CBB

WALDEN NEIGHBORHOOD PROFILE

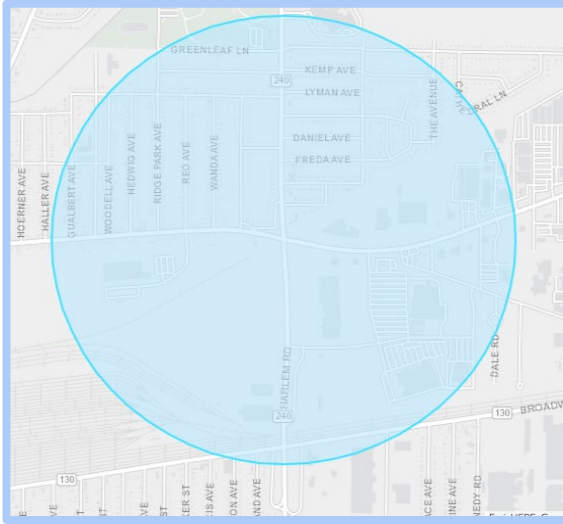


Figure 29: 1/2 Mile Around Proposed Walden Station, Street Map, ArcGIS



Figure 30: 1/2 Mile Around Proposed Walden Station, Satellite Map, ArcGIS

The Walden neighborhood is in the inner ring Buffalo suburb of Cheektowaga. With a population of 7,022, it has the smallest residential population of the station stops examined and has seen a population decline of 2.51% between 2014 and 2019, just below the rate for the corridor although still above that of Buffalo. The Walden neighborhood has a poverty rate of 13%, above that of Cheektowaga as a whole, but well below the East Side corridor or that of Buffalo. The percent of the population with a high school diploma, 93%, mirrors that of Cheektowaga almost perfectly and is nearly 10 percentage points above the corridor average. The proportion of the population that is college educated is larger than the corridor's at 20%, but lower than the Cheektowaga average of 23%. The primary employment sector in the area is healthcare and social assistance. [37] The neighborhood's Black community is smaller than Buffalo's and the corridor's but larger than the proportion of Cheektowaga at large. The region likewise has a relatively small minority population overall. [37]

Community	Number of Residents 2015-2019	Number of residents 2010-2014	Share of Region	Population Growth
Buffalo and Cheektowaga	344,875	349,383	100%	-1.3%
East Side Airport Corridor	42,284	43,429	12.3%	-2.7%
Walden Neighborhood	7,022	7,203	2.0%	-2.5%

Table 31: Walden Population Statistics, CBB

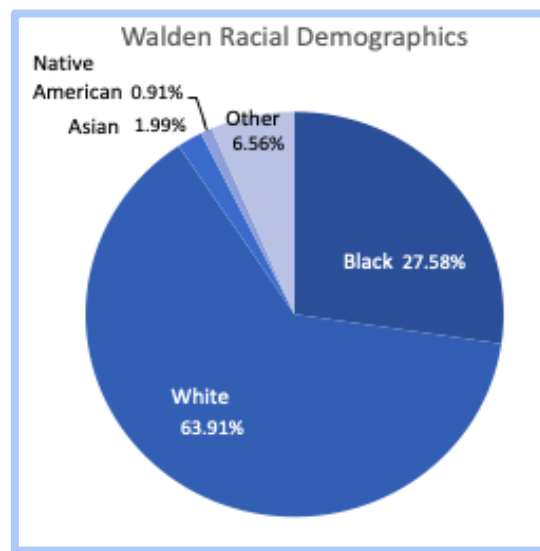


Figure 31: Walden Racial Demographics, CBB

Community	Poverty Rate	Employment Rate	Median Household Income	% of Population With a Bachelor's Degree or Higher	% of Population With a High School Diploma
Cheektowaga	10.7%	62.9%	\$54,002	23.6%	93.0%
East Side Airport Corridor	28.2%	54.9%	\$51,588	15.0%	84.9%
Walden Neighborhood	13.4%	65.6%	\$77,953	20.3%	93.8%

Table 32: Walden Social Statistics, CBB

Walden Station	<ul style="list-style-type: none"> • Health Care and Social Assistance 36.8% • Administration & Support, Waste Management and Remediation 15.3% • Retail Trade 35.1% • Accommodation and Food Services 4.0% • Professional, Scientific, and Technical Services 1.9%
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Table 33: Walden Station Job Sector

Growth Potential

Community	Occupied Residences 2015-2019	Growth Rate	Vacancy Rate	Unoccupied Housing	Home Ownership Rate
Cheektowaga	35,424	-1.2%	2.3%	1,983	68.5%
East Side Airport Corridor	18,486	-0.7%	18.2%	4,111	53.4%
Walden Neighborhood	3,026	-2.8%	13.2%	460	69.6%

Table 34: Walden Residential Statistics, CBB

Community	Businesses	Out of Business	Vacancy Rate	Share of Region	Growth 2010-2019
Buffalo & Cheektowaga	20,887	6,084	22.60%	100%	7.60%
Walden Station	153	54	26%	0.70%	8.50%

Table 35: Walden Business Statistics

Community	Jobs in Region 2008	Jobs in Region 2018	Job Growth Between 2008 and 2018	Number of Residents who Work Within the Corridor
Walden Station	1,568	1,618	3.20%	146

Table 36: Walden Job Statistics

As part of a suburban township just beyond the city limits of Buffalo, the Walden neighborhood is not eligible for the East Side investment funds that many of the neighborhoods along the East Side Airport Corridor will benefit from. However, the area has been identified by the Town of Cheektowaga planners as a TOD Ready Corridor for Bus Rapid Transit (See Figure 32). There are considerable retail assets surrounding the proposed stop, including the Thruway Mall, Walden Consumer Square, and the Walden Galleria Mall. The Walden Galleria is Greater Buffalo's largest and healthiest mall, drawing shoppers from all over the Buffalo Niagara Region.

Situated right alongside the railroad right-of-way that the LRRT would run on, the Walden Galleria is a logical choice to host a Metro Rail station. While the Walden Galleria is already thriving, the Thruway Mall, which is closest to the proposed [line] station stop, has room for eTOD-related expansion. The Walden neighborhood has seen business growth of 8.5% between 2010 and 2019, above that of Buffalo and Cheektowaga, and has likewise seen 3.2% job growth between 2008 and 2018. However, the region has a business vacancy rate of 26%, above Buffalo and Cheektowaga's rate of 23%. [37] This slightly elevated vacancy rate allows room for further eTOD-driven expansion, especially in the Thruway Mall and southwest quadrant surrounding the stop. This neighborhood has a residential vacancy rate of 13% – on par with Cheektowaga as a whole and experiencing further declines. [37] This may help to protect residents from potential eTOD-related displacement.

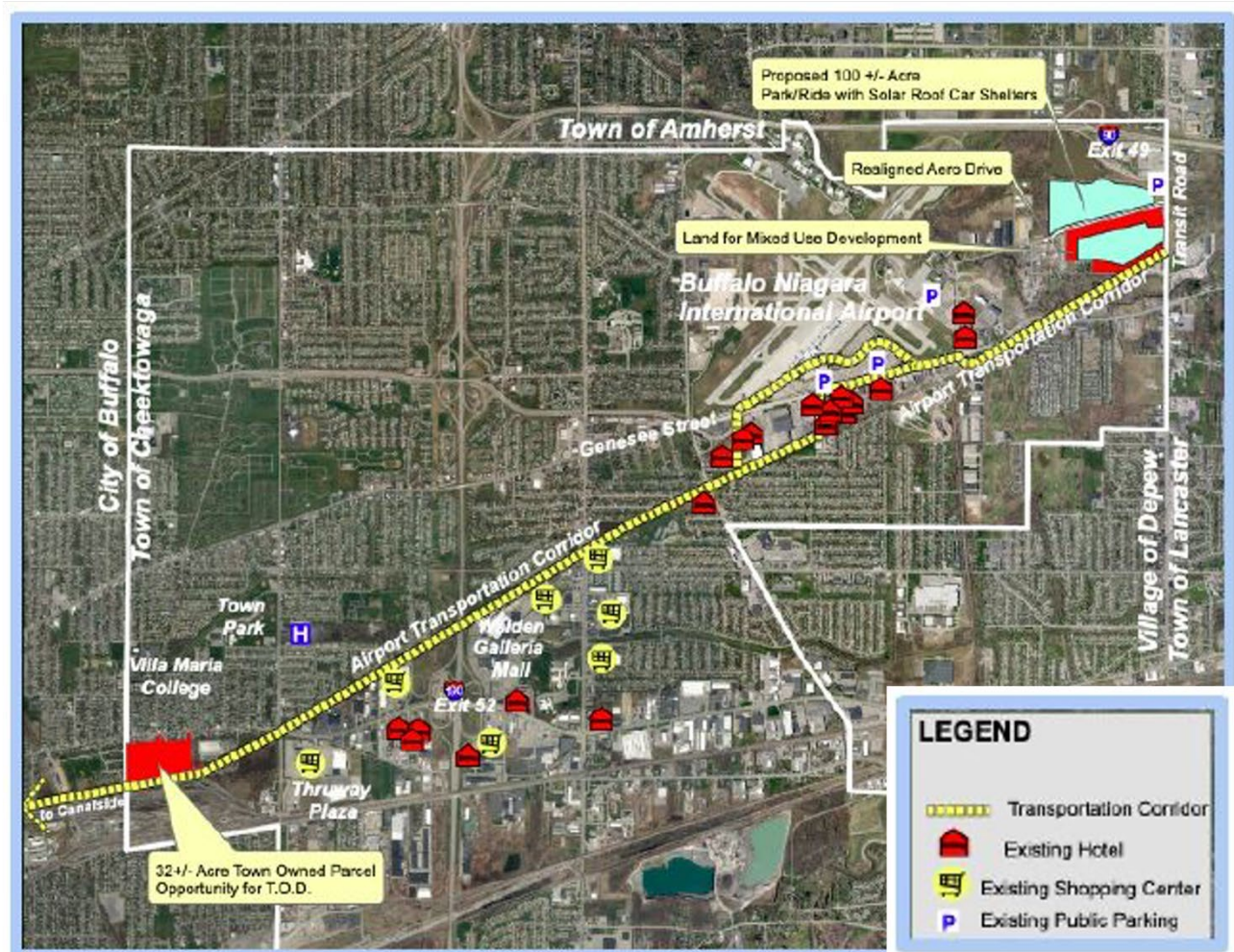


Figure 32: LRRT Transit Ready Airport Corridor, Buffalo/Town of Cheektowaga 2019³⁶

³⁶ [Map source \(PDF\)](#)

Points of Interest within ½-mile of prospective stop

Local Businesses

- Target
- Basil Ford
- Indo-pak Bangla Bazar Halal Meat and Grocery
- Sonwil Distribution Center
- Value City Furniture
- Home Depot
- Planet Fitness
- CSX Transportation Facility Office
- NFTA Information Center
- Citizens Bank
- Citi Trends
- M&T Bank
- Residence Inn Marriott Buffalo
- Holiday Inn Express Cheektowaga North
- Park View Soul Food Bar and Restaurant
- Dimar Manufacturing Corporation
- Davis Electrical Supply
- Upstate Farms Cooperative
- Upstate Steel
- Niagara Transformer Corporation
- Niagara Power Transformer
- Key Bank
- IHOP
- Raymour & Flanigan Furniture and Mattress
- China Jade Kitchen

- The Louisiana Cookery

Educational Resources

- Villa Maria College
- Erie 1 Boces
- Reinstein Memorial Library

Groceries

- Izzy's Mini Market
- Express Mini Mart
- TOPS Friendly Markets
- Redlinski Meats
- Price Rite

Medical and Childcare

- Rheumatology Center of WNY
- St. Joseph Campus and Hospital
- Aftercare Nursing Services
- CVS

Community centers

- Walden Park
- Walden Park Senior Apartments

Transportation Accessibility

22 bus stops within ½ mile of the proposed stop

Transportation use

Of the 99% of working residents in Walden who commute, 92% drive. Only 10% of the population has no car access, a car access rate above that of Buffalo or Cheektowaga, but a significantly lower percentage than the corridor. Residents of this neighborhood use public transportation the least of any of the communities examined with just 3.2% of the population depending on public transit to reach their places of employment. The region has a commute time on par with the corridor at large at around 20 minutes. [37]

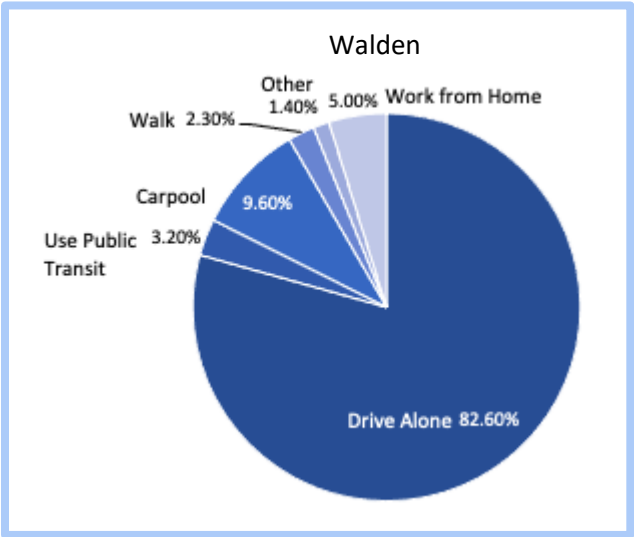


Figure 33: Walden Commuter Transportation Statistics, CBB

Community	Average Travel Time	Percent of Population with No Vehicle Available	Percent with one Car Available	Percent with Two or more Cars Available
East Side Airport Corridor	20.5 minutes	26.7%	41.4%	31.8%
Walden Neighborhood	20.4 minutes	9.0%	48.1%	42.0%
Buffalo	21.0 Minutes	11.7%	35.2%	53.0%
Cheektowaga	19.2 minutes	3.8%	27.8%	69.1%

Table 37: Walden Commuting Statistics, CBB

APPENDICES

Appendix A – Metro Rail Extension Evaluation Criteria

[This table represents the evaluation criteria that the NFTA used to evaluate Metro Rail Extension alternatives.]

Category	Evaluation Criteria	Evaluation Metrics
Order of Magnitude Costs	Difference in tunneling length	Minimize the cost of tunneling (based on linear feet of tunneling)
	Number of underground stations	Minimize cost of station (based on number of at-grade and underground stations)
	Purchase of ROW	Minimize cost of right-of-way (ROW) needed for purchase to accommodate Metro Rail running outside of ROW (based on acres of ROW easement)
		Minimize cost for easements to accommodate Metro Rail running outside of ROW (based on acres of ROW easement)
		Minimize cost of ROW needed for easement to accommodate Metro Rail running inside ROW to account for station areas and/or intersection widenings (based on acres of ROW easement)
	O&M Costs	Minimize cost of Operations & Maintenance
Overall Constructability	Availability of contractors	Availability of local contractors that can perform work
	Schedule / Length of construction	Minimize construction schedule
	Impacts to traffic and business operations	Minimize temporary street and/or driveway closures
	Utility conflicts	Minimize utility relocations and reconstruction
	ROW impacts	Amount of private property impacted (either by purchase or easement) to accommodate project
Travel Time	Length of time Metro Rail travels from I-990 to University Station	Minimize travel time (in minutes)
Community / Economic Development	Transit-supportive elements in place or can be put in place (zoning, policy, community support, plans, etc.)	Maximize existing transit supportive zoning
	Opportunity for Transit Oriented Development	Opportunity for TOD zoning to be approved
Municipal Coordination	Local and regional stakeholder preference / acceptance	Preferred alignment option of Town of Amherst
		Preferred alignment option of Town of Tonawanda
		Preferred alignment option of other regional, municipal, or other stakeholder entities
Ridership	Maximizes ridership	Maximizes ridership
Accessibility	Impacts to adjacent property (acres)	Minimize number of driveways closed
		Minimize number of driveways experiencing reduced accessibility (in-ability to make a left turn)
	Accessibility by transit supportive populations	Number of transit dependent population within ¼ mile radius of station areas

	ROW impacts	Amount of private property impacted (either by purchase or easement) to accommodate project
Travel Time	Length of time Metro Rail travels from I-990 to University Station	Minimize travel time (in minutes)
Community / Economic Development	Transit-supportive elements in place or can be put in place (zoning, policy, community support, plans, etc.)	Maximize existing transit supportive zoning
	Opportunity for Transit Oriented Development	Opportunity for TOD zoning to be approved
Municipal Coordination	Local and regional stakeholder preference / acceptance	Preferred alignment option of Town of Amherst
		Preferred alignment option of Town of Tonawanda
		Preferred alignment option of other regional, municipal, or other stakeholder entities
Ridership	Maximizes ridership	Maximizes ridership
Accessibility	Impacts to adjacent property (acres)	Minimize number of driveways closed
	Accessibility by transit supportive populations	Minimize number of driveways experiencing reduced accessibility (in-ability to make a left turn)
Traffic	Change to existing travel patterns	Number of transit dependent population within ¼ mile radius of station areas
	Impact to AM/PM Peak period volumes	Minimize in travel distance or durations for local trips
	Impact to Level of Service	Minimize increases in Peak period daily volumes (comparing no-build to build)
	Impacts to intersection LOS	Minimize reductions in LOS of project in build versus no-build
Environmental	Minimizes impact on natural and human environments	Minimize reductions of intersection LOS in build versus no-build
	Ability to reduce auto-dependency	Minimize acres of environmentally sensitive areas impacted by project
		Reduces vehicle miles travelled based on regional travel demand model

NFTA Metro. (2019). *Metro Rail Expansion Project*. Locally Preferred Alternative Refinement Technical Report.
https://www.nftametrorailexpansion.com/pdfs/LPA_refinement_technical_report_012019.pdf

Appendix B – Comparison of Emissions from Transit Alternatives

[These tables compare key emissions generated by alternative transit modes.]

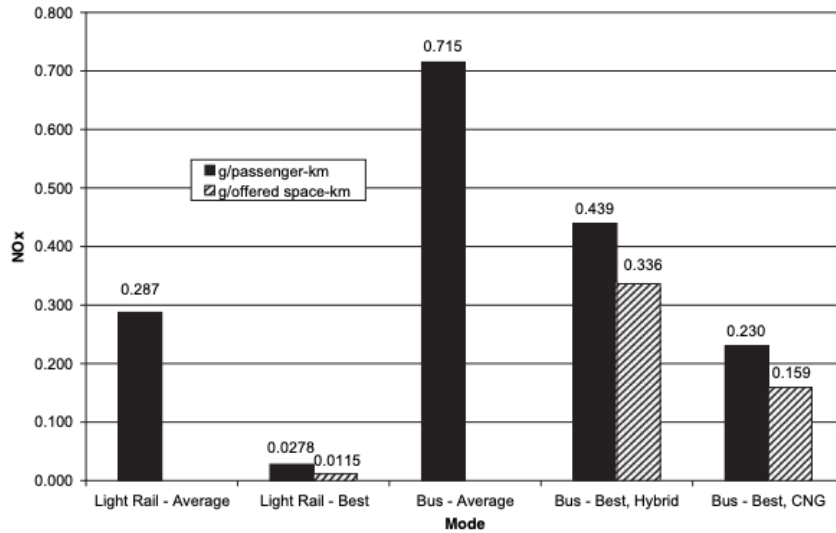


FIGURE 3 Comparison of NO_x emissions from LRT and BRT systems.

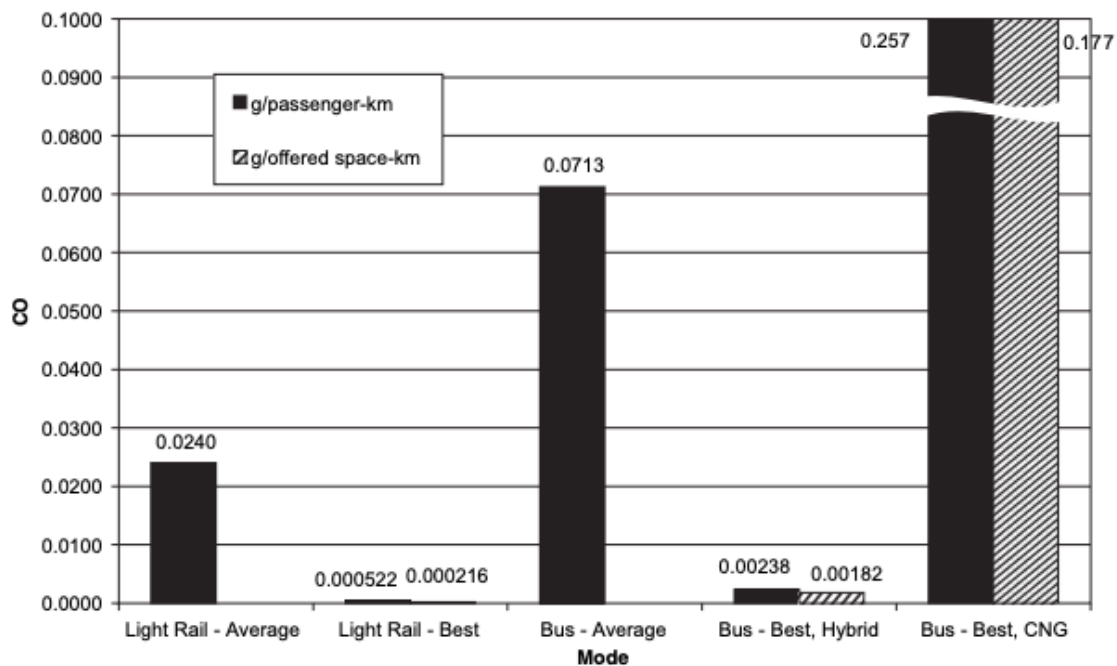


FIGURE 5 Comparison of CO emissions from LRT and BRT systems.

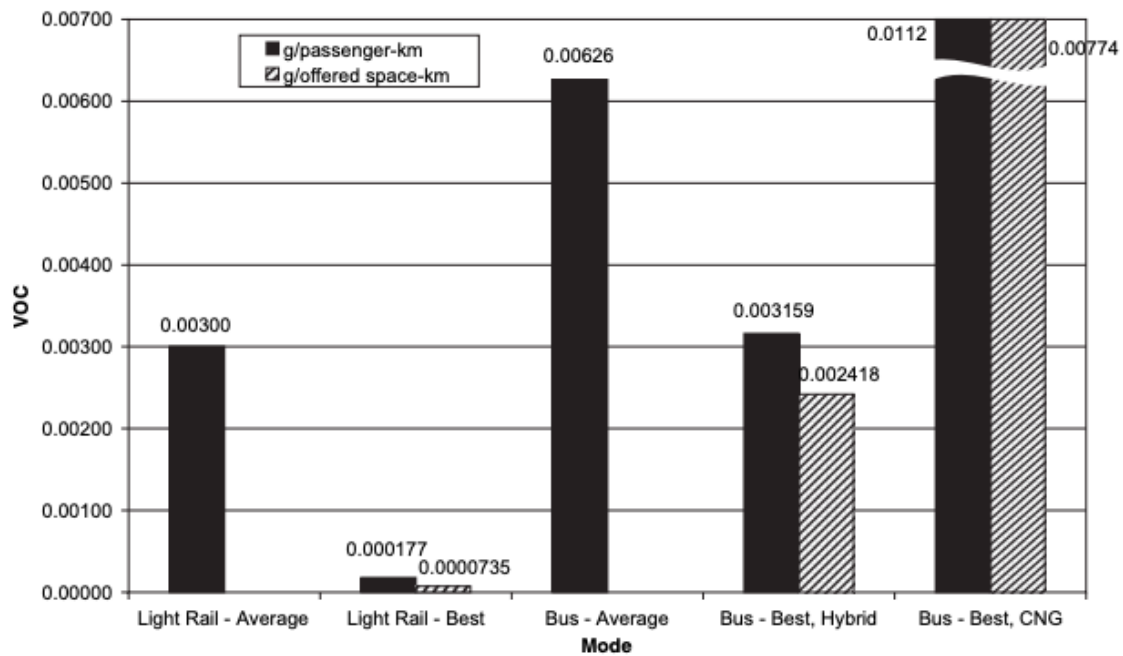


FIGURE 4 Comparison of VOC emissions from LRT and BRT systems.

Ewing, R., Tian, G., & Spain, A. (2014). Effect of Light-Rail The effect of Light-Rail Transit on Transit on Traffic in a Traffic in a Travel Corridor. Portland State University.

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