

Advancing Transportation Demand Management Strategies at the Buffalo Niagara Medical Campus

Final Report

Prepared for:

**New York State Energy Research and Development Authority and
New York State Department of Transportation**

Joseph D. Tario
Project Manager, NYSERDA

and

Ellwood Hanrahan
Project Manager, NYSDOT

Prepared by:

Buffalo Niagara Medical Campus, Inc.

William B. Smith
Project Director, BNMC

Jamie Hamann-Burney
Project Manager, BNMC

Agreement No. 25730

This report was prepared by the Buffalo Niagara Medical Campus, Inc. in the course of performing work contracted for and sponsored by the New York State Energy Research and Development Authority and the New York State Department of Transportation (hereafter the "Sponsors"). The opinions expressed in this report do not necessarily reflect those of the Sponsors or the State of New York, and reference to any specific product, service, process or method does not constitute an implied or expressed recommendation or endorsement of it. Further, the Sponsors and the State of New York make no warranties or representations, expressed or implied, as to the fitness for particular purpose or merchantability of any product, apparatus, or service, or the usefulness, completeness, or accuracy of any processes, methods or other information contained, described, disclosed or referred to in this report. The Sponsors, the State of New York, and the contractor make no representation that the use of any product, apparatus, process, method, or other information will not infringe privately owned rights and will assume no liability for any loss, injury, or damage resulting from, or occurring in connection with, the use of information contained, described, disclosed or referred to in this report.

Table of Contents

1. Project Overview	6
1.1 Background	7
1.2 Needs and Opportunities	10
1.3 Goals and Objectives.....	13
1.4 Performance Measures.....	14
2. BNMC Transportation Management Association	17
2.1 Engaging and Organizing Partners	17
2.2 Establishing a Structure.....	19
2.3 Devising a Work Plan.....	19
3. BNMC Transportation Demand Management Toolkit.....	20
3.1 Creating the Toolkit.....	20
3.2 Marketing the Toolkit.....	35
4. Project Outcomes	41
4.1 Effectiveness of TDM Strategies	41
4.2 Leveraging the TMA and TDM Toolkit	43
4.3 Project Replication	47
5. Obstacles and Planned Solutions.....	50
5.1 BNMC Member Institutions	50
5.2 Long Term Funding.....	51
5.3 NFTA-Metro	53
5.4 Employee Parking Advocates	55
5.5 Campus and Neighborhood Walkability	56
5.6 Housing	58
5.7 Website	60
5.8 Conclusion	63
 Appendix A: Employee Addresses in Relation to NFTA Routes.....	 65

List of Figures

Figure 1. Aerial view of BNMC.....	7
Figure 2. Major existing capital projects.....	8
Figure 3. BNMC regional context.....	9
Figure 4. GO Buffalo logo.....	18
Figure 5. GO BNMC logo.....	20
Figure 6. BNMC employees near Metro Rail stations.....	22
Figure 7. Give Transit a Try 3 Month Subsidy application.....	24
Figure 8. Give Transit a Try marketing materials.....	25
Figure 9. Buffalo CarShare on the BNMC.....	26
Figure 10. Buffalo BikeShare.....	27
Figure 11. Guaranteed Ride Home Voucher.....	28
Figure 12. Preferential carpool parking spaces.....	29
Figure 13. GO BNMC original website homepage.....	30
Figure 14. Bicycle Storage Facility.....	31
Figure 15. GO Buffalo TDM Assessment Catalog.....	34
Figure 16. GO BNMC video screen shots.....	36
Figure 17. GO BNMC marketing materials.....	36
Figure 18. GO BNMC Summer Block Party.....	37
Figure 19. GO BNMC Bike to Work Day.....	37
Figure 20. GO BNMC Champions.....	38
Figure 21. Champion meetings.....	39
Figure 22. GO BNMC orientations.....	40
Figure 23. BNMC Integrated Mobility Hub location.....	45
Figure 24. BNMC employee address and income analysis.....	54
Figure 25. Goodell and Main transportation corridors.....	56
Figure 26. CBD-North Transportation Study priority corridors.....	57
Figure 27. Housing and neighborhood development study areas.....	59
Figure 28. New GO BNMC online toolkit mock-ups.....	62

List of Tables

Table 1. 2012 employee commuting mode shares.....	12
Table 2. Employee interest in TDM programs.....	13
Table 3. Annualized cost of structured and surface parking.....	15
Table 4. Employee distances from work and VMT/emission calculation assumptions.....	15
Table 5. Mode share changes 2012-2013.....	41
Table 6. Leveraged funding to date.....	46

1. Project Overview

1.1 Background

Beginning in late March of 2012, the Buffalo Niagara Medical Campus (BNMC) entered into an agreement with the New York State Energy Research and Development Authority (NYSERDA) for the establishment and first year activities of a BNMC Transportation Management Association (TMA). The TMA was to be a membership organization that worked towards the development of a Transportation Demand Management (TDM) toolkit – or a set of strategies, policies, and programs designed to reduce the number of single occupant vehicles (SOV's) and to promote the use of alternative transportation modes among workers at the BNMC.

The BNMC is a consortium of nine healthcare, research and educational institutions located on 120 acres in downtown Buffalo, NY. Members include: Buffalo Hearing & Speech Center, Buffalo Medical Group, Hauptman-Woodward Medical Research Institute, Center for Hospice and Palliative Care, Kaleida Health, Roswell Park Cancer Institute, Olmsted Center for Sight, University at Buffalo, Upstate New York Transplant Services, as well as a number of other Campus tenants, entrepreneurs and researchers. BNMC board members consist of representatives from each of the nine institutions, as well as representatives from the surrounding neighborhoods and the City of Buffalo.

Figure 1. An aerial view of the Buffalo Niagara Medical Campus.



BNMC is the fastest growing employment center in Western New York (WNY) with 12,000 people working and studying on the BNMC today and 17,000 people projected by the end of 2016 with the relocation of Children's Hospital of Buffalo and the University at Buffalo (UB) School of Medicine. This growth will also continue beyond 2016, as UB continues to increase its presence on the BNMC, and as the WNY Regional Economic Development Council seeks to further establish the BNMC as a center for

innovation in medicine as a means to stimulate business creation and job growth in the life sciences industry for the region.

Figure 2. Major capital projects are taking place on the Campus, including (clockwise from top left) a new UB School of Medicine, the Conventus medical office building, Oishei Children's Hospital, and RPCI's clinical expansion.



Figure 3. BNMC is located next to Downtown Buffalo and is along the NFTA Metro Rail line.



1.2 Needs and Opportunities

At the time when the project began in late March of 2012, the BNMC was in the midst of much change, having just added over 2 million square feet of new development to the Campus and adding an additional 3,500 people to the employee population (going from 8,500 to 12,000) in just one year. In response to this rapid growth, the BNMC had constructed a 2,036 space parking garage at the cost of \$34 million to the institutions. During the early planning phases for this parking garage in the year 2010, the three largest member institutions (UB, Kaleida Health, and Roswell Park Cancer Institute) hired consultants Howard Stein-Hudson (HSH) and Walker Parking to conduct a comprehensive parking and transportation study for the BNMC.

Other than determining the required size and most appropriate location for the new parking garage, the study also looked at long term parking demands and vehicular trip distributions based on planned growth beyond 2012. With about 7,100 total parking spaces for 12,000 employees and over 1.5 million annual patient visits, it was clear that the planned future growth of the Campus would bring about considerable parking deficits and quickly require major capital investments in parking and transportation improvements. In short, the *2010 BNMC Comprehensive Transportation Study* began to paint a somewhat disconcerting and costly picture for partner institutions looking to build on the Campus.

In order to help alleviate this demand, the *2010 Transportation Study* provided a series of recommended TDM strategies, which fell under five main categories:

1. Parking supply/demand and pricing management;
2. Transit enhancements and incentives;
3. Ridesharing programs and incentives;
4. Promotion of transportation alternatives; and
5. Establishment of a TMA

The first of these recommendations – parking supply/demand and pricing management – was immediately seen by Campus planners as the most critical to address for a number of reasons, most importantly to ensure that convenient and ample parking remains available for patients and patient visitors. To do so, the BNMC instituted a tiered parking system in which the most convenient on-site parking (tier 1) would be reserved for priority users (i.e. patients/visitors) while employees would utilize slightly less convenient near-site parking (tier 2) or remote parking (tier 3) in combination with bus or rail service. While this strategy provided groundwork for the distribution and allocation of the Campus parking supply, there remained a need to properly price each tier as to incentivize near-Campus or park and ride options.

Previous studies had shown that the price of parking (along with gasoline price) is the most important factor influencing employee commuting behaviors. For many years, nearly all BNMC member institutions had been subsidizing parking to varying degrees, such as Roswell Park Cancer Institute (RPCI) who provides a partial subsidy where employees pay \$45.00 per month. In fact, cheap parking and the ease of vehicular commuting have long been advertised by many employers on the Medical Campus when recruiting talent from outside the area.

In the case of Kaleida Health and their rapidly expanding flagship hospital Buffalo General Medical Center, parking for all 3,900 of their employees was free (i.e. 100% subsidized by Kaleida). Recognizing the need to ensure ample and convenient patient/visitor parking, as well as the financial burden of providing free parking to thousands of employees, Kaleida leadership began taking steps to remove the subsidy as an employee benefit. After months of arbitration with local labor unions, Kaleida ended all parking subsidies to employees. As of March 2012, Kaleida Health employees who choose to drive alone to work and park on site are forced to bare the true cost or market rate for parking, which is currently \$89.00 per month.

The University at Buffalo is another example of a BNMC partner institution taking steps to remove or mitigate parking subsidies. Currently, the faculty and staff of UB pay only \$9.60 per year for a parking permit. However, recognizing the unique character of the Medical Campus as a dense, urban environment as opposed to the schools' sprawling suburban North Campus, UB has now begun issuing a policy that faculty and staff who choose to park in BNMC owned and operated parking facilities will be required to pay the rates set by the BNMC (\$89.00/month).

While the two cases described above (Kaleida and UB) demonstrate the initiation of culture change in terms of employers recognizing the "high cost of free parking," there is still much work to do in this arena. For many of the smaller organizations on the BNMC, free parking has long been simply handed out with no consideration of alternatives such as transit and bicycling. Later in Section 2.1, efforts that BNMC has taken to curb this behavior will be described more in depth.

While raising the parking rates and creating a parking management system to control the overall availability of spaces was a good first step towards changing commuting behaviors, it was just as critical to provide a set of feasible alternative commuting options. A major concern of BNMC planners had been that raising parking rates and limiting the availability of on-Campus parking might simply push single occupant vehicles towards free on-street parking in the surrounding neighborhoods, rather than shifting the commuter mode share. To prevent this from happening, BNMC had to examine what alternative commuting options were available to employees and what could be done to make those options more attractive.

The first and most obvious opportunity that the BNMC focused on was the Campus' location along the Niagara Frontier Transportation Authority (NFTA) Metro Rail line – a single subway line that runs north-northeast for approximately four miles under Main Street in the City of Buffalo before coming aboveground for another two miles through the Central Business District. Though long dubbed the "train to nowhere" by local residents, the Metro Rail is now beginning to see a number of destinations and transit oriented developments coming to fruition along the line. This development is due in part to the growth of the Medical Campus and its connection to other UB campuses, as well as the reemergence of the Buffalo waterfront as a recreational and entertainment destination.

BNMC planners quickly began looking at ways that the widespread employee population could better access Metro Rail. By utilizing employee address data in combination with Geographic Information Systems (GIS) mapping software, it was determined that approximately 5% of the people working on the Campus actually lived within walking distance (or ½ mile) to the Rail. In addition, a large concentration of employees live near the northern terminus of Metro Rail – in the areas of North Buffalo, Tonawanda, Kenmore and Amherst – where two large park and ride lots are located at the NFTA-Metro University and LaSalle Stations.

In addition to the Rail, the BNMC is also served directly by four local Metro Bus routes and two Metro Express routes. The same GIS mapping exercise that was performed for the Rail showed that a combined 15% of employees lived within walking distance of local Metro Bus routes that primarily serve the surrounding inner-city neighborhoods. When looking at Metro Bus and Rail combined, a total 20% of people who work on the BNMC live within walking distance to transit services which run directly to and from the Campus.

While it was determined that both Metro Rail and Bus were indeed accessible to a large number of employees, it was believed that very few of those employees utilize the service. In order to gain better insight into commuting behaviors and the reasons for those behaviors, BNMC planners conducted the *2012 BNMC Transportation Survey* which took a comprehensive look at all commuting modes, including transit. Survey data showed that only 4.0% of the 717 employees who responded actually commute by transit, with 1.8% rail and 2.2% bus.

The *2012 BNMC Transportation Survey* also painted a very telling portrait of the typical BNMC commuter. As shown in Table 1, the overall mode share weighed heavily towards SOV's with 88.4% of commuters driving alone. While this was not a major surprise due to the longstanding car culture of Western New York, the magnitude to which the problem had reached was somewhat overwhelming. The survey only reinforced the critical need to promote alternative modes among BNMC employees.

Table 1. 2012 employee commuting mode shares

What is your primary method of getting to and from work?		
Method	Response Count	Percent
Walk	13	1.8
Bike	5	0.7
Metro Bus	16	2.2
Metro Rail	13	1.8
UB Blue Line	3	0.4
Drive Alone	634	88.4
Carpool	33	4.6
Total	717	100.0

The 2012 Survey not only provided information on existing behaviors, but also examined ways to change those behaviors. Questions were asked regarding why people do or do not drive alone to work and what might entice them to drive less (see Table 2). In doing so, the survey helped BNMC planners to begin identifying and prioritizing potential TDM programs to be implemented. This became the basis for the BNMC's TDM toolkit.

Table 2. Employee interest in TDM programs

Q: If you had access to the following , which could entice you to drive less?	
Transit-Related Answers	Affirmative
Free guaranteed ride home program	75.61%
Rewards for not drive alone	58.54%
Improved safety/security	57.80%
Direct shuttle from park and ride lots	50.29%
Improved pedestrian connections	44.27%
Discounted monthly transit pass	43.83%
Enclosed and heated transit waiting areas	36.75%
Discounted access to CarShare	39.15%
Organized alternative commuter groups	26.82%
Access to a bike share program	19.95%
Bike storage facilities near Rail Stations	13.96%

1.3 Goals and Objectives

The initial goals of the TMA were taken directly from the 2012 *BNMC Annual Goals*. These goals are developed and agreed upon each year by the BNMC Board of Directors and provide a framework for the tasks and initiatives of BNMC staff. These were the guiding force for the TMA in creating a Work Plan for the first year of operations:

1. Proactively lessen the potentially negative impacts of increased vehicular traffic and congestion on and surrounding the Campus.
2. Develop and enhance a robust system of multi-modal transportation services.
3. Implement transportation demand management strategies to promote and incentivize the use of transit and alternative modes.
4. Identify and improve infrastructure to enable greater access to and on Campus.

As described in later sections, the goals for the TMA were further developed through ongoing dialogue between stakeholders.

1.4 Performance Measures

The performance measures for the project were derived mainly from the quantifiable aspects of key issues which presented themselves around transportation at the BNMC. In order to gain a baseline understanding of commuting behaviors at the start of the project, BNMC gathered a good amount of data regarding parking demand and travel to work. The following performance measures were identified as a means to determine the effectiveness of the TDM programs:

- Reduction in the drive alone mode share and increase in use of transit and alternative modes as a result of TDM strategies.
 - Baseline – As shown in Table 1 above, the *2012 BNMC Transportation Survey* determined that approximately 88.4% of employees drive alone as a means of travel to work, while the remaining 11.6% of employees using alternative modes were broken down between carpool (4.6%), bus (2.2%), rail (1.8%), walk (1.8%), bike (0.7%), and UB shuttle (0.4%).
- Decrease in parking demand and associated costs of constructing new parking.
 - Baseline – The total number of off-street parking spaces on the Campus at the beginning of 2012 was 7,078 spaces for a total employee population of 12,000 and over 1.5 million annual patient visits. Even after the construction of the new Michigan Goodrich Garage (2,036 spaces), there was a net parking deficit of approximately 1,300 spaces projected by the end of year 2014 associated with new Campus development.

Additional parking demands associated with additional development to be completed in 2016 will be described later.

The average cost of constructing new structured parking on the Campus is \$25,000-\$30,000 per space, as seen at the recently constructed Michigan Goodrich Garage. The cost of underground parking is more than double this, as seen in the new Conventus medical office building that is currently under construction. Table 3 below shows the annualized cost of structured and surface parking in terms of real estate, construction, and operating and maintenance.

Table 3. Annualized cost of structured and surface parking

	Annualized Per Space for Structured Parking	Annualized Per Space for Surface Parking
Land Cost	\$ 1,000.00	\$ 1,000.00
Construction Cost	\$ 2,200.00	\$ 550.00
O&M Cost	\$ 600.00	\$ 350.00
Total Cost	\$ 3,800.00	\$ 1,900.00

- Decrease in vehicle miles traveled and associated greenhouse gas emissions.
 - Baseline – Using a collection of employee address data provided by the member institutions in combination with the GIS mapping capabilities of BNMC and the identified drive alone mode share (88.4%), it was determined that BNMC employees who drove alone to work in 2012 were responsible for roughly 40,348,000 vehicle miles traveled (VMT) and approximately 32,480,000 lbs. of associated annual carbon emissions. Table 4 below shows the calculations for these estimates.

Table 4. Employee distances from work and VMT/emission calculation assumptions

Employee Residence Distance from BNMC	Source: BNMC Employee Distribution Map				
<i>Miles</i>	<i>Avg Miles/ Leg</i>	<i># of Legs in Commute</i>	<i>Employees</i>	<i>% of Total Employees</i>	<i>Current Miles Driven/Day</i>
<1	0.5	2	571	4.76%	505
1-3	2	2	1,546	12.88%	5,467
3-5	4	2	2,706	22.55%	19,137
5-10	7.5	2	4,057	33.81%	53,796
10-15	12.5	2	2,049	17.08%	45,283
15-20	17.5	2	690	5.75%	21,349
20-25	22.5	2	296	2.47%	11,775
25-30	27.5	2	84	0.70%	4,084
Total			12,000		161,395

Assumptions:	
Average US Fuel Efficiency	24.1 mpg
Carbon Dioxide	19.4 lbs/gallon

- Willingness of stakeholders to partner and actively participate in BNMC and regional transportation initiatives.
 - A key component of the project has been to facilitate collaboration among Campus and regional partners and service providers. One of the more qualitative performance measures of the project was to measure the degree to which successful partnerships and collaborative efforts have occurred towards solving both localized and regional transportation issues.

2. BNMC Transportation Management Association

2.1 Engaging and Organizing Partners

A key recommendation that was presented to the BNMC in the *2010 BNMC Comprehensive Transportation Plan* was the development of a Transportation Management Association (or TMA). TMA's are most commonly membership-based organizations with a fixed geographic scope whose mission is to reduce congestion, mitigate traffic impacts, and improve quality of life within a district. TMA's across the country provide a wide range of services with and for their members, including the provision of parking, shuttle bus services, ridesharing incentives, and alternative transportation promotions. They are seen as particularly effective in large urban activity centers, such as the BNMC, where commute and visitor destinations are concentrated into a relatively small area.

Some TMA's have evolved from other cooperative organizations (such as MASCO in Boston and University Circle in Cleveland) by adding transportation services to other services provided for institutions, while others have been established specifically to improve transportation options and systems. Their role may be primarily one of service and program coordination with transit and other transportation agencies, or they may operate services themselves. Their role is generally an adjunct to services provided separately by its members (e.g., parking) rather than a substitute for these services.

While the *2010 Plan* called for a TMA consisting of a wide array of transportation stakeholders from throughout the region, the first step from the BNMC's standpoint was to organize the nine member institutions around parking and transportation issues. To this end, the BNMC Parking and Transportation Project Management Group (PMG) was formed in 2011 and included representatives from Kaleida, Roswell, UB, Buffalo Medical Group and BNMC, Inc.. The PMG continues to meet on a monthly basis and focuses on management of the overall parking system, transportation and street infrastructure improvements, and the Campus shuttle system.

While the PMG provided a good platform for communicating on parking and transportation related issues amongst the member institutions, there was still a need to bring together a larger group of regional transportation stakeholders as recommended in the *2010 Plan*. It was at this time that the BNMC began proactively reaching out to local organizations that had the ability to help improve overall transportation services in the area. While the BNMC had already been communicating with local agencies such as the NFTA and Greater Buffalo Niagara Regional Transportation Council (GBNRTC), there had never been a formalizing of the partnership nor had any significant initiatives been pursued collectively.

In addition, a number of other local non-profit groups in the immediate area had been promoting alternative transportation modes and providing grassroots advocacy towards the development of

mobility services and complete streets infrastructure in the City. In particular, a unique and symbiotic partnership began to develop between the BNMC, Buffalo CarShare and Gobike Buffalo in order to address transportation issues not only around the Medical Campus, but on a city-wide level.

The first project that the newly formed partnership took on was dubbed GO Buffalo – a campaign to increase the awareness of, encourage the use of, and improve access to healthier, greener, and more equitable transportation options in the City of Buffalo. Initially funded by the Federal Transit Administration’s Job Access Reverse Commute Program (FTA-JARC), the main goal of the GO Buffalo campaign was to help provide the lower income neighborhoods surrounding the BNMC with greater mobility and access to the area’s emerging employment opportunities.

Figure 4. GO Buffalo (logo below) started as a partnership between BNMC, GObike Buffalo and Buffalo CarShare.



The majority of the scope for GO Buffalo focused on a comprehensive outreach program that included a street canvassing operation in the surrounding Fruit Belt, Masten Park, Linwood and Allentown neighborhoods. The job of the canvassers was not only to disseminate valuable information on emerging job and training opportunities and alternative transportation modes around the Campus, but also to collect surveys and organize meetings with both individuals and neighborhood groups.

It was during this time that a number of local officials and agencies began to take notice of the unique partnership developing between the BNMC, GObike Buffalo and Buffalo CarShare. This attention was amplified when all three of the non-profit organizations were awarded NYSDOT/NERDA funds through PON 2314 for three separate but coordinated projects to advance TDM strategies, alternative transportation modes, and complete streets infrastructure in the city of Buffalo.

2.2 Establishing a Structure

At the time of BNMC's award of NYSDOT PON 2314 for Advancing TDM Strategies, the organizational structure of the partnership was loosely defined by the Executive Directors of GOBike and Buffalo CarShare – Justin Booth and Creighton Randall respectively – and BNMC Director of Campus Access Bill Smith. However, the funding opportunities provided by NYSDOT, NYSDOT and FTA helped the partners to build organizational capacity in two major ways: (1) broadening the number of involved regional stakeholder groups and (2) hiring additional staff support.

In the case of *Advancing TDM Strategies at the BNMC*, the establishment of the Transportation Demand Management Working Group of regional stakeholders was a key element to the successful planning of the TMA and its initiatives. With the main role of the TDM Working Group being primarily advisory, the Group was also effective in spotlighting transportation issues around the BNMC on a regional stage. The Working Group was also successful in building relationships among the management and staff of multiple organizations from both public and private sectors.

In addition, the hiring of Jamie Hamann-Burney to help manage projects and coordinate TDM initiatives as well as the hiring of Holly Hutchinson to coordinate outreach efforts provided the BNMC with the staff capacity to implement and market the TDM toolkit on a day-to-day basis. In essence, the BNMC-TMA became its own sub-organization (with “board” and staff) embedded within the overall BNMC, Inc. organization that carried a specific mission to address both Campus and city-wide transportation issues.

2.3 Devising a Work Plan

The first thing the Working Group was tasked with was to develop a work plan for the BNMC-TMA to implement over the course of the first 2 years of operations. Members of the Working Group began meeting on a bi-weekly basis in order to discuss and identify the issues and opportunities. The result was a list of five tasks that represented the interests of a well-rounded and dedicated group of stakeholders.

1. *Enhance transit services to and from the Campus and provide incentives for taking transit.*
2. *Develop added-mobility services (i.e. services that complement transit) such as car sharing, bike sharing, and guaranteed ride home.*
3. *Promote, incentivize and facilitate ridesharing among BNMC employees.*
4. *Develop a web-based toolkit that connects transportation options, tracks commuting behaviors, and rewards participating employees.*
5. *Provide the necessary infrastructure and policies to ensure a safe and convenient environment for users of alternative transportation modes.*

3. BNMC Transportation Demand Management Toolkit

3.1 Creating the Toolkit

After the TDM Work Plan was created for the Medical Campus, the BNMC-TMA discussed the proper way to market the initiatives to employees. The TMA's goal was to create an easily identifiable brand for these initiatives that employees would positively relate to, and to tie this brand back to the regional TDM vision. The group decided that the initiative would be known as *GO BNMC*, and all projects taking place on the Campus that aimed to make it easier for employees to choose alternative transportation options would be marketed as being part of the *GO BNMC* initiative.

The TMA worked with local graphic design companies to create the brand's identity, and after a few renditions, the identity of *GO BNMC* was solidified, as seen below.

Figure 5. The GO BNMC logo is similar to the regional GO Buffalo logo to show that the two initiatives are related.



Once the brand was established, the BNMC began to implement the toolkit. The following discusses the ways in which each item of the Work Plan was advanced through the collaborative efforts of the TMA partners.

1. Enhance transit services to and from the Campus and provide incentives for taking transit.

In order to increase the percentage of employees who were choosing NFTA Metro Rail and Bus services as their primary commuting method, the BNMC first began to gather baseline data that would help the TMA make informed decisions about how they could improve and market these services. The BNMC worked with the NFTA to identify existing transit routes that adequately serviced the Medical Campus. The routes were identified based on their proximity to the BNMC and their level of service (frequency of trips, total travel times and schedule reliability). The BNMC then analyzed employee address data to see which of these Metro Routes had the highest percentage of employees living near them. Based on this

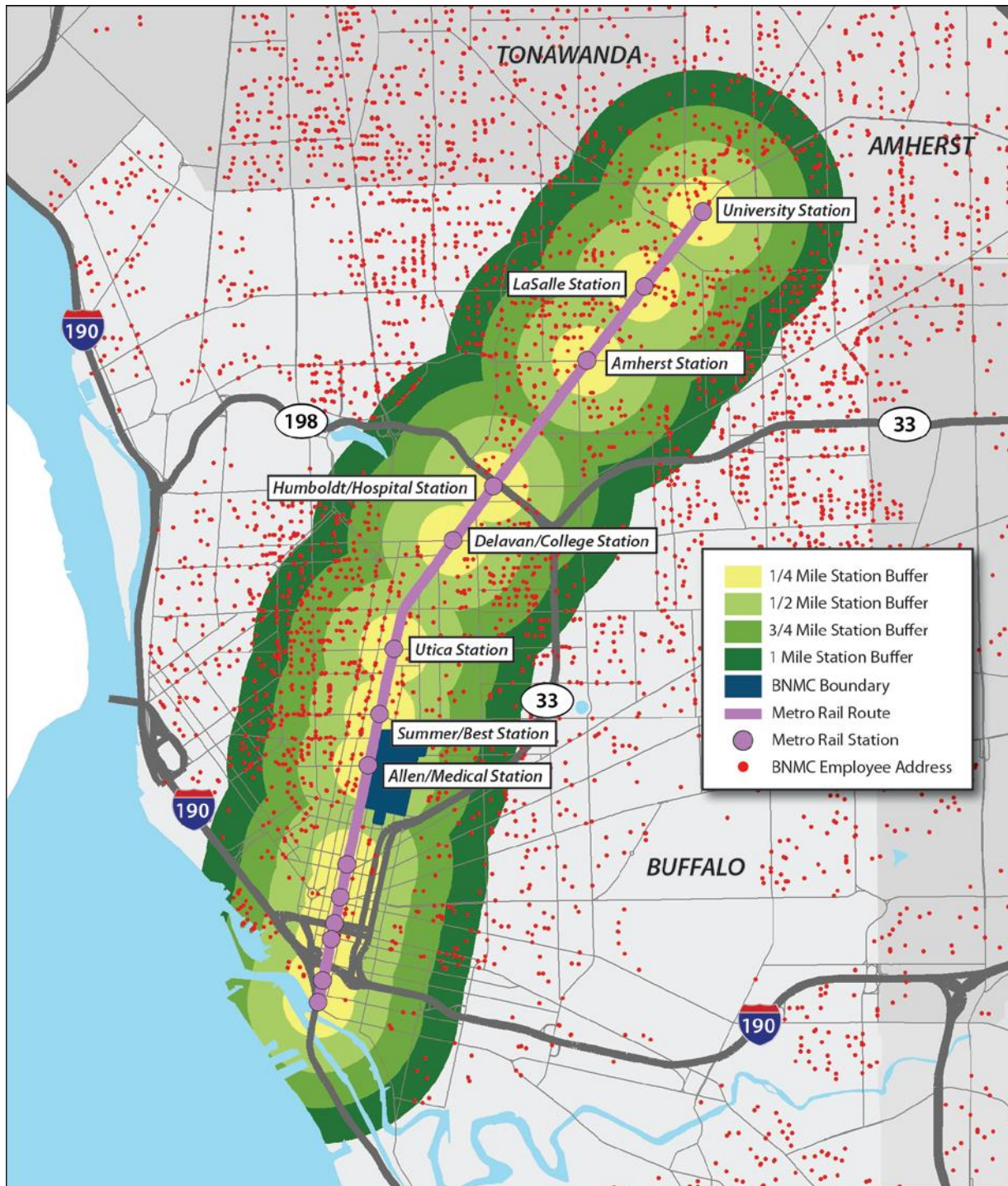
data, the TMA developed a marketing plan that focused on encouraging employees to utilize these identified primary routes, which included NFTA Metro Rail.

Once the baseline data was gathered, the TMA began to identify major barriers that were preventing employees from choosing these transit routes. From previous transportation surveys sent to employees, three primary barriers were identified. The first major barrier was that access to Metro Rail was limited due to inadequate intermodal connections. The second was that many employees were simply not aware of what their transit options were and the benefits of them, and how to find information about these options and how to actually utilize them. The third identified barrier was that many employees believed that the existing cost of public transit excluded it from being an affordable alternative to driving.

Improving Access to Transit

Approximately 5% of employees live within a half-mile of a Metro Rail Station. However, roughly 13% live within 1 mile, and roughly 20% live within two miles. This includes approximately 700 employees who live within a short drive of Metro Rail's two park-n-ride lots at LaSalle Station and University Station. In order to increase the number of employees who could utilize Metro Rail, it was determined that intermodal connections had to be improved. The BNMC worked with the NFTA and GObike Buffalo to install bicycle racks in each Station, as well as bicycle lockers at University and LaSalle Stations. This was done so that those who were not within walking distance of a Metro Rail Station could now bicycle to a Station and continue their commute on the Train. It was estimated that for those who live within two miles of a Station, this intermodal commuting option would still only take around 20 minutes, which is close to the average commuting time in the region. Funding for the bicycle parking came from a 2009 FTA JARC grant.

Figure 6. A large percentage of BNMC employees live near the NFTA Metro Rail line.



Because of the partnership between the NFTA and the BNMC, the NFTA also created two new Metro Express Bus Routes that directly serviced the Medical Campus from two suburban communities. This was done in order to provide employees who did not have access to adequate existing transit options with an alternative to driving. The communities were chosen based on employee shift information and employee address data.

The Express Routes operated once in the morning (arriving on the BNMC at 7 AM) and once in the afternoon (departing the BNMC at 3:30 PM). The NFTA also added an additional \$0.50 surcharge each way, meaning a round trip was \$5.

Marketing Transit

The TMA also developed programs and marketing materials that helped increase awareness about Metro Rail and Bus services and that made it as easy as possible for employees to learn how to utilize these services. These outreach strategies included a program where employees could request personalized information about their transit options based on where they lived and what time they worked. The idea behind this program was that by making it as easy as possible for employees to get information about what their options are, they'd be more inclined to begin utilizing these options.

Incentivizing Transit

In order to make public transit more financially competitive with driving, BNMC developed three major strategies. The first strategy was aimed at expanding employee access to Commuter Tax Benefits that would allow employees to purchase transit passes at pre-tax rates. The BNMC helped market these programs within institutions that already had the program established, and worked with other institutions to establish the program for their employees.

The second strategy was to develop a corporate pass program in partnership with the NFTA that would provide employees on the Medical Campus with a discounted-rate commuter pass. The BNMC is still working with the NFTA on creating this program.

The third strategy was to create a Give Transit a Try program. The program allowed employees who were new to transit to see if Metro works for their commute without a major upfront financial commitment. Two Give Transit a Try programs were established: The first program allowed employees to purchase heavily subsidized monthly passes for up to three months at an escalating rate. After the third month, employees who wanted to continue taking transit were encouraged to sign up for a pre-tax program. This three month program operated between September of 2012 and July of 2013. During this time, 112 employees signed up for the program. A recent survey (September 2013) indicated that approximately 60% of employees who participated in the program continued to take public transit to work after the three months. The major reason participants indicated that they did not continue to take transit after the program ended was because the real cost of a monthly pass was too high.

Figure 7. The three-month Give Transit a Try Program allowed employees new to transit to try it out without major upfront costs.

	<h2>3 Month Transit Pass Subsidy Application</h2>
<p>To receive your first month's transit pass, complete and sign this form and mail/deliver it along with a personal check (payable to BNMC ACCESS) for the amount indicated below to:</p>	<p>BNMC Access 640 Ellicott Street Buffalo, NY 14203</p>

Name: _____
Home Address: _____ **City:** _____ **Zip:** _____
Email: _____
Home/Cell Phone: _____ **Work Phone:** _____
Have you created an account for GO BNMC? YES NO
Will you be using Metro Rail? YES NO
Will you be using Metro Bus? YES NO **If yes, Bus Number:** _____
Employer Name: _____
Employer Address: _____
How do you currently get to work? _____
Do you currently have a monthly parking permit? YES NO
If yes, would you like to cancel it for the duration of the trial? (See program rules) YES NO

The TMA also developed a comprehensive Give Transit a Try campaign during the month of April in which employees new to transit were encouraged to sign up for a free 2-week transit pass that they could use to see if Metro worked for their commute. The campaign featured:

- Giving away free “2 week transit passes” to BNMC employees who did not already commute via transit. The NFTA created customized GO BNMC passes for the program, which were good for unlimited Metro trips between April 15th and April 26th. The NFTA provided the passes to the BNMC at a slightly discounted rate.
- Mailers to employees who lived within a half-mile of primary Metro Bus routes and to employees within two miles of Metro Rail stations. The mailers included information about Metro Rail and Bus, GO BNMC programs available to employees, as well as a plea to participate in the two-week program.
- Emails and other online notifications about the campaign.
- Posters with details about the program displayed throughout the Campus.
- Tabling events at major institutions on the Campus where individuals could sign up for the two-week pass program.

While the TMA anticipated giving away roughly 100 passes, more than 200 employees ended up signing up for the program.

After the program ended, approximately 70% of users indicated that they planned to continue to take transit to work, and approximately 30% decided to sign up for the three month Give Transit a Try program.

Figure 8. A flyer for the 2-week program was mailed to BNMC employees.

Try transit on us.
FREE 2-Week Metro Pass for April 15-29

With warm weather fast approaching, there is no better time to check out the benefits of NFTA Metro Rail and Bus. GO BNMC is offering employees who work on the Buffalo Niagara Medical Campus free Metro passes that are good for unlimited Rail and Bus trips between April 15th and April 29th. The passes are only for employees new to transit, providing the ideal opportunity to see if these alternatives are right for you. After the two weeks, you will have the option to sign up for our subsidized transit pass program.

To take advantage of this free offer, email gobnmc@bnmc.org and request your pass.

But Hurry! Supplies are limited and passes will be available on a first-come basis. We look forward to hearing from you.

Try transit this spring.
FREE trial offer for employees on the Buffalo Niagara Medical Campus

Join the movement!

The Buffalo Niagara Medical Campus is inviting you to join with other employees looking for greener, healthier and more affordable ways to get to work. Our GO BNMC initiative offers commuting options that help you fit a bit of exercise into your busy life and put money back into your bank account. In fact, when you GO BNMC instead of driving everyday, you could save more than \$1,500 per year! How's that for going green?

Plus, reducing your carbon footprint means a healthier environment and a more sustainable Campus. And that's good for everybody.

GO get more.
Need another reason to GO BNMC? We're proud to offer rewards to employees for their smart commuting choices. GO Getters can take advantage of exclusive events, monthly raffles and subsidized transit passes.

For more information on becoming a BNMC GO Getter, contact us today at 716.566.2316 or email us at gobnmc@bnmc.org. Together, we'll get your commute headed in the right direction.

Supported by NYSDOT and NYSDOT

So many ways to save.
Let us help you create a customized commute plan that works for you, including a combination of low-cost transportation solutions and incentive programs.

- Metro Rail & Bus**
Fast, convenient and affordable ways to avoid the hassles and costs of driving. Join the growing number of BNMC and downtown workers who are taking advantage of Metro Rail and Bus. For northtowns commuters, Metro Rail has a free Park & Ride lot located at US South Campus. It only takes 10 minutes from the US South Campus Station to the BNMC (Allen/Medical station). Commuters can also choose an Express Bus that connects suburban locations to the BNMC via the Thruway. Trains run every 10 minutes during peak hours. Metro bus routes run every 15. Save time and take your bike on board Metro Rail.
- Biking**
With secure and dry bike parking on the Campus, there's no better time to get outside, get a bit of exercise and get rid of your commuting costs.
- Walking**
Burn calories and save money. With living arrangement options for just about every lifestyle, choosing to reside near the Campus can surely be rewarding.
- Guaranteed Ride Home Program**
Worried about being stranded at work without a car if your kid is sick or you have to stay late? Relax, our Guaranteed Ride Home Program will provide you with a free taxi ride to wherever you need to be in the event of an emergency. We will give you a voucher, and you can use it when the unexpected occurs.
- Carpooling**
Park in our Carpool Reserved spots, and let us help you find carpool partners so you can cut your commuting costs in half or more.

For more information about BNMC transportation options visit www.gobnmc.org.

Little changes make a big difference.
Meet some GO getters.

"My husband and I decided to live in a neighborhood where we would not need a second vehicle. We can walk and bus to the grocery store, the farmers market, restaurants, shops and, of course, to work."
Deirdra
Research Data Center Institute

"My co-workers and I have fun carpooling together. Sharing the commute helps us do our part for the environment and it also saves us money."
Richard
Palatka Health

"I did the math and I realized I would save nearly \$3000/year by taking the bus and the train. Especially in the winter months, I feel safer on public transit. And it reduces the wear and tear on my car."
Marced
University of Buffalo

For more information on becoming a BNMC GO Getter, contact us today at 716.566.2316 or email us at gobnmc@bnmc.org. Together, we'll get your commute headed in the right direction.

Follow us on @GObnmc

In addition to the work done by the BNMC-TMA, William Smith (Director of Campus Access) also served on the NFTA Citizens Advisory Committee as a representative of the BNMC. The Citizens Advisory Committee was formed by the NFTA to gather input from community stakeholders on Metro programs and projects, such as creating new fare media options and plans to increase ridership.

2. Develop added-mobility services (i.e. services that complement transit) such as car sharing, bike sharing, and guaranteed ride home.

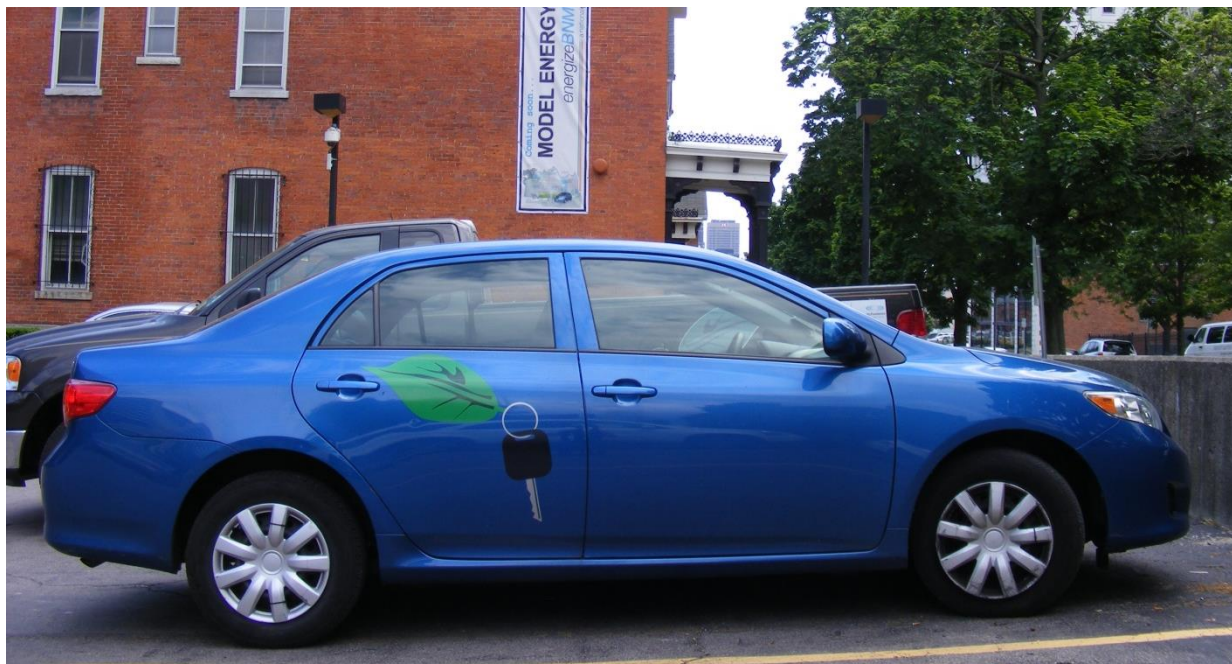
Employee transportation surveys also indicated that two major reasons why employees choose to drive alone to work are because they occasionally need a car while at work to perform job-related duties, run errands or go to lunch, and because they do not want to be stranded at work without a car and a quick way home if an emergency occurs. To address these issues, the BNMC created a support network for alternative commuters that included connecting employees to Buffalo CarShare and Buffalo BikeShare services, and connecting employees to a Campus-wide Guaranteed Ride Home program.

Buffalo CarShare

Many employees on the Medical Campus occasionally have to travel away from their workplace during their shift to perform job-related duties, such as attend meetings across town. In order to provide employees with the ability to do this without having to drive their own car to work, the BNMC worked with Buffalo CarShare to grow CarShare's presence on the Medical Campus. Buffalo CarShare provides employees and businesses with convenient access to a fleet of cars that they only pay for when they use. As of the summer of 2013, six CarShare vehicles were located on the Campus, including two new electric vehicles that NYSDOT recently provided Buffalo CarShare with research funding for.

The BNMC-TMA has been working with companies on the Campus to establish corporate CarShare accounts for their employees. The corporate accounts pay for employee use and act as an incentive for employees to not drive to work, which in turn can save employers money by not having to provide as much parking for their employees.

Figure 9. Buffalo CarShare vehicles are located on the Medical Campus and are available to employees and neighborhood residents.



Buffalo Bike Share

In 2012, NYSDOT and NYSERDA also provided Buffalo CarShare with funding to implement a pilot bikeshare program in Western New York. The BNMC also provided start-up funding for the program and has worked closely with Buffalo CarShare to ensure the program's success. The BikeShare program provided the BNMC with a fleet of bicycles that employees can use instead of their car to perform job related duties or simply get around more easily once they arrive at work. The program is currently being beta tested on the Medical Campus, and is therefore only available to a small employee population at this time.

Figure 10. BNMC employees have access to the BikeShare program on the Campus.



Guaranteed Ride Home Program

Through funds from a 2010 FTA JARC Grant, the BNMC was able to implement a Campus-wide Guaranteed Ride Home Program that provides employees who do not drive alone to work with a free taxi-ride home in the event of an emergency. This was implemented to address the concern of being stranded at work without a car and without a quick way home when something unexpected occurs, such as missing the bus, a carpool driver having to leave work early, or having to pick a sick child up from school. Roughly 40% of recent survey respondents indicated that having a guaranteed ride home in the event of an emergency could make them consider choosing an alternative commuting option.

BNMC, Inc. entered into contract with Liberty Cab Company to provide taxi-service to employees participating in the program. Employees who sign up for the program are given a free taxi-ride voucher that they hold on to until an emergency arises while at work.

When this occurs, the employees calls the Cab company, gets picked up, hands the voucher to the driver and gets a free ride home. The voucher covers the first \$60 of the ride, or the first 20 miles. Participants are allowed to use up to four vouchers per year.

Figure 11. Guaranteed Ride Home participants are given a free taxi ride voucher that they can use if an emergency arises.

GO BNMC
Guaranteed Ride Home Voucher

Liberty Cab Company
716.877.7111
Account Number:

Name:

Workplace:

Time of Trip:

Reason for Trip

Final Destination

Participant Signature

INSTRUCTIONS

To use this GRH Voucher, please follow these steps:

1. The GRH Trip must **originate from** the Buffalo Niagara Medical Campus.
2. Call **Liberty Taxi**. Inform them of your intention to use this voucher during this initial call.
3. Provide them with the **account number** located on the front of the voucher during this call.
4. The voucher will cover up to **\$60** of the trip's cost. The participant is responsible for **paying any amount above \$60**, including tip.
5. **Fill out and sign** this voucher and **present it to the taxi driver** once the trip is completed.
6. The BNMC will **mail a new voucher** to the participant once we receive the signed voucher and invoice from Liberty Taxi.

NOTICE

GRH is a free service provided by BNMC, Inc. BNMC will administer the GRH Program according to the guidelines above to the best of our abilities. By using this voucher, the participant acknowledges that the BNMC assumes no liability for the timeliness of the Taxi Company or any accidents that may occur during a GRH trip.

3. Promote, incentivize and facilitate ridesharing among BNMC employees.

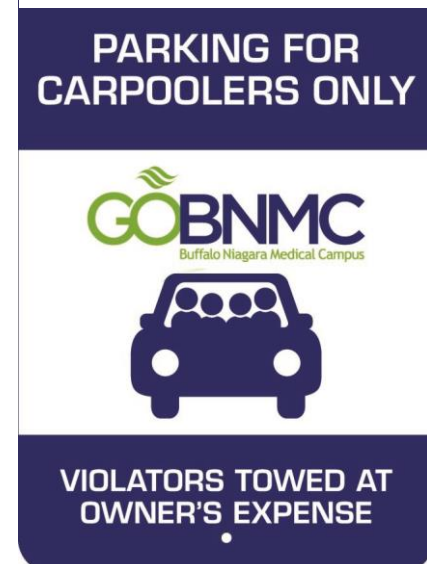
While increasing the number of employees who utilize public transit services was a primary goal, it was understood that not all employees would have access to these services. For instance, roughly 60% of employees who work on the Medical Campus live in the suburbs of Buffalo which have little to no Metro Routes connecting them to the BNMC, and the routes that do, typically require more than an hour of commuting time one way. In order to provide these employees with alternatives to driving alone, the BNMC created carpool incentive programs. Employees who park in BNMC-owned lots and garages are now able to create a carpool-account and share the account with those that they share a ride with. This allows employees to better manage their commuting costs and provides them with a way to significantly reduce those costs by splitting them in half or more, depending on how many ride share partners they

have. “Carpool Preferred” spaces were also placed in BNMC-owned lots to ensure that carpoolers always have a convenient place to park and to signify the BNMC’s gratitude for employees who choose to carpool.

Because of employee input about these programs, the BNMC also began to provide carpoolers with an extra parking tag at no additional cost. This was done to make it easier for carpoolers to switch drivers and to ensure that a carpooler would still be able to park in a lot/garage if the individual who held the original tag couldn’t make it to work for some reason. To prevent abuse of this system, the tags were designed so that only one could be in a lot or garage at a time – if one of the parking tags was already in the garage, the additional tag would not be able to gain entry until the first tag had exited.

An online carpool-matching system was also created for employees. For more information about this system, please see below.

Figure 12. BNMC set up Carpool Only parking spaces in parking lots and garages.



4. Develop a web-based toolkit that connects transportation options, tracks commuting behaviors, and rewards participating employees.

A comprehensive TDM website was built for GO BNMC in order to increase awareness of the programs available to employees on the Campus and to make it as easy as possible for employees to access these programs. BNMC, Inc. entered into contract with Ecology and Environment to create this TDM website using Ecology and Environment’s GreenRide Connect software. The major components of the website included:

- In-depth information about Metro Rail and Bus, carpooling, bicycling, walking, electric vehicle charging stations on the Campus, Buffalo CarShare and Buffalo BikeShare.
- Information about the different incentive programs offered through GO BNMC and how to access the programs.
- An interactive carpool matching system: employees interested in seeking carpool partners were able to create an online account that listed where the employee worked, where he or she lived and what their work schedule was. The matching system would show the employee’s potential partners based on both of their needs, and provided the employee with contact information so he or she could initiate a conversation if interested. To maximize the program’s effectiveness, the GO BNMC carpool database was linked to the GBNRTC’s regional carpool matching database known as *Good Going Western New York*. This provided Campus employees with the option of

matching to individuals who worked off-Campus as well. By the end of August, 2013, more than 1,000 accounts had been created by BNMC employees.

- A commute-cost calculator: The BNMC-TMA built an online commute-cost calculator that allowed employees to see how much they were actually spending to drive to work, based on direct and indirect costs associated with driving.
- A transit trip planner: employees were able to interactively plan their transit trip by typing in their starting point, ending point and starting time. The planner would then show the employee their NFTA transit options.
- A general incentive and rewards program: In addition to the incentive programs created for specific alternative modes, GO BNMC also managed a general incentive and rewards program that provided alternative commuters with monthly prizes. The program was administered through the website, and was primarily designed to garner attention for GO BNMC, both by having reward winners spread the word and by showing employees that the BNMC was serious about the program. The TMA worked with local businesses to provide gift certificates to employees who alternatively commuted. A monthly raffle was held and winners of the raffle were featured in BNMC and institution newsletters. By working with local businesses, the program was also able to raise awareness of these businesses and attract more customers to them. Businesses that provided gift certificates were featured in GO BNMC marketing materials.

The website went into operation near the end of August, 2012. By September 1st, 2013, the website had roughly 3,500 visits and 14,500 page views.

Figure 13. GO BNMC's original website design.



5. Provide the necessary infrastructure and policies to ensure a safe and convenient environment for users of alternative transportation modes.

Approximately 17% of employees live within three miles (typical comfortable bicycling distance) of the Buffalo Niagara Medical Campus. In order to facilitate an increase in the number of employees on the Campus who are regularly bicycling to and from work, the TMA developed plans to improve bicycle infrastructure on the Campus, improve bicycle routes to the Campus, and to create incentive programs that could encourage employees to begin commuting via bicycle.

Improving On-Campus Bicycle Infrastructure

The BNMC-TMA analyzed existing bicycle parking locations and amenities and identified on-Campus infrastructure gaps. The TMA then worked with institutional partners to add additional bicycle parking facilities to locations on the Campus where they were missing. Since September of 2013, approximately 25 bicycle racks have been added to the Medical Campus, and more are planned.

Through funding from the 2009 FTA JARC grant, the BNMC was also able to construct a state-of-the-art secure and dry bicycle storage facility on the corner of Ellicott and Virginia Streets. The storage facility provides an additional 15 parking spaces for bicycles.

Figure 14. A bicycle storage facility was constructed on the Campus to provide employees with secure and dry parking.



Plans are also in the works to develop a full-service bicycle complex for employees on the Medical Campus and for Metro Rail riders. The bicycle complex will be part of the BNMC's Integrated Mobility Hub (see section 4.2 for more information) and will be located adjacent to Metro Rail's Allen/Medical Campus Station. It will feature secure 24/7 access to bicycle parking, lockers, changing rooms, and a

repair station. The complex is also intended to act as a “bike-n-ride” for Metro Rail, in which employees can travel to a Station via bicycle, take the Train to work, and then park their bicycle next to the Allen/Medical Station in the Bicycle Complex. The Complex is expected to be operational by the Spring of 2014.

Improving Bicycle Routes

Because of the ongoing advocacy work from TMA partners and the growing shared-vision of creating better bicycle and pedestrian connections to the BNMC and Downtown Buffalo, the Mayor of Buffalo recently announced his intentions of making Buffalo a “Bicycle Platinum” City (based on ratings from the League of American Bicyclists). The City has pledged that over 10 miles of bicycle lanes will be added to City streets every year beginning in 2013. Four major “complete street” projects occurred in 2013 that improve bicycle access to the Medical Campus: Bike Lanes were added to Hudson Street which creates a connection to the lower west side, bike lanes were added to Linwood Avenue and Delaware Avenue which creates a bicycle connection for employees who live to the north, and bike lanes were added to Humboldt Parkway which creates a bicycle connection to employees who live on the East Side of Buffalo.

Planning for Complete Streets

Additionally, the GBNRTC recently allocated \$100,000 towards a traffic mitigation plan for corridors leading to and from the Buffalo Niagara Medical Campus and the northern section of Buffalo’s Central Business District. The plan is looking at ways to improve infrastructure along these corridors for pedestrians, bicyclists and vehicles alike. The scope of the study involves:

- Identifying existing conditions and future forecasting;
- Traffic simulation modeling in areas affected by the BNMC;
- Reviewing issues, forecasts and simulations to establish context for improvements;
- Developing a matrix of recommended improvements;
- Preparing a coordinated plan for the improvements; and
- Preparing final documents.

The plan is currently underway.

Incentivizing Bicycle Commuting

In addition to providing convenient bicycle parking and improving bicycle connections to the Campus, employees who bicycled to work were given free GObike Buffalo memberships. The purpose of these free memberships was to provide bicyclists with a support network: GObike members become part of Buffalo’s growing bicycle community and get peer support to continue their efforts, and also gain access to GObike’s Community Bike Workshop where employees can go to learn how to maintain and repair bicycles and get access to free bicycle parts and inexpensive used bikes. GObike members also get to participate in the Bicycle Benefits Program in which local businesses offer discounts on their services or

products to members. To date, more than 100 GOBike memberships were given away through GO BNMC.

Establishing Policies that Support Alternative Commuters

A major transportation issue on the Buffalo Niagara Medical Campus stems from the fact that the Campus is comprised of numerous institutions and organizations, all with their own employee transportation policies. While GO BNMC programs are available to employees within each organization, there are transportation policies internal to these organizations that were identified as impeding the overall TDM initiatives taking place. For instance, many organizations subsidized parking for their employees but did not subsidize transit, which in turn encourages employees to drive alone to work.

The BNMC-TMA created a Transportation Assessment Program for employers on the Medical Campus that help businesses implement internal programs that could encourage their employees to alternatively commute. The Assessment Program:

- Analyzes existing employee behavior and employer policies that impact transportation choices;
- Provides recommendations on how to encourage alternative commuting (including parking cash-out programs, CarShare accounts, bicycle amenities and better access to GO BNMC's programs); and
- Helps the organizations implement these recommendations.

The first organization that participated in the Assessment Program was Buffalo Hearing and Speech Center (BHSC). Because of the program, BHSC now provides employees with secure bicycle parking and rewards employees who carpool, take transit, bike or walk to work with a \$20 monthly bonus.

Figure 15. The BNMC created an assessment toolkit to help companies implement TDM programs.



3.2 Marketing the Toolkit

The BNMC-TMA devised a marketing plan that included four major outreach strategies: These strategies were to further develop support for GO BNMC from managers and HR departments on the Campus, to increase awareness and encourage existing employees to utilize the TDM programs, to create a large employee volunteer network in which existing alternatives commuters would act as ambassadors for the program, and to provide new hires on the Campus with information about these programs so that they can make informed commuting decisions from the very beginning of their tenure on the Campus.

Strengthening Relationships with Managers and HR Departments

While the BNMC-TMA features representatives from major institutions on the Campus, the size of these institutions meant that information about the TDM programs was not always able to trickle down to HR departments and managers of specific departments within these institutions. Because the HR departments and managers have the greatest dialogue with employees, BNMC representatives began to meet with these individuals to both inform them of the programs and to identify ways to reach out to employees. Representatives first gave overview presentations to all managers at Roswell Park and Kaleida Health that focused on why the Campus and institutions were implementing these programs, and what these programs were. Next, they reached out to individual managers to discuss the needs of the different departments.

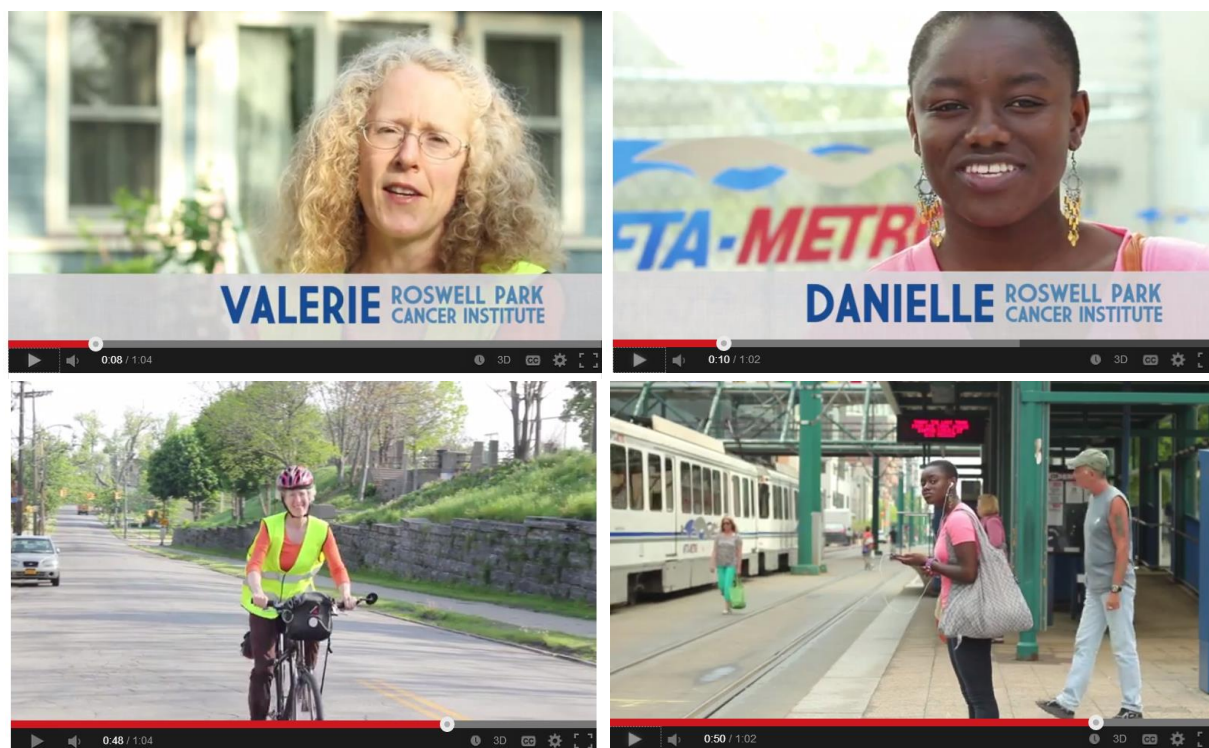
Reaching Out to Existing Employees

With help from manager input and the acquired services of 12 Grain Studio and Wynne Creative Group, the TMA created a comprehensive marketing campaign that aimed to increase employee awareness of GO BNMC initiatives and encourage employees to utilize alternative options. In addition to the GO BNMC website, print materials were created that included brochures, posters and outdoor signage. These brochures were distributed to employees on the BNMC (more than 10,000 have been given away to date) and posters were placed in all buildings on the BNMC. Below are examples of these promotional materials.

The TMA also created GO BNMC videos that were showcased on the website and were sent to employees on the Campus. The videos provided an overview of the GO BNMC initiative and featured employee testimonials from individuals who were already alternatively commuting (as seen below).

In addition, GO BNMC information is shared with employees electronically through BNMC and institutional newsletters and through intranet services for Kaleida and RPCI. A GO BNMC twitter account was also created to take advantage of social media's outreach capabilities.

Figure 16. Videos of “GO Getters” talking about and demonstrating alternative commuting modes.



The BNMC is currently developing a Campus-wide employee newsletter that will primarily focus on GO BNMC initiatives as well. To date, the BNMC’s newsletter was only being sent to a small percentage of employees on the Campus as well as interested community members.

Figure 17. Marketing materials for GO BNMC were distributed to employees on the Medical Campus.



In August of 2012, the TMA held a large Campus event to celebrate the launch of the GO BNMC initiative. The event was known as the GO BNMC Summer Block Party and featured interactive games as well as informational tables where representatives from organizations such as GObike Buffalo, Buffalo CarShare, NFTA, and the GBNRTC discussed their initiatives and services with BNMC employees. More than 400 employees attended the Summer Block Party.

Figure 18. GO BNMC's Summer Block Party introduced employees to the new initiative.



BNMC representatives also held and participated in numerous other tabling events, including events for Bike to Work Day, the two-week Give Transit a Try Program, institutional employee events like safety and health forums, and GO BNMC-specific tabling events where representatives signed employees up for GO BNMC programs. The Bike to Work Day event featured free breakfast for bicycle commuters as well as speeches from local politicians, including the Mayor of Buffalo who used the occasion to declare his intentions of adding at least ten miles per year of new bike lanes to city streets.

Figure 19. GO BNMC's Bike to Work Day had great attendance and featured a speech from the Mayor of Buffalo.



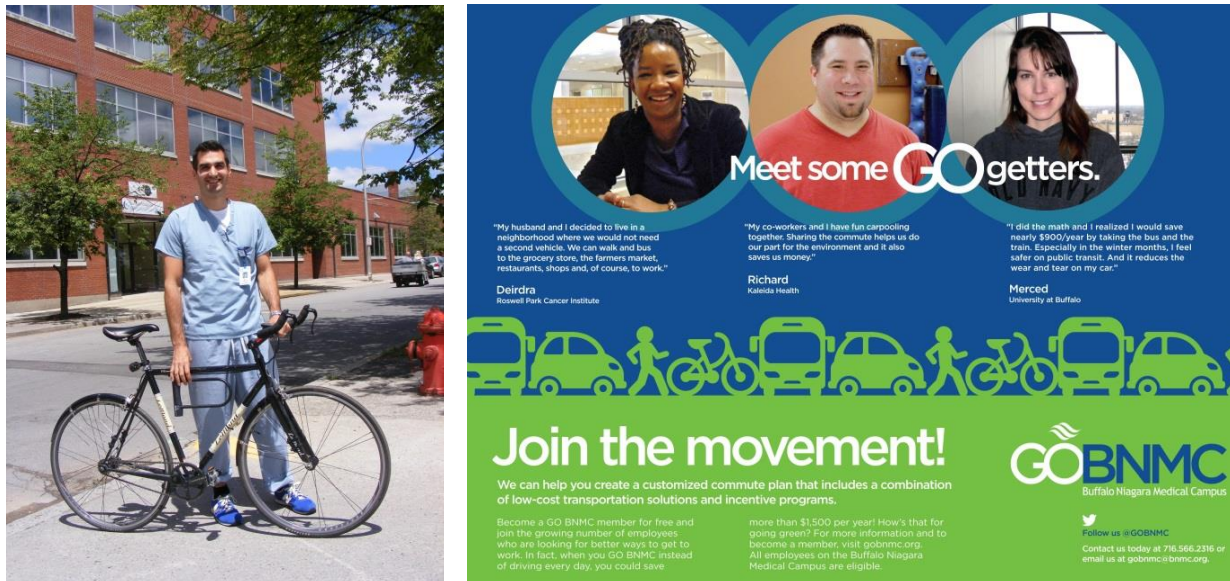
In addition, a GO BNMC member appreciation party was held in the summer of 2013 in which employees who alternatively commute and employees who have online GO BNMC accounts were invited to mingle and celebrate the successes to date. The objective of this party was to not only show appreciation for those who are participating in the programs, but to help brand the GO BNMC initiative as being a social “club” where members have access to activities and events that non-members do not – therefore encouraging more employees to sign up for the programs.

Establishing a Volunteer Employee Network

The BNMC also developed a large volunteer employee network made up of employees from different companies on the Campus that either carpool, take transit, bike or walk to work. The purpose of this employee network was to create ambassadors for the GO BNMC initiative (volunteers talk to their peers about the initiatives and alternative transportation options), to help other employees better relate to the programs by seeing that their peers are participating, and to gather input about the programs from employees who are utilizing them.

The BNMC established a volunteer network of more than 100 employees. These employees were labeled as “GO Getters” and many were featured in GO BNMC marketing materials, such as posters, videos and on the GO BNMC website.

Figure 20. GO BNMC Champions, like those below, helped with marketing and outreach.



TMA representatives also held “GO Getter” meetings in which employee volunteers got together and discussed and offered feedback on GO BNMC’s initiatives and other ways to encourage alternative commuting. The Carpool incentives implemented in BNMC-owned lots were one such example of the success of employee feedback. These meetings helped shape these incentive programs into what they are today. See images below.

Figure 21. BNMC held meetings with Champions to gather ideas and feedback about GO BNMC programs.



In addition, the TMA is working on establishing single points of contacts within the different institutions that BNMC staff can point employees interested in the GO BNMC programs toward so that they can seek peer advice. The plan is to have a contact person for employees interested in carpooling, a contact person for employees interested in transit, and a contact person for employees interested in bicycling within each major institution (University at Buffalo, Kaleida and Roswell).

Reaching out to New Employees

While changing the behavior of existing employees is a high priority, the TMA also identified reaching out to new employees as a major way to reduce parking demand. Because existing employees have already formed commuting habits, it was believed that it would be more difficult to encourage them to change these habits. On the other hand, new employees have not formed habits, and therefore were believed to be more open to choosing alternative commuting options.

To date, outreach to new employees has included presenting GO BNMC at employee orientations for Roswell Park and Kaleida Health (both occurring bi-weekly), and incorporating GO BNMC materials into orientation packets. The TMA is working with smaller organizations on the Campus to begin doing the same.

Figure 22. GO BNC is presented to new-hires during employee orientations



4. Project Outcomes

The following section will examine outcomes of the project in terms of achieving project goals through an analysis of the performance measures; advancing the project beyond its initial scope and schedule; and developing a model for replication in other parts of the region and beyond.

4.1 Effectiveness of TDM Strategies

As described in Section 1, there were four primary performance measures identified by the team as a means to identify the effectiveness of the project: changes in mode share, employee parking demands, and vehicle miles traveled as well as the number and success of partnerships.

Mode Share

As described earlier, the BNMC conducted a Comprehensive Transportation Survey in early 2012 immediately prior to the start of the project schedule. A little over one year later, after the implementation of the GO BNMC toolkit, the BNMC conducted a second transportation survey in June 2013 in order to help measure the effectiveness of the programs. As shown below in Table 5, there were some significant shifts in mode share over the course of GO BNMC's first year of operations.

Table 5. Mode share changes 2012-2013

Travel Mode to Work	2012	2013	Shift
Drive Alone	88.42%	82.80%	-5.62%
Carpool	4.60%	8.22%	3.62%
Metro Rail	1.81%	2.03%	0.22%
Metro Bus	2.23%	3.90%	1.67%
Shuttle	0.42%	0.44%	0.02%
Bike	0.70%	1.34%	0.64%
Walk	1.81%	1.21%	-0.60%
Respondents	725	795	

The 2013 Survey was sent to the same pool of employees across BNMC institutions and yielded a similar number of respondents, with 70 more people responding in 2013. According to the results of the 2013 survey, the number of people who responded that they drive alone to work decreased by 5.62%. At the same time, there were significant increases in the number of people carpooling, taking transit, and biking to work. However, an unexpected outcome of the survey showed that there was a slight decrease in the number of people walking to work over the course of the year, which is something the TMA is examining further through multiple lenses, as discussed in Section 5.

Employee Parking Demand

Another important metric in evaluating the success of the TDM toolkit is the reduction in employee parking demand in order to ensure ample parking for patients and to provide an attractive and sustainable Campus and neighborhood environment. The first example of this is currently related to the largest employer on the Campus, Kaleida Health, with approximately 3,900 employees at their Buffalo General Medical Center location. As discussed earlier, the cost of parking for Kaleida employees jumped from \$0 to \$89 per month in March of 2012, just as the GO BNMC toolkit and TMA were being established. This sudden and significant increase in the cost of parking was presented alongside the list of alternative commuting options (i.e. the toolkit) for employees to consider.

Prior to March 2012, the 100% employee parking subsidy provided by Kaleida resulted in a significant parking deficit and a flooding of the shared monthly and transient parking facilities. Even despite the construction of the new 2,036 space parking garage, it was projected in the *2010 BNMC Comprehensive Transportation Study* that there would still be a parking deficit of over 900 spaces on the north end of Campus and approximately 350 spaces on the south end as a result of the new Gates Vascular Institute, HighPointe Long Term Care Facility, and UB's Educational Opportunity Center.

Today, these new developments on both the north and south ends of Campus are fully operational and the BNMC Parking system is running significantly below total capacity, with ample and convenient parking for current and future hospital patients/visitors located in the Ellicott Goodrich Garage. In addition, the new employee Michigan Goodrich Garage is also running below capacity with room to accommodate a number of future employees associated with current capital projects (i.e. UB School of Medicine and Children's Hospital).

As a result, the original plans for the construction of additional parking facilities to serve these new developments have been modified to lessen the total number of required spaces and to refocus efforts on the implementation of TDM strategies. A good example of this is the recent UB Parking Study prepared by Greenman-Pedersen, Inc. for the new UB School of Medicine. According to the UB Parking Study, the total parking demand for the new School is 1,103 spaces; however, the Study only identifies a need for 534 on-Campus spaces while the remaining 569 spaces will be covered through aggressive TDM strategies and utilization of park-and-ride facilities on the Metro Rail line.

Reduction in VMT's and GHG Emissions

Before the implementation of TDM programs, the Campus' single-occupancy-vehicle commuters were estimated to be responsible for 40,348,000 annual vehicle miles traveled and 32,479,000 pounds of associated annual carbon dioxide emissions. Because the drive alone mode share has been reduced to 82.8%, the estimated annual vehicle miles travelled is now 37,793,000 miles, and the estimated annual pounds of CO₂ emissions is now 30,422,000 pounds. This means that annual VMT has been reduced by an estimated 2,555,000 miles, and that annual CO₂ emissions have been reduced by roughly 2,057,000 pounds.

4.2 Leveraging the TMA and TDM Toolkit

Successful Partnerships

When evaluating the formation of GO BNMC from a project outcome perspective, there are a number of ways to measure the level of success which has been achieved by creating and strengthening partnerships with various stakeholders. Below are three examples of how partnerships that were developed through the TMA have improved the outcome of this project and have led to additional projects being undertaken by the TMA and its stakeholders.

1. How has the development of partnerships helped to achieve the project goals and objectives?

The overarching goal of GO BNMC and the GO Buffalo campaigns is to improve access and mobility by developing and promoting a multi-modal transportation system for the people of Buffalo. To this end, the development of partnerships is critical to identifying opportunities and overcoming barriers. In addition, a successful partnership should form a symbiotic relationship that helps further the mission of each organization while effectively addressing the issues at hand.

A good case example of this is the partnership that has developed between BNMC and Buffalo CarShare over the past two years. Though two very different non-profit organizations, some similarities and overlap can be seen in terms of mission, goals and geographic scope. For example, each organization shares the goal of promoting community development in lower income neighborhoods surrounding the Medical Campus. Each organization also strives to reduce the number of cars on the roads. And each also shares a vision of environmental sustainability through the implementation of multi-modal transportation services and alternative fuel vehicle infrastructure.

At the time of project start up, the BNMC had allowed CarShare to park two of their vehicles in the 941 Washington Street parking lot (one car and one pickup truck) due to its proximity to the transit station and CarShare's main office on Allen Street. Immediately, BNMC recognized Buffalo CarShare's unique car sharing model as something that could not only fit nicely into the TDM toolkit for BNMC employees, but could also provide a much needed service to residents of the surrounding neighborhoods.

In addition, Buffalo CarShare had approached the BNMC about interest in developing a bike sharing program that would serve the Campus and surrounding communities. In response, the BNMC partnered with CarShare and provided \$10,000 in startup funds to develop a Request for Qualifications (RFQ) to find groups interested in bringing bike sharing to Buffalo. The two organizations also began closely coordinating and partnering with GObike Buffalo on various funding opportunities toward advancing a number of collaborative projects, including awards from the FTA, NYSEDA and NYSDOT towards TDM strategies, bike sharing, car sharing, and complete streets infrastructure.

Today, the outcomes of this partnership have been the addition of four vehicles to the fleet on the Medical Campus (six total), including two electric vehicles; a pilot program that explores a new, low-cost

model of bike sharing known as Social Bicycles; and a Carshare membership program that offers a free one year membership to businesses located on the BNMC. Car sharing vehicles located on the BNMC are the most heavily utilized among the CarShare fleet by residents of the surrounding neighborhood and Campus employees alike. The addition of electric vehicles to the fleet (with electric and parking fees covered by the BNMC) has also allowed BNMC to showcase the use of electric vehicles as well as car sharing as a means of changing commuting behavior on multiple levels. BNMC currently has 21 electric vehicle charging stations (EVCS) located across the Campus and is working with Carshare, National Grid and NYSEERDA on adding additional ones at the 941 Washington Street location.

Overall, the growing partnership of BNMC and Buffalo CarShare has provided BNMC with a tool for promoting the use of alternative modes and reducing the number of single occupant vehicles and, at the same time, helped CarShare to build their organizational capacity and further their overall mission.

2. How have the partnerships been leveraged to acquire funding to advance additional projects?

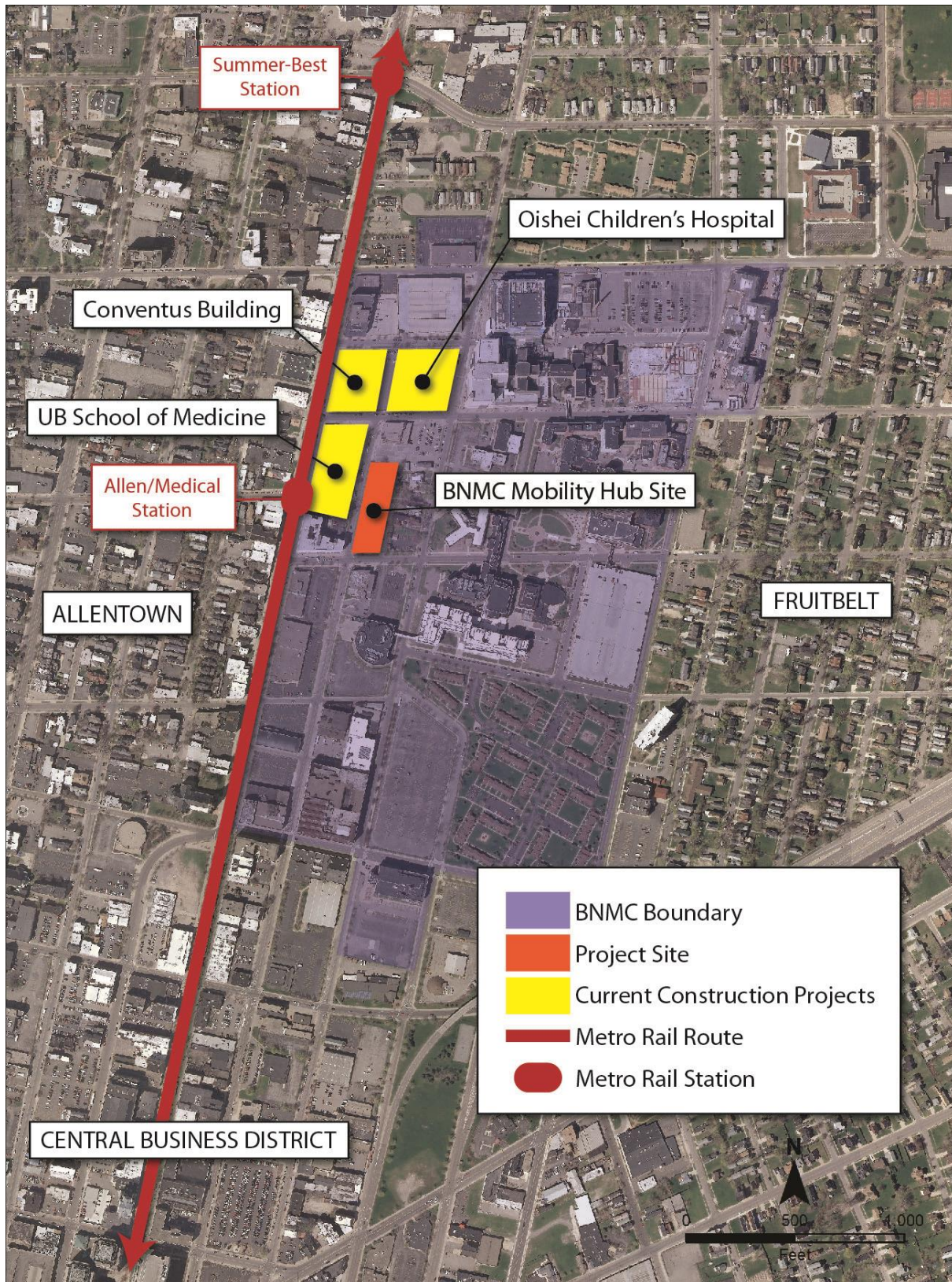
Since 2011, the development of the BNMC-TMA and the partnerships that compose it have brought in over \$1.67 million towards TDM strategies at the BNMC and surrounding neighborhoods, developing and marketing alternative modes, and planning and implementation of complete streets infrastructure in the City of Buffalo. Below is a list of those collaborative efforts, funds acquired by each organization, and their various funding sources over the past two years. In addition to the \$771,600 in NYSEERDA & NYSDOT funds, the partnership between BNMC, CarShare and GO Bike have brought in over \$900,000 in other public and private funds towards ten related projects (not including their in-kind matches).

These additional projects include creating a BNMC Integrated Mobility Hub and conducting a feasibility study and pilot project for a BNMC Transportation Smart Card.

BNMC Integrated Mobility Hub

The BNMC was recently awarded funding through the FTA to operate an Integrated Mobility Hub on the Medical Campus. 927 Washington Street, which is owned by the BNMC and is located adjacent to the NFTA Allen/Medical Campus Metro Rail Station, will become the headquarters of the GO Buffalo initiative, and will provide a centralized and highly accessible space where employees and residents can come to learn about alternative transportation programs and services available to them, as well as be able to participate in these programs and services. GO BNMC programs will operate out of the Mobility Hub as well, and the Hub will also feature a bicycle complex and direct access to the Buffalo CarShare fleet and bikeshare bicycles, as well as access to electric vehicle charging stations. More so, it will act as a centralized location where interested residents can come to learn about the emerging job opportunities on the Medical Campus.

Figure 23. The BNMC Mobility Hub will be located in the center of the Medical Campus next to a Metro Rail Station.



BNMC Smart Card Pilot Project

The BNMC recently received funding from NYSDOT and NYSED to conduct a feasibility study and pilot project around the implementation of Smart Card technology that would provide employees with access to the various alternative transportation systems available on and around the Campus. The project would create a Smart Card that could be used to access Metro Rail and Bus, UB shuttle services, Buffalo CarShare and BikeShare fleets, bicycle storage facilities and secured Campus facilities. The program will also be exploring the opportunity to create a complementary mobile application that would provide real-time data for various transportation systems, as well as access, reservation and account management services for these systems.

Buffalo Bike Master Plan

The BNMC is working closely with partners from the City of Buffalo and GOBike Buffalo on developing a plan for the prioritization and implementation of complete street projects throughout the city. The BNMC and GBNRTC have also partnered and leveraged funding from NYSED/NYSOT for the Bike Master Plan to conduct a similar plan, the BNMC CDB-North Transportation Study, which focuses on the development of complete streets on and around the Medical Campus.

Table 6. Leveraged funding to date

Project Title	Project Lead	Funding Sources								Total
		NYSED & NYSDOT	FTA	GBNRTC	Community Foundation	City of Buffalo	Independent Health	Oishei Foundation	Seneca Nation	
GO Buffalo Community Transportation Program	BNMC	-	\$ 206,180	-	-	-	\$ 20,000	-	-	\$ 226,180
Advancing TDM Strategies at the BNMC	BNMC	\$ 121,000	-	-	-	-	-	-	-	\$ 121,000
GO BNMC Guaranteed Ride Home	BNMC	-	\$ 36,250	-	-	-	-	-	-	\$ 36,250
GO Buffalo Integrated Mobility Hub	BNMC	-	\$ 249,852	-	\$ 25,000	-	-	-	-	\$ 274,852
Smart Card for Multi-Modal Transportation	BNMC	\$ 162,600	-	-	-	-	-	-	-	\$ 162,600
BNMC & CBD-North Transportation Study	BNMC	-	-	\$ 100,000	-	-	-	-	-	\$ 100,000
Buffalo Bike Share	BCS	\$ 143,000	-	-	-	-	-	-	\$ 24,000	\$ 167,000
Electric Vehicle Car Sharing	BCS	\$ 250,000	-	-	-	-	-	\$ 195,000	-	\$ 445,000
Complete Streets Summit	GBB	\$ 20,000	-	-	-	-	-	-	-	\$ 20,000
Bike Master Plan	GBB	\$ 75,000	-	-	-	\$ 50,000	-	-	-	\$ 125,000
Total		\$ 771,600	\$ 492,282	\$ 100,000	\$ 25,000	\$ 50,000	\$ 20,000	\$ 195,000	\$ 24,000	\$ 1,677,882

The BNMC and partners have also applied for funds for the following two proposed projects related to the advancement of TDM strategies in the Buffalo Niagara region:

GO BNMC Vanpool Program

BNMC in partnership with V-Ride is requesting \$46,860 from the FTA-JARC program to help pilot an employer-based vanpool program in which funds will be used to subsidize the cost of vehicle lease for participants.

BNMC Green Commons

The BNMC-TMA in partnership with National Grid is seeking \$2,186,500 from NYSEERDA's Cleaner, Greener Communities Program to develop a public space made up of interconnected buildings in which people from the across the region can come to participate in and learn about sustainable best practices in land use, energy and transportation. The project involves the adaptive reuse of three vacant historic buildings following low-impact development principles, including improving energy efficiency, utilizing renewable energy sources, and featuring onsite stormwater management. GO Buffalo's Integrated Mobility Hub would be expanded through this project. National Grid is also committing approximately \$570,000 in match to the project if awarded.

4.3 Project Replication

There are a number of ways in which the development of the BNMC-TMA and TDM toolkit are being replicated on both regional and statewide levels. Below are examples of how the work being performed on and around the Medical Campus is being viewed as a model for expansion throughout the WNY Region and for other urban employment centers and municipalities across Upstate New York.

Regional Expansion

The development of the TMA and TDM toolkit has also gained a good amount of positive attention from various organizations and agencies throughout the Western New York region. Below is a list of examples of how the work being done by the TMA on and around the Medical Campus is being viewed as a model for expansion throughout the city and region.

Green Code



The City of Buffalo's Office of Strategic Planning recently presented a final draft of the new Buffalo Green Code, which is scheduled for implementation in the spring of 2014. This will be the first update to the City's long outdated zoning ordinance since the 1950's. Within the Unified Development Ordinance, Article 9.4 requires any development containing 100,000 square feet or more of

new or additional gross floor to require submittal of a TDM plan and the designation of a TMA that oversees the implementation of the plan. The City has expressed a desire to work with the members of the BNMC-TMA in developing a model to be replicated among current and future developments throughout the City of Buffalo.

One Region Forward



Representatives from the TMA are also serving on three committees of the One Region Forward Plan for Sustainable Development: the 1RF Steering Committee, the Transportation and Mobility Working Group, and the Climate Change Action Working Group. One Region Forward is a broad-based, collaborative effort being spearheaded by the GBNRTC to promote more sustainable

forms of development in Erie and Niagara counties in the areas of land use, transportation, housing, energy and climate, and access to food. The Transportation and Mobility Group members include five representatives of the BNMC-TMA. A primary goal of the Working Group is to establish a framework for the establishment of a regional TMA or network of TMA's. The Working Group is looking closely at and consulting with the BNMC as a model for moving forward.

GO Buffalo

The core team of the TMA, primarily BNMC, Buffalo CarShare (BCS) and Go Bike Buffalo (GBB) has developed a GO Buffalo catalog to promote TDM planning and implementation services, also known as the GO Buffalo Business Assessment Toolkit, to other organizations, businesses and institutions throughout the region. In order to begin performing this work, the TMA was awarded funds from the FTA JARC program to conduct up to 10 TDM assessments for organizations located in the City of Buffalo beginning in 2014.

GO Buffalo-Niagara Website

The BNMC is currently working with the GBNRTC and NYSDOT to create a new and enhanced regional TDM online toolkit that will provide educational information and services to the regional population as a whole as well as to businesses in the area. The website is being designed so that it is connected to smaller TDM programs and websites, such as GO BNMC. They will share resources and information, and will show that smaller TDM efforts are part of a larger and more comprehensive TDM program. This macro-micro approach is designed to make it easier and less expensive for other organizations to replicate the BNMC's TDM programs, since the services, tools and materials that these organizations would utilize have already been created and would simply need to be customized to their specific needs.

Presentations by TMA Staff

Staff members of the BNMC-TMA have been actively promoting the program and educating others on the benefits of TDM strategies through a series of presentations at various conferences and seminars, as well as through meetings with government leadership, including:

Presenters and Panel Members at Conferences and Annual Meetings

- Institute of Transportation Engineers New York Upstate Section: 2012 Annual Meeting in Syracuse, NY
- NYS Association of Transportation Engineers: 2012 Annual Meeting in Buffalo, NY
- Eastern Region of Association of Physical Plant Administrators: 2013 Annual Conference in Rochester, NY
- 2013 Conference on the Environment: A Bi-National Sustainability Summit in Buffalo, NY
- The Case for Transit: How light rail can be a vehicle for sustainable development in Buffalo, NY (September 2013)
- Buffalo CarShare Startup Symposium in Niagara Falls, NY (August 2013)

Presentations to Regional Stakeholder Groups

- WNY Regional Sustainability Plan Transportation Working Group in August 2012
- One Region Forward Transportation and Mobility Working Group in September 2013
- Citizens for Regional Transit Quarterly Meeting in June 2012

Other Notable Presentations

- Polly Trottenberg, Assistant Secretary for Transportation Policy at the U.S. Department of Transportation in October, 2012.
- Howard Zemsky, Co-Chair of the WNY Regional Economic Development Council in June, 2012.
- Funders' Network for Smart Growth and Livable Communities – Member Site Visit to Buffalo, NY in June, 2013.
- Congress for New Urbanism Board of Directors on October 5, 2013.

St Joes in Syracuse

As requested by NYSDOT & NYSDOT, BNMC has been pleased to serve in an advisory role to staff from St. Joseph's Hospital Health Center in Syracuse, NY in regards to planning and implementation of TDM strategies. This has involved multiple trips to the Syracuse facility for meeting and presentations as well as a number of phone discussions. While the initial purpose of the relationship set up through the agreement with NYSDOT & NYSDOT was to be a mutual sharing of information, it would seem that the BNMC has moved further along into implementation of TDM strategies whilst St Joseph's is still in the planning phases of their programming. In this way, the BNMC is able to serve as a model and in some ways a testing ground for St Joseph's in Syracuse and perhaps other areas of Upstate New York.

5. Obstacles and Planned Solutions

5.1 BNMC Member Institutions

Obstacles: Getting the institutions to make the leap

While the concept of implementing TDM strategies has been widely accepted among BNMC member organizations due to outreach and education by BNMC-TMA staff, the challenge has been getting the organizations to adopt a comprehensive approach to TDM and to reject or alter previous policies and programs that incentivize single occupant vehicles. The adoption of TDM strategies has, for the most part, been occurring to varying degrees among the BNMC organizations. While BNMC-TMA staff members are able to communicate directly and regularly with leadership from the BNMC member organizations, are able to strongly encourage the adoption of TDM, and are able to provide services that promote the use of alternative modes, the BNMC as an organization does not have complete control over the internal transportation and parking policies and programs of the individual organizations. Some examples include:

- Varying degree of parking subsidies among institutions and organizations.
- Outdated union agreements regarding parking and transportation policies.
- Using free parking as a recruitment tool and a means of remaining competitive with suburban locations where parking is often free and abundant.
- A reluctance to invest dollars in TDM strategies until they have been tried and tested – or until parking and transportation issues become abundantly obvious.

Planned Solutions: Custom TDM assessments and creating a set of options

While there have been some major victories around the elimination of parking subsidies among certain member institutions, at the same time the challenge has been to fully develop the unique policies, programs and infrastructure that further incentivize behavior changes among each organization. The solution to this problem has been to conduct customized assessments of individual organizations in order to identify the unique issues and opportunities for implementation of TDM strategies. To continue this process, the BNMC and GO Buffalo partners have received funding from the FTA-JARC program to conduct up to twenty custom TDM assessments of organizations on and around the Campus over the next two years. The assessments not only involve identifying TDM strategies that organizations could implement, but also involve actually working with these organizations to implement the TDM strategies. This program will be headquartered out of the new BNMC Mobility Hub.

5.2 Long Term Funding

Obstacles: Lack of long term funding mechanisms

As seen in other areas, TMA's and TDM strategies are often funded by membership dues, parking revenues, and revolving government funds set up for more regional scale programs. While a large portion of the BNMC-TMA operations are funded in this manner through membership dues and parking revenue (e.g. website, staff time, marketing, car sharing, bike sharing and secure bike parking) there remains a current and potential future funding gap for the continuation of certain programs that have relied solely on funds from the award of competitive state and federal grants. For example, the program dubbed "Give Transit a Try" as described in section 3.1 was discontinued in September 2013 due to a lack of funding despite the fact that it was successful in terms of creating new transit riders. The main factor in the discontinuation of the program is related to what will be discussed in the next section which describes some issues that the BNMC has experienced in developing a partnership with NFTA.

Another issue that the TMA has been experiencing in regards to funding is related to the TMA's ability to expand programs to areas and organizations outside the Campus bounds. Due to the enhanced perception of the BNMC as a forward thinking organization, the success in partnering with other organizations to bring in state and federal dollars, and the success of GO BNMC programs in lowering the number of SOV's and related parking demands, there has been a growing number of requests and inquiries as to the replication/expansion of the TDM toolkit on a more regional scale. As described above, members of the TMA are in fact using funds acquired through FTA-JARC to respond to some of these requests in the form of TDM assessments and marketing alternative transportation services through GO Buffalo. However, the FTA-JARC funds are limited to just two years and were acquired through a competitive grant process. In other words, there is no long term, reliable funding mechanism in place for further development of the TMA and TDM toolkit beyond two years.

Planned Solutions: Develop a BNMC TDM fund and long term business plan for regional expansion

In regards to the continuation, enhancement and creation of TDM programs at the BNMC, the current plan is to establish a general fund using parking revenues to support GO BNMC. In fact, this fund has already been created around parking revenues generated by the new Michigan Goodrich Garage, which is owned by a partnership of BNMC, Kaleida Health, University at Buffalo, and Roswell Park under the name 134 High Street, LLC. Currently, any net profit produced by the LLC is placed in a general fund which is managed cooperatively by the involved partners and used for transportation enhancements. While the first use of these funds is going towards the implementation of a new Campus signage and wayfinding plan, it is agreed by partners that the future use of the general fund will go in part toward the support of TDM programs.

As TMA partners continue to receive inquiries and requests to help develop more regional TDM programs, the goal of the group is to develop a sound business plan with incomes including membership dues, fees for services, research grants, and the proposed development of a revolving fund set up through the NFTA, the regional DOT and/or the GBNRTC. To this end, the TMA has brought on a MBA

student from Canisius College through the Prosperity Scholarship at 20 hours per week for the next six months to assist in the development of a business plan.

With funding, a key to the long term sustainability of the TMA is the development of sound partnerships and programs with other organizations. Below is a list of those relationships that the TMA is looking to build upon in order to maintain, expand and enhance current operations.

Relationship with the University at Buffalo

Work with the University at Buffalo to establish an affiliated research and development center to (1) study the effectiveness of innovative transportation solutions and (2) create sustainable and scalable systems based on this research. Interdisciplinary projects might include:

- Design of community bike workshop.
- Planning and design of integrated mobility hubs throughout the city.
- Research study on TMA's and addressing social equity issues.
- Develop an "indicators kit" for recording and analyzing project metrics.
- Create a strategic plan for GO Buffalo.
- Complete streets and urban greenway planning.
- Studies on integrated technology infrastructure.
- Design of affordable secure bike parking.
- Identifying innovative funding strategies.

Relationship with the City

Assist new developments in maintaining accordance with Article 9.4 of the Buffalo Green Code's Unified Development Ordinance regarding TDM, including:

- Creation, implementation and monitoring of TDM plans.
- Use the existing TMA and TDM strategies at the BNMC as a model for city-wide application.
- Develop customized TDM plans for the City's "strategic development areas" as identified in Buffalo's Comprehensive Plan.

Relationship with the Regional Metropolitan Planning Organization (GBNRTC)

Assist in the creation, management and promotion of a regional online TDM toolkit in order to better incorporate the site with other GO Buffalo services and initiatives, and assist in the development of an updated bicycle master plan for the Greater Buffalo Metropolitan Area.

Relationship with the Niagara Frontier Transportation Authority

Partner with the NFTA on the development and promotion of integrated transit and mobility solutions as well as various fare media, such as customized employer pass programs and the use of shared Smart Card technology. Serve as a marketing, promotions, customer service and educational agent of the NFTA in order to help improve public perception and build new relationships with the private sector.

Potential Private Consulting Services

Develop TDM plans for businesses/organizations that are interested in reducing costs associated with parking, interested in providing employees with greater benefit packages, and interested in reducing environmental impacts.

5.3 NFTA-Metro

Obstacles: Relationship with NFTA and construction impacts on service

A longstanding issue of the BNMC has been getting the NFTA to consider new programs that would help incentivize the use of transit among BNMC employees. For over five years now, the BNMC and NFTA have been in negotiations regarding the development of a corporate pass program, or a program that would allow BNMC to offer people who work on the Medical Campus a discounted monthly pass. One of the major reasons for this issue has been the perception among NFTA board and staff members that the NFTA cannot offer a discount to the perceived “white collar” workers on the Medical Campus and not also to the large transit-dependent, low-income population that the NFTA primarily serves.

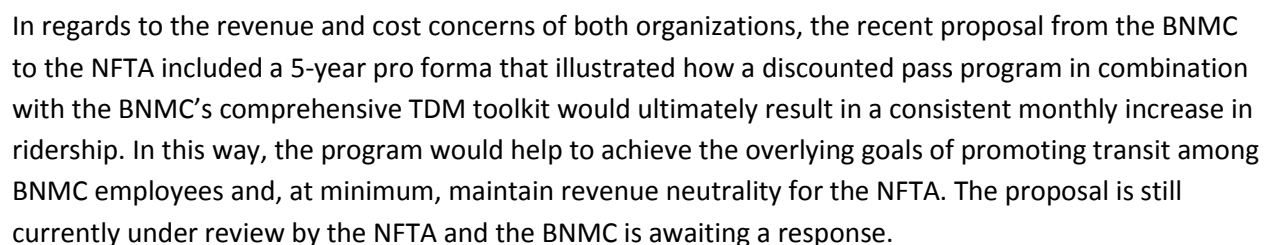
Another reason for the inability to strike a deal between NFTA and BNMC for an employer pass program is that the BNMC would prefer a program that can be offered to interested employees, while the NFTA prefers a 100% participation program where the pass is provided by BNMC to all people who work on the Campus. The issue in the 100% participation program lies in the affordability of the program, which would require the upfront purchase of approximately 12,000 passes every month. On the other hand, the NFTA’s concerns lie in their policy of maintaining revenue neutrality.

Another issue that the BNMC is currently experiencing with the NFTA is the current and future interruption of Metro-Rail service due to construction projects. Beginning in July of 2013, the reconstruction of the NFTA-Metro Rail track bed in combination with a project to bring cars back to Main Street has greatly impacted the trip frequency of the Rail. During construction seasons, the train runs approximately every 25-30 minutes instead of its normal and reliable schedule of every 10 minutes. To make matters worse, the drop in trip frequency has been accompanied by unreliable arrival and departure times. It is anticipated that this service interruption could continue at least through 2014 and possibly longer.

Planned Solutions: Strengthening the partnership through shared data and technology

In a recent report and proposed pass program to the NFTA, the BNMC provided NFTA with a large amount of demographic data to show the varying types of jobs and salaries that are located on the Medical Campus, and to dismiss the NFTA’s notion that the majority of Medical Campus employees are within upper-income levels. Other purposes of the report were: to provide relevant information to the NFTA regarding the BNMC’s current and future transportation situation; to describe ongoing transportation initiatives being implemented by the BNMC to promote transit services; and to present a potential model for a discounted monthly transit pass program.

Figure 24. The demographics of BNMC employees vary greatly, including income levels. This map shows employee addresses in relation to the median household income of census tracts.



54

beginning the process of replacing their fare collection system for all bus and rail operations. This will include replacement of the fare boxes on 307 buses and 74 para-transit vehicles, and the replacement of ticket vending machines at 14 rail stations and four transit centers. In addition, NFTA will be converting the current cash-only fare collection system to an account based system that utilizes contactless Smart Cards and proximity readers as well as Near Field Communication (NFC) technology for use with mobile application software. NFTA has agreed to work closely with BNMC towards integrating their new system with various transportation services and access controls on the Medical Campus to create a more efficient, user-friendly and sustainable multi-modal transportation network.

The BNMC is also partnering with the NFTA to create a user-friendly interactive transportation map that will be embedded into BNMC and partner websites. The map will feature toggle-able transportation layers, such as Metro routes and CarShare locations, and will also feature a Transit Trip Planner similar to Google's.

5.4 Employee Parking Advocates

Obstacles: Organized labor and a focus on free parking as an employee benefit

One of the obstacles that the BNMC and member institutions have encountered when working to implement TDM strategies, particularly those strategies that impact the price and availability of employee parking, has been organized labor. For decades, free parking has been viewed as an employee benefit and the discontinuation of subsidized parking for the 3,900 Kaleida employees on the BNMC has led to countless hours of arbitration between labor and hospital administration. In other cases, such as the University at Buffalo, the fear of labor disputes over the removal of free or heavily subsidized parking has led to a total avoidance of the issue. In the case of Kaleida Health, for years organized labor has set up a separate committee at Buffalo General to simply focus on and advocate for free and convenient parking for all employees. Though BNMC has approached this group about revising their mission so that they focus on improving all modes of transportation for employees, this idea was rejected by the committee. In the case of RPCI, nearly 30% of all employees are currently ineligible for pre-tax savings on transit passes because it is seen as an employee benefit that needs to be sanctioned by the union.

Planned Solutions: Organizing GO BNMC champions and creating a more formalized structure

A primary goal for BNMC-TMA staff in the coming months is to begin meeting more regularly with our over 100 GO BNMC champions and to begin identifying true ambassadors of alternative commuting. The goal here is to begin developing a more formal organizational structure around the GO BNMC Champions and to create a more unified voice around improving overall access to the Campus via infrastructure upgrades and implementing policies and programs that support alternative modes. In doing so, it is anticipated that a network of various internal and Campus-wide committees will be developed to advocate for change.

5.5 Campus and Neighborhood Walkability

Obstacles: Implementation of complete streets (funding and definition of Level of Service [LOS])

While great strides have been made in the City of Buffalo towards the implementation of complete streets infrastructure, there is still a need to improve the walkability of the Campus and surrounding neighborhoods. As seen in the below image, there are still a number of environments leading to and from the Campus that lack proper accommodations for pedestrians and bicyclists. Areas of greatest concern are higher traffic areas that interface with the surrounding community, such as Goodell Street to the south and Main Street to the west. In both these areas, these high traffic corridors inhibit rather than promote pedestrian traffic between the BNMC and the surrounding Allentown and Downtown residential and business communities.

Figure 25. Goodell Street (left) and Main Street (right) are wide, high-traffic corridors that currently separate the BNMC from Downtown and surrounding neighborhoods.



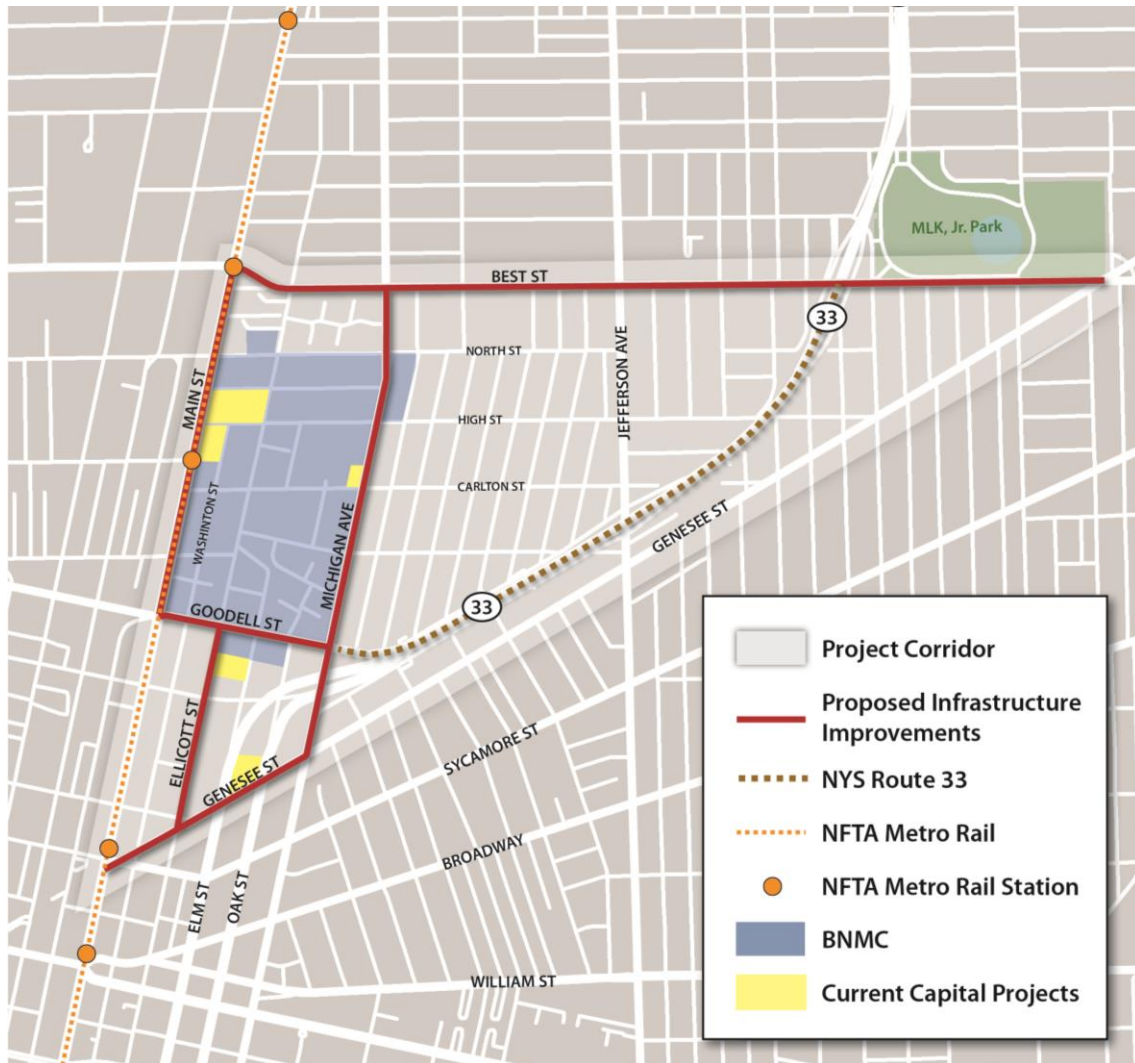
Planned Solutions: 2013-14 Central Business District-North Transportation Study

As described above in section 3.1, the BNMC is currently working with the GBNRTC, the City of Buffalo, NYSDOT, GObike Buffalo, NFTA and consultants C&S on the BNMC & CBD-North Transportation Study. The study will examine impacts of existing and proposed land use and developmental changes in the Buffalo North CBD area, which encompasses the Medical Campus and surrounding neighborhoods. It will also examine transportation impacts and opportunities, the accessibility of the area and the area's internal circulation system. The recommendations from this study will include specific opportunities for high-impact projects that will achieve some the following goals:

- Alleviate congestion in corridors leading to and from the Campus.
- Provide safe travel to and throughout the area for pedestrians and bicyclists.
- Provide enhanced multimodal connections to the regional transit system.
- Provide efficient vehicular access to the Campus, especially as related to patients and visitors.
- Provide opportunities for strategic partnerships, shared services and cost savings through collaborations with local and regional stakeholders.

- Promote the sustainability of the Campus and surrounding neighborhoods from both an environmental and socioeconomic standpoint.
- Test potential improvements in simulation models and examine impact of proposed changes.
- Identify jurisdictional ownership, cost and implementation plans for likely alternatives.

Figure 26. The CBD-North Transportation Study will identify priority projects for traffic calming and complete street implementation.



5.6 Housing

Obstacles: Availability of mixed-use and mixed income housing and transit oriented development

Despite that a large number employees from the projected BNMC population for the year 2016 live within walking distance to the Metro Rail, as seen in the population distribution maps in Attachment A, a large majority of people who work on the Campus lack adequate access to transit. One of the reasons for this issue is the lack of adequate mixed-income housing either within walking distance to the Campus itself or to transit stops and stations that serve the Campus. Though there has been a major increase in the amount of private sector residential/mixed-use development occurring around the Campus and along the Metro Rail line, there remains a need to accelerate and to appropriately direct this development in a manner that promotes improved quality of life, the use of transit and the walkability of the neighborhoods.

Planned Solutions: Community revitalization and Employer Assisted Housing (EAH) initiative

The BNMC has recently embarked on a planning initiative with consultants BRick Partners, LLC who will work with members of the community to achieve the following goals:

- Accelerate the redevelopment and revitalization of housing and communities in targeted areas near the Campus, tied to BNMC's 2016 projected workforce numbers.
- Ensure that all BNMC employers, employees and students have access to relevant housing information and incentives needed to help attract and retain top-notch talent, as well as reduce BNMC's carbon footprint by encouraging bicycling, walking and the use of public transportation.

Specific tasks related to improving access to transit include:

- Assess demand for housing in the BNMC area and along transit corridors through surveys and discussions with employers.
- Create a cost-benefit analysis comparing BNMC's parking investments and guarantees to those of its proposed housing investments.
- Identify potential partners in the real estate community.
- Develop a strategic outreach plan to communicate the program and market the neighborhoods.
- Create a housing resource center.

Figure 27. BNMC is exploring the potential for housing and neighborhood development within neighborhoods surrounding the BNMC and along the Metro Rail line.



5.7 Website

Obstacles: Functionality of online TDM toolkit

Ecology and Environment's Green Ride Connect software, which was used for GO BNMC's online toolkit, proved difficult to use and manage. Being an out-of-the-box product, it was difficult to customize the design and layout of the Green Ride site, and it was difficult to update certain aspects of the site. For instance, the home page could not be updated without going through Ecology and Environment, and these updates were considered "outside of their scope of work." Another problem was that the software program came with predetermined applications, which in many cases were not user-friendly. It was very difficult to customize these applications to the needs of the BNMC, and because of this, many of these applications were bypassed and the programs ended up being operated externally from the site. For instance, the software had a Guaranteed Ride Home program component, but could not be customized to the needs of the BNMC, so the GRH program ended up being managed independently from the site's software. Also, because it was an out-of-the-box product, many applications that the BNMC wanted to include in the site could not be, such as a functional and easy to use interactive transportation map. Two other major issues with the software were that it had data-gathering and analysis limitations, and had a large annual subscription renewal fee that would be financially burdensome to the BNMC moving forward.

Planned Solutions: Development of a custom TDM toolkit

The BNMC, in partnership with NYSDOT, is also in the process of replacing the original online TDM toolkit with a new responsive and user-friendly version that will allow BNMC staff to have better control of the content and services/programs offered to employees. The website is being designed so that it becomes a "one-stop-shop" for employees seeking information about their options, and will also allow employees to directly sign up for certain services and programs offered through GO BNMC and its partners, instead of redirecting them to other websites.

The new GO BNMC website will feature educational information about transportation options and programs available to employees, and will allow employees to sign up for these programs. The website is being designed so that it has a shared database – for instance, employees will be able to sign up for Buffalo CarShare on this website, and this information and data will be sent to Buffalo CarShare staff instead of to a third party who would then transfer the data to CarShare. The site will also allow employees to sign up for the Guaranteed Ride Home Program and future Give Transit a Try Programs, among other things.

A custom interactive map and transit trip planner are also being developed in partnership with the NFTA. The map will be embedded into the website, and will feature toggle-able layers for Metro routes, CarShare locations, park and rides, bicycle routes and bicycle parking. It will also allow users to plan their transit trip similar to Google's Trip Planner.

The website will also feature a commute cost calculator that will allow employees to see how much they currently spend driving alone to work, a commuter benefits calculator that will allow users to see

how much they would save by participating in IRS pre-tax transit programs, an employer policies section that highlights what programs and services are available to the user based on where they work, and a Request Information form that will allow users to receive personalized information about their transportation options. For instance, if an employee was new to transit and would like to figure out how to get to work via Metro Bus or Rail, BNMC staff would provide them with the step-by-step information the employee would need to safely and comfortably do so.

Another major feature of the website is its emphasis on highlighting champions, or employees who currently utilize alternative transportation options and want to share their knowledge with their colleagues. The website will feature champions on its home page, and will also have a sub-section that highlights numerous champions and allows employees to submit their story so that they can be featured on the site or in other outreach/marketing materials.

This new website is being developed in partnership with NYSDOT, which is seeking to create a new model for online TDM toolkits that strays away from typical products that are currently on the market. Instead of purchasing a TDM “package” that has out-of-the-box pre-determined content and software applications, this new model allows companies and agencies to develop a completely customized toolkit based on their needs. The model separates software applications, such as rideshare matching or trip planning, from the website, and instead allows the owner to embed these applications into a website. This model provides the owner with optimal control and customizability of the content and management system of the site.

The website is also being developed as part of a larger picture: It is intended to be a micro application of TDM programs that are directly tied into a macro, or a regional, application of these programs. Because of this, it is being developed in coordination with a future regional online TDM toolkit.

Figure 28. GO BNMC's new online toolkit will provide a user-friendly one-stop-shop for BNMC employees looking for information on and access to existing transportation programs. Below are draft mock-ups of the new website.



5.8 Conclusion

In conclusion, TDM programs at the BNMC have been successful to date. Based on BNMC employee commuter surveys, the drive alone mode share has shifted towards alternative modes and ridesharing by approximately 5% from 2012 to 2013. One of the largest factors in this shift has been the increased cost of parking passed on to the employee and the discontinuation of employer subsidies. Simultaneously, the BNMC has taken a comprehensive approach by developing and marketing a set of unique alternative transportation programs and providing the necessary supporting transportation infrastructure.

Through the partnerships developed by Campus and regional partners, the BNMC has moved closer to reaching their TDM goals, and at a rate more rapid than initially anticipated. These partnerships, which were formed through the establishment of the TMA, have played a huge role in the overall success of the program and have taken on two primary forms. The first is the advisory role that we see mainly in the BNMC's relationship with groups such as NYSDOT, GBNRTC and the City of Buffalo. Through regular meetings and conversations with these partners, the BNMC receives advisement on current projects and also learns about various opportunities, such as funding, for future projects.

The second type of relationship that BNMC has developed with TMA partners is the synergistic or mutually beneficial relationship with other non-profit organizations, such as Buffalo CarShare and GObike Buffalo. In these cases, other non-profit organizations are able to help BNMC overcome transportation-related issues, such as parking demands, through a variety of unique services and programs. In turn, the BNMC is able to help build the capacity and further the mission of these partner non-profits by leveraging the power of the anchor institutions on the Medical Campus.

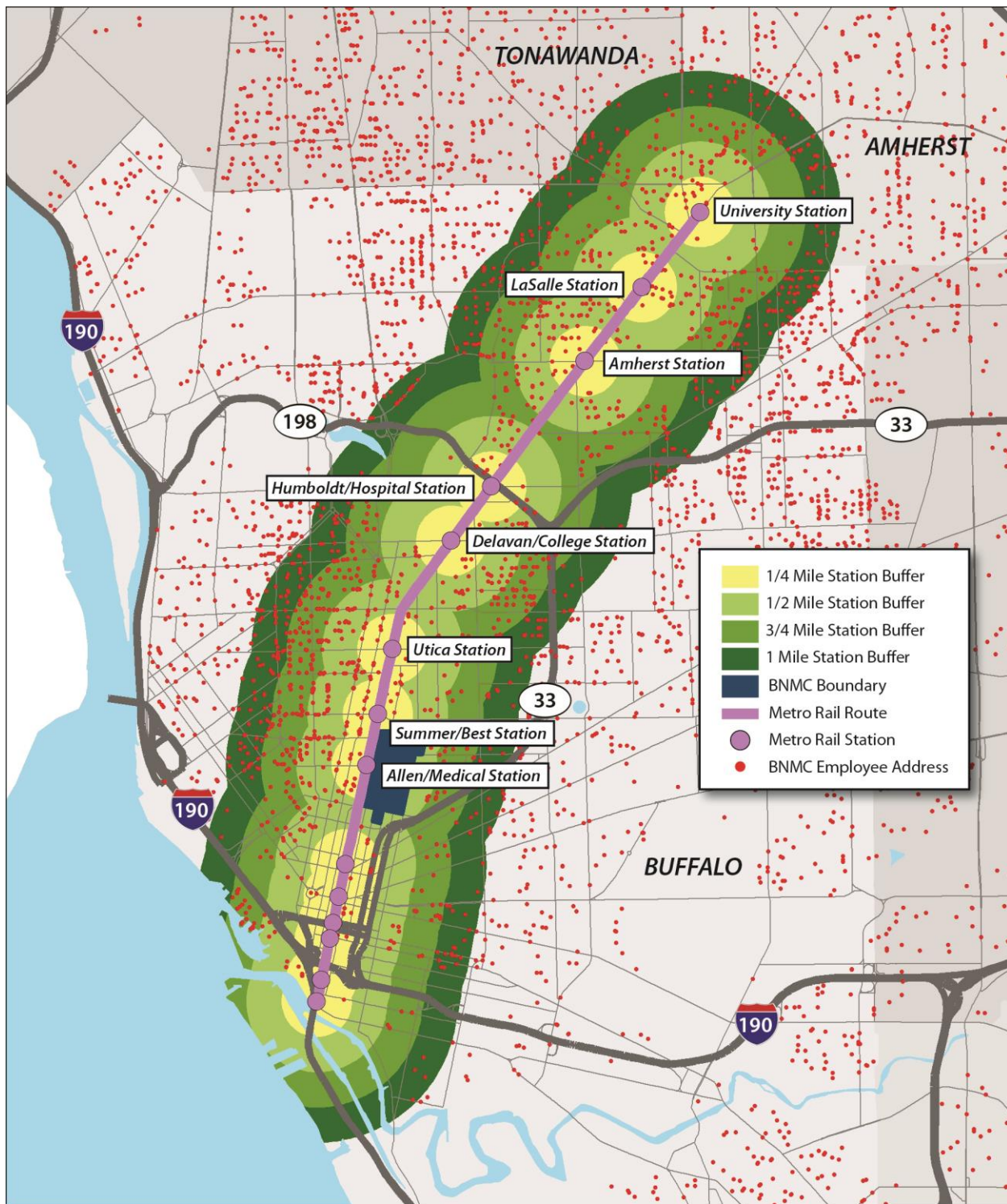
Another key to the success of BNMC's TDM programs has been a comprehensive approach to employee outreach through a combination of marketing and organizing. While the BNMC uses a number of more traditional marketing tools – such as newsletters, brochures, webpages and videos – the unique aspect of the BNMC's marketing campaign has been the use of actual employees and alternative commuters to carry the message. The “champions” (referred to as GO Getters) of over 100 employees are featured regularly in all the forms of media mentioned above. In addition, regular meetings are held with the GO Getters to receive feedback on the GO BNMC programs and learn more about the issues.

Collaborative planning and the ability to develop an array of alternative mode options through various funding sources has been a primary function of the TMA. In this regard, non-profit members of the TMA (i.e. BNMC, GObike and Buffalo CarShare) have partnered on numerous projects and funding opportunities to bring in nearly \$1.7 million in federal, state and private funding towards the development of TDM strategies, alternative transportation modes, alternative fuel vehicles, new transportation technologies, and complete streets infrastructure.

A major goal of the project has been to create model for the advancement of TDM strategies and the development of a TMA. To this end, the BNMC has been presenting this work at a large number of local, regional and statewide events as well as to federal, state and local leadership. Though faced with a number of real and perceived obstacles, the TMA will continue to build the TDM toolkit and to develop and promote a model for replication across Upstate NY and beyond.

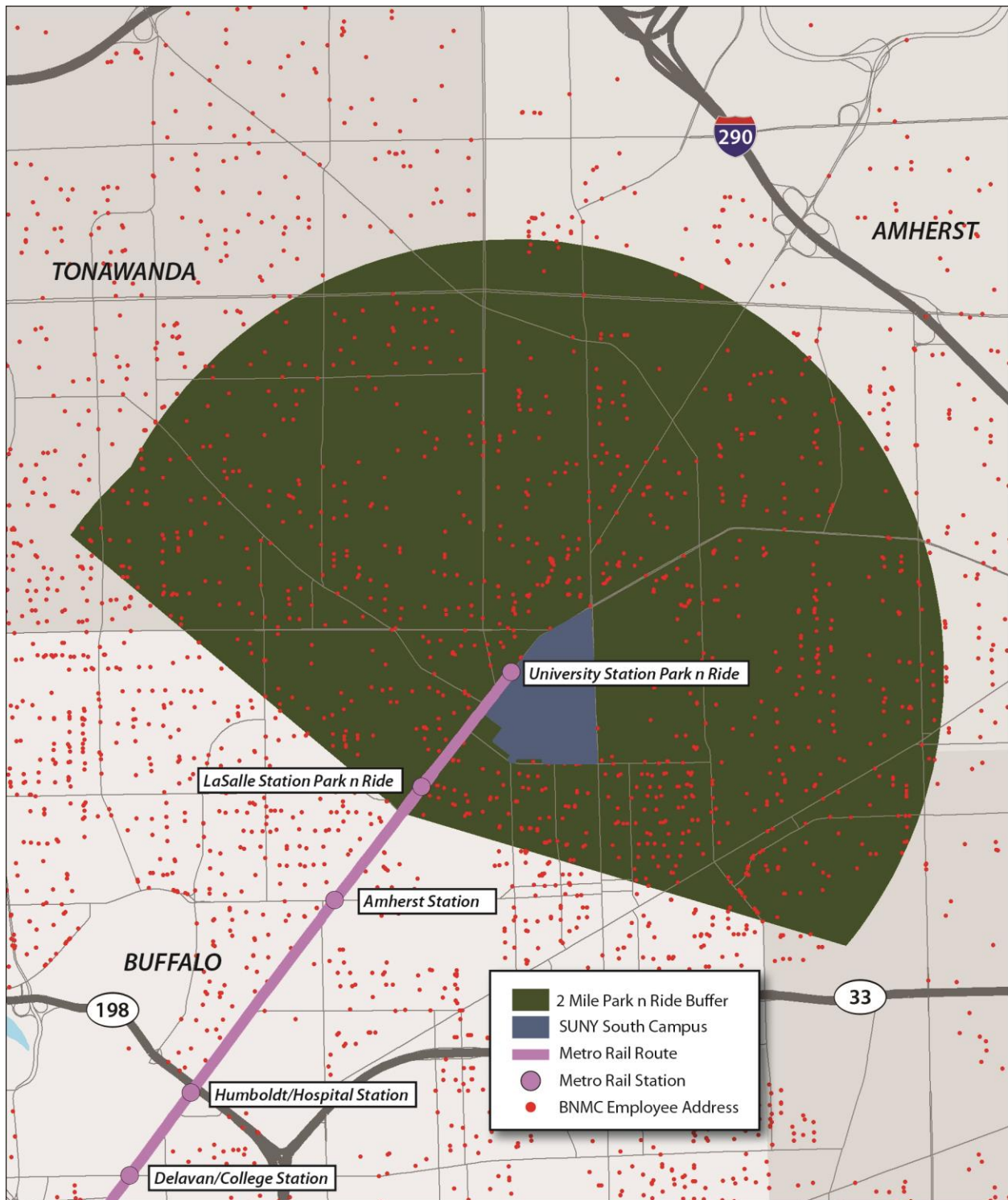
APPENDIX A

EMPLOYEE ADDRESSES IN RELATION TO NFTA METRO ROUTES

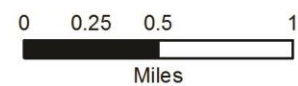


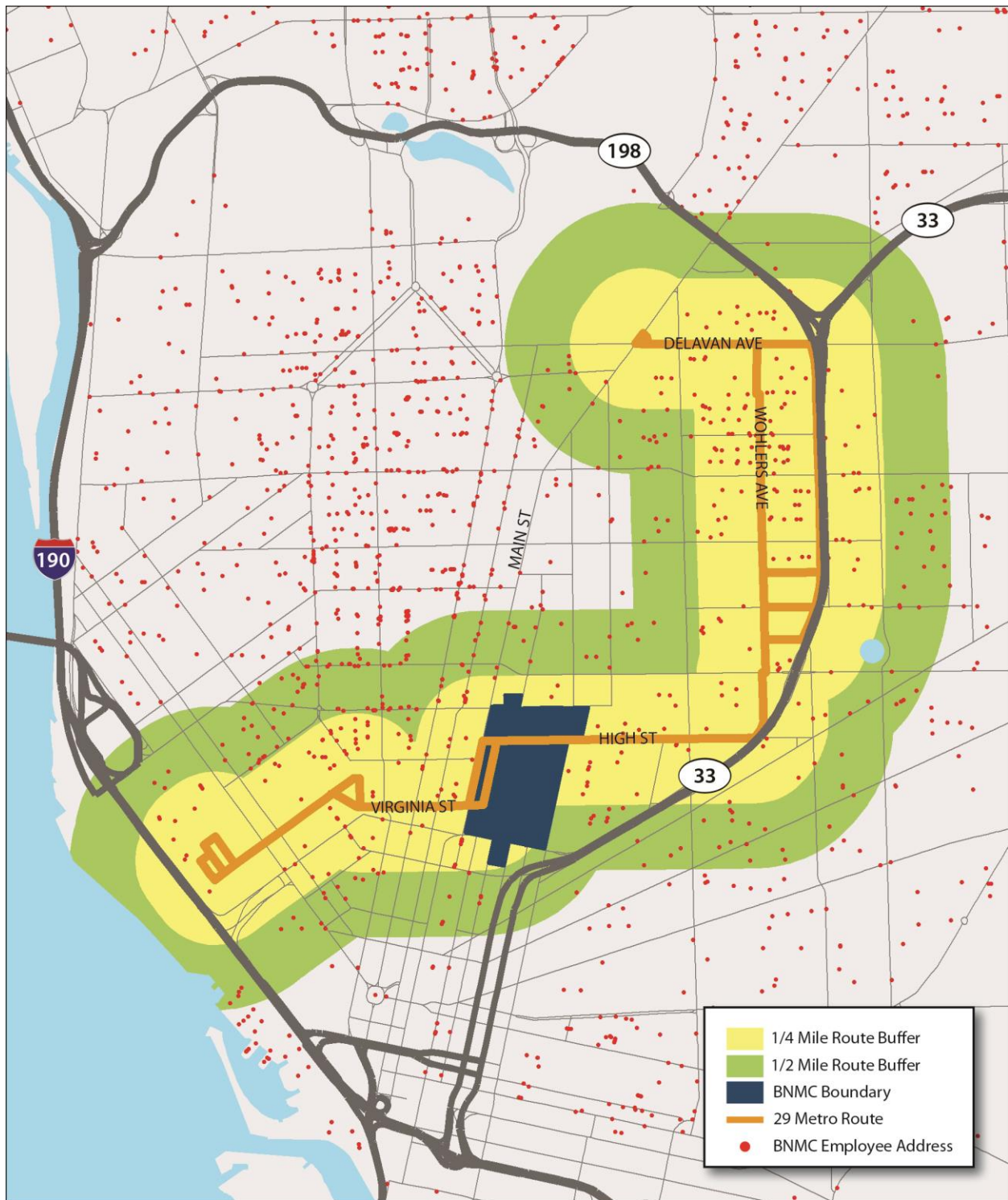
Metro Rail 2013 Employee Addresses						
	Kaleida	RPCI	BHSC	BMG	UB SMBS	Total
0 to .25 Miles from Station	87	79	0	1	155	322
.25 to .5 miles from Station	238	155	7	2	201	603
.5 to .75 Miles from Station	286	139	10	1	148	584
.75 to 1 Mile from Station	267	115	9	3	113	507
Total within 1 Mile from Station	878	488	26	7	617	2016



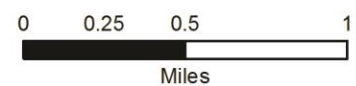


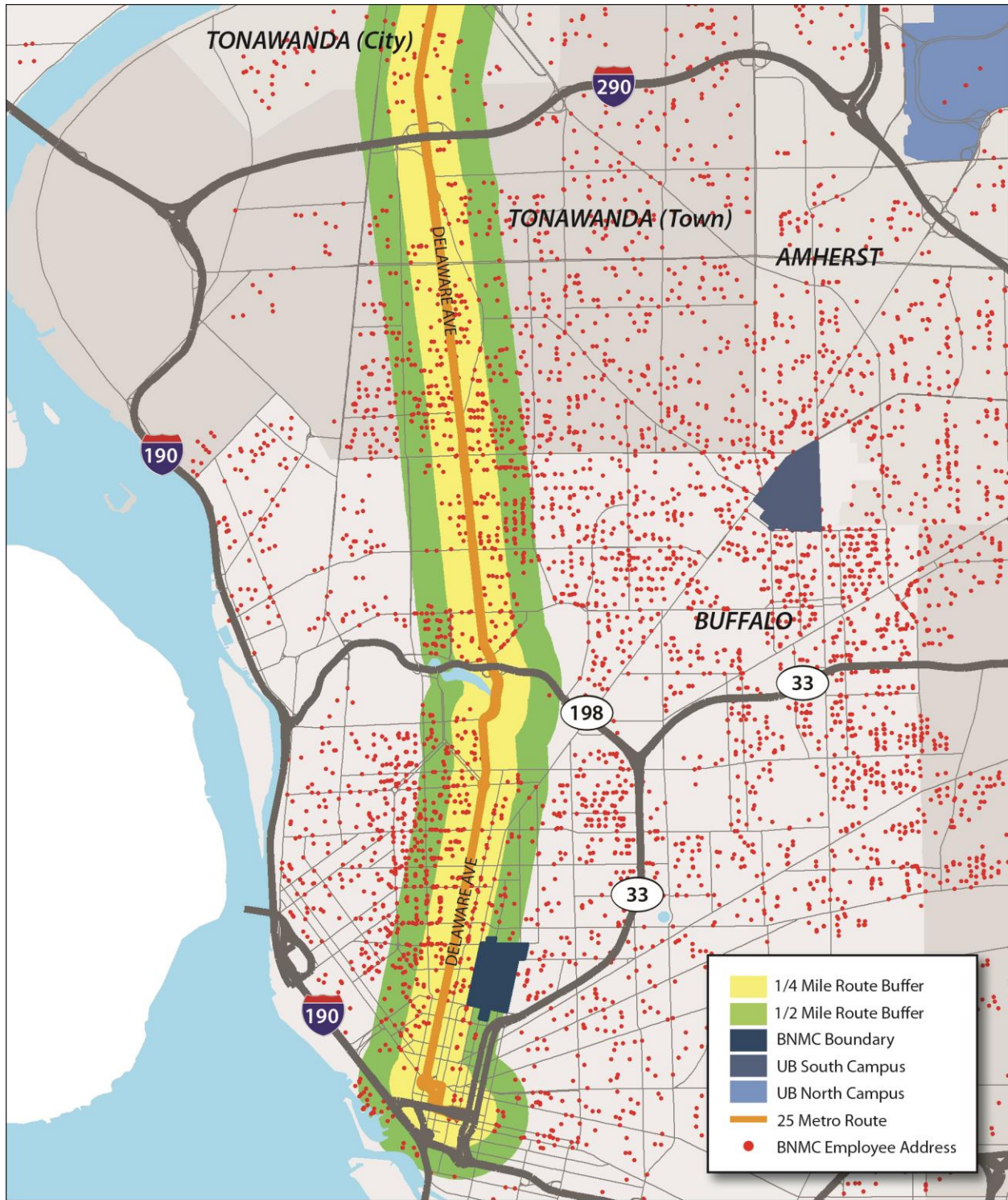
Metro Rail Park n Ride 2013 Employee Addresses						
	Kaleida	RPCI	BHSC	BMG	UB SMBS	Total
0 to 2 miles from University and LaSalle Park n Ride	412	235	16	8	372	1043





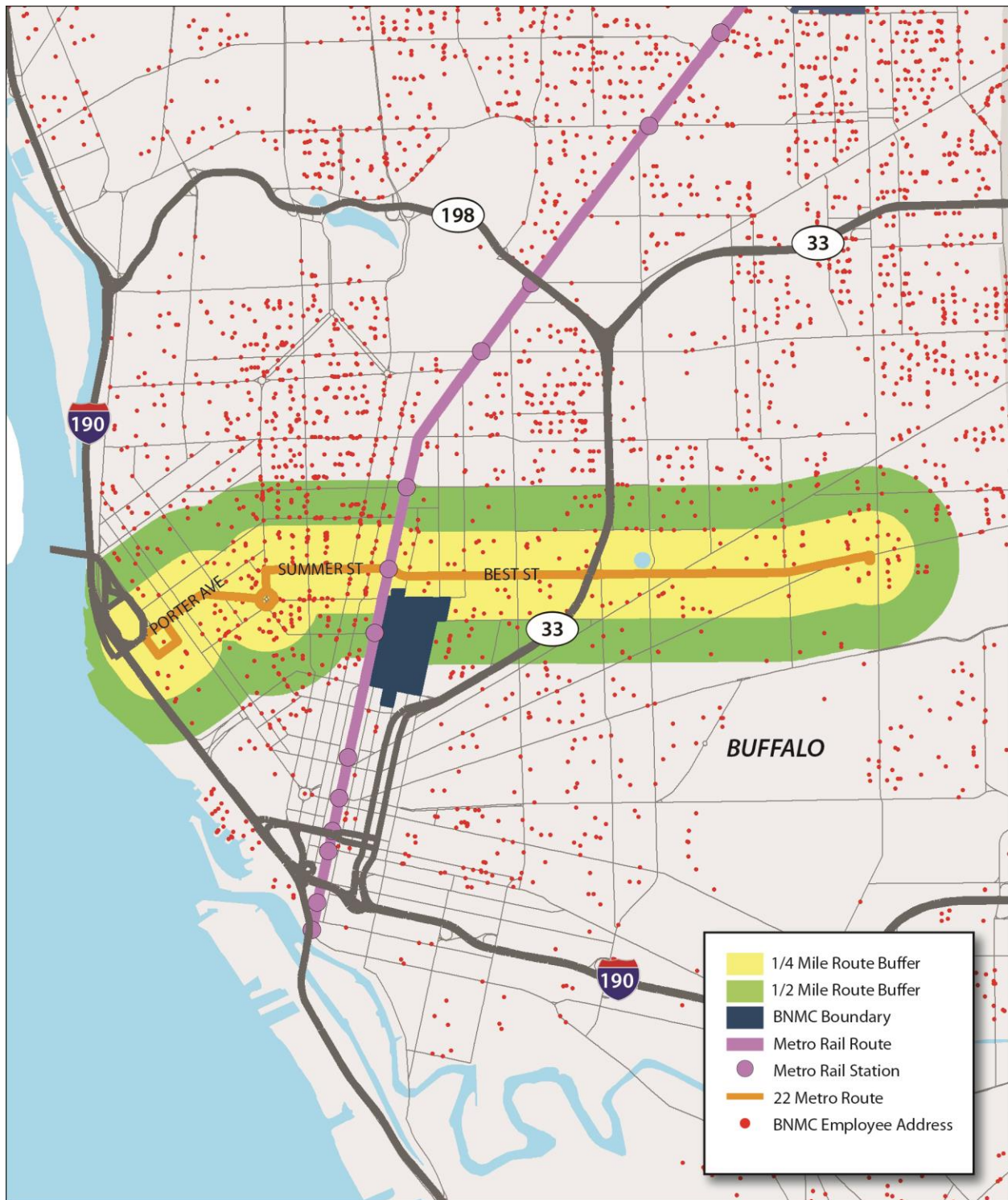
29 Wohlers 2013 Employee Addresses						
	Kaleida	RPCI	BHSC	BMG	UB SMBS	Total
0 to .25 Miles from Route	226	100	2	4	43	375
.25 to .5 Miles from Route	152	87	3	0	36	278
Total within .5 Miles from Route	378	187	5	4	79	653



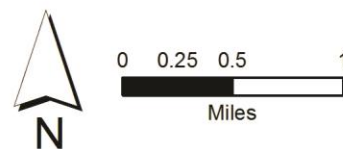


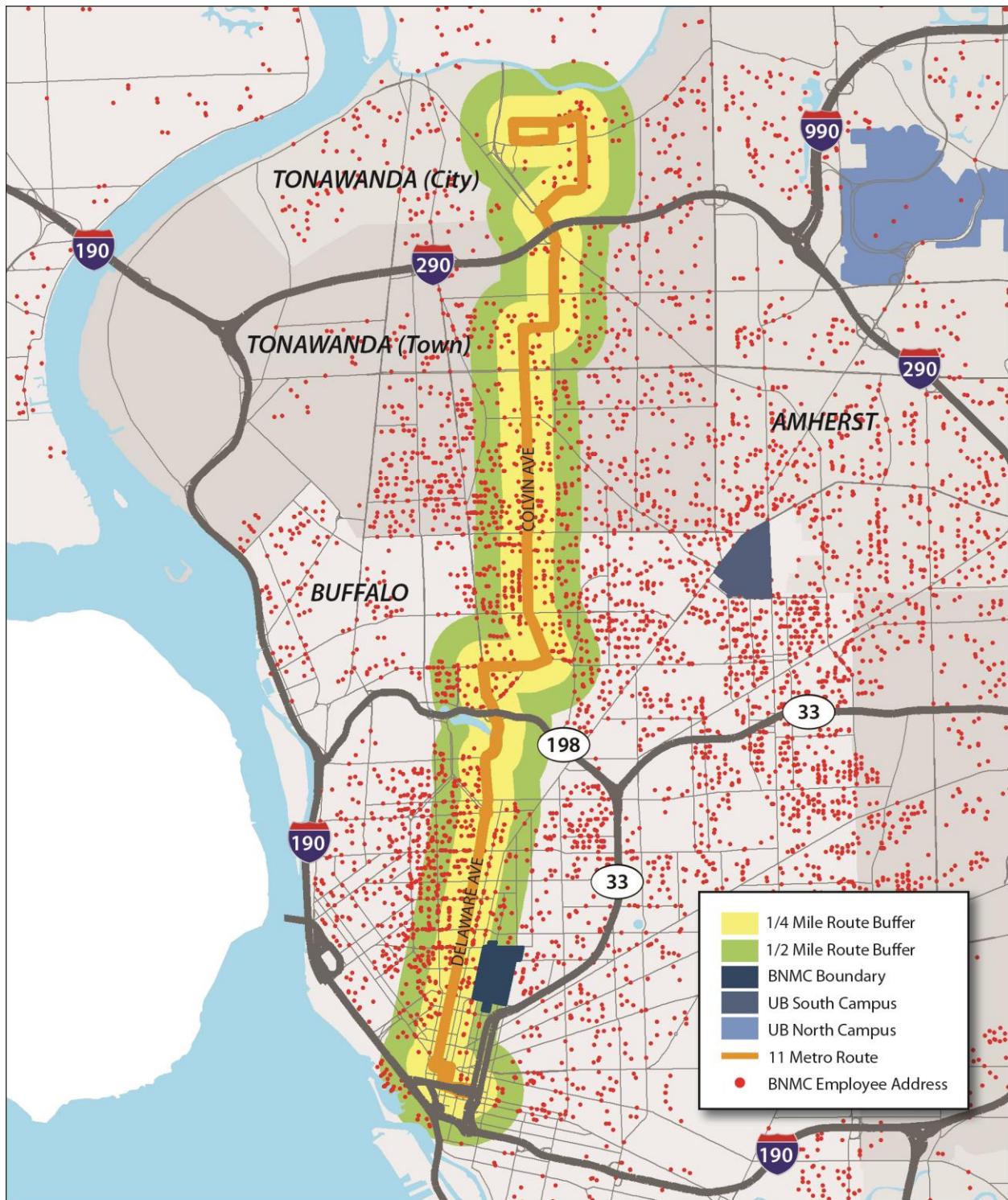
25 Delaware						
2013 Employee Addresses						
	Kaleida	RPCI	BHSC	BMG	UB SMBS	Total
0 to .25 Miles from Route	284	235	16	5	236	776
.25 to .5 Miles from Route	285	173	17	1	166	642
Total within .5 Miles from Route	569	408	33	6	402	1418





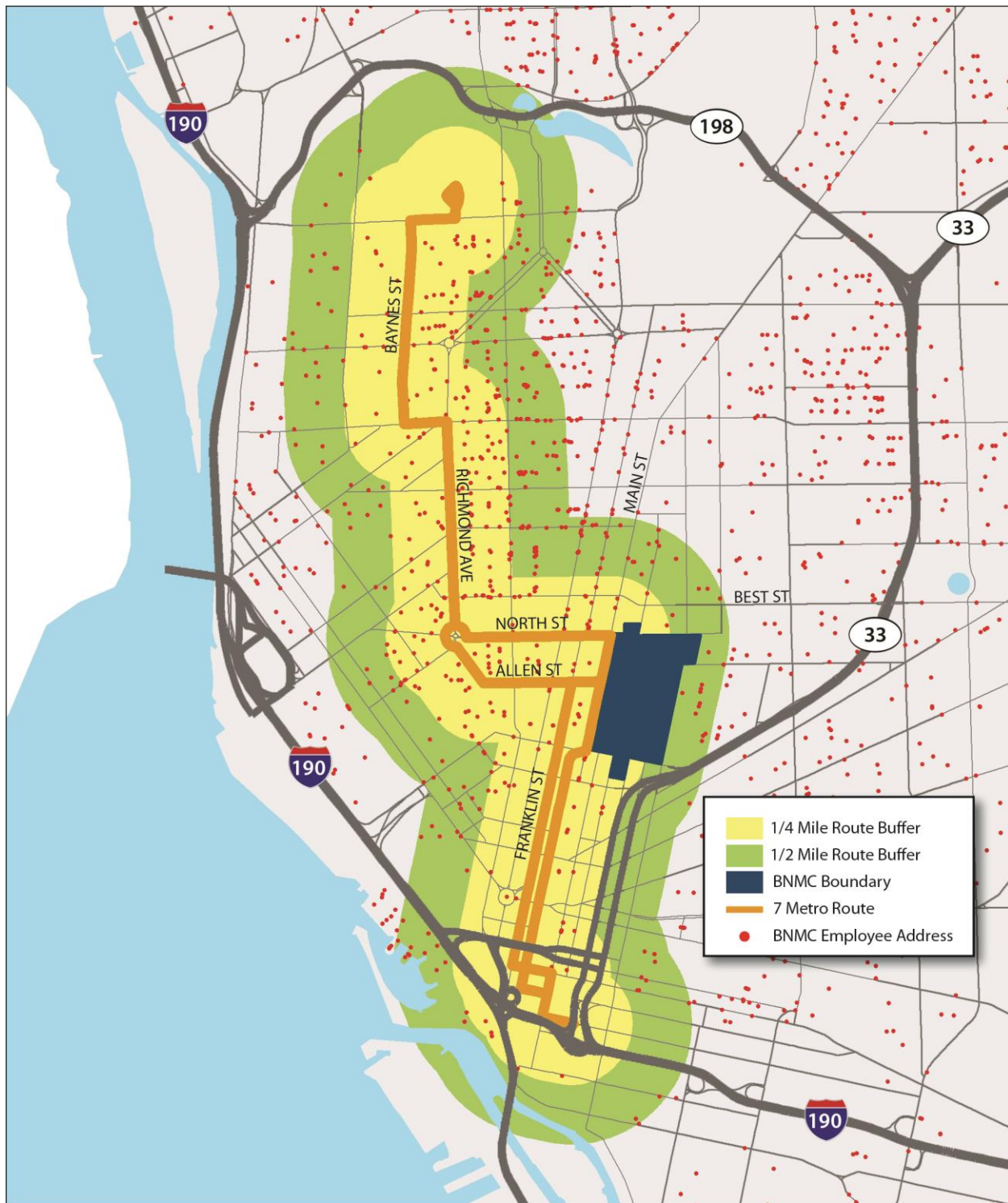
22 Summer-Best						
2013 Employee Addresses						
	Kaleida	RPCI	BHSC	BMG	UB SMBS	Total
0 to .25 Miles from Route	182	104	4	2	53	345
.25 to .5 Miles from Route	129	75	4	2	56	266
Total within .5 Miles from Route	311	179	8	4	109	611





11 Colvin 2013 Employee Addresses						
	Kaleida	RPCI	BHSC	BMG	UB SMBS	Total
0 to .25 Miles from Route	250	224	18	3	237	732
.25 to .5 Miles from Route	278	184	13	4	167	646
Total within .5 Miles from Route	528	408	31	7	404	1378





7 Baynes/Richmond 2013 Employee Addresses						
	Kaleida	RPCI	BHSC	BMG	UB SMBS	Total
0 to .25 Miles from Route	182	181	9	3	108	483
.25 to .5 Miles from Route	118	85	7	1	90	301
Total within .5 Miles from Route	300	266	16	4	198	784

