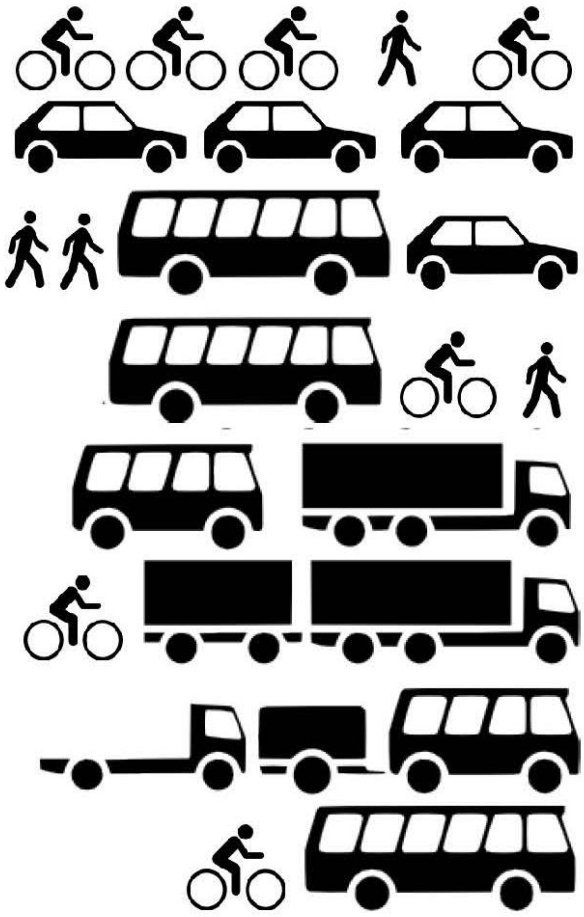
Michigan Livable Communities
Demonstration Project

Grand Rapids' Michigan Street Transportation Demand Management Strategy



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Completed in collaboration with the Michigan Department of Transportation and Michigan State Housing Development Authority.

MDOT Michigan Department of Transportation

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Project Leadership

Suzanne Schulz	Planning Director, City of Grand Rapids
Jay Steffen	Assistant Planning Director, City of Grand Rapids
Roger Millar	Vice President, Smart Growth America
Rayla Bellis	Policy Associate, Smart Growth America

Project Stakeholder Group

Micki Benz	St. Mary's Health Care
Rick Chapla	The Right Place, Inc.
Devon Cunningham	Midtown Neighborhood Association
Jennifer DeHaan	Kent County
Kristi DeKraker	Neighbors of Belknap Lookout
Josh Duggan	Greater Grand Rapids Bicycle Coalition
Jan Earl	Heritage Hill Neighborhood Association
Lisa Freiburger	Grand Rapids Community College
Kim Frost	Disability Advocates of Kent County
Art Green	MDOT Grand Rapids TSC
Andy Guy	Neighbors of Belknap Lookout / Parking Commission
Jeff Hammond	Spectrum Health
Tom Hanley	Spectrum Health
Steve Heacock	Spectrum Health
John Helmholdt	Grand Rapids Public Schools
Abed Itani	Grand Valley Metropolitan Council
Matthew Jamrog	Michigan Street Corridor Association
Vicki Janowiak	Grand Rapids Community College
Ruth Kelly	Grand Rapids City Commission
Dennis Kent	MDOT Grand Rapids TSC
Ken Klomparens	Grand Rapids Public Schools
Jerry Kooiman	MSU College of Human Medicine
Rabbi David Krishef	Congregation Ahavas Israel
Elizabeth Lawrence	MSU College of Human Medicine
Jeff Lobdell	Restaurant Partners
Jonathan Loux	RDV Corporation

Frank Lynn	Disability Advocates of Kent County
Karen McCarthy	Consumers Energy
Nick Monoyios	The Rapid
James Moyer	Grand Valley State University
Jill Myer	Kent County Health Department
Craig Nobbelin	Heritage Hill Neighborhood Association
Jon Nunn	Grand Action
Sam Pinto	Van Andel Institute
Steve Redmond	MDOT Grand Rapids TSC
Brad Rosely	Third Coast Development Partners
Carlos Sanchez	Grand Rapids Housing Commission
John Schuring	Fulton Heights Neighborhood Association
Mary Swanson	Kent County
Peter Varga	Interurban Transit Partnership (The Rapid)
Lee Weber	Dyer-Ives Foundation
Steven Wilson	Frey Foundation
Sharon Worst	Michigan Oaks Neighborhood

Project Team

Ellen Oettinger	Nelson\Nygaard Associates
Karina Ricks	Nelson\Nygaard Associates

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Any errors and all interpretations are the responsibility of Smart Growth America. Please direct questions about this report to Roger Millar, PE, AICP, Vice President: rmillar@smartgrowthamerica.org, (406) 544-1963.

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Project Overview

Transportation demand management uses what you HAVE to provide the mobility you NEED to accommodate the growth and economic regeneration you WANT.

In 2013, the Michigan Sense of Place Council, representing numerous state agencies under the direction of Governor Snyder, engaged in a partnership with Smart Growth America to provide technical advisory services to six communities of Michigan pursuing livable communities initiatives. The six communities were the Southeast Michigan Council of Governments (SEMCOG), ReImagine Washtenaw (Washtenaw County), the Tri-County Council of Governments, the City of Grand Rapids, the Northwest Michigan Council of Governments, and the City of Marquette. As part of the Federal Partnership for Sustainable Communities program, the program seeks to coordinate federal funding directed to housing, transportation, and other infrastructure in communities to create more livable places where people can access jobs while reducing pollution and also saving time and money.

The assistance was in two primary areas – community mobility management and strategic transportation demand management (TDM). The Michigan Street corridor livability effort in Grand Rapids focused on TDM to support and sustain the growth of the "Medical Mile" and leverage and connect that growth to other areas of the city. The Michigan Street Corridor plan is a comprehensive, stakeholder-lead initiative to holistically integrate housing, economic and community development, transportation and environmental design to strengthen Grand Rapids and advance the West Michigan region.

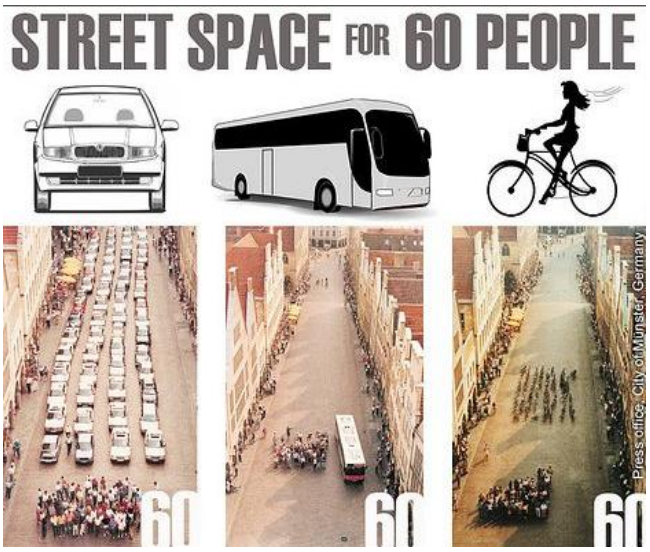
TDM is a general term for strategies that increase overall system efficiency by encouraging and enabling a shift from single-occupant vehicle (SOV) trips to non-SOV modes. TDM strategies may also look to shift trips from peak period (high-demand) hours to times when more capacity is available. SOV trip reduction strategies include increasing travel options, enhancing non-motorized networks and connections for bicyclists and pedestrians, providing incentives and information to encourage and help individuals modify their travel behavior, and reducing the physical need to travel through transportation-efficient land uses. The cumulative impact of a comprehensive set of TDM strategies can have a significant benefit on system efficiency, accommodation of new growth, and success of a metropolitan area. TDM programs are usually implemented by public agencies, employers, or via public private partnerships.

The project progressed in three distinct stages: 1) review of national leading practices and assessment of existing local resources and opportunities, 2) discussion of alternative approaches and strategies, and finally 3) development of an action strategy for implementation. This report is the culmination of these three phases and their associated findings.

1 State of the Practice

Despite common perception, few places, including Michigan Street, have a consistent traffic problem – they have a rush hour problem. The nearly universal hours of the traditional workday mean that legions of workers, students, and visitors converge on our streets and transit systems at the same time making them seem congested, while in reality, outside of the limited rush hour period, the system has abundant unused capacity.

Figure 1-1 Roadway Space Consumption



Road space occupied by 60 people in cars, a bus, and on bicycles
Source: City of Munster, Germany

Transportation Demand Management (TDM) seeks to do two things – 1) promote more efficient modes of travel to move more people in the same amount of roadway space (**Error! Reference source not found.**), and 2) spread the travel demand across more hours of the day to take advantage of space and capacity when it's available (**Error! Reference source not found.**).

TDM is typically achieved by providing incentives and information to encourage and help individuals modify their travel behavior, or by reducing the need to travel at all through transportation-efficient land uses. The cumulative impact of a comprehensive set of TDM strategies can have a significant benefit on system efficiency thereby accommodating new development and economic growth using the existing roadway facilities. TDM programs are usually implemented by public agencies, private sector employers, or via public private partnerships.

Figure 1-2 Time of Day Capacity Constraints

Peak Direction Rush Hour Traffic - Washington, DC
Source: http://livewirepast.wordpress.com

Target Audience

Transportation demand management is about providing choice and convenience. Travelers can generally be categorized into four broad types: (Figure 1-3)

Figure 1-3 Generalized traveler types*

Typology	Description
Convinced and committed	Regular transit, telecommuting, or non-motorized travel users; early adopters either by commitment , choice or condition (economic limitations to travel choice)
Confident, but cautious	Travelers who may have used non-private auto travel modes in the past or occasionally, but do not use them routinely; perhaps because they have other choices and/or they feel alternate modes do not conveniently and reliably meet their needs.
Curious, but skeptical	Travelers who have not tried alternative travel modes, but would consider trying them if they had sufficient information about how to use them and confidence that the option would meet their needs and be reliable.. Lack of information, and skepticism about reliability is a major barrier to current use.
No way, no how!	Travelers who may or may not have tried alternative commutes, but are nonetheless not interested in using them even occasionally.

*Adapted from City of Portland, Oregon bicycle planning program

Typically the largest segment of the traveling public is "confident, but cautious" or "curious, but skeptical." These travelers typically lack information or are unconvinced alternative travel or parking management can meet their needs. These groups are the primary target of TDM efforts, however the "no way, no how!" travelers are often equal beneficiaries as those who are willing to shift their travel patterns now have the ability or motivation to thus freeing capacity on the road for the drivers that remain.

Leading Practices

TDM is a common term today. Most places associate it with measures such as transit benefits, carpool matching, and telecommuting. All are very important measures, though still often lightly used, but the leaders in transportation demand management go much farther in adopting comprehensive and ambitious strategies. Leading practices include:

- Integrated TDM programs across multiple employers and institutions, and closely coordinated with the municipality and transit authorities (e.g. transportation management associations or TDM coordinators);
- Strong regional leadership and coordination of transportation demand management strategies, often including mode split targets with regular measurement and reporting of performance and progress;
- Pricing and incentives to influence mode choice and travel demand (e.g. demand-responsive parking pricing, parking cash-out, or transit or bicycle benefits);
- Adoption of public policies that imbed transportation demand management (and predictability) into the land development process; and

Broad and effective public outreach and promotion programs that not only improve the public's awareness of alternative modes, but actively assist them in their day to day travel planning and choices.

Tools and Techniques

In addition to these broad approaches, there are also a wide range of specific and effective tools utilized in successful TDM programs (Figure 1-4).

Figure 1-4 Common Transportation Demand Management Tools

Approaches	Programs
Expanded Transportation Options	▪ Enhanced bicycle and pedestrian facilities ▪ Free or reduced fare transit pass programs ▪ Vanpool, carpool, rideshare and ride-matching programs ▪ Car share programs ▪ Employer shuttles
Incentives and policies	▪ Travel subsidies or benefits ▪ Guaranteed ride home programs that provide taxi vouchers for travelers who rideshare or take transit but need an emergency ride home for a qualified reason ▪ Flexible schedules, compressed work week and telecommuting ▪ Employer assisted housing and live-near-work programs ▪ TDM requirements in the zoning and development code
Parking management	▪ Variable market rate on-street pricing (a.k.a. performance parking) ▪ Unbundling parking (leasing or selling parking spaces separately from the rent or sale price) ▪ Rush hour parking user fee (fee applied during high congestion hours to encourage travel before or after peak period) ▪ Parking cash-out (employees given a choice between a free parking space or the cash equivalent of the cost to provide that space) ▪ Shared parking and park-once districts (one parking space serves multiple land uses and trip purposes) ▪ Pay-what-you-use monthly parking permits ▪ Priority parking for shared-use vehicles ▪ Parking occupancy tracking and guidance systems ▪ Parking maximums for new development ▪ Park and ride facilities
Education and outreach	▪ Travel planning apps and services ▪ Promotion campaigns ▪ Employer outreach and engagement ▪ Events and activities to raise awareness ▪ Travel coaching and mentoring

Organizational Structures

Choosing the TDM strategies to employ are only half the equation. The other half is how these tool are applied and by whom. To be effective and sustainable, TDM strategies must be appropriate to the organizational structure through which they will be carried out. In some regions, a public or private entity takes the lead and manages implementation; in many, a public-private partnership is set up to access the advantages of each.

Figure 1-5 Organizational Structures to Implement Transportation Demand Management

Structure	Elements
Transportation Management Organizations / Associations	▪ Typically non-profit organizations ▪ Executed in partnership with local or regional governments ▪ Eligible for state and federal aid funds for congestion management and air quality
Private entities	▪ Entities of a private for-profit employer or non-profit institution ▪ Generally privately funded (or through partnership) ▪ Less state or federal funding typically means greater flexibility in the types of programs offered ▪ With fewer participants and targeted clients, may have more limited effect on the broader area
Public agency	▪ Often regional transit providers, municipal transportation agencies, or metropolitan planning organizations ▪ As a public entity, can have broad reach, but may have limited staffing and inability for staff to devote sufficient focused time on the effort
Individual coordinators	▪ Reside in each individual employer or institution ▪ Serve only the employees of that employer ▪ Privately funded ▪ May be difficult to orchestrate collective and unified action for a district or region

.

Funding and Partnerships

Funding transportation demand management initiatives can be enhanced through partnerships and especially by the creation of a transportation management organization, or TMO. While businesses themselves can offer employee transportation benefits and in some cases take advantage of federal tax incentives. TMOs have much greater flexibility with raising funding and accessing additional funding streams. These can include:

- **District assessment/tax** - Assessments levied through a TMO or other type of business improvement district can help fund TDM programs and are often the largest source of income for these entities.
- **Parking revenue** - Parking revenue can be used on an individual employer level but also on a larger scale, especially if the organization is allowed to collect revenue from parking meters.
- **Direct employer contributions** - Direct contributions to services is the most

common type of funding, especially for smaller-scale or early-phase efforts. Contributions can be assessed based on a formula or collected as part of dues for a TMO.

- **Local government contributions** - For special projects, local governments sometimes supply grants or potentially state or federal funding for certain types of initiatives, such as directly-operated transit. Typically, governmental contributions are not allocated on an ongoing basis.

Performance Measurement

No matter what type of strategy an area decides to implement, keeping track of its effect on the region is critical to maintaining participant momentum and supporting funding. For some measures, such as transit service, tracking the number of passengers supplies an acceptable metric to measure success. However, the primary goal of TDM measures is to reduce single-occupant vehicle travel in an area. Therefore, measuring the trip reduction impact is a more telling method for gauging success. The table below displays the estimated effects of each type of strategy and combination of strategies. When viewing the table, bear in mind that if used in combination, the impact of the strategies is not necessarily cumulative; for instance, a combination of transit vouchers and parking charges would not likely result in a 50% reduction of trips.

Figure 1-6 Impact of Selected Employer-Based TDM Strategies

Strategy	Details	Employee Vehicle Trip Reduction Impact
Parking Charges[1]	Previously Free Parking	20%-30%
Information Alone[2]	Information on Available SOV Alternatives	1.4%
Services Alone[3]	Ridematching, Shuttles, Guaranteed Ride Home	8.5%
Monetary Incentives Alone[4]	Subsidies for carpool, vanpool, transit	8-18%
Services + Monetary Incentives[5]	Example: Transit vouchers and Guaranteed Ride Home	24.5%
Cash Out[6]	Cash benefit offered in lieu of accepting free parking	17%

1 Based on research conducted by Washington State Department of Transportation.

2 Schreffler, Eric. "TDM Without the Tedium," Presentation to the Northern California Chapter of the Association for Commuter Transportation, March 20, 1996.

3 Ibid.

4 Washington State Department of Transportation.

5 Schreffler (1996).

6 Donald Shoup (1997), "Evaluating the Effects of California's Parking Cash-out Law: Eight Case Studies," Transport Policy, Vol. 4, No. 4, 1997, pp. 201-216. http://www.commuterchallenge.org (accessed November 2, 2007).

2 Local Practices and Opportunities

Overview

Downtown Grand Rapids has seen a resurgence somewhat unique in the state. The past two decades have been tough for Michigan. While every city in the state saw some level of economic contraction, Grand Rapids still saw significant growth along the "Medical Mile" – a half mile stretch of Michigan Street NE extending from College to Division Avenues. Major health institutions have grown and risen on "The Hill" including Spectrum Health and Butterworth Hospital and the facilities of Michigan State University (MSU) and Grand Valley State University (GVSU). Scarcely a block away is Grand Rapids Community College (GRCC) and a mile west, across the river, is the major urban campus of GVSU – an institution that just two decades ago was a college in a corn field, now a prominent university in the state. Just to the southwest, the historic (and modern) downtown continues to grow and expand as a major civic, cultural, and employment destination while neighborhoods north and south emerge as some of the most attractive communities in the state.

Michigan Street is one of several major east-west thoroughfares through Grand Rapids. The arterial parallels I-196 and provides access to some of the largest employers in Western Michigan. East of the bridge to College Avenue, Michigan Street is a very hard-working four-(sometimes five-) lane multimodal corridor through an intensely urban segment. East of College Avenue, the street gives way to lower scale horizontally mixed development patterns – some with attractive sidewalks buffered from traffic with landscaped strips, often with narrow sidewalks barely distinguishable among the multiple curbcuts and lacking any buffer from the auto traffic. Barely a half a mile on, at Eastern Avenue, the glassy modern towers on The Hill can almost be seen from the parking lots of the strip retail, gas stations and car repair shops lining the corridor -- reminders of the economic challenges the state, and city, continue to face and the opportunities for restoration still ahead. Just a mile east of the intensity of the Medical Mile, The Rapid transit service departs the corridor for destinations north (Route 13) and south (Route 19).

Development and new investment are beneficial changes, but can cause some anxiety and discomfort as the community adapts to the change. On the city-wide level, Grand Rapids has instituted a number of policies to manage growth to promote and sustain a multimodal city. The master plan encourages compact, mixed-use development, adds requirements for sidewalks and bicycle parking to the zoning ordinance, and diversifies the transit system with the exciting introduction of Bus Rapid Transit (BRT).

Grand Rapids enjoys many assets that provide a strong foundation on which to build a very successful transportation demand management program. Foremost among them is the sense of partnership and shared commitment evident in the city. While this certainly does not mean that universal harmony prevails at all times and in all places, the openness to work together to explore viable strategies to ensure the transportation mobility necessary for sustained economic success in the city is a vital cornerstone of any wide ranging and successful strategy.

The city further enjoys a strong and creative foundation community and expanding major institutions who have demonstrated a vested interest in not only the Michigan Street corridor, but the whole of the Grand Valley region. These institutions not only have the ability to make profound change based on their sheer size, but also based on the values and missions that drive them.

Change of any form, however, requires energetic leadership and an engaged populace. In this arena too, the city is well positioned to chart and

seize a holistic vision of mobility that sustains residents, workers, visitors and students regardless of economic or physical ability. Grand Rapids leaders at the citizen, city, and civic levels have shown the willingness to be bold in vision and committed in action. These leaders will be essential in sustaining the momentum and energy needed for what is often slow or sporadic advances. The transit system is well regarded and trusted. This too is an amazing foundation on which to build a highly successful transportation demand management program for the Michigan Street corridor and beyond.

Major institutions and employers along Michigan Street have instituted some transportation demand management (TDM) measures. However, these TDM practices are independent and isolated from one another, limited in scope and effect, and lack consistent measurement and evaluation.

Existing Studies and Efforts

A number of studies have been conducted or are currently being conducted for Grand Rapids generally and for the Michigan Street corridor specifically (

Figure 2-1).

Figure 2-1 Local plans and initiatives affecting Michigan Street

Initiative	Overview
Michigan Street Corridor Plan	The Michigan Street Corridor Plan is a holistic planning effort linking transportation, land use, environment and housing to achieve a unified vision and sustainable future for the corridor and surrounding area. Bicycle boulevards, two-way conversions, and transit gateway park and ride lots are potential strategies to enhance travel alternatives for downtown-bound employees and congestion relief.
Michigan Street Project	This transportation modeling program report ranges in scale from big picture shifts in regional traffic to a local street focus on refining future land uses. Modeling the trip reduction includes enhancements of adding streets, restricting turns, and distinct sub-zones within the Michigan Street Project. The study has calculated alternative plans for new ramp configurations, additional housing in the downtown and AM and PM traffic affects on the educational and medical institutions.
The Rapid Silver Line	Grand Rapids received a federal New Starts grant to implement north-south bus rapid transit (BRT) along Division Avenue from the southern Grand Rapids community of Wyoming/ Kentwood into downtown. The BRT links St. Mary's campus to the Medical Mile at its western edge before looping back south again through the civic core to the main transit terminal, Rapid Central Station. Construction of the stations and infrastructure is slated to begin spring 2013, with operations beginning in 2014.

Existing Travel Conditions along Michigan Street

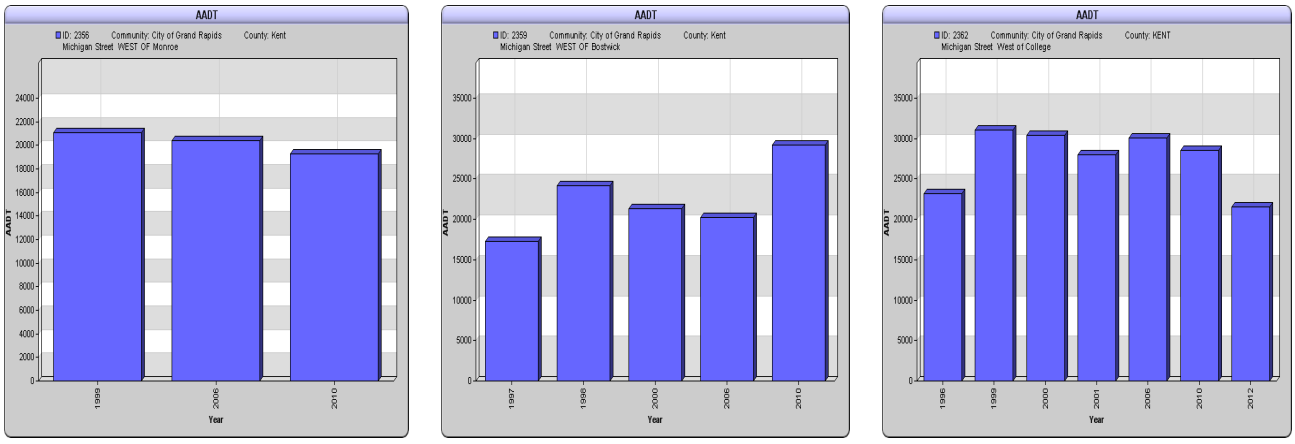
Automobile Traffic

Traffic along Michigan Street is congested at peak hours. The average daily traffic (ADT) along the corridor ranges from 19,000 vehicles per day crossing the Grand River to a high of just under 30,000 at the DeVos Children's Hospital to less than 14,000 at Lafayette Street and back up to 21,000 at College Avenue[1]. The past 15 years have seen wide variation in traffic levels on Michigan Street (Figure 2-2). The swings reflect the changing economic conditions over time and distance along the corridor; as well as the significant disruption of the "Fix on I-196" that closed the highway for 8 months in 2010. While the corridor as a whole generally operates satisfactorily, some intersections, experience a level of service (LOS) as low as F at peak commuting hours.

Parking

A large number of parking facilities – surface lots above and underground ramps, and free and metered on-street parking – are available along the Michigan Street corridor. The type, location, and price of parking add to traffic volumes; for instance, all of Spectrum's parking facilities are located east of the Spectrum campus, causing staff to drive past work to park. The downtown has a number of major parking facilities. All city-owned/ operated lots have automated payment systems. Despite this, the perception persists that Michigan Street is under-parked. Currently, employees, students, and other affiliates of many institutions utilize peripheral streets in residential neighborhoods for parking. Grand Rapids does not have a residential permit system. The City of Grand Rapids Parking Authority is responsible for all on-street meters and for enforcing parking regulations.

Figure 2-2 Michigan Street Traffic Trends



Source: Grand Valley Metropolitan Council (GVMC)

Transit

Several transit services operate along Michigan Street. The Interurban Transit Partnership (known as The Rapid) is the primary transit provider for the region. Primary services include the traditional public transit service of *The Rapid*, park and ride service contracted by the

[1] Grand Valley Metropolitan Council Traffic Count Database System
http://www.gvmc.org/transportation/TrafficCounts.shtml

parking authority known as *DASH*, and independently contracted employer shuttle service.

Five routes operate along Michigan Street:

- Route 11 Plainfield - operates primarily north-south, but runs along Michigan Street between Monroe Avenue and Lafayette Street, continuing north through Creston
- Route 13 Michigan/Fuller - one of the longest bus routes along Michigan Street, operating between Ottawa Avenue and Fuller Avenue, continuing north to 3 Mile and the veterans facility
- Route 14 East Fulton - operates primarily parallel to Michigan Street on Fulton Street, but runs along Michigan between Plymouth Avenue and Lakeside Drive
- Route 19 Michigan-Fuller South - one of the longest bus routes along Michigan Street, operates between Monroe Avenue to Fuller Avenue, continuing south through East Hills, Eastown, and Baxter to Madison Area
- Route 51 GVSU Health Sciences/West DASH Lot (aka DASH to the Hill) - operates between the GVSU lot and Health Sciences building, along Michigan Street between Highway 131 and Lafayette Avenue

The Rapid has instituted a number of improvements and special programs, including Next Bus technology and bike racks on all buses. The Rapid created a shuttle service for the Monroe North Business Association in December 2012. The route serves the DASH North lot and is a partnership between The Rapid, the DDA, and the City's parking authority. Service is funded through the Monroe North TIFA.

Ridesharing and Vanpools

The Rapid offers a vanpool service through employers called RapidVan for groups of no fewer than four individuals. The Rapid provides the van, maintenance, fuel, and insurance, as well as roadside assistance. Individuals supply the driver and fees. Costs vary between $100-$200 per month per person. Ridesharing is also offered through Western Michigan Rideshare for individuals looking to carpool.

Pedestrian and Bicycle Facilities

Bike volumes are generally low along Michigan Street. While Western Michigan has an organized and avid bicycling community, the general absence of cyclists on the corridor is likely due to the high speed and high volume automobile traffic. A bi-directional cycle track is planned for Lyon Street – a westbound street to the south. Institutions of higher education along Michigan Street provide bicycle racks for students, and at least one employer has on-site bicycle amenities for cyclists such as bike lockers and showers.

The pedestrian experience along Michigan Street is also compromised by high automobile volumes and speeds and limited sensitivity to design with many sidewalks lacking much, if any, buffer from traffic. Many new buildings are set back behind parking lots, forcing pedestrians to traverse large and intimidating lots to access their destination. Maintenance of pedestrian infrastructure along the corridor is a concern. Sidewalks are in disrepair, especially on the lower end of the street, and some are too narrow for comfortable or accessible use. Some intersections lack crosswalks completely while several lack pedestrian walk signals.

Employer-Based Transportation Programs

The major institutions along Michigan Street and extending to the south (St. Mary's Health Center and Mary Free Bed Rehabilitation Hospital) represent over 20,000 downtown workers and 22,500 students. U3 Ventures has estimated that of these, only roughly 3.5% live within the Michigan Street Corridor area meaning that the vast majority of the workforce

and student population must commute from more distant areas.

While there are cultural, historical, infrastructure and service challenges, several institutions along Michigan Street have some early forms of TDM in place (Figure 2-3).

Figure 2-3 Existing TDM Programs at Major Employers

Entities	Transit	Parking	Ridesharing / Vanpools	Others
Spectrum Health	Spectrum operates free shuttles to its off-site parking facilities along Michigan Street. Spectrum contracts with The Rapid to provide free passes to employees, though most do not use the program.	Spectrum has three off-site parking facilities with 200, 300, and 600 spaces.	Spectrum participates in the Western Michigan Green Ride program.	Spectrum provides a shower facility for cyclists and is adding bike lockers and bike parking.
Grand Valley State University	GVSU has contracted with The Rapid for 10 years and has four dedicated routes serving its students/campus.	The Grand Rapids campus has 1,705 student spaces, 634 faculty/staff spaces, and 230 residential student spaces. GVSU wants to try differential parking pricing.	GVSU pays dues to participate in Western Michigan Green Ride and an internal carpooling website.	GVSU started a car sharing program in 2012. GVSU offers bike rentals to students on an annual basis.
Grand Rapids Community College	GRCC contracts with The Rapid to reserve DASH parking spaces and DASH shuttle service to campus. The future BRT line will have a stop on campus.	GRCC owns and operates two parking ramps.	GRCC participates in a rideshare advertised on the DASH and GRCC websites.	GRCC has a large amount of bike parking on campus.
St. Mary's Health Center	St. Mary's has contracted with The Rapid in the past but currently does not.	St. Mary's owns and operates two parking ramps and several surface lots on Jefferson and Cherry streets.	N/A	N/A

3 Targets and Measures

We achieve what we measure. For the last half century, transportation professionals have measured the success of a transportation facility by how much traffic it can pump through (AADT), how much delay vehicles experience traveling through the corridor (LOS) and how often they crash. Traditionally transportation professionals reported success if there were more traffic with fewer stops and the least number of conflicts. As a result, we have achieved more and wider roads (more throughput), larger intersections and faster travel (less delay), and pedestrians walled off from the street or caged in crosswalks high above it. What we haven't always achieved with these measures, however, were great streets or thriving economies.

Increasingly communities are moving away from these traditional transportation measures to measures that reflect the outcomes they really want – sustainable streets that move people in a variety of modes; vibrant and dynamic places; corridors that carry people TO destinations rather than simply THROUGH communities.

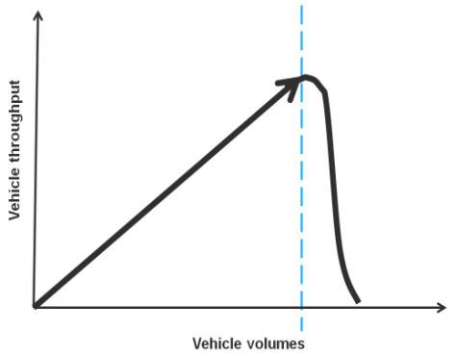
Given the goals and objectives of the Michigan Street Corridor Plan, subsequent to the first meetings, stakeholders were asked "What would it take?" to support the ultimate vision for build out of the Michigan Street plan within the confines of the existing dimensions of Michigan Street and the surrounding network?

Auto capacity of the Michigan Street corridor is finite. With just four lanes in each direction, the corridor can move roughly 4,000 cars per hour – a number already achieved at certain times of the day today. Ironically as more cars converge on the corridor, fewer and fewer are actually able to get through due to gridlock and congestion. This is known as the "capacity cliff" (Figure 3-1).

This does **not** mean the corridor cannot continue to grow – it does mean, however, there is an imperative to grow and travel differently.

The stakeholders were challenged to set targets that would ensure that continued economic growth need not necessarily mean continued auto growth. A range of ambitious goals set by peer cities and communities around the country informed the discussion.

Figure 3-1 The Capacity Cliff



Vehicle throughput can increase up to the geometric capacity of the street, however once vehicle volumes exceed the capacity, actual vehicle throughput drops precipitously.

Figure 3-2 Examples of Objectives, Targets, and Strategies

City/Initiative	Desired Outcomes	Measurable Targets	Key Strategies
London, England	Accommodate growth of 1.4 million people, 750,000 jobs and 3 million new trips while maintaining quality of life while reducing impacts on climate change.	Reduce transportation CO2 emissions 60% by 2025 Reduce private vehicle mode share by 6% Increase walking mode share to 25% Increase cycling mode share to 5% Increase public transport mode share to 34%	Enhance the use of the Thames for moving people and goods Establish a new crosstown subway line Launch a bike share program
Washington (DC) Metropolitan COG **Region Forward**	Maintain affordability and environmental quality while increasing as one of the nation's most competitive and thriving regions.	Ensure housing + transportation costs do not exceed 45% of area median income Reduce CO2 emissions by 20% below 2005 levels Annually increase jobs by 1-3%	Cooperative regional land use and transportation planning
Vancouver, BC **Transportation 2040**	Support a thriving economy while improving affordability, health and safety, and the natural environment	Increase non-auto trips from 40% to 66% by 2040 Reduce traffic fatalities to zero Reduce average distance driven per resident by 20% from 2007 levels by 2020	Increase transit capacity and service quality Make cycling safe, convenient, comfortable and fun Design to create a safe and interesting public realm Plan land use and development to support shorter trips and more travel choices
Denver Regional Council of Governments **Metro Vision**		Reduce single occupancy vehicles from 74% to 65% Decrease per capita VMT by 10% by 2035 Reduce transportation CO2 emissions 40% Achieve a 10% bicycle mode share in Denver by 2018	Establish a strong transportation demand management program Expand and broaden rapid transit, bicycle and pedestrian networks Introduce bike share
Albuquerque, NM	Accommodate a 74% increase in population while retaining quality of life and economic vitality.	30% multiple-occupant vehicle trips 20% transit mode share 10% bicycle mode share	Introduce bus rapid transit Increase on-street bikeway mileage 75% to 650 miles Increase multi-use trail mileage 37% to 240 miles
Rochester, NY	Accommodate all forecasted new growth AND maintain efficient mobility without building new roads or capacity.	Reduce SOV mode share to 50% (from 71%) by 2030 Increase transit mode share to 23% (from 10%) Increase carpooling to 14% (from 12%) Increase bike or walk share to 13% (from 7%)	Establish a Transportation Management Association Provide fully subsidized bus passes Provide extensive commuter bus system from region Complete a bike master plan Explore feasibility of bike share

City/Initiative	Desired Outcomes	Measurable Targets	Key Strategies
Santa Monica, CA	Even while growing, produce no net new vehicle trips.	0% growth in total VMT	Open the Expo light rail line (2016) Complete a citywide bicycle plan Reform zoning ordinances Ensure careful review of all development projects Require aggressive TDM measures
Boulder, CO		Achieve a 75% non-SOV mode share by 2020	Universal transit pass (EcoPass) for downtown workers Establish a transportation management organization Provide high frequency transit service Manage parking

In April 2013, Mayor George Heartwell set new targets for transportation travel in the City of Grand Rapids. With the corridor expected to have over 15,000 daytime employees arriving and leaving over a 2 hour peak travel period by 2035, and up to 10,000 new residential units in the downtown area, these targets became the basis for developing focused strategies for transportation demand management to meet and exceed them, with a recommendation of reaching even further.

Figure 3-3 Mode Share Targets

Mode	Current Share	Mayor's Target	Audacious Goal (2035)
Transit (incl. shuttle)	1% - 2%	5% - 10%	20%
Walk	3% - 5%	10%	12%
Bike	0.2%	2%	5%
Carpool/ ride share		15%	20%
SOV	95%	70%	45%

Figure 3-4 Effectiveness of potential TDM strategies

Strategy	Details	Employee Vehicle Trip Reduction Impact
Transportation Management	Ranges from association (high impact) to information only (low impact)	30% - 2%
Non-motorized improvements	Bicycle and pedestrian systems, incentives and improvements	8% - 1%
Transit solutions	Universal pass, intermodal connections, branded service	20% - 5%
Live Near Work	Housing or home search assistance	15% – 1%
Parking Management	Previously Free Parking and/or parking cash-out	30% - 17%

4 Alternative Approaches

The proposed targets can be met through multiple alternative approaches across five broad strategy areas. Several different approaches were presented to the stakeholders and thoroughly discussed in order to select the options most suitable to the context and objectives of the Michigan Street Corridor.

Figure 4-1 Alternative Transportation Demand Management approaches for Michigan Street

Strategy	Alternative Approaches
Management	• **Transportation Management Association** – Michigan Street stakeholders are well organized as a group coordinated around common action. The partnership is well suited to the formation of a formal TMA led by the private sector in partnership with public sector agencies. The primary goal would be to collectively manage transportation demand through coordinated programs. • **Not for Profit Public-Private Partnership** – TMAs typically require specific authorizing legislation. The stakeholders can pursue the same activities of a TMA through a non-legislatively established partnership. This would require the voluntary commitment of partners, but as a partnership provides somewhat less stable funding and uniformity in program activities. ▪ **Strong Leader Model** – Michigan Street has several strong, capable and respected leader institutions. Any one of these could be the leader and catalyst for TDM programming among all. Parallels can be readily drawn with Rochester, MN in which the Mayo Clinic has stepped up leading and funding several TDM initiatives in that city. ▪ **Ad Hoc with Coordinator** – The existing Stakeholder Committee could continue to function leading TDM initiatives, but would likely require the appointment of a staff member with sufficient time capacity and expertise to coordinate TDM activities among the many members. ▪ **Marketing** – The least intensive alternative is the simple development of a marketing package for employers, employees, residents, visitors and travelers of the corridor. This could be a product of the joint committee or one of the several members with information provided to all for common distribution.
Non-Motorized Transportation Improvements	▪ Bike Share – Grand Rapids is a bike friendly city. Bike share would provide another layer of public transportation options, convenience, and competitiveness for the corridor. ▪ Enhancing the Bicycle Network – While there is a strong bike culture in the city, the bicycle network remains lacking. Providing, extending and enhancing bicycle facilities to and through the corridor can attract the "interested, but skeptical" would-be bicycle commuters or lunchtime riders. ▪ Enhancing the pedestrian network - While the core of Grand Rapids measures up fairly well in the WalkScore system, the Medical Mile ranks slightly lower and the average for the Belknap community lower still. Improving the walk environment and convenient access to amenities can have a profound impact on other transportation demand management strategies.
	▪

Strategy	Alternative Approaches
Live Near Work Programs	▪ Employer Provided/Constructed Housing - In extremely high demand housing and employment areas, companies in tight national competition for high-demand workers have turned to employer-provided or employer-constructed housing. Employers who own or construct housing then sell or rent the housing to their workforce at a much reduced price compared to the dominant market rates. ▪ Homebuyer Assistance - Home purchase assistance is the most common form of employer assisted housing and is commonly offered to first time home-buyers that have been with the sponsoring employer for a set time and may (or may not) be linked to household income. Benefits offered may include mortgage guarantees or discounts, closing cost reductions, and/or down-payment assistance. ▪ Rental Assistance - Rental assistance ranges from monthly subsidies for housing costs, to employers covering required security deposits, to simply matching employees with accessible and affordable housing opportunities. ▪ Homeowner Education - Some employers simply partner with local real estate professionals to work with existing or prospective employees to find housing options accessible to the employment site via walking, bike or transit.

The project working group investigated the approaches outlined above and identified several strategies for further pursuit. The group identified parking management and leveraging existing and anticipated transit services as high priority strategies to pursue further. Live-near-work housing was of high interest, however the stakeholders advised that the challenge was more with regard to housing supply rather than demand for housing near the high employment areas. Most agreed that management of transportation demand was an imperative, but recognized there were varying perspectives as to how this could best be accomplished.

Pedestrian and bicycle access is a core requirement to achieve the success of virtually any transportation demand management program, and the Michigan Street Corridor stakeholders recognized this imperative. This TDM strategy development progressed concurrent with the Michigan Street Corridor Master Plan. That larger planning effort proposed a number of pedestrian and bicycle improvements on Michigan Street itself, as well as on parallel and perpendicular streets. Given this complementary and concurrent work, the stakeholders opted to focus the attention of this effort on the policy, organizational, and management efforts necessary to a comprehensive and effective TDM program. The stakeholders remained strong in their intent and desire that bicycle and pedestrian improvements be advanced through the larger and holistic corridor effort.

5 Implementation Plans

Overview

Overall, Grand Rapids and the many stakeholders of the corridor are ready and eager to pursue transportation demand management and agree that it is necessary for the sustained success and continued growth of the corridor and larger area. This chapter provides a broad approach; however specific implementation may require additional work and study, particularly as it relates to individual TDM plans and marketing for the major employers.

It would be imprudent and likely impossible to pursue all the strategies outlined in Chapter 3 at once, therefore it is necessary to choose among them. For the recommended strategies to be successfully implemented, continuous assessment of the following are recommended:

- **Clearly define where you want to go** – identify firm targets and outcomes, establish a baseline for where you are now, and track progress along the way in order to make course corrections and actively learn the most effective strategies for this community.
- **Build from existing capabilities** – Thoroughly and realistically inventory the resources available for this pursuit – including budget, staff time, and leadership attention. These are vital for success. "Right size" early actions to the resources that will ensure that first success in order to propel the program and initiative on to continued and expanded effectiveness later.
- **Find the champions** – Few of these strategies can be implemented overnight. Many will take months and years to implement. Strong and respected champions will provide the visibility, energy, and persistence necessary to pursue, and accelerate change.

Strategies

The possible paths to pursue transportation demand management are virtually limitless. However not all may have the same level of effectiveness for the Michigan Street corridor at this current point in its evolution, while others – such as enhanced pedestrian and bicycle accommodations – are well underway already.

Four strategies are recommended for pursuit at this time in order of their level of anticipated effectiveness. All four strategies can be pursued independently or in tandem together. It is recommended that if energy and resources permit, all four be advanced concurrently by separate, but partner champions. The strategies are:

- Transportation Management
- Parking Management
- Transit Solutions
- Live Near Work Strategies

Transportation Management

Michigan Street stakeholders are at a crossroads. To date, each institution has acted largely independently with regard to their transportation management programs, albeit with open communication with others. While this has been sufficient to date, individual institutions acting individually are unlikely to effect the collective change in transportation that is necessary for the next several decades of growth on the corridor. For that, a more deliberate, focused, effective and coordinated strategy is needed – one that will provide broad and mutual benefit to all stakeholders and the investments they have made.

The corridor is ready for a formal Transportation Management Association, lead by the public and

private institutions that are positioned to be the greatest beneficiaries. The programs of the TMA will be determined by the contributing stakeholders and tailored to their needs and objectives. Almost without exception, the expense of managing transportation demand through the promotion of travel benefits, alternative commutes, and more efficient travel patterns is a fraction of the cost of building, maintaining, operating and financing additional parking ramps. Not only is the financial return on investment significant, but the intangible ROI with regard to a more attractive and human-scaled downtown, environmental benefits, and competitive standing with the young, educated, and mobile workforce or student body is also considerable.

While a TMA is ultimately the most effective organizational mechanism for Michigan Street, it will take time to build support and become established. In the very near term, we recommend establishing a dedicated TDM coordinator, jointly funded if at all possible, by the several stakeholder beneficiaries. The TDM coordinator may be an existing staff member of one of the leading stakeholders or may be a newly hired coordinator. Whichever route is taken, the coordinator should be knowledgeable and experienced the in unique field of TDM and have sufficient time to dedicate to TDM efforts to be effective with the many institutions and partners. The work of the coordinator will allow time to explore and establish an independent TMA with dedicated funding.

Transportation Management Recommended Actions

- Designate a TDM coordinator (immediate)
- Establish a Transportation Management Association (long term)

Designate a TDM Coordinator

The TDM coordinator would represent the entire coalition of TDM stakeholders in the Michigan Street corridor--employers, universities, the Rapid, and the involved city agencies--and selecting a qualified individual with direct experience or training can greatly increase the likelihood and speed of successful implementation.

TDM Coordinator Implementation Steps

1. Define the duties and activities
2. Identify the host entity and funding structure
3. Hire the coordinator

A TDM coordinator is most successful if employed full time as a stand-alone position focused solely on TDM projects. Some cities have had success with a part-time employee and a strong support network of involved employers and stakeholders. Other cities have opted to reassign an existing staff member to TDM duties. While this may be efficient, often, that staff member is unable to commit 100% of her time to TDM projects. Especially as new TDM projects are introduced and the cooperating employer group begins to coalesce, a dedicated staff member is essential to prevent TDM from losing momentum or becoming too watered-down.

1. Define the duties

Stakeholders must agree on the designated duties and activities of the TDM coordinator. Typically the TDM coordinator:

- Manages day-to-day activities necessary to promote and implement TDM on the corridor including coordinating meetings, performing follow-up duties, and serving as primary point of contact and communicator for TDM efforts along Michigan Street.

- Designs and implements TDM strategies under the direction of the stakeholder committee.
- Researches, analyzes, and maps population and market trends for Michigan Street corridor.
- Plans and facilitates transportation outreach activities and TDM events to meet stakeholder transportation goals.
- Represents TDM efforts of the stakeholder committee in the community; meets with citizens, interest groups, schools, and the public to market and gather feedback about TDM programs. Presents educational programs at schools, events, meetings, and conferences.
- Plans and implements marketing campaigns for TDM strategies.
- Applies for funding and actively researches grant opportunities.
- A sample job description for a TDM Coordinator is included in Appendix A.

2. Identify the host agency

Though the location of a TDM coordinator will likely be influenced by the type of funding available to cover a salary, the designation of a host agency is a critical decision that will affect the scope and impact of TDM implementation in Grand Rapids. Only a handful of organizations are potential hosts:

Figure 5-1 Evaluation of potential TDM Coordinator host agencies

Entity	Advantages	Disadvantages
City of Grand Rapids	Access to all city agencies and highly connected to other related city efforts	Funding the position may be difficult in light of recent staff reductions. TDM efforts may be perceived as top-down
Downtown Development Authority	Access to staff who operate similar projects on behalf of area businesses Downtown; more resources and potentially more funding than the City.	The DDA does not currently focus on Michigan Street and may not be amenable to expanding their mission.
Grand Rapids Parking Authority	Parking management is the most effective TDM strategy; the Authority has some additional flexibilities.	TDM is not part of the Parking Authority's mission at this time.
Grand Valley Metropolitan Council	TDM is an element of regional planning; a position housed at the MPO could be funded through CMAQ funds.	TDM effort would, by definition, need to be regional and could dilute the impact on the corridor
Grand Valley State University	Strong commitment to and investment in the corridor; major leader in sustainability efforts	No mechanism to ensure other area employers stay engaged and involved in TDM efforts.
Spectrum Health	Largest employer in the city, highly influential leader on the corridor.	No mechanism to ensure other area employers stay engaged and involved in TDM efforts.

GVSU has expressed a willingness to take on a leadership role in TDM on the corridor. As a university, GVSU has more flexibility in hiring than governmental agencies, while having a similar mission in its investment in the future of the community. As a nongovernmental agency, GVSU is in a better position to discuss and negotiate TDM efforts with peer institutions

along Michigan Street without risking perceptions of a top-down approach. While GVSU is the recommended host to initiate a TDM coordinator, it is anticipated that coordinator costs would be shared by many stakeholders.

3. Hire the coordinator

The TDM coordinator could be explicitly hired personnel or reassigned existing personnel. Because TDM is a unique discipline requiring a unique skill set, it is recommended that the designated staff member be specifically recruited, reviewed and hired based on the skills necessary to meet the expected duties and establish and pursue TDM practices in the Michigan Street corridor. The recommended process is to:

- Create a hiring subcommittee - A core group of stakeholders should manage the hiring process, led by the host agency.
- Create and disseminate job description - The host agency will work closely with the stakeholder subcommittee to draft and distribute a job description tailored to TDM work on Michigan Street. All stakeholders should market the position to their network and assist with informal recruiting of exceptionally qualified candidates.
- Screen and interview candidates - The subcommittee, led by the host agency, will review applications and select candidates to interview. The process will be heavily influenced by the host agency's hiring process requirements, but other stakeholders should stay involved and participate in interviews. If the host agency's hiring process allows, the stakeholder subcommittee should have the final say in rating and selecting the candidate.
- TDM coordinator training - The first few months will be spent training the TDM coordinator. Other stakeholders along the corridor should spend time assisting with training to ensure the coordinator has a strong sense of the overall corridor environment from multiple perspectives, and not only that of the host agency.

Establish a Transportation Management Association

Establish a TMA - Implementation Steps

1. Determine the structure
2. Define the service area and services
3. Develop a funding structure
4. Pass authorizing legislation
5. Determine staffing and initial workplan

1. Determining the structure

The TMA could continue operating as an ad hoc committee, but for the long term, we recommend the formal establishment of an independent organization. TMAs are typically formed as private 501(c) organizations, but can operate as private corporations as well. TMAs are not typically government entities, although they work in close cooperation with the public sector and transit authorities and may utilize public funding mechanisms in addition to private resources.

Formation of an independent TMA typically requires the negotiation and establishment of Articles of Incorporation and bylaws, assignment of a Board of Directors, definition of duties for Board and roles and responsibilities of board and staff, as well as standard office procedures. TMAs typically have an executive director and at least one additional full-time staff member.

During the formation process, the stakeholder committee should appoint an interim board that will likely become the permanent board of the TMA.

2. Define the service area and services

The TMA could cover a range of different geographies and as a result provide a broad range of different services. Given the context of the Michigan Street corridor, it is recommended that the TMA be limited in area to either the Medical Mile to the riverfront area or be designed to ultimately include the whole of the "Hill" and the downtown "valley". It may be possible to initiate the TMA at a smaller geography and expand it to include the larger area once it has matured a bit provided the mechanisms and expectations for expansion are clearly articulated at the onset.

The committee should also review the scope of services the TMA is anticipated to provide. This may be limited to information and outreach, but could also include specialized transportation management plans for individual stakeholders as well as brokerage or clearinghouse services for processing transit benefits and passes. If it is anticipated that the TMA would expand to include stakeholders beyond the initial Michigan Street concentration, these stakeholders should be consulted in the initial service planning so as to avoid necessary changes to authority later and to anticipate budgetary needs.

3. Develop a funding structure

TMAs provide valuable services to their area stakeholders, but these services come at some financial cost and therefore must be funded. The vast majority of places that have established transportation management associations have found that the benefits that accrue to their employers, cities and regions represent a substantial return on investment for the funding provided.

Multiple funding options are discussed in the financing section below.

4. Legislative authorization

Depending on the organizational and funding structure selected, many TMAs require authorizing legislation to provide them the authority to operate and raise funds for operations.

5. Staffing and initial work plan

The Board will be responsible for recruiting and hiring staff for the TMA. As with the TDM coordinator, transportation management is a unique discipline. The Board will undoubtedly seek a TMA director familiar with the various tools and techniques. It is possible that the TDM coordinator could assume this role with additional staff to assist with marketing and outreach (additional unique skills!).

The initial work plan must be realistic. The first few years of the Association are likely to be focused on outreach and capacity building, with limited direct services. A firm foundation in the early years will support a stronger organization overall.

Parking Management

At present, parking along the Michigan Street corridor is largely a private resource. There is no publically managed off street parking in the Michigan Street Corridor. On-street parking is not allowed in the downtown and "Hill" area of Michigan Street, nor on the majority of cross streets in the immediate vicinity. While on-street parking is permitted in segments further to the east, this parking is generally unmetered given the availability of free off-street lots. The Grand Rapids Parking Authority has recently piloted a residential permit parking program to attempt to mitigate "spill over" parking effects occurring in the residential area north of I-196 near the major institutions. This is the first residential parking permit program in the city.

While an abundance of parking exists along the corridor – primarily in structured ramps – there is little to no coordinated parking management. Each institution provides parking relative to their own estimated parking needs and sets pricing according to their own internal policies and practices. While allowed by zoning, the institutions do not generally participate in shared parking arrangements. While some institutions contract for DASH or independent shuttle bus service from lots outside the heart of the

corridor, this too is generally done in isolation (see transit section that follows).

There is much common ground however. All institutions concur that building parking is expensive and a cost most would like to avoid to the maximum extent feasible (while remaining accessible, operational and competitive). All institutions acknowledge that land is valuable and demand for its active use (vs. vehicle storage) will continue to grow in the future. Increasing traffic associated with continued growth in vehicular trips (in turn associated with parking provision and management) is a significant concern. Finally, all have a vested interest in and demonstrated commitment to the long term success and sustainability of the Michigan Street corridor – not only with regard to traffic and parking, but also a desire to create a great place that is an attractive, accessible destination.

Parking Management Recommended Actions

- Establish baseline parking information
- Reform pricing and permits
- Explore creation of a Parking Management District

Establish a Baseline

In 2002, the City of Grand Rapids commissioned the Michigan Hill Parking Study. At the time, the study concluded that there was a parking shortage for many users, but concurrently concluded that traffic back-ups plagued the area.[2] [3] Roughly ten years later, many still attest to a parking shortage even while highlighting concerns about traffic congestion.

Beginning to unravel the challenge of providing adequate vehicular access while managing traffic at a sustainable level for efficient operations requires establishing a detailed baseline. This baseline should include:

- **The supply** – what parking resources exist, who controls them, how they are managed, when they are used, their occupancy at various times of day, and other relevant information;
- **The demand** – who are the users, where they are coming from, what their needs and the factors that most influence their travel decisions; what do the institutions need to operate and be highly competitive.
- **The resources** –what is the "carrying capacity" of the roadway network, what viable transportation alternatives exist, how reliable are they, what is their capacity, what are barriers to their use, etc.

This baseline not only provides important inputs into subsequent decision-making, but also is vital to tracking success and the effectiveness over time of various strategies. Data tracking has proven to be one of the most effective tools in building support for parking management strategies, especially in emerging economies.

Reform parking pricing and permits

Parking management varies widely in the employment center of Michigan Street. While most institutions have implemented some type of strategy to encourage the use of remote lots and shuttle services, the continued high demand for near-in parking (and parking in general, compared to alternative transportation uses) indicates that parking pricing is still well below demand-management levels. Parking rates for visitors, while a sensitive topic for medical institutions, also appear to be below rates that would encourage the use of alternate locations or modes for those for whom this may be a viable option (visitors, well-patient visits, etc.).

[2] Czurak, David. "Michigan Hill Parking Study Well Underway." *Grand Rapids Business Journal*. December 20, 2002. http://www.grbj.com/articles/61908 [accessed April 11, 2013]

[3] *Michigan Hill Parking and TDM Study*. Walker Parking Consultants. March 2004.

Permit parking should be examined for opportunities for reform. Permits are typically issued on a month, semester, or annual basis with no differentiation in price whether a user utilizes the parking facility often or infrequently. Employers/institutions should contemplate permit structures that allow the user to pay based on frequency of use in order to equalize the opportunity for alternative commute modes. Employee contracts may also make market-based parking reform difficult and should be examined and potentially renegotiated when the opportunity arises.

While at present employers and facility managers set ramp prices and permit policies independently, a collaborative working group to share data and strategies among the major stakeholders would be a good first step in coordinating parking reform, sharing experiences and successes, and reducing competition between institutions.

Explore creation of a parking management district

Parking Management District Implementation Steps

1. Build stakeholder support
2. Determine mission, outcomes, funding and organizational structure
3. Define and establish authority
4. Coordinate with broader TDM efforts
5. Develop initial and long term work plan

Parking management districts of the type needed in the Michigan Street corridor are somewhat rare nationally, however given the significant concentration of similar users, the shared vision and objectives for the corridor, and the common concerns regarding high land and financial cost of parking provision for growing institutions, Grand Rapids has an opportunity to be a national leader in demonstrating the effectiveness of collaborative parking management. A Parking Management District (PMD) would holistically organize parking management and optimization in the District, to the benefit of all. By managing not only the off street ramps, but the on-street resources in the immediate vicinity, it can also aid in mitigating the spillover impacts into the adjacent residential communities.

1. Developing Stakeholder Support for a PMD

First and foremost would be gaining the trust and participation needed from the stakeholder institutions to endorse the creation for a Parking Management District. This will require additional study to document the costs and benefits to each of the major institutions and confidence that they will retain ultimate control of their individual assets and future. Definition of a common purpose and need will be important in this initial phase as well as clear articulation of what measures will be used to evaluate the effectiveness of the outcome and make course corrections (or disband) as necessary.

2. Negotiate mission, outcomes, funding and organizational structure

Negotiating the purpose of the parking management district, the common desired outcomes, the financing structure and oversight and decision-making structure is perhaps the most complicated and difficult step of creating any new district authority, but also the most important. Stakeholders must be active participants, and ultimately active supporters, of the PMD in order for it to succeed and effectively recognize and meet their needs.

Initiating such a dialogue will require a strong and catalytic leader from among the affected institutions or stakeholders. It should be expected that this may take the longest period of time.

3. Identification and establishment of authority

There are several options for creating an entity to oversee and guide the Parking Management District, each with its own unique advantages and disadvantages.

- **Parking Authority** - The Grand Rapids Parking Authority manages parking facilities and city-wide parking strategies, however it does not presently manage or oversee private assets. As the city's go-to parking expert, the Parking Authority would be the natural choice to run and establish the Parking Management District, however this may be a challenge for both the Authority and stakeholders as it would require concentrated focus in one particular area, and would enlarge the authority and necessary review/expertise of the agency.
- **Transportation Management Association –** If and when a TMA is established for the Michigan Street Corridor, that entity would likely be the ideal organization to oversee the parking management district. This would allow a geographic focus and tailored strategies, ensure control of the stakeholder entities, and complement parking management with a whole suite of multimodal tools, education, and information. However, at present, there is not a TMA for the Michigan Street study area.
- **Parking Management District Authority** – It is possible to establish a separate and unique parking management district authority through local legislation or possibly under the authority of the Corridor Improvement Authority Act [Act 280 of 2005[4]]. Due to the strength of this legislation, its designed intent and the limited focus of a PMD this is not the preferred route to take.

The Parking Authority is already charged with managing parking in Downtown. To avoid duplication and confusion, at the present time the Parking Authority is in the best position to explore and implement a PMD.

4. *Coordinate with other TDM initiatives and activities*

Parking management is not a function unto itself. Parking management is a tool within a larger transportation demand management program. For this reason it is necessary that the purpose, entity, and activities of the parking management district be closely coordinated with other TDM initiatives and measured alongside these against the baseline.

5. *Develop initial and long term workplan*

The last step in establishing the parking management district is to determine the initial workplan to ensure success in the fledgling years of the organization, but also to define the long term anticipated pursuits of the entity.

Staffing will also be critical at this time as an initiative of this magnitude would require dedicated staff in order to be successful.

Transit Solutions

Transit Solutions - Implementation Steps
1. Address concerns of Spectrum Health
2. Consolidate shuttle operations
3. Implement an EcoPass

Several stakeholders operate private shuttles and/or contract with The Rapid to provide shuttle services. This is in addition to the existing Rapid and DASH services already provided to and within the Michigan Street corridor area. Additional transit services are planned with the coming Bus Rapid Transit project. These services are provided at substantial expense and with some unnecessary redundancy in coverage and operations.

Even with this richness of transit options, there still appears to be some biases against the bus. In many cases this is because riders, many of whom begin their trip as drivers, feel the bus is a

[4] http://www.legislature.mi.gov/(3sgrj1zv5d05cl45axyumdi1)/documents/mcl/pdf/mcl-Act-280-of-2005.pdf (accessed April 11, 2013)

lower class of service, is not frequent or reliable enough to meet their needs, or is complicated for them to figure out and use.

At present, transit is not being optimized for the corridor nor its use maximized. If stakeholder institutions consolidated their investments in transit operations with each other and The Rapid into a branded circulator route, the corridor could see real progress toward its mode shift goals.

Address concerns to ensure the participation of Spectrum Health

Spectrum Health currently operates shuttles in-house to transport its workers from outlying park and rides to its main campus. Spectrum consulted with The Rapid before investing in an internal shuttle system. There are advantages to operating a shuttle in-house, including exclusivity of service and maintenance of control over all service-related decisions.

For the Medical Mile circulator to operate most efficiently, Spectrum's participation is critical given its large number of workers. Discussions with Spectrum about a new Rapid circulator service and discontinuation of its internal shuttle service must be one of the first steps in developing the circulator. Several arguments support consolidation:

- **Spectrum estimates expenditures of $70,000 each month, or $840,000 annually, on its shuttle system.** With a new circulator, Spectrum will pay an estimated $130,000 for passes and TMA contributions for a premium transit service, higher frequencies, and access for all staff to The Rapid's entire system. This is a smarter deal, dollar for dollar.
- **The Rapid operates transit as its exclusive mission.** Spectrum operates service out of necessity, but transit system planning and operations are at best tangential to its corporate mission. The Rapid has more resources and staff expertise for planning and operations of transit service.
- **Current Spectrum routes are not optimized and operate only partially filled.** Spectrum has not been able to maximize the capacity of its shuttle system and has not yet invested in a study or consultant to help them fix the utilization issue.
- Premium circulator service and access to The Rapid's system for free is **a major perk to advertise to potential future employees** during the recruiting process. Young talent is valuing transit more and more and is looking to move to cities that prioritize transit.
- **Circulators in most other cities are funded by the business community, and many primarily by the anchor employer.** Businesses use the circulators as advertising and as part of developing their relationship with the community. (See Appendix B for comprehensive data about peer circulators.)

Paramount to convincing Spectrum of consolidating its shuttles and investing instead in The Rapid's circulator is crafting a convenient, premium circulator route and assuring Spectrum that its employees will be receiving an even higher level of service than they currently do.

Consolidate shuttles into a branded "choice-rider" service

Often times it takes little more than a uniquely identifiable vehicle and a distinctive marketing campaign to convert bus avoiders to bus admirers. Many choice riders (those that have the financial resources to pay more to drive and park) want to feel special, be treated and accommodated with dignity, and feel like the service is an exclusive mode of travel. While many public transit providers often bristle at this position, others have learned to embrace it and give the riders what they want, and enjoy greater efficiencies, lower traffic volumes, and happier workers as a result.

While a good paint job and catchy slogan can go a long ways toward convincing and attracting these choice riders, it often takes more than that including sensible service design and alignment,

1. Design service and alignment

We recommend that a Michigan Street circulator service operate at 10-minute headways throughout the day, primarily on weekdays between 6:30 AM and 7:30 PM to accommodate shift workers and visitors to the hospital and many students.

The route should be designed to serve institutions at the core of Medical Mile at the western end of Michigan Street as well as Spectrum parking lots at the eastern end, along Plymouth Street, connecting with the Silver Line BRT at Michigan Street and Bostwick Avenue. This would result in a three mile long one-way route. A loop serving GRCC adds an additional mile. To maintain 10-minute headways, the route requires three vehicles to operate, plus one spare.

An alternative loop could continue to St. Mary's Hospital; this loop would add two additional miles (round trip) to the service. This addition would require an additional vehicle to maintain 10-minute headways, which would cost over $200,000 more in operating expenses.

2. Design a unique brand

Branding is important. The consolidated service should be uniquely branded with a new logo and distinctive (and catchy) name. The DASH is a successful brand and already inhabits a niche of fast, simple, commuter service in the vicinity. If The Rapid prefers to maintain this brand instead of creating another brand layer, the DASH must be decoupled from merely a park and ride service and expand its mission to include circulation and not only connections to parking. Though the new circulator would serve park and rides, its purpose as a circulator service stretches beyond that of the DASH service.

Branding should extend through the whole realm of the service from signage and furnishings, to vehicle paint scheme, to informational materials.

3. Contemplate unique vehicles

New vehicles offer the opportunity to create a new brand of service, one that reflects a cleaner, greener, more urban corridor or destination(s). Full 40' transit vehicles are recommended for this service to accommodate the existing demand from Spectrum park and ride lots. These vehicles will further distinguish the service. Smaller vehicles may also be contemplated as they can fit into tighter spaces and drop passengers off closer to entrances in some cases, but these should clearly "read" as vehicles for public use, albeit higher end, and not merely private shuttles.

Hybrid diesel vehicles and 100% electric transit vehicles both offer environmental improvement over the standard diesel and further the branding as a clean quiet and desirable, green mode of travel.

4. Provide Wi-Fi on buses

The Medical Mile Circulator is designed for short, local trips, and travel time will be relatively short. Still, wifi is an important amenity for many workers, and wifi is a relatively inexpensive investment. Such an amenity again raises the standard perception of bus travel and appeals to the younger incoming workforce.

Wireless internet could be funded through sponsorship and increase marketing for local businesses, events or destinations via the log-in screen.

A basic system, installed by The Rapid, could use off-the-shelf routers that use 12V adapters instead of AC, making them easiest to install on buses. Government rates for routers and for service are often available with major carriers; other systems spend just $39 per bus per month. For the circulator, this would amount to about $2,000 per year. The routers and antennae would be a one-time cost of $350 each.

Establish an EcoPass program

U/EcoPass programs are designed so that every member of the institution or employer (i.e. all

students, faculty or staff) receives a transit pass. Passes are typically provided free of charge to all members of the institution, or shared between the institution and its members. Some university UPass programs bill students for the pass as part of student fees; national experience suggests most UPass passes cost between $25 and $100 per student per semester.

U/EcoPass programs have been very successful at universities and with large employers, and to a lesser extent in designated areas, such as shopping malls or downtown districts. Transit passes encourage transit ridership, help control parking demand, and are frequently viewed by employees as a valuable benefit. It is worth noting, however, that some programs have had trouble with the program because as demand for service increases, as does costs, making annual program costs unpredictable.

The Rapid's current pass program is negotiated on a case-by-case basis, though standards such as discounted cost per trip are used across all institutions. We recommend a fully branded EcoPass program accessible by large and small employers and universities alike. This eliminates legwork for both the employers and The Rapid; moreover, a program with a distinct brand such as "EcoPass" can encourage more participation from employers, who may view it as more suited for the universities. We also recommend a much more involved and targeted marketing campaign for the passes. Many institutions along the corridor send information in orientation packets or offer the information to new employees only upon request. Fewer than 300 employees at Spectrum use their passes each month, on average.

The cost of the program is determined according to existing ridership, which is typically measured through a survey, though The Rapid is able to track rides from all current partners that have a pass program. In most cases universities or employers negotiate a discounted trip rate in exchange for purchasing a large volume of service. For instance, The Rapid charges Spectrum only $0.95 per trip, a $0.55 discount from the standard fare.

Assuming, conservatively, that 5% of faculty and staff and 20% of students travel by bus to/from school and work and that the Rapid offers the EcoPass program at a discounted rate of $0.95 per trip, the annual EcoPass costs are roughly estimated at about $1.5 million (see below).

GVSU already pays a significant amount ($2.5 million) to have exclusive shuttles for their students and to give every student a pass.

Figure 5-2 UPass Program – Broad Estimate of Potential Revenues

Institution	Population	Type	Est. Mode Share	Rides per Year*	Total Trips per Year	Discounted Trip Rate	Total Contribution
GRCC	20,000	Students	20%	320	1,280,000	$0.95	$1,216,000
	700	Faculty/Staff	5%	440	15,400	$0.95	$14,630
Spectrum	6,300	Employees	5%	440	138,600	$0.95	$131,670
St Mary's	2,800	Employees	5%	440	61,600	$0.95	$58,520
MSU	400	Students	20%	320	25,600	$0.95	$24,320
Van Andel Institute	300	Employees	5%	440	6,600	$0.95	$6,270
Total					1,527,800		$1,451,410

* Two rides per day, 160 school days/year, 220 work days/year.

If St. Mary's does not receive direct service from the circulator, the hospital may not want to participate in the EcoPass program. However, the pass would be good on all services, and since the hospital is getting BRT service, this agreement may be a good investment for them.

The benefit to employees more than justifies the investment for most institutions; however, institutions must keep in mind that as the EcoPass program grows in popularity and employee participation rises, their annual costs will rise.

Figure 5-3 Existing pass agreements

Partner	Annual Amount	Annual Ridership
GVSU	$2,500,000	3,010,000 (~10,000 on non-GVSU routes)
GRCC	Unknown	Unknown
MSU	N/A	N/A
Spectrum Health	$38,000	40,400
St. Mary's Hospital	N/A	N/A
Total	$2,538,000	3,050,000

Finally, revenues generated by an EcoPass program are not necessarily new revenue for The Rapid, since some employees, faculty/staff, or students may be paying for passes already. The Rapid must weigh the costs of potential lost revenue versus the revenue generated through the EcoPass program in order to structure a contract that is beneficial to both The Rapid and the participating institutions.

Funding and Costs

Operating Costs

According to the National Transit Database, The Rapid's cost per operating hour is $78.08. Assuming three vehicles operating for 13 hours each day, 250 weekdays per year, annual operating costs for the Medical Mile Circulator are estimated to be about $760,000. Wi-Fi service will cost an addition $2,000.

The primary capital costs for service are the four new vehicles required to operate the circulator (three for operation and one spare). Depending on the type of alternative fuel vehicle, the cost ranges from $2.5 million to $4.6 million. Vehicle wraps for branding carry an additional cost, but can typically be sold as advertising to an area employer or business.

Capital costs

The approximate cost of four vehicles is $2.5 million for the hybrid diesels or $4.6 million for 100% electric. Transit vehicles typically have a useful life of about 12 years, therefore, although the vehicles cost $610,000 and $1,000,000 (respectively) to purchase, the annual costs of the investment is about $310,000 for hybrid electric vehicle to $550,000 for 100% electric vehicles.

Figure 5-4 Estimated Vehicle Costs

Transit Vehicle Options	Unit Cost	Quantity	Net Cost	Straight Line Annual Costs[5]
Standard Diesel 40’ Transit Vehicle (for comparison)				
Vehicles	$425,000	4	$1,700,000	$212,500
Hybrid Diesel 40’ Transit Vehicle				
Vehicles	$610,000	4	$2,460,000	$310,000
Proterra 100% Electric 35’ Transit Vehicle				
Vehicles	$1,000,000	4	$4,000,000	$550,000
Charging Stations	$600,000	1	$600,000	

[5] Assumes a 12-year useful life per FTA standard.

Live Near Work

There are multiple benefits to living near work. It can not only strengthen and revitalize urban neighborhoods, but also improve worker satisfaction and productivity, improve relations between major institutions and the community and provide a competitive advantage to employers who provide such benefits.

In years past, many live near work programs have emphasized the demand side of the equation – providing enticements to lure workers back to city centers. Today however, with the ever increasing attraction of urban living, more emphasis is needed on the supply side – how to increase the quantity of urban housing units and residential opportunities. Indeed, several properties and providers in downtown Grand Rapids have reported high demand for their residential units and sizable wait lists for downtown housing units.

Employers can participate on both sides of the housing equation. Live near work benefits are extremely cost effective and competitive benefits that reduce transportation impacts and increase their attraction to the workforce, and especially the younger worker cohort so essential to organizational innovation and growth. Housing assistance programs can also preserve housing affordability for entry level workers or lower wage earners essential to many institutions.

On the supply side, institutions and employers can participate as strategic investors and a secure "buyer" that can help developers write down development costs and loans.

Grand Rapids has several residential areas near the Michigan Street Corridor that are prime areas for a Live-Near-Work program. Speculation is an issue in some of these neighborhoods, and some of the housing stock is not in an ideal state of repair as a result. To spur not only homeownership to revitalize these neighborhoods but also the development of new housing opportunities, the two-pronged demand- and supply-side approaches can be undertaken.

Most live near work programs focus on the demand side – creating incentives for employees to live near their employment site. Far fewer focus on the supply side, though several have found success with a dual focus on supply-side and demand-side approaches.

Live-Near-Work Recommended Actions

- Explore employer "supply side" investment opportunities and strategies
- Expand and encourage employee housing support
- Pursue initial pilot projects

Explore supply-side investment opportunities and strategies

A supply-side program has a longer lag time to create and is more complex, involving more entities and more far-reaching policies. The first step for both types of programs is to assess the housing market and conduct a needs assessment in order to establish a narrative and convey the need to decision-makers and funders.

Supply-side programs are less common and more involved, but can have a more substantial impact on neighborhood revitalization than demand-side only programs. Funding or other types of assistance on the supply side is provided to real estate developers or affordable housing developers to construct new housing units or reconstruct existing units. Many cities create a large development fund that is used similarly to an affordable housing development fund. Critical to this process is earning the buy-in from the development community and maintaining strong working relationships with these development partners.

Supply-side programs are high impact and thus are considerably more expensive than demand-side programs. However, there are more funding streams available to supply-side programs if

development is focused on creating more affordable housing units.

To assist such investment, city budget and financial experts, together with financial and development lending institutions, should explore viable incentives such as tax credits or abatements, or other benefits that could accrue to investing employers.

Expand and encourage employee housing support

Large employers can be leaders in influencing other institutions to participate. Demand-side Live-Near-Work programs provide a financial incentive to the home buyer to influence the location of a purchased residence. Rental assistance should be explored in addition to traditional home buyer support.

Assistance may include mortgage down-payments or closing cost coverage. Assistance typically ranges from as little as $2,500 to $10,000 and may take the form of a grant or loan (low cost or forgivable).

Pilot Project(s)

Pilot projects can provide an opportunity for Grand Rapids to test either (or both!) a supply or demand side Live-Near-Work program before launching a full-scale program. The pilot should be constructed with one or two participating employers. The designated working group should be tasked to lay out the program parameters and work closely with the participating employers to monitor the process. Equally important will be supply yield and/or employee utilization as well as measurable changes in the community and employer/employee productivity and benefits.

Funding and Costs

Funding levels for Live-Near-Work programs vary widely. Demand-side programs are typically lower cost and more scalable, while supply-side programs have higher capital demands and require more patient capital. Tax credits and other incentives are likely required. The first work of the working group or committee should be to establish funding requirements and available resources.

Figure 5-5 Implementation Matrix

	Responsible Stakeholder	Estimated Cost[6]	Potential Funding Source(s)	Timeline
Transportation Management				
Designate a TDM coordinator	Stakeholder committee Host institution (GVSU recommended)	$75,000 - $90,000 + $15,000 for marketing and supplies	CMAQ funding Beneficiary institutions Reallocation of existing staff	1 -6 months
Establish a Transportation Management Association	Stakeholder committee Legislative body	$100,000 - $500,000	CMAQ funding Designated fee structure Parking cost savings	1-3 years
Parking Management				
Establish baseline parking information	Planning department Parking facility owners	2000 hours in-house staff time ~$70,000 if external consultant	Foundation grant Facility owners	Immediate
Reform permits and pricing	Parking facility owners	Staff time	Restructured rates	1-6 months
Explore the creation of a Parking Management District7	Stakeholder committee Lead entity (Parking Authority recommended)	$200,000 - $400,000	City or foundation funding Facility owners	1-3 years
Transit Solutions				
Address concerns to ensure the participation of Spectrum Health	The Rapid	Staff time	N/A	Immediate
Consolidate shuttles into a branded “choice-rider” service	The Rapid Grand Rapids Parking Authority Major institutions	$2.5 - $4.6 million (capital) $760,000 (operating)	Redirected shuttle costs CMAQ funding Cost savings on parking	1-2 years
Implement an eco-pass	The Rapid Major institutions	$1.5 million	Existing pass agreements Student transportation fees Employee transit benefits	1 year
Live Near Work Strategies				
Explore employer “supply side” opportunities and strategies	City of Grand Rapids Economic Development	Staff time	N/A	6 months
Expand and encourage employee housing support	Stakeholder committee City of Grand Rapids	$500 - $5,0008 per participating employee	Individual employers	6 months – 1 year
Pursue initial pilot projects	Economic Development office Selected development partners	Variable	Foundation investment Institution investment Financing mechanisms	1-3 years

[6] Cost is annual unless otherwise noted
[7] NOTE: A parking management district would not be pursued if a Transportation Management Association were established as many of the duties and authorities would be redundant.
[8] Non recurring cost