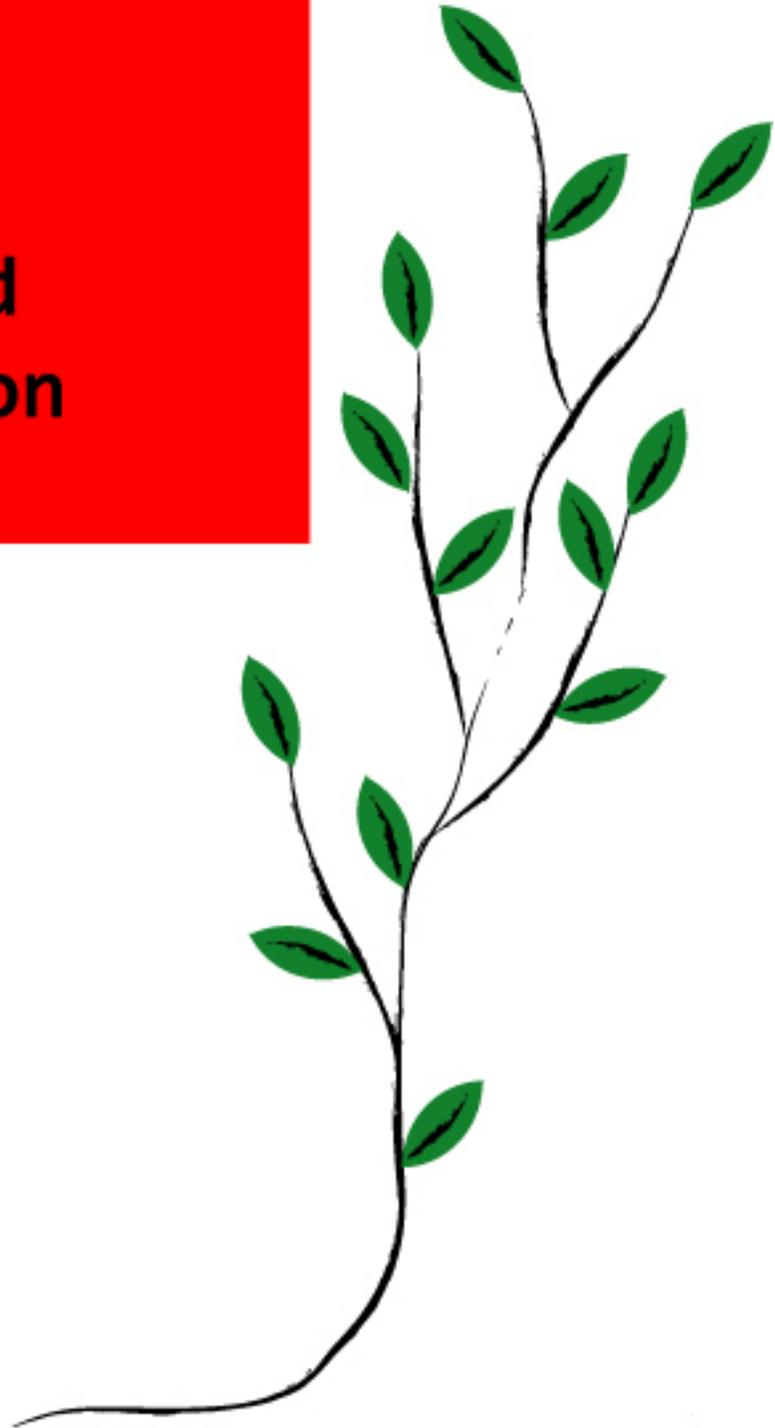


*Eight Mile Boulevard  
Association*

# 8 MBA

## Non-Motorized Transportation Master Plan

*Prepared by:*





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# Executive Summary: 8MBA Non-Motorized Transportation Plan

**Premise-** Popular use of non-motorized transportation (NMT) on Eight Mile Boulevard will improve the local business environment and quality of life.

This report details the steps recommended for making NMT a more attractive option on Eight Mile, divided into five categories with goals, leading up to the project implementation strategy. The specific recommended actions to take in order to reach individual goals are too numerous to list here and are given in the body of the report. More generally speaking, the 8MBA can work toward these goals through its position and resources as a respected agent of development in the Detroit area, as well as through the Association's leverage in administering grants and other incentives to promote its purpose.

**1. Plan for NMT with transit and other forms of transportation,** with the goal of making Eight Mile a multi-modal boulevard, where pedestrians and cyclists are as comfortable as drivers.

**Goals:** Create dedicated lanes, address pedestrian pathways, address bicycle pathways, address transit and traffic, right-of-way education, improve intersections, improve NMT and transit interactions.

**2. Make the Boulevard safe for pedestrians and cyclists.** It is not currently safe in all areas. There are problematic (or missing) pedestrian crossings, no sidewalks in some places, and no bike lanes.

**Goals:** Improve safety for pedestrians, improve safety for cyclists, improve pedestrian and bicycle safety education.

**3. Bring local governments bordering Eight Mile into the planning process.** The plan will not be successful without support from the municipalities of the Eight Mile corridor.

**Goals:** Educate governments about the benefits of NMT on Eight Mile, encourage governments to incorporate the 8MBA NMT Plan into their own plans.

**4. Plan with and for businesses on Eight Mile.** This will create the right environment for more use of non-motorized transportation. More use of NMT will also be good for businesses.

**Goals:** Promote businesses that are open and inviting, provide accessible public facilities, encourage businesses to provide bicycle parking facilities, promote NMT-friendly business through grant programs, and eliminate all on-street parking between Telegraph and Ryan road.

**5. Inform the residents of the Eight Mile Boulevard area about NMT on Eight Mile.** NMT cannot become popular if people have not thought about it or cannot imagine it on Eight Mile.

**Goals:** Address school and community groups, promote NMT and Eight Mile Boulevard through public events.

**Project Implementation Strategy-** Divided into high priority-short-term actions and second priority actions. A strategy based on the one used in Portland, Oregon's NMT plan is recommended for physical infrastructure improvements.

**High Priority:** Complete sidewalk network, designate locations for bike lane/paths and intersection improvements, begin coordination of *Safe Routes to School* applications, form committees to plan and implement special events.

**Second Priority:** Bike parking at transit stops, business outreach and development objectives, investigate possibilities for freeway crossings, select locations for fitness trails; solicit donors/grants.

**Improving Physical Infrastructure:** Solicit input from individuals and neighborhood groups, Conduct an in-depth inventory of infrastructure, Aggregate all data in map form, preferably using GIS, Estimate individual project costs, Utilize the Pedestrian Potential Index and the Pedestrian Deficiency Index used in Portland.



Figure 1: An utopic view of 8 Mile...

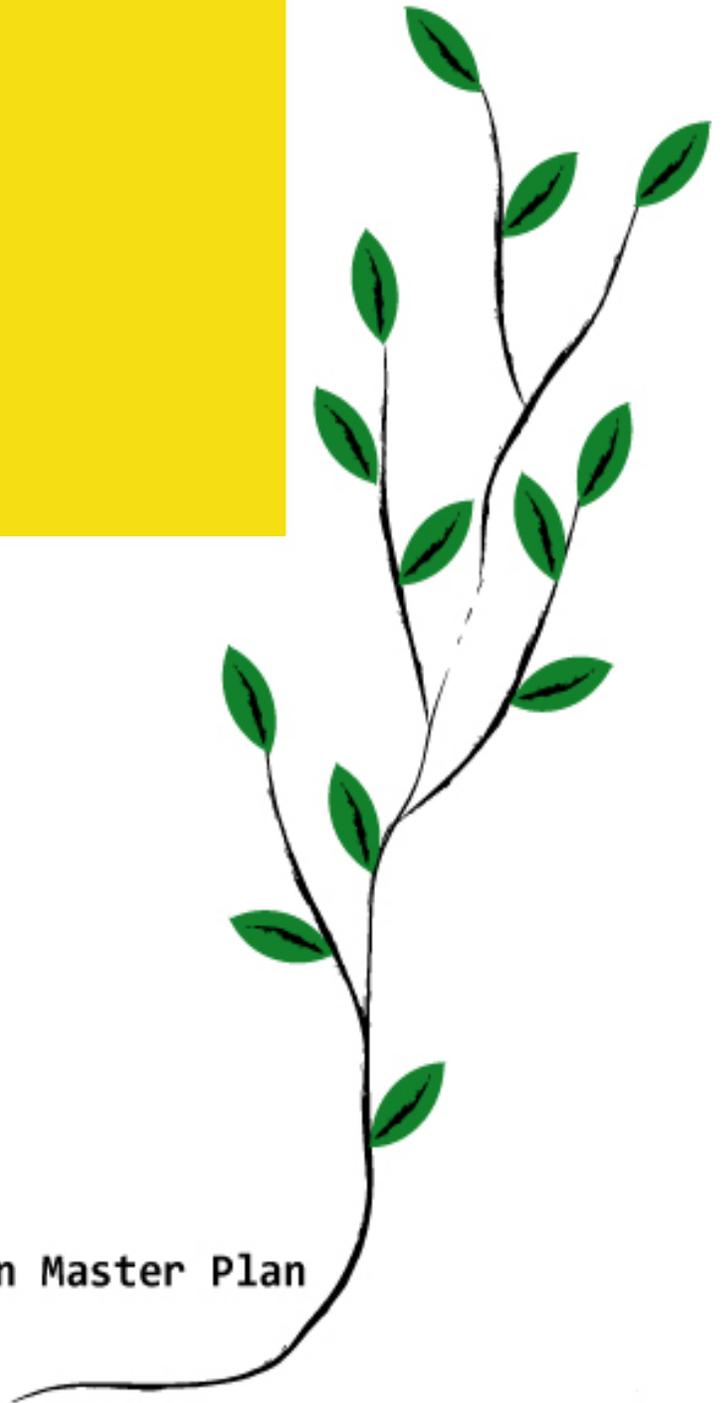


# Chapter One

# 8 MBA

Introduction

Non-Motorized Transportation Master Plan  
*Prepared by*  
MovingForward



Walking and cycling are the ultimate zero-pollution means of transportation. They provide mobility and exercise, enhance neighborhood safety and quality, and are affordable and convenient. Non-motorized transportation (NMT) is a healthful and cost-free alternative for adults going to work and for children traveling to school.

In 1991, Congress passed the Intermodal Surface Transportation Efficiency Act (ISTEA), which requires metropolitan areas to create long-range transportation plans—not just for highways and transit, but for non-motorized transportation as well. This formal recognition of NMT’s importance to cities has changed how planners and transportation officials view pedestrians and cyclists and giving long overdue consideration to those who do not own a car, or who simply prefer walking or cycling to driving.

Eight Mile Boulevard is many things:

- A major east-west route for motor traffic in the Wayne-Oakland-Macomb metropolitan area
- A state highway governed by the Michigan Department of Transportation
- The municipal boundary for thirteen cities and townships and three counties
- The symbolic point of contact between the city of Detroit and its northern suburbs
- A significant commercial and industrial district

*Most importantly, Eight Mile Boulevard is a major motor route in the motor capital of the world.*

The Eight Mile Boulevard Association (8MBA) recognizes the benefits that NMT provides to a major motor route, and seeks to improve the quality of NMT infrastructure and promote walking and cycling. This plan sets out a series of recommendations aimed at achieving 8MBA’s goals.

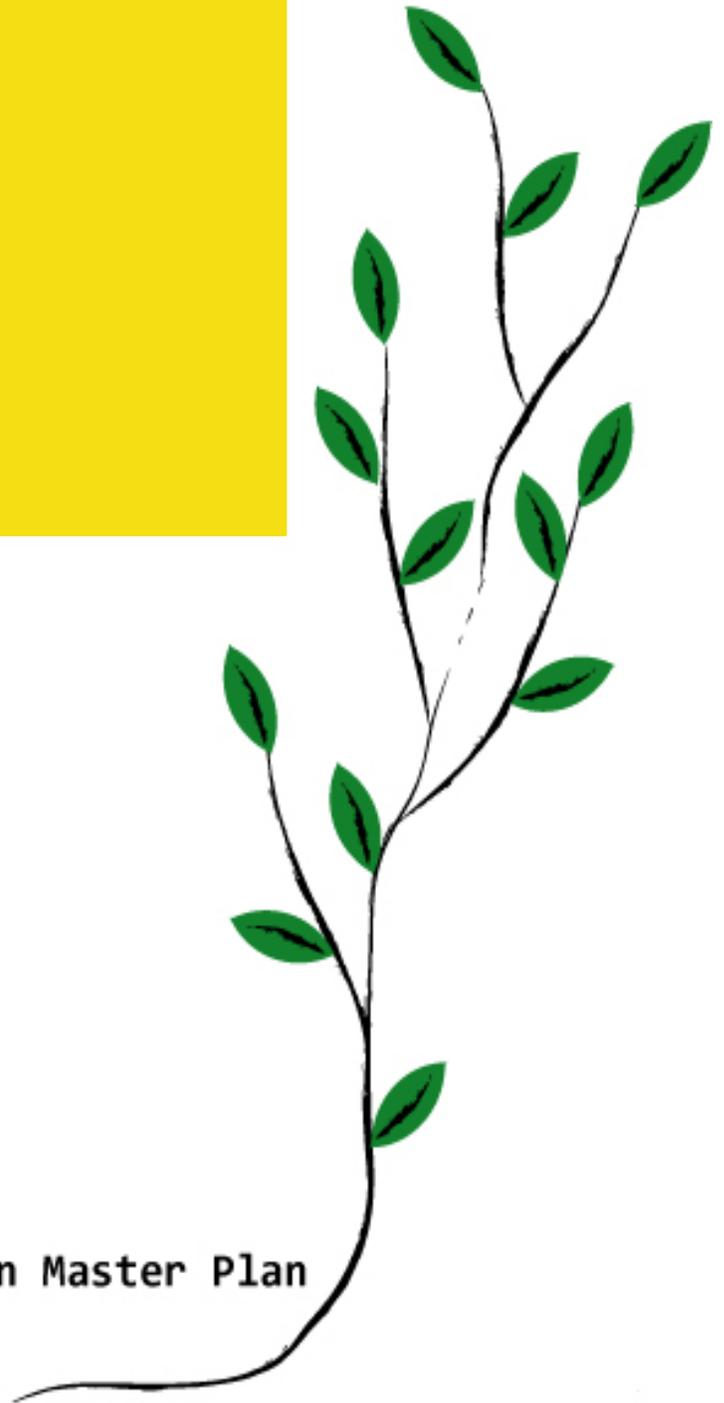


# Chapter Two

# 8 MBA

**Goals, Actions,  
and Policies**

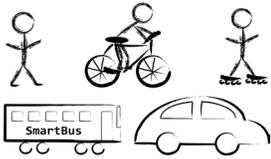
**Non-Motorized Transportation Master Plan**  
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# A | Planning *with* Transportation Modes

## Creating a multi-modal thoroughfare

Promoting non-motorized transportation is above all promoting a multi-modal environment where pedestrians and cyclists can interact with other modes in the same space. Therefore, promoting walking and cycling on Eight Mile Boulevard should begin by planning for safe, convenient and enjoyable interaction for all road users.



### Goal A1: Create dedicated lanes

As different modes have different needs, the Plan cannot fully integrate all modes without compromises. Non-motorized transportation is characteristically slower than motorized traffic, and users are more exposed to risk as they have no heavy structure around them. Roads and pathways are already separated, but the Plan proposes to take this one step further:

**Action A1(a):** *Establish separate paths for each mode along the entire length of the Eight Mile Boulevard corridor.*

Currently, the only mode that can travel uninterrupted is the automobile. We recommend an extension of this privilege to cyclists and pedestrians, but also to public transit to create a multi-modal Boulevard.

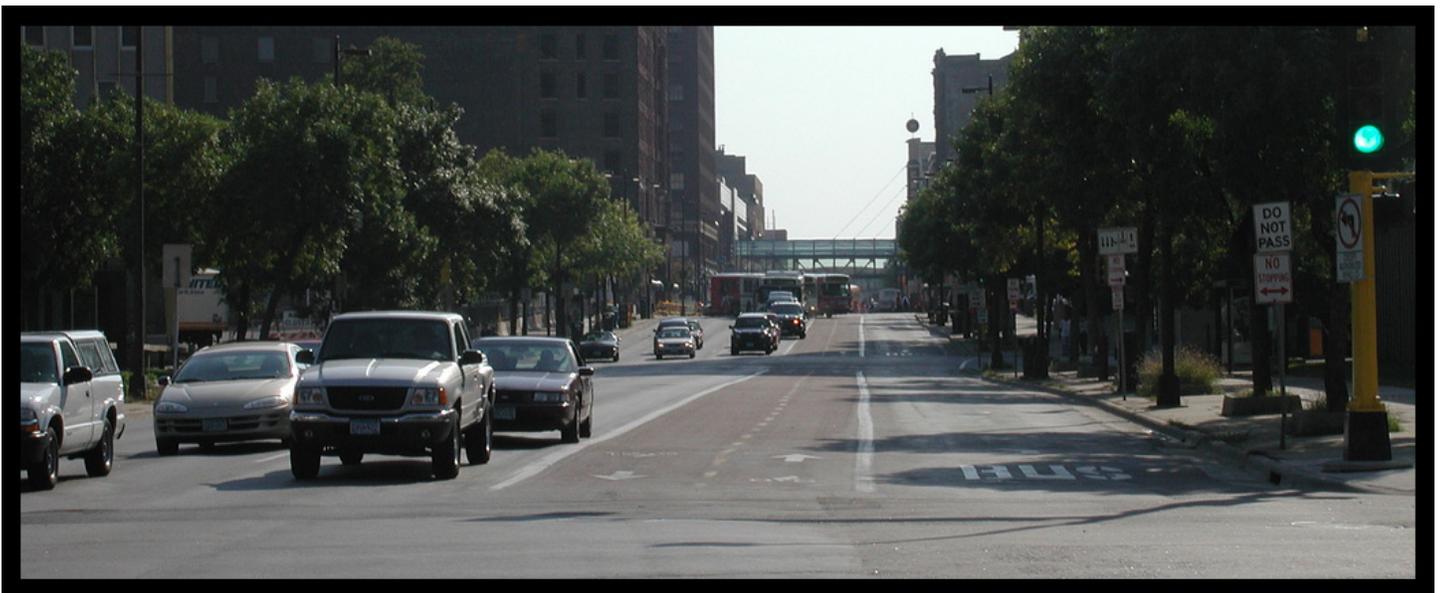


Figure 2: Example of multi-modal street



## Goal A2: Address Pedestrian Pathways



Sidewalks do exist on most parts of the Boulevard, but improvements are still needed.

*Action A2(a): Build sidewalks in the remaining segments of the Boulevard still lacking them.*

*Action A2(b): Improve Cross-Boulevard pedestrian crossings in keeping with the 8 Mile Boulevard Streetscape Plan.*

*Action A2(c): Replace Older, narrow sidewalks and widen them in commercial areas.*

*Action A2(d): Initiate A tree-planting program, in keeping with the 8MB Streetscape Plan.*



In commercial areas, grass strips are not useful and could be replaced by wider pathways between the roads and businesses. The function of the trees is mainly to create a more attractive pedestrian environment and to discourage vehicle parking in pedestrian territory.

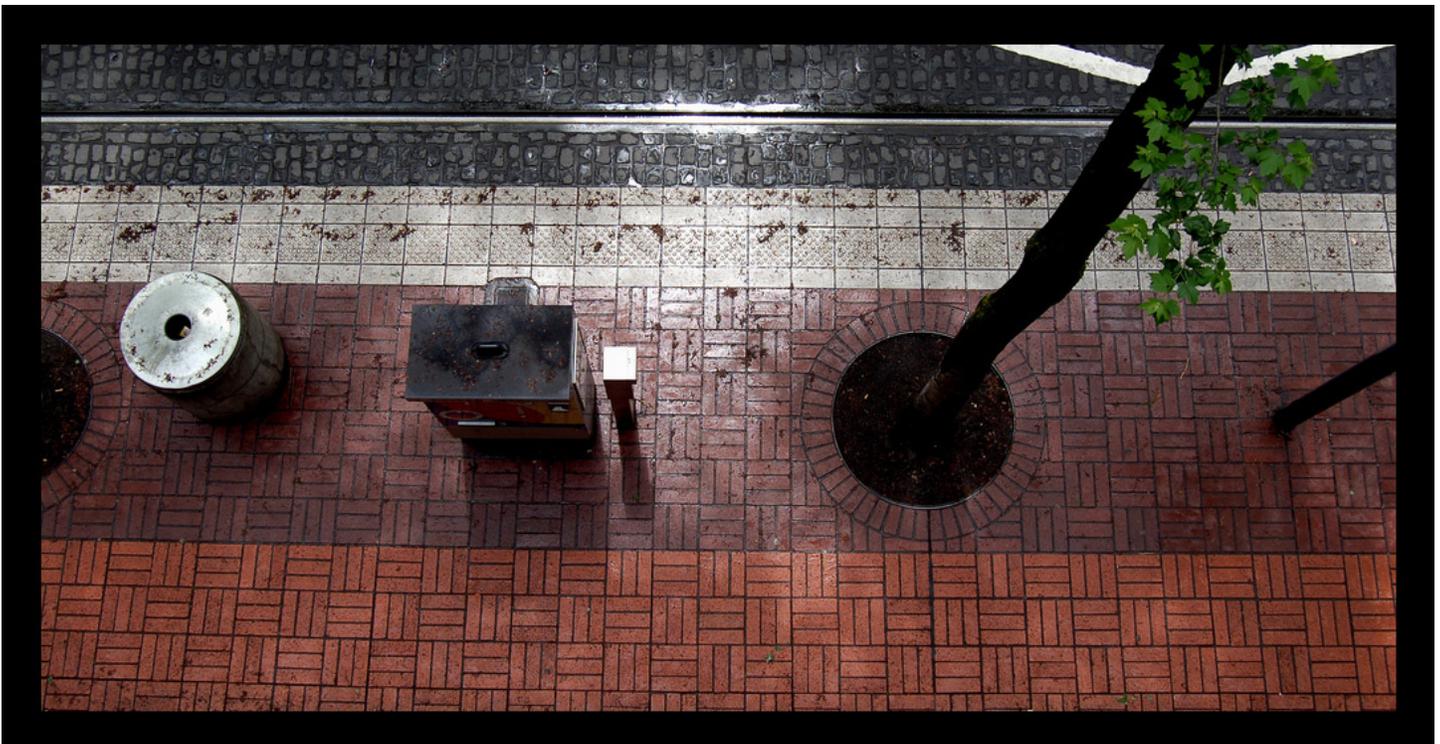


Figure 3: Red bricks, trees and garbage disposal are elements of a well-designed sidewalk



## Goal A3: Address Bicycle Pathways

The lack of bicycle infrastructure is significant, and the creation of bike lanes on both sides of the Boulevard is integral to the Plan.



**Action A3(a): Construct On-road bike lanes where speed limits allow.**



**Action A3(b)-1: Construct Off-road bike paths along busier segments of the Boulevard.**

**Action A3(c)-2: Shared bike/pedestrian pathways should be utilized only in the short run, as temporary measures.**



**Action A3(d): Clear, unique pavement markings and signage should indicate the presence of a bike lane.**



**Action A3(e): Connect Eight Mile Boulevard bike Lanes to other established bike lane networks as soon as possible.**

From I-275 to Grand River Avenue and from Eastland Center (Vernier Road) to I-94, there are only two lanes on each side of the Boulevard. These sectors can contain on-road bike lanes, which could also be shared with busses.

Between these two sectors, on-road bike lanes are too dangerous. Pathways should be shared with pedestrians for a transition period until a paved lane parallel to the pathway can be built.

We propose the same design for bike signage and other non-motorized signage and we encourage an original, unique design to increase the population's understanding of the infrastructure.

Bike lanes should not be confined to Eight Mile, but rather be the spine of a larger bike network developed in association with the surrounding municipalities. Consistent signage could be used throughout the whole area.



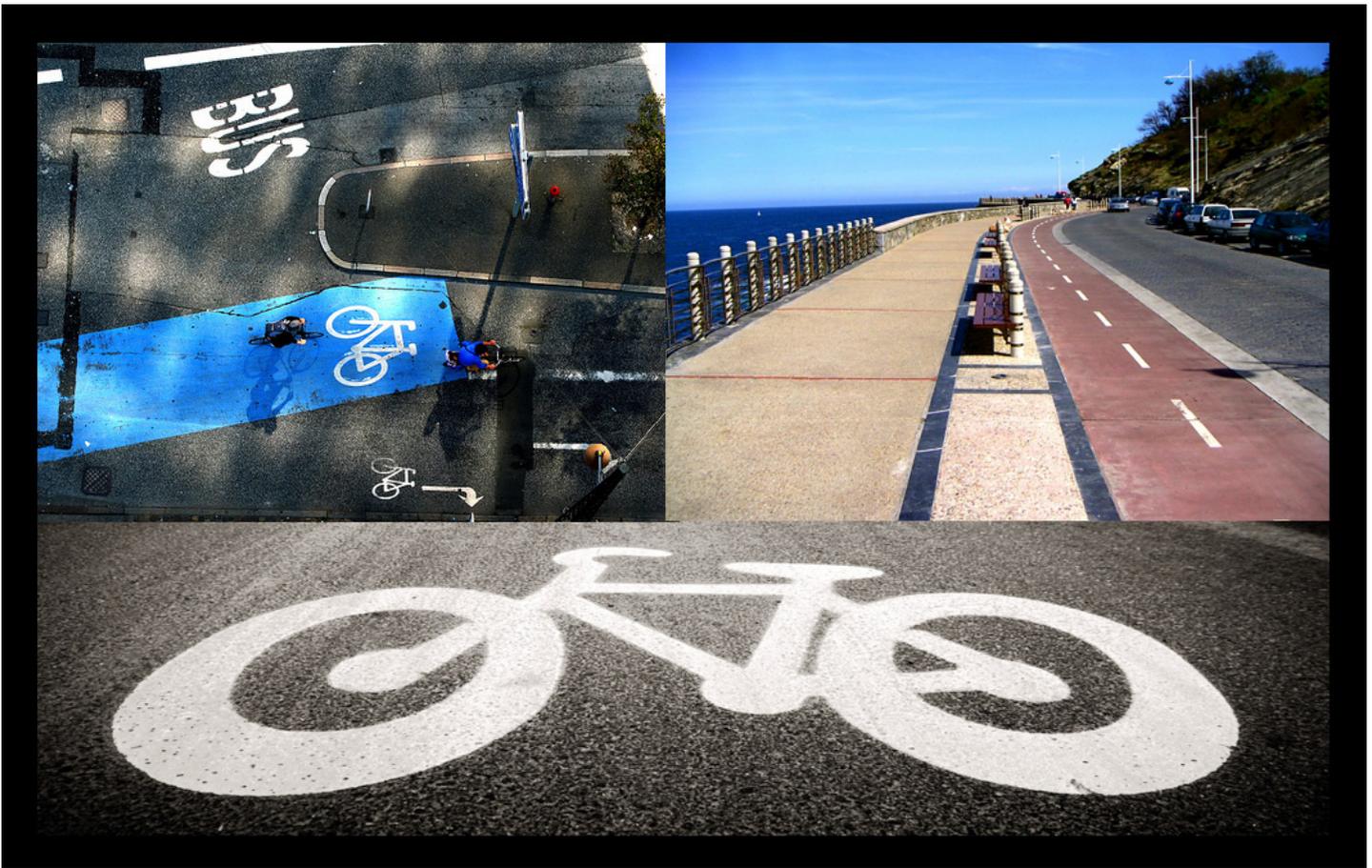
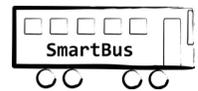


Figure 4: Example of bike lane designs

## Goal A4: Address Transit and Traffic

To transform an eight-lane auto-oriented road into a multi-modal boulevard, the creation of sidewalks and bike lanes is not sufficient. Other improvements have to be initiated.



**Action A4(a):** *Designate bus lanes to improve transit and to reduce the auto-dominant character of the Boulevard*

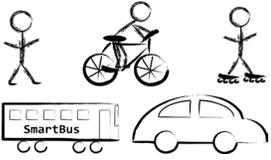


Non-motorized transportation cannot stand on its own, especially in a city like Detroit and in an area like 8 Mile where urban sprawl is such an issue. A combination of modes is sometimes necessary. One of the most natural interactions is between non-motorized transportation and public transit. Dedicating lanes for buses has two main benefits: improving the performance and image of public transportation & moderating motorized traffic.

**Action A4(b):** *Investigate reduction of speed limits in commercial corridors.*



While driving on Eight Mile Boulevard, the width of the road and the high speed limits give the impression of driving on a highway. This is not compatible with a world-class boulevard vision. Lower speed limits could bring improvements for other transportation modes while not significantly affecting road traffic. The area between the Lodge Freeway and Groesbeck Highway is the most commercial and should be the first target for speed reduction.



## Goal A5: Right-of-Way Education

Car drivers can forget that they have to share the road and, as they are not as threatened by safety issues, they do not always give the right-of-way when they should. This is a serious problem in a multi-modal environment. The situation can be fixed easily with simpler rules.



**Policy A5(a): Right-of-way should be codified as belonging to designated modes: i.e., buses in bus lanes, etc.**

Sidewalks are situated between the road and businesses, commerce, or houses, so cars have to cross it regularly. Pedestrians should feel comfortable in their own space.



Figure 5: The mess of road signage...



It is vitally important that pedestrians become as important as cars on the Boulevard. Giving them the right-of-way on their own path and on street crossings is the first important step. The only place where pedestrians should have to wait is at crossing lights.

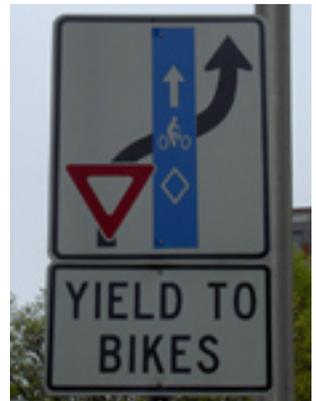
**Policy A5(b): In the absence of crossing signals, pedestrians should have the right-of-way over cars when crossing the street.**

Cars need to cross pathways to enter into businesses' parking areas in many cases and this can be dangerous for pedestrians. The situation would be improved if all cars wait until there are no more pedestrians on the pathways to enter the parking areas.

**Policy A5(c): Cars crossing sidewalks should give the right of way to pedestrians without exception.**

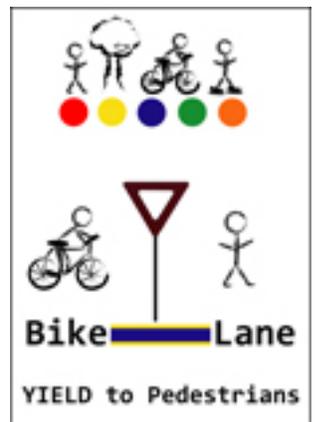
When cyclists have to share the road with cars, they are vulnerable. When cyclists share pathways with pedestrians, they become the danger. Hierarchic right-of-way is necessary to ensure everybody's comfort.

**Policy A5(d): When crossing a bike lane, cars or pedestrians should always give the right-of-way to cyclists.**



When cars are turning onto a perpendicular road, they do not always realize that they are crossing an in-use bike lane. Signage is important to specify that bikes have the unconditional right-of-way in their lane. The same applies when cars have to cross the bike lane to enter businesses' parking areas.

**Policy A5(e): When bikes use sidewalks, they should always give the right-of-way to pedestrians.**



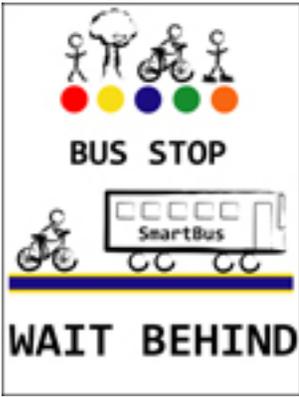
On the other hand, when bikes have to share pedestrian pathways, pedestrians become more vulnerable. As bikers go faster, they need to watch for pedestrians and to give them the right-of-way.

**Action A5(f): Provide Signage to clarify the right-of-way policies.**



Cohabitation of buses and bike lanes is a good way to promote alternative modes of transportation, but it is important to first define simple rules to guarantee safety.

**Policy A5(g): Buses should respect bike lanes when there are users on it, except at their stops.**



**Policy A5(h):** *Cyclists should never stop within the space allocated for bus stops.*

**Policy A5(i):** *When passengers are boarding, cyclists should wait behind the bus.*

Buses can pass bikes using the first lane dedicated for cars, so bikes can stay in their own lane. At bus stops, buses should always be able to stop in the dedicated space. For safety concerns, bikes have to wait for the bus to leave instead of passing it using the first car lane.



## Goal A6: Improve Intersections

Intersections are the places where all modes have to mix in order to complete their trips. Safety issues are central, and the decisions made will reflect the desired nature of the Boulevard. In an auto-oriented environment, lights regulate everything and the time allocated for other modes is limited. In a world-class Boulevard, each mode has its own importance. Streetscape design and monitoring should, therefore, give careful consideration to making specific crossings for each mode to increase safety and accessibility for all users.

Specific recommendations for this chapter are made in the safety chapter, and collaboration with streetscape designers is advised.

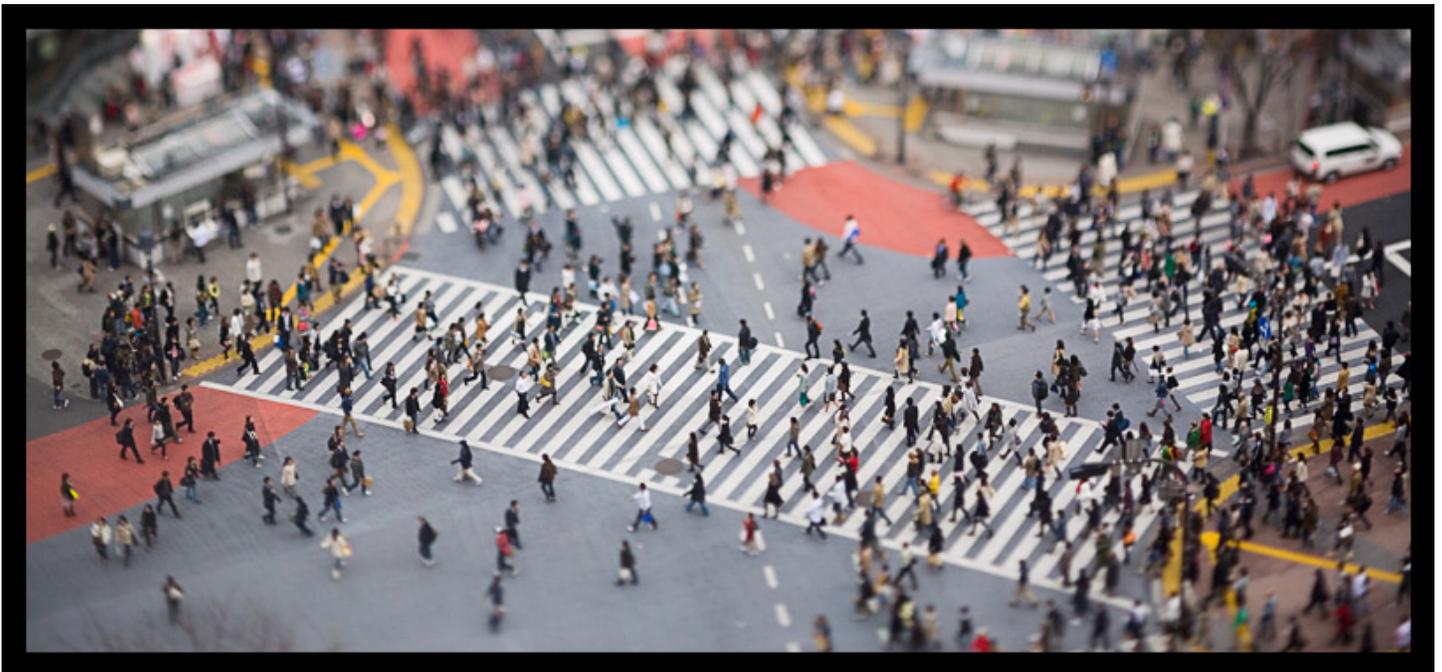


Figure 6: Example of safe and NMT friendly intersection

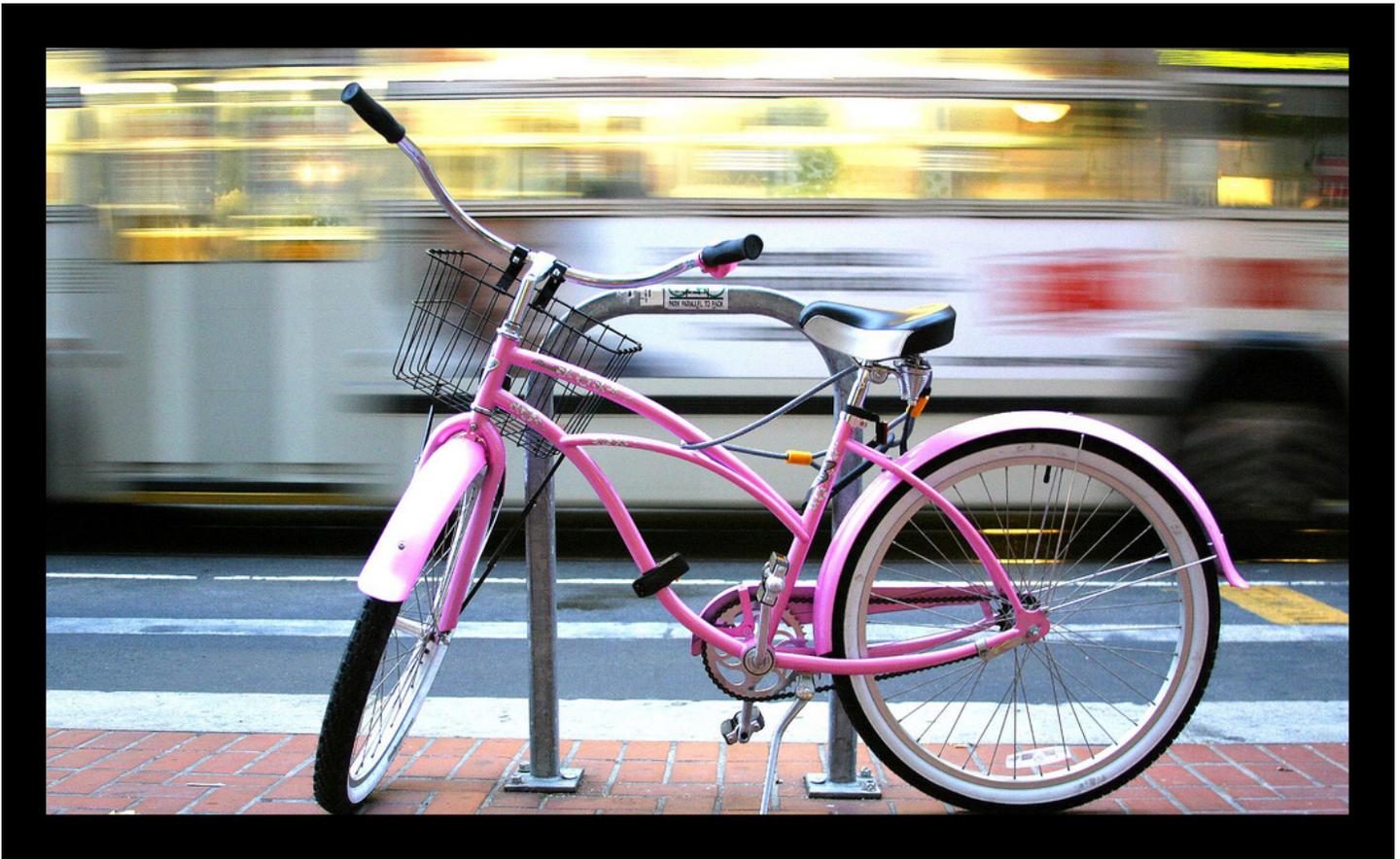
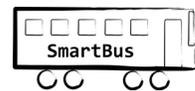


Figure 7: Bikes and transit interaction are important for NMT development

## Goal A7: Improve NMT and Transit Interactions

Non-motorized transportation usually needs to be linked with another motorized mode when average distance to the destination is over 0.5 miles for pedestrians and over 3 miles for bikes. In our modern world, activities are spread across a large area, usually much bigger than a 3 mile radius. As the main goal of this plan is to promote sustainability, interactions between transit and non-motorized transportation are central, leaving interactions between NMT and automobiles to future plans.

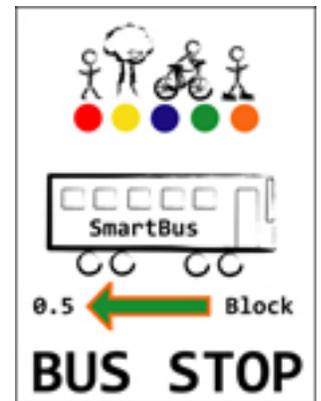


**Action A7(a): Erect signs giving directions to closest bus stops on sidewalks and bike lanes.**

**Action A7(b): Install bus shelters at each stop.**



**Action A7(c): Add more information at each bus stops to improve attractiveness of transit.**



Indicating where the closest bus stops are is helpful to people who are not used to taking transit, and this can increase the number of riders. Regular bus riders also require clear indications at each bus stop. At a minimum, there should be a map and a

schedule, explaining clearly when buses will come and what their destinations are.

Bikes are already accepted in front of most buses. But when the bike is not needed at the final destination or when buses cannot take it, parking facilities are required. Bike racks are necessary at most stops and bike lockers can be added at the important transit nodes.



**Action A7(d): Install bike parking facilities at every bus stop.**

Finally, when the weather is capricious and the bus is late, stops without shelters are anything but attractive. A shelter is the first step to take in order to promote transit for both pedestrians and cyclists.



Figure 8: Bike racks are a good solution for bike parking

# B | Planning *with* People

## Improving safety for pedestrians and cyclists

### Goal B1: Improve Safety for Pedestrians



The term “pedestrians” includes all foot traffic, as well as wheelchair users and strollers.

#### Sidewalks

Sidewalks have been built on most parts of Eight Mile Boulevard. There are only seven sections where there are no sidewalks.



Figure 9: Places without sidewalk on 8 Mile

**Action B1(a): Build sidewalks in all missing sections along Eight Mile Boulevard.**



#### Intersection Crossings

There are two highway intersections (US-24 & M-10) that pedestrians cannot cross in the east-west direction.

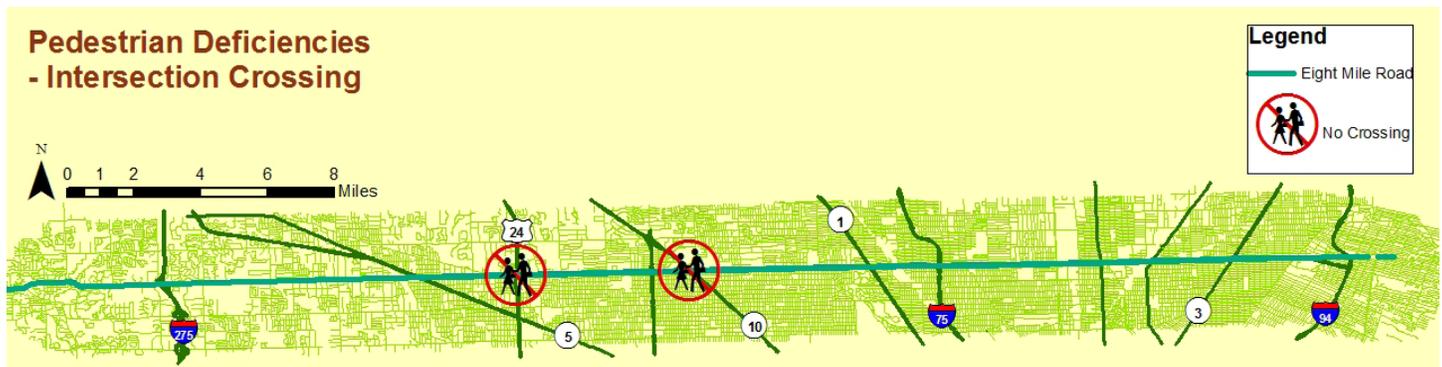


Figure 10: Places without safe crossing option on major intersections on 8 Mile

**Action B1(b): Build pedestrian crossings at US-24 and M-10.**

## Mid-Block Crossings

There are only 38 north-south pedestrian crossings on Eight Mile Boulevard. The average distance between marked crossings is 0.72 Miles. On average, it may take more than 14 minutes to walk to a crossing. This is the biggest safety issue on Eight Mile that many people cross the Road in places without a pedestrian crossing.



Figure 11: Places where mid-block crossing exist on 8 Mile

**Action B1(c): Add marked crosswalks and pedestrian-activated signals or pedestrian overpasses on Eight Mile.**

**Action B1(d): Add crossings at U-turn intersections controlled by traffic signals.**

## Major Destinations

Elementary and middle schools, grocery stores, and parks are important pedestrian destinations on Eight Mile. Roads within the service areas of five minute walking distance from these destinations are important pedestrian routes.



**Action B1(e): Build crossings, sidewalks, and pedestrian facilities at primary intersections.**



Figure 12: U-turn intersections on 8 Mile

### Schools

**Action B1(f): Develop a Safe Routes to School program and promote walking buses.**



The Safe Routes to School (SR2S) initiative is funded and administered by the Michigan Department of Transportation. It awards grants to municipalities for:

- Construction of sidewalks and crossings.
- Installation of traffic calming and speed reduction improvements.
- Installation of signs alerting motorists to schools and bicycle or pedestrian school traffic.
- Installation of pavement markings to improve recognition of walking facilities directly serving schools.

8MBA’s guidance in selecting important routes, along with development of application guidelines and assistance for its member communities can improve the likelihood of winning SR2S grants.

Another valuable tool to promote non-motorized transportation in the school sector is the walking bus. It consists in organizing pedestrian buses from residential area to schools. The bus is conducted by parents or other volunteers in turn and goes from one stop to another ending to the school. Children go to the stop from home by themselves and wait for the bus.



Figure 13: Places at a walking distance from schools on 8 Mile

## Grocery stores

Besides basic construction of sidewalks and crossings, we especially suggest adding lights to increase night visibility on 8MB. This will increase drivers' awareness of pedestrians and create a safer environment for pedestrians



**Action B1(g): Request that municipalities install or improve lighting in important pedestrian routes.**



Figure 14: Places at a walking distance from major destinations on 8 Mile

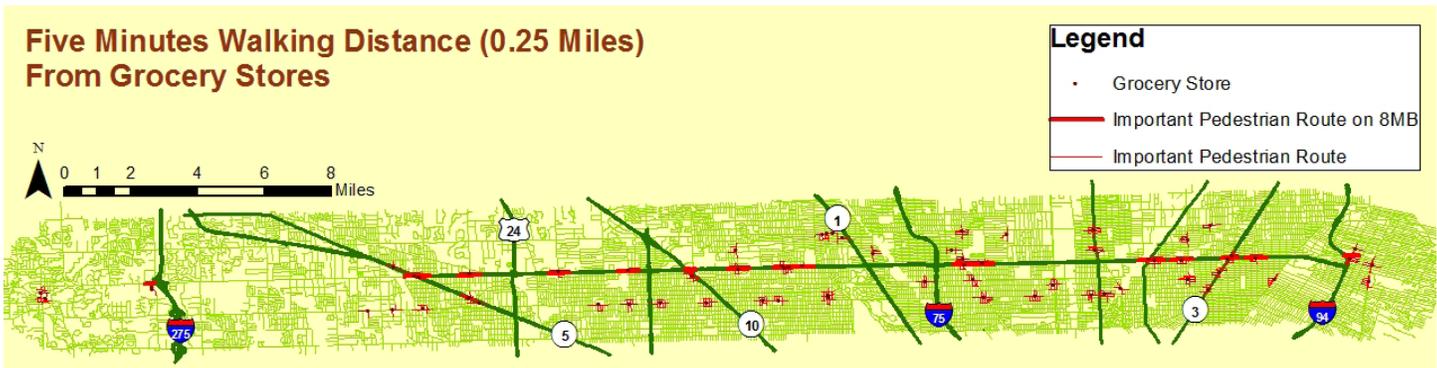


Figure 15: Places at a walking distance from grocery stores on 8 Mile

## Parks

We suggest the use of existing parks for potential central places for the non-motorized network. It has been proved that public spaces and NMT are interesting to develop jointly as they are strongly linked. Therefore, the improvement of pavements on the routes to parks must have the priority over less important pedestrian routes. See appendix VIII for the role of public spaces in the NMT.

**Action B1(h): Work with 8MBA member communities to improve parks and the routes leading to them.**



Figure 16: Places at a walking distance from parks on 8 Mile

## Goal B2: Improve Safety for Cyclists



### Speed Limits

The speed limit is 50 mph on some parts of 8MB, rendering them unsuitable for on-road biking.

### Route Placement

Eight Mile Road has been designated by the Southeast Michigan Council of Governments (SEMCOG) as a major east-west route. SEMCOG does not recommend building on-road bike lanes on the eight-lane portions on Eight Mile Road, where traffic is heaviest and speed limits are highest.

### Bike Lanes

Currently there is no bike lane on 8MB. They should be build on street when it's safe to avoid conflict with pedestrians. Bike boxes should be used to increase safety at crossing. For more info on bike boxes, see appendix II.

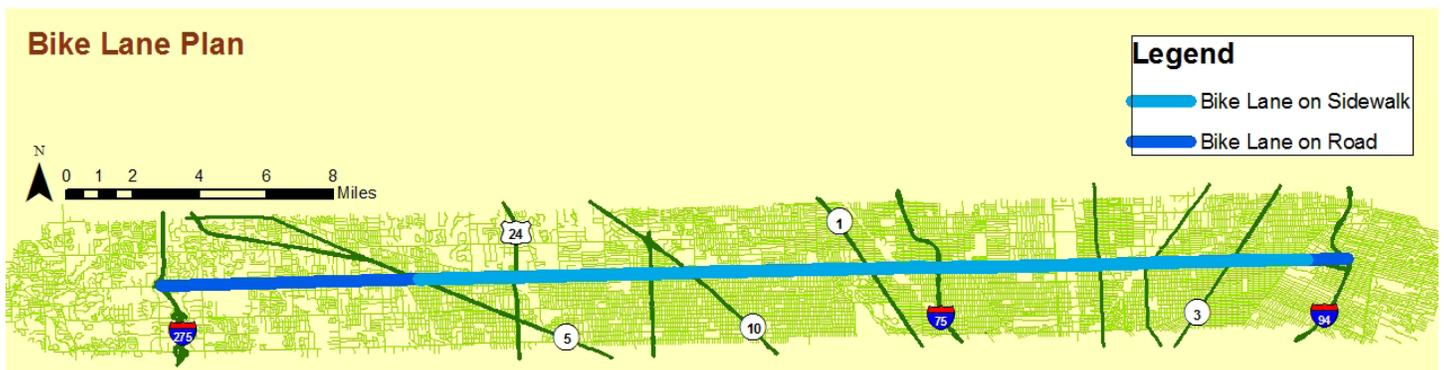


Figure 17: Potential bike lanes on 8 Mile



Action B2(a): Build bike lanes adjacent to sidewalk between M-5 and Kelly Road

Action B2(b): Build on-street bike lanes and incorporate bike boxes and bicycle lights on remaining segments of Eight Mile Boulevard.



## Bicycles and Highway Exits

Action B2(c): Modify freeway ramp intersections as shown in figure X, with appropriate signage.

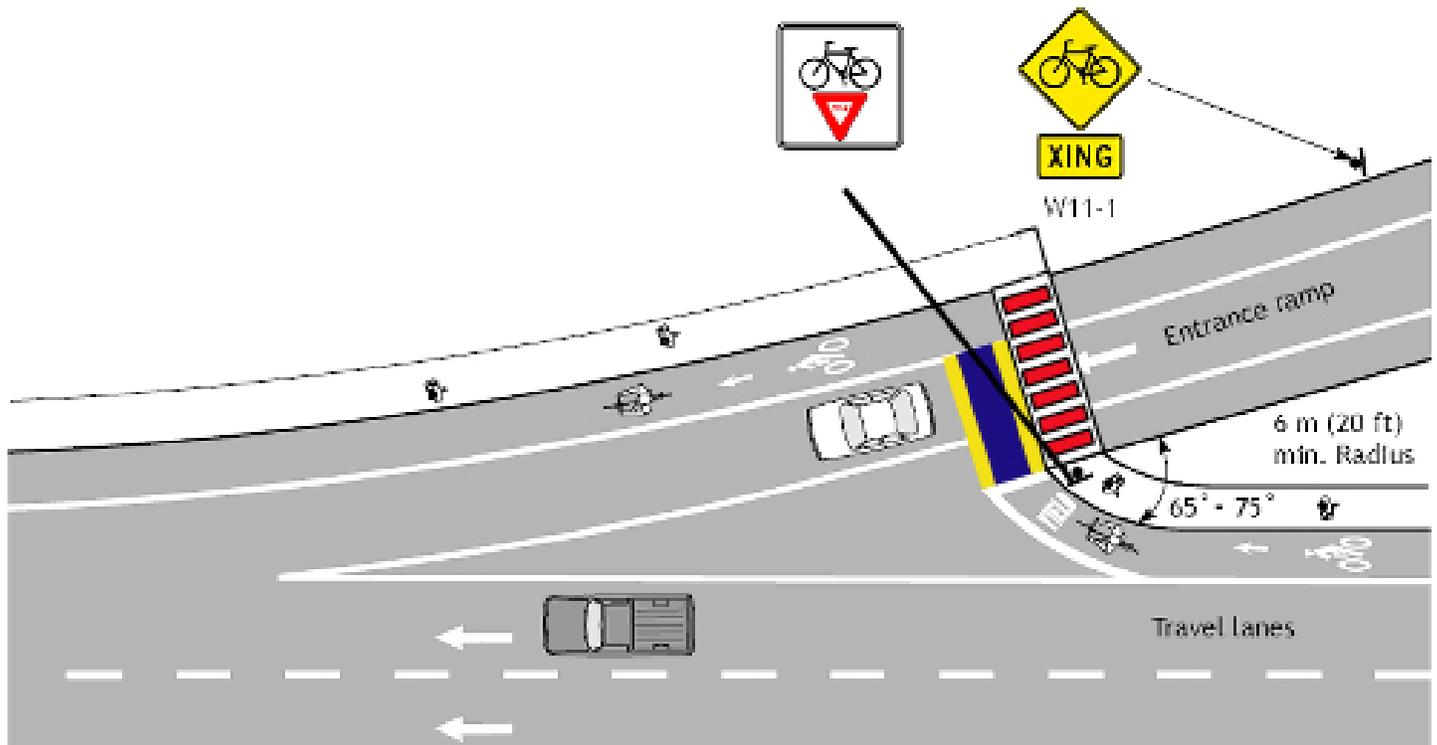


Figure 18: Example of an highway exit design



## Goal B3: Improve Pedestrian and Bicycle Safety Education

We suggest improving pedestrian and bike safety education to teach the children through classroom activities and community walkabouts and to reach community adults and parents through neighborhood association and other meetings. Students will learn to be responsible pedestrians (bikers) who follow traffic rules and regulations. Adults will learn what to expect in pedestrian (biking) areas.



## C | Planning *with* Governments

### Building a unified commitment to non-motorized transportation

#### Goal C1: Educate member governments about the benefits of non-motorized transportation on Eight Mile Boulevard.

Non-motorized transportation would benefit Eight Mile Boulevard in several ways. Perhaps the most obvious of these would be the health benefits associated with enhanced possibilities for exercise. If people have the chance to enjoy walking, running, or cycling in an environment that allows them to do these things safely, it is logical that they will take advantage of it.

Planning for non-motorized transportation on Eight Mile can create this type of environment. The ideal result of this plan is that more people will take advantage of non-motorized transportation for recreation as well as for normal everyday trips they might otherwise have used their cars for. This extra exercise from choosing non-motorized transportation for trips along the boulevard would not only be good for people's physical health, but also for the health of the Eight Mile corridor in general.

The Eight Mile Boulevard Association's façade improvement program and the streetscape improvement program (in progress) are excellent ways of making the boulevard a more attractive option for pedestrians. A plan specifically for non-motorized transportation can complement these, so that all three programs can benefit from the existence of the others.

Also, if more people are walking or cycling in the area, there will be more potential customers for the businesses along the boulevard. This situation will generate economic benefits on Eight Mile through the increased business that shops in the area will do.

#### Importance of regional commitment/informing local decision makers

A well-known challenge for projects on Eight Mile is that so many different municipalities border the boulevard. This can make it time consuming and complicated to put a plan in place. Because a good non-motorized transportation plan needs to cover a very large part of the boulevard, however, it is imperative that there is a regional commitment to non-motorized transportation on Eight Mile. The first step in forging this commitment should be to inform the planners and decision makers of the various municipalities along Eight Mile about the existence of a non-motorized transportation plan.

The staff planners, planning commission members, and city council members of the municipalities along Eight Mile are the people who will have the most to do with incorporating non-motorized transportation plans for Eight Mile into the existing plans

of their respective cities. These people should, therefore, be the focus of efforts to promote the Eight Mile Boulevard Association's non-motorized transportation plan. The 8MBA can play a role in soliciting the support of these key people.

## Goal C2: Encourage member governments to incorporate the 8MBA NMT Plan into their own Plans.

Eight Mile Boulevard Association can encourage the decision makers in its member governments to include the planning and design elements of the 8MBA Non-motorized Transportation Plan in their existing plans both informally and formally.

### Informal Strategies



**Action C2(a): Establish or utilize relationships with municipal planners.**

Some strategies for informally getting the word out include creating a website detailing the vision for a non-motorized transportation plan on Eight Mile, sending information about the plan to planners and commissioners, or simply talking to people in the Eight Mile Boulevard Association's regular course of communicating with its contacts in the various municipalities. This type of informal communication with municipalities will be a useful first step in letting them know about the plan. After they have some initial information about the 8MBA non-motorized transportation plan, the next step is to get them to formally include it in their existing city plans.

### Formal Strategies

**Action C2(b): Participate in the planning process as advisors and consultants to member governments.**

The purpose of Goal C3 is to encourage municipalities to include the planning and design elements of the Eight Mile Boulevard Association non-motorized transportation plan in their own master plans or any specific transportation plans that they have. A representative of Eight Mile Boulevard Association should follow municipalities' planning processes and attend their meetings to promote the 8MBA non-motorized transportation plan. These talking points might be a useful guide for discussing the plan in such meetings:

### Talking Points

Benefits of non-motorized transportation on Eight Mile:

- Health benefits of more exercise, which a non-motorized transportation plan would make more convenient/attractive
- Economic benefits of more people walking/cycling by businesses, since it is easier for them to make a spontaneous decision to go into a shop if they traveling more slowly than they would be if they were driving

Current obstacles to non-motorized transportation:

- High speed limit on parts of Eight Mile
- Not enough crosswalks; many people cross mid-block
- Difficulty in crossing the freeways that intersect Eight Mile
- No bike lanes

Eight Mile Boulevard Association non-motorized transportation plan features:

### **Pedestrian**

- Creation of more crosswalks
- Pedestrian bridges at freeway intersections
- non-motorized transportation plan as a complement to façade improvement plan (making it safer/easier to walk in the more attractive environment)

### **Bicycle**

- Bike paths on the sidewalk in high speed areas
- Bike lanes where possible/safe
- Increased bike infrastructure (bike racks near businesses/transit stops, bike boxes at big intersections, signs to mark designated paths)

## D | Planning *with* Businesses

### Non-motorized transportation and economic development

#### Pedestrian-Friendly Business

A successful NMT corridor has pedestrian-friendly businesses and amenities—it is walkable. There are three key components to walkable business districts, reflected in goals D1 through D3.

#### Goal D1: Promote businesses that are open and inviting.

Businesses can use streetscape—the landscaping and other physical elements comprising street scenery—to entice pedestrians to shop at their locations. Three characteristics create healthy streetscapes

- open first floor designs;
- cleanliness; and
- attractions

Glass windows and entrances that face or open to the street invite and encourage people to “window shop.” Successful pedestrian corridors entice people with colorful fronting or window advertisements. Open designs intend to attract pedestrians. Businesses can attract pedestrians by designing their stores to entice passersby.



Figure 19: Example of NMT friendly businesses

This area is successful because it allows pedestrians to sample stores as they walk through the neighborhood. Successful streetscapes have curb appeal. Curb appeal is an integral component to individuals' comfort while walking along the corridor. Further, nice business fronting provides a focal point for individuals traversing the corridor. Storefronts can exhibit art or products. Streetscapes give pedestrians destinations to pass as they walk along the corridor. The sidewalk and front of stores need to be clean and clear. Areas where stores put too much in front of the store impede the flow of pedestrians and discourage walking. Curb appeal of other stores encourages pedestrians to patronize or explore them, while consistency promotes walking. The 8MBA already has a Facade Improvement Program and a Streetscape Plan, they should be used in accordance to the NMT Master Plan.

**Action D1(a):** *Ensure that all NMT planning and policies are consistent with design principles set forth in the 8MBA Streetscape Plan and Facade Improvement Program*



## Goal D2: Promote businesses that are diverse in dense areas.

Corridors that are dense and diverse are the best pedestrian routes. Successful business density can be measured using three characteristics:

- diversity of products;
- proximity of entrances; and
- parking to attraction ratio.

First, business diversity is important for pedestrian customers. Business areas that offer needed products in proximity to luxury goods encourage usage of the space. Developing strong overlap between businesses is important. Collaborative businesses promote the success of adjacent neighbors. Diverse products encourage individuals already in the corridor to continue shopping on the corridor. Businesses need to complement each other. For example, a shoe store next to a clothing store gives both businesses mutual benefits. Pedestrians who walk by or see the adjacent complimentary goods are now potential customers. Increased pedestrian travel emphasizes the importance of good curb appeal. It further entices pedestrians to stop and explore. But breadth of product allows pedestrians to be very efficient. Other important services are food and entertainment. Corridors that have restaurants keep people on the streets and able to continue shopping. Streets with no restaurants are less pedestrian friendly than those with cafes or other places to get food or drink. Restaurant services are integral draws and amenities for any successful business corridor.

Second, businesses need to be designed to interact with their neighbors. Good urban form creates places that interact well with each other. Businesses benefit when entrances and exits are easily viewable and accessible to pedestrians. Developing pedestrian friendliness must include disabled individuals. Spaces designed for the disabled serve all patrons better. Accessible businesses are good business.



Last, positioning stores between parking converts drivers into pedestrians on the corridor.

## Goal D3: Provide accessible public facilities

Public facilities or third spaces are important to any successful pedestrian corridor. Pedestrians need access to

- Bathrooms;
- Seating; and
- Walkable spaces.

Public restrooms allow people to spend more time on the corridor. When people need to use these facilities stores or restaurants can gain additional business. People will leave the corridor to find bathrooms if they are not readily accessible.

**Action D3(a): Encourage businesses to provide accessible restroom facilities.**

Seating or meeting spaces keep people on the corridor. Available seating can be used as resting places for people who have been walking around the corridor all day. Restaurants or plazas can serve as meeting places. Seating outside and inside provide patrons with a place to gather and relax while remaining in the area.

**Action D3(b): Encourage businesses to provide public seating.**

Walkable space must be clear and continuous, especially for wheelchair users. People do not like to walk in areas with constant impediments to continued clear flow of traffic. Put tables or outdoor seating next to but not in the main walkway.

1. Display goods closer to the street as a buffer to road way traffic without blocking the main sidewalk.
2. Landscaping is important.

## Cyclists

Cyclists have many of the same needs as pedestrians. They need

- Parking;
- Awareness; and
- Safe routes.



## Goal D4: Encourage businesses to provide bicycle parking facilities.

Cyclists need adequate, safe, and visible parking.

Remember to think of these four things when deciding to provide bike parking.

**Action D4(a): Encourage businesses to provide bicycle racks that are securely anchored and visible.**



Businesses should encourage commuters. Commuters are most common where shower facilities are available, routes are safe, and commutes are short. Business owners can promote cycling among their employees.

**Action D4(b): Encourage businesses to hire within their neighborhoods as a way to reduce parking requirements and promote NMT.**

Commuter cyclists are an excellent measure for bike friendliness—they are the most knowledgeable and consistent users of cycling infrastructure. If commuters use the facilities, other cyclists likely will as well. Businesses can promote cycling by providing shower and locker facilities that allow individuals to change clothes after riding to work.

## Awards

The 8MBA can promote cycling and walking along the corridor by offering streetscape and infrastructure improvements grants with NMT in mind. These grants could be used for

- Outdoor seating
- Public restrooms
- Bike lanes or sidewalk rehab
- Plantings
- Creation of public spaces like plazas, courtyards and fountains etc.

## Goal D5: Promote NMT-friendly business through grant programs.

A grant should be offered to the business that has done the most to promote NMT and wants to make changes to the streetscape. This program differs from the current grant program in that it specifically promotes NMT infrastructure improvements.

**Action D5(a): Adopt or amend a grant program for NMT infrastructure improvement.**



A second grant could be given to the business that has the best design plan for developing NMT. A design competition should be based on the following criteria:

- Promotion of NMT
- Creation of a destination
- Incorporation or creation of a public space
- Connection to public transit
- Visual impact to the corridor
- Sustainability

## **Automobile Parking and Transit**

Decreasing frontal parking can promote density of pedestrian travel.

### **Goal D6: Eliminate all on-street parking between telegraph and Ryan road.**

Rear entering parking structures or lots should be built 1 mile apart to create designated areas for parking. Handicap parking should be provided as required by all applicable laws. The corridor should request variances to decrease the minimum parking requirements along the corridor. The decrease of parking supply should make people who drove to the area into pedestrians on 8 mile boulevard.

It is not feasible at the current time to assume many individuals will walk to the corridor, however. By concentrating parking opportunities individuals will park in designated areas and walk to their destinations. After arriving on the corridor these pedestrians will benefit from the other programs and improvements designed to augment pedestrian traffic. The increased flow of pedestrians will exist primarily between designated parking areas or 1 mile intervals. Concentrating the density of parking will promote proximity business. Individuals will no longer be able to park and walk directly to their destinations. The corridor will gain most of its pedestrians from these individuals who drive and walk.

A second integral component is business incorporation of transit stops. Creating inviting and integrated transit locations can further boost NMT traffic. Cyclists are willing to ride part of the way toward their destination and then use public transit. The business community should take advantage of this resource and promote the use of public transit by maintaining adjacent transit stops and incorporating them into their streetscape plans.

## E | Planning *with* Education

### Increasing awareness in the community

The residents of the Detroit area are who this plan is for, and their knowledge of its existence and systems is critical to the plan's success.

#### Goal E1: Address school and community groups.

8MBA should organize a group of volunteers to attend meetings of community groups, government bodies, and school assemblies to provide information about bike lanes, parking and storage of bicycles, connections with public transit, pedestrian and cyclist safety, and the many other characteristics of the Eight Mile Boulevard multi-modal corridor. 8MBA can facilitate these activities through scheduling and preparation of materials, and through training volunteers.

*Action E1(a): Compose press releases, talking points, hand-outs, and media (PowerPoint) for elementary and middle school presentations and community groups.*

*Action E1(b): Produce a general-audience brochure to be distributed through area businesses, schools, and visitors' bureaus.*



#### Goal E2: Implement Fitness Trails to increase the awareness of existing infrastructure

To encourage people to “go on the street”, urban fitness trails should be used as a valuable and cheap tool. Safety and vandalism issues have to be carefully address before their implementation. The use of existing street furniture should be made as often as possible to reduce their cost and health benefits should be emphasized through the parcours as well as through information to the population about the program. For more information, see appendix IV.

*Action E2(a): Implement Fitness Trails where they fit the best on both side of the Boulevard*



#### Goal E3: Promote NMT and Eight Mile Boulevard through public events.

Eight Mile Boulevard is an historic, iconic thoroughfare deserving of recognition and promotion through regular special events. Such exposure will greatly increase awareness of the Boulevard's amenities—especially NMT infrastructure—among neighborhoods along the corridor and beyond.

8MBA can catalyze the creation of public events by providing organizational coordination for individual task groups charged with designing and initiating public events along the corridor, such as public art showings, marathons and charity walk/bike events, musical events, classic car cruises, parades, and other similar activities.



**Action E3(a): *Establish task forces for the design and initiation of special events.***

8MBA may wish to establish a committee to generate ideas and subcommittees (task forces) to oversee each event. Assistance to the task forces should include a package of resources including government and media resource contacts. For more information, see appendix III.

Suggested events:

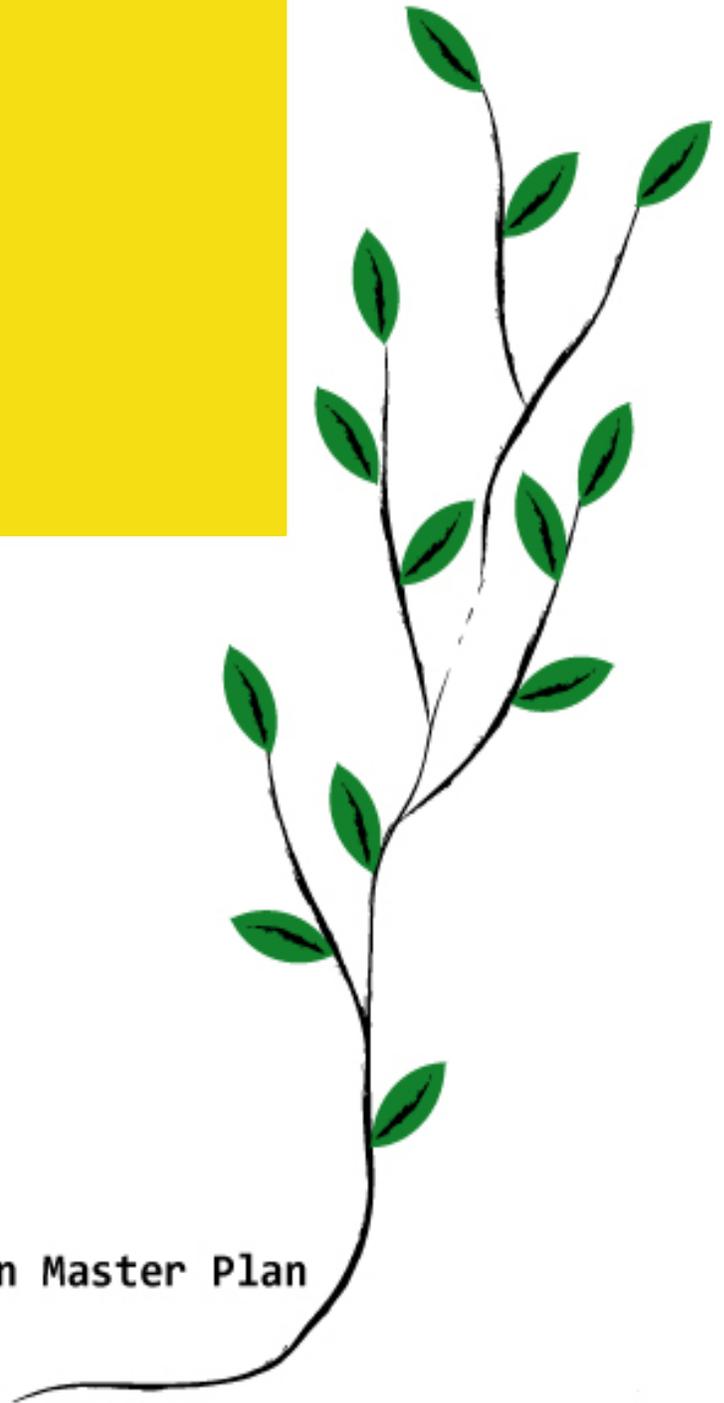
- Car-Free Day
- 8MB Marathon
- Classis Car Cruise
- Bicycle race event or Triathlon
- Public art show/competition

# Chapter Three

# 8 MBA

## Implementation Strategy

Non-Motorized Transportation Master Plan  
*Prepared by*  
MovingForward



Transforming a plan into actions requires a systematic strategy for prioritizing projects. A general inventory of existing infrastructure in the Eight Mile Road corridor was conducted during the preparation of this plan, but further steps should be taken in order to proceed with effective improvements.

## Strategy for General Plan Implementation



### High Priority, Short-Term Actions

- Organize a Car Free Day to launch the program
- Complete sidewalk network
- Begin designating locations for bike lane/path construction and intersection improvements (see “Strategy for Physical Infrastructure Improvements,” below.)
- Begin the coordination of Safe Routes to School applications in all local schools
- Construct bike parking at transit stops

### Second Priority Actions

- Implement business outreach and development objectives
- Investigate possibilities for freeway crossings
- Select locations for fitness trails; solicit donors/grants
- Form committees to plan and implement special events

## Strategy for Physical Infrastructure Improvements

Based in large part on the excellent implementation strategy developed in Portland, Oregon for that city’s highly regarded 1998 Pedestrian Master Plan, the following steps are suggested to select high-priority projects:

1. Solicit input from individuals and neighborhood groups regarding high-priority projects. The Appendix shows a sample poster/flyer used in Portland as an invitation to participate in public meetings.
2. Conduct an in-depth inventory of infrastructure, including measurement of sidewalk widths and setbacks, presence or absence of curb cuts, crosswalk painting, signals, bus stop infrastructure, and streetscape elements. 8MBA may wish to use volunteer or intern labor to collect this data, as it will be time-intensive.
3. Aggregate data in map form, preferably using GIS.
4. Collect auto-pedestrian and auto-cyclist crash data (available from SEMCOG) and code the information into the mapping system.
5. Estimate individual project costs, in consultation with local street/transportation departments and MDOT.
6. Utilize two measures borrowed from the City of Portland Office of Transportation to prioritize projects: the Pedestrian Potential Index and the Pedestrian Deficiency Index.

The Pedestrian Potential Index (PPI), based on street segments, indicates the potential for pedestrian activity based on rank-value scores in four categories. 8MBA should determine the scale of possible scores for each category based on relative importance.

- Land Use Mix: neighborhood density, diversity of land uses
- Destinations: retail, recreation, schools and other activity centers
- Connectivity: a dense and accessible network of streets
- Scale: human-scaled businesses at appropriate setbacks (i.e., not too far from the street.)
- (A fifth measure, topography, is part of the Portland index, and is excluded here.)

Once scores are assigned in each category and summed for each segment of the Boulevard, they can be mapped (or coded into a GIS model.).

The Pedestrian Deficiency Index (PDI) is a similar measure, indicating the degree to which necessary elements—especially safety elements—are missing from each street segment. It is based on three measures:

- Missing sidewalks
- Dangerous street crossings (incorporating crash data)
- Lack of connected street network (length of blocks between intersections)

Again, 8MBA should assign a standard number of points to each segment for each deficiency or degree of each deficiency, and sum them.

High priority areas for improvement can be identified by looking for street segments with high PPI and high PDI. Using these two scores together with cost estimates, 8MBA can compose a ranked list of priority projects.

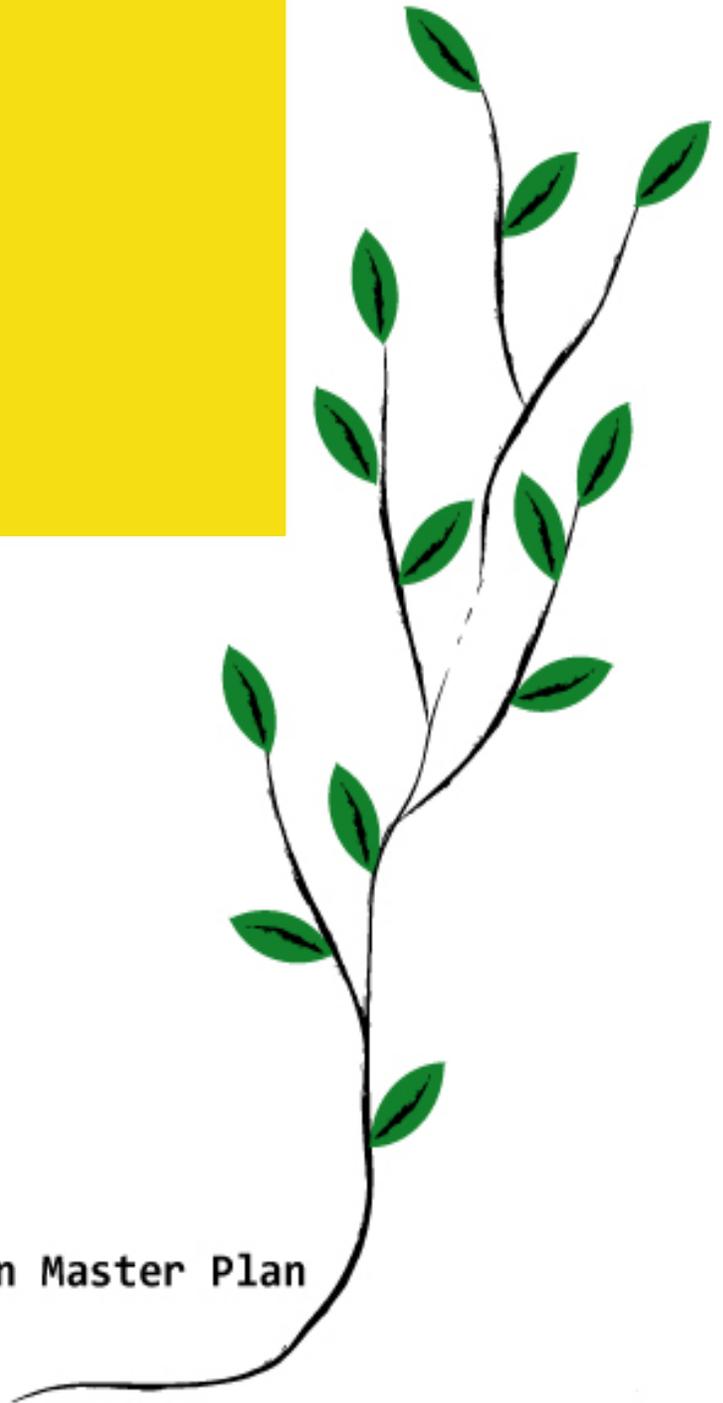
In general, and in cases where clear differences between street segments do not emerge, pedestrian safety must be given the highest priority.

# Chapter Four

# 8 MBA

**Conclusion**

**Non-Motorized Transportation Master Plan**  
*Prepared by*  
**MovingForward**



Eight Mile Boulevard may not have been designed for non-motorized transportation, but that does not mean NMT can never be an attractive option there. Making it so, however, will require a lot of time and effort.

The plan outlined here is intended to be a guide to the issues that will be important in making walking and cycling on Eight Mile safer and more enjoyable, and also to what can be done to transform the Boulevard into a place that is friendlier to these forms of transportation. This transformation will require planning with transit and other forms of transportation with the goal of making Eight Mile a multi-modal boulevard, where pedestrians and cyclists feel as at home as drivers. It will also require the physical planning that must go into making the Boulevard safe for those taking advantage of non-motorized transportation.

Bringing the local governments that border Eight Mile into the planning process is another essential part of non-motorized transportation's hoped-for success in the area. Similarly, planning with and for businesses on Eight Mile is critical to a successful NMT plan.

Promoting businesses that are open and inviting, diverse, densely clustered, and easily accessible will create a good environment for non-motorized transportation to flourish in, which will in turn be good for the businesses on the corridor.

Finally, encouraging non-motorized transportation on Eight Mile will require informing the residents of the area about the possibilities and feasibility of taking advantage of it.

The Eight Mile Boulevard Association can work toward these goals through its position and resources as a respected agent of development in the Detroit area, as well as through the Association's leverage in administering grants and other incentives to promote its purpose. Popular use of non-motorized transportation is an outcome that would further the greater mission of the Eight Mile Boulevard Association, and for this reason making it a reality is a pursuit worthy of the Association's time and energy. This plan can be called a success if it is useful to the 8MBA as it negotiates the process of making NMT more possible and popular on Eight Mile Boulevard.

# 8 MBA

## Appendices

**Additional Resources: I**  
**Implementation Tools**  
**and Interviews: II-VI**  
**Case Studies: VII-X**

**Non-Motorized Transportation Master Plan**  
*Prepared by*  
**MovingForward**



# I Additional Resources

## Non-motorized plans:

Washtenaw: <http://www.miwats.org/nonmotorized/nonmotorized.htm>

Ann Arbor: <http://www.greenwaycollab.com/AANoMo.htm>

Portland: <http://www.trails.org/news.html>

Michigan: [http://www.michigan.gov/mdot/0,1607,7-151-9621\\_11050---,00.html](http://www.michigan.gov/mdot/0,1607,7-151-9621_11050---,00.html)

Minneapolis: <http://www.tlcminnesota.org/Resources/NTP%20Program/ntp.html>

Auburn: <http://www.ci.auburn.wa.us/transportation/non-motor.asp>

## Websites:

Bike boxes: <http://www.bikexpert.com/bikepol/facil/stopline.htm>

Safe route to school: <http://www.saferoutesinfo.org/>

Fitness trail: <http://www.vitaparcours.ch/d/html/>

Car free day: <http://www.worldcarfree.net/wcfd/>

Walking bus: <http://www.iwalktoschool.org/>

## Books:

- Rodríguez, D. A. and Joonwon, J., 2004, *The relationship between non-motorized mode choice and the local physical environment*, Transportation Research Part D: Transport and Environment Volume 9, Issue 2, March 2004, Pages 151-173

- Plaut, P. O., 2005, *Non-motorized commuting in the US*, Transportation Research Part D: Transport and Environment Volume 10, Issue 5, September 2005, Pages 347-356

- Thompson, D., 1978, *Idaho non-motorized recreation trails report*, Idaho Dept. of Parks and Recreation

## Implementation Tools and Interviews

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IV Urban Fitness Trails as an Implementation Tool	47
V Interview with Billy Freund and Mark	50
VI Interview with Tawnya Morris of Abayomi CDC	52



**To:** *MovingForward* group members  
**From:** Jason Enos  
**Subject:** “Bike Boxes” for cyclist safety  
**Date:** March 20<sup>th</sup>, 2008

### **Introduction**

“Bike Boxes” are a traffic safety innovation that originated in Europe and became common in a few cities during the last twenty years. They are designed to make cyclists more visible to drivers at intersections, and to allow cyclists to enter the intersection before motorists. The bike box, or Advanced Stop Line, is a pavement marking system for street intersections in which the stop line for vehicles is held back from its normal position by 8 to 12 feet, and the space in front of the vehicular stop line is designated the “bike box.” The box—the area between the vehicular stop line and the bike stop line—is often painted in a highly visible color. During a red light, motor vehicles are required to stop behind the bike box, while cyclists are permitted to go ahead of traffic, to the bike box, and wait for the green light directly in front of motorized traffic.

Bike Boxes are implemented in conjunction with on-street bike lanes. Engineers have devised designs for bike boxes that conform to a variety of intersection configurations.

### **Why Use Bike Boxes?**

One of the more common types of car-bike collisions is the “right hook,” in which a motorist making a right-hand turn at an intersection crosses the path of a cyclist in the adjacent bike lane who is continuing straight through the intersection. Bike boxes are intended to increase the visibility of cyclists all around an intersection, but are particularly well suited to decreasing the likelihood of “right hooks.”

### **Implementation of Bike Boxes**

The cost of creating bike boxes is generally considered to be minimal when it is incorporated into street reconstruction or re-painting of pavement markings. In some European cities where bike boxes are commonly used, additional “bike-only” traffic signals are also employed, giving cyclists a green light in all directions before any motorized traffic is given a green.

Signage is not absolutely necessary to indicate the presence of bike boxes, but many jurisdictions have included them. Signs prior to the intersection can indicate to both drivers and cyclists that the bike box is used at the upcoming intersection, and graphically represent where the stopping lines are for both traffic types.

### **Bike Boxes on 8MB**

On-street bike lanes and bike boxes are promising tools for making 8MB safer for cyclists. Because the capacity of 8MB for motorized traffic is generally higher than its usage, there is reason to believe that the Michigan Department of Transportation would consider reducing the number of traffic lanes to incorporate bike lanes or bus/bike lanes. Planning for the addition of bike lanes should include bike boxes and signage as a low-cost extension of the utility of bike lanes.

Other jurisdictions have educated drivers and cyclists about the proper use of bike boxes through a combination of billboard advertising and web-based information. The cities of Eugene and Portland, Oregon have added bike boxes to some intersections in recent years, and have used both outdoor advertising and websites to inform the public. Billboard advertising, should it be incorporated, should include a web address. Because the 8MB corridor is multi-jurisdictional, all of the adjacent municipalities should have bike box information on their websites or links to a website centrally maintained by 8MBA, MDOT, or another regional authority.

### **Drawbacks**

The only drawback yet noticed by jurisdictions having experience with bike boxes is that their installation requires a “no right turn on red” designation wherever they are used. Under conditions of congestion—as one might find in a central city—this can have a negative effect on travel times. However, 8MB is a generally free-flowing thoroughfare, and restricting right turns on red at signaled intersections should have little effect on total travel times through the corridor.

### **Sources**

Cambridge Cycling Campaign (1998). “Advanced Stop Lines.” Document No. N9815. Available at [www.ccdc.cam.ac.uk/camcycle](http://www.ccdc.cam.ac.uk/camcycle).

City of Portland [OR], Office of Transportation (2003). *Portland’s Blue Bike Lanes: Improved Safety Through Enhanced Visibility*

Cumming, Alistair. “A Framework for Bicycles at Intersections.” (Unpublished) Institute of Transport Studies, Monash University, Melbourne, Australia.

Federal Highway Administration (1994). “FHWA Study Tour for Pedestrian and Bicyclist Safety in England, Germany, and The Netherlands.” <http://ntl.bts.gov/DOCS/bikeped.html>. Accessed March 9, 2008.

Federal Highway Administration. “Pedestrian Safety Guide and Countermeasure Selection System: Advanced Stop Lines.” [http://www.walkinginfo.org/pedsafe/pedsafe\\_curb1.cfm?CM\\_NUM=42](http://www.walkinginfo.org/pedsafe/pedsafe_curb1.cfm?CM_NUM=42). Accessed March 9, 2008.

Hunter, William W. (2003). “Evaluation of Innovative Bike-Box Application in Eugene, Oregon,” *Transportation Research Record* 1705. 99-106.



# III MEMORANDUM

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**To:** *MovingForward* group members  
**From:** Chuang-Chung Hu  
**Subject:** Car Free Day event as an Implementation tool  
**Date:** March 20<sup>th</sup>, 2008

## Introduction

This memorandum discusses “Car Free Day” event as an implementation tool for increasing awareness of Eight Mile Boulevard Non-motorized Transportation Plan. A Car Free Day is an event organized with the goal of taking a fair number of cars off the streets of a city or some target area or neighborhood for all or part of a day, in order to give the people who live and work there a chance to consider how their city might look and work with a lot fewer cars. Now it’s a popular event all over the world. September 22nd is annual world car free day; over 100 million people in 1,500 cities around the world get together in the streets, intersections and neighborhood blocks to remind the world that we don’t have to accept our car-dominated society. Here I suggest that the Car Free Day event can be a nice tool for our project.

## Why Car Free Day

A Car Free Day event is a powerful tool to persuade local people that reducing motorized traffic leads to a better local environment and healthier local economy. The Car Free Day event has these effects:

- **Awareness:** To let people (residents & people outside 8MB) be aware of 8MB Non-motorized Transportation Plan.
- **Encouraging non-motorized activities:** To increase people’s walking or bicycling activities by increasing people’s awareness of what non-motorized facilities can be used.
- **Local economy improvement:** Business facilities on 8MB can benefit from customers attracted by the Car Free Day event.
- **Satisfying the demand of non-motorized activities:** To meet or to increase bicycling or pedestrian interest groups’ demand of activities events.
- **Cooperation:** The event can promote the cooperation of different municipals, communities, merchants, and interest groups.
- **Culture:** Local cultures and characteristics (e.g. food, music, etc) can be promoted through different types of activities in the Car Free Day event.
- **Education:** To let people understand we should depend on car less, and be more concerned with environment and healthy life issues.

## How to implement Car Free Day

- **Dialogue** with municipals, communities, local business, and cycling groups on Car Free Day event. It works best as a participatory event. Consult and involve as many groups as possible.
- **Plan** positive use of the car free space. E.g. arts and crafts markets, children’s play areas, cycle training and other cycle events, free zero emission delivery service, evening parties,

# MEMORANDUM

**To:** *MovingForward* group members  
**From:** Jason Enos  
**Subject:** “Bike Boxes” for cyclist safety  
**Date:** March 20<sup>th</sup>, 2008

## Introduction

“Bike Boxes” are a traffic safety innovation that originated in Europe and became common in a few cities during the last twenty years. They are designed to make cyclists more visible to drivers at intersections, and to allow cyclists to enter the intersection before motorists. The bike box, or Advanced Stop Line, is a pavement marking system for street intersections in which the stop line for vehicles is held back from its normal position by 8 to 12 feet, and the space in front of the vehicular stop line is designated the “bike box.” The box—the area between the vehicular stop line and the bike stop line—is often painted in a highly visible color. During a red light, motor vehicles are required to stop behind the bike box, while cyclists are permitted to go ahead of traffic, to the bike box, and wait for the green light directly in front of motorized traffic.

Bike Boxes are implemented in conjunction with on-street bike lanes. Engineers have devised designs for bike boxes that conform to a variety of intersection configurations.

## Why Use Bike Boxes?

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## Implementation of Bike Boxes

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Signage is not absolutely necessary to indicate the presence of bike boxes, but many jurisdictions have included them. Signs prior to the intersection can indicate to both drivers and cyclists that the bike box is used at the upcoming intersection, and graphically represent where the stopping lines are for both traffic types.

## Bike Boxes on 8MB

On-street bike lanes and bike boxes are promising tools for making 8MB safer for cyclists. Because the capacity of 8MB for motorized traffic is generally higher than its usage, there is reason to believe that the Michigan Department of Transportation would consider reducing the number of traffic lanes to incorporate bike lanes or bus/bike lanes. Planning for the addition of bike lanes should include bike boxes and signage as a low-cost extension of the utility of bike lanes.

# IV MEMORANDUM

**To:** MovingForward group members  
**From:** Marie Chollet  
**Subject:** Urban Fitness Trails as an Implementation Tool  
**Date:** 03/20/2008

## INTRODUCTION

*This memo explains what fitness trails are, how they can be implemented on the 8 Mile Boulevard and what the benefits and disadvantages of such an initiative are.*

I will first discuss the concept of fitness trail, their cost and their possible source of funding. Then, I will show that little adaptations would allow fitness trails to be successfully implemented on 8 Mile in order to promote health in surrounding communities and to influence people's behavior in terms of mobility.

## FITNESS TRAILS

Created in Switzerland during the sixties by the *Zürich Insurance*, fitness trails quickly spread all around the western world. They are based on the "Natural Method" of George Hébert, a French physical educator who believed that exercise should be practiced in a way that imitates the life in the nature (he was fascinated by the physical condition of native African)<sup>i</sup>. They consist in a course and several exercise stations that are coached by signs. The goal is to run from one station to the other and to perform the physical exercises at each station. Nowadays, 504 *Vita parcours* exists in Switzerland<sup>ii</sup> and around 1,300 in Europe<sup>iii</sup>. In USA, they are also known as "parcourse" (which was the product of a private company) and were very popular in the seventies. In the mid-eighties, there were close to 4,500 parcourses in the country along with hundreds of similar products sold by other firms<sup>iv</sup>.

Fitness trails are usually between 1 to 2 miles long. The Swiss trails have 15 stations and exercises are divided into three groups: endurance, strength, and agility, but there are several variations of the initial parcourse in other countries. By definition, fitness trails are located in natural environment such as parks or forests at the periphery of urban centers.

## INFRASTRUCTURE, COST AND FUNDING

The average cost of a *Vita parcours* in Switzerland is around 100,000 SFR<sup>v</sup> and funding typically come from municipalities, sport & health organizations, and the *Zürich Insurance* that provides signage. Costs usually include the creation of the trail, the 15 stations and parking infrastructure. Some stations require very little infrastructure (if any) and some others a little bit more.

In USA, a few businesses provide stations for fitness trails. Here are some examples: *FitnessTrails*<sup>vi</sup>, *Fit-Trail*<sup>vii</sup>, *Columbia Cascade*<sup>viii</sup>, *GameTime*<sup>ix</sup>, and *Outdoor Fitness*<sup>x</sup>. Prices are not always clearly indicated, but here is an overview of what ones can expect:

- 10 *Fit-Tails* stations: \$5495 without shipping and handling fees.
- The complete 16 stations *GameTime* set: \$11,649 without shipping and installation
- *Outdoor Fitness* single stations costs from \$110 to \$3,573 without shipping and installation but stations from the initial parcourse are all less than \$1,000.



Some firms offer recycled material (wood, plastic, metal). This implies the eligibility for LEED certification (Leadership in Energy and Environmental Design)<sup>xi</sup> which could bring funding from State or Federal government.

According to *FitnessTails*, funding is easily available in the form of grants from Sport and Recreation Departments or Heath Agencies. Also, there is a great sponsorship opportunity because signage can be personalized with sponsor logos<sup>xii</sup>. Finally, a partnership with insurance companies is conceivable because their support for these trails is strong<sup>xiii</sup>.

### **URBAN FITNESS TRAILS ON 8 MILE**

Implementing fitness trails on 8 Mile will require their adaptation to the urban environment. This means that itineraries will have to be conscientiously chosen in regards to:

- **Maximize the use of existing infrastructure:** street furniture and existing pathways should be used as often as possible to provide the needed infrastructure for the stations and the course, hence costs will be lower.
- **Minimize the possible safety concerns:** itinerary should include as few road crossings as possible and efficient lightening should be provided all along the parcours.

Besides, **vandalism issues** should be seriously considered. Previous attempts to implement urban fitness trails in Switzerland failed because of safety and vandalism issues. However, fitness trails & clusters<sup>xiv</sup> are already successfully implemented in some US cities and vandalism doesn't affect every existing playground; therefore solutions exist to avoid a flop:

- **Use resistant equipments:** most outdoor fitness equipments available in the US are designed to withstand vandalism. Fit-Trails even offers a five-years guarantee for any damages on sign panels including vandalism<sup>xv</sup>.
- **Ensure good attendance:** the best way to avoid vandalism is to avoid poor attendance. A successful parcours won't be vandalized.
- **Involve communities:** a project brought by the community is likely to be successful because it is the results of local population's desire.

<b><i>Benefits</i></b>	<b><i>Disadvantages</i></b>
<ul style="list-style-type: none"> <li>- Promote health</li> <li>- Bring people in the streets</li> <li>- Make people aware of non-motorized infrastructure</li> <li>- Unify communities through the project</li> </ul>	<ul style="list-style-type: none"> <li>- Exposure to vandalism</li> <li>- Safety concerns if the itinerary is not well-designed</li> </ul>

<sup>i</sup> Source: Revue Internationale Militaire (*International Review of Military History*) N°83, 2003, "Aux origines de la "méthode naturelle": Georges Hébert et l'enseignement de l'éducation physique dans la Marine française", La Haye: Commission Internationale d'Histoire Militaire (*International Commission of Military History*)

<sup>ii</sup> Source: <http://www.vitaparcours.ch>

<sup>iii</sup> Source: Douglas M. Knudson & Wendy Weis, undated, "FNR-106 - Park Trails for Fitness", West Lafayette, IN: University of Purdue, Department of Forestry & Natural Resources, Outdoor Recreation. Retrieved 03/20/2008 from <http://washingtontparkour.com/Parkour/parcours/purdue.htm>

<sup>iv</sup> Source: Mike Grudowski, "Parcourse Redux", *Outside Magazine*, May 2000. Retrieved 03/20/2008 from <http://outside.away.com/outside/magazine/200005/200005body1.html>

<sup>v</sup> Source: [http://www.versoix.ch/?page=61&obj=3594&site\\_map=](http://www.versoix.ch/?page=61&obj=3594&site_map=) retrieved 03/20/2008

<sup>vi</sup> <http://www.fitnessrails.com/usa/index.htm>



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<sup>vii</sup> <http://www.fittrail.com>

<sup>viii</sup> <http://www.columbia-cascade.com>

<sup>ix</sup> <http://www.gametime.com>

<sup>x</sup> <http://www.outdoor-fitness.com>

<sup>xi</sup> Source: <http://www.columbia-cascade.com/leed1.html>. LEED® is a registered trademark of the U. S. Green Building Council

<sup>xii</sup> Source: <http://www.fitnessstrails.com/usa/funding.htm>

<sup>xiii</sup> Source: Source: Douglas M. Knudson & Wendy Weis, undated, "FNR-106 - Park Trails for Fitness", West Lafayette, IN: University of Purdue, Department of Forestry & Natural Resources, Outdoor Recreation. Retrieved 03/20/2008 from <http://washingtonparkour.com/Parkour/parcours/purdue.htm>

<sup>xiv</sup> Fitness clusters are when stations are not distributed in a course but clustered at one place.

<sup>xv</sup> <http://www.fittrail.com/guarantee.htm>

# V MEMORANDUM

**To:** *MovingForward* group members  
**From:** Adam Hollier  
**Subject :** Interview with Billy Freund and Mark  
**Date :** 03/13/2008

This memo discusses the interview held on March 13 with Billy Freund and Mark in Oak Park, Michigan. First it describes Billy and Mark's role highlighting their experience and connection to 8mile and cycling. Second, it summarizes the interview and discusses the major findings. Last, it explains the implications of the interview findings to the project as a whole and how the information will be used. In short, the interview will be used as community input, expert knowledge and a base for continued research.

## Background

Billy Freund is the owner of Bill Freund Olympic Schwinn on Coolidge road in Oak Park. Billy has experience with cycling from a variety of levels; he competed Olympics as a cyclist; he has cycled in the area for more than forty years; he has also owned and operated his bike shop for more than twenty years. Billy's experience makes him an expert cyclist. One of his employees Mark also provided valuable information. Mark has worked as a bike mechanic for more than twenty years. He is very knowledgeable about bicycle maintenance and performance. They both sell bikes and maintenance plans to local municipalities. They have sold bikes to the Detroit Medical Center, MGM Grand and Greek Town Casinos' private security. Also, they have a contract to service the city of Southfield and Oak Park's police bikes. Their customers ride on the many trails and streets in the surrounding tri-county area and beyond.

## Interview Summary

During the interview I asked Billy and Mark about: bike infrastructure, special programs, facilities, stakeholders and businesses. Their recommendations can be broken into three groups: infrastructure improvements, and potential partners. First they suggested drastic changes in the bike infrastructure in the area. Mark advocated for great signage which can be seen by the marked routes on Hilton and Pine Crest roads just north of 8mile. These routes are clearly identified with a yellow line, bikes painted on the lane and eye level signage. Another option is blue lanes painted on the street to delineate bike lanes from automobile lanes (popular in Portland, OR.) Billy suggested putting on street bike lanes in areas where traffic is moving slower and taking bike routes onto the sidewalk or separating them when traffic differentials become increased. They both mentioned the importance of Bike racks along the route and air stations (for pumping up tires.) Last, they mentioned SMART buses as a potential partner for cycling in the area. SMART has recently increased



the number of buses with the bike carrying racks. They commented on the number of their customers that are now more willing to ride since they can put their bike on the bus and go to work or other places of greater distance. They also mentioned collaborating with the municipalities to develop safe policed routes. They proposed incorporating bike cops looping bike routes to ensure safety of cyclists and promote continued use. Mark suggested that the bike police ride bikes with electric motor assists that are capable of reaching sustained speeds of 30-40MPH. A safe environment was the best amenity they could advocate. Further, they constantly mentioned the need for businesses that wanted cyclists.

## ***Implications***

The information gathered in this interview was integral to developing a comprehensive bike assessment of needs. The information will be heavily integrated into the cycling portion of the non-motorized plan. Their recommendations of other potential partners especially SMART will be an integral next step in developing support for a non-motorized 8mile plan. SMART would be interested in programs that increased their ridership. A collaborative program could provide 8mba with a potential funder as well as continued support and influence for non-motorized transit on 8mile. The suggestions about developing signage have already been adopted into our plan. An emphasis on developing unified signage across the corridor will also be an important directive of the plan. Also, developing appropriate signage to explain transitions from on street bike lanes to separated routes along the sidewalk will be integral. Connecting on-street and off street cycling routes will be a focus of coming research. Though these suggestions are very useful we must maintain a balance between developing adequate cycling and pedestrian access.

If you have any questions about the interview or any of the suggestions please do not hesitate to contact me.

# VI MEMORANDUM

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**To:** *MovingForward* group members  
**From:** Christopher Ash  
**Subject :** Interview with Tawnya Morris of Abayomi CDC  
**Date :** 3/13/2008

## **Introduction**

This memo will present the ideas of Tawnya Morris, president and CEO of the Abayomi Community Development Corporation in Detroit, on non-motorized transportation (NMT) on Eight Mile Boulevard and consider their implications for our project. Her position as the head of a community group based on Eight Mile in Detroit makes her input very valuable for understanding the needs of the residents in the area regarding a NMT plan for the boulevard. A NMT plan for Eight Mile should be designed with the people living near the boulevard in mind, and we can act on Morris's suggestions by focusing on safety, improvements to the physical environment, and cooperation with businesses along Eight Mile in our plans.

## **Background and Significance**

I interviewed Morris on Wednesday, March 12. As her titles suggest, she is in charge of managing the Abayomi CDC. "Abayomi" means "a pleasant meeting place" in Yoruba, and this choice of name gives a good sense of the organization's purpose<sup>i</sup>. The goals the organization states on its website are to "establish an awareness of the value of family, improve socioeconomic conditions, and increase the level of dignity and personal achievement within the Detroit community"<sup>ii</sup>. My goal in interviewing Morris was to get a sense of what would be important to her, as the head of a community organization, in a plan for NMT on Eight Mile Boulevard. Abayomi has its offices on Eight Mile, and it serves a community in Detroit, which is the largest city bordering the boulevard. These two attributes of the organization made Morris an ideal source of input for our project.

## **Interview Summary**

The first thing I wanted to find out from Morris was how Abayomi works toward meeting its goals. She explained that the organization works with families in the area, specifically by providing support such as home repair programs, teen counseling services, and summer day camp. It is apparent from its website that Abayomi also provides many youth recreation opportunities as well as a tutoring program<sup>iii</sup>. The rest of the interview, which I will presently summarize, dealt with Morris's thoughts on NMT on Eight Mile. Morris believes that safety is the most important thing to consider in a NMT plan for the boulevard. She mentioned specifically that it would be important for the paths that people are supposed to use to be very clearly marked so that they are easy to follow. She also thought that it might be better to stress walking over biking for safety reasons. Morris further offered some suggestions for promoting NMT on Eight Mile. She thought that stressing the health benefits of walking and biking would be a good approach. She also suggested improving the sidewalks and adding more greenery along the boulevard. The final



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# VII MEMORANDUM

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**To:** *MovingForward* group members  
**From:** Chuang-Chung Hu  
**Subject:** Case Study of Non-Motorized Plan for Washtenaw County  
**Date:** March 6<sup>th</sup>, 2008

## **Introduction**

Case name: Non-Motorized Plan for Washtenaw County  
Time: September, 2006  
Author: Washtenaw Area Transportation Study (WATS)

The Non-Motorized Transportation Plan reflects the desires of Washtenaw County to promote and develop a comprehensive non-motorized transportation system. To facilitate plan development, WATS inventoried the non-motorized system existing in 2005, established goals and policies, and identified improvements needed for the system.

## **Problem Statement**

WATS did a survey for non-motorized transportation in Washtenaw County in 2005. The non-motorized facilities in the County were not friendly or easy to be used. There were 41% of the 196 major destinations (shopping centers, post offices, libraries, universities, parks, public schools, bus stops, retail, etc) are not accessible by walking and 94% of them were not accessible by biking. Less than 10% of the youths surveyed use non-motorized modes to travel to and from school. The WATS travel demand model estimated that approximately 14% of all trips on an average day were made by walking and 1% of all trips were made by biking.

Mass transit is also an important issue. Approximately 34,000 Washtenaw County residents were within a reasonable distance (one half mile) of transit yet were not served by an accessible bus stop.

WATS also wanted to make benefits from the non-motorized transportation plan which can provide transportation choices, support transit, improve air quality, improve residents' health, and reduced transportation cost.

## **Problem Solving**

### **Inventory**

WATS inventoried 866 miles of non-motorized facilities including over 560 miles of sidewalk, 64 miles of off road paths, and 194 miles of bike facilities including 58 miles of paved shoulders. The inventory of existing non-motorized facilities was initiated through meetings with local government and agency staffs and supplemented through the use of aerial photos, existing GIS layers and public comments.

### **Identifying demand**

WATS identified major destinations such as shopping centers, post offices, libraries, universities, parks, public schools, bus stops, retail, etc. The Plan's conceptual non-motorized network is designed

to connect sidewalks and bicycle facilities to schools, major business and commercial districts, housing developments, public and private institutions, and connect communities.

Additionally, WATS developed separate walking and biking surveys for analysis of needs, perceptions and facility use. WATS also did a Youth Mobility Survey to understand people’s behavior. They surveyed approximately 1,000 middle and high school students, an age group whom are not often surveyed, to determine their transportation needs.

### **Public Involvement**

WATS held public involvement meetings at various locations in Washtenaw County. They used email, website, and newspaper to notify residents of the public meetings. A general comment form was developed and distributed at public meetings and posted on the website. These surveys were sent to several walking and biking groups and were distributed at all public meetings. For each survey that cites a specific location in need of a bicycle or walking facility, WATS added the location to a list of future improvements.

### **Identifying deficiencies & improvements**

After the inventory and survey, WATS identified non-motorized deficiencies including bike deficiencies, pedestrian deficiencies, and accessibility issues. A detailed list of location and condition of each deficiency was made. The goal of the project was to improve these deficiencies. In the end of the report, there are detailed lists of the locations and the costs of all improvements in deficiencies.

### **Relevance & Future Team Work Direction**

Washtenaw County is located near 8 Mile Boulevard area and it has similar natural, social, cultural, and economic conditions to our project area’s conditions. The case was also a multi-jurisdictional non-motorized transportation plan. Base on these reasons, I find this plan for the case study and learn some ideas from it.

WATS did a great job in inventory of non-motorized facilities. A detailed inventory is a very important groundwork for a non-motorized plan. The inventory made it possible to identify deficiencies, which were used in the development of a vision and a future improvements list. However, it’s the most difficult part for our project because the 8 Mile Boulevard area is too large for a limited number of group members to investigate. We will try to ask municipals or county governments had they already made non-motorized investigation before or do they hold relative paper or digital data (especially GIS data). If they don’t have such data, we may try to investigate only major deficiencies of non-motorized facilities in the project area. Our project goal should be the same as that in the non-motorized plan for Washtenaw - to identify deficiencies and to improve them.

The concept of “major destinations” is a very good idea for us to know what places may have more non-motorized activities. We will try to indentify spots like schools, parks, libraries, post offices, shopping centers, retails, and grocery stores in our project area. Furthermore, we will also indentify residential area and office districts, and then we can use GIS to help us to identify the important pedestrian routes from homes (offices) to major destinations.

In the plan for Washtenaw County, mass transit is a very important subject. Public bus system is an important way of transportation on 8 Mile Road. Nevertheless, a bus system improving plan and a transit center project for 8 Mile Road were just made and executed. Hence in our project we won’t focus too much on the location or design of bus stops. Instead, we will focus more on the improvement in walking routes from bus stops to major destinations.

About the public inputs, the mobility survey made by WATS helps us to roughly know why people don’t use non-motorized transportation mode. We will care more about these issues such as road safety or the inconvenience of biking facilities. Besides, we may also try to develop a Website to

get people's opinions and to send information to residents by the Internet. In addition, we will try to find and contact the walking or biking interest groups in 8 Mile Boulevard area.

The plan mentioned some guidelines for non-motorized transportation that we should also pay attention to. For example, the plan should meet the requirements of American Association of State Highway and Transportation Officials (AASHTO) standards, Americans with Disabilities Act Accessibility Guidelines (ADAAG).

Finally, we will try to find more funding sources which are listed in the case. These sources of funds are available to address non-motorized facility deficiencies and may also be applied to our project:

Surface Transportation Program Urban and Rural Funds (STP-U and STP-R)

Enhancement Funds (managed by Michigan Department of Transportation)

TEA-21

Congestion Mitigation / Air Quality (CMAQ)

Safe Routes to School

Michigan Transportation Fund (Act 51)

Millage & Special Assessment Tax

General & Private Funds

We will try to get more information of these funds and to determine whether our project fits to the criteria of them or not.

Sources:

Washtenaw Area Transportation Study (WATS) Website: <http://www.miwats.org/>

Eight Mile Comprehensive Transit Center Plan Website: <http://www.eightmile.org/development.html#>



# VIII MEMORANDUM

**To:** *MovingForward* group members  
**From:** Marie Chollet  
**Subject :** West Lausanne Master Plan Case Study  
**Date :** 03/03/2008

## INTRODUCTION

Lausanne has been one of the first Swiss metropolitan areas to create an intermunicipal master plan that brought several communes (the smallest Swiss political entity) together. This master plan includes a non-motorized transportation section that can be very instructive for the 8 Mile plan. It describes interesting analytical and implementation tools as well as overall concepts about non-motorized transportation that can be used in our project. The purpose of this memo is to present this innovative plan, to compare it with the situation on 8 Mile Boulevard, and to identify the links that could be drawn between the two areas. The first section gives a quick overview of the situation in Lausanne, then, the actual plan is described with an emphasis on non-motorized transportation issues and the last part of the memo discuss the relevance to the 8 Mile non-motorized plan.

## SWISS AND LAUSANNE CONTEXT

The main political structures of Switzerland are similar to those of America in many ways because both countries are federalist states. However, urban and metropolitan areas don't have a specific government in Switzerland and are run at either the communal or cantonal (state) levels. This raises many problems, because none of these structures are efficient for dealing with urban issues. To counter this problem, the Confederation revised its urban politics and gave cities the option of creating an "Agglomeration project" that gathers several urban communes together in order to receive federal funding for development projects especially those concerning transportation [6].

Lausanne (like many other Swiss cities) quickly seized the opportunity and created in 2003 the "Lausanne - Morges Agglomeration", which presently encompasses 22 communes. The goal is to ensure sustainable urban development through an integrative approach. As 22 communes represent a vast territory, the Agglomeration is divided into four master plans: East, West & North Lausanne and the Morges area. Among them, West Lausanne is the poorest and the most industrial and commercial area. Somewhat surprisingly, this is the only region that has already completed its master plan. Social and environmental issues are greater and more diverse there than in any other parts of the city: poor neighborhoods are mixing with wealthy areas, quiet residential lots located near the lake are right next to highways and huge commercial centers, and old narrow pedestrian-friendly roads run alongside big auto-oriented roads. West Lausanne is the most challenging region to develop in the Agglomeration and this is also where the most innovative initiatives are created [5].



West Lausanne

## SDOL

From its French name "Schéma directeur de l'Ouest Lausannois", the master plan is called SDOL and was initiated in 2000. One urban planner work part-time on the project and other stakeholders are local and cantonal governments. Eight communes plus the City of Lausanne and the Canton of Vaud are involved in the process. Lausanne West has approximately 65,000 inhabitants and is the area that will probably gain the most population over the next decades in the metropolitan region.

The master plan is divided in six parts. The first four parts deal with specific sites where development will be concentrated. The fifth part concentrates on public spaces and non-motorized transportation, and the last part talks about other transportation modes. [4].

## **PART 5: PUBLIC SPACES AND NON-MOTORIZED TRANSPORTATION**

The decision to analyze non-motorized transportation with public spaces and independently of other transportation modes is interesting. It links two subjects that we don't usually analyze together, but it ends up being really accurate. Public spaces and non-motorized transportation are dependant of each other because an improvement in one part will likely leads to an improvement in the other.

The study is divided into five different sections:

1. *The preoccupation frame* gives a description of the area of study and explains the main issue of non-motorized transportation and public spaces. The initial situation is given at this point.
2. *The vision* presents the objectives of the plan. It provides two maps of the transportation network for pedestrians and cyclists including current and needed infrastructures.
3. *The technical aspects* study specific subjects linked to non-motorized transportation and public spaces issues. It discusses major crossings, modal transfer, neighborhood identification, roads and places toponymy, trails, and categorization of roads.
4. *The key sectors* identify areas that have an intercommunal influence and that should be developed first. Seven sectors are deeply analyzed.
5. *The recommendations* come in the end taking into account the previous analysis as well as the political reality. It gives concrete steps of implementation to reach the initial objectives.

The two maps, one for the pedestrian network and the other for bikes, are included in appendix of this memo. The networks are organized into a hierarchy. If the two maps are complementary, issues regarding cyclists and pedestrian are too different to make a single readable map. Maps show major crossings, public transportation stops, schools, green areas and unsuitable itineraries (roads where non-motorized transportation is obviously too dangerous and would need too many infrastructures to become suitable).

Final recommendations are pragmatic and designed to be integrated in the rest of the master plan. Low speed areas and meeting zones (where cars don't have priority) are in the center of the last section as well as convenience and visibility of routes. Another advice is to create a trails' map to increase comprehensibility. Finally, preservation of green areas, creation of public squares as new central places for neighborhood, as well as maintenance and lighting of existing public places, are recommended [1].



Cycling map and routes direction

## **OTHER PROJECTS**

A quick word about the importance of non-motorized transportation in SDOL's other projects is useful to illustrate the master plan's global vision and the main goals regarding mobility. There are two projects that are particularly relevant to our case: the rehabilitation of a brownfield and the conversion of a major road into an urban boulevard.

1. *Malley's brownfield* has a huge potential for development because it is situated at the heart of a dynamic residential neighborhood that lacks a true center. Public transportation already serves the area (metro and buses), and a regional train stop is planned. Around it, residential and commercial units will take place. This is a perfect example of redevelopment through density and

mixed activities, that probably are the two main components to promote non-motorized transportation [3].

2. *Route de Cossonay* is a major road that goes from the highway belt to the city center. It now goes through auto-oriented commercial and residential areas, and the SDOL plans to transform it into an urban boulevard. The key components are the development of public transportation on the road (bus lanes, possibly a light rail), the widening of the pathways, the creation of visible crosswalks, the planting of trees, and the use of urban design to increase attractiveness of the corridor [2].

## **FROM LAUSANNE TO 8 MILE, LESSONS TO RETAIN**

The west part of the City of Lausanne is a more complex area than the 8 Mile Boulevard because it contains more diverse locations. However, many issues are the same at both places. First, the two regions cross auto-oriented commercial areas. Second, as they are located outside the city center, non-motorized transportation is more challenging to implement. Third, residential “suburb-like” districts are near or in the area of study. And finally, sustainability is the main goal in both cases.

The first interesting thing to learn from the SDOL is that an integrative approach is desirable. One general plan is better than many small plans that are not linked. Bringing municipalities together to work on one common plan will probably gives better results. The 8 Mile Boulevard spans 13 municipalities and three counties; they should all be consulted during the process.

Another useful tool that can be extracted from the SDOL is the “technical aspects” related to non-motorized transportation. Central themes like crossings, pathways’ width, roads qualification, trails, and modal transfer are well-discussed in the SDOL and many ideas can be applied to the 8 Mile plan. Moreover, the idea of representing the goals in two maps is interesting. It enables the reader to visualize both existing and needed infrastructures at the same time. The classification of trails into a hierarchy is also pertinent, especially if the 8 Mile Boulevard will one day be connected to a wider network of trails and bike routes. The concepts of slow speed and meeting zones can be studied, but it is more accurate for residential neighborhoods around 8 Mile rather than on the boulevard itself. Including public spaces in the plan could also be a good idea. Finally, the concepts of urban boulevard and mixed activities that are deeply discussed in the SDOL can perfectly fit in the 8 Mile plan.

The major difference between the two areas is the global context in which they take place. Most Swiss people are already in the habit of using public and non-motorized transportation and this is not always the case in America. When small improvement may be enough in Switzerland, further steps will probably be needed in Detroit. For example, education should be further developed in the 8 Mile plan. Also, funding is easier in West Lausanne’s case because the money will probably come from the Confederation, while no such programs exist in Michigan.

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- [6] Website of the Swiss Federal Office for Spatial Development: <http://www.are.admin.ch>

# IX MEMORANDUM

**To:** *MovingForward* group members  
**From:** Adam Hollier  
**Subject :** Minneapolis, Minnesota Bicycle Discontinuities.  
**Date :** 02/28/2008

## Introduction

This memorandum presents the case of Minneapolis, Minnesota, which was ranked as America's second best bicycle commuting city by the U.S. Census Bureau<sup>i</sup>. Minneapolis is the best city to compare to the Detroit Metropolitan Statistical Area (M.S.A.) because of their shared climate. Most studies of cycling cities involve cities in warmer climates. This memo discusses the findings of *What is at the end of the road? Understanding discontinuities of on-street bicycle lanes in urban settings* a study performed by Kevin Krizek and Rio Roland at the University of Minnesota in 2005. First, I will provide preliminary background on Minneapolis and explain its success. Second, I will explain and discuss bicycle lane discontinuities. Third I will explain the study findings. The study concluded that left hand losers (places where the bike lane ends on the left and cyclists must move across traffic to the right) were the most dangerous. Last, I will explain the relevance to the 8MBA and provide four recommendations for future development.

## Background

Minneapolis was featured in the APA journal as a biking haven. There are three reasons for Minneapolis's cycling success: infrastructure, education and lobbying power. This report focuses on infrastructure, primarily on street bike lanes. The comprehensive network of trails and bike lanes has allowed Minneapolis, with a population of 372,833, to become a bike commuter city. Minneapolis riders possess a high degree of cycling skills and experience. The city has continued to develop its cycling infrastructure, opening the Mid-town Greenway to promote type II and III cyclists. Minneapolis has approximately 400 miles of cycling facilities.

### *Basis for Comparison*

Minneapolis is an excellent comparison city to Metro Detroit because of their similar weather. Minnesota's large cycling community is unique because despite their cold weather, they have a large number of cycling commuters. Minneapolis has an average yearly temperature of 45°F and a winter temperature range between 2-37°F. The city also receives an average of 45 inches of snow yearly. These conditions contrast starkly to other large cycling commuting cities like Portland, Oregon and San Diego, California. Commuter cyclists are a target population along the 8 mile corridor. The city also has a large greenway exclusively for cycling and pedestrian travel. Commuters use it like a bike only highway into downtown. The Mid-Town greenway is an example of an ideal cycling route, a dedicated roadway.

### *Cycling Infrastructure*



Minneapolis has two distinct types of cycling infrastructure on street bike lanes and separated bike lanes like the Mid-Town Greenway. The Mid-Town Greenway is a bicycle and walking trail designed by the city of Minneapolis. The Greenway was opened in three phases. Access to phase III was limited until the opening of the nationally recognized Hiawatha non-motorized bridge. The newly opened bridge made the Greenway a continuous traffic route from beginning to end. The Mid-Town Greenway is a successful model for developing safe cycling routes. Minneapolis has developed the mid-town greenway to facilitate the movement of type II and III cyclists. There are three types of cyclists: type I the most experienced and confident often adults, type II moderate experienced and confidence often teenagers, type III least experienced and confident, often children. The Greenway is known as a type III facility because it is separated from motorized transit. Type III cyclists are novice bikers and children who primarily cycle for recreation separated from traffic.<sup>ii</sup> Type II bike lanes are excellent tools for encouraging new cyclists and nurturing beginners. The Federal Highway Administration (FHWA) recommends on-street bicycle lanes for Type II cyclists<sup>iii</sup> However, problems arise at various intersections because bike lanes end.

## Study: Findings and methods

### Study

*What is at the end of the road?* The focus of this study is safety perception at discontinuities. Discontinuities are defined as the “location in which on-street bicycle lanes end.”<sup>iv</sup> Discontinuities are believed to be the most unsafe portions of bike infrastructure. The three types of discontinuities discussed in this case are Left Side Losers, Intersection Inconsistencies, and Lapsing Lanes. Left Side Losers are “result from bicycle lanes being on the left side of the street, thereby forcing the cyclist to cross over lanes of traffic to continue moving in the forward direction (You need to rephrase all of these definitions in your own words instead of using quotes. Quotes should be used very sparingly/hardly ever.”<sup>v</sup> Intersection Inconsistencies occur when “the bicycle lane is disrupted or terminated due to a relatively prominent intersection.”<sup>vi</sup> Lapsing Lanes “end under relatively benign conditions and provide a well-buffered transition to riding among auto traffic.”<sup>vii</sup>

### Methodology

The study gathered information on the physical attributes of discontinuities (street width, number of lanes of traffic in adjacent lanes, traffic volumes, parking availability, the direction of adjacent traffic, side of the road of the bicycle lane, and other relevant physical characteristics.)<sup>viii</sup> The survey then asks respondents to ride through a minimum of 10 of the 30 selected discontinuities located on the map. Each rider was asked about their perceived safety. The survey had five potential responses: very comfortable, comfortable, neutral uncomfortable and hazardous. Based on the responses, a multivariate analysis was used to determine the importance of 12 variables.<sup>ix</sup> The study had 28 respondents and all the discontinuities were rated at least 10 times. The average age of respondents was 39 years old and 80% were male. Cycling studies are often skewed towards male respondents.<sup>x</sup> Further, the members of this group were primarily experienced cyclists averaging 2.7 bikes per person and 96% of whom cycle to work at least once a week, with an average of 3.71 trips weekly.

## Conclusion

Krizek and Roland found that “having discontinuities end on the left side of the street, increased distance of crossing intersections, the presence of parking after the discontinuity, and increased width of the curb lane all contribute to a heightened level of discomfort for the cyclist.”<sup>xi</sup> Bike lanes primarily help recreational and inexperienced cyclists feel comfortable riding with traffic. The study further develops a system to understand the significant factors of developing bike lanes and infrastructure. The study is easily duplicated and can be used in other cities and areas to assess the locations most in need of alteration.

## Applicability

Minneapolis is a model cycling city. The 8MBA can learn a great deal from Minneapolis’s success at developing a yearlong cycling commuting city in an area with equally cold winters as the Detroit Metro area. The 8 mile corridor is filled with difficult intersections including five expressways (I-275, I-96, M-39, M-10, I-75 and I-94), and two large streets (Telegraph and Woodward). The research methods and conclusions can be utilized to develop safe and effective means to cross these barriers by minimizing the detrimental variables to safety preference identified by the Krizek and Roland study. There are four key takeaways:

1. The weakest points of cycling infrastructure are discontinuities.
2. Developing a cycling population requires safe routes and perceived safety.
3. Beginning and recreational cyclists are more comfortable in bike lanes.
4. The damages of bicycle discontinuities dangers should be minimized.

This study shows that even after building bike lanes, problems arise. It is important to plan for these locations. Effective planning can make these potential hazards minimal by minimizing dangerous discontinuities. Our team hopes to use this information to assess the area using the predictive study variables, minimize discontinuities and build safer bike lanes. The increases in perceived safety could help increase the number of type II cyclists. Most importantly we can give 8MBA the necessary tools to accurately assess the strengths and weaknesses of the bike infrastructure in place. If you have any questions regarding this case study, please do not hesitate to contact me. Thank you for your time and good luck.

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<sup>i</sup> Adam Regn Arvidson “Pedal Pushers” Planning Magazine March 2008 7

<sup>ii</sup> Ibid 8

<sup>iii</sup> Kevin Krizek, Rio W. Roland What is at the end of the road? Understanding discontinuities of on-street bicycle lanes in urban settings. Transportation Research Part D 10 (2005) 56

<sup>iv</sup> Ibid

<sup>v</sup> Ibid 60

<sup>vi</sup> Ibid 61

<sup>vii</sup> Ibid 61

<sup>viii</sup> Ibid 58

<sup>ix</sup> Ibid 64

<sup>x</sup> Ibid 60

<sup>xi</sup> Ibid 66



# X MEMORANDUM

**To:** *MovingForward* group members  
**From:** Christopher Ash  
**Subject:** Atlanta Beltline Case Study  
**Date:** 3/6/2008

## **Introduction**

This memo will discuss the possible applications of a project currently underway in Atlanta to the non-motorized transportation project we are working on for Eight Mile Boulevard. Atlanta has a history of focusing on the car as the most important mode of transportation, which has led to some familiar problems. A relatively new project called the Atlanta Beltline shows promise in addressing these problems. This project is relevant to the similarly car-centered Detroit area mainly in the way that it is designed. Its comprehensive scope is a useful example for organizing our non-motorized transportation plan and for planning in the Detroit area in general.

## **Atlanta's History**

The Atlanta area has a reputation for being very dispersed and car-centered in its development. Lester Brown, in his “Eco-Economy: Building an Economy for the Earth” attributes this condition to the general trend in the development of US cities after World War II<sup>i</sup>. During this period, cars became more popular along with the suburban development designed to accommodate them<sup>ii</sup>. The development of the Atlanta area after World War II was no exception to this pattern, which Brown describes as “often exclusively residential, with no mixing of shops or businesses among the residences”<sup>iii</sup>. Mark Stewart Foster argues that Atlanta emulated the “sprawling cities in the North and West” on purpose<sup>iv</sup>. The results of this approach to growth are predictable, and Foster confirms our predictions by going on to explain that, as one consequence, “dealerships and other automobile services destroyed one of the finest districts along Peachtree Street” in Atlanta<sup>v</sup>. These glimpses of the city’s post World War II development make it easy to imagine what Atlanta is like today. It is hard to find a US city that does not follow the same tired pattern, with all of the problems that arise from it. One of these problems, which may affect the lives of a greater number of people than all of the others, is the problem of almost unavoidably having to rely on a car as the only reasonable mode of transportation. There are many issues embedded in this problem, which are well documented elsewhere. What is interesting for our purposes is that at least some of the people in Atlanta are apparently not content to let the city languish any further as another completely car-centered city.

## **The Atlanta Beltline**

If cars have been the major transportation theme of Atlanta since the end of World War II, trains were very important earlier in the city’s history<sup>vi</sup>. Railroad tracks were built in a circle around the city, but they eventually fell into disuse<sup>vii</sup>. This circle of tracks was the focus of a 1999 thesis by Ryan Gravel, a graduate student at the Georgia Institute of Technology<sup>viii</sup>.



His idea was to use the unused tracks as space for a transit system, which is at the center of what has become a much more comprehensive project known as the Atlanta Beltline<sup>ix</sup>. This project includes many approaches to improving the city, and non-motorized transportation is a part of its scope<sup>x</sup>.

### **Non-motorized Transportation in the Beltline Plan**

It is easy to only think about bicycling when the term “non-motorized transportation” comes up. This, however, neglects walking, the most basic form of non-motorized transportation. It is often inconvenient and unsafe to walk in car-centered cities, and so planning for pedestrians is an important part of a non-motorized transportation agenda. Ed McBrayer, the founder of the PATH foundation, which is trying to connect a system of trails in the Atlanta area, understands this<sup>xi</sup>. He argues that walking trails will actually serve more people than bike lanes will, and his organization is working on creating trails for pedestrians as well as cyclists<sup>xii</sup>. The Beltline’s website explains that there will eventually be 33 miles of “multi-use” trails in the railroad track area, mentioning specifically walkers, bikers, joggers, and in-line skaters as the beneficiaries of these paths<sup>xiii</sup>. This comprehensive focus, as opposed to a strict focus on bike lanes, is very considerate and useful planning. The Beltline plan is also comprehensive in bringing elements outside of its transportation roots into consideration<sup>xiv</sup>. These include affordable housing, brownfield cleanup, economic development, and historic preservation<sup>xv</sup>. The clever planning of this project can hopefully undo some of the damage done by the car-centered planning of an earlier era.

### **Applications for the Detroit Area and our Present Project**

Of all of the regions in the US that have been negatively affected by having based their transportation systems almost solely on cars, the Detroit area is a serious contender for being the hardest hit. The “dealerships and other automobile services” that Foster blames for destroying a nice part of Atlanta are also a familiar sight in the Detroit area<sup>xvi</sup>. Then again, it only makes sense that there are many parallels between Detroit and Atlanta if, as Foster argues, Atlanta followed the example of cities like Detroit as it grew<sup>xvii</sup>. Now that Atlanta has grown up and got some ideas of its own, it might be Detroit’s turn to emulate Atlanta, at least in terms of some of the ideas embodied in the Beltline program. It goes without saying that the Detroit area is in need of more provisions for non-car-centered transportation, but it is not reasonable to expect Detroit to do exactly what Atlanta is doing with the Beltline project at the moment. Atlanta has had the benefit of an already well-established regional transit authority that was willing to get behind the Beltline project<sup>xviii</sup>. Detroit would also do well to establish a regional organization with some kind of power, but the main lesson to be learned from Atlanta is that it is important to make a comprehensive transportation plan. Non-motorized transportation should not be considered independently of transit, which should itself have goals for improving other aspects of the city in its design. Within the category of non-motorized transportation, planners should be careful to consider the needs of pedestrians as well as cyclists in order to benefit as many people as possible, which is clearly an important goal for all of the various plans of the city to have. Please feel free to contact me with any questions you may have about this memo or to further discuss applying these ideas to planning for non-motorized transportation on Eight Mile Boulevard.

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<sup>i</sup> Brown, Lester R. Eco-Economy: Building an Economy for the Earth. New York: W. W. Norton, 2001. <[http://www.earth-policy.org/Books/Eco/EEch9\\_ss3.htm](http://www.earth-policy.org/Books/Eco/EEch9_ss3.htm)> 6 Mar. 2008.

<sup>ii</sup> *ibid.*

<sup>iii</sup> *ibid.*

<sup>iv</sup> Foster, Mark Stewart “Review Essay : Delivering the Masses: Recent Excursions in Transportation History”. Journal of Urban History 7 (1981): 381-389. p. 384.

<sup>v</sup> *ibid.*

<sup>vi</sup> “Beltline Basics: History of the Beltline”. Beltline: Atlanta Connected. 2007. 6 Mar. 2008. <<http://www.beltline.org/BeltLineBasics/BeltLineHistory/tabid/1703/Default.aspx>>

<sup>vii</sup> *ibid.*

<sup>viii</sup> *ibid.*

<sup>ix</sup> *ibid.*

<sup>x</sup> “Implementation: Transit and Trails”. Beltline: Atlanta Connected. 2007. 6 Mar. 2008. <<http://www.beltline.org/Implementation/TransitandTrails/tabid/1805/Default.aspx>>

<sup>xi</sup> Arvidson, Adam Regn. “Pedal Pushers”. Planning. Mar. 2008: 6-12. p. 11.

<sup>xii</sup> *ibid.*

<sup>xiii</sup> *cf. x.*

<sup>xiv</sup> “Beltline Basics: Overview”. Beltline: Atlanta Connected. 2007. 6 Mar. 2008. <<http://www.beltline.org/BeltLineBasics/BeltLineBasicsOverview/tabid/1691/Default.aspx>>

<sup>xv</sup> *ibid.*

<sup>xvi</sup> *cf. iv.*

<sup>xvii</sup> *cf. iv.*

<sup>xviii</sup> “History of MARTA”. Metro Atlanta Rapid Transit Authority. 2004. 6 Mar. 2008. <<http://www.itsmarta.com/about/history/>>

*cf. also vi.*