

## *6. Planning and Zoning Review and Recommendations*

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Accomplishing the vision for the Greater Mt. Pleasant Area requires the combination of a variety of elements, from policy changes, to revised funding priorities, to modified laws and regulations. Many of the physical improvements needed to provide walkable, bikeable places are required within the road right-of-way, often resulting in large public costs. In some cases, retrofitting existing conditions can be avoided if sites, sidewalk systems and access are properly designed at the outset. This section discusses changes to local policy and regulations to minimize some of the conditions discussed in this report, such as lack of connectivity, need for amenities, and even lack of awareness.

The City of Mt. Pleasant and Union Township's ability to regulate development is limited by Michigan law. The Michigan Zoning Enabling Act governs what must and may be contained in a local zoning ordinance, and subsequent case law suggests that municipalities have little jurisdiction or legal right to assess impact fees or require off-site improvements, considered to be those not immediately adjacent to the site. As a result, communities often try to avoid requiring improvements within road rights-of-way. Despite these setbacks, there are some things that can be done to prevent these conditions during the planning and site development stages.

### **Topics:**

- 6.1 – Master Planning
- 6.2 – Subdivision Regulations
- 6.3 – Zoning Ordinance
- 6.4 – Recommendations for Planning and Zoning

## 6.1 Master Planning

The overarching goal of this plan is to give residents a viable alternative to vehicular travel. Auto trips are often reduced when development includes a variety of uses on one site so travelers can choose to walk a comfortable distance rather than drive, or if it includes strong physical links between the site and transit facilities, pathways, and other facilities. Other tools like travel demand management, parking programs, transit carpool lots, etc. can also reduce dependency on the automobile. Improving the non-motorized environment and maintaining a vibrant downtown will ultimately require a variety of strategies, but when discussing non-motorized needs, efficiency of design, compact development and mixed use are the key elements.

### Efficient Design

Efficient design maximizes public investment in transportation, water and sewer systems. Simply put, maximizing the number of residences or businesses within a system will spread costs among more users, thus lowering the per user cost to provide services.

To prevent a “leapfrog” pattern of development, Master Plan goals should prioritize development within areas already served by infrastructure before undeveloped land is rezoned or otherwise made available for development. This includes development of vacant land as well as redevelopment of underutilized sites. Mt. Pleasant is largely built, and so the City should focus its resources on accommodating redevelopment in a way that does not discourage improvement. Flexibility in the ordinance and review procedures will help to make brownfield and other obsolete sites more attractive to the developer. The Union Township Master Plan embraces this concept well. It states that development opportunities for land within the first tier (usually those lands not in agricultural use that are located within closest proximity to the City) should be exhausted before land beyond are rezoned for development. This efficient design policy will minimize the need to run costly infrastructure to outlying areas, eliminating large gaps in the system that would otherwise go unutilized. It will also result in more compact, pedestrian-friendly development.

### Compact Development

Compact development is a critical component of most sustainable communities. The efficient design inherent in compact neighborhoods and higher-rise buildings can be financially enticing both to a community and a private developer. Compact development encourages more people to live and work in close proximity, often resulting in the type of urban places desired by young professionals and modern seniors. Also, by focusing transportation, water and sewer resources more efficiently, surplus budgets can be shifted to providing other amenities like public squares, pedestrian safety improvements or road design modifications that will encourage more walking and biking, such as those presented in this plan.



**Fig. 6.1A. Compact Development**

*Image: [www.builderonline.com](http://www.builderonline.com)*

The collaboration between Mt. Pleasant and Union Township will be significant in preventing sprawl within the region. Often sprawl occurs as a result of poor inter-jurisdictional communication and an instinctive desire to “push” undesirable uses to the periphery of the community. By working together on regional planning efforts such as this one, the community as a whole will grow together in harmony. The fact that the two community goals are distinct, yet compatible (i.e. to maintain a strong downtown core in the city and to maintain some order to conversion of undeveloped land in the township) will eliminate competition and ill will between the two as they continue to grow into the future.

**Mixed Use**

Integrating residential and non-residential uses within compact development areas further enhances the non-motorized environment by injecting daytime populations (i.e. employees) to the area. Mixed use development is attractive to businesses because it brings more “customers” to the area, as opposed to single-use districts that tend to slow down during off-peak times. As a result, businesses can market to both daytime and evening populations, and residents have broader access to goods and services. Higher population and employment densities can also support additional public transportation options to accommodate people of all age and ability. While the City of Mt. Pleasant and Union Township’s current zoning would likely not result in the density needed to support rail or high capacity service, they are likely to support continued bus service. Therefore, non-motorized systems should include accessible connections to bus stops and transfer stations. The table below shows the general densities needed to support the various types of transit service.

**Fig. 6.1B. Densities Required to Support Transit**

Service:	Density (per acre) Requirements	
	Residential(units)	Business (employees)
<ul style="list-style-type: none"> <li>▪ High Capacity Service</li> <li>▪ Rail Service</li> </ul>	15 to 24+	150+
<ul style="list-style-type: none"> <li>▪ Local Bus Service</li> </ul>	7+	40+
<ul style="list-style-type: none"> <li>▪ Cars</li> <li>▪ Carpools</li> <li>▪ Vanpools</li> </ul>	1 to 6	2+

## Master Plan Reviews

The City of Mt. Pleasant is an urbanizing City surrounded by Union Township, a community that is somewhat rural, but growing to accommodate additional development attracted to the City. The City of Mt. Pleasant and Union Township both have Master Plan documents that guide planning and zoning decisions within each community. Analysis of these plans suggests the City and township are considering the proper elements when planning for the future.

Mt. Pleasant is largely built, with few large tracts of land left to develop. Therefore, local planning policies (from the 2006 City of Mt. Pleasant Master Plan) focus on improving existing conditions and maintaining safety and economic viability. Some key points from the plan include:

- The City wants to encourage activity in the downtown. It calls for business diversity, marketing, and improvements that will attract residents and new businesses. In particular, the plan suggests using TIFA or PSD monies toward pedestrian walkability improvements.
- Preserving high-quality, owner-occupied residential neighborhoods are a priority for the City. The plan suggests traffic calming, property maintenance standards, sidewalk improvements and installation of bicycle paths to provide the safety, recreation and quality desired.
- Improved bicycle and pedestrian facilities are desired, especially near schools, parks and neighborhoods. Providing connections between neighborhoods and community destinations is a goal.
- Transit and taxi services should be expanded to meet the needs of seniors.
- A City-wide multi-use pathway is envisioned to connect parks, community facilities, schools, businesses, employment centers, and neighborhoods, as well as providing connections within and outside the City.
- Traffic safety should be preserved through access management, traffic calming, and sidewalk/bike path development.

Union Township, on the other hand, has significant agricultural and vacant lands that are ripe for development. Due to its location immediately surrounding the City, Union Township's planning policies (from the 2011 Union Township Master Plan) focus more on managing future development rather than trying to prevent it through costly preservation efforts. Some key points from the plan include:

- Union Township acknowledges that, despite its affection for the local rural character, the pressures of land development proximate to the City of Mt. Pleasant are too strong. The township is focusing on how best to manage future growth rather than spend resources on costly and uncertain preservation and protection efforts.
- The plan suggests development should occur in an orderly, tired development pattern, with full development of land located closest to Mt. Pleasant occurring first, before development boundaries (i.e. high density zoning districts) are extended to outlying areas.
- To prevent leapfrog development patterns, the township encourages infill and redevelopment before development of Greenfield sites. Utility extensions are recommended only when needed to protect public health or the operational safety of the system.
- Roads in the township should be safe, with access management regulations and integration of proper non-motorized facilities like sidewalks and bike lanes.
- Non-motorized systems should include all types of facilities, and prioritize improvements according to local demand, destinations and need. Systems should connect local destinations and link to the City of Mt. Pleasant as well as other regional systems.

**Fig. 6.1C. Union Township's Agricultural Priorities**

## 6.2 Subdivision Regulations

Street connections and non-motorized improvements can be required during the subdivision or site condominium development processes. In many communities, such connections and facilities are technically required, but for reasons of precedent or lack of enforcement over time, have not been enforced or required. Both Mt. Pleasant and Union Township require wide pedestrian pathways (12 feet and 10 feet respectively), both require street connections and both require stub streets to ensure a continuous street network, so no changes are suggested to the local ordinances. We encourage the City and township to be vigilant in requiring such improvements.

### What to Require:

- Street connections to future sites
- Walkable block lengths
- Limited cul-de-sac length
- Sidewalks on both sides of the street
- Connections to local and regional trail systems, where applicable

### Benefits of Connectivity:

- Shorter vehicle trips, less fuel consumption
- Provides alternative pedestrian/bike routes
- Improved emergency access

### 6.3 Zoning Ordinance

When properly designed, development sites can enhance the non-motorized environment. Buildings that align public streets and open spaces shape the ambiance of the area and create its character. Therefore, the placement and design of buildings is important to creating the desired type of place. Where the master plan sets forth the vision for such places, it is the zoning ordinance that sets forth the specific setbacks, building heights and design required. The ordinance also governs certain items like internal pedestrian circulation, driveway access and other requirements to protect the public health, safety and welfare. Therefore, it is critical that such elements are properly addressed in the zoning ordinance.

#### Zoning Approaches

The various approaches to zoning can be divided into four broad categories: Euclidean, Performance, Incentive, and Form-based. In the past, Michigan communities have typically used Euclidian zoning to regulate development. This form of zoning focuses more on separation of incompatible uses and often results in segregation of land uses, sprawling suburban development and increased automobile use. While the original sentiment to protect public health and safety was valid, total separation of uses does not usually create the sense of community that many citizens desire. More modern approaches to zoning shift the focus from segregation of uses to integration; from rigid dimensional requirements to performance-based review standards; and from imposing regulations to incentives. Each approach can have benefits and drawbacks that should be carefully considered to ensure the proper approach, or a combination thereof, is applied within the local context. For example, Euclidian zoning standards could be applied in industrial areas, where separation of offensive uses or activities is appropriate, but a form-based code may be more appropriate in other areas like the downtown, where integrated use and compact development is desired.

**Fig. 6.3A. Zoning Approaches**

Approach	Description	Pros	Cons
<b>Euclidian</b>	<ul style="list-style-type: none"> <li>• Separates uses into districts</li> <li>• Requires larger building setbacks</li> </ul>	<ul style="list-style-type: none"> <li>• Historically used</li> <li>• Easy to enforce</li> </ul>	<ul style="list-style-type: none"> <li>• Rigid and inflexible</li> <li>• Can contribute to sprawl and higher auto travel</li> </ul>
<b>Performance</b>	<ul style="list-style-type: none"> <li>• Development reviewed according to established goals or criteria rather than specific dimensional requirements</li> </ul>	<ul style="list-style-type: none"> <li>• Provides more flexibility</li> <li>• Protects private property rights</li> <li>• Helpful in redevelopment where creative approaches are needed</li> </ul>	<ul style="list-style-type: none"> <li>• Can be perceived as too discretionary</li> </ul>
<b>Incentive</b>	<ul style="list-style-type: none"> <li>• Offers rewards like increased density, building height, or regulatory flexibility for developments that provide elements that are desired by the community</li> </ul>	<ul style="list-style-type: none"> <li>• Provides a means to achieve better development in a way that benefits both the public and the private developer</li> </ul>	<ul style="list-style-type: none"> <li>• Can be difficult to administer</li> <li>• Regulations can be complex and difficult to navigate</li> </ul>
<b>Form-Based</b>	<ul style="list-style-type: none"> <li>• Shifts the focus away from the use of land to the building form and character</li> </ul>	<ul style="list-style-type: none"> <li>• Creates “places” by relating buildings to the public realm (i.e. streets and parks) rather than one single site</li> </ul>	<ul style="list-style-type: none"> <li>• Newer concept is more difficult to grasp</li> <li>• Requires some knowledge of architecture and urban design</li> <li>• Can be difficult to administer</li> </ul>

## Site Design

As discussed, conventional zoning focused on separation of uses and buildings, often requiring large building setbacks, high parking ratios, and significant landscaping. While these regulations can create attractive lawns and detention basins, these areas are often unused as parkland. The separation of uses requires each business to maintain often oversized parking and detention facilities, where in mixed use environments, these facilities are often shared for maximum use. The larger lot size and lot width requirements can result in sprawling patterns that demand longer travel trips.

Modern regulations focus more on the building form and community character and less on the specific use. The concept is based on the idea that the building is the more permanent community fixture, and uses come and go. Therefore, rather than building the site to suit one particular use, the building and site should be designed to accommodate many different uses. The following key site design elements should be incorporated into any site design where pedestrian, bicycle or transit activity is encouraged:

- **Building placement.** Where pedestrian activity is desired, businesses should be located within close proximity so the required walk is not so excessive to deter customers. Buildings should be designed with the customer in mind, with frequent windows and entrances, and proper height and scale to the area.
- **Internal sidewalk connections.** To attract pedestrian traffic, connections to bus stops, building entrances and public sidewalks must be safe, convenient, and of sufficient width to accommodate the type of traffic desired.
- **Bicycle amendments.** Bike amenities could include upgrades to bike paths or routes and/or the provision of on-site facilities like bike racks. Accommodations for bicycle parking should be available in urban settings, or areas proximate to multi-use pathways or bike lane systems. Secured parking is needed in residential areas or employment centers, where long-term bike parking occurs.
- **Transit facilities.** A development is considered transit-friendly when it is expected to result in higher than ordinary transit use. To encourage transit use, facilities must be convenient, comfortable and safe. Transit stops need to be accessible to those with mobility challenges. Preferably, concrete or asphalt pads should be a minimum of 8 feet wide by 5 feet to accommodate seating areas and shelters. Three-foot wide connections should also be provided between the sidewalk and these pads to accommodate wheelchairs. Providing shelter from rain and snow is especially important during winter, but shelters can also provide needed shade in the summer. Snow should be cleared from sidewalks and bus stop connections to provide waiting areas for riders. Snow removal for both the transit stop and connecting sidewalks is critical to providing a visible and safe waiting location.

The City of Mt. Pleasant has created a special overlay zoning district for the Mission Street corridor. This overlay embodies the type of philosophy proposed in this plan. The preferred form of development in the Mission Street overlay district addresses the following objectives:

- Improved building appearance
- Use of durable building materials, such as brick masonry
- Increased pedestrian accommodations and facilities
- Less required parking
- Safe and efficient vehicle circulation
- Appropriate transitions to adjoining single-family residential
- Signs of a compatible size and materials
- Buildings located closer to the street
- Multiple story buildings
- Varied and interesting architectural styles and features
- Increased building transparency on the first floors
- Mixed uses

Because it surrounds the City of Mt. Pleasant, Union Township has developed into a more suburban community. It does not contain a downtown, rather it functions as an extension of Mt. Pleasant, with development patterns generally continuing out from those established in the City. Therefore, transit feasibility in the Township will not likely occur unless it is also feasible in the City. Transit routes are likely to extend out from the City, and so the Township should consider where it wishes to encourage such non-motorized use, then match areas of the township to areas in the City that are served by or are planned for transit.

**Fig. 6.3B. Mission Street Design Guidelines**

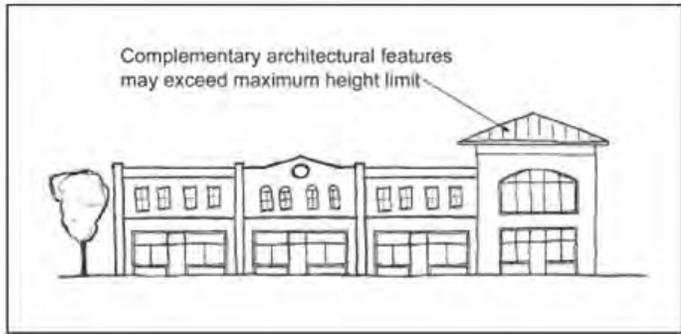


Figure I-1

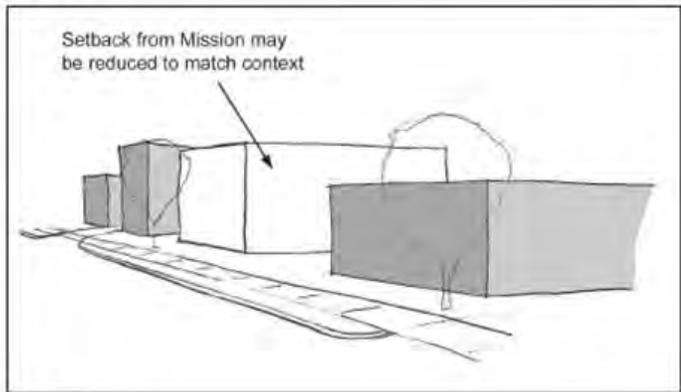


Figure I-2

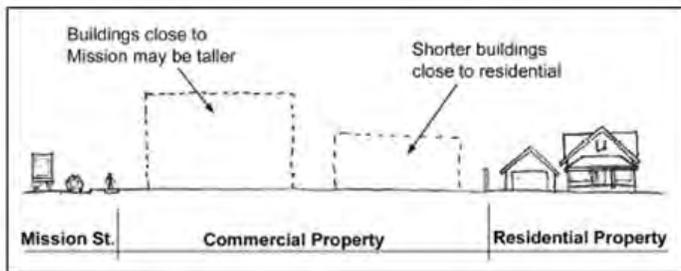


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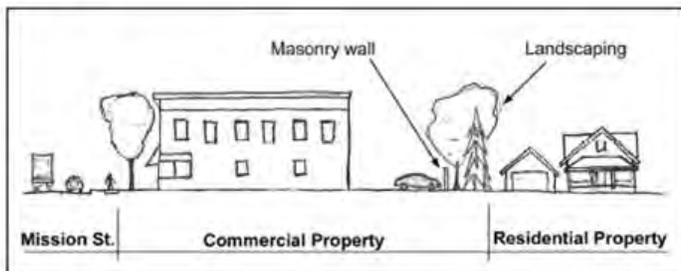


Figure I-4

## **Standards to Ensure Safety for All Users**

Pedestrians and bicyclists (referred to as “non-motorized users”) are the most vulnerable travelers. To be most effective when planning corridor features, the pedestrian and bicyclist must be considered a priority. The following tools are available to improve safety for non-motorized users:

### **Access management**

By minimizing the number of access points and ensuring proper spacing and design, access management can improve the non-motorized environment. Improved driveway design (e.g. geometric, materials) can improve visibility of pedestrians and bicyclists. Pedestrian and bicycle travel along corridors with a proliferation of access points can be dangerous for several reasons:

- More driveway crossings means pedestrians face interaction with vehicles more often, increasing the likelihood of a vehicle-to-pedestrian crash.
- More driveways often results in more signs and clutter within the right-of-way, which can be distracting to motorists and can block views of pedestrians and bicyclists.
- Driveways designed without proper curb radii, throat depth, and other design factors can reduce visibility, reaction times and hamper circulation. Access management supports driveway designs that intuitively cause motorists to drive with caution.

Access management is a concept that has been endorsed by MDOT and local road agencies for several years. As a result, many Michigan communities, including both Mt. Pleasant and Union Township, have incorporated standards to regulate the number, placement and design of access points into their Master Plans. The City of Mt. Pleasant Zoning Ordinance regulates access based on the proposed land use, and has adopted a specific overlay district for the U.S. 127/M-20 Corridor. The Union Township Zoning Ordinance includes incentives to encourage access management in the Auto-Related Highway Business District and Retail and Service Highway Business District. To discourage new access points to U.S. 127/M-20, the ordinance allows reduced lot widths and increased lot coverage.

### **Quality of Service v. Level of Service**

Travelers will generally choose the mode of travel that is most convenient, comfortable and safe, and so it stands to reason why non-motorized and transit modes have lost their attraction; there have been little standards by which to measure their quality. Most measures of service have been established for motorized vehicular travel. Adequacy of road systems is measured by level of service (LOS), which is an intuitive scale of “grades” from A to F that measure how a roadway is operating. The level of service is defined in terms of delay, which is a measure of driver discomfort, frustration, fuel consumption, and lost travel time. When developments are proposed, they are often required to evaluate pre- and post-development traffic to assess the impact that the development will have, and what sorts of road improvements may be needed to mitigate any functional deficiencies. While past LOS ratings have helped to improve road safety and operations, they do not assess impacts to non-motorized users. Arguably, improved safety and operations of the road system have come at the expense of other modes, as the improvements needed to maintain adequate roadway LOS generally result in higher vehicle speeds and more continuous traffic, which is desirable for the automobile driver, but less so for the pedestrian or bicyclist. In response to this imbalance, the LOS standards of the past have been modified into multi-modal standards, or “Quality of Service” (QOS) standards that consider impacts to pedestrian, bicycle and transit users in addition to vehicular users. These comprehensive indicators are important to ensuring comfort, safety and timely travel for all modes, without giving priority to any one mode. Please refer to Figure 6.3.

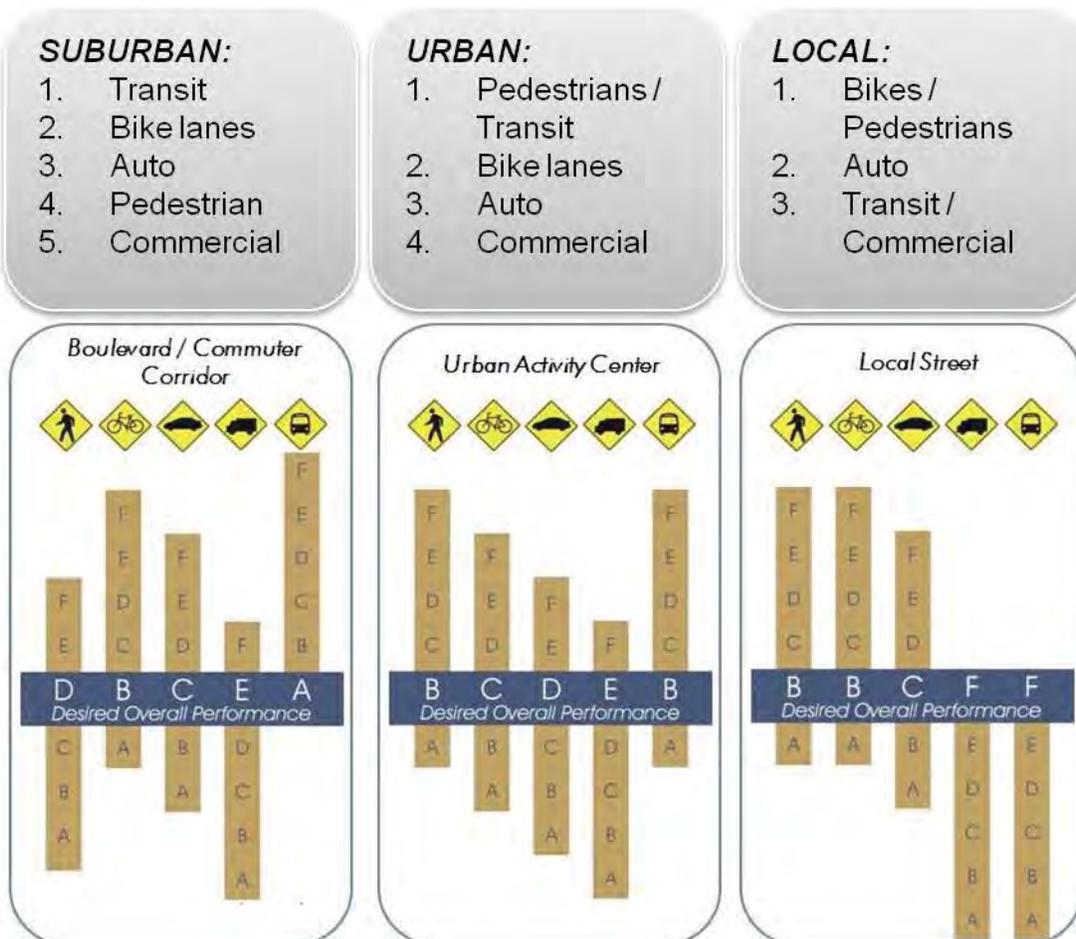
**Transportation Impact Studies**

In order for transportation impacts of proposed development to be anticipated and mitigated, it is important to understand how many new 'trips' will be generated, and how those trips will impact the transportation system.

Typical Traffic Impact Studies are required for any project expected to generate 50 or more directional (one-way) trips in the peak hour or 500 trips expected in an average day. Guidelines for preparing transportation impact studies have been established by the "Evaluating Traffic Impact Studies: A Recommended Practice for Michigan Communities," the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, the Transportation Research Board (TRB) *Highway Capacity Manual*, and other handbooks. Traditionally, these studies have focused on traffic impacts and what improvements are needed to retain a certain "acceptable" Level of Service (LOS) of traffic operations. This predominantly auto-oriented analysis has resulted in a disproportionate amount of attention paid to road systems. In response, the latest volume of the TRB Highway Capacity Manual expands traffic impact study requirement to require evaluation of all modes of transportation when analyzing transportation impacts of a proposed development.

**Fig. 6.3C. Transportation Priorities**

Priorities for transportation should vary based on the type of road. Pedestrian movement should be the focus in urban areas, and movement of people and goods should be a focus in suburban areas.



A “transportation” impact study evaluates the existing conditions for pedestrians, bicyclists and transit users in addition to vehicular users. Such studies are generally based on the following service indicators:

#### **Roadway Service Indicators:**



- Existing v. proposed road capacity
- Financial costs to governments
- Vehicle operating costs (fuel, tolls, tire wear)
- Travel time (reduced congestion)
- Per-mile crash risk
- Project construction environmental impacts

#### **Pedestrian level of service Indicators:**



- Ease of crossing the street for pedestrians (note: traffic impact mitigation should not include signal optimization that reduces pedestrian crossing time)
- Presence of elements that make it inviting for pedestrians such as the presence of a sidewalk, width of sidewalk, buffers between sidewalk and motor vehicle travel lanes

#### **Bicycle level of service Indicators:**



- Ease of bicycling to/from and within a site
- Presence of bike lane or paved shoulder
- Motorized vehicle volume, speed and percentage of trucks
- Pavement condition
- Potential to improve safety and comfort with elements to buffer bicyclists from pedestrians
- On-street parking
- Availability of bicycle parking

#### **Transit level of service Indicators:**



- Service Frequency
- Information on transit availability (such as kiosks)
- Sidewalk connection to transit stop
- Proximity and ease of travel along the sidewalk and from building front and street sidewalk to transit stop

## 6.4 Recommendations for Planning and Zoning

To implement their respective Master Plans, the City of Mt. Pleasant and Union Township both have zoning ordinances that regulate the development process. Based on the discussion above, the following revisions are suggested:

### **Mt. Pleasant Zoning Ordinance**

The City currently uses an administrative review process that involves discussions with staff before development projects are forwarded on to the proper boards for review. This helps to streamline the number of meetings required for approval, and often results in better development overall, since they can discuss changes to plans before extensive investments are made in site engineering. The following suggestions are provided to improve the process even further:

#### **Procedures:**

- Many of the administrative procedures (some discussed above) are not explicitly mentioned in the zoning ordinance. The City could revise Chapter 154, Administration and Enforcement, of the ordinance to discuss pre-application meetings, requirements for impact studies, and access issues that relate to the development. This will help developers who are unfamiliar with the City know of this option before they submit a formal application.
- Consider tiered standards and review procedures that can be used as an incentive to developers. Projects that meet basic standards for approval could be routed according to the City's current protocol, but projects that meet a higher set of standards, such as those that include improved building design, inclusion of bicycle facilities, etc., could be reviewed and approved administratively or by Planning Commission sub-committee.

#### **Zoning Regulations:**

- Consider a form-based code for the Central Business District. As written, this district does not indicate the type of character and building form desired to maintain the integrity of the downtown. Developing a form-based code would provide developers with a clear understanding of what is required to create the pedestrian-friendly environments envisioned in the Master Plan and this non-motorized plan. Since much of the focus of a form-based code relates to the scale of buildings as they relate to the public realm, the street and the pedestrian, they often result in more comfortable, vibrant places.
- Allow mixed use in areas where walking and biking is encouraged. If applied to these areas, a form-based code can also help to encourage pedestrian activity because of the building placement and storefront design elements that are often included. These types of places, where residential and smaller-scale commercial uses are intermingled, are becoming more popular amongst retired adults and young professionals.
- PUD ordinances and commercial districts should allow mixed-use development, where they will contribute to pedestrian-friendly or transit-friendly environments.
- Identify where higher residential densities and multiple-family development could be allowed by right. At the fringe of commercial areas, or even as mixed-use developments, infusing residential uses will increase business viability and generate additional pedestrian activity, and can often result in less vehicular traffic because these residential types often cater to smaller families with less vehicles.

- Revise parking requirements so they are not excessive or limit redevelopment of smaller sites. Current standards are somewhat “suburban” and require individual off-street parking lots. Some shared parking is allowed, but no reduction in parking is permitted for uses with staggered peak demand times. There are areas of the City that contain underutilized on-street parking, so requirements for the downtown could be reduced where such on-street or other municipal parking is located nearby.

**Review Standards:**

- Discuss internal pedestrian connections between public sidewalks, transit stops, building entrances, in the Site Plan Review section of the ordinance. Additional standards for approval could be added to Chapter 154 that discuss these requirements more specifically. Allow additional flexibility in site design when needed to accommodate pedestrian, bike or transit facilities, possibly as an incentive to include such facilities.
- Require transportation impact studies during development review. A multi-modal approach should be taken to ensure walking, biking and transit facilities are as safe, convenient and comfortable as road facilities.

**Union Township Zoning Ordinance****Procedures:**

- Consider tiered standards and review procedures that can be used as an incentive to developers. Projects that meet basic standards for approval could be routed according to the City’s current protocol, but projects that meet a higher set of standards, such as those that include improved building design, inclusion of bicycle facilities, etc., could be reviewed and approved administratively or by Planning Commission sub-committee.

**Zoning Regulations:**

- Revise parking requirements so they are not excessive. Current standards are somewhat “suburban” and may result in large expanses of pavement. Some shared parking is allowed, but no reduction in parking is permitted for uses with staggered peak demand times. Maximum parking requirements should also be considered so parking lots are not constructed for the peak holiday demand only.
- The ordinance requires spaces that are 9 feet wide by 20 feet deep, which may be wider than necessary. Parking spaces that are 8 ½ feet by 18 feet are adequate, and can reduce the impervious coverage and expanse of parking that pedestrians must cross to reach the building entrance.
- Expand the access management regulations to apply to all major corridors throughout the township. The township’s current incentive approach in the B-6 and B-7 districts could be applied in other areas. However, because there is such a strong basis of research that indicates the safety benefits of access management are great enough that incentives are not necessary and the township could simply require compliance with access requirements, if so desired.

**Review Standards:**

- Require transportation impact studies during development review. A multi-modal approach should be taken to ensure walking, biking and transit facilities are as safe, convenient and comfortable as road facilities.
- Discuss internal pedestrian connections between public sidewalks, transit stops, building entrances, in the Site Plan Review section of the ordinance. Additional standards for approval could be added to Section 12 that discuss these requirements more specifically. Allow additional flexibility in site design when needed to accommodate pedestrian, bike or transit facilities, possibly as an incentive to include such facilities.

## *7. Proposed Policies & Programs*

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These policies and programs provide the institutional support for the non-motorized system. They provide the necessary support systems for the proposed physical system. They also provide a framework within which new issues related to non-motorized transportation may be addressed.

### **Topics:**

- 7.1 – Compete Streets Policy
- 7.2 – ADA Compliance Issues
- 7.3 – Safe Routes to School
- 7.4 – Bike Parking
- 7.5 – Maintenance of Non-motorized Facilities
- 7.6 – Sidewalk/Roadside Pathway Completion

### **Prioritization Process for Policy Recommendations:**

The method of prioritization for the following policy recommendations was made by identifying the relative importance of that policy and the ease with which it could be implemented within a given time frame. Some policy items could readily be achievable within a year. Others, due to the process required to put together the necessary items needed to fully implement the policy, may take three to five years. These policies are flexible enough that they can be rearranged as priorities and available resources change.

### **Roles and Responsibilities in Implementing Policy Recommendations:**

The policy recommendations have not been assigned to particular departments or staff positions in the community. One of the first tasks in implementing these recommendations would be assigning each policy recommendation to a responsible party.

## 7.1 Complete Streets Policy

### Complete Streets Background

States, regions, counties and cities around the country have used various complete street policies to unambiguously endorse and define their support for non-motorized transportation. Complete streets are planned, designed, operated and maintained such that all users may safely, comfortably and conveniently move along and across streets throughout a community. The complete streets concept recognizes that streets serve multiple purposes and that a community's roadways must be designed such that they balance the needs of all of the transportation users. Complete streets are key to creating healthy, active communities and establishing safe routes to school. There has been a concerted move towards complete streets in the United States since the 1990's.

Recently, the US Department of Transportation issued a Policy Statement on Complete Streets. It indicated that it is the DOT's policy to incorporate safe and convenient walking and bicycling facilities into transportation projects. It also noted that it is every transportation agency's responsibility to improve conditions and opportunities for walking and bicycling and integrate improvements for such into the transportation system. It also encourages transportation agencies to go beyond the minimum standards. Part of the DOT recommended actions include:

- Providing accommodations on new, rehabilitated and limited-access bridges
- Collecting data, setting targets and tracking progress
- Maintaining sidewalks and pathways the same way roads are maintained
- Improving facilities as part of maintenance projects

In short, the policy states that walking and bicycling should be considered equals with other transportation modes.

In the fall of 2010, The State of Michigan adopted Complete Streets legislation. The complete streets legislation was in the form of two bills. The first bill revised Act 51, addressing transportation issues. The second bill revised Act 33 that addresses planning issues.

#### Act 51 Revision Highlights:

- Requires interjurisdictional consultation on non-motorized projects and 5-year plans
- Use of established best practices
- Directs MDOT to draft and adopt a complete streets policy as well as develop model policies for local agencies
- Directs MDOT to advise local agencies on non-motorized issues
- Enables interjurisdictional agreements for maintenance

**Act 33 Revision Highlights:**

- Expands the definition of “streets” to include all legal users
- Expands elements that may be included in a master plan to include all forms of transportation
- Specifies that transportation improvements be appropriate to their context
- Specifies cooperation with road agencies.

Numerous local communities have already adopted complete streets resolutions or ordinances.

**National Complete Streets Coalition Model**

Since the FHWA model was developed, The National Complete Streets Coalition has taken the idea further and identified ten elements of a comprehensive Complete Streets policy:

1. A vision for how and why the community wants to complete its streets. Specifies that all users including pedestrians, bicyclists and transit passengers of all ages and abilities, as well as trucks, buses and automobiles.
2. Specifies that ‘all users’ includes pedestrians, bicyclists and transit passengers of all ages and abilities; as well as trucks, buses and automobiles.
3. Encourages street connectivity and aims to create a comprehensive, integrated, connected network for all modes.
4. Is adoptable by all agencies to cover all roads.
5. Applies to both new and retrofit projects, including design, planning, maintenance, and operations, for the entire right of way.
6. Makes any exceptions specific and sets a clear procedure that requires high-level approval of exceptions.
7. Directs the use of the latest and best design standards while recognizing the need for flexibility in balancing user needs.
8. Directs that complete streets solutions will complement the context of the community.
9. Establishes performance standards with measurable outcomes.
10. Includes specific next steps for implementation of the policy.

The adoption of this plan addresses many of the elements.

## **Policy Recommendations for Complete Streets:**

### **Within One Year:**

- Adopt a Complete Streets Resolution that includes language about developing a complete streets policy.
- Adopt the Non-motorized Transportation Plan
- Draft a Complete Streets Policy that address the ten key elements as defined by the National Complete Streets Coalition and that clearly defines the responsible authorities
- Adopt a Complete Streets Policy
- Develop 5-year non-motorized improvement plan (based on the Non-Motorized Master Plan)
- Meet with MDOT and Isabella County Road Commission to review 5-year plan as it relates to facilities under their jurisdiction

### **Within Three Years:**

- Implement recommended operations procedures
- Establish performance measures
- Begin data collection
- Build a reference library of current best practices
- Establish professional staff training program
- Identify local municipality standard plans and details that need to be revised
- Begin revising standard plans and details

### **Within Five Years:**

- Complete update of standard plans and details
- Evaluate progress

## 7.2 ADA and Transition Plan

Title II of the Americans with Disabilities Act of 1990 (ADA) requires local governments to make their activities, programs and services accessible to persons with disabilities. In the area of non-motorized transportation, public entities with 50 or more employees are required to use accessible design standards for newly constructed and reconstructed sidewalks and shared use paths to the maximum extent feasible and make altered facilities through the City as part of a transition plan.

Four recent publications address accessibility of non-motorized facilities. They are:

1. *Designing Sidewalks and Trails for Access Part 2 – Best Practices Design Guide* (FHWA, Publication # FHWA-EP-01-027)
2. *Building a True Community – Final Report of the Public Rights-of-Way Access Advisory Committee*, November, 2005 (Public Rights-of-Way Access Advisory Committee)
3. *Draft Guidelines for Accessible Rights-of-Way*, November 23, 2005 (FHWA, Pub. # FHWA-SA-03-019, based in part on the preceding publication)
4. *Accessible Public Rights-of-Way, Planning and Designing for Alternations*, July 2007 (Public Rights-of-Way Access Advisory Committee)

Together these documents define current best practices for accommodating pedestrians with disabilities for sidewalks and shared-use paths, intersections, crosswalks, and signalization. Until public rights-of-way standards are adopted by the Department of Justice and the U.S. Department of Transportation, the DOT has identified the 2005 draft PROWAG as the current best practice in accessible pedestrian design.

### Transition Plan

Title II requires that public entities with 50 or more employees create and regularly update an ADA Transition Plan and make this plan available to the public. The transition plan should at a minimum identify physical barriers and provide a detailed outline to remove those barriers. An ADA coordinator must be designated to coordinate compliance efforts. The following outlines the key elements of a transition plan.

### Identification of Physical Barriers

The identification of physical barriers may take place on a number of levels:

- **Complaint-Based** – At the most basic level, there should be a process in place for citizens to register a complaint and for that complaint to receive appropriate evaluation and action.
- **Inventory Based** – More commonly, existing facilities receive a base line documentation that may be accomplished with simple tools such as a smart level, digital camera and a standard recording form. For example, the inventory of sidewalk curb ramps would identify issues such as the presence of a ramp, ramp slope and cross slope and the presence, type and condition of a detectable warning strip. The goal of this inventory is to identify the geographic location, type and severity of barriers. Often this survey would be done using a Global Positioning System and the data stored in a Geographic Information System. This inventory would be completed over time with the most heavily traveled areas completed first and then covering other, less traveled areas in a systematic approach.
- **Survey Based** – In a few cases where there is a high degree of controversy regarding a specific area or facility type, trained surveyors will take detailed field measurements and elevations of the facilities and translate them into survey drawings. This is by far the most expensive identification

approach but may be appropriate if construction to remedy the solution is considered likely to occur in the near future.

### **Outline of Methods to Remove Barriers**

A systematic approach for removing barriers should be established.

- **New and Altered Facilities Policy** – There should be in place a policy for how accessibility is achieved for new construction and alterations. This should include addressing how areas adjacent to new construction or alternation projects may be incorporated into a project. For example, when a new construction or alternation project is undertaken, the inventory of physical barriers for the immediate surrounding areas should be consulted to see if limited targeted improvements in adjacent areas would make a much larger area accessible. If so, those changes should be incorporated into the project.
- **Prioritization of Routes** – As it will be many years before new construction and alterations will provide accessible routes along all public right-of-ways, a process should be established to identify which routes should be upgraded independent of new or altered facilities. This would be based on the inventory of the physical barriers, citizen complaints and relative demand. This way, key routes such as those in the downtown, near schools and public buildings may be targeted improvements independently of new construction or alternation projects.

### **Schedule for Implementation**

After the routes are prioritized, general costs of removing the barriers should be determined. Then using those costs, the removal of barriers should be integrated into the city's capital improvement plan.

### **Policy Recommendations for ADA Compliance:**

Even if a community is not required to do an ADA transition plan it is still recommended that it be done as a best practice to prevent any incidents. See the Appendix for more details on ADA and Transition Plans.

#### **Within One Year:**

- Establish an interim transition complaint based transition plan.
- Designate an ADA coordinator.

#### **Within Three Years:**

- Have an inventory based transition plan in place.
- Integrate the transition plan into the capital improvement plan.

#### **Within Five Years:**

- Complete the inventory of physical barriers.
- Have made substantial progress in removing barriers in the most highly traveled corridors.

## 7.3 Safe Routes to Schools

The challenges to getting more children to walk and or bike to school are significant. Approximately half of all children in the United States are driven to school in a private vehicle and only 13% walk or bike to school.<sup>1</sup> The number of children walking or biking to school has dropped 37% in 20 years.<sup>2</sup> This drop in the number of children walking and bicycling to school can be attributed to many factors that have changed over the past 20 years:

- Increase in availability of before and after-school programs.
- Increase in the number of schools of choice, private schools and charter schools.
- Increase in the number of grade-based elementary schools.
- Increase in the number of children bused to school who live within walking distance due to real or perceived safety concerns.
- Fewer children living in each home.

These factors have combined to simultaneously reduce the total number of children who attend their neighborhood school, reduce the number of kids who walk and spread out the times children arrive at and depart from school. The result is a loss of the critical mass of children walking to school and the perceived safety in numbers.

These factors are combined with the fact that there is also an increase in the number of two-wage earner families where both wage-earners are leaving for work in the morning. This makes dropping a child off at school on the way to work the easy and seemingly logical choice. We have now entered a period in time where choosing to have a child walk to school is considered a political statement or some act tantamount to child neglect rather than the default choice.

While the challenges to getting more children to walk and bicycle to school are significant, the consequences of doing nothing are even more challenging. The Center for Disease Control states that 13% of children in the United States are overweight, and the number of overweight teens has tripled since 1980. Many children in the United States do not get the hour of daily physical activity recommended by the Surgeon General. Decreased participation in physical activities, and fewer students walking or riding their bikes to school may be contributing to the rise in childhood obesity.

For many children who live very far away from school, walking or biking is not a feasible option. However, the CDC estimates that only 31% of the children living a mile away or less walk or bike to school. Often times, schools and their surrounding areas lack safe road crossings, preventing children from having safe access to school on foot. Parents and caregivers cite perceived traffic danger as the second most common barrier to children walking and biking to school, preventing as many as 20 million children from walking or biking to school nationwide.<sup>3</sup> The amount of people driving their children to school in private automobiles not only represents a missed opportunity for physical activity, but also increases traffic congestion and puts a huge strain on existing road systems during peak travel times. In one city examined, 20-25% of morning traffic consisted of students being driven to school and 50% percent of children hit near schools were hit by parents of other students.<sup>4</sup>

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<sup>1</sup> Center for Disease Control. *MMWR Weekly*. August 16, 2002. 51(32);701-704

<sup>2</sup> Michigan Governor's Council on Physical Fitness, Health and Sports.

<sup>3</sup> Center for Disease Control. *MMWR Weekly*. August 16, 2002. 51(32);701-704

<sup>4</sup> Center for Disease Control, 1995.

In an effort to reverse these alarming trends, the CDC announced a national health objective to increase the proportion of walking and biking trips to school for children living a mile or less from 31% to 50% by the year 2010. Communities, school groups, and local officials all over the country are responding to this challenge by mobilizing children to walk to school, addressing traffic safety concerns, mapping safe routes to school, and by measuring and taking account of their neighborhoods' walkability.

### **Michigan's Safe Routes to School (SR2S)**

Michigan has a model Safe Routes to School program that is managed by the Michigan Department of Transportation (MDOT) in partnership with the Michigan Fitness Foundation which provides training, administrative and technical support. The center for Michigan SR2S program's website [www.saferoutesmichigan.org](http://www.saferoutesmichigan.org) has extensive information on how a school may start a SR2S program.

The website describes the six step SR2S planning process:

1. Register a school on the website.
2. Designate a SR2S coordinator.
3. Establish a SR2S team comprised of school officials, students and their parents and local officials.
4. Survey the students and parents to understand the issues.
5. Perform a safety assessment of the physical environment.
6. Develop an action plan.

Beyond describing the planning process Michigan's SR2S program offers technical assistance and support to schools. These include:

- A SR2S Handbook with a wealth of information including templates and forms useful in implementing a program.
- Providing training programs.
- Walk to School Day kits.
- Newsletters.
- Direct technical assistance.

### **The Community's Role in SR2S Programs**

The community a key partner in any Safe Routes to School Program. SR2S school teams typically include a local law enforcement official or officer and a representative from the local road authority. These officials provide the technical expertise to help the team implement some of the programs and physical improvements.

A typical SR2S program addresses issues such as the education of parents and students as well as improvements to the physical conditions on the school grounds. But much of the SR2S physical improvements take place on facilities outside of the school's jurisdiction and must be undertaken in partnership. Likewise the city's non-motorized network identifies key routes that transverse school grounds. Thus, both entities must work together in order to meet their shared goals.

Community policies should include a system of accountability for responding to and remedying safety concerns along children's routes to school. The community should work with the surrounding School

Districts to evaluate how best to spend transportation dollars, looking at busing, facility improvements, and the addition of adult supervisors for children walking to school.

Ensuring safety in the school zone must be a combined effort of traffic engineers, local officials, law enforcement, school officials, parents and children. In addition to promotional and educational programs, a variety of roadway improvements can be used to increase safety in school zones and for children on their routes to school. Some important safety design guidelines for school zones include<sup>1</sup>:

- Reduced speed zones.
- Marked crosswalks.
- Signalized crossings at intersections with pedestrian activation.
- Pedestrian crossing islands and bulb outs where needed.
- Special crosswalk striping, painted according to state standards, and “School Crossing” signage where appropriate.

Police enforcement of yielding and speeding in school zones, and the utilization of adult crossing guards at difficult intersections can also increase safety in the school zone.

Individual school policies as well as district wide policies should be evaluated to make sure that they promote bicycling and walking.

The National Highway Traffic Safety Administration has provided some resources that may be useful in teaching children pedestrian safety and cycling skills. Please visit their website at, <http://www.nhtsa.gov/ChildPedestrianSafetyCurriculum> for more information.

In conclusion, increasing the number of children who are able to safely walk and bike to school is part of a national goal that will address childhood obesity, enhance neighborhood walkability, and help alleviate traffic congestion problems.

### **Key Programs to Continue for School Transportation**

The Greater Mt. Pleasant Area has some good existing policies and programs that support the non-motorized system. The following policies and programs should be reinforced and continued.

- Fancher Elementary participates in the Safe Routes to School Program.
- The local government should continue to enforcement speeding in school zones and yielding to pedestrians in the crosswalks within school safety zone.
- The local government should continue to encourage that within school safety zones, all safety design guidelines are in place and current with national safety guidelines.

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<sup>1</sup> San Diego’s Regional Planning Agency. Model Guidelines for the San Diego Region. April 2002. p. 105.

## **Policy Recommendations for School Transportation**

The local government and the Surrounding School Districts should jointly explore the following options.

### **Within One Year:**

- The local government and the School Districts should develop maintenance standards as well as fix defects and gaps in public sidewalk system adjoining school sites.
- Encourage the School District to consider the safest routes to school for children when adjusting school boundaries.
- The local government and the School District should develop a cost-share policy for the construction and maintenance on pathways that are part of the City's Non-motorized System and traverse school property.
- The local government and School District should develop a strategic implementation plan for pathways and trails that are part of the City's Non-motorized System that traverse school property.

### **Within Three Years:**

- The local government and School District should continue to enhance a system of accountability for responding to and correcting safety concerns along routes to school and other problems identified through these programs.
- The local government should continue to promote and initiate with the school system and parents Walk-to-School Day events, "walking school bus" programs, "Safe Routes to School" programs, and walkability audits in conjunction with the state-wide program.
- School Districts should perform formal evaluations of how pedestrians and bicyclists are accommodated to all school grounds and prepare action plans to address deficiencies.
- School Districts should encourage walking and bicycling to school as a part of the physical education and well being of the students.
- School Districts should try to eliminate the need for all "Safety Busing" by remedying the hazards that currently warrant the safety busing.

### **Within Five Years:**

- School Districts should evaluate all individual school and district wide policies regarding bicycling to school and amend policies that discourage bicycling.
- Encourage residential infill projects within walking distance of schools.

## 7.4 Bike Parking

The lack of a secure parking space discourages many people from using their bikes for basic transportation. When sufficient bike parking is not provided, theft becomes a concern and it leads to bikes being locked up to sign post, benches and other street furniture. When bicycles are parked in these spaces, they often disrupt pedestrian flow because the bikes impede the walkway. Bicycles also get impounded by local enforcement when parked in these areas causing an even greater deterrent to bicycle use. Bicycle parking needs to be visible, accessible, plentiful and convenient. If any of these criteria are not met, there is a good chance cyclist will not use the facilities and will park their bike wherever they feel it will be safest.

Definition of a Bicycle Parking Space- A bicycle parking space is an area two feet by six feet or the area occupied by a bicycle when using a bicycle parking device as designed.

Short-Term Bicycle Parking - Short-term bicycle parking is defined as a rack to which the frame and at least one wheel can be secured with a user-provided U-lock or padlock and cable. This type of parking is appropriate for short term parking at locations such as shopping areas, libraries, restaurants and other places where typical parking duration is less than two hours.

Long-Term Bicycle Parking- A long-term bicycle parking space is defined as protecting the entire bicycle and its components from inclement weather and theft or vandalism. It is to be located where it will serve the needs of cyclist who need to leave their bicycles unattended for extended periods of time, such as employees, tenants or residents.

### Uncovered Bicycle Racks

Uncovered Bicycle Racks are the primary bike parking approach for areas where people are expected to park their bikes for only a few hours.

**Design-**Generally, bicycle racks of the inverted “U” design are considered the best models. Alternative designs may be considered for special situations, although they should function similar to the inverted “U” design, providing at least two contact points for a bicycle and be a shape and size that would permit locking of a bicycle through the frame and one wheel with a standard U-Lock or cable.



**Location-** Bicycle racks should be located on every city block where there is retail within a commercial district. The hoops should be placed on a hard surface with ample lighting and high visibility (e.g. in front of a store window) to discourage theft and vandalism. Racks should be placed to avoid conflicts with pedestrians, usually installed near the curb and away from building entrances and crosswalks. When racks are installed in public spaces there needs to be at least 5 feet of clear sidewalk space in order to allow for pedestrian flow.

### Covered Bicycle Parking

Covered Bike Parking is desirable for both long-term and short-term bicycle storage. Basic bicycle racks should be placed under an overhang whenever possible, and specific covered bicycle parking should be created when needed. Covered Bicycle Parking should be available in areas where bikes are kept for an extended period of time, such as apartment buildings or at large commercial centers where employees and customers will utilize the covered spaces.

**Design-** The covering for bicycle parking will vary depending on the location. In addition to a roof, complete or partial side enclosures should be provided to minimize exposure to windblown rain and snow. The design of the racks is the same as for the basic uncovered bicycle hoops. When creating covered parking, there is also the opportunity to incorporate a green roof or solar panels into the rooftop to add to the functionality of the structure.



**Location-** Covered Bike Parking should be incorporated whenever there is opportunity to do so. Long-term covered bike parking should be located within 400 feet of the building it is intended to serve. Centralized locations further than 400 feet are also acceptable.

### **Enclosed and Secured Bicycle Parking**

Enclosed and Secured Bicycle Parking is best for areas where bikes are kept for extended periods of time, such as apartment buildings and near places of employment. These types of facilities are usually placed within existing parking structures and come with extra bicycle parking amenities.

**Design-** Enclosed and Secured Bicycle Parking generally consists of an enclosed room or fenced off-area where access is controlled through a doorway. The configuration of the bike racks will vary based on the space, but in general they are designed to maximize the number of bicycles that may be fit in the space. Double tier bike racks and hanging bike racks are used to provide the majority of the bike storage. A few standard inverted “U” hoops should be provided and reserved for atypical bicycle designs that may not be accommodated by the other racks.

When bike racks are located within a parking decks there should be a safe means of egress to the parking area. If bicycles must access the space via a gate controlled access point, care should be taken to minimize conflicts with the gate arm. The gate arm should be shortened to allow a 4’ wide pathway for bicycles. The end of the gate arm should be rounded and covered with foam. The pathway for bicycles should be clearly marked on the pavement. This pathway should be 3’ wide and be located at least one foot from the end of the gate. Users of enclosed secured bike parking that is accessed via gate control should be provided instruction on how to safely navigate around the gate.

**Access Control-** Is by identification badge reader and for a specific location only.

**Location-** Generally within parking decks, but individual facilities may be established.

**Amenities-** Will vary by site. Ideally these include compressed air, lockers, a bench and a vending machine that dispenses basic bicycle supplies such as tubes and repair kits.

**User Costs-** Generally \$60 to \$80 per year rental plus \$20 account set-up fee.

Enclosed and Secured Bicycle Parking works best at areas with high concentrations of people, such as at Hospitals or Regional Shopping Centers where the facilities are targeted toward employees.

## Bike Station

Bike Stations are premium secured bike parking and maintenance facilities intended for transit stations located in high density areas. They are intended primarily to serve transit riders who will disembark and then retrieve their bike and continue onto their final destination. They will also serve as a centralized bike parking solution for bicyclists who are not using the transit station but whose final destination is near the bike station. The bike station has an attendant that assist with the bicycle storage and the day-to-day operations of the facility.

**Amount of Parking-** Based on the expected number of transit users and a survey of potential users.

**Design-** The bike parking and maintenance areas are restricted to bike station employees only.

**Access Control-** The bike station is generally attended for extended hours.

**Location-** Generally within parking decks

**Amenities-** Compressed air, lockers, benches, changing room, showers and bicycle repair shop. The changing room and showers may be omitted if most of the users are expected to arrive via transit.

**User Costs-** Generally \$60 to \$80 per year rental plus \$20 account set-up fee or an hourly charge for parking. Repair cost at market rate.

At this point the Mt. Pleasant area probably does not have the density to support a full blown Bike Station but some scaled back version may be appropriate on campus.

## Bike Lockers

Bike Lockers are individual premium bike parking solution intended for remote and lower density areas where enclosed and secured bike parking is not available or feasible. Given the cost, appearance and space requirements of bike lockers they are only appropriate for limited locations.

**Design-** There is substantial variability in the designs of the bike lockers. Typically, individual bike lockers have an interior diagonal divider and doors on either end such that they may accommodate two bicycles. Bike Lockers may be arranged in row, in a circular pattern and stacked.

**Access Control-** Typically via a key.

**User Costs-** Generally around \$60 per year rental plus a \$20 key deposit.



## On-Street Bicycle Parking

On-Street Bicycle Parking consists of movable bike racks that take the place of on-street motor vehicle parking. These racks are temporary and can be experimented with and moved as needed. They can also be used on a seasonal basis and can be removed during the winter.

**Design-** On-Street Bicycle Parking Racks are the size of a standard vehicle parking space and hold about 12 bicycles. These Racks are bolted into the pavement and can be removed when needed.

**Location-** These racks should be placed in active areas where it is difficult to accommodate sidewalk bicycle parking due to the competing demand for café tables and pedestrian walking space within the sidewalk area. Urban public spaces where there is on-street parking, such as Main Street would be a good location to test these facilities once non-motorized facilities are provided to this area.

### **Bike Racks on Buses**

Used individually, bicycling and transit provide low-cost mobility and place fewer demands on local roads and highways to carry every day trips. Studies show that people are most likely to use public transit when it's within a quarter mile walking distance or when it's within a three mile bike ride. By combining bikes and transit it makes it easier for bicyclists to take their vehicles along on public transit, opening up a 12 times larger drawing zone for riders. Also, many bicyclists are constrained by bridges, tunnels, freeways and other barriers that prevent them from using their bicycle. Adding bike racks to buses provides an alternative option to overcome geographical barriers, thus creating more opportunities for commuters to choose to use their bicycle over automobile.



### **Current Programs**

The City of Mt. Pleasant, as part of their Capital Improvement Plan, is going to implement bike shelters in the downtown area over the next few years. The attempt will be made to place bike shelters in and around parking lots over time as they are repaved in the next 10 to 15 years. There are plans to begin an installation of a prototype bike shelter in 2012.



Photo: City of Mt. Pleasant Capital Improvement Plan

## **Bicycle Parking Requirements**

Currently the communities' do not have bicycle parking requirements in their ordinances. The code should be revised and updated as necessary to address the following issues:

- Require a minimum of 4 bicycle parking spaces at each commercial development or multi-family dwelling.
- For each multi-family dwelling require half of the bicycle parking spaces to be covered if the site is required to have 16 or more spaces based on the existing code description.
- Incentives should be provided to commercial and multi-family dwellings for providing covered and secured bicycle parking (e.g. reduction of vehicular parking and/or density bonus could be offered).
- Incentives should be provided to commercial and multi-family dwellings for providing covered bicycle parking over uncovered bicycle parking when not required to by code (e.g. reduction of vehicular parking and/or density bonus could be offered).
- Explore the idea of required bicycle parking facilities being credited toward provision of motor vehicle parking. Each ten required bicycle parking spaces, or fraction thereof, may be substituted for one code required motor vehicle parking space.
- Provide or reference graphical design guidelines with information on the specifics of bicycle rack design and placement. The Association of Pedestrian and Bicycle Professionals recently published the 2<sup>nd</sup> Edition of Bicycle Parking Guidelines; these serve as a good model or may be referenced. The report may be found at [http://www.apbp.org/resource/resmgr/publications/bicycle\\_parking\\_guidelines.pdf](http://www.apbp.org/resource/resmgr/publications/bicycle_parking_guidelines.pdf)
- Require hoops on every block with retail in a downtown/commercial zone.

## **Policy Recommendations for Bicycle Parking:**

### **Within One Year:**

- Update the local government code to include bicycle parking requirements and design standards.
- Encourage Isabella County Transportation Commission to implement bike racks on bus racks on at least one of the bus routes

### **Within Three Years:**

- Implement the bicycle parking requirements and design standards.
- If the bike racks on buses is successful after the first year add bike racks to the entire fleet.

## 7.5 Maintenance of Non-motorized Facilities

The success of the City's non-motorized transportation system ultimately depends on thorough and timely maintenance of all its facilities. Typical problems that can occur on pedestrian and bike facilities include cracked pavement, standing water, obstructions in the clear zone such as sidewalk furniture, overgrown trees and shrubs, construction equipment and signs, and road debris. Without proper maintenance and removal of these problems, people are not encouraged or able to use non-motorized modes of transportation.

### General Maintenance of Sidewalks

Regular and consistent maintenance of sidewalks, particularly along arterials and collectors, is important for non-motorized modes of travel. Conditions such as cracks, heaving from tree roots, icy surfaces and surface spalling create trip hazards for pedestrians. Inadequate maintenance of sidewalks is not only dangerous, but can complicate any travel by pedestrians who are elderly or have mobility impairments.

It is recommended that the communities update their ordinances to require property owners to maintain the sidewalk adjacent to their property. It is recommended that the city develop a citywide inspection program to identify and cite hazardous sidewalks. The program should evaluate different areas of the city each year and property owners should be notified if their sidewalk is not in compliance with city regulations. If a property owner does not make the required repairs, the community should make the repairs and assess the property for cost. This may be integrated into a comprehensive citywide asset management system that also addresses ADA issues.

For asphalt shared use paths, an asset management system should be created to track condition and repairs. The surface should be inspected every other year to make sure the surface is appropriate for all users and to determine what repairs and preventative maintenance operations should be scheduled.

In addition to the sidewalk and path surface evaluation programs, a systematic tree and brush trimming program for sidewalks along major streets and shared use paths should be undertaken.

Overhanging vegetation can greatly reduce the usable width of a walkway, cause injury to users and obstruct views. There should be a 2 foot clear zone on each side of the walkway and a vertical clearance of 8 feet above the walkway. Routine trimming should be done at least twice a year to keep the sidewalk clear of vegetation.



### Snow Removal

People who rely on non-motorized transportation as a means of travel are often at the mercy of the weather, especially in the winter. The current practices of snow removal on sidewalks, curb cuts and crossing islands make large portions of the City impassable to many mobility impaired pedestrians or those pushing strollers or grocery carts.

Many northern cities around the globe maintain excellent facilities for non-motorized travel in the winter. For example, Boulder, Colorado and Madison, Wisconsin, cities that both have comparable amounts of annual snow to the Mt. Pleasant area , (Boulder-60", Madison-42", Mt. Pleasant-36") have bicycle mode-

shares higher than the Mt. Pleasant area. Both Minneapolis and Madison have higher bicycle commuting rates than San Diego<sup>1</sup>.

Just as it is important for roads to be cleared for automobile, it is important for sidewalks to be cleared for pedestrians. If the sidewalks are not cleared, many times pedestrians will use the cleared roadway, presenting a dangerous situation for both cars and pedestrians. Areas of special concern are curb ramps at intersections and pedestrian crossing islands. Crossing islands are not the responsibility of an adjacent property owner, so they require clearing by City staff. Additional attention may be needed to identify “orphan” areas, such as over freeways or along other public rights-of-way to ensure that these areas are cleared by the appropriate agency. Shared-use Trails should also be included in snow removal because they provide a non-motorized route of travel.

### **Crosswalks**

While motorists can tolerate bumpy roads, uneven pavement surfaces at intersection crosswalks can be hazardous for pedestrians. The City should develop criteria to identify those pedestrian crossings that are in need of resurfacing. In addition to a smooth pavement surface, crosswalks need markings that provide good contrast for motorists and a non-slip surface for pedestrians.

### **Bicycle Lanes**

Motor vehicles tend to sweep debris into bicycle lanes filling them with debris quicker than the motor vehicle lanes. If debris is left in place it becomes a hazard for cyclists and some cyclists will no longer ride in the bicycle lanes. To avoid this problem, bicycle lanes should receive more frequent sweeping. This has the added benefit of reducing the amount of sediment washed into the storm sewer system and some communities have increased the frequency of street cleaning solely for that purpose.



Maintaining visibility and reflectivity of bicycle lane pavement markings and symbols are important to nighttime cycling safety, especially when raining or snowing. The City should repaint its pavement markings on all roadways, including bike lanes and crosswalks on a yearly basis. This type of maintenance is important to retain high contrast and visibility. The City should avoid multiple layers of thermoplastic because it results in rough surfaces for bikers. Materials used for bicycle markings should be non-slip.

When snow is removed, it is critical that the entire bicycle lane be cleared since many cyclists use their bicycle year round. Any loss of bicycle lane width means cyclists are more likely to use the motor vehicle lanes.

The City should also undertake a public awareness campaign on the value of keeping bicycle lanes and curbs in general free of debris to promote bicycle safety and water quality. It is recommended that the City evaluate if more frequent street sweeping is necessary to keep the bicycle lanes and curb areas cleared.

<sup>1</sup> Federal Highway Administration. Publication FHWA-PD-041. Case Study No.1:Reasons Why Bicycling and Walking Are Not Being Used More Extensively as Travel Modes.

### **Signalized Intersections**

Bicyclists and Pedestrians in many cases, cross the road in very different fashions. Bicyclists in the roadway most likely will treat the intersection the same as a vehicle, merging across lanes and making a left turn from the center turn lane. Their restrictions to crossing the road are primarily based on their comfort level of riding with traffic and the volumes, speed and gaps that exist. Since many bicycles function similar to vehicles at intersections it is important that signals are able to detect bicycles even when no motor vehicles are present. The City should develop a system to identify and replace the signals that do not identify bicycles at an intersection.

### **Problem Identification and Prioritization**

Encouraging the community to identify non-motorized facility problems and maintenance issues can save City staff both time and resources. Public participation also allows citizens to feel that the City is responding to their needs and concerns. The City of Portland, Oregon uses a phone hotline, web pages and postcard/comment cards to aid citizens in reporting maintenance issues. Problems may include malfunctioning pedestrian signals, gaps in the sidewalk system, maintenance of crosswalk or bicycle lane markings, or debris in bicycle lanes. In addition to providing comment cards at locations such as bicycle stores and public buildings, the City should set up web-based forms that allow tracking of service requests and direct the request to the appropriate person.

One area that demands particular attention is pedestrian-activated crosswalk signals that are not functioning properly. By the time pedestrians have completed their trip, they may not remember or do not know how to report the problem. Posting a phone number on the post, along with the fixture number, could allow those with cell phones to call in a report.

### **Key Programs to Continue for Maintenance of Non-motorized Facilities**

The Greater Mt. Pleasant Area has many good existing policies and programs that support the non-motorized system. The following policies and programs should be reinforced and continued.

- The City of Mt. Pleasant has a sidewalk snow removal policy in place. Property Owners are responsible for the snow removal of at least 48" width on their property within 18 hours after the end of each accumulation of snow, sleet or freezing rain. This policy should be enforced and continued.
- The City of Mt. Pleasant has an ordinance to give written notice to the owner or occupant of the premises when a sidewalk needs repair or when the sidewalk is unsafe for use or required to be constructed for the public safety. This policy should be enforced and continued.

## **Policy Recommendations on Maintenance of Non-motorized Facilities**

### **Within One Year:**

- The local government should develop a multi-year maintenance schedule as part of the annual striping program for updating signs and refreshing pavement markings on Trails and Bike Routes to maintain high contrast and visibility and help bicyclist and pedestrians navigate.
- The local government should develop a community inspection program to identify and cite hazardous sidewalks.
- The local government should develop a comprehensive community asset management for entire system that addresses regular inspections, preventative maintenance and ADA issues.
- Establish a dedicated website form for non-motorized service requests.
- Develop an educational campaign encouraging property owners to clear curb ramps and bus stops when shoveling their sidewalks.
- Establish a policy for maintenance and snow removal of crossing islands.
- The local government should continue to refresh pavement marking on all roadways, including bike lanes and crosswalks, yearly to maintain high contrast and visibility.
- The local government should enforce a street sweeping policy to keep the bike lanes clear of debris
- Establish a policy to integrate all of the non-motorized facilities that are part of the Network Plan into the current snow removal program.

### **Within Three Years:**

- The local governments should determine if additional means are necessary to develop a program that provides maintenance contact information, such as stickers or signs to be placed on pedestrian signals.
- The local government should assess the effectiveness of the efforts of the code compliance staff to enforce the existing snow removal ordinance on privately owned hard surfaced sidewalks and pathways, specifically on local roads and private drives. If necessary, the City should develop a program to assure snow removal from privately owned sidewalks and pathways along Arterials and Collectors.
- The local government should designate or hire additional staff and assign responsibility for clearing and maintaining crossing islands, shared-use trails and off-road pathways of snow and ice.
- The local government should develop a program that monitors the condition of sidewalks along Arterials and Collectors on a yearly basis.

### **Within Five Years:**

- Establish a maintenance hot-line and website for non-motorized issues (this may be integrated with other maintenance hot-lines) and place a sticker with this hotline number and website address at locations around town including at all pedestrian activated signals.

## 7.6 Sidewalk/Roadside Pathway Completion

Sidewalks are the unsung heroes of a non-motorized system. They are usually the first facilities to be constructed and provide a backbone to a complete non-motorized network. Sidewalks are one of the key components to a walkable community and policies and programs need to be established to support the installation of these facilities.

In general, sidewalks should be installed by developers when constructing new buildings or homes and by the local city, county or state agency during a roadway improvement project. Every city and municipality handles sidewalk installation differently, but the important thing is to have policies in place that require the installation of sidewalks in both existing and newly developed areas.

### **Sidewalks/Roadside Pathways along Arterial and Collector Roads**

There are usually many destinations along arterial and collector roads so it is important to have a complete sidewalk and/or pathway on both sides of the street.

The Greater Mt. Pleasant Area has a fairly complete system in the neighborhoods, however the areas of new develop have little to no pedestrian connections. A sidewalk should be built on at least one side of the road in these areas to help link people to existing non-motorized system.

### **Sidewalks in Residential Neighborhoods**

Local sidewalks are critical to the walkability of a neighborhood. In many communities, local sidewalks are where a majority of daily recreation takes place. Daily activities such as jogging, dog walking, and socializing occur along local neighborhood streets so it is important to provide a safe alternative to the roadway where these activities can take place.

There are some neighborhoods in the Greater Mt. Pleasant Area that have an incomplete sidewalk system along the local roadways. Many times the existing policies for sidewalk construction only apply to new construction, not to existing subdivisions where there are many gaps or no sidewalks at all within the entire development. Also, in some of the newly constructed subdivisions, sidewalk construction is not always required until the house is completed. As a result of the current economic downturn, many of the new subdivisions are only partly built out, creating many gaps in the sidewalk system where houses have not been built yet.

The local government policies should be revised for a possible updated to include the following:

In New Construction of Subdivisions, given the development may take up to 10 years to complete, sidewalks must be complete at the time the road is being built.

In Existing Subdivisions where there are sidewalk gaps, or no sidewalks are present, establish a process for completing the sidewalk system. It is suggested that if 2/3 of the occupied households vote to complete the sidewalk system that is being constructed with cost assessed to the landowners who segments are incomplete. If it is for a sidewalk along a local neighborhood road the vote should be among property owners just on that road. If it is for a sidewalk along a neighborhood collector road then the vote should be among the property owner in the neighborhood.

**Key Programs to Continue for Sidewalk/Roadside Pathway Completion**

The Greater Mt. Pleasant Area has many good existing policies and programs that support the non-motorized system. The following policies and programs should be reinforced and continued.

- There is a Sidewalk and Pathways Committee that is part of a regional effort that is prioritizing non-motorized routes for development. The committee includes representatives from Union Township, Central Michigan University, the City of Mt. Pleasant, four townships to the north of Union Township and the Bay Region office of the Michigan Department of Transportation.
- Union Township adopted a sidewalk and pathway ordinance which requires all new development and redevelopment requiring site plan approval and substantial remodeling to include a sidewalk plan.

**Policy Recommendations on Sidewalk/Roadside Pathway Completion****Within One Year:**

- Establish a committee to update the local government code based on the recommendations within this report.

**Within Three Years:**

- Establish the process for neighborhoods to complete their sidewalk system.

**Within Five Years:**

- Track the progress of sidewalks constructed.

