US 41/M-26 HIGHWAY CORRIDOR
ACCESS MANAGEMENT PLAN

PREPARED FOR:
HOUGHTON COUNTY ACCESS MANAGEMENT TEAM

WESTERN U.P. PLANNING & DEVELOPMENT REGION
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The study was prepared by planners and transportation engineers with U.P. Engineers & Architects, Inc.

Note: the Houghton County Road Commission elected not to participate in this planning process
## TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>CHAPTERS</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acknowledgments</td>
<td>1</td>
</tr>
<tr>
<td>Table of Contents</td>
<td>2</td>
</tr>
<tr>
<td>Introduction</td>
<td>4</td>
</tr>
<tr>
<td>The Value of Access Management</td>
<td>8</td>
</tr>
<tr>
<td>Project Goals</td>
<td>9</td>
</tr>
<tr>
<td>The Land Use and Transportation Relationship</td>
<td>10</td>
</tr>
<tr>
<td>Local Master Plans and Zoning</td>
<td>11</td>
</tr>
<tr>
<td>The U.S. 41/M26 Corridor Access Management Planning Process</td>
<td>13</td>
</tr>
<tr>
<td>U.S. 41/M26 Corridor Description and Traffic Safety Analysis</td>
<td>14</td>
</tr>
<tr>
<td>Proposed Corridor and Access Management Improvements</td>
<td>30</td>
</tr>
<tr>
<td>City of Houghton Recommendations</td>
<td>35</td>
</tr>
<tr>
<td>City of Hancock Recommendation</td>
<td>41</td>
</tr>
<tr>
<td>Franklin Township Recommendations</td>
<td>43</td>
</tr>
<tr>
<td>Portage Township Recommendations</td>
<td>44</td>
</tr>
<tr>
<td>Site Specific Access Management Recommendations</td>
<td>49</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FIGURES</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Figure 1: US-41/M26 Corridor Study Area</td>
<td>4</td>
</tr>
<tr>
<td>Figure 2: Impact of Roadside Development over time</td>
<td>8</td>
</tr>
<tr>
<td>Figure 3: Elements of pedestrian discomfort in Winter Cities</td>
<td>9</td>
</tr>
<tr>
<td>Figure 4: The Transportation Land Use Cycle</td>
<td>10</td>
</tr>
<tr>
<td>Figure 5: Teams of Local Management</td>
<td>11</td>
</tr>
<tr>
<td>Figure 6: US 41/M-26 Highway Corridor Issues Identified At The Public forum</td>
<td>13</td>
</tr>
<tr>
<td>Figure 7: Study Area segments</td>
<td>14</td>
</tr>
<tr>
<td>Figure 8: Study Area segments</td>
<td>15</td>
</tr>
</tbody>
</table>
Figure 9: Study Area segments
Figure 10: Study Area segments
Figure 11: Study Area segments
Figure 12: Study Area segments
Figure 13: Average Daily Traffic Year 2004
Figure 14: Traffic Counts (ADT Trends) by Segment, 1993-2005
Figure 15: Traffic Counts (ADT Trends) by Segment, 1993-2005
Figure 16: Area of Study – Crash Data Summary 1994 – 2003
Figure 17: Driveway crashes by movement
Figure 18: Study Area segments analysis
Figure 19: Study Area segments analysis
Figure 20: Study Area segments analysis
Figure 21: Ten Principles of Access management
Figure 22. US 41 – M 26 - Houghton and Hancock
Figure 23: Approval Process
Figure 24: Shared driveways and connected parking lots
Figure 25: Frontage roads and rear service roads
Figure 26: Ideal street section
Figure 27: Left-Turn Lane and Vehicle Safety
Figure 28: Alternate Left-Turn / Emergency Lane and Bicycle Lanes
Figure 29: Pedestrian-safe 3 lane roadway
Figure 30: Alternate Routes
Figure 31: Areas of Future Growth – Houghton
Figure 32: Areas of Future Growth – Hancock
Figure 33: Areas of Future Growth – Franklin Township
Figure 34: Areas of Future Growth – Portage Township
INTRODUCTION

Michigan’s Keweenaw Peninsula is one of the most geographically isolated regions in the lower 48 states. Located at the far northwestern edge of Michigan, the Keweenaw Peninsula is not a place you drive through on the way to a destination…it is a final destination.

Both U.S. 41 and M-26 provide the primary highway access to the Keweenaw Peninsula and specifically, the cities of Houghton and Hancock. These twin cities straddle both sides of Portage Lake/Keweenaw Waterway, connected by the world’s largest lift span bridge. The two highway corridors converge at the south end of the Portage Lake Lift Bridge only to split again at the north end of the bridge, where they serve different communities of the Keweenaw.

The cities of Houghton and Hancock, together with the surrounding townships of Franklin and Portage, are the nucleus of a busy “micropolitan area” with a combined population of 15,809. Houghton-Hancock is the commercial center for Houghton and Keweenaw Counties, as well as Baraga County to the south and Ontonagon County to the southwest. These four counties are considered the primary trade area for Houghton-Hancock, with a combined population of nearly 55,000. Many people within this primary trade area travel to Houghton-Hancock for employment, education, medical care and shopping.

The area is also home to thousands of students at Michigan Technological University (MTU) and Finlandia University.
U.S. 41 provides access from the south and east, and is the route connecting the Keweenaw with Marquette and Escanaba. M-26 links the region to areas to the south and west.

History and geography have shaped the major highway corridors serving Houghton and Hancock. The area was developed as the result of copper mining activity on the Keweenaw Peninsula and in the 1920’s, had nearly double the current population.

A unique characteristic of the Keweenaw is the number of individual small communities or neighborhoods, each oriented to a separate mine site or copper processing facility. This urban pattern was established before there were automobiles. Much of this development pattern remains today.

The major highways linking the Keweenaw’s communities are mostly upgraded local streets that were in existence before the emergence of the automobile. A few segments have been upgraded with major widening and alignment changes over the years:

- The M-26 south corridor in Houghton was realigned and widened to eliminate a steep, winding road known as Van Orden’s hill in the early 1980’s. This segment was further widened in the 1990’s to create the five-lane roadway present at this time.
- The reroute of US 41 around the MTU campus with the boulevard cross section four lane Townsend Drive relocated US 41 out of the central campus of MTU in the 1970’s.

Improvements to the Quincy Hill US 41 segment in the City of Hancock, Franklin and Quincy Townships included widening to four lanes.
Another unique characteristic of the US 41 Corridor are the one-way pair
segments through the Houghton and Hancock downtown districts. These
downtown districts are each listed on the National Register of Historic
Places because of their outstanding historic architectural resources. Both
feature narrow building to building widths with sidewalks and on-street
parking. Houghton and Hancock are situated on steep hillsides and grades
on adjoining cross streets are in excess of 15%. These features create a
special sense of place, but also contribute to a perception of congestion and safety concerns.

The presence of Michigan Technological University (MTU) in Houghton
creates both opportunity and challenges. MTU is the major driver of the
region’s economy and cultural activity. However, MTU is also the primary
traffic generator in Houghton and Hancock, and creates the peak traffic
congestion in the central cities and bridge area during commuting times.
The “rush hour” traffic can be very intimidating and creates negative
perceptions about the adequacy of the US 41/M26 road system, particularly
in the downtowms and at the bridge intersections.

In 1979, the development of the Copper Country Mall south of Houghton
in Portage Township began to change traffic flows and patterns. As the
development of adjoining lands progressed, and additional road
improvements have been made, traffic counts are increasing on M26.
Fortunately, the City of Houghton planned access management concepts to
accommodate the commercial development while preserving the primary
functions of moving traffic safely at design speeds through the US 41
Highway Corridor. Separate driveways are limited in number, instead,
defined access streets and frontage roads to businesses limit turning
movement opportunities. These planned improvements have also increased
available land and road frontage for additional commercial development.
The transportation and land use cycle, discussed in this report, is a documented pattern. Land use, if not properly coordinated and managed, can dramatically alter and diminish the primary functions of the highway. If the roadway segment becomes so congested that the primary functions become diminished, alternatives must be discussed.

The purpose of the US 41/M-26 Highway Corridor Access Management Plan is to identify solutions to existing traffic and access conflicts and issues, thereby alleviating the need for expensive lane widening and bypasses. This plan will establish a process for managing future access to these primary roadways in the Houghton-Hancock area.

This approach will improve safety, preserve capacity, as well as allow for future economic development of adjacent properties while maintaining the primary functions of the two major roadway corridors serving the Houghton-Hancock area.
THE VALUE OF ACCESS MANAGEMENT

When access to highway corridors is planned and managed, a number of benefits accrue to local communities, transportation agencies, and the public interest. The primary benefits are discussed below:

Access Management improves traffic safety.
Limiting the number and locations of driveways and access points minimizes the number of conflict points. MDOT traffic and safety statistics prove the relationship between access movements and crashes.

Access Management decreases travel time and reduces motorist costs.
Fewer delays resulting from good traffic flows reduces travel time.

Access Management maintains traffic capacity and roadway functions.
Appropriate access management preserves the road’s capacity to move vehicles at the design speed and extends the life-cycle of the road.

Access management improves access and the value of private land development.
Managed site access results in better designed site plans that provide safe access to each property. These sites are more attractive to customers, as they are frequently easier and safer to access.

Access Management improves the attractiveness of a community.
A safe and pleasant driving experience through a community’s highway corridor with clear and safe turning movements, more landscaping, and fewer stops adds to the perceived quality of life and attractiveness for economic development.

Source: MDOT Access management Guidebook
PROJECT GOALS

The following goals have been developed to guide the US 41/M-26 Corridor Access Management Program.

- Improve the traffic safety of the US 41/M-26 Corridors.
- Maintain, enhance and/or improve the traffic carrying capacity of the corridors.
- Coordinate state and local infrastructure investments in the highway, intersecting roadways, communities and adjacent properties.
- Improve local government planning response to highway corridor issues.
- Consider winter and snow management in access, site plan design and proposed highway improvements.
- Create and maintain a coordinated site plan review and permitting process to achieve appropriate economic development of the corridors, while meeting the goals of the corridor plan.
- Provide for safe and adequate non-motorized access along the corridor.
- Utilize the team as a forum for exchanging pertinent information related to transportation needs along the established US 41/M-26 corridor.

Figure 3. Elements of pedestrian discomfort in Winter Cities

Elements of pedestrian discomfort include:
- Downdraft
- Rain
- Snow
- Drying precipitation
- Wind
- Ice
- Low sun
- Snow spray
THE LAND USE AND TRANSPORTATION RELATIONSHIP

The relationship between the capacity and use of a transportation facility and the value and intensity of development is direct. As land develops and the road facility becomes congested, the safety of the facility begins to decline. To improve safety and traffic flow, the roadway is improved, perhaps with additional lanes, traffic signals, and right/left turn lanes.

While these improvements will improve capacity and safety, the effect is to attract more traffic which attracts additional development. Over time, the cycle is repeated; the roadway becomes congested and is in need of improvements. Eventually, a maximum capacity is achieved and options for relocation of the highway and bypassing all the development are explored.

LOCAL MASTER PLANS AND ZONING

Local planning commissions, master or comprehensive plans and zoning ordinances provide the means upon which a community may exercise some management and control over access to properties adjacent to the US 41/M-26 Corridors. A major effort of this planning process will be to work with each local government to assist with the preparation of appropriate zoning, access management and site plan requirements. These tools are key to implement the ideas and planning strategies for the highway corridor.

Of the four local government units included within the study area, three have zoning ordinances. Only two, the cities of Hancock and Houghton, have Master Plans and site plan review as part of the existing ordinance. The table below summarizes existing planning and zoning frameworks in place for implementation of the Access Management Plan.

<table>
<thead>
<tr>
<th>Local Unit</th>
<th>Master Plan</th>
<th>Zoning Ordinance</th>
<th>Site Plan Review</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Houghton</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>City of Hancock</td>
<td>Yes (strategic plan)</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Portage Township</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Franklin Township</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Figure 5. Teams of Local Management

Source: MDOT Access Management Guidebook
The Checklist included here incorporates the access management principles and may be used in sight plan evaluation by local agencies. In addition, this information can be used by developers, property owners and business owners in the preparation of site plans.

**CHECKLIST FOR ACCESS MANAGEMENT**

1. Is other access to the property available in addition to highway access?
2. Is interconnection provided between properties?
3. Is there a proper spacing between drives on the highway?
   - 245 ft in 35 mph zone
   - 300 ft in 40 mph zone
   - 350 ft in 45 mph zone
4. Will a turning lane be required? (determined by MDOT)
5. Can the proposed driveway be combined/shared with an existing driveway?
6. Is the proposed access aligned with a street or drive across the roadway?
7. Is there more than one driveway requested per lot?
8. Is the proposed drive near an intersection? Will the drive be blocked by intersection traffic?
9. Is there a rear access drive provided?
10. Is the best design used for the access? i.e. right turn only exit, slope, drainage, radius, clear vision and pedestrian/bicycle considerations.
11. Do we know of any immediate plans for adjacent properties?
THE US 41/M-26 CORRIDOR ACCESS MANAGEMENT PLANNING PROCESS

The development of the US 41/M-26 Corridor Access Management Plan involved a committee of local officials representing the local government jurisdictions of the City of Hancock, the City of Houghton, the Charter Township of Portage and Franklin Township. The Michigan Department of Transportation participated in committee meetings and provided funding for the project. The Western Upper Peninsula Planning and Development Region provided coordination for the funding and participated in the planning process.

Other representatives of the various city and township boards and planning commissions also attended meetings of the committee, which were open to the public.

A public and local official Access Management Training program was conducted on January 10, 2007. The training program included an open house afternoon session and an evening public meeting. The purpose of this meeting was to identify and receive public comment on access management issues and project goals, as well as provide educational information on the benefits of highway access management and how this will fit into the community’s existing planning and zoning process.

The public meeting resulted in the identification of a number of highway corridor issues. Community members participating in the workshop have many opinions and ideas about traffic and safety issues in the Houghton-Hancock area which are outlined in Figure 6.

Following the draft of the Access Management Plan, the consultant worked with each local government jurisdiction on developing the local ordinance modifications to enable the management of access along the US 41/M-26 Highway Corridors.
US 41/M-26 CORRIDOR DESCRIPTION AND
TRAFFIC SAFETY ANALYSIS

The study area for this plan includes two primary Michigan trunk lines, M-26 and US-41. The M-26 corridor runs from the Portage Township line, south of Houghton, northerly through the cities of Houghton and Hancock to the Franklin-Osceola Township line near Dollar Bay. The US-41 corridor is studied from the south Portage Township Line northerly through the cities of Houghton and Hancock to the Franklin-Osceola Township line. This section will provide an overview of the physical characteristics of these corridors, as well as the traffic and safety issues in the study area.

US-41 is located on the National Highway System and is an important commercial and strategic route connecting the Houghton-Hancock urban area with the other primary commercial areas of the Upper Peninsula and the United States.

M-26 is not classified as being on the National Highway System but is noted as a principal arterial south of Houghton and an urban collector north of the Portage Canal. M-26 is a part of this study because of the heavy commercial and residential traffic volumes utilizing the corridor, as well as the commercial properties adjacent to the roadway. Land use trends indicate that these properties will be developed over time.

Because of the large study area, as well as the fact more than one route is to be studied, the study area has been split into segments. The following segments of M-26 and US-41 are to be referred in the analysis. Figures 7 through 12 illustrate the various segments.
M26-1

This is a rural segment from the Portage/Adams Township line northerly to the South Houghton City Limits. This road segment has been recently widened to five lanes and three lanes and has a 55 mph speed limit. The MDOT Control Section is 31012.

M26-2

This M-26 segment is MDOT Control Section 31012 and runs from the South Houghton City Limit to Sharon Avenue. The speed limit is 45 mph in this 5-lane (2 lanes each direction with center left turns) roadway segment. This is a highly commercialized area.

M26-3

This M-26 segment is Control Section 31012 and runs from Sharon Avenue to the south junction with US-41. The speed limit is 45 mph in this 5-lane roadway segment. The junction with US-41 is regulated with a stop sign. The intersection is clearly signed for directional traffic. The land use in this segment is primarily commercial, however highway access from the east is limited due to elevation differences of the adjacent properties.

M26-4

This M-26/US-41 segment is Control Section 31012 and begins at the south junction of M-26/US-41 and ends at the north junction of M-26/US-41 and incorporates the Portage Lift Bridge traffic. This segment consists of 2 northbound and 2 southbound traffic lanes. This is a ‘lift’ bridge which means traffic must stop when the bridge lifts to allow shipping traffic below.
M26-5

This M-26 segment is Control Section 31013 and begins at the north junction with US-41 and ends at Ski Hill Road. The speed limit in this 3-4 lane roadway segment is 40 mph. This area is primarily commercial.

M26-6

This M-26 segment is Control Section 31013 and runs from Ski Hill Road to Goat Hill Road. This is a 2-lane, 2-way roadway segment with non-uniform horizontal and vertical alignment. There is mixed land use, residential and commercial, through the area. The speed limit is 45 and 55 mph.

M26-7

This is a primarily rural roadway segment from Goat Hill Road to the Franklin Twp line at Dollar Bay. This is a two-lane roadway with a 55 mph speed.

US41-1

This US-41 segment is Control Section 31051 and begins at the south Portage Township line and runs to the East Houghton City Limits. This a two-lane, two-way roadway with a 55 mph speed limit. The shoulders are paved full width (9 ft). This area is primarily residential with mixed commercial consisting of used car lots and small businesses.

US41-2 through US41-4

This segment is from the East Houghton City Limit to Franklin Street in Houghton. This segment of Control Section 31051 is complicated and has been further broken into 3 segments for study.
- US41-2 from East Houghton City Limits to Division Street – 2 lane 2 way with center divider.

- US41-3 from Division Street to Pearl Street – divided 2 to 4 lane roadway

- US41-4 from Pearl Street to Franklin Street – 2-lane, 2-way roadway

This consists largely of Michigan Technological University and the related housing developments and fraternity housing. There is a significant amount of pedestrian traffic in this segment. The speed limit changes from 55 mph to 45 mph at the City Limit, then drops to 30 mph at the university.

**US41-5**

This northbound US-41 segment is from Franklin Street to the south M-26/US-41 south junction. This segment runs through the Houghton Business District with a speed limit of 25 mph. It consists of two lanes carrying one-way traffic.

**US41-6 & US41-7**

This US-41 segment is the southbound segment from Franklin Street to the M-26/US-41 south junction, better known as Montezuma Avenue. This 2-lane, one way roadway has a 30 mph speed limit and is retail commercial. It is further broken down as follows:

6 from Franklin Street to Isle Royale Street

7 from Isle Royale Street to south M-26/US-41 junction

**US41-8**

This segment is a duplicate of segment 3 but has been left in the segments in order to maintain continuity for the corridor descriptions.
**US-41-9**

This is the beginning of highway Control Section 31052 and runs from the north M-26 junction to the beginning of the one way pair in Hancock. This commercial district with little highway access has a speed limit of 30 mph.

**US-41-10**

This segment of Control Section 31052 runs on Quincy Street northerly to the M-203 junction. This northbound, 2-lane, one-way roadway travels through Hancock’s downtown business district with a 25 mph speed limit.

**US-41-11**

This segment is the southbound equivalent of Segment 12 from the M-26 north junction to M-203. The land use is commercial and the speed limit is 30 mph.

**US-41-12**

This segment is that part of Control Section 31052 from the M-203 junction to White Street in the City of Hancock, also called Lincoln Street. This 3-lane roadway segment includes 2 lanes in the northbound direction (up hill) and one lane in the southbound direction. The speed limit is 30 mph.

**US-41-13**

This segment is that part of Control Section 31052 from White Street to the northerly Hancock City Limits. The roadway becomes 4 lanes wide through this section, reducing to 3 lanes at Campus Drive with a speed limit of 45 miles per hour. North of Lake Annie Road, the roadway is two lane, two way with a 55 mph speed limit.
This segment is best addressed as a cultural or historical area because of the Quincy Mine Hoist and the roadside park. The surrounding land is part of the Keweenaw National Historical Park and is a National Landmark District.

US-41-14

This is a rural segment of roadway from the Hancock City Limit northerly to the Franklin/Osceola Township Line. The speed limit is 55 mph with a primarily two-lane, two-way roadway segment.
Traffic Volumes

Average Daily Traffic volumes from 1995 to 2005 are provided by the Michigan Department of Transportation for analysis of the corridors. US-41/M-26 at the Portage Lift Bridge between Houghton and Hancock maintains the highest traffic volumes in the county with nearly 27,000 vehicles in 2005.

The 2005 average daily traffic counts are illustrated in Figure 14. Traffic counts are generally taken during the summer months and are corrected for seasonality. The validity of the numbers may be swayed by whether Michigan Technological University classes were in session during the study period. This may explain some of the variability across the ten-year period as shown in Figures 14 and 15.
Figure 14 tabulates the segment ADT information. One reason for the decreasing ADT of some segments may be due to the motorist attempting to find alternate routes on city streets due to congestion.
Figure 15:

AADT Report for US-41 through Houghton & Hancock

AADT Report for M-26 through Houghton & Hancock
Accident Data

Accident data from 1995 to 2005 is provided by the Michigan Department of Transportation as shown in Figure 16.

In keeping with national statistics, intersection-related crashes represent a large number of crashes reported during the period from 1995 to 2005. Intersection crash data, in general, indicates signalized intersections have a high number of right angle and head-on left turn crashes. The study area is no exception. These crashes are also responsible for a higher incidence of the crashes involving injuries.

Additionally, a large number of side-swipe accidents and rear-end accidents are recorded in the study area. These types of accidents are inherent to the roadway cross-section (two lanes of parallel traffic) due to traffic changing lanes and the frequency of left turns from the inside lane when no left turn lane is available.

Figure 16: Area of Study - Crash Data Summary 1994-2003

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<th>MDOT Nomenclature</th>
<th>Crash Type</th>
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<td>2</td>
<td>hit train</td>
<td>0</td>
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<tr>
<td>1</td>
<td>overturn</td>
<td>57</td>
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<tr>
<td>3</td>
<td>parked vehicle</td>
<td>68</td>
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<tr>
<td>4</td>
<td>backing</td>
<td>290</td>
</tr>
<tr>
<td>5</td>
<td>parking</td>
<td>123</td>
</tr>
<tr>
<td>6</td>
<td>pedestrian</td>
<td>55</td>
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<tr>
<td>7</td>
<td>fixed object</td>
<td>416</td>
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<tr>
<td>8</td>
<td>other object</td>
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<tr>
<td>9</td>
<td>hit animal</td>
<td>344</td>
</tr>
<tr>
<td>10</td>
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<tr>
<td>11</td>
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<td>12</td>
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<td>13</td>
<td>rear end straight</td>
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<tr>
<td>14</td>
<td>angle turn</td>
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<td>15</td>
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<td>rear end right turn</td>
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<td>18</td>
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<tr>
<td>24</td>
<td>dual right turn</td>
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Crash data

Access Management can, however, affect the numbers of angle crashes due to unanticipated turning movements. Moving the turns to the intersections where there may be additional turning lanes and slower traffic reduce the frequency of the angle accidents caused by vehicles turning and entering the highway from unmanaged points along the roadway.

Specifically, within the study area, the largest number of accidents overall, are the rear end straight accidents. According to the Crash Reporting Information System in which the crash information is derived, the following describes the crash types:

**Head On-Left Turn:** When two vehicles are approaching head on and at least one is attempting a left turn.

**Angle:** This type is recorded when the intended direction of travel is basically perpendicular for both drivers and there is a side impact of approximately 90 degrees.

An angle crash is a more direct impact and may stop the forward movement of one vehicle.

An angle crash does not include the instance when the side impact takes place during a Head On-Left Turn, Rear End-Left Turn, or Rear End-Right Turn as described below.

**Rear End:** When the vehicles are traveling in the same direction, one behind REAR ENDS the other, and no turn is involved. Area of damage on the vehicles is not the determining factor.
Note: Any crash involving a vehicle backing up into another vehicle is not considered a rear end crash. This type of crash would be considered a Head On crash because the direction of travel was toward one another.

**Rear End-Left Turn:** When the intention of one driver was to make a left turn and he was struck by a following vehicle not necessarily in the same lane, the term Rear End-Left Turn is used. Initial impact damage to the turning vehicle may not necessarily be to the rear end.

**Rear End-Right Turn:** Same as Rear End-Left Turn (6) except involving right turns.

Source: State

**Figure 17. Driveway Crashes by Movement**

Source: National Highway Institute Research Center
Roadway Segment Analysis

M26-2 – This highway segment is entirely commercial. Access Management principles have been incorporated throughout much of the east side of the roadway. The west side of the road was developed earlier and provides individual access to many of the buildings. Generally, the accident rate is localized at the intersections with the Sharon Avenue intersection (signalized) having the highest accident rate. There are few accidents in this area relating to turning movements to or from the highway.

M26-3 – This highway segment is mixed residential and commercial, with a reduction in residential land use over the last 10-15 years. This portion of roadway has a limited number of driveways, mostly due to elevation differences with the adjacent properties. The accident rate through this much higher than the previous segment, with 44 rear-end straight accidents and 21 angle straight accidents.

M26-4 – This segment, as stated previously, includes the Portage Lift Bridge and short sections of US-41/M-26 at either end. There is little or no access to the highway in this portion of roadway but it carries the highest traffic volumes in the study area. Surprisingly, the accident rate here is quite high. There is a high incidence of rear-end crashes on this segment.

M26-5 – This segment of roadway has a 3 or 4 lane cross-section. The accident data relating to driveway access is very low (3 angle straight). This is likely due to the multiple lane section. There are 17 rear-end-straight crashes over the same 10 year period indicating this segment of roadway is not impacted by the number of driveways or their locations.

M26-6 – As M-26 continues easterly past the ski hill, the number of lanes decreases; however the number of accidents remains relatively low and non-driveway related. With the mixed land use and high speed roadway (55 mph), one would expect a higher crash rate than the 5 angle straight crashes reported over the 10 year period.
US41-1 – This portion of US-41 is the rural with mixed commercial south and east of Houghton. This section is a high speed area with a widened shoulder, with 2 angle-straight accidents recorded in the ten year period.

US41-2 through US41-4 – This portion of roadway, separated further into 3 portions by number of lanes and speed limit. This roadway segment has a large number of pedestrians crossing and walking adjacent to the roadway. The largest incidence of accidents are once again the rear-end straight crashes, with 35 occurring between Pearl Street and Franklin Square, while 19 occurred between the east city limit and Division Street.

US41-5 – The Houghton Central Business District (NB US-41) tallies 40 rear-end straight crashes, as well as a number of parking related crashes, but due to the few drives, these accident types are not at issue.

US41-6 & US41-7 – Southbound US-41 or Montezuma Drive is separated into 2 portions due to the variations in traffic counts. The accident rates of the 2 portions remain similar at between 9 and 13 rear-end straight crashes with between 7 and 10 angle-straight crashes. The higher incidence of crashes remains related to something other than the number of driveways.

US41-8 – Bridge area previously discussed.

US41-9 – On the north side of the Portage Lift Bridge from M-26 there are few points of access to the roadway. Includes rear-end straight accidents and side-swipe accidents but few angle crashes.

US41-10 – The Hancock central business district (NB US-41), also known as Quincy Street has been painted with a solid white line at the center, which indicates not crossing lanes is permitted. This is most likely due to the large incidence of side-swipe crashes. Since this is a business district, there are few driveways and few crashes relating to the driveways.
US41-11 – This one-way segment between M-203 and M-26 (SB US-41) includes both residences and commercial properties. Once again the accident rate here is more closely related to the roadway cross-section than the number of driveways.

US41-12 – That portion of US-41 between M-203 and White Street consists of an additional uphill lane for slow-moving and turning traffic. The accident rate on this segment is light and crashes are contained mainly at the intersections, particularly the sharp turn north of M-203.

US41-13 – This final recognized segment under analysis has a low crash rate with the crash concentration taking place at the roadway intersections. This area has limited development potential but has a higher speed and a high traffic volume that is increasing.

M26-7, M26-1 & US41-14 - The remaining rural roadways have only a small number of crashes which are more related to fixed objects and animals. In some instances there are crashes concentrated at intersections.

CONCLUSIONS

In general, Access Management principles for newer developments are being put into place. In at least 4 of the segments studied, there are few existing drives and the large number of crashes appears to be caused by other factors, such as crossing lanes or parking.

The traffic volumes on some of the segments are decreasing, while some are increasing. This shows a traffic pattern that is shifting. The major volume shift is on M-26 south of Houghton due to the growing commercial district. Other shifts in volume may be due to motorists finding alternate routes, housing location shifts, or just inconsistent adjustments of the data. For example, Sharon Avenue is carrying more traffic to and from the M-26 corridor as an alternate to traveling on College and Shelden Avenues through downtown. The Canal Road/M-26 intersection will also see more traffic due to more residential growth west of Houghton along the waterfront. The changes may continue as the municipalities plan for additional developments.
The crash data indicates that turning movements cause a significant number of crashes at intersections, however there appear to be few driveways experiencing consistent crashes that need immediate attention. In the long term, the areas to be considered for future access management criteria are the undeveloped ‘rural’ areas which tend to see small commercial operations replacing the residential make-up of the areas close to the city.

Additionally, the geometrics of some intersections with high crash concentrations warrant additional study; as does the two-lane, two-way section between Pearl Street and Franklin Square. By improving capacity, providing alternative routes, separating modes of travel, or otherwise making travel less complicated, the highway user’s patterns may shift to accommodate their individual needs.

**Figure 21. Ten Principles of Access Management**

1. Determine roadway’s type and function.
2. Identify main access points to major roads.
3. Define intersection hierarchy.
4. Locate signals to favor thorough traffic movement.
5. Preserve areas close to intersections as clear as possible.
6. Limit number of conflict points.
7. Increase the spacing between driveways and between access points.
8. Define turning lanes at intersections
9. Define turning lanes at mid block
10. Provide supporting or secondary roadways

Source: Access management Manual RTB 2003
PROPOSED CORRIDOR AND ACCESS IMPROVEMENTS

The US 41/M-26 study area is mostly developed. There are a few “greenfield” sites and areas where access management techniques can be applied on new projects. Other areas may see redevelopment, adaptive re-use of existing buildings and commercial upgrades to a higher degree, and these also can benefit from access management.

Many of the traffic and safety issues identified involve intensely developed segments through Houghton and Hancock. Resolving these problems may require major changes and reconfigurations of the highways.

The study has identified access, traffic and safety issues and problems of the US 41/M-26 Corridor. In this chapter, both general and specific improvements within the study area are recommended.

Recommendations for All Communities
General recommendations and access management techniques for all participating communities are discussed below:
Zoning and Site Plan review

All local governments with the exception of Franklin Township currently have planning and zoning functions. Franklin Township should adopt a land use plan and zoning ordinance in the near future, especially to manage growth along its US-41 and M-26 corridors.

Portage Township should update their Master Plan and adopt site plan review provisions within their zoning ordinance for commercial and industrial projects. Currently, only the cities of Houghton and Hancock have this tool. Through site plan review, cities and townships can greatly affect the site plan quality, appearance and traffic safety of individual development projects and preserve the safety and functionality of US-41 and M26.

Access Management Ordinance

An Access Management Ordinance is proposed for adoption by each participating local government. This ordinance establishes the intergovernmental committee and the process for the approval of site plans and driveway/access permits. Through this mechanism, the intergovernmental access management committee, made up of representatives of the participating local governments and MDOT, can meet to review and make recommendations to the participating jurisdictions and MDOT on new developments and driveway permit requests. This regional, collaborative approach maintains local control through the local zoning and site plan approval process, while coordination of the approval of driveway permitting is accomplished, as well as affecting the number of driveways allowed per parcel of land.

The goal is to manage the number and locations of driveways and curb-cuts, and to coordinate the approval process between the community, a proposed intergovernmental committee, and the Michigan Department of Transportation.
Service drives and shared access
Adjoining properties can consolidate driveways. This is especially effective on the existing narrow lots experienced in some areas of the corridors. Existing driveways and curb-cuts may be eliminated by consolidating driveways, thereby reducing the number of conflict points and congestion. This will require a cooperative effort of property owners and existing businesses and should be considered when highway improvements are being planned.

In addition to safety improvements, shared access has benefits for the businesses. Maintenance, snow plowing, and future reconstruction costs are spread among adjoining and benefiting property owners.

Service drives along the frontage or in the rear of properties should be encouraged where possible. The benefits of this strategy are obvious: additional commercial frontage can be created along the corridor without the problems associated with multiple driveways and access points.

Parking lot connections
Interconnecting parking lots is an easy way to improve access to businesses where a frontage road or service drive is not feasible. It is also effective along the intensely developed areas of the corridor. The benefit of parking lot connections is that customers can move between businesses without having to re-enter the highway. This may be possible on the west side of M-26 and US 41 south of Houghton.

Figure 24: Shared Driveways and Connected Parking Lots

Limit new curb-cuts and driveways

Restricting the number and spacing of new driveways and curb-cuts is a local government decision that can greatly improve traffic safety and capacity of the roadway. This can be done through the local zoning ordinance and can be combined with other access management techniques including shared access points and access drives at the front or rear of properties. Generally, only driveway per lot should be allowed and access from an adjoining side street should be encouraged.

Restrict the number and size of new lots

Larger lots can spread out the location of driveways in the rural segments of the US41/M-26 corridor. In existing developed areas, this may not be possible. Defining the allowable size of future land splits along the corridor can be done through the local zoning ordinance.

<table>
<thead>
<tr>
<th>Driveways per Mile</th>
<th>Representative Crash Rate per Mile for a Multi-lane, Undivided Roadway</th>
<th>Increase in Crashes Associated with Higher Driveway Density</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 20</td>
<td>3.4</td>
<td>-</td>
</tr>
<tr>
<td>20 to 40</td>
<td>5.9</td>
<td>+ 74%</td>
</tr>
<tr>
<td>40 to 60</td>
<td>7.4</td>
<td>+ 118%</td>
</tr>
<tr>
<td>Over 60</td>
<td>9.2</td>
<td>+ 171%</td>
</tr>
</tbody>
</table>


Note: Rear access roads are usually safer and more effective than frontage roads and should be used whenever possible. Frontage roads should not be too close to the roadway or used where the volume of traffic is too great for safe vehicle use.
Driver Awareness and Education
Promoting safety consciousness and awareness of pedestrian and bicycle issues could help reduce traffic and pedestrian/bicycle conflicts. Signage and news articles, as well as enforcement of speed limits are ways to promote courtesy and awareness of pedestrian and bicycle rights.

Separate Modes Where Possible
In areas of high pedestrian and bicycle traffic, opportunities to separate these modes from automobiles should be implemented, as illustrated in Figure 34.

Specific Recommendations
Specific recommendations for the US 41/M26 Corridors have been identified. These are can be located on the maps for each unit of local government that follow and are discussed below:
City of Houghton

College Avenue

The largest impact to the study area would be the implementation of geometric change on College Avenue in the City of Houghton. The need to modify this segment and reduce the number of driveways is evidenced by the number of accidents, the lower level of service of the two-lane, two-way roadway section with no shoulders, and the unavailability of alternate routes.

A comprehensive study of College Avenue is beyond the scope of the Access Management Plan, however, several alternatives have been identified to improve safety and capacity. These options are described below:

A three-lane roadway section

There are a number of potential benefits relating to the three-lane roadway section including:

- Improved Vehicle Safety
- Improved Pedestrian Safety
- Traffic Calming
- Improved Emergency Response Time
- Potential Bike Accommodation

Improved Vehicle Safety

This potential benefit is self explanatory. There is an elimination of drivers changing lanes to pass slower vehicles. Speeds are limited by the speed of the lead vehicle. This will reduce the number of side-swipes. Also reduced are the number of rear-end crashes, as vehicles are now using the left-turn lane. Studies have shown a reduction in the total number of crashes ranging from 17 to 62 percent. The severity of the crashes has also decreased.
Improved Pedestrian Safety

Pedestrians may benefit because motor vehicles are likely to be moving more slowly. The three-lane configuration allows pedestrians to focus on one-lane of traffic at a time and medians or left-turn lanes can provide a refuge for pedestrians if needed. While the left-turn lanes are active lanes, they would have lower traffic volumes and slower speeds. Three-lane roadways create a more comfortable environment for pedestrians with less noise due to slower and more consistent traffic speeds.

Traffic Calming

Studies show that narrow roadways decrease the speed motorists feel comfortable traveling. In fact, studies found a dramatic reduction of excessive speeding (five miles per hour or faster). Another result of the three-lane configuration is lower speed variability which creates a more predictable and consistent travel environment.

Improved Emergency Response Time

Emergency vehicles may use the left-turn lane as a means to travel unimpeded along a busy roadway.

Potential Bike Accommodation and Streetscape

The roadway cross section may be designed to provide additional room for use as a bike lane. In addition, the change could create opportunities for visual enhancements and streetscape improvements. Funding may be available through MDOT for these kinds of enhancements.

There are also potential disadvantages to the three-lane cross-section on College Avenue. These disadvantages are discussed below:
Change in community character and impact on historic properties
College Avenue is part of an historic district listed on the National Register of Historic Places, due to the concentration of large historic homes. A number of these residential properties have been converted to fraternity and sorority houses. There will be concern about how a change in the roadway will visually impact these properties, as well as the historic and cultural landscape of College Avenue.

Encroachment upon residential front yards and tree removal
Converting College Avenue to three lanes and maintaining or enhancing pedestrian facilities will require additional space. Currently the walkways on the north and south sides of College Avenue are at the roadway’s edge. Ideally, at least one of the walkways should be separated from the roadway to buffer walkers from traffic and improve the pedestrian experience. This will require some tree removal and further encroach upon the front yards of the homes along the avenue. It may be possible to weave the walkway around existing trees and to incorporate tree planting/landscaping into the project.

Center Median Eliminating Left Turns and Roundabouts
A continuous center median restricting left turns would eliminate the cause of most accidents on College Avenue. The median could be a planted or landscaped median or perhaps decorative concrete.

For those vehicles needing to make a left turn, a roundabout on each end of College Avenue would enable vehicles to loop around and reverse direction, then make a right turn into their destination. The existing Franklin Square intersection is already configured in a roundabout-like geometry. On the east end of College Avenue, a roundabout could be provided at the US 41 and Cliff Drive intersection.

Roundabouts have gained increasing acceptance as a safe and effective traffic control measure in the United States. In the Houghton-Hancock area, drivers would quickly adapt to this type of intersection, as they are similar to the US 41/ M26 intersection on the south side of the Portage Lake Lift Bridge.
Prior to making a recommendation on this change for College Avenue, the following questions should be answered:

- Are the existing average speeds appropriate given corridor land uses?
- Does speed variability create safety concerns and noise problems?
- Is improving the pedestrian environment a priority?
- Is the road an existing or planned bicycle corridor?
- Do high crash rates exist due to turning movements, or stop and go traffic?
- How will this configuration affect the through truck traffic on US41?
- What alternative routes may be affected by local traffic avoiding the corridor?

These questions will determine the primary purpose of the corridor.

**Convert existing center turn lane to a decorative pavement or grass median on portions of the Houghton M-26 corridor**

North of Sharon Avenue, the number of driveways and curb-cuts decreases dramatically and the spacing between access points increases. The existing center turn lane is virtually non-functional in this area with little use except at a few existing driveways and at Canal Road.

Making a turn on to M-26 from Canal Road can be difficult during peak traffic due to the speed of traffic. In addition, the M-26 grade in this area makes it difficult to determine the speed of oncoming traffic. Frequently, the center turn lane is used as an acceleration lane by vehicles turning left on to M-26. The number of vehicles using Canal road appears to be growing due to recent and expected development west of Houghton along the Portage Lake and Lake Superior waterfronts.

The City of Houghton and MDOT may wish to consider converting the existing center lane to a decorative pavement or grass median in the future during a future reconstruction project. Combined with the other access management controls being used by the City and as recommended in this study, the median may have benefits that include:
- The better definition of a left turn lane in the few places necessary for driveways and especially at the Canal Road intersection.
- The median can serve as a snow storage area and provide a snow barrier to prevent head-on crashes during winter and slippery conditions.
- A median will improve visual context in this scenic area that serves as a gateway to Houghton and Hancock.

**Monitor the Wal-Mart intersection at M-26**
One of the busier intersections on M-26 is at the entrance road to Wal-Mart. This road (Cedar Street) also serves a motel, restaurant, future recreation center and connects to two commercial frontage roads. Currently, the intersection does not meet MDOT warrants for a traffic signal at this location. If traffic increases at this intersection as a result of more commercial development and future connections to the east, it should be monitored to determine if signalization is required.

**Separated Pedestrian Crossing at MTU**
Plans are being developed for a separated pedestrian crossing between residence halls at Michigan Technological University (MTU) and the core campus area north of US 41. Currently, thousands of students cross US 41 each day while classes are in session. MTU has been awarded a grant to design and construct a separated pedestrian crossing. A study of options at the beginning of this design process determined that raising the grade of US 41 with Conspan tunnels underneath the road offered the best possible alternative. This project is currently in design with construction anticipated in 2008. MTU, the city and MDOT should continue to review options to reduce conflict points at pedestrian crossings.

**Study the College Avenue Corridor**
As previously discussed in this chapter, resolving the safety issues associated with College Avenue, particularly the rear end collisions noted in this area, should be studied further. The goal should be to improve traffic flows and enhance pedestrian conditions in this segment.
Promote Alternate Routes

Traffic congestion within Houghton may be reduced by promoting and improving alternate routes for traffic, as an alternative to US 41, such as MacInnes Drive/Sharon Avenue.

One important connection that could relieve traffic pressure is the proposed extension of Cedar Street from the Wal-Mart commercial area to the intersection of Superior Road and Paradise Road. (see discussion on Wal-Mart access road/M-26 intersection.) This connection would provide an alternate route for traffic traveling from the south to the commercial area on M-26.

Create a Bicycle and Pedestrian Connection between MTU and Houghton’s Waterfront Trail

Establishing a convenient connection between MTU and Houghton’s waterfront trail would greatly improve conditions particularly for bicycle commuting. Separation of traffic types will limit conflicts and reduce the potential for serious injury crashes. Also, mixed traffic types impact vehicle traffic flow and create confusion.
City of Hancock

Hancock faces many of the same issues as Houghton in regard to moving peak traffic flows through the existing urbanized area. In addition to the general access management directions (shared driveways, limiting curb cuts, etc.) discussed above, Hancock should consider and study the following recommendations.

Eliminate US 41 Trunk-line Traffic from Quincy Street
Converting Hancock Street for two way traffic using a 3 or 4 lane cross-section would allow MDOT to remove US 41 traffic from Quincy Street. It is recognized that much of the downtown traffic is not shopping-related; rather the traffic is commuting to and from work or on their way to another destination. The points of divergence and convergence for this one-way pair also experience geometric problems and driver confusion, which result in a high crash rate that could be reduced by this solution. The accident history on Quincy Street is dominated by side-swipes and rear-end crashes which could be reduced by making this a local street. Many of the businesses on Hancock Street are accessible by alternate drives and off-street parking facilities making it possible to provide a high level of service for two-way traffic.

The benefits of a 3 lane configuration, as outlined previously in the College Avenue analysis, would apply to Hancock Street as well. (see pages 32-34)

Identify Alternate East-West Routes
Hancock has limited options for alternate routes for traffic moving east-west. This creates problems particularly during emergency situations when Quincy Street is closed or restricted. There are few options for vehicles seeking alternate routes to avoid the congestion of Quincy Street during peak commute periods.
Consider a Designated Right Turn Lane for M-203 at the US 41 Intersection

During peak traffic flows, this intersection becomes difficult for traffic attempting to enter US 41 from M-203. A designated right turn lane, lane reconfiguration or roundabout at this location would make an operational improvement and enable traffic from M-203 to better merge into US 41 traffic. Drivers would quickly adapt to a roundabout intersection, as they are similar to the US 41/ M26 intersection on the south side of the Portage Lake Lift Bridge.

White Street Traffic Study
White Street serves as a shortcut between US 41 at Quincy Street and US 41 at North Lincoln Street. Northbound traffic, in particular, is likely to avoid the perception of slower moving traffic on the narrow Quincy Street and the tight curve at the “Santori Corner” in favor of the direct link White Street provides. To discourage this traffic, the City closed a segment of Tezcuco Street, which provided a direct southbound link across Quincy Street to US 41 on Hancock Street.

The situation at White Street requires a traffic study to determine the best possible solution to the desire to calm traffic through neighborhoods while preserving access for emergency vehicles and as an alternate route across the city. It is possible that eliminating improving Hancock Street to a two way US 41 could change the short-cut perception and solve this problem.

Elevation Street Intersection
The Elevation Street/US 41 intersection has been noted by law enforcement as a trouble spot on the US 41 corridor through the City of Hancock, due to limited sight distance and the grade on Elevation Street. This intersection should be evaluated in the future to determine if geometric corrections could be made to improve the intersection.
Franklin Township

Franklin Township should adopt a Master Plan and Zoning Ordinance as quickly as possible to manage future growth, particularly along the US 41 and M-26 corridors. In addition to the general access management directions (Master Plan, zoning, shared driveways, limiting curb cuts, etc.) discussed above, Franklin Township should work with MDOT on the following ideas for improving traffic flows, especially on M-26. The township should also consider driveway access when approving land divisions. Cluster development with a single point of access is preferred over traditional single lot development with access directly onto the highway.

Improve the Rail Grade Trail for Bicycles and Pedestrians
One of the two rail grades that parallel M-26 through Ripley and Franklin Township to Lake Linden should be considered for all season non-motorized use. Pedestrians and bicyclists would be attracted to this trail. This project could also have dramatic economic development/tourism implications for the area.

M-26 Reconstruction through Ripley
Currently M-26 through Ripley is a rural type road cross section without curb, gutter and paved shoulders. This is an urbanized area with a mix of residential and business land uses. An urban-type roadway cross section with curb would control and limit access points. In addition, it would serve to calm traffic, as well as better define the roadway. Drainage improvements are also needed through this area.

The M-26 reconstruction will provide the opportunity to reconfigure and consolidate existing driveways. Some businesses have parking and driveways that are merely extensions of the roadway shoulder, some are extremely wide without defined entrances. These create safety problems and confusion, both for vehicles entering and exiting as well as the traffic traveling on M-26.
Portage Township

The M-26 and US 41 frontage through Portage Township will continue to see commercial development in the future. Once adopted, an access management ordinance and site plan review process will enable the Township to effectively manage and control this development in regards to driveway placement and access.

There are several areas on US 41 and M-26 south of Houghton where driveway consolidation would benefit safety in Portage Township. These are located in areas already developed and where land use has changed to a higher level of commercial activity, in Segment US 41 1-2, from the Houghton city limits to the Pilgrim River and near the Copper Country Mall in Segments M-26 1-2.

A right turn lane from Green Acres Road onto M-26 is suggested to improve traffic flows and safety for vehicles entering M-26 from this important county road.
Study and Plan For the Future of US 41 through Houghton/Hancock

The Houghton/Hancock area has not experienced population growth to any great extent and tourism is relatively stable. MTU also has not experienced growth in the number of students. Yet the perception is that there is more traffic, which is somewhat confirmed by the ADT reports for certain segments of both US 41 and M-26.

At the same time, both of the downtown districts have considered how removal of through-traffic would benefit the retail and pedestrian environments and decrease accidents relating to parking and pedestrians. Most of the downtown traffic in Houghton/Hancock is not seeking the commercial establishments, rather the traffic is commuting to and from work or on their way to another destination. Providing alternate routes for the thru traffic will free the downtown streets for local traffic and alternate modes of transportation. By maintaining access controls on the alternate routes, the functionality of the roadways can remain high.

In addition, the US 41 corridor through the MTU campus a discussion point. As the major employer and destination for commuting staff and students, MTU is the major traffic generator in the region. While Townsend Drive removed traffic from the heart of campus, it still must be crossed by thousands of pedestrians each day creating a potential safety issue. With increasing roadway capacity for the traffic increases, roadway cross-sections are wider with more opportunity for conflict with other users. Through the use of alternate routes, the conflict points can be reduced and managed.

Topography/geography, existing development and land ownership patterns, historic districts and fear of change are major constraints to resolving traffic and congestion issues in both downtown areas and at MTU.
Future Growth Areas

While much of the study area is already developed, there are areas in the four communities where new development is anticipated. It is with new development where access management principals can have big impacts. Changes in land use and additional development can also have unintended consequences on traffic in other areas of the highway corridors. Examining these kinds of issues and working together to resolve both short and long-term transportation issues is a major benefit to the intergovernmental Access Management Committee approach to review of development proposals.

Areas where growth, development and land use change is likely to occur are identified and discussed below:

**City of Houghton**
The land adjacent to the proposed Cedar Street (Wal-Mart to Dodgeville area) is likely to develop as a mixed use commercial, residential and business park area. Traffic flowing to and from this area has several options. The intersection of Cedar Street and M-26 will likely see increases in traffic. Access planning and continuing the current policies of access management should be used.

**City of Hancock**
Land on the north side of the city surrounding the Portage Health Campus and High School is planned for more mixed-use development.

**Franklin Township**
The waterfront land along the M-26 corridor is an area likely to see major land use changes. Currently this land is underutilized, but the availability of utilities and increasing waterfront land values will result in redevelopment, such as being experienced now at the Coal Dock site. Development along M-26 in the township will result in increased traffic, leading to more congestion at the bridge intersection.
The US 41 corridor in Franklin Township has experienced several developments in recent years and more development is expected.

Without land use planning and zoning in Franklin Township, the community is vulnerable to unwanted land uses and unintended impacts from highway corridor developments. The establishment of access management ordinances is vital for future development along the corridor and to preserve the functionality of these routes.

**Portage Township**
The M-26 corridor south of Green Acres Road has several cleared sites on the market; however, the lack of public utilities is a constraint to development. Should utilities become available, these sites are likely to develop. It is also likely that conversion of existing small businesses and homes will also occur.

The corridor south of Houghton on US 41 has experienced some small business development and continues conversion of seasonal waterfront cottages to year-round homes. Several stretches of waterfront currently constrained by the former rail grade/trail right-of-way could be developable if and when the current legal issues associated with the right-of-way are resolved. Access planning and management is needed to ensure that future development and redevelopment of properties do not have a significant negative impact to the corridor.

Figure 33: Areas of Future Growth – Franklin Township
In the Long-Term…

While the Houghton-Hancock area is not experiencing fast growth, it is changing. The Access Management Committee provides a great opportunity to help manage this change, as well as a forum to discuss with MDOT transportation issues affecting the cities and townships. This study has caused all participating communities to look at the big picture and begin some long-range thinking about future transportation issues and opportunities.

One idea discussed for many years for resolving traffic congestion and improving the commute to MTU is to construct a new bridge east of MTU. Concerns have also been expressed that another bridge is necessary for emergency management purposes and for access to the area’s medical care facilities, both located north of the existing bridge.

Other long-range concepts include:

- Bypass much of Houghton by connecting US 41 to Sharon Avenue east of the city.
- Create a bypass south of Houghton to M-26

Resolving these issues is beyond the scope of this Access Management Plan. A major traffic study is needed to identify options, identify a preferred alternative, and develop public support. Resolving this issue would benefit the future, long-term planning by all involved local governments affected by the future of US 41.
SITE SPECIFIC ACCESS MANAGEMENT RECOMMENDATIONS

The following recommendations are based on field review of the roadway segments during the study period. They are based on the cooperation of adjacent property owners and opportunity for work within the right of way. These recommendations are in no way meant to single out a business or residence to incur loss of highway access, but are observations made while looking for opportunity to reduce points of access and thus reduce the overall accident rate.

Segment M26-1, M-26 from Portage Twp line to Houghton City Limit

The ADT of this segment has remained relatively stable over the 10-year study period. Accidents in this rural road cross-section are animal related and do not appear to be related to roadway access issues. It is however recommended that future development be limited to a single access drive or be required to consolidate with adjacent properties where relevant.

The residential drives in this segment serve single family homes and are located such that consolidation is possible only in two locations: on the right just north of Scout Camp Road and on the right north of Snowmobile Club Road.

Commercial drive locations include elimination of one drive at the automobile body shop on the right just south of Janovsky Road and one drive at Manderfield Electric on the right. It is also suggested the drive on the west side of M-26 to Copper Country Ford’s lot be eliminated and access provided from West Sharon Avenue.

Segment M26-2, Houghton City Limit to East Sharon Avenue

The ADT of this segment has increased 22% since the 1995 ADT was recorded. The number of driveway related accidents is also higher in this portion of highway.
Though the city of Houghton has been practicing access management principles in the corridor, two commercial drives may be eliminated. Copper Country Ford has access from both the county road to the south and the Copper Country Mall to the north. Also, driveway consolidation for the businesses on the west side of M-26 north of McDonald’s, particularly the Sew & Vac, should be considered. At least one gravel drive could be eliminated by combining access with an adjacent business.

Segment M26-3, Sharon Avenue to US-41

The ADT of this segment has remained unchanged over the 10-year period. The accidents relating to highway access are concentrated on the northerly end of the segment where there is a concentration of businesses.

Highway access in this segment is limited by site distances of the curving roadway, grades and higher speeds. If property access allows, businesses along the west (left) side of the roadway could access from intersecting roadways or the access road at Econo-Foods and eliminate drives directly onto the trunkline. In addition, at least one driveway at Hardee’s Restaurant should be eliminated.

Segment M26-4, south US-41 junction to north US-41 junction

There are no drives accessing this portion of road and lift bridge.

Segment M26-5, US-41 to Ski Hill Road

This segment has undergone a significant increase in ADT numbers since 1995. Though the accident numbers remain relatively low relating to driveways, a number of access issues are evident in this location, as well as drainage problems and a possibility for increased growth along this portion of shoreline.
On the left (north), M-26 is populated with residential homes having short drives and steep elevations. On the right (south), a number of industrial and commercial properties are accessed by wide gravel and paved parking lots with little or no defined access points. The recommended treatment for this segment of roadway is the placement of curb and gutter with islands delineating access and enclosed drainage. The number of lanes and additional right of way are to be determined by MDOT and additional traffic studies. Through the geometric design of the roadway, opportunities to eliminate obsolete driveways and garages may be presented.

Segment M26-6, Ski Hill Road to Goat Hill Road

This segment has seen a slight increase in ADT counts over the last 10 years. As in the previous segment, the roadway is primarily residential on the left and commercial on the right. An improved rural roadway section providing ditches and additional drive delineation would be sufficient to maintain the low accident rate relating to drives in this segment. There is little opportunity for drive consolidation or elimination.

Segment M26-7, Goat Hill Road to Franklin Township line

This segment has seen an over 17% decrease in traffic volumes, much of which may be due to the changing limits of the data collection and reporting. As in M26-6, there is little opportunity noted for drive consolidation or elimination in this rural setting. Accident data does not indicate this segment as a priority.

Segment US41-1, Portage Township line to east Houghton City Limits

The traffic volumes in this rural segment have remained unchanged over the 10-year period. This rural residential area also contains commercial and recreational properties. There are many access points through the route.
There are some recommendations for elimination of drives when the opportunity arises. The following list of commercial establishments could operated with fewer drives than they currently have:

- Goodwin Motors (eliminate middle drive)
- Hitch, Inc. (eliminate southerly drive)
- Budget Host (eliminate southerly drive)
- Pilgrim Point
- Pilgrim River Steakhouse (eliminate middle drive)
- Holiday Motel (eliminate easterly drive and consolidate with Citgo)
- Gateway Apartments (eliminate westerly drive and connect with Denton Road and also connect with Citgo)

In addition, it is recommended the residents along the shoreline take advantage of the ‘old’ US-41 pavement to access property rather than constructing new drives. There are a number of drives that could be eliminated through this access. This would require Sew Crazy to remove the barrier preventing vehicle passage through their property.

**Segment US41-2, East Houghton City Limit to Franklin Street**

This segment includes the area through Michigan Technological University. Traffic volumes have increased significantly through this area and prompting a pedestrian study. The divided highway portion of the segment has limited access points and provides little opportunity for reduction in the number of access points unless MTU undertakes a major renovation of the parking facilities.

It is recommended, however that the drive accessing the parking area at the beginning of this segment on the right be eliminated. This parking facility can be accessed by Cliff Drive.
Segment US41-3, Division Street to Pearl Street

No recommendations for this segment for drives.

Segment US41-4, Pearl Street to Franklin Street

College Avenue has significant opportunity to consolidate drives which could give rise to a reduction in the number of access related accidents in the corridor. This along with other traffic or geometric controls may provide a solution to the congestion in this area. Detailed recommendations are as follows:

- College Motel Site: eliminate one drive
- Combine the easterly TKE drive with one at the College motel (eliminate drive and connect at rear of property)
- Combine the westerly TKE drive with the house next to it to the west (photo right)
- Combine house drive with adjacent drive (photo #2)
- Combine fraternity/sorority house drives which are already joint drives (photo #3)
- Combine 2 drives to single accessing the Insurance Agency and the Church on the right (photo #4)
- By combining the church and adjacent fraternity, additional parking would be provided
- Eliminate a drive at the vision clinic