

## **Chapter Four RECOMMENDATIONS**

### **INTRODUCTION**

This Chapter provides access management and corridor improvement recommendations within the study area. It begins with a general overview of the relationship of future land use along US-10 and US-31 to preservation of highway capacity. Then it identifies proposed new parallel and connecting roads that should be constructed along US-10/US-31 over the next twenty years. The bulk of the Chapter is devoted to specific access management recommendations for each stretch of highway. Recommendations range from improving intersections, converting diagonal intersections to T-intersections, closing or consolidating driveways, linking parking lots, limiting left-turns and other access management solutions. The final section in this Chapter includes pedestrian, trail transit and snowmobile observations.

### **FUTURE LAND USE AND NEW CONNECTING ROADS**

#### **Future Land Use**

Future land use in the rural parts of the County east of Scottville on US-10 and north of Scottville on US-31 is planned for low intensity agricultural and forest management activities (except in the Village of Custer). Zoning will permit limited single family residences on land along the highway, but lot widths should be wide unless there is shared access (as in a platted subdivision) so as to minimize new access points to these stretches of US-10 and US-31.

Planned future land use for property abutting US-10 from Ludington to Dennis Road is largely commercial with some industrial on both sides of US-10. This largely matches existing use. The few existing residential uses along this stretch of the corridor will likely be replaced by market activity over the next decade. From Meyers Road to Dennis Road and north as far as Johnson Road and south to First is planned for continued expansion of the “big box” stores. East from Dennis Road to Scottville on the south side of the road is planned for job producing land uses. This will be a mix of commercial and industrial land uses. There are presently dozens of residential dwellings in this area. Market pressure will likely result in their replacement with other more intensive uses over the next twenty years. The north side of US-10/US-31 from Dennis Road to Scottville is planned for more residential than commercial use and the commercial will be oriented, at least as much, to serving future residences as highway uses. This area is expected to be developed first from Dennis Road east to Stiles Road and then later from the south junction of the US-31 bypass west to Stiles. Lands in between will be targeted for development last. The new connecting roads proposed on Map 4-1 and discussed in more detail below are essential to successful development of the future land uses described above. Similarly, strong access management regulations will need to be consistently implemented to preserve the capacity of US-10/US-31 as this development takes place.

The area from Dennis Road to Stiles Road is specifically targeted for comparatively high density residential development with an internal street system and neighborhood design that permits many of the day-to-day retail needs of residences to be met by small commercial stores that are accessible on foot and by bike. There would be a mixture of residential housing types including mid-rise apartments, townhouses, and single family homes on small lots. This type of mixed use development goes by a variety of names (e.g. neo-traditional development, new urbanism, traditional neighborhood development and smart growth). It is strongly promoted in the State Land Use Leadership Council final report of August 2003. Many examples are becoming popular in southeast Michigan, Grand Rapids and the Traverse City metro areas. Careful planning will be necessary to ensure that the desirable characteristics of these neighborhoods is achieved, without orienting the development to US-10/US-31—which could create unnecessary congestion problems.

### **New Roads**

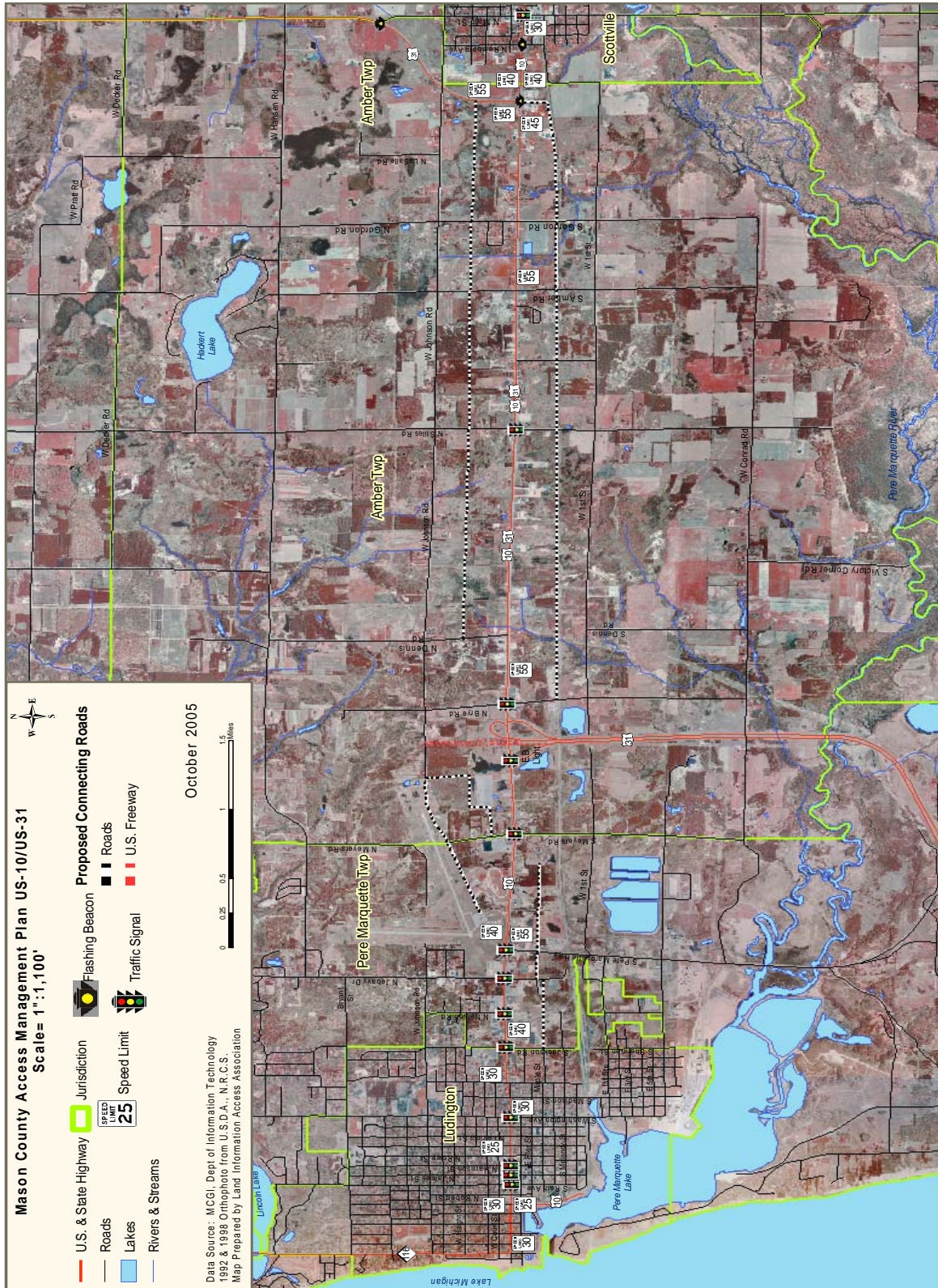
Proposed new parallel roads to US-10 and US-10/US-31 are represented as dotted lines on Map 4-1, and dashed lines on Maps 4-2, 4-3 and 4-4. These new roads are critical to keeping local traffic (and especially turning movements) off of US-10/US-31. The locations are generalized and exact locations would depend upon topographic and wetland limitations, property ownership, funding and opportunity. The key is that an interconnected road system, and especially new roads paralleling US-10 will do the most in the future to retain the movement functions of US-10/US-31 and the public investment that exists in that highway. These new roads will have to be financed by a combination of means. In some cases they run predominantly by public property (such as the connection from the Fairgrounds to Johnson Road south of the County Airport. In other cases they thread between existing developed private properties. These connecting roads will largely have to be paid for by the public. New roads between Brye Road and Scottville largely cross undeveloped property and should be required to be constructed as a condition of development approval by the developers of those properties. That will mean they are constructed incrementally and in some cases big gaps may remain for some time. If this becomes problematic, it may be necessary for the public to build the road and then specially assess the benefiting properties for their share of the cost.

On the south side of US-10/US-31 there are extensive wetlands in some places. This will prevent parallel road construction in those areas. At about every quarter and not more than every half-mile, these parallel roads should have a perpendicular connecting road constructed north to Johnson Road and south to US-10/US-31 on the north side of the highway and north to US-10/US-31 on the south side of the highway. The railroad line will prevent extending connecting roads south to First Street. These connecting links are not shown on Maps 4-1 through 4-4 as their location will depend on future development design.

Comments on each of the proposed new parallel and connecting roads are offered in the specific recommendations associated with Maps 4-2 through 4-4.

In addition to these new roads, it is critical that all new subdivisions and condominium developments along the corridor have internal streets that link to one another as each development is approved. This makes for the most efficient circulation system and the safest, since there are multiple ways to get emergency vehicles to property. It also results in many vehicular trips being taken without ever going onto the main highway.

# Map 4-1 Proposed New Connecting Roads



## **Other Relevant Considerations**

In addition to the specific access management recommendations that will follow shortly, there are a few other considerations that need to be kept in mind. These include the following:

- The extensive development proposed along US-10/US-31 will require careful consideration of stormwater runoff, and it is likely that a carefully constructed stormwater management plan will be necessary to preserve the water quality of the Pere Marquette River and connecting waterways. Such a plan should be prepared coincident with plans for construction of the many parallel and connecting roads proposed on Map 4-1.
- The specific techniques described in Chapter Three and in the specific recommendations which follow need to be carefully and consistently applied according to specific access management regulations provided in Appendix A. Attention should focus on reducing the number of curb cuts by closing or consolidating unneeded driveways, sharing driveways, separating driveways, or connecting parking lots, as well as on limiting left-turns and using right-turn lanes at high volume driveways.
- It is important to increase lot width requirements or require shared access for all future development along US-10/US-31. Flag lot and small parcel land divisions in particular result in driveway proliferation which can be prevented by locking-in future access points using the sample ordinance language in Appendix A.
- Local governments will need to focus zoning approvals on not only new construction and new land uses along US-10/US-31, but also to change of use and expansion of existing use (especially small home/business) situations. These are often missed at the local zoning level, but can result in the application of new driveway design requirements (and associated elimination of inappropriate driveways). This requires integrating local land use review and approval with MDOT and the County Road Commission so that all change of use and expansion of nonconforming use situations have the access brought up to code prior to occupancy.
- Once new parallel roads are constructed, it may be feasible to ban access to yard sales along the US-10/US-31 corridor. This will take many parked cars off the shoulder during these activities.
- Many business establishments along the corridor display signs, goods, products or vehicles for sale inside the right-of-way of US-10 and US-31. This is an infringement on the public right-of-way and often impedes clear vision at driveways and intersections. Local zoning officials and law enforcement officials should work with MDOT to prohibit such infringement of the right-of-way and then routinely enforce all applicable laws (e.g., Michigan Vehicle Code 257.676 and the local zoning ordinance).
- Initiating targeted local official education on access management techniques as well as broad public education on proper driving skills (especially related to running of yellow and red lights, driving too fast or too slow, using the center lane as a travel lane, acceleration lane, deceleration lane and storage lane, and what specific penalties are for common traffic violations).
- Addressing pedestrian, bicycle, transit and snowmobile issues as described at the end of this Chapter.



## SPECIFIC RECOMMENDATIONS

The US-10/US-31 Advisory Committee assisted the Planning and Zoning Center, Inc. (PZC) with the identification of key traffic and safety issues along the corridor and with specific access management recommendations. These were supplemented with recommendations by PZC's independent analysis and reviewed with the Advisory Committee.

Future driveways should be planned to share access from a limited number of access points. All new driveways should be spaced in accordance with the *MDOT Guidelines for Driveway Spacing* as shown in Table 4-1 below. These standards are included in the sample access management ordinance in Appendix A.

Table 4-1  
**Guideline for Unsignalized Driveway Spacing**

Speed on Roadway (MPH)	MDOT Spacing Guidelines (feet)
25	130
30	185
35	245
40	300
45	350
50	455
55	455+

Source: "Spacing for Commercial Drives and Streets," MDOT Traffic & Safety Division Note 7.9, Table 1.

The following recommendations are listed per highway section. Refer to Maps 4-2 through 4-8. Comments go west to east and south to north. The Town and Range number of each map is printed at the bottom of the map. The Section number is in white near the center of the Section (except when on the edge of the map). The digital orthophoto that serves as the base of each map is from 1992 for all the maps but Maps 4-7 and 4-8 which are from 1998. There has been a large amount of land use change along US-10 during this period. For that reason, an E-sized 2004 orthophoto blueprint copy of each Section overlaid with parcel lines was used to perform most of the analysis which follows. Because the original photos for the blueprint are not in digital format, they cannot be used as the base for Maps 4-1 through 4-8. Blueprint copies of the 2004 photos with lot lines are available for purchase from the Mason County Equalization Department.

Speed limits, traffic signals, and flashing beacon locations are also illustrated on Maps 4-1 through 4-8, along with the generalized proposed location for new parallel and connecting roads.

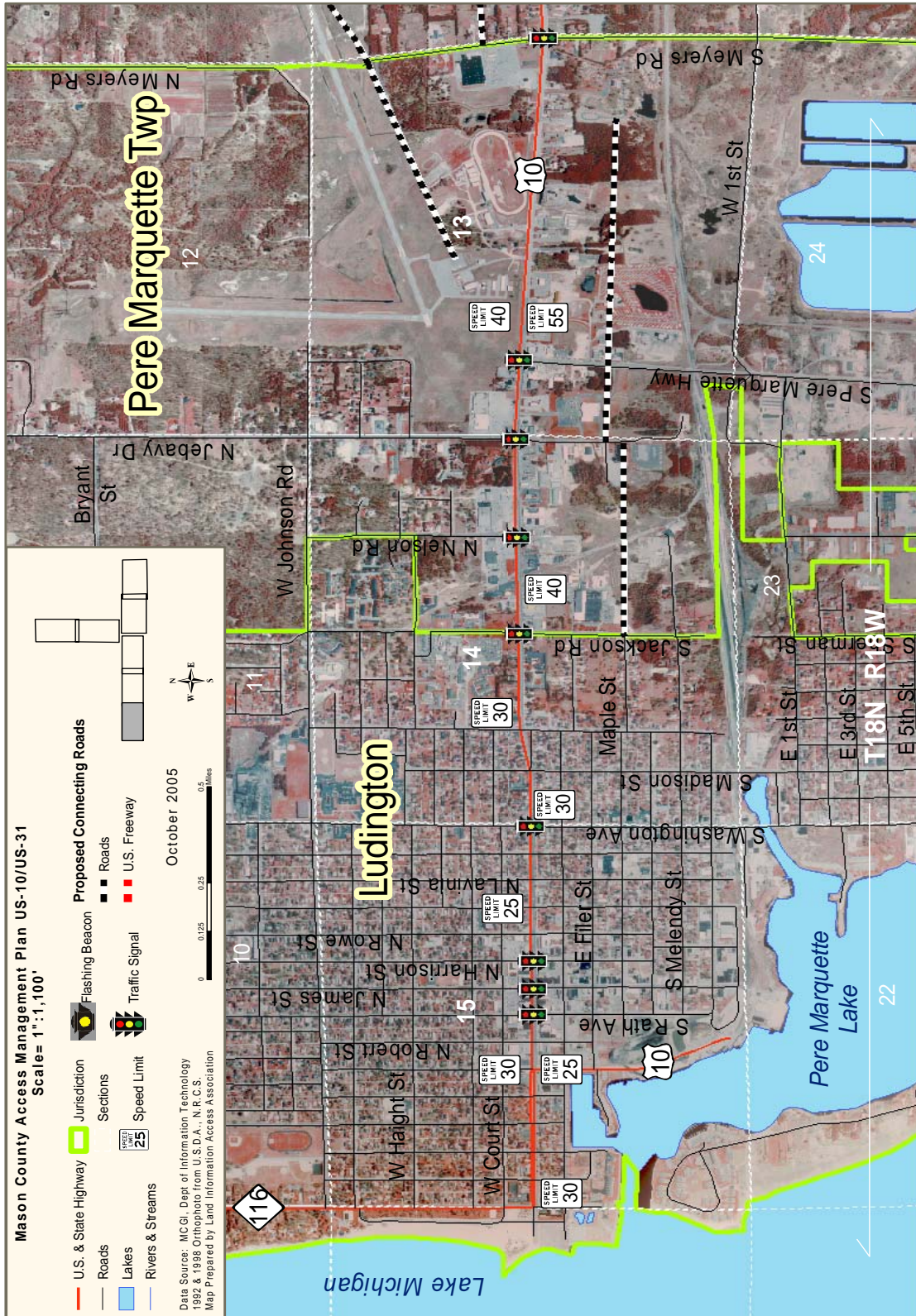
### **US-10 West to East**

#### **MAP 4-2 – CITY OF LUDINGTON AND PERE MARQUETTE CHARTER TOWNSHIP**

##### **Sec. 16 T.18N. R.18W. City of Ludington at M-116**

No recommendations. This is immediately west of M-116 where the study area begins.

Map 4-2  
 City of Ludington and Pere Marquette Charter Township



### **Sec. 15 T.18N. R.18W. Center of City of Ludington**

The western end of Ludington Ave. has a broad right-of-way (ROW) with a tree-lined median (see Photo 3-5 in the last Chapter). This is not only attractive, but the safest roadway design. This Section also includes the downtown area of the City of Ludington. There are 9 blocks of largely residential and 7 blocks of largely commercial/institutional before the block the hospital is in. Much of this area is served by alleys. It is very important to keep all alleys and pedestrian ways open and functioning. Where homes are on corner lots, access should come from the local street rather than Ludington Ave. and where the opportunity comes to close a residential driveway (as when there is a u-shaped drive, or a home is torn down or extensively remodeled) and reasonable access is available from the side street or alley, it should be pursued. This will increase driveway separation and reduce the total number of turning points. As this is a mature residential area, characterized by large well-kept homes with distinctive architecture, these opportunities are likely to be few in number. However, if residences are converted to commercial or office, every effort should be made to close or consolidate driveways. Most of the downtown commercial uses do not have driveways along Ludington Ave. Most are served from alleys in the rear. Those that do have parking lots accessed off of Ludington Ave. should only have one entry, or one-way in and one-way out. As there is on-street parking, speed limits should remain not more than 25 miles/per hour downtown, and any opportunities to close driveways, consolidate driveways or share parking lots should be pursued. In the central part of the downtown, on the south side, a block is proposed for demolition and redevelopment. It is important to use a design with no new accesses on Ludington Ave. (take access from the side streets on both ends of the block, and/or the alley) and to integrate pedestrian access along, through and behind the new structures.

### **Sec. 14 T.18N. R.18W. East end of City of Ludington and West end of Pere Marquette Charter Township**

The observations made above about residential and commercial uses on the eastern end of Ludington Ave. apply here as well. There appear to be numerous lots where access could be taken from alleys instead of from US-10. However, the major access management issues in this Section relate to the block the hospital and related medical facilities are in-between Staffon and Atkinson Drive/Jackson Road on the north side of Ludington Ave. While there are currently only a few driveways on Ludington Ave. on this side of the block, as the hospital and related uses expand, no new ones should be permitted if feasible. The one U-shaped drive in this block should be converted to a single driveway as the opportunity presents itself. Most important is achieving improvements to internal circulation in that block. The internal and external traffic circulation in the hospital area should be reviewed with the hospital. As the hospital expands, plans for improved ingress and egress (access control) and internal circulation should be addressed.

On the south side of US-10 near Staffon are several closely spaced driveways that appear to be prime candidates for consolidation into shared driveways. At the Rite Aid drugstore on the east end of the block (southwest corner of Jackson Road and US-10) is a good example of access management. The driveway at the west end of the lot on US-10 is limited to right-in and right-out traffic, while left-turning traffic is directed out the eastern drive onto Jackson Road, where there is a traffic signal. There is good separation distance of each driveway from each corner. This design should be used as a model for future corner development along the corridor.

At Jackson Road the four-lane highway expands to a five-lane with a center-turn lane which continues to the US-10/US-31 bypass junction on the west side of Scottville (where it changes to a three-lane road through Scottville to Bean Road). From Pere Marquette Highway east to the US-31 junction is a raised paved shoulder on each side of the highway as well.

On the north side of US-10 between Jackson Road and Nelson Road are two businesses west of the old railroad (RR) ROW. Together they have four driveways where at most two are appropriate, unless large semi-trucks are involved, in which case, two may still work with one being a shared driveway. The strip mall east of the old RR ROW to Nelson Road has three driveways on US-10 and three on Nelson Road. The two closest to the intersection should be closed. If property behind the strip mall is developed, the rear service drive should be improved and used as the access along with the western most strip mall driveway.

On the south side of US-10 between Jackson Road and Nelson Road there are several opportunities for driveway consolidation and improved (more formal) parking lot cross-access. There appears to be space for a rear service road at least to where Nelson Road would be if it extended south. If so, all but two driveways on US-10 could be closed if they were shared. The Marathon gas station appears to have two driveways on US-10 and two on Jackson Road from the air photo (or one long one on each side). If so, the driveways closest to the intersection on each street should each be closed or the driveway opening better defined as the farthest point on the property from the intersection on each street (unless that places it too close to an adjacent property) as the opportunity permits itself.

Continuing on the south side of US-10 between Nelson Road and Jebavy Drive are many businesses on small lots with many driveways close to others. Driveway consolidation and shared parking should be promoted whenever possible. It is feasible in at least one instance shown in Photo 3-6 (in Chapter Three) where one driveway is already closed to make room for more parking. The two driveways at the bank could be consolidated into one with the drive-through looping back to the beginning. The Wesco gasoline station has three driveways where not more than two are needed. East of the Wesco, driveways are poorly defined and consolidation appears feasible. The auto parts store at US-10 and Jebavy Drive (southwest corner) has well managed access like the drug store at Jackson and US-10.

On the north side of US-10 between Nelson Road and the east property line of the bank (if extended north, as the bank is on the south side of the road) is a strip mall and three frontage lots with a total of seven driveways on US-10. Consolidation with a shared frontage road could reduce that to two access points. The driveway closest to the intersection on Nelson Road could also be closed. If the property to the east of the strip mall (which goes all the way to Jebavy Drive) is developed, consideration should be given to a rear service road that connects with the service area behind the strip mall and across to Nelson Road. If this is feasible, then no other access may be necessary off of Jebavy Drive and not more than two access points should be permitted on US-10. This could be reduced to one access point if it tied into the recommended frontage road described above or better, into the parking lot of the strip mall.



### **Sec. 13 T.18N. R.18W. Pere Marquette Charter Township**

Jebavy Drive at US-10 and Pere Marquette Highway at US-10 are among the most problematic intersections on the corridor as they are only 1000 feet apart and much of the traffic is north/south bound and vice versa requiring a left-turn one way or the other. Jebavy Drive will be subject to "mill and fill" work in the 2006 construction season. Left-turn phasing off Jebavy Drive can be done on the existing signal and should be coordinated with left-turns off US-10 both east and westbound. Jebavy Drive should be widened approaching the intersection. Unfortunately, the most apparent solution is unfeasible. That is to connect Jebavy Drive and Pere Marquette Highway by extending Pere Marquette Highway north across US-10 and then diagonally to Jebavy Drive. This would allow elimination of the traffic signal at Jebavy Drive and US-10. However, this option is not feasible as long as the airport is there, as the connected road would cross the clear zone area at the end of the runway in violation of FAA regulations. Other alternatives worthy of study include: 1) extending Jebavy Drive halfway to First and then building a new connecting road east to Pere Marquette Highway (in line with Mitchell St.); and 2) extending Jebavy Drive down to First St. (which would require an expensive bridge over railroad tracks). Each alternative would move southbound traffic on Jebavy Drive across US-10 before turning east to Pere Marquette Highway or north on Pere Marquette Highway and then west on the new road before heading north on Jebavy Drive before crossing US-10. Many left-turns at both Jebavy Drive and Pere Marquette Highway would be eliminated. These options should be studied soon, or undeveloped land between Pere Marquette Highway and Jebavy Drive south of US-10 could be developed, further limiting the options. Driveway closure and consolidation should be a priority in this part of US-10 no matter what is done and when, as the left-turning movements in both directions already create a lot of activity which is made all the more complex by left-turns off US-10 into abutting property. As noted in Chapter Three, the area between Nelson and Pere Marquette Highway is where about ¼ of all the traffic crashes on the corridor occurred between 2002 and 2004.

The Mancino's on the north side of US-10 east of Jebavy Drive has one access onto US-10 and so does the abutting strip mall. If feasible with the property owners, Mancino's should share access with the strip mall, closing the driveway closest to the intersection. On the south side of US-10 east of Jebavy Drive, Tom's Gas has poorly defined, and very large driveway openings. These should be recurbed with one driveway as far from the intersection as feasible. Sharing the driveway with the property east of Tom's Gas should also be explored. The next property east should have the driveway closed and access taken from the access drive to the Shop-N-Save if possible. Similarly, the westernmost driveway on the next property east should also take its access off this driveway. The two parcels at the southwest corner with Pere Marquette Highway (one is the Walgreen's drugstore) already have shared access and good driveway locations. See Photo 3-2 in Chapter Three. There are also four driveways south of US-10 on the west side of Pere Marquette Highway where only two are necessary. Across the street on Pere Marquette Highway are ten driveways where only five are needed with proper design, sharing and linked parking lots. This includes the Shell gasoline station at the corner with US-10 which has two driveways on each side. Again, only two are needed. All these driveway closures and consolidations should be accomplished whenever there is work on these roadways. Give landowners the option of MDOT (or the County Road Commission on a county road) paying to tear out and rebuild a proper driveway, or them having to do so at their own cost the next time they need a building or zoning permit for their property. Explain how it will increase space for parking or landscaping and improve safe ingress and egress to their property. Also explain how it will decrease congestion

and potential for traffic crashes on the abutting roads. But to back the road authority up, Pere Marquette Charter Township will need to adopt access management regulations as a part of the local zoning ordinance. Appendix A presents sample ordinance language.

East of the Shell station on the south side of US-10, the McDonald's has two access drives where a single well designed one would work fine. The rear access drive is good, but the Holiday Inn should also connect to it. That would take some left-turning movements off of US-10. The Holiday Inn and Big Boy each have two driveways on US-10 when a single consolidated driveway would work fine since they already have connected parking lots. The auto parts store and the Burger King both have good access designs. However, the private drive between the Burger King and Wendy's adds an additional access point in the middle of a congested area and it does not have connections to the parking lots of either restaurants, so drivers that missed the driveway of either restaurant cannot get to them except by going back onto US-10. It is hard to require such a connection unless the private drive to McLain Construction were converted to a public street, but it would help. Photo 3-7 (in Chapter Three) shows the tire path of a vehicle that made its own connection between Wendy's and this private drive. From Pere Marquette Highway east to the mobile home park is a short connecting private road (Wallace Road). There appears to be space to extend this road all the way to a second mobile home park just west of Meyers Road. This extension would allow all the lots that front on US-10 to connect in the back and would take a lot of left-turning local traffic off of US-10. It would also open up quite a bit of property north of the RR tracks to development. Most importantly it would give each mobile home park a second means of ingress and egress in case of an emergency, a very important consideration given the large number of dwelling units in each park. The Standard Lumber Company east of Wendy's has one wide opening instead of a single well designed driveway—which it should have. From Adventure Island east to Meyers Road on the south side of the highway, there are few immediate opportunities for driveway consolidation or sharing, but as vacant lots along here are developed, it is important to explore these options, including construction of a frontage road serving several properties if feasible.

On the north side of US-10 consideration should be given to either sharing a single access to both the County Airport and County Fairgrounds or making a connection for west bound vehicles exiting the fairgrounds through the parking lot at the airport. Similarly, the road at the rear of the fairgrounds should be significantly improved and properly built east to Meyers Road. The traffic signal at Meyers Road will greatly assist left-turning vehicles exiting the fairgrounds during peak periods. The driveway on US-10 at the gasoline station in front of WalMart should be right-out only as all other turning movements can be accommodated from the access drive to WalMart or by crossing the parking lot to Meyers Road. In addition, this drive has an inadequate offset from the entry to the mobile home park across US-10.

#### **MAP 4-3 – AMBER TOWNSHIP**

##### **Sec. 18 T.18N. R.17W. West end of Amber Township**

On the north side of US-10 the driveway off Meyers Road to a Dow well site should be explored for acquisition and development as a public road to connect between the WalMart and the Lowes/Tractor Supply/Fashion Bug complex. At the eastern edge of that development, the service road should go north past the 40 acres owned by Amber Township and connect to Johnson Road. The extension of the road behind the fairgrounds should continue across Meyers Road to this point so that Johnson Road

goes all the way to Meyers Road. This will not only allow customers to go between “big box” stores without venturing onto US-10 (including Meijer’s on the east side of interchange) it will also improve access to other undeveloped land in this area. The service drive from WalMart to Lowes should also be extended to Brye Road if in twenty years there is no chance that MDOT will extend US-31 as a freeway on a new alignment north of the current terminus at US-10.

As the six properties at the northeast corner of US-10 and Meyers Road are redeveloped, opportunities for shared driveways and connected parking lots should be carefully explored to reduce the total number of driveways on US-10 in this area to one or two. In front of Lowes is a BP gasoline station and National City branch bank that should both have connections between their parking lots and with the Lowes shopping complex in the rear. If possible, the motel to the west should also be connected. The gasoline station should have an access off the west access road to Lowes. Wetlands in the back may make this difficult, but it would take unnecessary trips off of US-10.

From the Goodwill to Arby’s on the south side of US-10 appears to be an emerging opportunity for a shared frontage road and only two access points. It may be this opportunity only extends to the Ponderosa which only needs one driveway instead of two if the frontage road is not feasible. The condo campground proposed behind the Goodwill should take its access from Meyers Road. The Ramada Inn just east of the US-10/US-31 interchange should take its access from Brye, or the access should be reconfigured so it is right-in/right-out only. It is too close to the signalized intersection and has easy access off of Brye Road.

**Sec. 17 T.18N. R.17W. Amber Township**

Just north of the RR tracks at Brye Road is where a new road should be constructed parallel to the RR east all the way to Scottville. This area is planned for intensive commercial and industrial development over the next 20+ years. This should be done in increments as the property is developed. This will permit rear access and maximize the efficient use of this land. It will also take a significant amount of service and connecting traffic off of US-10/US-31. There are substantial areas of wetland along this stretch and that may cause the road to be broken for a stretch. Future development from Brye Road to Scottville will also require incremental improvements to First Street as well. Eventually it should be three lanes with a paved shoulder suitable for bikes on both sides of the road.

Map 4-3  
Amber Township





A similar need for a parallel road will exist on the north side of US-10/US-31. It should be constructed half way between US-10/US-31 and Johnson Road beginning at Dennis Road. Some segments will need to vary slightly from this course because of existing development. This area is planned for dense residential development behind commercial development that fronts on US-10/US-31. In some areas, new mixed use neighborhoods would be created. Future development will also require incremental improvements to Johnson Road similar to those described above for First Street.

The east exits of Meijer's and Home Depot have opposing drives and vehicles try to cross the road from one business to the other. This is dangerous during peak periods given the proximity to the signalized intersection at Brye Road. Drivers should be encouraged to use the traffic signal at Brye Road. To do so, the opposing drives could be redesigned as right-in and right-out only. But there should also be a connecting road between Brye Road and the Home Depot driveway on US-10/US-31 behind Applebees. It should be continued east as the land is developed all the way to the utility corridor. This road should provide the primary access for several new businesses. Brye Road should be widened south from US-10/US-31 to the railroad tracks.

There appear to be five businesses on the south side of US-10/US-31 between Brye Road and the eastern edge of Section 17 that have two driveways each. The lumber company, auto sales and manufactured home sales may have a legitimate need for two driveways to accommodate large delivery vehicle movements, but the others should be restricted to a single driveway (or none if there is reasonable rear access) as the opportunity presents itself.

Much of the land east of here along US-10/US-31 in Amber Township has not yet been developed. It is important for the County Board of Commissioners to adopt a regulation that locks in not more than one access point per parcel very soon. That way as the land is divided or developed, only one access point is assured. A traffic impact study may warrant additional driveways for intensive uses, or uses involving significant truck traffic, but the landowner would have to demonstrate that in order to be considered for more than one driveway. That means that future drive-through establishments would also be limited to only one driveway on US-10/US-31. Gaining access off new service roads or shared driveways (as Applebee's does) should be strongly encouraged. These measures will greatly lengthen the useful life of the US-10/US-31 road capacity. The sample access management regulations in Appendix A include a "lock-in the access" provision.

#### **Sec 16 T.18N. R.17W. Amber Township**

All the previous comments about rear service roads parallel to US-10/31 on both sides of the road from Brye Road to Scottville apply here as well. Similarly the need to lock in a single access is very important here as little of the land has developed.

The only property with a current driveway problem is the Grassas Farm Market on the northwest corner of US-10/US-31 and Stiles Road. There are two driveways on US-10/US-31 and the eastern most one should be closed.

Problems with truck traffic coming from Padnos and Elmer's Cement (west of Stiles Road on south side of US-10/US-31) would be partially aided with the construction of the rear service road along the RR line as discussed earlier. Another option for east bound

trucks is to create an acceleration lane on each property for trucks to use before entering eastbound US-10/US-31. Acceleration lanes are the opposite of deceleration or right-turn lanes discussed and illustrated in Chapter Three, and are rarely warranted, but here they may be appropriate to consider.

Stiles Road is beginning to develop with many single family homes fronting on the road. This will become problematic as traffic increases on Stiles Road. New residential development and redevelopment should be in the form of platted subdivisions or condominium developments between US-10/US-31 and Johnson Road and should have limited access on Stiles Road. Appropriate mixed use development with limited access is also appropriate and planned for this area as described earlier in the Chapter.

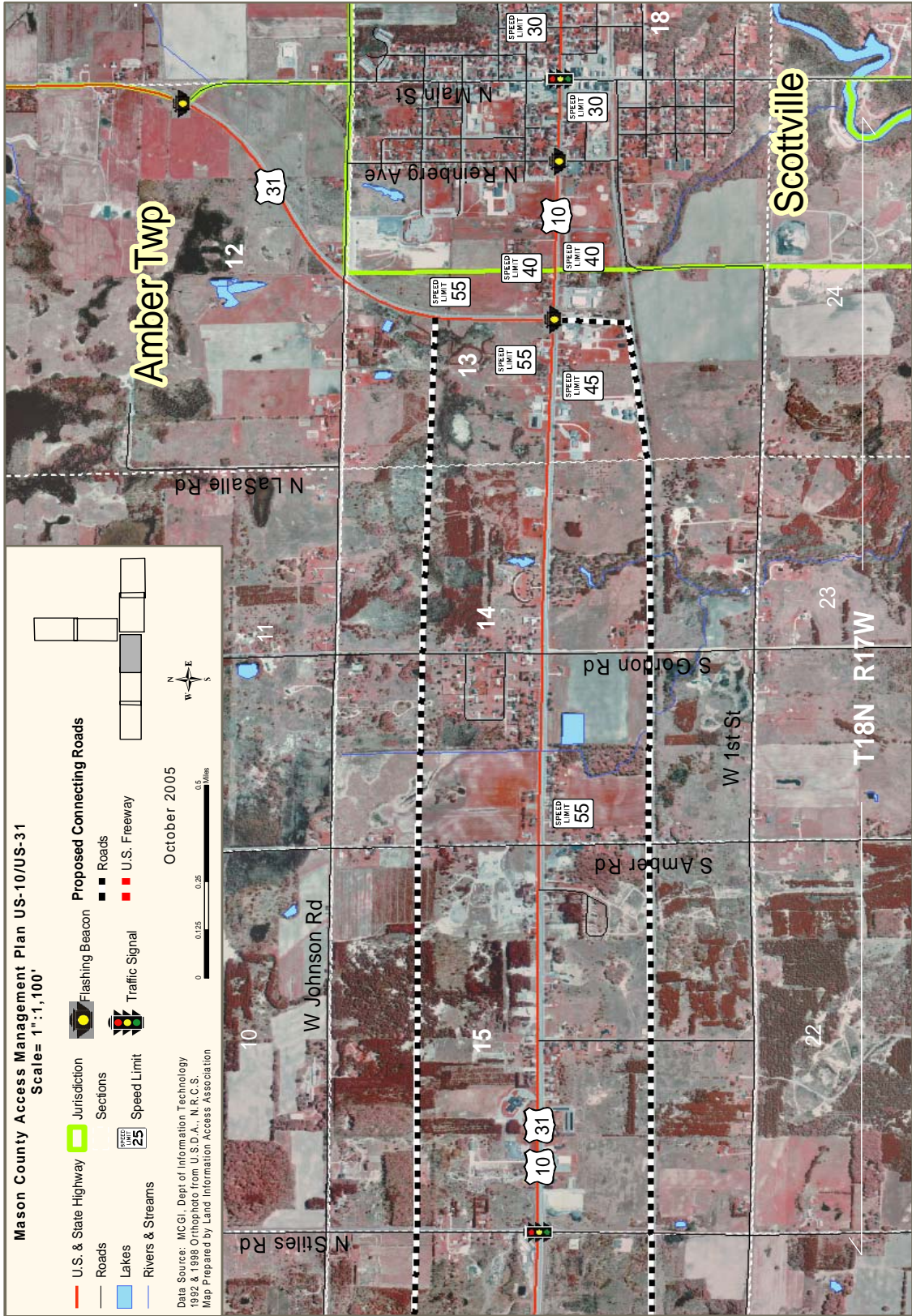
#### **MAP 4-4 – AMBER TOWNSHIP**

##### **Sec. 15 T.18N. R.17W. Amber Township**

From Stiles Road to Amber Road there are about two dozen single family residences along US-10/US-31. Most are on the south side of the road. While these are low volume uses, the proliferation of driveways close together on a roadway with a 55 mph speed limit is not desirable. This pattern continues up and down Quarterline Road and Amber Road. There are several actions that can help prevent further proliferation of small frontage residential lots with direct frontage on US-10/US-31 and connecting roads. The first is locking in the access as previously described so that future land divisions do not exacerbate the problem. The second is to not zone this land for more intensive single family residential use (if not in a plat). The third is to require a large frontage requirement (at least 330') if residences are not in a residential subdivision or condominium development. The fourth is to require shared driveways for any residences fronting on the highway or a connecting county road. Last, as the undeveloped land along US-10/US-31 fills up with commercial and industrial development, the residences along the highway will likely be slowly acquired and incorporated into new developments using undeveloped backlot property, or several lots together fronting on the highway. Each time this happens is an opportunity to reduce and more widely separate driveways along this stretch of highway. However, in the meantime, the property should retain its R-1 zoning classification as long as used for single family homes. When a more intensive use is proposed, then it should be rezoned and driveways widely separated.

Three properties in this stretch have dual driveways. None appear to require it, so as the opportunity for consolidation exists, it should be pursued. One use on the north side of the road near the intersection with Amber Road has a Y-shaped driveway. This driveway design accommodates the directional split often desired by businesses, but only results in one driveway connection on the highway (thus it is better), unlike the U-shaped design which results in two driveways on the highway.

# Map 4-4 Amber Township



As always, as new commercial and industrial uses are established, shared driveways, service roads, and connected parking lots should be required to minimize turning movements onto and off of US-10/US-31. Traffic impact studies should be used to help establish the right design for the situation.

**Sec. 14 T.18N. R.17W. Amber Township**

The same comments as made about residences on US-10/US-31 in Section 15 in Amber Township apply here as well. There are another two dozen homes in this stretch. A few have dual driveways which should be consolidated. There is a small plat at the northwest corner of Gordon Road and US-10/US-31. Such residential plats should be encouraged, but should not permit residences to front directly onto US-10/US-31 or connecting roads. Lots should back up to these roadways and be bermed or landscaped to minimize traffic noise.

**Sec. 13 T.18N. R.17W. East Amber Township and Scottville**

There are several narrow parcels wedged between wider and deeper parcels on the south side of US-10/US-31 as one approaches the junction where US-31 splits to the north and US-10 continues to the east. There are many dual driveways in this 1000' foot stretch. Because of the traffic that backs up at the signalized intersection an effort should be made to consolidate as many of these drives as possible. The dual driveways should be combined into one, and at least one pair of residences may be able to share a driveway. Immediately south of the Junction are three properties (includes UBC Lumber and a utility company) that should be served by two driveways widely separated and joined by a common frontage road or connected parking lots. That would take turning movements into and out of these businesses at least 350' from the intersection. One residence may also be able to be served on the west side of the shared driveway as well.

Another alternative at this intersection is a roundabout (see Figure 3-7 in Chapter Three). Roundabouts permit continual traffic flow in a yield condition and no traffic signal is needed. The driveway problem described above would be easier to accommodate with a roundabout. There is already adequate ROW at this intersection for a roundabout. However, if a roundabout is considered here, it should also be considered for the north junction of the bypass at Scottville Road. In that location there are elevation challenges that would make a roundabout difficult without extensive fill. Nevertheless, both intersections are identified locally as posing challenges for safe turning movements and a roundabout would likely improve safety of turning movements while improving traffic flow. Since traffic volumes are low at these intersections now, and other improvements along US-10 and US-31 are of a higher priority, further consideration of this option could legitimately be put off for many years. During that period, the dozens of roundabouts under construction or recently opened in other Michigan communities will have been in operation for years, and the benefits, or detriments of roundabouts in these locations may be more apparent.

On the north side of the highway at the intersection and especially along the bypass, future development should have widely spaced driveways or the benefit of the bypass will be lost. MDOT secured access rights to abutting land when buying ROW for the bypass so driveways are permitted at a separation distance of one per 700'. Adoption of the lock-in the access approach described earlier will help ensure that as land along the bypass is divided, not more than one access is permitted per parcel.



Lane widths drop from five lanes to three just east of the junction and speeds to 40 then 30 mph as one approaches Main Street in Scottville. A block from the city center, many driveways for small frontage lots are the norm. While most lots service single family homes there are some businesses as well. New driveways should be severely limited from the Junction to the City Center and wherever opportunities arise, driveways should be combined, or shared driveways installed, and connected parking lots should be created. However, these opportunities are not likely to come along often because it is a mature, developed area and speeds are already lowest where driveway density is the greatest.

As land is developed in the City, new streets should connect with existing streets so that the interconnected street network continues. That will take many future trips off of US-10 compared to what would occur if cul-de-sac subdivisions were permitted.

The Scottville Admiral is on a narrow lot at a high volume corner on the north side of US-10. Consideration should be given to making the drive on State Street/US-10 left-in and right-in only (no right-out). This is often hard to achieve in practice and may not be feasible. If not, consider right-in only.

#### **MAP 4-5 – SCOTTVILLE and CUSTER TOWNSHIP**

##### **Sec. 18 T.18N. R.16W. West end of Custer Township**

In downtown Scottville there are few access points along Main Street and both an alley and interconnected parking lots on both sides of the street. This provides good access and permits more on-street parking. East of Main Street the speed limit on US-10 (State Street) slowly rises to 40 mph and then to 55 mph at the County Road Commission building. More residences than businesses line this stretch of US-10 and a half-dozen residences on the south side of US-10 gain access from an alley. The two blocks west of these also gain access off alleys, but are oriented at a ninety degree angle away from US-10. In both cases, the alley access eliminates driveways in these blocks. It is important to remain open and well functioning.

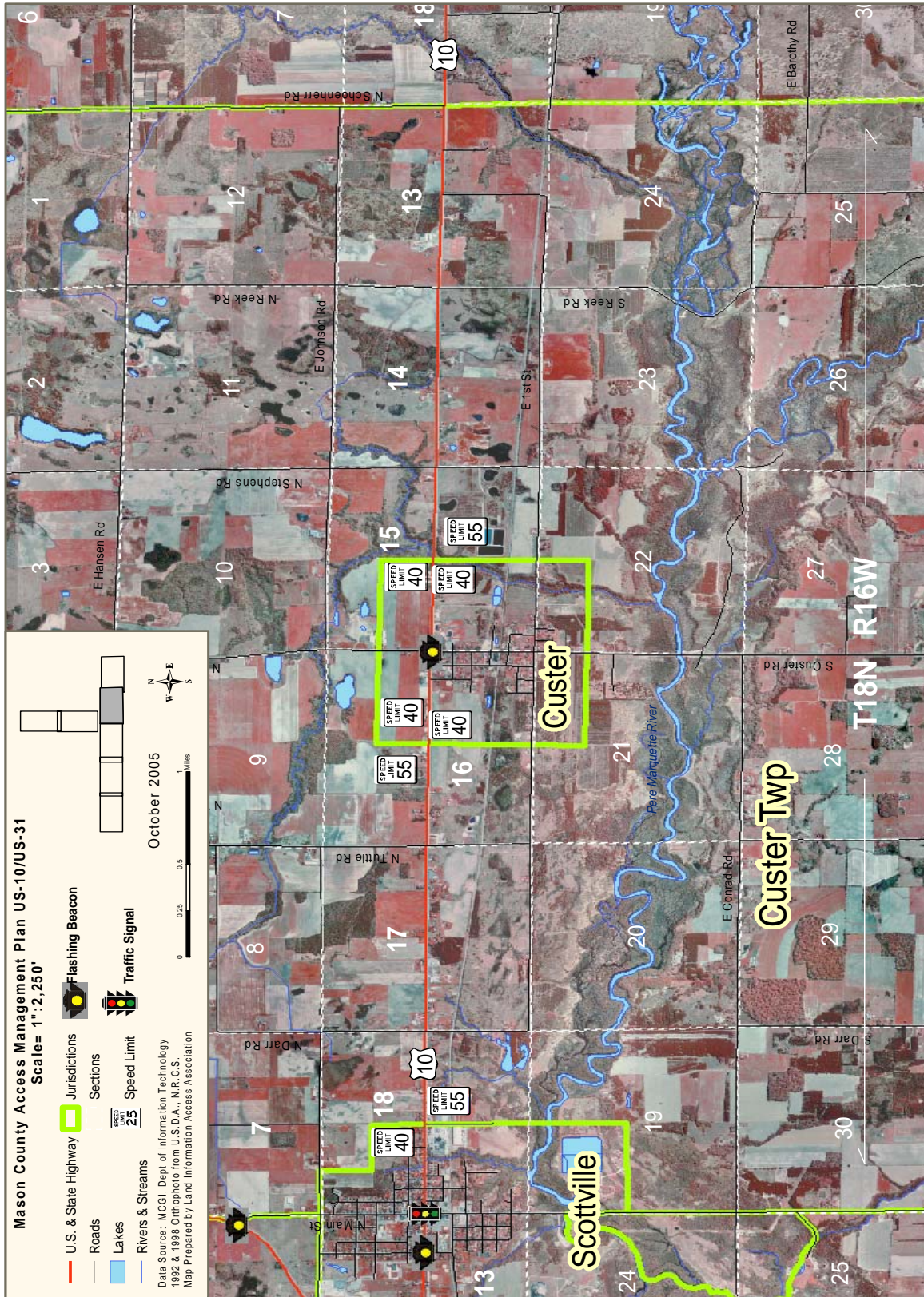
The driveway opening at the Scottville Shell on State Street is too wide. While it is a shared driveway, it should still be located as far east of the intersection with Main Street as feasible.

From the Scottville city limits to the eastern edge of Section 18, the three lanes drop to two and remain that way except through Custer, all the way to the eastern County line (except where passing relief lanes are provided). There are three dual driveways through Scottville where a single consolidated driveway should be constructed in each case as the opportunity presents itself. One of these is at the County Road Commission Building.

##### **Sec. 17 T.18N. R.16W. Custer Township**

Section 17 in Custer Township is rural with a few widely separated homes and farms and except for the bus garage on the south side of the road, there are no intensive land uses. It is important to lock-in access here to not more than one per parcel soon and to discourage new uses from gaining direct access from the highway, unless it is shared or consolidated as with a residential plat. No intensive land uses are planned for this area and none should be permitted for the next twenty years, unless all the necessary urban utilities were also provided.

# Map 4-5 Custer Township



There are a couple of U-shaped drives and dual drives primarily associated with agricultural operations. These are low volume driveways that pose few problems, but if the opportunity arose to consolidate them into one well planned and located driveway it should be acted upon.

**Sec. 16 T.18N. R.16W. Custer Township**

Up to the Custer Village limits, land uses in Section 16 parallel those in Section 17 discussed above. The same recommendations apply.

Speed limits slow to 40 mph in Custer and there is a flashing beacon at the main intersection in the Village. There are three lanes through Custer with the center lane for left-turns.

A lot of driveways were closed in 2001 and curbs installed for the first time when two lanes were expanded to three lanes in Custer. There remain two U-shaped drives on the west side of the Village on the north side of the highway which should be consolidated if feasible, but other than locking in access on the undeveloped land, no other significant access management issues demand attention. As land is developed in the Village, new streets should connect with existing streets so that the interconnected street network continues. That will take many future trips off of US-10 compared to what would occur if cul-de-sac subdivisions were permitted.

**Sec. 15 T.18N.R.16W. Custer Township**

The eastern side of Custer Village has few driveways on the north side of US-10 and three of the four uses on the south side of the highway have poorly defined driveways, with most of the lot open to the highway. As the opportunity presents itself, a proper driveway with curbs should be installed.

From the eastern edge of Custer Village to the County line there are few driveways on US-10. Up to the Branch Township line abutting land is largely in agricultural use, from there to the County line it is largely forested, with much of it in national forest.

Nevertheless, the following measures should be taken:

- Lock-in access points on all land abutting the highway.
- Better define driveway openings where much of the lot is open to vehicular movement.
- Consolidate dual driveways except where necessary to accommodate large vehicles.
- Add passing relief lanes as traffic conditions warrant.

**Sec. 14 T.18N. R.16W. Custer Township**

See recommendation above.

**Sec. 13 T. 18N. R.16W. East end of Custer Township**

See above.

**MAP 4-6 – BRANCH TOWNSHIP**

**Sec. 18 T.18N. R.15W. West end of Branch Township**

See above.

**Sec. 17 T.18N. R.15W. Branch Township**

See above. Also, there is a party store on the south side of the highway in the middle of the Township that has a dual driveway where one well designed driveway would be better.

**Sec. 16 T.18N. R.15W. Branch Township**

See above. Between Walhalla Road and Campbell Road there are a half-dozen commercial establishments (including a car dealer, bar, and the Post Office) with poorly defined driveways. Most of the frontage is open to vehicular movement. This is not safe. As the opportunity presents itself, these establishments should have a driveway installed that is appropriate for the vehicles using it. Care should be taken to align driveways across the highway from one another when this is done. Most of the rest of the land is not developed so locking-in access points is very important.

**Sec. 15 T.18N. R.15W. Branch Township**

Two businesses in this Section have oversized and poorly defined driveways which should be replaced as the opportunity presents itself. All other undeveloped land should have access points locked in and shared driveways should be considered on the narrow lots that are already there. No new narrow lots should be permitted and if any more commercial development is proposed, it should be designed with a shared frontage or rear service road accessing multiple businesses at once.

**Sec. 14 T.18N. R.15W. Branch Township**

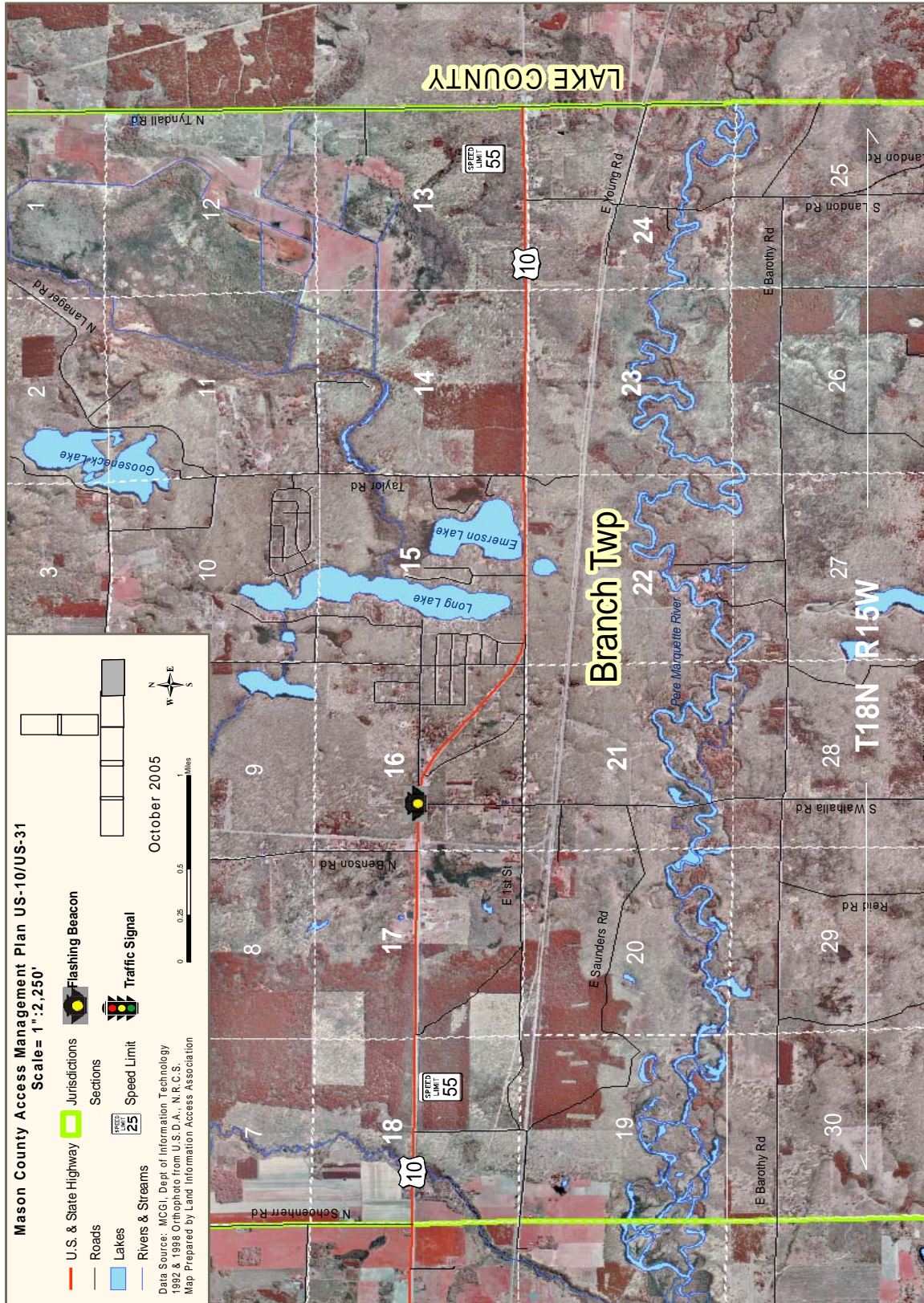
The key action in this Section and Section 13 is to lock-in access to one driveway per parcel before land is developed.

**Sec. 13 T.18N. R.15W. East end of Branch Township**

Same as Section 14 above.



# Map 4-6 Branch Township



**MAP 4-4 – AMBER TOWNSHIP, SCOTTVILLE AND CUSTER TOWNSHIP**

**Sec. 12 T.18N. R.17W. Amber Township, Scottville and Custer Township**

Along the bypass, future development should have widely spaced driveways or the benefit of the bypass will be lost. MDOT secured access rights to abutting land when buying ROW for the bypass so driveways are permitted only one per 700'. Adoption of the lock-in the access approach described earlier will help ensure that as land is divided, not more than one access is permitted per parcel.

As mentioned in Section 13 in East Amber Township at Scottville, a roundabout may be a more desirable option at the US-10/US-31 intersection (south junction of bypass). The same can be said about the north junction of the bypass. While the “T” intersection design is good and there is good sight distance, vehicles are going 55 mph and even with the flashing beacon, it is not uncommon for half a dozen to a dozen vehicles to back up at this intersection at congested times. A roundabout would slow vehicles through the intersection and permit vehicles from Scottville Road to enter the intersection more easily and more safely. As noted earlier, there is no urgent need to consider this option, but as traffic volumes rise and more experience with roundabouts in other communities has been obtained, a roundabout at both the north and south junctions of the bypass may be worthy of serious study.

North of the US-31/Scottville Road intersection on the east side of US-31, are a petroleum business, propane business and a dog grooming business with a farm across the highway. All of these establishments (and one more each to the north and south—possibly residences) have U-shaped driveways or dual driveway openings. It may be that large trucks require two openings at the fuel storage and propane business, but only one well-designed driveway is probably all that is needed at the other establishments. Driveway consolidation should occur as the opportunity presents itself.

**Sec. 1 T.18N. R.17W. Amber Township/Custer Township**

From here north to the Manistee County line, the principal focus for access management should be:

- Lock-in access points on all land abutting the highway.
- Better define driveway openings where much of the lot is open to vehicular movement.
- Consolidate dual driveways except where necessary to accommodate large vehicles.

**MAP 4-7 – VICTORY TOWNSHIP/SHERMAN TOWNSHIP**

**Sec. 36 T.19N. R.17W. South end of Victory Township/Sherman Township**

There are several U-shaped driveways and one poorly defined driveway at a junkyard on the west side of US-31 in the middle of this Section that should be addressed when the opportunity presents itself. Beyond that, it is important to lock-in access before land is further divided.

**Sec. 25 T.19N. R.17W. Victory Township/Sherman Township**

Again there are a couple of U-shaped driveways that should be consolidated where feasible and access should be locked in soon.

**Sec. 24 T.19N. R.17W. Victory Township/Sherman Township**

Lock-in access points.

**Sec. 13 T.19M. R.17W. Victory Township/Sherman Township**

Commercial properties on the west side of US-31 just south of Fountain Road have many driveways with inadequate separation. Consolidation or a frontage road should be addressed as the opportunity presents itself. There are also a few U-shaped driveways and locking in access should be initiated soon.

**Sec. 12 T.19N. R.17W. Victory Township/Sherman Township**

Lock-in access points.

**Sec. 1 T.19N. R.17W. North end of Victory Township/Sherman Township**

Lock-in access points.

**MAP 4-8 – GRANT TOWNSHIP/FREE SOIL TOWNSHIP**

**Sec. 36 T.20N. R.17W. South end of Grant Township/Free Soil Township**

This stretch of highway remains very rural and largely agrarian. There are few driveways and relatively large and wide lots along the highway. From here north to the Manistee County line, the principal focus for access management should continue to be:

- Lock-in access points on all land abutting the highway.
- Better define driveway openings where much of the lot is open to vehicular movement.
- Consolidate dual driveways except where necessary to accommodate large vehicles.

**Sec. 25 T.20N. R.17W. Grant Township/Free Soil Township**

See above.

**Sec. 24 T.20N. R.17.W. Grant Township/Free Soil Township**

On the northeast corner of Free Soil Road and US-31 is a market with two driveways. The southernmost driveway is too close to the intersection and should be closed. Again, access should be locked-in soon.

**Sec. 13 T.20N. R.17W. Grant Township/Free Soil Township**

A gasoline service station on the west side of US-31 between Trembl Road and Forest Trail has at least three driveways and not more than two are warranted. The excess driveways should be closed.

U-shaped and dual driveways in this stretch should be consolidated where feasible. Access should be locked-in soon.

**Sec. 12 T.20N. R.17.W. Grant Township/Free Soil Township**

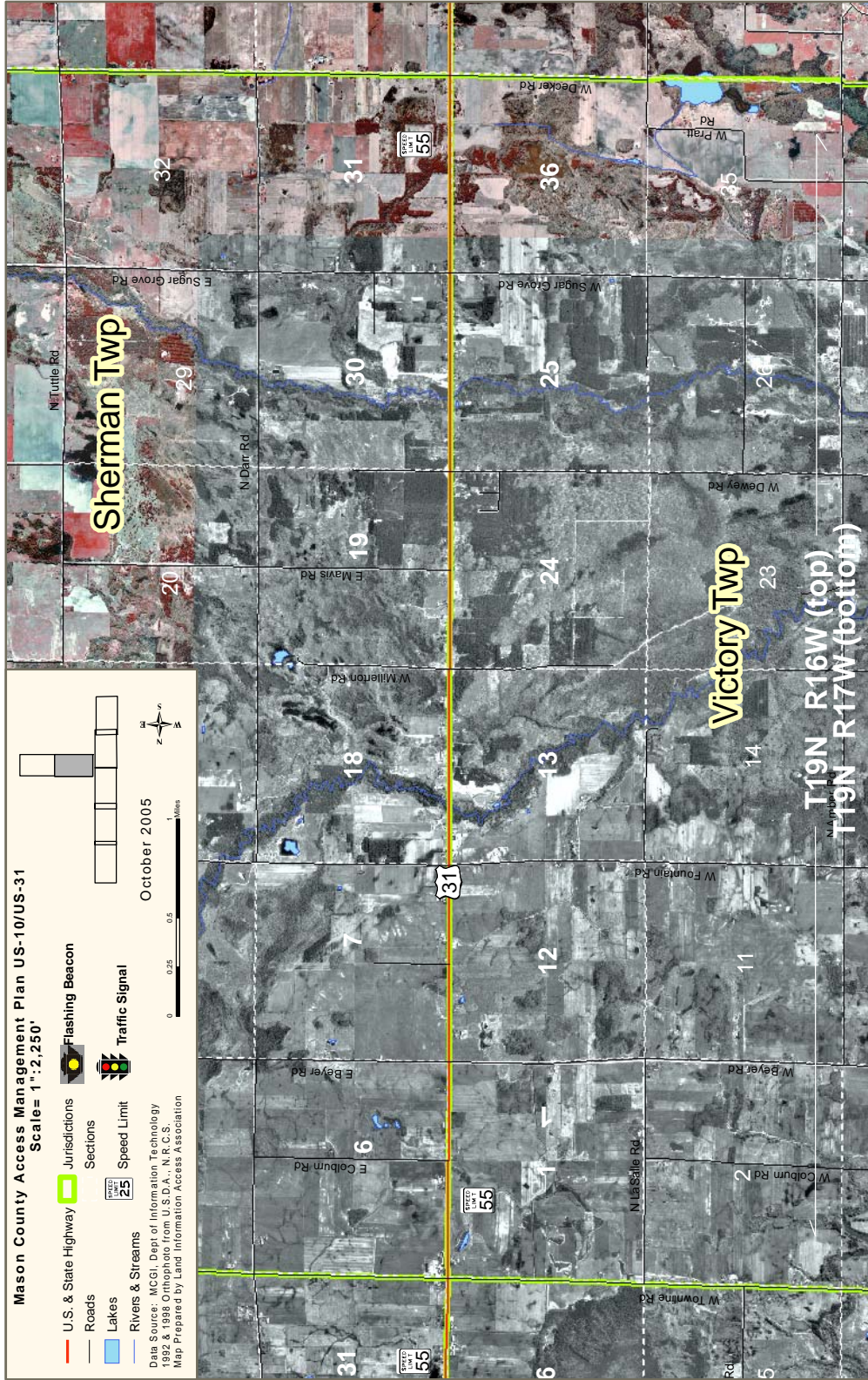
Access should be locked-in soon.

**South Sec. 1 T.20N. R.17W. Grant Township/Free Soil Township**

Several driveways intersect US-31 on a curve. Some of these driveways are not square to the highway and should be "T'd" as the opportunity presents itself. Because of the curve, it is especially important to lock-in access soon so that as few driveways as feasible are established in the future.



Map 4-7  
 Victory Township/Sherman Township





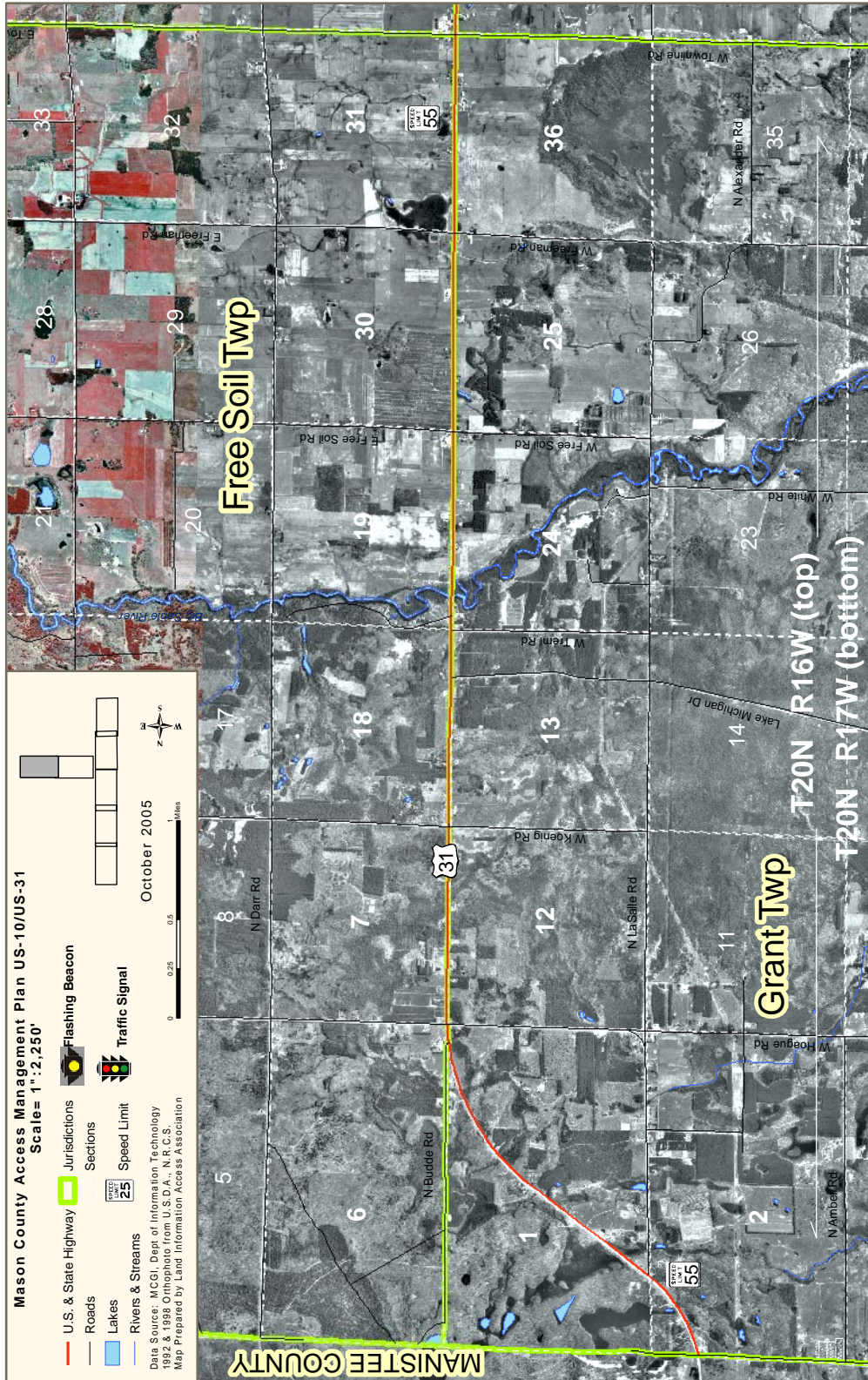
**North Sec. 1 T.20N. R.17W. Grant Township/Free Soil Township**

The LaSalle Road US-31 intersection should be redesigned to a "T" to create a 90 degree intersection and offset further to the south from the driveway on the opposite side of the highway. Locking-in access is important to accomplish soon.

**North Sec. 2 T.20N. R.17W. North end of Grant Township/Free Soil Township**

The business on the west side of US-31 and south of County Line Road is on a curve and has a poorly defined access. If feasible, access should come from County Line Road, or farthest from the intersection as feasible. Again, locking-in the access soon is very important.

# Map 4-8 Grant Township/Free Soil Township



## **BUS, BICYCLE, PEDESTRIAN, TRANSIT AND SNOWMOBILE CONSIDERATIONS**

### **Pedestrian and Bicycle Systems**

While there is an extensive sidewalk system in Ludington and Scottville, pedestrians are not well served along most of the corridor between Ludington and Scottville. Creating more pedestrian facilities along US-10/US-31 is needed; however, new pedestrian facilities must be designed so that the safety of the pedestrians is foremost. There are “raised curbs” adjacent to US-10 from Pere Marquette Highway to Scottville that pedestrians utilize as a sidewalk. However, this is too close to the highway to be safe for walking. There are also many parking lots close to the road, but these are also not proper sidewalks. There should be sidewalks on both sides of the road in urbanized parts of the corridor. They should be required of all new development along the corridor. Pedestrian crossings should be clearly marked at major intersections and crossing signals should be provided at every signalized intersection. Pedestrians should be clearly guided to the safest crossing locations. This is difficult to accomplish without a coordinated sidewalk system.

Pedestrian overpasses, or tunnels are options that protect the pedestrian from having to cross the highway at grade. These are preferred alternatives where traffic speed is high, and/or traffic flow or mix issues make it difficult to safely site a crosswalk at grade; however, they are expensive. Sidewalk connections are needed before any overpasses or tunnels would be constructed across US-10/US-31.

As an alternative, if the extensive system of parallel connecting roads recommended at the start of this Chapter were constructed with a separate (parallel) combined pedestrian and bicycle path that linked to the major commercial areas along the corridor, a safer environment would be provided for pedestrians and bicyclists than using paved shoulders along US-10/US-31. A more extensive sidewalk system is needed in the Village of Custer, but the balance of the corridor is too rural to need a pedestrian or bicycle system.

### **Snowmobile Trails**

While there are no state designated snowmobile trails that cross US-10 or US-31 in Mason County, snowmobiles are used frequently in the most rural parts of the County. If new snowmobile trails are planned with highway crossings, snowmobile groups and the DNR are encouraged to meet with MDOT and local government officials to identify the best solutions to safe crossings of US-10 or US-31.

### **Transit**

Mason County currently has a demand responsive transit system. If a fixed route local transit system were to be established, the route must be carefully planned and flow with current traffic. Bus pull-out lanes would need to be constructed as well as sidewalks to promote ease of dropping off and picking up passengers at the curb which is more effective than dropping off passengers at the outer edge of a parking lot. Speed limits would also have to be studied to determine safe locations for bus pull-out lanes.