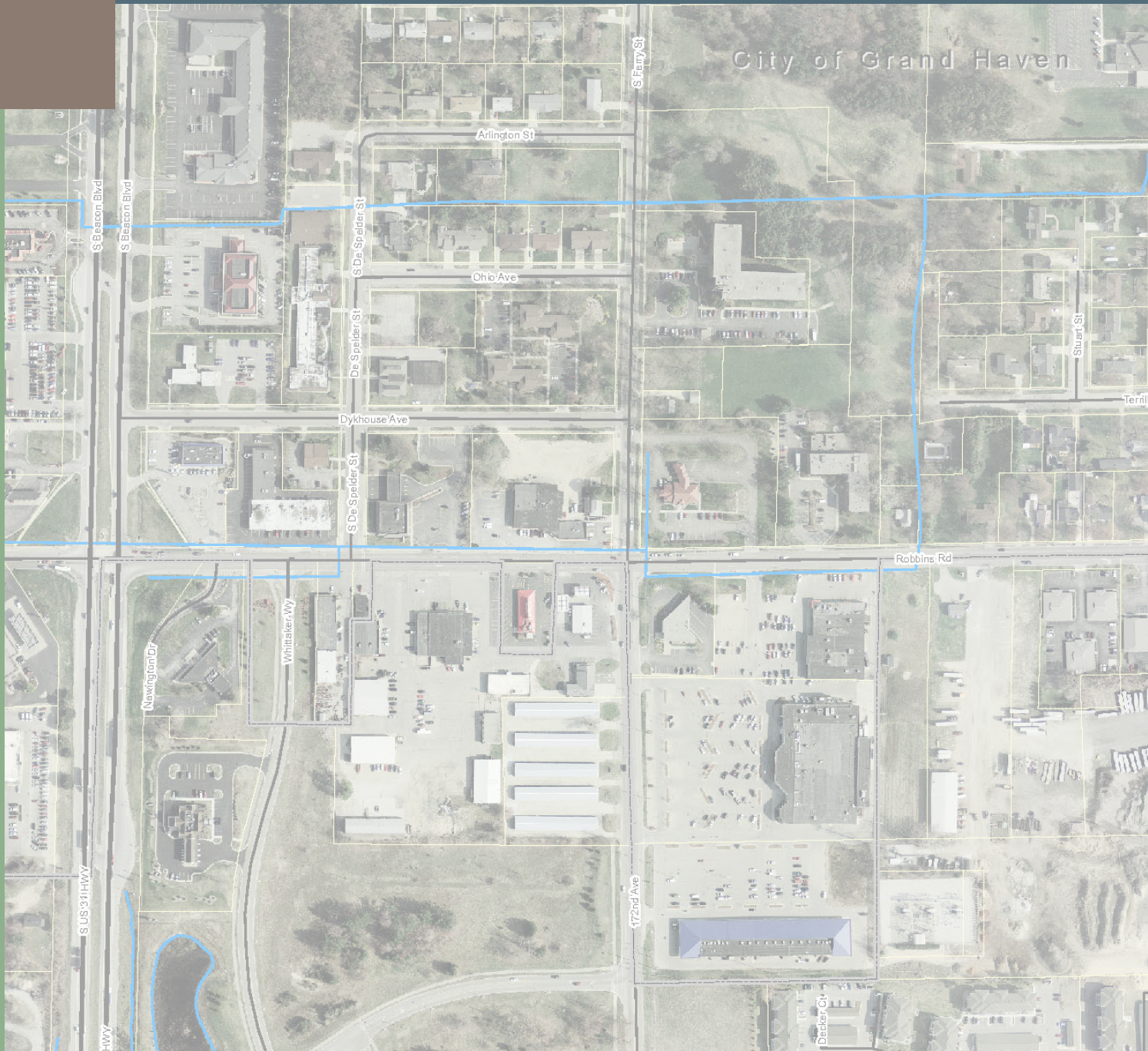


City of Grand Haven & Grand Haven Charter Township

Ottawa County, Michigan



Joint Robbins Road Corridor Plan

prepared by



progressive|ae



**City of Grand Haven City Council
Ottawa County, MI
Resolution No. 11-131**

**CITY COUNCIL RESOLUTION TO ADOPT THE ROBBINS ROAD
ACCESS MANAGEMENT & DESIGN GUIDELINE PLAN**

WHEREAS, the City of Grand Haven City Council adopted a comprehensive Master Plan on February 1 2010; and

WHEREAS, the adopted Master plan included a sub area plan for the Robbins Road corridor, a plan done in collaboration with Grand Haven Charter Township; and

WHEREAS, the sub area plan included implementation strategies which identified a need for an access management plan and a tool to develop uniform design standards for the corridor; and

WHEREAS, the City of Grand Haven and Grand Haven Charter Township initiated a joint study known as the Robbins Road Access Management & Design Guideline Plan began in August 2010 ; and

WHEREAS, the joint study process included meetings with the Michigan Department of Transportation, Ottawa County Road Commission, corridor stakeholders and the City and Township Planning Commission; and

WHEREAS, on April 12, 2011 the Planning Commission passed a motion to approve the Plan as proposed and recommended the Plan to City Council,

WHEREAS, the Grand Haven City Council finds that the proposed Robbins Road Access Management & Design Guideline Plan is desirable and proper and furthers goals of the adopted Master Plan;

NOW, THEREFORE, BE IT RESOLVED that the City of Grand Haven Council hereby adopts the Robbins Road Access Management & Design Guideline Plan as the Plan carries out the goals and objectives of the 2010 Comprehensive Master Plan.

YEAS: Council Member(s) Monetza, Nieuwenhuis, and Bergman

NAYS: Council Member(s) Fritz and Scott

ABSTAIN: Council Member(s) NONE

ABSENT: Council Member(s) NONE

CERTIFICATION

I certify that this Master Plan was adopted by the City Council of the City of Grand Haven at a regular meeting of the City Council held on April 18, 2011.

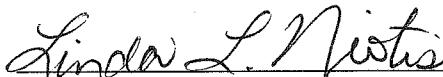

Linda L. Niotis, City Clerk

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Acknowledgements

This corridor improvement plan and associated design guidelines are intended to improve safety and traffic operations along the Robbins Road corridor in the City of Grand Haven and Grand Haven Charter Township and improve overall development character. All recognize the need to establish a coordinated approach for access management, addressing efficient and safe travel for motorists, pedestrians, bicyclists, and future transit users alike. With its inconsistent pattern of development, varying setbacks, disjointed architectural character and lack of a unified streetscape, integrated design standards for the corridor, implemented through zoning, are an additional means to achieve positive change. To that end, access management and design standards are recognized as key tools to improve transportation conditions and safety for all users and to enhance the urban environment.

What is Access Management?

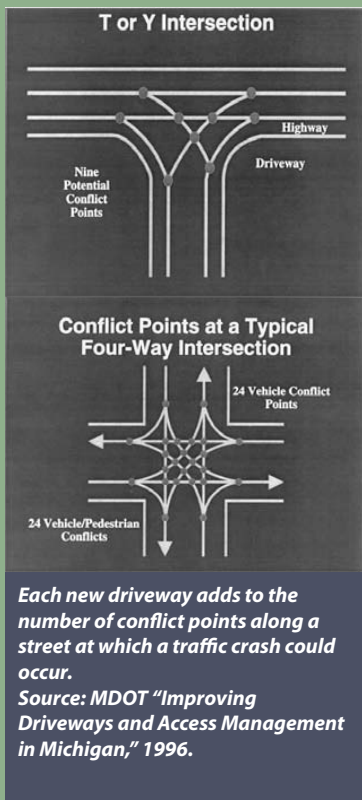
Access management involves maximizing the existing capacity of Robbins Road and reducing the potential for crashes by limiting the number of access points, carefully placing and spacing them and implementing other enhancements. The terms “access” and “access point” are used frequently throughout this document. These terms refer to commercial driveways (e.g. retail, office, industrial, etc.) and platted roadways or private roads, but generally do not refer to driveways for individual single family homes.

Numerous studies in Michigan and nationwide have shown that a proliferation of driveways or an environment of uncontrolled driveways can increase the number and severity of crashes, reduce the capacity of a street, and create a need for more costly improvements in the future. Areas where access management plans have been adopted and implemented by communities and road agencies access-related crashes have been reduced by 25-50 % (Access Management Manual, Transportation Research Board).

Access management techniques are used to improve transportation operations and increase safety along road corridors for all types of transportation, while maintaining reasonable access to properties. It involves maximizing the existing capacity of a street to carry traffic and improving the corridor for transit riders, bicyclists, and pedestrians by reducing and limiting the number of access points, carefully placing and spacing them and providing non-motorized facilities where they are missing. Access management is achieved by:

- Reducing the overall number of access points
- Optimizing the location of transit stops
- Connecting key gaps in non-motorized trails and facilities
- Properly spacing access points
- Applying appropriate geometric design to streets and access points
- Increasing shared access between adjacent properties

In the State of Michigan, access management has been in practice for over two decades. In 1999, the Michigan Department of Transportation (MDOT)



commissioned a task force to research, discuss and organize best practices for access management. In 2001 MDOT officially adopted a statewide guide known as The Access Management Guidebook. That document and its foundation in significant national research and statistics form the basis for this plan's standards and recommendations.

Access management is not new in the greater Grand Haven area either. The City and Township (through the Ottawa County Road Commission and MDOT) have successfully been applying access management to both residential and commercial development for several years. For example, Grand Haven Township adopted access management standards through its zoning ordinance for the US-31 and M-45 Area Overlay Zone.

Benefits of this Planning Effort

By considering the relationship between access points along Robbins Road, motorists, non-motorized users, transit riders, communities, residents and businesses along the corridor all stand to benefit. National experience and case studies of other corridors have shown that access management can:

- Reduce crash potential by regulating the placement, spacing, and design of future access points and by redesigning existing ones as opportunities arise.
- Maintain or increase travel efficiency by reducing or eliminating access points that unnecessarily slow traffic, thereby reducing air quality.
- Provide landowners with reasonable access to their property, though in some cases the number of access points may be fewer or more indirect than existing ones.
- Boost local property values and increase the vitality of adjacent businesses by reducing congestion and improving business visibility.
- Improve air quality by reducing the need to brake and accelerate, eliminating unnecessary vehicle idling, and promoting alternative travel options.
- Enhance access to and from businesses, both in terms of safety and convenience.
- Lessen the need for costly road widening or other major improvements by maximizing the efficiency and volume of traffic.

Who Benefits?

Extensive national and state data demonstrate a number of benefits experienced along corridors with access management. A wide range of people benefit, including:

- Motorists
- Customers
- Residents, visitors, and employees
- Business owners and operators

Access Management

Principles

- Design for efficient access
- Separate conflict areas
- Remove turning vehicles or queues from through lanes
- Limit the types of conflicts
- Provide reasonable access

Benefits

- Contributes to more livable, vibrant communities
- Reduces crash potential
- Preserves or restores the capacity of roads
- Sustains more vibrant business districts
- Maximizes taxpayer investment in road construction
- Maintains or improves traffic flow
- Supports community goals along corridor: non-motorized, transit, low-impact development and others

Access Management Techniques

Access Placement

- Require appropriate spacing between driveways and road intersections
- Ensure new driveways are directly aligned with or properly offset from driveways across the street
- Consolidate closely spaced or redundant drives

Access Design

- Promote cross access between parking lots and service drives
- Restrict turning movements (e.g. right-in/right-out only, etc.)
- Require proper driveway radii and ample throat depth to safely store waiting vehicles

Intersections, Crosswalks & Signals

- Use advanced pedestrian signals
- Ensure non-motorized connectivity near transit stops and crosswalks
- Design intersections with 'bumpouts' & pedestrian refuge islands where feasible
- Include pavement markings and textured crosswalks

Roadway Design

- Improve intersection design
- Provide proper median crossovers when applicable
- Encourage shared cross-access to signalized drives or cross streets
- Provide service/frontage roads & rear access roads/alleys

- Property owners
- Pedestrians, bicyclists and transit users

How Quickly Will Changes Occur?

Development approvals, such as site plan review through each community, provide the greatest opportunity to implement recommendations. However, the level and pace of private investment requiring site plan review often dictates if and when change will occur. It is important to understand that change will not occur overnight; access management will be implemented over time, as opportunities arise or redevelopment occurs and must be a coordinated effort between both communities and, to a lesser degree on this corridor, the Michigan Department of Transportation and the Ottawa County Road Commission. While access management benefits are most obvious to motorists, there are many beneficiaries. Both the City and Township have implemented policies to make walking and biking more convenient and the regional transit agency, Harbor Transit, is studying improved transit opportunities. Access management supports those endeavors since fewer conflicts will improve the environment for all modes of transportation. Businesses can also benefit since access to their property can be safer and more convenient for customers. In addition, in some locations recommendations may allow "extra" driveways to be replaced with parking. Finally, businesses, motorists and the general public can benefit from a long-term payback of "greening" the corridor with street trees and by using "low impact design," both as part of improvements within the right-of-way and within redeveloped properties along Robbins Road. Given the proposed reconfiguration from four to three travel lanes (with a center turn lane) significant reconstruction will not be necessary, since the current location of curbs should only necessitate restriping lanes.

Green Infrastructure

To manage the quantity of rainwater runoff and prevent flooding stormwater management has historically been addressed from an engineering standpoint, but the quality of stormwater runoff can

also be managed by applying green infrastructure techniques. From a stormwater management perspective, green infrastructure, also referred to as low impact development (LID), is the application of techniques emulating the natural water cycle. LID uses a basic principle modeled after nature: manage rainfall by using design techniques that infiltrate, filter, store, evaporate, and detain runoff close to its source. Instead of conveying and managing/treating stormwater in large, costly, end-of-pipe facilities often located in drainage areas, LID addresses stormwater through smaller, more cost-effective features.

This plan provides a policy framework rather than site-specific recommendations for both LID planning and engineering techniques. These techniques should be considered as part of the menu of other potential improvements when there is a change to a site plan or a proposed new development to determine if there are ways to better address stormwater runoff.



The Robbins Road planning area stretches between US-31 and Beechtree Street/168th Avenue and includes land on both sides of the street. The corridor is currently flanked by commercial, office, and residential land uses and the street is under the jurisdiction of the City of Grand Haven. Municipal boundaries tend to follow the street with Grand Haven to the north and the Township to the south. The exception is near the Ferry Street/172nd Avenue intersection where the boundaries jog. Long term opportunities, as described in community master plans, suggest redeveloping certain sites in the corridor and accommodating infill and mixed use development. In addition to its residential, office and commercial land use character, White Pines Middle and Griffin Elementary Schools (both located on Griffin Street) also have an influence on corridor traffic patterns.

Between US-31 and Beechtree Street/168th Avenue, Robbins Road is currently a 4-lane (two each WB and EB lanes) paved road with a posted speed limit of 25 mph. However, between US-31 and DeSpelder Street, the north WB lane becomes a dedicated right turn lane. The road is currently configured with two inside lanes that are 11 feet wide and two outside lanes that are 10 feet wide. Measured curb to curb Robbins Road is 45 feet wide with 1.5 foot wide gutter pans. The Robbins Road and US-31, Ferry Street/172nd Avenue, and Beechtree Street/168th Avenue intersections are controlled by signals while all other cross streets and driveways are stop-controlled. There are approximately 46 access points in the planning area, 9 of which are related to single family homes and 37 of which are for commercial or office uses. The focus of this effort is on the latter group.

Previous efforts to address traffic issues and development character include the recent Robbins Road joint planning effort undertaken by both communities. That process involved community stakeholders and solicited public input through a series of facilitated public workshops. The result was an overall vision for the corridor, incorporated into each community's master plan and several more specific recommendations:

- Provide greater corridor design quality and consistency
- Lower traffic speeds
- Explore lane reductions to allow a dedicated left turn lane
- Provide opportunities for new roads and interconnections
- Implement access management

In addition, a joint Robbins Road Operational and Access Management Study was undertaken earlier in 2010. The study covered Robbins Road between US-31 and Beechtree Street/168th Avenue, including intersections at US-31, Whittaker Way, Despelder Street and Ferry Street/172nd Avenue. Based on an operational analyses of the Robbins Road corridor, two scenarios were identified and evaluated:

- Alternate 1 – a 4-lane scenario with dual WB lanes and a single EB lane
- Alternate 2 – a 3-lane scenario with a single lane in each direction and a shared center left turn lane

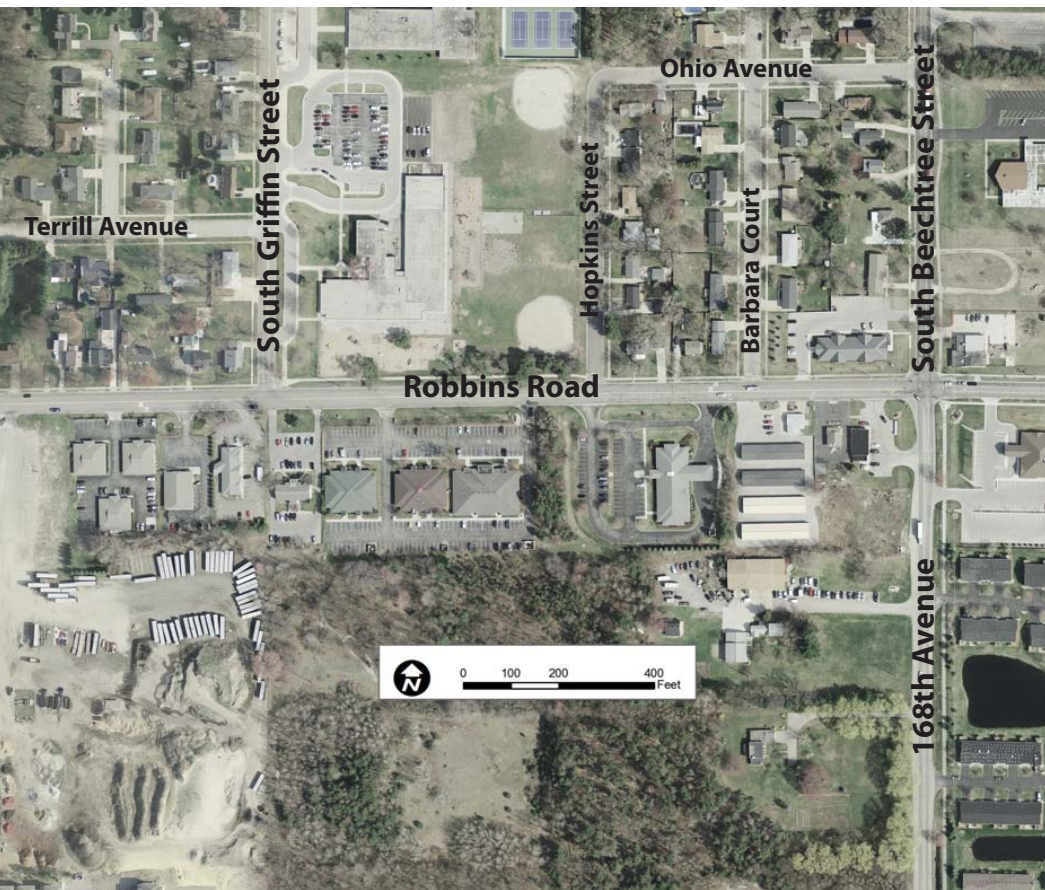


Since changing the existing 4-lane configuration (two each WB and EB lanes) to either alternative (east of the US-31 intersection) did not significantly affect intersection or corridor performance both options were deemed viable. In fact, the study found both could also accommodate future increases in traffic volume. That analysis ultimately helped guide a preferred corridor design option.

The Joint Robbins Road Corridor Plan relied on crash data previously included as part of the Robbins Road Operations and Access Management Study. While crash data were not analyzed on the corridor it is clear several segments, especially on the south side of Robbins Road, have a high crash potential. This is in part due to street resurfacing where pavement comes close to breaching the top of the curb in some places. As a result there is almost free and unpredictable vehicle access when entering or exiting parking lots and driveways; drivers can effectively turn at will. In addition, some drives are excessively wide, closely spaced and redundant. Together, these conditions disrupt the flow of traffic and pedestrians traveling along the street. Those conflicts and the potential for crashes and congestion can be reduced by reconstructing curbs and repaving the street to an appropriate level and by adopting access management standards that control the number, placement, and design of access points (intersecting streets and driveways).

Robbins Road Corridor Map





III. How This Plan was Prepared

This effort was a joint planning project between the City of Grand Haven and Grand Haven Charter Township. The previous public workshops and recently completed master plans for both communities provided a solid foundation and direction for this plan. However, the partnership was expanded to also include MDOT and the Ottawa County Road Commission. The Township's and City's zoning ordinances were also evaluated to determine if regulations supported access management and the kind of development envisioned along Robbins Road

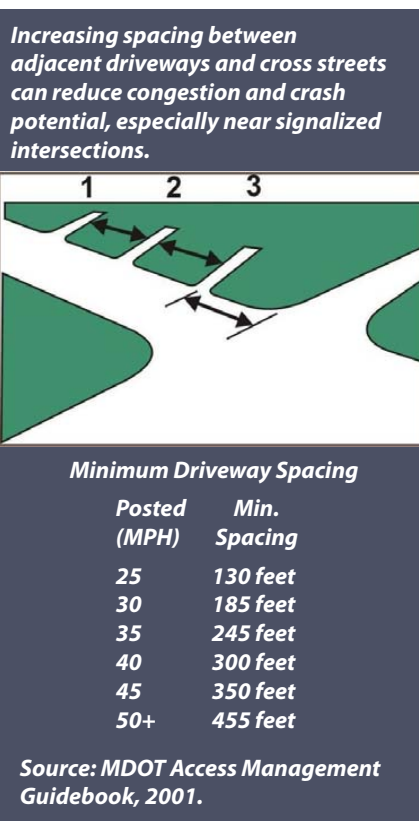
The Access Management plan was developed after carrying out a site-by-site review of the corridor that considered access, topography, utilities, site design, land use, planned land use, zoning, and the existing network of non-motorized paths. The MDOT Access Management Guidebook, which includes decades of research and statistics supporting access management from around the country, formed a solid base for developing draft recommendations for reducing the number of drives and promoting the benefits of access management. The experience of the consultant team coupled with input from the public and local boards and elected officials was instrumental in creating a corridor improvement plan that serves the needs of both communities.

Following a tour of the corridor the project team met with agency representatives early in the process to discuss emerging concepts for the configuration of travel lanes, intersection design and access management. These discussions avoided going too far with ideas that potentially could negatively affect intersection operations at Beacon Boulevard (US-31), 172nd Avenue/ Ferry Street and Beechtree Street/ 168th Avenue and meet with later resistance from road agencies. In addition, a public workshop was held to discuss issues and initial concepts for the corridor. Again these showed road configuration, the addition of bike lanes, sidewalk extensions, redesigned intersections, marked crosswalks, street trees and driveway modifications to individual sites and businesses. Based on comments and suggestions by corridor stakeholders and the general public some changes were made and the revised concepts were then shared with elected and appointed officials from both communities at a joint meeting. Given general support for the overall concepts, a more detailed access management plan was prepared and later presented, again to both communities, and subsequently adopted.

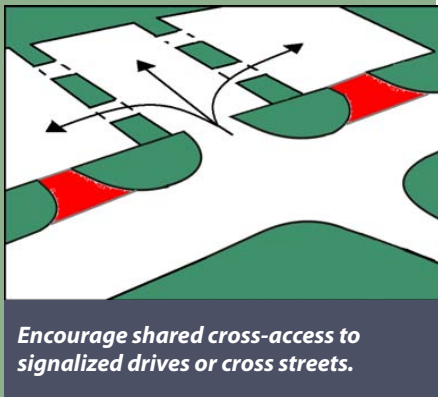
This corridor improvement plan not only addresses access management and design standards but also sets a framework to adopt changes to zoning ordinances by each community to provide consistent regulations. Custom-tailoring specific details, such as triggers to implement a change in use, expansion or redevelopment, are based on input and discussion with officials from each community and their staffs. Both the plan and the framework to modify ordinances provide some flexibility to respond to new information and conditions in the future. To be effective though, the plan and standards to guide the subsequent development of ordinances must be endorsed and used by both communities, the Ottawa County Road Commission and MDOT to guide development and related road improvements along the corridor.

The following section discusses the key access design standards that were applied during the analysis of the Robbins Road Corridor Improvement Plan. Access management can be accomplished through a variety of techniques, both physical and regulatory. Specific recommendations that consider existing access points along Robbins Road and potential new ones are illustrated on a series of drawings of the corridor. Recommendations and regulations are based on the following techniques:

- **Driveway Spacing from Other Driveways:** Driveways must be adequately spaced from one another to ensure turning conflicts are minimized. Generally, the higher the posted speed limit, the more driveways need to be spaced apart. Spacing standards recommended for the corridor are based upon MDOT guidelines for minimum centerline to centerline distances between driveways (shown in the table to the left).



- **Limit Number of Access Points:** Where possible, the number of access points to a development or an individual site should be limited to one. Every effort should be made to limit the number of driveways and encourage access off side streets, rear service drives, and shared parking lots and driveways. However, certain commercial uses, or the scale of development may generate enough traffic to consider allowing more than one driveway. Larger parcels, with frontages that are wide enough to meet spacing standards, may also warrant an additional driveway.
- **Driveway Spacing from Intersections:** Driveways need to be spaced far enough from intersections to ensure entering or exiting traffic does not conflict with intersection traffic. Typical standards take into account the type of roadway involved, intersection control type and the type of access requested. For roadways with posted speeds ranging from 25 to 40 miles an hour, such as the Robbins Road corridor, full movement driveways should typically be at least 230 feet away from a signalized intersection and 115 feet away from unsignalized intersections.
- **Design of Access Points:** The geometric design of access points, including the width, throat, radius, and pavement type, should meet current standards wherever possible to promote a smooth transition to and from Robbins Road at driveways.
- **Shared Driveways and Cross-Access:** Shared or joint use of a driveway by two or more property owners should be encouraged. This will require a written easement, developed before or during the site plan



review process, between all affected property owners. Where future shared access is desired, a 'stub drive' up to the property line (with an access easement) should be required or a reciprocal floating cross access easement with adjacent future development should be initiated to facilitate an easy connection when opportunities arise.

- **Promote Service Drives:** Frontage drives, rear service drives, and shared driveways should be used to minimize the number of driveways while preserving a property owner's right to reasonable access. Such options can provide customers with access to multiple shopping/commercial sites without having to re-enter Robbins Road

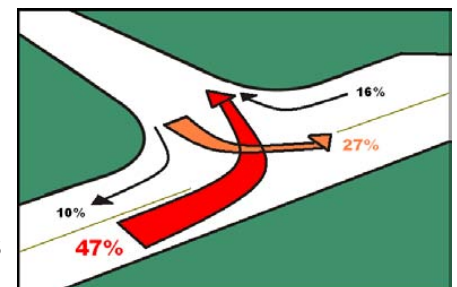
In areas where service drives are proposed or recommended, but adjacent properties have not yet developed, the site should be designed to accommodate a future service drive with access easements provided. In any case, care should be taken to minimize any negative traffic impacts of service drive connections to residential side streets.

A critical design element of service drives, such as interconnected parking lot drives, is the distance between the through traffic lane and the service drive (also known as throat depth, or storage space). For shared access drives providing access to two small commercial uses, the throat/ storage depth should be at least 40 feet. For drives providing access to more than two small commercial uses, the throat/storage depth should be at least 60-100 feet (potentially more depending on the volume of traffic generated by the land uses).

Rear service drives (similar to the one currently serving businesses south of Robbins Road and to the west of 172nd/Ferry, but better defined) are often preferred over frontage drives because they provide sufficient driveway depth, facilitate parking to the rear of buildings and move buildings closer to the road. Additionally, rear service drives have the potential to serve as integrated access and circulation for adjacent development, such as office or residential areas, especially when properties are sufficiently deep. There are several areas along Robbins Road with contiguous deep lots where this concept could apply. This configuration may facilitate the development, and in some cases the redevelopment of the Robbins Road frontage with a rear service drive, alley, or future public road providing rear access to businesses and direct access to adjacent land to the south.

Service drives are usually constructed and maintained by a property owner or an association of owners. The service drive itself should be constructed to public roadway standards in regard to cross section (i.e. 22-30 feet wide), materials, design, and alignment. While parking along service drives is usually discouraged, as it can interfere with internal circulation, in some cases all, or portions of a service drive may consist of interconnected parking drive aisles across multiple properties.

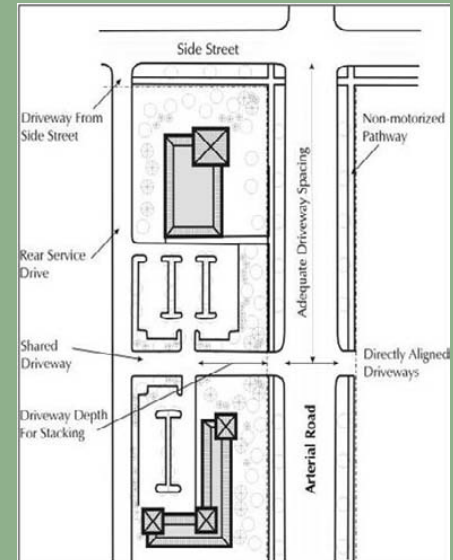
- **Driveway Alignment and Offsets Relative to Other Driveways:** On corridor segments or cross streets



Above: data from the National Highway Institute indicates that most driveway crashes involve left-turn movements

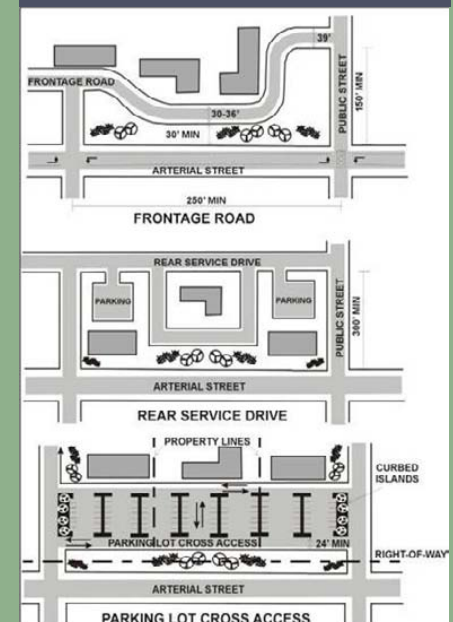
without a center median, driveways should be aligned with those across the street, or offset a sufficient distance to prevent left turn conflicts. Minimum offsets on the corridor should be determined by posted speeds and range of traffic. In the case of Robbins Road a 325 foot offset is recommended for a 25-mile per hour speed zone.

- **Internal Sidewalk Connections to Public System:** Sites should be designed to include internal sidewalks or pathways that are clearly marked and at a prominent location to encourage their use; but clearly separated or otherwise protected from driveways and circulation lanes. This is especially important for corridor segments that have higher densities of residential nearby; especially the existing senior-oriented housing that could generate a higher level of sidewalk traffic to and from businesses.



Above: rear service drives and shared driveways are important techniques to reduce the number of access points, especially near cross streets.

Below: the success of different types of shared drives, roads, and parking connections are dependent on lot depth, building placement, and parking configuration.



The Robbins Road Access Management Plan was developed by analyzing existing access conditions and constraints; through input from community staff, local officials and property owners; and by reviewing state, national, local, and other states' access guidelines.

While it may be all but impossible to retrofit Robbins Road to meet current spacing guidelines for new driveways one of the primary goals should still be to minimize the number of driveways as much as possible. This will enhance long-term safety along the corridor for all users – drivers, pedestrians, and cyclists.

It is important to recognize that many of the access improvements recommended by this plan, as shown on the following maps, will only be implemented when an owner or developer approaches the City and/or Township as part of development review. However, incentives to assist with the costs of closing and reconstructing driveways could increase the pace of implementing the plan. To do this, some communities have established a Corridor Improvement Authority (a CIA is structured like a Tax Increment Finance Authority) and used the captured tax increment as a way of funding, or financing various improvements. Other techniques include amortizing improvements over a number of years so a property owner in effect takes out a loan to close a driveway or improve the streetscape. Implementing corridor enhancements will require cooperation between both communities since the Township has already established a DDA for a portion of the corridor. This could affect the viability of a CIA since the tax increment, at least for a portion of the corridor, is already committed. Otherwise, access improvements done outside of any major street improvements (doubtful with Robbins Road) will likely be paid for by business/property owners when required by ordinance.

This access management plan should be viewed as a flexible document, subject to adjustments and improvements as the Robbins Road corridor continues to change. Although the basic design parameters should remain in place, exact locations and configurations of driveways and service/frontage connections may shift as plans come into focus.

The access management plan recommendations are largely based on parcel configurations and future land use plans in place at the time this plan was prepared. To achieve its goals, property combinations and unified development of small parcels is strongly encouraged. In addition, existing parcels should be subdivided only if a coordinated system of access is retained through signed agreements and illustrated on a plan.

The following sections and accompanying figures outline recommended access management standards for the Robbins Road study area. With a current speed limit of 25 mph and an almost pure retrofit environment, recommendations largely focus on reducing existing conflict points so that more efficient traffic flow and safer street segments can be achieved. Other factors that come into play include intersection traffic control types, physical constraints and the type and size of future land uses and the traffic they will generate.

Service drives, or internal site connections play an integral role in access management along portions of the corridor. The plan illustrates a few locations and the variable alignments service drives could take.

The Robbins Road Access Management Plan Maps (see maps 1 - 3) illustrate recommendations resulting from numerous discussions with the Advisory Committee and input from corridor stakeholders and the general public. While the following recommendations are general in nature and do not discuss each property on an individual basis, some sites are addressed in greater detail.

US-31 to Ferry Street/172nd Avenue

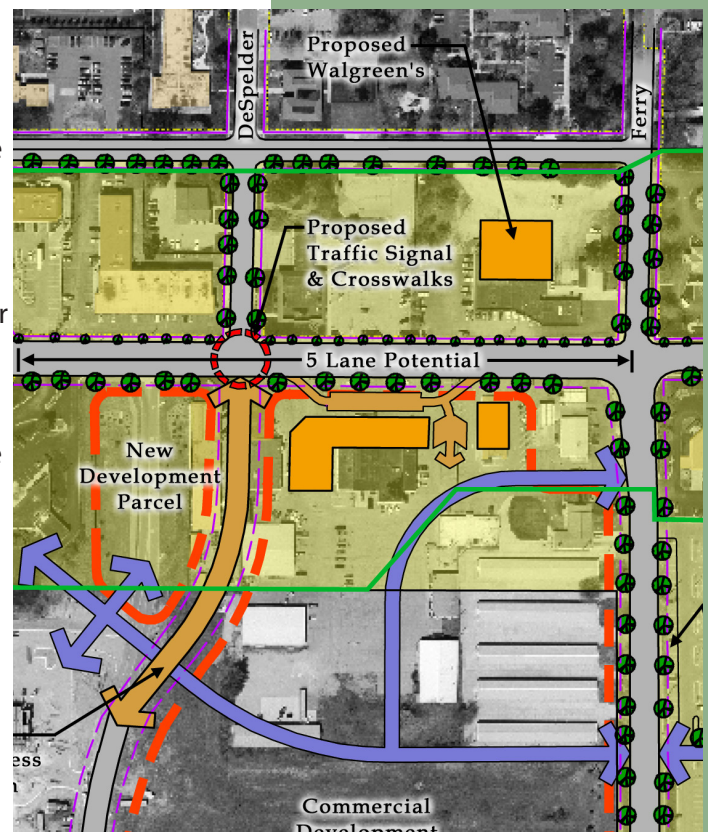
This section of the corridor has several small sites with multiple driveways, particularly to the south of Robbins Road, that were approved many years ago before the negative safety impacts of poor driveway spacing were well recognized. It now essentially requires a complete retrofit to achieve access management goals. As a result, most of the recommendations focus on adjusting existing access points or systems, including combining and/or closing driveways. The recommendations (see Map 1) should be used as a baseline for future short and long-term access/driveway changes.

One of the key features (see Map 1) is a planned three-lane cross section on Robbins Road that accommodates bike lanes on both sides. This cross section begins approximately 250 feet east of US-31, allowing a proper transition from the US-31/Robbins Road intersection. The three lane cross section itself will enhance access management since a center lane, dedicated for left turns, is safer than stopping or queuing vehicles in a through lane. The planned cross section will also serve to calm traffic throughout the corridor, allowing the prudent driver to encourage slower driving speeds.

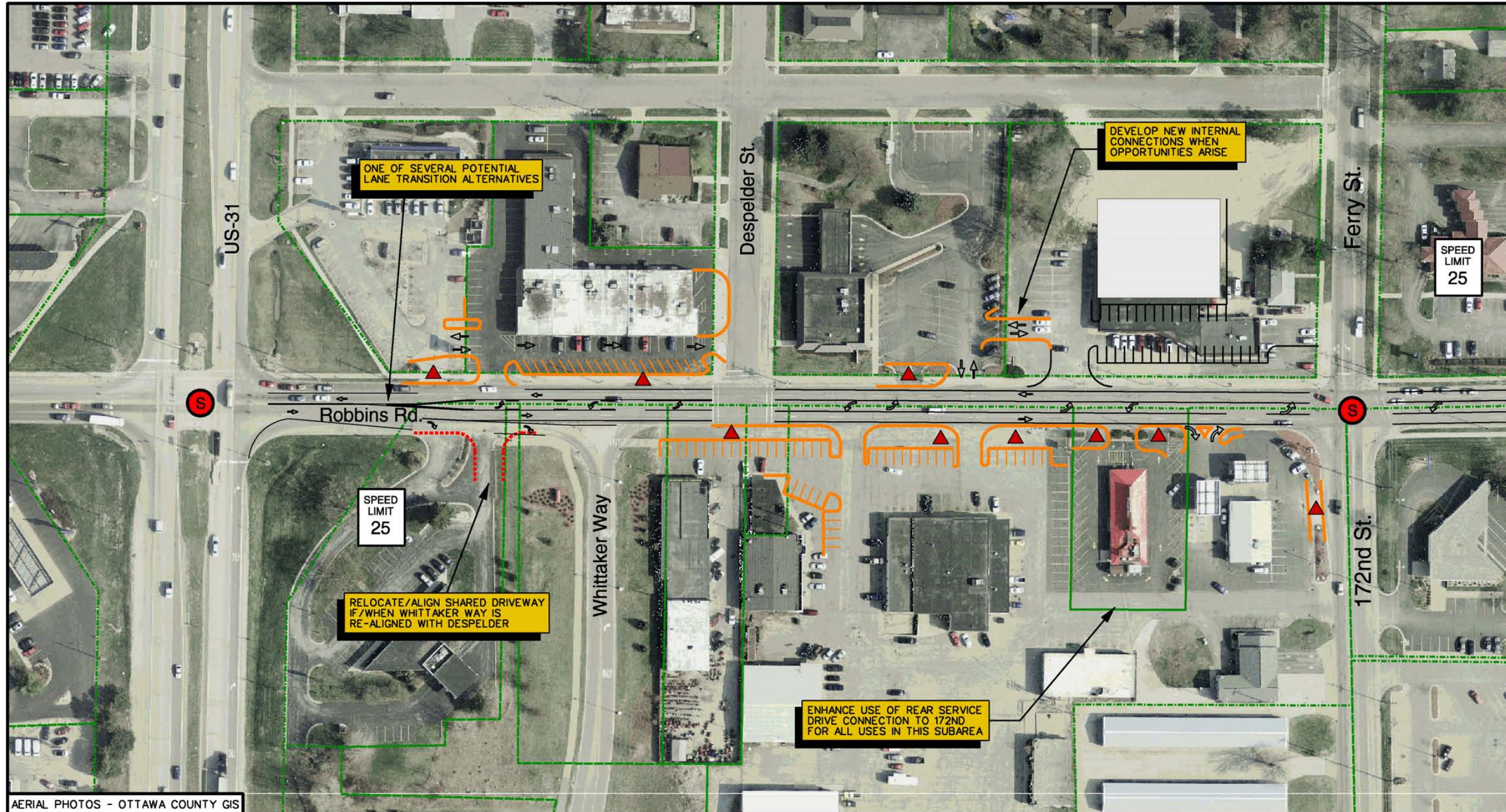
By closing or combining driveways on the south side increased space for clearly defined parking (as illustrated), sidewalks, and landscaping will be provided. The recommendations reflect, in some cases, the input gained by discussing changes with business owners. In other cases, as with the Pizza Hut site, the plan reflects the most appropriate changes to enhance access management (in this case combining two one-way drives into a single driveway). For this site and several others along the south side of Robbins Road the existing rear “service drive” that connects to 172nd Avenue is viewed as a good option since it provides a safer alternative for left turns at the signalized Robbins/172nd /Ferry intersection. Efforts should be made to enhance the use of this service drive especially during peak traffic.

Longer term recommendations include a realigned Whittaker Way to intersect with Robbins Road at Despelder Street. This recommendation was also included in the recent Robbins Road Corridor Plan that the Township and City worked on jointly in 2009/2010. Clearly, such realignment would require agreements between existing businesses and property owners, but would improve access and turning movements on Whittaker Way and potentially allow an additional signalized intersection on Robbins Road. The realignment would facilitate outbound left-turn movements and could also open additional land for redevelopment.

Aligning Whittaker Way and Despelder would improve the efficiency of the intersection and create a new development parcel.

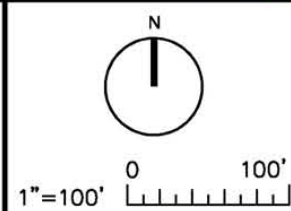


US-31 to Ferry Street/ 172nd Avenue



AERIAL PHOTOS - OTTAWA COUNTY GIS

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LEGEND

- SPEED LIMIT IN AREA
- EXISTING SIGNAL
- RECOMMENDED DRIVEWAY CLOSURE

- ROW OR PARCEL LINES
- RECOMMENDED NEW/RELOCATED DRIVEWAY
- RECOMMENDED CROSS ACCESS
- RECOMMENDED FUTURE DEVELOPMENT -RELATED ACCESS IMPROVEMENT

ACCESS MANAGEMENT RECOMMENDATIONS

ROBBINS ROAD ACCESS MANAGEMENT PLAN -
MAP 1
CITY OF GRAND HAVEN/
GRAND HAVEN TOWNSHIP

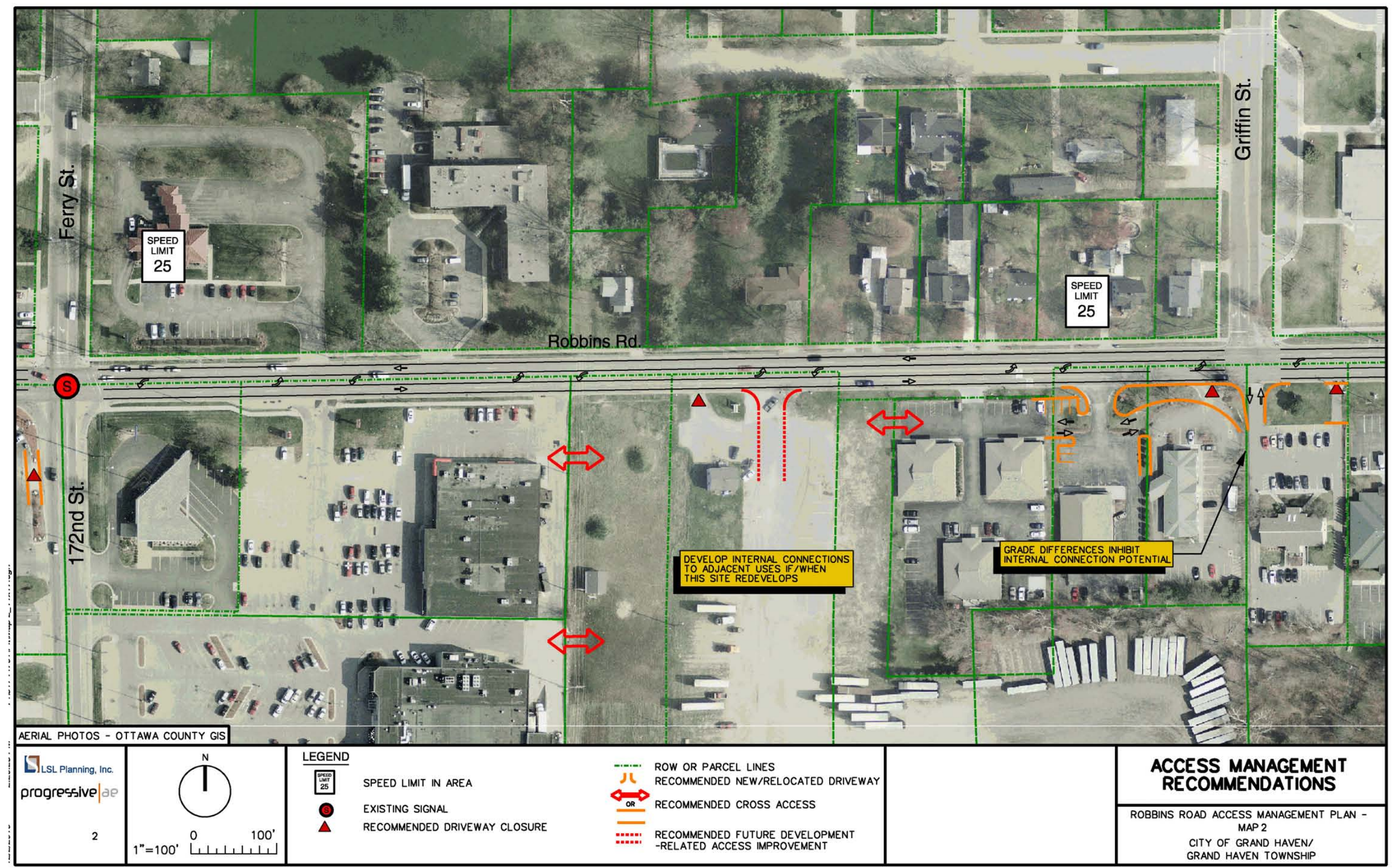
Ferry Street/172nd Avenue to Griffin Street

East of US-31, Robbins Road transitions into an area with less of a commercial focus, especially along the north side. Consequently, the recommendations (see Map 2) are less dramatic and are predominantly oriented to existing, or potential development on the south side.

They include closing and/or combining several existing driveways that are either poorly spaced from other commercial driveways or public street intersections; or are redundant second access points for land uses that generate relatively low traffic volumes. An example is the existing commercial driveway located just west of Griffin Street that is offset from the Robbins/Griffin intersection by approximately 30 feet. Typical standards, even for low speed corridors, attempt to maintain at least 115 feet between a public street intersection and a commercial driveway. While in some cases that can't be achieved, especially in a retrofit situation, in this case, coupled with cross access to the adjacent like uses, it makes good sense.

Recommendations for the subarea also include future cross access between other sites, particularly those located east of the D&W/commercial center. If and when they redevelop, cross access should be a key feature of an overall access management plan. Like most service and cross access drives these connections would allow patrons to access adjacent uses without having to go back out onto Robbins Road. Since the existing drives on Robbins Road serving the D&W/commercial center are well spaced, additional ones should be discouraged. Therefore, the eastern most driveway should be viewed in the context of future shared access with sites to the east.

Ferry Street/172nd Avenue to Griffin Street



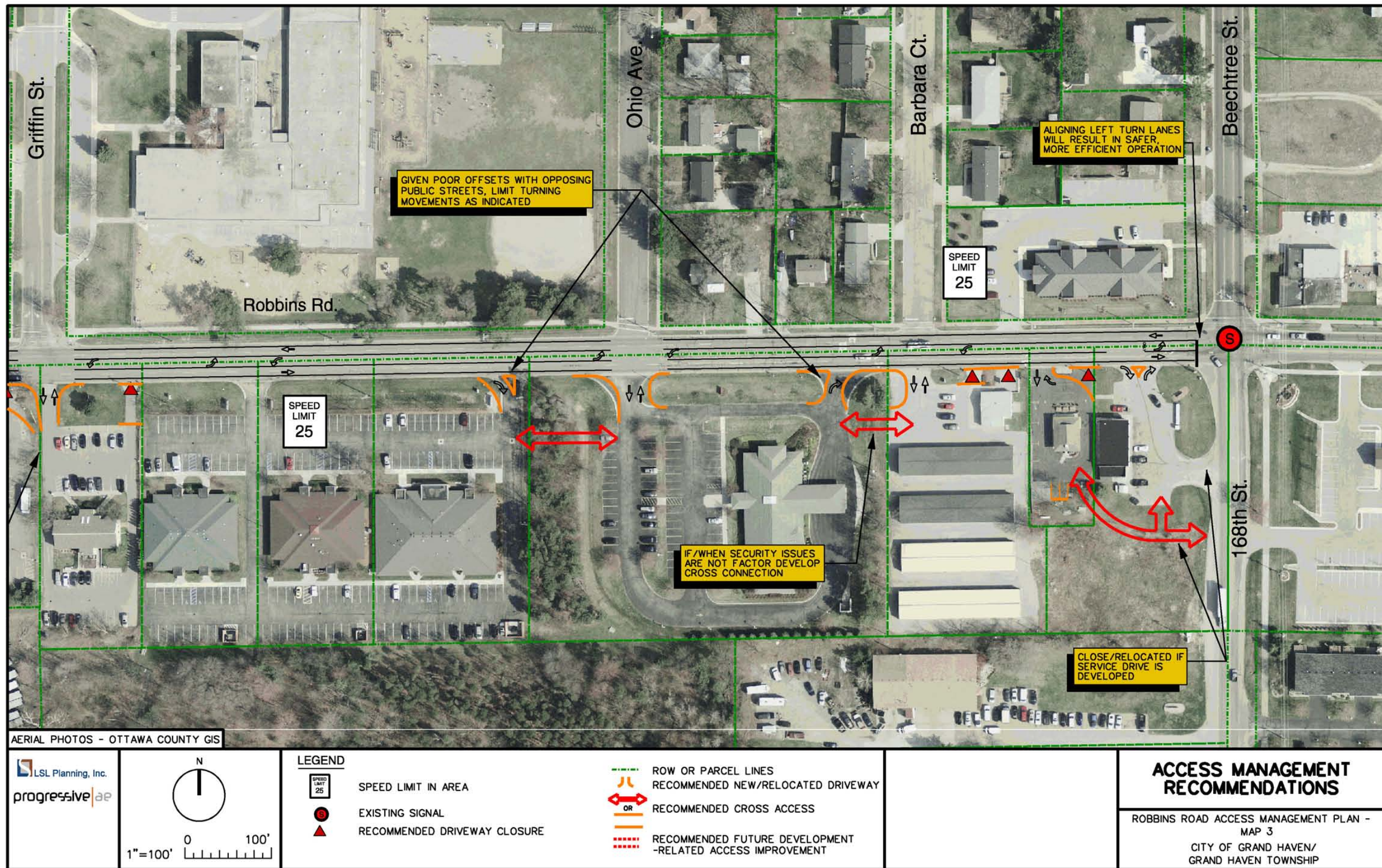
Griffin Street to Beechtree Street/168th Avenue

The recommendations for the eastern most segment of the study area are similar to the ones outlined for the middle segment and the focus remains on the corridor's commercial south side (see Map 3). They include closing, relocating, or combining several driveways. In several other instances while driveways do not have to be fully closed specific turning movements should be restricted through channelization. In three locations the proximity of a private drive to a public street intersection suggests eliminating inbound left turns. This is primarily due to the previously discussed issue of closely spaced street intersections and driveways. In this case, eastbound left turns onto a public street should have priority over westbound lefts into a private drive. Poorly spaced driveways lead to left lane turn conflicts when both eastbound and westbound lefts are allowed at current locations.

There was considerable discussion at the public open house regarding access to the convenience store and the ice cream shop, located on the south side of Robbins Road just west of Beechtree Street/168th Avenue intersection. Including the storage facility, there are six closely spaced driveways in this area; all within only 300 feet. Therefore, the recommendation is to close three of them. Ultimately, if and when the opportunity arises, the best course of action would be to develop a small rear service drive providing access to and from the ice cream shop and 168th Avenue. This, along with restricted turning movements at the adjacent convenience store, would reduce turning conflicts on Robbins Road close to the signalized Robbins/168th/Beechtree intersection.

Again, it's important to note that such access changes will not occur overnight; access management will be implemented over time, as opportunities arise or redevelopment occurs and must be a coordinated effort between both communities.

Griffin Street to Beechtree Street/168th Avenue



To help improve the appearance and character of the Robbins Road corridor, the following design guidelines provide direction for both new development and redevelopment. Ultimately, they will be used as a foundation for a set of consistent development regulations for each community. They will further provide Grand Haven and Grand Haven Charter Township, design professionals, property owners and the business community with a comprehensive set of standards to consider when preparing, reviewing, and approving development proposals along Robbins Road. They also assure property owners and potential investors that all projects will be held to a uniform and consistent development standard.

Quality development generally leads to new investment so the goal is to gradually upgrade the image of the corridor based on these design guidelines; implemented through new zoning requirements and triggered as part of the development review process. The intent is to facilitate investment so that public and private improvements, redevelopment and new development are realized in a manner consistent with the quality and character envisioned in the master plans of both communities. However, it is important to note that change will happen over time as improvements and redevelopment occur. Given the size and depth of some properties (as measured from the Robbins Road right-of-way) land assembly and site consolidation may well be necessary to fully achieve these recommendations. In the meantime, existing businesses should be allowed to remain and repairs and certain property upgrades should be allowed. However, significant changes and building expansion should be viewed in the context of the ultimate plans for the corridor. Therefore, as part of each community's development review process a consistent set of triggers should be established that would require the new regulations to apply.

The following goals support upgrading the Robbins Road corridor by:

1. Creating a better sense of place for Robbins Road with retail and mixed-use developments that differentiate it from other corridors.
2. Establishing a common theme and development pattern through site design, architectural character, landscaping, lighting, signage, and streetscapes.
3. Ensuring traffic impacts from new development (or redevelopment) are minimized by employing shared entrances and cross-access between sites.
4. Providing guidance to prospective developers and to both municipalities when reviewing site plans through a set of consistent development regulations.

It is important to keep in mind that until they are adopted as district requirements through zoning, these guidelines are not strict rules but instead interpret the adopted corridor master plans. Together with other zoning requirements they can help guide corridor development decisions. However, they also provide each community with a framework for actual code requirements that is envisioned as a follow-on to this project. Until such time, independent judgment must be exercised in each case without sacrificing the intent behind the guidelines and consideration must be given to the specifics of each case and handled accordingly.

Site Design

Functional and attractive site plans that establish a consistent pattern of buildings and parking lots relative to their distance from the road edge and that are in scale and character with corridor development should be required.

The configuration of a site and its context must be carefully considered early in the design process to make sure a building and its related parking appropriately relate to the public realm (the street and sidewalk). Typically, as traffic speeds increase the scale of development changes, as do setbacks. Given the volume of traffic, vehicle speeds and the character of existing development on Robbins Road a more traditional development model is envisioned that reflects, but somewhat modifies current patterns. The following principles should apply:

- Buildings and parking lots should be oriented square and true to Robbins Road and side streets; unusual angles and relationships are generally inappropriate and detract from creating a continuous and predictable line of building facades (called a street wall). A street wall helps define and create scale along the street and sidewalk; the closer a building is to the edge of a street or sidewalk the more intimate the scale of development can become.
- A building should front onto Robbins Road and be located between 75 to 80 feet from the front property line, as established by a required building line (RBL). For a corner lot, a building could be located between 15 to 20 feet from the right-of-way of the intersecting public street. Changing the side yard RBL would allow a building closer to the street and serve to create a landscaped side yard, guide the location of parking to the “interior” side of the lot and provide some flexibility in site layout. A good example is the Chase Bank at the corner of DeSpelder Street and Robbins Road. To avoid a dead end parking configuration the side yard RBL may need to be adjusted to allow a drive that serves a rear parking lot.
- Except for service areas and corner lots that abut a public street the non-storefront side of a building should be accommodate a landscaped zone at least three feet wide.

Parking

Parking lots should be adequately sized to meet demand; however, they should not be unduly oversized, resulting in excessive paving and increasing the burden on stormwater management. There should also be a hierarchy of site circulation that is logical, clearly delineated, safe and well planned – motorists, pedestrians and delivery and service vehicle drivers must understand where to go and where not to. Parking lots should also not overwhelm a site or the streetscape, especially as viewed from public streets. Consequently, they should be well screened, defined as compartments and landscaped. The following design principles should apply:

- Shared parking should be encouraged between compatible uses and parking maximums (and minimums) should be employed to reduce paving.
- Consistent standards should be developed for the design of parking lots (drive aisle and parking bay dimensions).



- Standard parking spaces should be 18 feet long and 9 feet wide.
- To limit the size and scale of parking lots adjacent to Robbins Road and intersecting public streets the majority of parking should be located either to the interior side (the side away from a public street) or rear of a building. Therefore, the maximum extent of parking allowed adjacent to public streets should be a single bay (consisting of a drive aisle with parking only on one side) located 25 feet from a property line.
- Parking, storage, merchandise display or loading should not be allowed within a parking setback.
- Driveways and parking lots should be paved and well maintained.
- Pavers or painted markings should be used to delineate pedestrian crossings.
- Parking spaces should be striped.
- Driveways, parking lots and islands should be defined by concrete curbs. Timber and asphalt curbs should not be allowed due to their appearance, short life span and vulnerability to damage.
- Parking lots should contain landscaped islands and driveway medians to delineate vehicular from pedestrian circulation and to help break up the mass and scale of parking lots. Landscaping requirements should be based on the total number of parking spaces, since smaller parking lots may not have the same visual impact as larger ones.
- A parking lot island should be at least 9 feet by 18 feet and where possible they should be combined to facilitate alternate stormwater management techniques (rain gardens, infiltration areas, etc.) and to enhance the survival rates of trees, shrubs and groundcover.

Pedestrian Circulation

Providing a safer and more pleasant pedestrian environment will typically encourage people to walk and shop in nearby businesses, thereby reducing vehicle trips. This is especially true given nearby existing and planned senior housing, residential neighborhoods and the kind of businesses already located in the corridor. Walkways should be located where people are most likely to use them and head in directions people are most likely to go. The following principles apply:

- Sidewalks along the storefront side of a building should be sufficiently wide to accommodate outdoor displays, dining and amenities, such as planters. Typically, this dimension should be at least 10-12 feet and up to about 16 feet.
- A sidewalk fronting a parking space should be at least 10 feet wide - measured from the edge of a parking space - to account for a 2.5 bumper overhang. The width of a sidewalk could be reduced to 6 feet in all other locations.
- Sidewalks should be appropriately illuminated and pedestrian scale lighting used to encourage a more comfortable and inviting environment.



- *Storefront sidewalks provide ample width for outdoor dining and other amenities*
- *Pedestrian scale lighting*
- *Concrete or paver surface*
- *Clearly separated from travel lanes*
- *Connect parking areas with building entrances*

- Sidewalks should be concrete (or pavers) - not asphalt.
- Sidewalks should be delineated by curbs, different paving, striping and/or landscaped parkways.
- Sidewalks should connect parking lots with building entrances in the most direct manner.
- Sidewalks must be clearly separated from traffic lanes - cars should not drive over a sidewalk to enter/exit a parking space.
- Sidewalks should interconnect with public sidewalks and adjoining businesses to encourage walking. Public sidewalks (located in the right-of-way) should be at least 6 feet wide and extend across a driveway apron to better delineate the interface between pedestrians and vehicles.



Screening and Landscaping

Screening and landscaping can better integrate an unsightly activity or element into the public environment. Included are such things as delivery and trash storage areas that should be accessible, yet inconspicuous, which in some instances is not the case on Robbins Road today. Service and utility functions can often be selectively located out of public view, while screening may be required when that is not possible.

Streets and surface parking often consume a huge portion of a site (up to 75%) and can also leave a lasting impression on a community or place. Therefore, well-designed streets and parking lots are among the most effective ways to improve the aesthetics of a road corridor. Screening and landscaping can soften the visual effects of vast paved surfaces. Street trees can add scale, color, texture, and rhythm to the entire length of the Robbins Road corridor unifying the diverse elements that make up its visual experience. However, given the location of overhead utilities the design of the streetscape will have to respond appropriately to site conditions. These factors should be considered:

- Truck docks, service areas and trash storage must be located on the side of a building or to the rear; not facing a public right-of-way and must be screened. While it is often desirable to store trash inside a building, outdoor dumpsters should be allowed. They should, however, be enclosed by a masonry wall that matches the architectural character of the building and be gated and screened by a combination of trees, shrubs and/or groundcover.
- When landscaping is employed to screen objectionable views and activities its design should be simple, attractive, and lasting, but not monotonous. Plants should be grouped in masses; the number of species can be limited, but variety should be provided throughout. The key is to appropriately address the most important view plane; which could include groundcover and/or sculpted topography, such as berms for the ground plane, addressing the mid-plane with shrubs and/or ornamental trees, or the upper plane with canopy or evergreen trees.
- Street trees can be accommodated on the north side of Robbins Road, but due to overhead utilities not within the public right-of-way. Consequently, trees should be located within a proposed 25 foot parking setback in a regular pattern, consistent with the approach

already employed for the recently built Walgreens store. Landscape standards that are based on lot frontage should also be incorporated into future development regulations, specifying the number of trees and shrubs and their minimum sizes. Typically, the minimum caliper size for a street tree should be 3 inches. Landscape design should also be kept simple and combined with low berms that are approximately 2 to 2 ½ feet high. Regularly spaced trees will provide shade, order, and rhythm to the corridor and low shrubs, ground cover and grass will help screen parking and define the roadway.

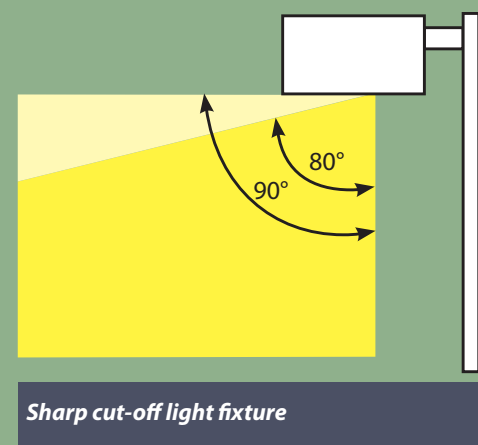
Since overhead utilities are located on the north side of the street trees can be accommodated in a grassed parkway within the right-of-way on the south side. Typically street trees are planted on 30 to 35 foot centers and adjusted accordingly to avoid conflicts with any overhead wires.

- While buffers are not necessary to separate compatible adjoining uses, sites and parking lots should also not blur together as a single mass; they should be differentiated. Parking lot islands and medians should include shade trees, and ground cover such as turf and native grasses. Rocks and mulch should, however, not constitute ground cover and landscaping. Tall shrubs should be avoided in parking lots since they can block driver views and result in unsafe conditions.
- Only healthy, hardy (preferably native) and proven plant species compatible with local conditions and climate should be used.
- Street trees should be not be located where they will grow to interfere with overhead utility lines at maturity. Conflicting trees that have been substantially pruned and cut back have lost their natural appearance and are typically a continuing maintenance headache.
- Planting areas should be defined by walks, edging or curbs.
- Driveways and site entrances should be landscaped to help motorists identify where to turn. These planting areas should contain trees, low shrubs and ornamental plants that do not conflict with views and site lines.

Lighting

To make the Robbins Road corridor a more attractive place appropriate types and levels of lighting should be incorporated into the design of sites and buildings. Lighting is especially important to businesses with a nighttime trade such as restaurants, but other retail operations such as grocery or convenience stores also keep late hours. Therefore, lighting should be a prime consideration not only to attract shoppers, but to also provide a safe environment for travelers and nearby residential neighborhoods. The key will be to avoid glare and excessive light levels. The illumination levels contained in the Lighting Handbook, Illuminating Engineering Society of North America, should be used as a guide for determining adequate and safe illumination levels.

- A lighting and photometric plan that examines the degree to which exterior night lighting affects an adjacent street, property owner, or neighborhood should be required as part of the development review process.
- Parking lot and site lighting should be designed to avoid light



trespass onto adjacent properties. Typically, parking lots should have an average illumination level of 2 foot candles with a minimum/maximum ratio of 4:1 (the ratio of the brightest to the darkest locations). Light levels at the boundary of a commercial property should also not exceed 0.2 foot candle and could vary based on adjacent land uses.

- A light fixture (called a luminaire) should be a sharp cut-off type, with a flat lens and utilize a maximum lamp size of two hundred fifty (250) watts with either a high pressure sodium or metal halide type of bulb. With this type of luminaire the bulb is recessed and not visible below the fixture head. Fixtures should be oriented downward to minimize up-light, spill-light, glare and unnecessary diffusion onto adjacent properties and the sky.
- Light poles should not conflict with things like trees, sidewalks, utilities, road signs, fire hydrants, or street furniture such as benches, bike racks, and mailboxes.
- Light fixtures mounted below canopies (e.g. gas stations) should utilize recessed or flush mounted light fixtures with shields so that the lens of the fixture is not visible below the sides of the canopy. All the light emitted by an under canopy fixtures should also be substantially confined to the ground surface directly beneath the perimeter of the canopy.
- While building or wall mounted lights may be used to illuminate storage and loading/unloading areas they must be fully shielded to avoid glare.
- Maximum light pole heights, based on proximity to either commercial or residential areas, should be specified in a uniform set of development regulations for the corridor.



Ground-mounted sign



Signs

Of all the features in a commercial corridor signs can have one of the greatest impacts on the perceived quality and appearance of not only individual businesses, but the area as a whole. A set of uniform sign requirements should be developed that effectively achieve a goal of providing essential information to approaching travelers, while supporting a positive corridor image. Consequently, businesses should be restricted to two types of identification signs. The first is a main identification sign for each lot or development, while the second is a smaller, building-mounted sign identifying individual businesses. Additional supporting signs that provide directional or regulatory information such as 'One-way', Handicap Parking', etc. should also be allowed.

Main Identification Signs

Quality graphic design is crucial for main identification signs – they need to be appropriately scaled, simple and legible to motorists, allowing safe and ample reaction time to make decisions.

- A ground-mounted main identification sign should be located as close to a primary site entrance as reasonable without obscuring sight lines - affecting pedestrian safety and the ability to safely enter and exit.

- The maximum height for such a sign should be 6 feet, with a maximum sign area of 24 sq. ft.
- Generally, one main identification sign should be allowed per development. However, if there is more than one entrance, or if adjacent parcels share two driveways, the primary one should receive the main identification sign while the other(s) would get a similarly designed, but smaller sign.
- Information should include the minimum needed to identify the development or business and address.
- Logos and symbols should be created specifically for outdoor use and not merely enlarged from other media. For example, a logo used on business letterhead may be too intricate for an exterior sign.
- Colors should be coordinated with the overall architectural theme of the business or development.
- Main identification signs should be internally illuminated, reducing glare and stray light.
- The background sign panel should be opaque to reduce excessive light levels, but with translucent letters and/or logo so they contrast and are more visible at night.
- Sign components such as wires, conduit, junction boxes, transformers, etc. should be concealed.
- Signs should be well built and finished on all sides.
- Temporary or portable signs should be prohibited.

Building-Mounted Business Identification Signs

- An exterior building-mounted sign should be located within a consistent sign band on a building and be uniformly placed above an entrance.
- The size of a sign should be based on the linear frontage a tenant or business occupies in a building. Normally this is defined as 1 ¼ to 1 ½ sq. ft. of sign area for every one linear foot of ground level frontage, yielding 25 - 30 sq. ft. for a typical tenant lease space (20' x 70') in a commercial strip center. As building (or tenant space) increases so should the size of the sign up to a maximum 75 to 100 sq. ft.
- Signs should be placed parallel to the face of a building and allowed to project no more than 18 inches.
- Rectangular box frame signs should be discouraged; rather signs should consist of separate (but joined) internally illuminated letters/logos that are pinned to a sign band.
- One sign per business should be allowed.
- Awning and canopy signs should be prohibited.
- An complete and integrated sign package should be required for all development reviews.



Building-mounted signs



Architecture

Architecture that appropriately responds to the desired character of the Robbins Road corridor will enhance the area's image and help spur new investment. These architectural guidelines are not intended to discourage creative design or individuality, rather they are intended to foster a consistent image that will help make the corridor unique and distinguishable as a special place. The key is to have individual businesses and buildings relate to one another, building by building and site by site.

This is best accomplished through traditional design principles. This term does not define a particular style or period, but is generally understood to embody architectural characteristics and elements of previous periods or styles. They are basic and transferable to all good architecture. Therefore, buildings must be of compatible form, scale, detail, proportion, material, color and texture. Buildings must be restrained and dignified and thoughtfully designed without any one building becoming visually prominent through flamboyance, irregular form or marked differentiation of materials.

Mass

Buildings should be simply massed with a clearly defined rhythm of architectural forms. Typically, the maximum length of an uninterrupted building façade facing a public street should be no more than 30 feet. Façades should be articulated through design variations to ensure that a building is not monotonous in appearance. Wall offsets (projections and recesses), changes in building materials, windows, entrances and pilasters can be employed to help break up the mass of a long building. Such a building should appear to have a series of multiple small storefronts without individual doorways.

Height

Among the key factors is to establish an appropriate scale for the Robbins Road corridor so there is a predictable range of building heights - up to two stories. The farther a building is set back from the road the taller it must be to create a sense of enclosure. Given the previously described RBL (required

Clearly defined architectural form

Appropriate height; 14' to 30'

Windows, entrances, & projections avoid monotony

Minimum 60% fenestration

Durable materials

**Transitional elements/
sign band**

Cornice

Clearly defined entrances



building line) a one story building should be at least 14-16 ft. tall to avoid it from appearing too short and out of scale. Two story buildings should have an established minimum and maximum height, ranging between 26 and 30 ft. (measured to the bottom of the eave line).

Roofs

Variation in roof lines should be encouraged and both pitched and flat roofs allowed. Sloped roofs should range between a 6:12 and 8:12 pitch, while the top of a building with a flat roof should be enclosed by a parapet to screen rooftop equipment and defined by a cornice.

Transitional Elements

The ground and upper floors of a two story building should be clearly distinguished from one another. A similar principle also applies to one story buildings – distinguishing the storefront from the top of the building. Both can be accomplished by a storefront cornice that also contains a consistent band for signage.

Similarly the base of a building should be clearly defined by elevating storefront windows. Virtually all storefronts typically contain a base panel below the display windows, which can be constructed of various materials. The base panel provides a strong anchor for the storefront, placing the display area at an effective viewing height and also acts as a kickplate. The storefront base should be between 24 and 30 inches high.

Building or Storefront Entrances

Main entrances should be highlighted and clearly visible from parking lots and they should orient toward streets. The entry door is the gateway into a business and should make an important impression on a customer. Typically, entryways were recessed from the front of the façade by an alcove. This provided additional shelter from the elements and an area for the doorway to swing out without interfering with sidewalk traffic. Other techniques include:

- Using towers and articulated corner elements to distinguish building entries.
- Defining a building entrance with an awning or canopy.
- Providing a transom window above the doorway to accentuate the building entrance.

Fenestration

Buildings should contain ample and transparent windows that orient toward streets and parking areas. Approximately 60% of a storefront should contain windows and glass doors; requirements for upper floors and side walls could be reduced to approximately 40%.

Materials

Durable building materials that provide an attractive, quality appearance should be employed. Brick, decorative masonry block, or a combination of the two should be used; while EIFS (synthetic stucco), wood, cement board siding, and metal for only accent details. Because of issues related to durability and damage, EIFS should only be used well above the ground plane.



Innovative stormwater management techniques. From top; rain garden (bioretention), bioswale, and pervious paving.

Green Infrastructure Guidelines

As previously mentioned, incorporating green infrastructure with corridor and access improvements provides numerous benefits to property owners, local government and the general public:

- Reduces municipal infrastructure and utility maintenance costs (e.g., streets, curbs, gutters, storm sewers).
- Reduces stormwater runoff volume and improves stormwater quality.
- Increases energy and cost savings for heating, cooling, irrigation.
- Protects community character/aesthetics.
- Reduces salt usage and snow removal on paved surfaces.
- Protects/restores the water quality of rivers and lakes.
- Improves air quality.
- Improves urban wildlife and habitat opportunities.

Streets and parking lots are among the largest contributors to stormwater runoff and have a tremendous impact on the quality of water entering our lakes and streams. Systems to collect, concentrate and then distribute runoff water are expensive to build and maintain and techniques to lessen the amount of runoff and its rate of flow can help reduce those costs. Stormwater runoff along Robbins Road has historically been directed to privately-owned on-site systems and municipally-owned storm sewer systems and drains. While attention has focused on dealing with volume and flow little has addressed the quality of water runoff. Improved water quality through non-traditional methods can benefit the environment, lead to more appealing environments and can help reduce the need for costly system improvements. Design options to consider include the use of rain gardens, native plant species, street trees (i.e. planters or grass parkways), bioswales and porous pavement. In many cases, these beneficial design alternatives offer a significant long-term cost savings, even when factoring in some additional maintenance costs.

The guidelines below should be considered as part of any site plan review. Similar to the recommended practice of reviewing site access, each community's site plan review process should also provide a mechanism to review a stormwater management plan when significant site modifications are proposed.

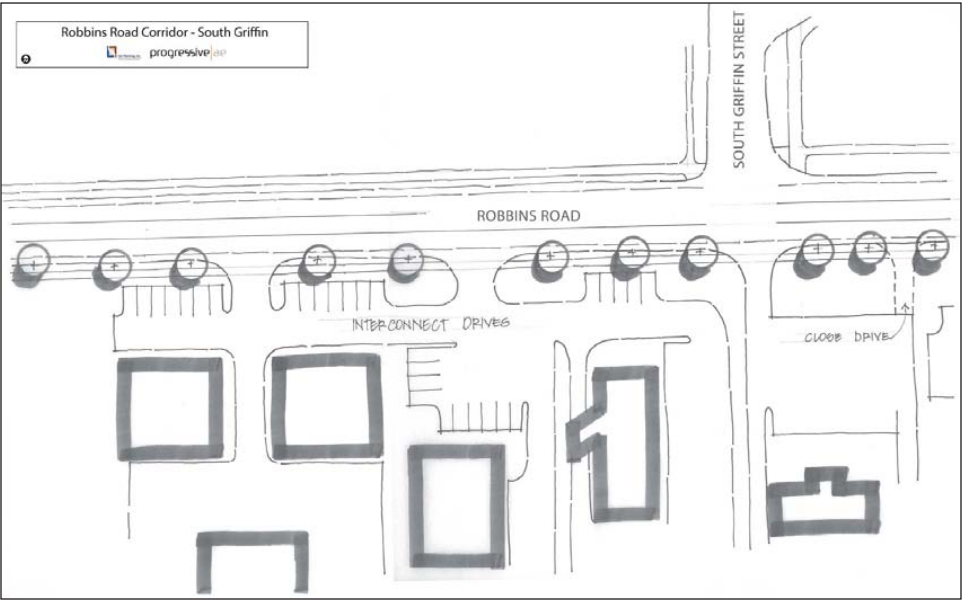
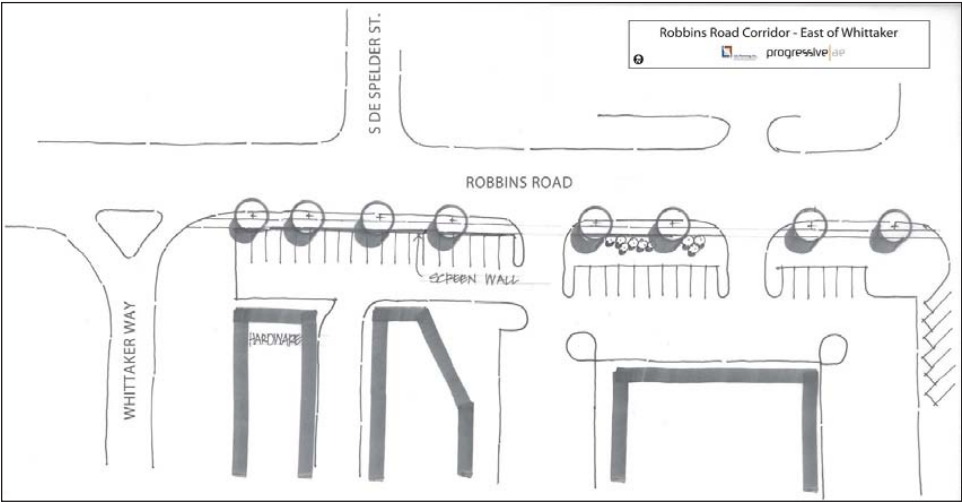
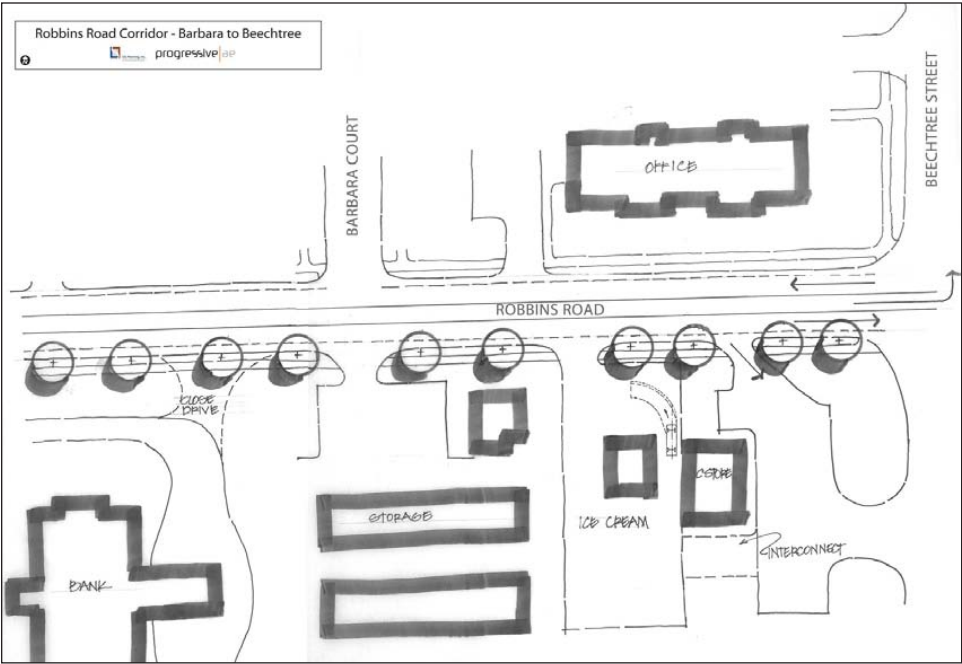
While a discussion of green infrastructure is included in the general context of this plan, its actual design and implementation can be very site specific. While low impact design is encouraged wherever it can be applied, it is specifically warranted where vegetation may be installed in lieu of impervious surfaces (i.e. pavement). In all situations, a clear understanding of the regulatory agencies that may require review, approval and permitting for green infrastructure techniques is necessary. For more detailed design criteria, please review Southeast Michigan Council of Government's (SEMCOG) Low Impact Development Manual (A Design Guide for Implementation and Reviewers).

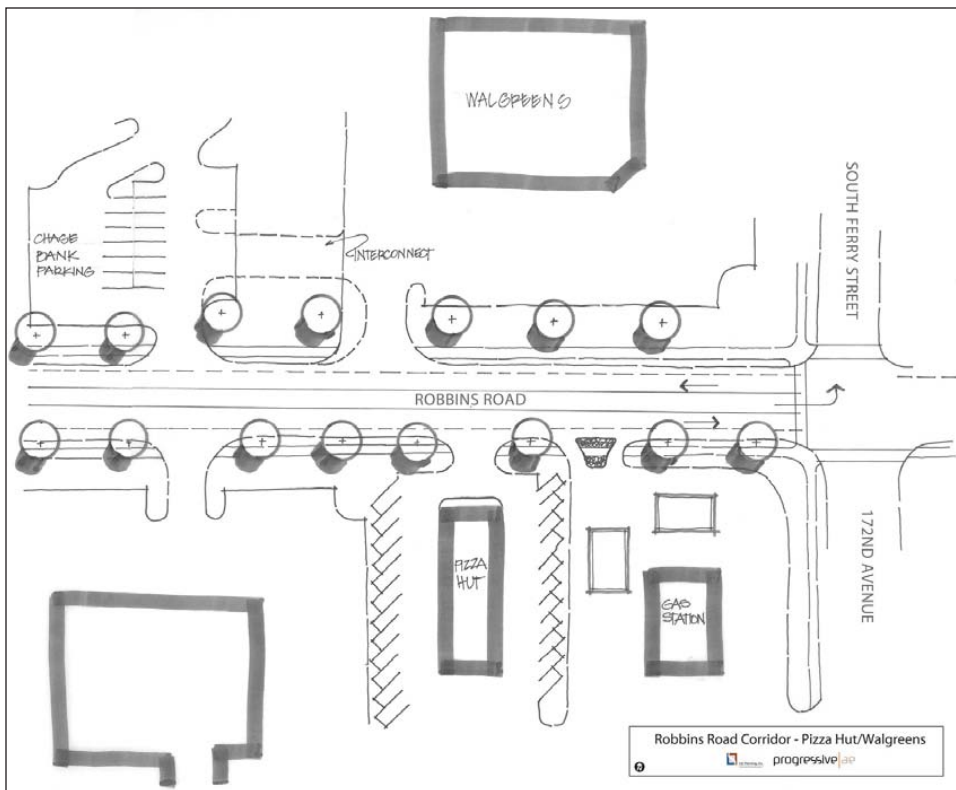
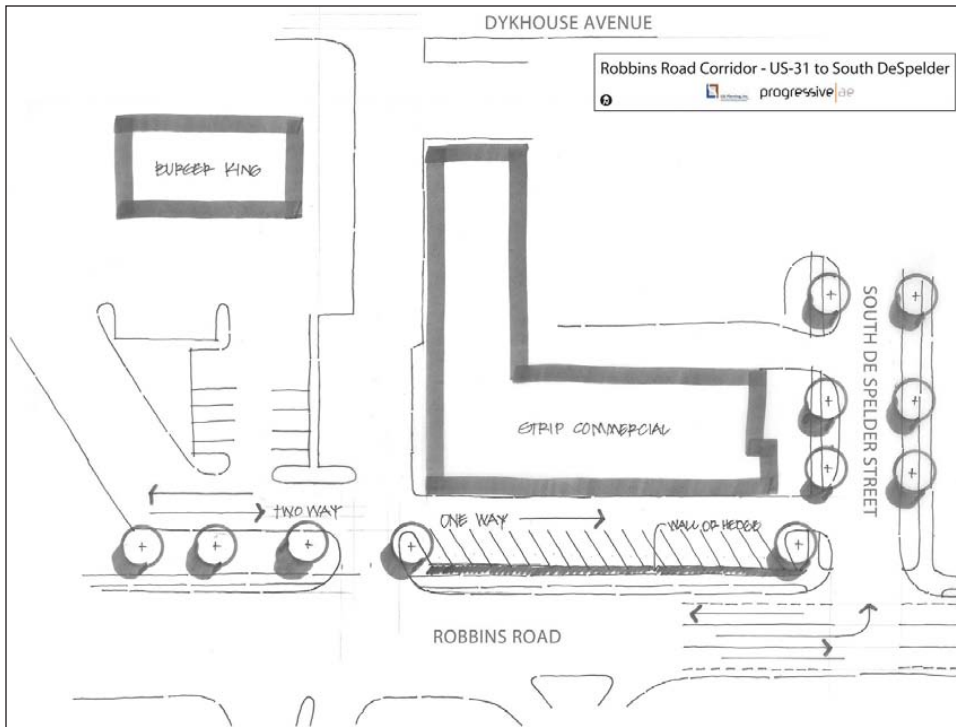
- Bioretention (Rain Gardens) & Bioswales should be considered in areas between a new or existing sidewalk or where driveways are removed and replaced with green space. It is important to clearly define the

drainage area and the stormwater volume that will be managed. For larger drainage areas, a series of rain gardens should be considered and in all situations, an overflow provided in anticipation of larger storms. Plant species should be salt tolerant, provide aesthetic benefits and low maintenance. Grading should be designed to direct runoff into these areas and maintenance agreements should be included as part of any approval.

- Native Trees are recommended where earth is disturbed due to the removal or relocation of a driveway or median crossover. Maximizing exposed soil around the tree will facilitate water infiltration; however, tree grates and planter options can be applied in more urban or high pedestrian traffic areas. Street tree species should be varied to minimize the potential of invasive threats.
- Porous pavement may be considered instead of typical applications (i.e. asphalt or concrete) in parking areas or for the curb/gutter pan. To function properly, porous pavement requires adequate subsurface soil conditions, an overflow connection to a storm sewer or other final discharge location and routine maintenance. Porous pavement should not be installed in areas where there is a potential to affect existing subsurface soil contamination.

Preliminary Design Concepts





When City and Township zoning ordinances are compared (see below) it is evident regulations, review standards and even results are inconsistent. Specifically, access management and design standards, which are the focus of this corridor improvement plan either differ, or are not even addressed in current regulations. Consequently, the zoning ordinances of both communities must be rewritten in a manner consistent with the recommendations of this document and both sets of regulations must be uniformly applied to help guarantee the kind of development envisioned by both communities.

Local zoning ordinances should acknowledge special standards and review procedures for Robbins Road, which could be accomplished as overlay zone. Under such an approach, a Robbins Road Overlay Zoning District would be placed over existing zoning regulations for all parcels with frontage along Robbins Road and along intersecting streets a specified distance. The overlay could be applied either selectively, to certain areas of the corridor, or uniformly along its entire length. For example, if a property is currently zoned for office, the uses permitted in that zoning district, the dimensional standards (setbacks, height, etc.) and other regulations would still apply, but the access spacing and circulation design standards of the Overlay District would also apply.

These kinds of decisions will have to be worked out as part of the code writing process, since the corridor varies by the age of development, the types of uses and development character. Some standards, such as those related to access management, landscape, screening, and lighting may be desired along the entire corridor, while architectural standards, or certain site design requirements may be targeted to a particular area, for example to the west of Ferry Street/172nd Avenue.

Not every site will be able to meet all of the access management standards, particularly existing ones that are constrained by parcel size and depth. In order to address these situations an ordinance should provide the authority to modify standards on a case-by-case basis. The planning commissions of both communities should be empowered to modify access management standards during site plan review, provided the intent is being met to the maximum extent practical and input is obtained from appropriate agencies and the other community. The ordinances should also require larger developments to have traffic impact studies, completed by qualified professionals, for sites that have the potential to generate significant volumes of traffic. These studies would evaluate the impact that a proposed development would have on the road system and identify potential mitigation techniques to offset any impacts. The intent of such a process is to ensure that the two local units of government (and if necessary, any road agencies) review site plans in a coordinated manner to implement the recommendations of this plan. The process should provide feedback loops between the local planning commissions as modifications are made to access and circulation. To continue the implementation of the Robbins Road Corridor Improvement Plan a Joint Corridor Advisory Committee should be established and meet on a regular basis to develop a consistent set of development regulations. Potentially, this forum could continue to discuss and coordinate major development proposals, traffic impact studies, access issues, right-of-way preservation and roadway cross-section designs, rezoning proposals, ordinance text amendments, local master plan updates, roadway improvements, non-motorized transportation, streetscape enhancement and other common issues along the corridor.

City of Grand Haven Zoning Ordinance Review

Zoning District	Properties w/ Frontage on Robbins Road	Requirements						
		Setbacks (ft)		Lot Width (ft.)	Driveway Width	Driveway Separation	Front Setback Landscaping	Clear Vision
		Building	Parking					
SFR - Single Family Residential	11	30 ⁽²⁾	No reqt. for 1 & 2 family ⁽⁴⁾	66	18 ft. max. at ROW	Not specified	⁽¹⁰⁾	25 feet at street intersections, drawn along ROW lines; drives not specified
MFR - Multiple Family Residential	1	1-2 Units: 20 >3 Units: 25 ⁽²⁾	Not permitted in required yard	1-2 Units: 45 >3 Units: 100	Not listed	30 ft. from intersection ⁽⁷⁾	⁽¹⁰⁾	
OS - Office-Service	1	15 ⁽²⁾	Not permitted in required yard ⁽⁴⁾	45	Not listed	30 ft. from intersection	⁽¹⁰⁾ ⁽¹¹⁾	
C - Commercial	11	25 ⁽²⁾ ⁽³⁾	Not permitted in required yard ⁽⁵⁾	N/A	18 ft. min. 35 ft. max. ⁽⁶⁾	⁽⁸⁾ ⁽⁹⁾	⁽¹⁰⁾ ⁽¹¹⁾	

Notes to City of Grand Haven Requirements:

- Whenever requirements in the City of Grand Haven ordinance appear to be in conflict or inconsistent, it is assumed that the most restrictive applies.
- On corner lots, both yards adjacent to the street must meet the front yard setback
- For lots with frontage also on Beacon Blvd, an 80-ft. front yard building setback is required along Beacon.
- Parking areas for non-residential uses shall be located to the rear of the building to continue or establish a continuous facade wall along the street and/or to conceal the expanse of parking area. Where the Planning Commission determines such a configuration is not feasible, it may allow a parking area or portion thereof to be located to the side or front of the building; provided it is fully screened from public view with landscaping materials or a masonry wall in accordance with Section 40-803.02, Required Parking Area Screening.
- Along Beacon Blvd, parking may encroach into the required yard provided it is setback 30 feet from the Beacon Blvd right-of-way line.
- Exit-only or entrance-only driveways shall be a minimum of 10 feet wide, and no more than 18 feet in width, at the ROW.
- New access points to off-street parking lots shall be located a minimum of twenty-four (24) feet from a street intersection and if not located on a property line as a shared driveway, shall be located a minimum of five (5) feet from a property line. The area between the driveway and the property line shall be landscaped to provide a buffer between motor vehicles and the adjacent property, in accordance with Section 40-803.02 Required Parking Area Screening.
- Drives shall be at least 24 feet from an intersection, except that parcels greater than 100 feet wide shall have drive cuts at least 60 feet from an intersection, measured from the edges of the right-of-way.
- Spacing between commercial driveways is based on posted speed limits. On Robbins Road, the posted speed limit between Beacon Blvd. and Beachtree Street is 25 mph. Section 40-606, F requires drives on opposite sides of a street to be aligned, or have a centerline separation of 105 feet (based on 25 mph speed limit). For sites with insufficient frontage, the Planning Commission may require a driveway to be located on a side street, a shared drive, or other approach to achieve appropriate and safe site access. Also, upon recommendation of the Zoning Administrator, the Planning Commission may vary the requirements where local conditions make full compliance impossible, provided that the separation of new drives from intersections and other drives is the greatest possible
- Parking lots for non-residential and multiple family uses must be screened from all property lines by a 5-foot wide screening area, with 1 deciduous tree, 2 landscape trees and 3 evergreen trees per each 50 linear feet of screening area.
- In the C and OS districts where an off-street parking area is located within the front yard, a brick or stone screening wall not less than 3 feet nor more than 4 feet, 6 inches in height, may be provided in lieu of the landscaped screening area. In the alternative, a 3 foot tall berm may be employed to supplement front yard parking screening, but the use of a berm shall not relieve the applicant from the required landscape planting requirements and ground cover.

City of Grand Haven Zoning Ordinance Review (continued)

Applicable Site Plan Review Standards

1. That there is a proper relationship between the existing streets and highways within the vicinity, and proposed deceleration lanes, service drives, entrance and exit driveways, and parking areas to assure the safety and convenience of pedestrian and vehicular traffic, and that the proposed streets and access plan conform to any street or access plan adopted by the City or the Michigan Department of Transportation.
2. That the buildings, structures, and entrances thereto proposed to be located upon the premises are so situated and so designed as to minimize adverse effects upon owners and occupants of adjacent properties and the neighborhood.
3. That all buildings and structures are accessible to emergency vehicles.
4. That the plan as approved is consistent with the intent and purpose of zoning ... to lessen congestion on the public roads and streets; to reduce hazards to life and property; to facilitate adequate provisions for a system of transportation...and to conserve the expenditure of funds for public improvements and services to conform with the most advantageous uses of land, resources and properties; to preserve property values and natural resources; and to give reasonable consideration to character of a particular area, its peculiar suitability for particular uses and the general appropriate trend and character of land, building, and population development.

Grand Haven Charter Township Zoning Ordinance Review

Zoning District	Properties w/ Frontage on Robbins Road	Requirements						
		Setbacks (ft)		Lot Width (ft.)	Driveway Width	Driveway Separation	Front Setback Landscaping	Clear Vision
		Building	Parking					
C-1 Commercial	11	50 ⁽¹⁾	50	100	Not listed in Zoning Ordinance	(2)	Landscaped area 10 feet deep; 1 tree per 30 linear ft. plus min. 36" high continuous screen (berm or plants)	(3)
SP - Service/ Professional	5	50 ⁽¹⁾	50	110				

Notes to Grand Haven Charter Township Requirements:

1. On side streets, the front yard building setback shall be 25 feet
2. Each entrance and exit to and from any off-street parking lot shall be at least twenty (20) feet distant from adjacent property located in any single family residential district, and at least twenty-four (24) feet from any street corner.
3. Clear vision is established by measuring 20 feet from edge of pavement down the side street or driveway, and then measuring along the right-of-way along Robbins Road a distance of 12 times the speed limit or determined operational speed, according to Ottawa County Road Commission standards. Based on the Robins Road posted speed limit of 25 mph, the clear vision area extends for 300 feet along Robbins Road. See Grand Haven Township Clear Vision Ordinance, Ord. No. 449.

Applicable Site Plan Review Standards

1. Safe, convenient, uncontested, and well-defined vehicular and pedestrian circulation shall be provided for ingress/egress points and within the site. Drives, streets and other circulation routes shall be designed to promote safe and efficient traffic operations within the site and at ingress/egress points.
2. The arrangement of public or private vehicular and pedestrian connections to existing or planned street in the area shall be planned to provide a safe and efficient circulation system for traffic within the Township.
3. All buildings and groups of buildings shall be arranged so as to permit necessary emergency vehicle access as requested by the Fire/Rescue Department.
4. All streets and driveways shall be developed in accordance with the Township Subdivision Control Ordinance, the Ottawa County Road Commission, or Michigan Department of Transportation specifications, as appropriate, unless developed as a private road in accordance with the requirements for private roads in this Ordinance or any other Township Ordinance. Except that the Planning Commission may impose more stringent requirements than those for the Road Commission or Department of Transportation with respect to driveway location and spacing. In addition, sidewalks may be required if determined to be necessary or appropriate for pedestrians and non-motorized vehicles.
5. Entrances and exits shall be provided at appropriate locations so as to maximize the convenience and safety for persons entering or leaving the site. The number of entrances to and exits from the site shall be determined with reference to the number of dwelling units or other land uses within the site, the nature and location of the surrounding streets, the effect of traffic in the area, nearby topography, and other factors. In those instances where the Planning Commission finds that an excessive number of ingress or egress points may occur on abutting street, thereby diminishing the carrying capacity of such street, and compromising public safety, the Planning Commission may limit such access points and require service access drives within the site.