

Thoroughfare Plan

An important element of the Master Planning process is the development of a plan for the over-all system of streets and roads in a community. This system provides for the movement of people and goods to and from places both inside and outside the community. Also, the right-of-ways of roads provide places for various public utilities such as: water lines, gas lines, sanitary and storm sewers, cable television lines, electrical power and telephone lines, in addition to the actual roadway surface. Because of these functions of roads, the system of roads in a community can impact on economic conditions, environmental quality, energy consumption, land development and the overall quality of life in a community.

With the implementation of the Thoroughfare Plan, strength will be lent to the development of the Township in the pattern envisioned by the Future Land Use Plan. Because of the close relationship between transportation and land use, improvements to the system of thoroughfares will increase the development possibilities for the Township.

Principles

To be effective, a Thoroughfare Plan must adhere to certain principles. The principles associated with developing an effective thoroughfare plan are as follows:

- The Thoroughfare Plan must provide for a road system in the Township that will be safe, convenient and efficient in the movement of people and goods.
- The Thoroughfare Plan must effectively integrate local roads with regional thoroughfares, but segregate through traffic from local residential streets.
- The Thoroughfare Plan must ensure adequate, but not unlimited, ingress and egress for all land uses.

- The Thoroughfare Plan must ensure right-of-way dedications, reservations consistent with local, county, and state proposals.
- There must be coordination of the Thoroughfare Plan with the existing and proposed patterns of land use.
- The Thoroughfare Plan must be developed to accommodate all types of traffic expected in the Future Land Use Plan.
- The Thoroughfare Plan must facilitate governmental and private development of streets and thoroughfares through an orderly and progressive Capital Improvement Program for the Township.
- Modern design standards must be used in planning rights-of-way, pavement width and other characteristics of streets.

Functional Classification of Streets & Roads

The first step in creating a thoroughfare plan is to inventory the Township road network by classifying each road by planned function/right-of-way categories. The four categories used in this plan will be:

1. Major Thoroughfares
2. Secondary Thoroughfares
3. Collector Thoroughfares
4. Local Thoroughfares

These functional classifications are defined as follows:

MAJOR THOROUGHFARES:

These roads have a planned right-of-way of at least 150' and are intended to carry high volumes of through traffic both within the Township and to or from the surrounding region. Major thoroughfares also can provide access to larger abutting properties and large commercial or business areas, such as shopping centers, factories and industrial parks.

SECONDARY THOROUGHFARES:

These roads have a planned right-of-way of 120' and serve many of the same functions as major thoroughfares (carrying through traffic and providing access to large scale abutting uses), but at somewhat lower traffic volumes and speeds. Furthermore, secondary thoroughfares primarily only carry through traffic within the Township, not to or from the surrounding region.

COLLECTOR THOROUGHFARES:

These roads have a planned right-of-way of 86' and have three purposes. First, they collect traffic from local streets and distribute that traffic to local destinations or major and secondary thoroughfares. Second, they funnel through traffic from major and/or secondary thoroughfares to local destinations. Third, collector streets can provide internal circulation and access to major shopping centers and industrial parks.

LOCAL THOROUGHFARES:

These roads have a planned right-of-way of 66' and are intended to provide access to adjacent land uses, such as residential neighborhoods. Generally, these roads carry relatively small volumes of traffic.

County Road Classifications

The St. Clair County Road Commission also uses, for maintenance purposes, a classification system based on the source(s) of funding for repairs and upgrades. This classification system has two categories:

COUNTY PRIMARY:

These are roads for which the County is responsible for providing funds for maintenance and upgrades.

COUNTY LOCAL:

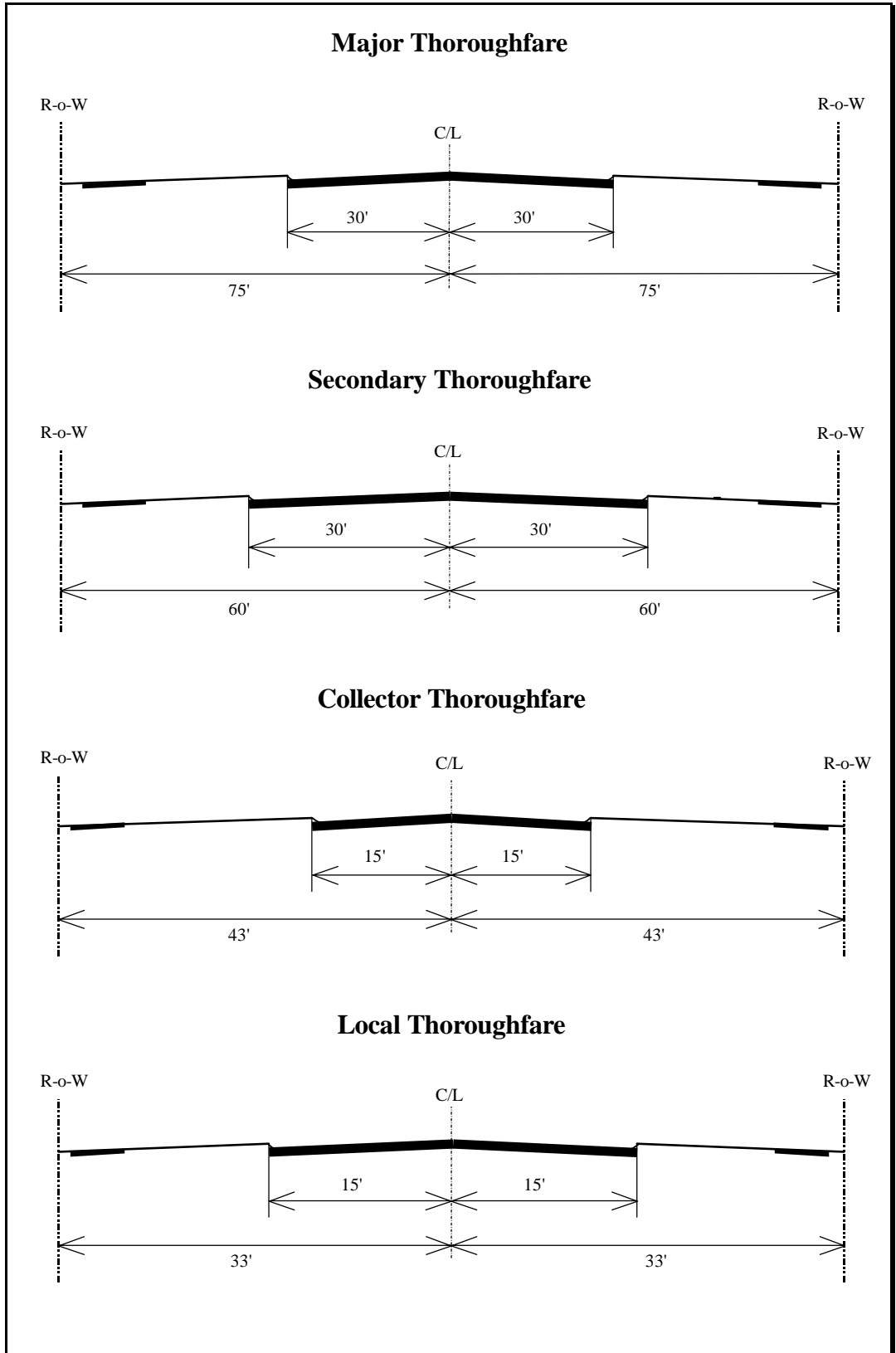
These are roads for which the County and the local community have historically shared in the maintenance and upgrade costs.

Cross-Section Standards

To aid local communities in implementing thoroughfare plans, the St. Clair County Road Commission has established cross-section standards (showing the arrangement of the road surface, shoulders, median strips and utilities/drainage located within the various widths of road right-of-way) for the four road classifications given above (as well as for expressways).⁸ According to these standards, local and collector thoroughfares (66' & 86' planned right-of-way) are limited to two lanes of traffic and major and secondary thoroughfares (150' & 120' planned right-of-way, respectively) can accommodate up to four lanes of traffic (two lanes in each direction) plus a left-turn lane. Major thoroughfares can also be divided with a 60' wide median.

⁸*St. Clair County Thoroughfare Planning Guide*, p. 33

Figure 16: Typical Cross-Sections



Existing Road Network

An effective thoroughfare plan can only be prepared after a study of the existing road network is complete.

COUNTY & STATE ROADS

The layout of Fort Gratiot Township was influenced by the Land Ordinance of 1785, which established a land survey system that divided the land into six-mile square **townships** (containing 36 square miles). Each square mile in a township is called a **section**.

The establishment of townships and sections has created a logical system for the provision of County and other roadways along the mile-grid section lines. East-west mile roads in the Township include:

- **Metcalf Road** – a County Primary road which is paved between Lakeshore Road and State Road and gravel west of State Road to the Township border;
- **Brace Road** – a gravel County Local road that runs from Lakeshore Road to State Road;
- **Carrigan Road** – a gravel County Local (paved east of M-25) road that traverses the width of the Township; (NOTE: the westernmost $\frac{3}{4}$ -mile departs from the section line alignment)
- **Keewahdin Road** – a paved County Primary Road that traverses the width of the Township and forms part of State Highway M-136 west of Pine Grove Avenue;
- **Krafft Road** – a paved County Primary Road that traverses the width of the Township;

One other east-west road lies parallel to, but not on a section line. Cole Road, a gravel County Local road, runs west from State Road to the Township border $\frac{1}{4}$ -mile north of the southern section line of Section 6.

North-south mile roads in the Township include:

- **Campbell Road** – a County Local Road which is paved between North River Road and Krafft Road and gravel between Krafft Road and Keewahdin Road;
- **State Road** – a County Local Road which is paved between North River Road and Metcalf Road;
- **Parker Road** – a County Local Road which is paved between North River Road and Keewahdin Road and gravel from Keewahdin Road to Brace Road;

- **24th Avenue** – a County Primary Road which is paved for its entire length from North River Road to Lakeshore north of Carrigan Road and forms part of State Highway M-25 north of Pine Grove Avenue.

Three paved County Primary roads in the Township are not located on the mile-grid section lines. Lakeshore Road (south of Keewahdin Road also known as Gratiot Avenue) runs northwest along the Lake Huron shoreline from Krafft Road to Metcalf Road and forms part of State Highway M-25 north of 24th Avenue. North River Road runs along the Black River from Pine Grove Avenue westerly to Campbell Road. Pine Grove Avenue runs northwest from the Port Huron city limits to Keewahdin Road and forms part of State Highway M-136 between 24th Avenue and Keewahdin Road.

All county and state roads in the Township are two- and three-lane (with center left turn lanes) roads except for the following: 24th Avenue, five lanes up to just south of Carrigan Road; North River Road, four lanes east of State Road; Pine Grove Avenue, five lanes south of 24th Avenue. Right-of-way widths for county and state roads range from 66 ft. to 150 ft.

COLLECTOR & LOCAL ROADS

The remaining roads in the Township are collector and local roads. Most of these are paved public roads with right-of-way widths of 66 to 86 feet for collector roads and 50 to 66 feet for local roads. There are a few gravel public local roads, mostly in the northeastern part of the Township. Also, there are several private local roads in the Township, generally found near the Lakeshore Road corridor. Most of these private roads are gravel, with right-of-way widths of 20 to 66 feet.

National Functional Classification

The Federal Highway Administration (FHWA) also developed a system of classifying all streets, roads and highways according to their function, known as the National Functional Classification (NFC). All public streets, roads and highways in Michigan have a NFC designation.

NFC CLASSIFICATIONS DEFINED

The NFC system uses the following classifications:

Principal Arterials

Principal Arterials generally carry long distance, through-travel movements. They also provide access to important traffic generators, such as major airports or regional shopping centers. Examples of principal arterials include: Interstate and other freeways; other state routes between large cities; important surface streets in large cities.

Minor Arterials

Minor Arterials are similar in function to principal arterials, except they carry

trips of shorter distance and to lesser traffic generators. Examples of minor arterials include: State routes between smaller cities; surface streets of medium importance in large cities; important surface streets in smaller cities.

Major and Minor Collectors

Major and Minor Collectors tend to provide more access to property than do arterials. Collectors also funnel traffic from residential or rural areas to arterials. Examples of major and minor collectors include: County, farm-to-market roads; various connecting streets in large and small cities.

Local

Local roads primarily provide access to property. Examples of local roads include: Residential streets; lightly-traveled county roads.

FEDERAL-AID ROADS

The NFC designation of a given road determines whether it is a federal-aid road. Federal-aid roads are eligible for federal funds, either as part of the National Highway System (NHS—usually limited to principal arterials) or through the Surface Transportation Program (STP). Federal-aid roads are, collectively: all principal arterials, all minor arterials, all urban collectors and all rural major collectors. If a road has an NFC designation of rural minor collector, it is not included in the definition of federal-aid road, but it does have some limited eligibility for federal funds. Roads classified as urban or rural local, are not eligible for federal-aid.

TOWNSHIP ROAD NFC DESIGNATIONS

In Fort Gratiot Township, State Trunkline M-25 is designated as an Urban Other Principal Arterial; North River Road, Krafft Road, Keewahdin Road, Lakeshore Road (between Keewahdin Road and M-25), and Pine Grove Avenue (between M-25 and Keewahdin Road) are all Urban Minor Arterials. State Road and Metcalf Road (east of State Road) are Urban Major Collectors. Metcalf Road west of State Road is a Rural Minor Collector.

Problem Intersections

Several intersections in the Township could be identified as **problem intersections**. Problem intersections are defined in three ways:

1. Two or more intersections falling closely together:

When this happens, the number of turning movements required of motorists will rise, thus increasing congestion and traffic hazard. There are many instances in the Township of intersections in this category, particularly where residential areas access M-25, North River Road, and Lakeshore Road.

2. Intersecting roads that meet at angles other than 90 degrees:

These kinds of intersections limit horizontal sight visibility between roads (making it difficult to see traffic approaching on the intersecting road) and can create odd shaped lots that can be difficult to develop. Again, there are many instances in the Township of intersections in this category, especially where the east-west mile roads (and local roads parallel to these) and 24th Avenue intersect with Lakeshore road, which runs from southeast to northwest parallel to the Lake Huron shoreline.

Pine Grove Avenue, which also runs southeast to northwest, creates problem intersections with both the east-west and the north-south mile roads. In addition, similar problems are found along North River Road.

3. More than two roads intersecting in one spot:

These kinds of intersections create additional turning movements and increased driver confusion, thus increasing congestion and traffic hazard. At this time, there are no intersections of this kind in the Township.

Generally, problem intersections can be corrected by realigning one or more of the roads in the intersection(s). If that is not possible due to space or geographic limitations, the addition of special signalization (and possibly channelization) can help to mitigate hazards associated with such problem intersections. Furthermore, future subdivisions, residential areas, and other local uses with access roads, must be carefully planned so as not to create new problem intersections.

Thoroughfare Plan Map

In formulating the Thoroughfare Plan, it must be understood that St. Clair County and the State of Michigan own, maintain and have jurisdiction over the public roads in the Township. Thus, the Township Thoroughfare Plan must take into account any plans made by the St. Clair County Road Commission and the Michigan Department of Transportation.

COUNTY THOROUGHFARE PLAN MAP

The most recent thoroughfare plan map was prepared for Fort Gratiot Township in the early 1970's by the St. Clair County Road Commission in accordance with the Inter-County Highway Plan developed by the Inter-County Highway Commission of Southeastern Michigan (IHC)⁹. The purpose of the IHC (of which St. Clair County was a member) was to coordinate and acquire rights-of-way of inter-county highways on the IHC Plan. No adoption date is shown on the map prepared by the Road Commission, however, this map duplicates the thoroughfare plan map found in the 1967 *St. Clair County Thoroughfare Planning Guide*. The County thoroughfare plan map divided the County Thoroughfares of the

⁹Established in May, 1956 under the Inter-County Highway Commission Act of 1925, as amended by Act 195 of 1955.

Township into three of the four function/right-of-way categories described above. The County's planned designations are as follows:

Major Thoroughfares (150' R-o-W):

- Metcalf Road (west of M-25)
- Keewahdin Road, west of Pine Grove Avenue
- Pine Grove Avenue, between Keewahdin Road and the Port Huron city limits
- 24th Avenue, between Pine Grove Avenue and Lakeshore Road
- Lakeshore Road, between 24th Avenue and Metcalf Road

Secondary Thoroughfares (120' R-o-W):

- Brace Road
- Cole Road
- Carrigan Road
- Keewahdin Road, east of Pine Grove Avenue
- Krafft Road
- State Road
- Parker Road
- Lakeshore Road, between Krafft Road and 24th Avenue

Collector Thoroughfares (86' R-o-W):

- Campbell Road
- North River Road

FORT GRATIOT TOWNSHIP THOROUGHFARE PLAN MAP

The Fort Gratiot Township Thoroughfare Plan divides the existing roads in the Township into all four of the function/right-of-way categories described previously. Generally, the Township Thoroughfare Plan map is based on the County Thoroughfare Plan, with changes noted in the list below in italics. In addition, several proposed local and collector routes are shown on the map.

Major Thoroughfares (150' R-o-W):

- Metcalf Road (west of M-25)
- *Keewahdin Road, west of 24th Avenue* (upgraded east of Pine Grove Ave.)
- Pine Grove Avenue, between Keewahdin Road and the Port Huron city limits
- 24th Avenue, between Pine Grove Avenue and Lakeshore Road
- Lakeshore Road, between 24th Avenue and Metcalf Road

It is further suggested that the section of Keewahdin Road between Pine Grove Avenue and 24th Avenue be upgraded to State Trunkline status. This will allow more direct access from the west to the commercial center of the Township. The

M-136 designation would then be removed from Pine Grove Avenue south of Keewahdin Road.

Secondary Thoroughfares (120' R-o-W):

- Brace Road
- Cole Road
- Carrigan Road
- Keewahdin Road, east of 24th Avenue
- Krafft Road
- *North River Road* (upgraded from collector status)
- State Road
- Parker Road
- Lakeshore Road, between Krafft Road and 24th Avenue

Collector Thoroughfares (86' R-o-W):

- Campbell Road
- *Fairway Drive* (previously unclassified)
- *Simpson Road* (previously unclassified)
- *Bonisteel Road* (previously unclassified)
- *Pollina Avenue* (previously unclassified)
- *Trickle Creek Drive* (previously unclassified)

In sections 4, 9, 16, 17, 19, and 20, proposed collector routes are laid out along or parallel to the quarter-section and section lines. The purpose of these collector routes is to open up the interior portions of those sections for development. Two of these collector routes are extensions of existing roads: Pollina Avenue north to Krafft Road in Section 29, and an extension of Parker north from Brace Road to Metcalf Road.

Local Thoroughfares (66' R-o-W):

All remaining streets, not previously listed otherwise, are local thoroughfares. Many of these local thoroughfares are curb and guttered and paved. Those that are unimproved should be improved with some or all of the cost being assessed against the adjacent property owners. Furthermore, there are a large number of streets, both public and private, that fail to meet the minimum right-of-way and construction standards established by the Road Commission for local roads. Where possible, these roads should be improved to meet those minimum standards.

The Thoroughfare Plan also shows numerous proposed local streets that are intended to allow proper access to residential and other local uses. The exact location and layout many of these streets will vary with development. Those shown on the Plan are just one of many acceptable possibilities.

Service Drives (50' R-o-W):

In sections 21 and 22, service drives run roughly parallel to 24th Avenue. The purpose of these roads is to provide alternate access to the commercial and office uses adjacent to 24th Avenue. With these access roads, drivers may gain access to, and travel among the various commercial and office uses without having to use 24th Avenue, thereby relieving pressure on that road. These service drives have a planned minimum right-of-way of 50 feet, unless otherwise allowed for by the Planning Commission.

Proposed Improvements

In addition to the above recommendations, the following road improvements are suggested for County roads within the Township:

COUNTY PRIMARY SYSTEM

- Pave Metcalf Road from State Road to the western Township Limits.
- Widen Krafft Road west of M-25 from two lanes to three lanes (where not already widened).

COUNTY LOCAL SYSTEM

Pave the following County Local roads:

- Parker Road between Keewahdin and Brace Road;
- Carrigan Road from M-25 to a point one-quarter mile west of Parker Road;
- Brace Road from M-25 to a point one-eighth mile west of Parker Road;
- Campbell Road between Krafft Road and Keewahdin Road.

2030 Regional Transportation Plan

Under the current Federal surface transportation Act, SEMCOG is required to develop regional transportation plans in order for the region to qualify for federal transportation funding. The 2030 Regional Transportation Plan is the current plan in effect for the SEMCOG region, which includes St. Clair County. Part of the 2030 Regional Transportation Plan includes a list of transportation improvement projects to be completed between FY 2005 and FY 2030. The following projects from that list apply to roads in Fort Gratiot Township:

- Keewahdin Road: resurface from Pine Grove Avenue to Campbell Road
- Metcalf Road: resurface from State Road to M-25
- State Road: resurface from Krafft Road to Keewahdin Road
- State Road: reconstruct from Keewahdin Road to Metcalf Road
- Gratiot Avenue: reconstruct from Krafft Road to Keewahdin Road

Black River Crossing Study

In 1994, the Black River Crossing Study Team, with the assistance of the St. Clair County Metropolitan Planning Commission, prepared the Black River Crossing Feasibility Study for the St. Clair County Transportation Study Policy Committee. The purpose of the Feasibility Study was to determine the optimal location for a new bridge crossing over the Black River. Eight alternative locations for a new crossing were examined by the Study Team. These alternatives were:

1. No bridge built, system remains unchanged;
2. Beach Road to State Road;
3. Range Road to State Road;
4. Range Road to Campbell Road;
5. Strawberry Lane to North River Road;
6. Construction of an additional bridge at Wadhams Road;
7. Tenth Avenue from Holland Road to Krafft Road;
8. Allen Road from Atkins Road to West Water/North River Road.

These alternatives were evaluated according to how well each met various traffic, land use, environmental and cost criteria. An analysis of these evaluations led the Study Team to conclude that Alternative #3, a bridge from Range Road to State Road, would be the best alternative.

Since this study was completed, no action has been taken by either the St. Clair County Metropolitan Planning Commission or the St. Clair County Road Commission to implement the findings of this study. In spite of this, the findings of the study are included in this Thoroughfare Plan, and as such, the Thoroughfare Plan Map shows, in schematic form, a crossing over the Black River at State Road. This crossing is classified as a Secondary Thoroughfare.

Future Land Use Plan

The goal of land use planning is the improvement of the general welfare of the people of Fort Gratiot Township through the proper development of vacant land and where necessary, the redevelopment of existing areas for new uses that create a better community in which to live, work and recreate. In general, this land use plan is a guide for locating private and public uses in Fort Gratiot Township.

The land use plan is intended to be long range, comprehensive, generalized, flexible and regional, with the following broad objectives:

- Long range planning for land development to the year 2030.
- Comprehensive planning to provide for a variety of types of land uses, bearing a relationship to the land capability and transportation system.
- Generalized planning based upon broad principles of land use allocations and relationships.
- Flexible planning that is able to accept changes, yet not detract from the total plan.
- Regional planning transcending arbitrary boundaries and which is an integrated part of the regional system.

The land use plan is more than just a graphic presentation. Behind the graphics and maps are spatial distributions and relationships reflecting the specific goals and objectives described in the “*Goals & Objectives*” section of this Master Plan.

Concept Plan

The possible physical arrangements of the various land uses on vacant ground are infinite in number. However, regional considerations, roads, existing land uses, soils, topography, population growth and economic potential are all constraints on the number of possible arrangements. The goals and objectives set out earlier in

this Master Plan direct the possible array to a narrow band of alternatives. These possibilities are developed into a concept of the preferred general arrangement of land uses.

The long range land use plan for Fort Gratiot Township is based on analysis of the basic data presented in this Master Plan of trends in the Township and the surrounding areas. The recommendations for the separate land uses are graphically and statistically presented in fourteen classifications:

1. Agricultural & Rural Residential
2. Single-Family Residential
3. Two-Family Residential
4. Multiple Family Residential
5. Manufactured Housing Community
6. General Commercial
7. Neighborhood Commercial
8. Office
9. Office—Mixed Use
10. Public, Quasi-Public, Institutional
11. Recreation
12. Open Space
13. Light Industrial Park
14. Right-of-Way

The future land use plan for Fort Gratiot Township is designed so as to derive the maximum benefit for the residents of the Township. The land use plan illustrates the arrangement of land uses to meet the goals, capacity and trends in the Township.

Urban-Rural Boundary

In developing the land use plan, evaluations were made of locations in the Township and adjacent communities in regard to where development will and should occur. To aid in these evaluations, an “urban-rural boundary” has been laid out, dividing the Township into planned urban and rural areas. The location of this urban-rural boundary is based on an examination of the existing land uses, natural resources, and public services of the Township.

The planned urban area is that part of the Township that is expected be fully served by public sewer and water by the year 2030, that contains the existing urban uses of the Township, and that contains natural resources and natural features that are more compatible with urban uses (or at least are less impacted by urban uses). The planned rural area is that part of the Township that contains most of the existing agricultural uses in the Township, that contains the bulk of prime agricultural land in the Township, and that will not be served by public sewer and water by the year 2030.

The planned land use classifications have been arranged within the land use plan in part according to the urban-rural boundary.

Land Use Plan Map

A Land Use Plan Map has been prepared and is a part of this document. Following is a description of the general locations of the Plan's land use classifications:

AGRICULTURAL & RURAL RESIDENTIAL

On the Land Use Plan Map, over 2,850 acres have been designated for agricultural and rural residential use, which is almost 28% of the total land area of the Township. All of this acreage is confined to the aforementioned planned rural area in the northwest part of the Township. This area contains most of the prime agricultural land in the Township, has many existing farms, and (for the most part) will not be serviced by public water and sewer within the time frame of this Plan. Thus, this part of the Township is best suited to agricultural and rural residential uses. Here rural residential refers to single-family homes on relatively large lots, lots that are larger than typically found in suburban residential developments, but smaller than would be practical for normal agricultural use (but could be used for small "hobby" farms). Rural residential development should be (in so far as is practical) limited or directed toward areas where the soils have only slight or moderate limitations for septic system use.

SINGLE-FAMILY RESIDENTIAL

The largest land use classification within the Township is and will continue to be single-family residential, with approximately 3,635 acres planned for this use (approx. 36% of the land area of the Township). Approximately 30% of this acreage is currently vacant and undeveloped. It is expected that the development of this acreage will take three forms:

1. Infill development of vacant parcels within existing subdivisions in the Township;
2. The completion of the more recently platted subdivisions and site condominium developments;
3. The creation of new subdivisions with the construction of new residential streets and the linking of those streets to the existing street system.

The Land Use Plan provides for these three situations as follows:

Infill Development:

There are many vacant lots scattered throughout the existing subdivisions along the lakeshore and in the southern part of the Township. These lots are already serviced by water, sewer, gas and electric utilities, thus they should be given priority over the development of new subdivision plats. Development of these lots in most cases should follow the pattern (size and density) of neighboring residential lots. However, there are also several small and odd-shaped lots (particularly along and near the lakeshore) that may be more difficult to build on. In these cases, some flexibility may be needed in order to utilize these lots. For example, many of these lots would be ideal locations for smaller-sized inexpensive start-up housing for younger families (perhaps even acceptable kinds of manufactured housing).

Completion of Existing Newer Subdivisions:

In the northern and western parts of the Township, there are subdivisions (and site condominium developments) that as yet are only partially developed. These include Evergreen Terrace, the J. Piceu Lakeshore Drive subdivision, Shorewood Forest site condominiums, and Gratiot Center. As with infill development, because of the availability of public utilities, priority should be given to completing these and other similar subdivisions in the Township. Furthermore, where feasible, any stub streets should either be turned in to cul-de-sacs, or be linked to the completed parts of the subdivisions, or to neighboring subdivisions, or to the surrounding road network.

Creation of New Subdivisions:

There are several large vacant tracts of land in the northern and western parts of the Township adjacent to existing subdivisions, which would be suitable for future development as single-family residential subdivisions (or site condominiums). These new subdivisions should be linked to adjacent subdivisions and the surrounding road network to provide proper access to new home sites. Also, because some of these sites contain wetland areas and other interesting natural features, the Township should encourage the use of cluster development and planned unit development concepts to preserve the natural features on these sites and provide for more buildable lots than would otherwise be possible with conventional platting.

Neotraditional Neighborhoods

Another alternative to standard subdivision development is the “neotraditional neighborhood” development. This kind of development, like the planned unit development, involves a mixture of commercial, office and residential uses on one large parcel. However, the neotraditional neighborhood is developed similar to the neighborhoods found in the second half the 19th Century and the first half of the 20th Century. Typical elements of a neotraditional neighborhood include:

- Houses and commercial/office uses setback close to the street, with garages and parking oriented to the rear of the buildings;

- Rear alleys to provide access to businesses and homes;
- Storefront commercial districts with easy pedestrian access;
- A formal town square;
- Parks, churches and schools within easy walking distance.

A sample plan of a neotraditional neighborhood development is included with this document. In this sample plan, various land uses are provided for, including single and multiple residential, office and convenience commercial, a village green, parks, a church and a school. All of these land uses are laid out on a 160-acre parcel.

TWO-FAMILY RESIDENTIAL

In keeping with the objectives for providing opportunities for multiple and medium density housing, approximately 126 acres are shown on the Land Use Plan Map as planned for two-family residential use. This acreage is divided among one existing site, located near the southwest corner of Krafft Road and (planned) Pollina Avenue, and three planned sites. The three planned two-family residential sites are located as follows:

- The southeast corner of Parker Road and Keewahdin Road;
- The north side of Brace Road west of Lakeshore Road;
- The west side of Lakeshore Road between Brace Road and Metcalf Road;

The planned sites have been placed to help provide a transition between higher density uses and adjacent single-family residential uses.

MULTIPLE-FAMILY RESIDENTIAL

Also in keeping with the objectives for providing opportunities for multiple and medium density housing, approximately 220 acres are shown on the Land Use Plan Map as planned for multiple-family residential use. This includes existing apartment and condominium complexes, such as: Fairway Terrace condominiums, Krafft Terrace condominiums, Lakeshore North condominiums, Keewahdin Apartments, Windmere condominiums, Golf View Arms apartments, Golf Harbor apartments, Heritage Grove apartments, the Westmore Apartments, Lake Huron Woods/Presbyterian Village senior citizen apartments, Blue Water Lodge senior citizen apartments, and the BARSS Adult Foster Care Facility. Four new multiple-family residential sites are also shown. These are located as follows:

- The north side of Krafft Road east of the Heritage Grove apartments;
- The north side of Keewahdin Road adjacent to Blue Water Lodge;
- The south side of Carrigan Road west of 24th Avenue;
- The south side of Keewahdin Road between 24th Avenue and Parker Road;

With the exception of the Pollina Avenue location, these new sites are located to help provide a buffer between the commercial-office-industrial uses near 24th Avenue and surrounding lower-density residential uses. Most of these sites could

be developed either as low-rise rental apartments or as condominiums. The Krafft Road site could be developed as mid-rise apartments, given the proximity to an existing high-rise development in Port Huron just south of Krafft Road.

MANUFACTURED HOUSING COMMUNITY

The Land Use Plan Map shows 156 acres planned for manufactured housing communities. This acreage is divided between two existing manufactured housing communities (with additional acreage adjacent to each for expansion). The first of these is located in Section 21, near the intersection of Keewahdin Road and 24th Avenue. The second is located in Section 19 at the corner of Krafft Road and Campbell Road.

GENERAL COMMERCIAL

The 24th Avenue commercial strip forms the backbone of the 530-acre general commercial district generally running along M-25 from the Port Huron City Limits north to Carrigan Road. This general commercial district not only includes the existing 24th Avenue strip and vacant parcels within that strip, but acreage running west of 24th Avenue along Pine Grove Avenue, Krafft Road and Keewahdin Road. Land on both sides of 24th Avenue north of Cherry Hill is also included, along with the block bounded by Cherry Hill, Keewahdin, 24th Avenue and Meadowlawn.

Land uses in the general commercial district include Birchwood Mall, several big-box retailers, restaurants, banks, new car dealerships, and large strip commercial centers.

NEIGHBORHOOD COMMERCIAL

Approximately 37 acres of neighborhood commercial uses are planned for the Township. Neighborhood commercial uses are those less intensive commercial uses intended to meet the daily needs of adjacent residential areas. Common neighborhood commercial uses include party/convenience stores, pharmacies, laundromats, and markets. These uses would be located either within stand-alone structures or small strip centers.

Eight sites for neighborhood commercial use have been scattered throughout the residential areas of the Township and are located as follows:

1. The north side of Pine Grove Avenue west of 24th Avenue;
2. The southwest corner of State Road and M-136;
3. The southwest corner of Parker Road and Keewahdin Road;
4. The southeast corner of Parker Road and Carrigan Road;
5. The northwest corner of Carrigan Road and 24th Avenue;
6. The west side of Lakeshore Road between Brace Road and Metcalf Road;
7. The intersection of Lakeshore Road and Metcalf Road.

8. The northwest corner of Keewahdin Road and Lakeshore Road.

OFFICE

There are five areas in the Township designated for office use, totaling almost 44 acres. The first area is an expansion of the existing Birchwood Office Park westward along a planned extension of Commerce Drive. This area will also have access from Keewahdin Road. The second area is located on the south side of Keewahdin Road behind the Birchwood Mall property. The third area is located on the north side of Keewahdin Road east of Meadowlawn. The fourth area is located on the north side of Krafft Road east of the Mercy Health Center complex. The final area is located on the north side of Carrigan Road west of M-25. These planned office areas are located so as to help provide transitions between the general commercial district and neighboring residential uses.

OFFICE—MIXED USE

The area designated as office—mixed use on the Land Use Plan Map is intended to provide for a mixture of residential uses along with compatible office uses. These office uses would consist of uses similar to the following:

- Professional offices;
- Small scale medical offices;
- Art/arts & crafts/photography studios and shops/galleries;
- Related accessory uses.

The proposed office—mixed use area is located along most of the east side of Meadowlawn in Section 15 and contains 16.72 acres.

PUBLIC, QUASI-PUBLIC, INSTITUTIONAL

Most of the 755 acres of land designated for public, quasi-public and institutional uses are occupied by existing schools, churches, government facilities, nursing homes, medical facilities, cemeteries, public utility facilities and the entirety of the Detroit Water Board property. The rest of the acreage is allocated to two new sites. The first site is property located at the corner of Keewahdin Road and Campbell Road owned by the Port Huron Area School District, to be used for a future school. The second site is an area tract north and east of the existing Township Hall in Section 17. It is proposed that this property be used for a Township Civic Center. This Township Civic Center could contain:

- A new Township Hall and Administrative Office building to replace the existing Township Hall building, which has become increasingly cramped in recent years;
- A Township police department building (or a mini-station for the County Sheriff patrols);
- A Township fire station (if the existing Township Hall is not deemed adequate);

- A Department of Public Works building (when the existing facility is no longer useful);
- A Township library (if adequate space cannot be found in or near the commercial district:

Some of these Township Civic Center facilities may not be needed by the Township within the time frame of this Master Plan. However, the Township should reserve a sufficient amount of land now for these facilities so that they may be more easily developed when needed.

RECREATION

The Land Use Plan Map allocates 793 acres for recreational uses. This includes the three existing Township parks, the non-motorized trail north of the Township Hall, three privately owned golf courses, the new County Park on Lake Huron near the corner of Lakeshore Road and Metcalf Road, and three privately developed neighborhood parks. Additional proposed parkland includes property west and northwest of the landfill, the Township-owned land south of the Community Center, most of that part of the east half of Section 17 north of the Township Hall, and an area for a neighborhood park in Section 20.

OPEN SPACE

An additional 284 acres of land are proposed to be held as open space, divided into six areas on the Land Use Plan Map. The first open space area is the land within the 100-year floodplain of the Black River, except for the North River Road Park, the two golf courses along the river, and the property occupied by the Golf Harbor Apartments. The second open space area is the site of the closed landfill, which, because of the potential for contamination, should not be built on. Once the site has been properly cleaned up, it may be possible to use it for parkland, as many other communities have done with closed landfills. The third open space area consists of most of the beaches on the Lake Huron shoreline, except for the lakefront residential lots. The fourth open space area is the property behind the Birchwood Mall, which is used for a retention pond for the mall. The fifth open space area is land owned by the Detroit Water Board, underneath which the main intake pipe from Lake Huron runs. The final open space area consists of land used for conservation purposes within site condominium projects in Section 20 and Section 29.

LIGHT INDUSTRIAL

In order to provide some balance to the Township's tax base, over 86 acres have been designated for light industrial use, all located in a single area in Section 16 adjacent to the west of the planned commercial district. The kinds of uses envisioned for this area are small-scale manufacturing, processing, warehousing, and research facilities, uses that do not result in nuisances or negative environmental impacts. It is further envisioned that these uses will be located entirely within one or two planned industrial parks.

Given that the Township is not served by rail or direct interstate highway access, the development of heavy industrial uses should be discouraged. There are no designated heavy industrial areas on the Land Use Plan Map.

RIGHT OF WAY

Approximately 659 acres of right-of-way have been designated for existing roads (at existing right-of-way widths) and proposed roads (at proposed right-of-way widths) in the Township. These existing and proposed roads are described in the Thoroughfare Plan section of this document.

Acreage Allocations & Expected Capacity

The areas allocated to the various planned land use categories were measured from the Land Use Plan Map. The planned land use category measurements are summarized in the table and graph below.

Figure 17: Acreage Allocations

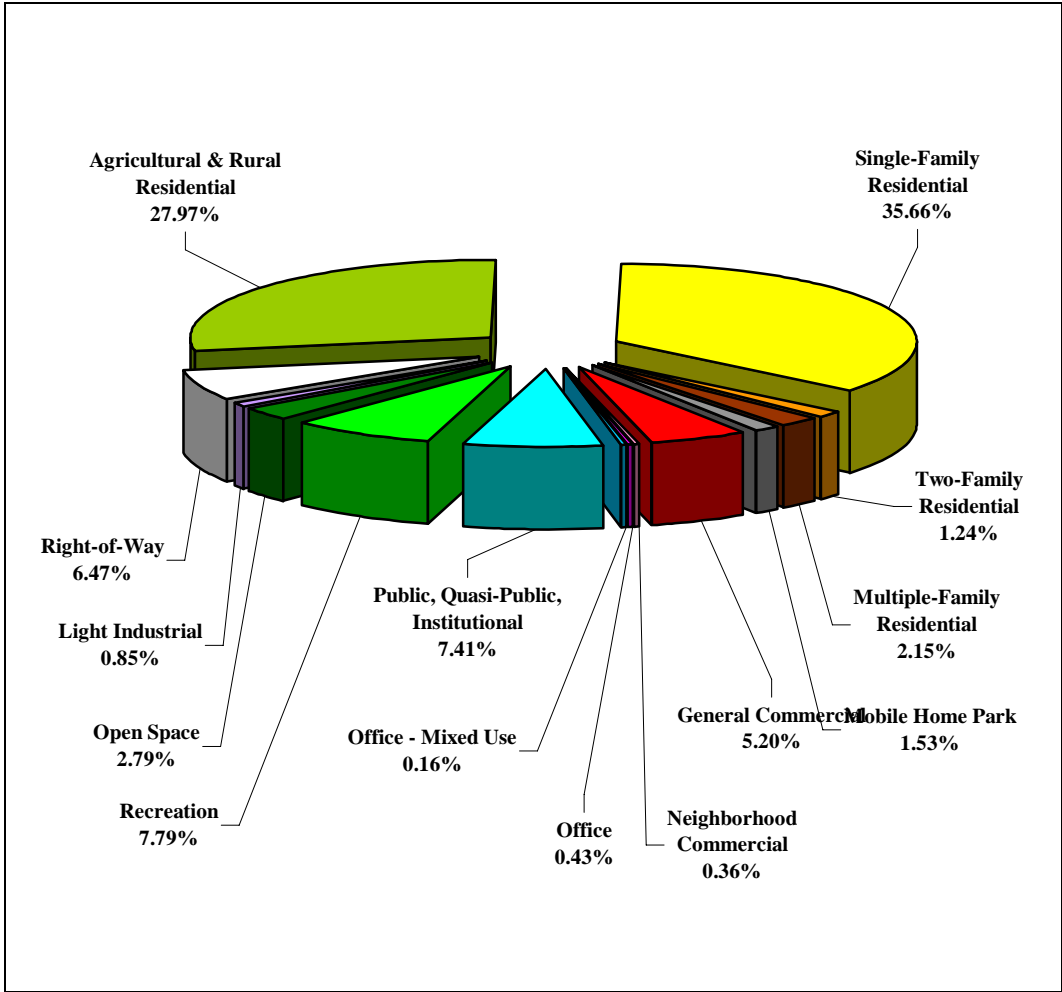


Table 39: Planned Acreage

Land Use Category	Planned Acreage	
Agricultural & Rural Residential	2,850.38	27.97%
Single-Family Residential	3,634.71	35.66%
Two-Family Residential	126.02	1.24%
Multiple-Family Residential	219.42	2.15%
Manufactured Housing Community	156.29	1.53%
General Commercial	529.83	5.20%
Neighborhood Commercial	36.82	0.36%
Office	43.81	0.43%
Office—Mixed Use	16.72	0.16%
Public, Quasi-Public, Institutional	755.43	7.41%
Recreation	793.52	7.79%
Open Space	283.88	2.79%
Light Industrial Park	86.15	0.85%
Right-of-Way	659.14	6.47%
TOTAL:	10,192.12	

EXPECTED CAPACITY

By using the acreage figures for the various planned residential land uses shown in Table 39, it is possible to determine the expected population of the newly planned areas of the Township. In Table 40, the new acreage amounts for single-family, two-family, multiple-family and manufactured housing community residential uses are multiplied by the respective allowed dwelling units per acre to determine the expected numbers of dwelling units. In turn, the expected numbers of dwelling units for each land use are multiplied by the number of persons per dwelling unit, as given by the Census, to calculate the additional expected population. This expected population figure then is added to the amount of the existing population of the Township to determine the total expected population capacity of the Township.

Table 40: Expected Population Capacity

Land Use Category	New Acreage	DU/Acre	Dwelling Units	Persons/DU	Population
Single-Family	997.12	2.5	2,493	2.47	6,158
Two-Family	122.04	4.3	525	2.47	1,296
Multiple-Family	162.45	5.0	812	2.47	2,006
Manufactured Housing	36.42	6.5	237	2.47	585
Additional Expected Population:					10,045
Existing Population:					10,691
Total Expected Population Capacity:					20,736

As can be seen in Table 40, the total expected population capacity of Fort Gratiot

Township is 20,736, which is greater than the projected population for 2030 of 19,345. Therefore, the amount of land allocated for residential purposes in the Land Use Plan is more than adequate for the projected population of the Township.

Capital Improvements Programming

Each type of land use has different degrees of need for local public facilities. For example, a community will need different levels of water and sewer system improvements if the comprehensive plan recommends certain densities of residential development or commercial use for a certain location. These and other possible changes in land use policies necessitate a Capital Improvements Program (CIP).

The public improvement investments expressed in a CIP can also be used to permit or control phasing of land developments, since public facilities investment decisions directly influence the location, intensity and rate of land development.

Purpose and Uses

In its basic form, a CIP is a complete list of all proposed public improvements over the next six- (6) year period, including costs and operation expenses. The CIP outlines the projects that will replace or improve existing facilities or that will be necessary to serve current and projected land use development in Fort Gratiot Township.

FACILITY & FINANCIAL PLANNING

The Uniform Budgeting and Accounting Act¹⁰ requires local governments to annually develop a capital improvements program as part of the budget process. Furthermore, advanced planning for public works projects ensures more effective

¹⁰ MCL §141.435 et seq.

and economical capital expenditures, as well as the provision of public works in a timely manner. Since municipalities face ongoing expenses, the development of a CIP makes it possible to strike a balance between maintenance and operational expenses and the construction of public works.

Recommendations presented in the CIP can serve to guide Fort Gratiot Township investments in public facilities to provide necessary services to all land uses. Furthermore, with a CIP the Township can monitor its balance of borrowing power and municipal credit rating, which in turn affects the interest rates the Township must pay when it borrows for public works construction.

PLANNING COMMISSION OVERSIGHT

Additionally, Section 10 of the Township Planning Act states, in part:

“Whenever the planning commission has adopted the basic plan of the township of 1 or more major sections or districts thereof, no street, square, park, or other public way, ground or open space, or public building or structure, shall be constructed or authorized in the township or in the planned section and district until the location, character and extent thereof shall have been submitted to and approved by the planning commission.”

This is intended to ensure that public improvements conform to the master plan and the planning commission is aware of such improvements before they are constructed.

In the event the planning commission disapproves a project, a majority vote of the township board is required to override that action. If the planning commission does not act within 60 days after the plan is submitted to it, approval is automatic. This provision is not intended to give the planning commission veto authority over public improvements or require their approval of routine infrastructure and facility maintenance. However, it does ensure that the township considers the relationship of these improvements to the master plan. In evaluating that relationship, the planning commission should look at consistency with land use, as well as the impact of the proposed improvement on other plan recommendations.

The most simple and effective way to implement this responsibility is preparing a CIP, enabling the planning commission to review all capital projects at the same time.

CIP Preparation

The CIP process includes the following:

- Determining the type, scale and level of service of public improvements.

- Establishing the timing and beginning date for recommended public improvements
- Determining the method of financing the public improvements, including the capability of paying operational expenses once the facility is finished.

The Fort Gratiot Township Planning Commission has as one of its primary responsibilities, the preparation of a viable and fiscally responsible program of capital improvements. Keep in mind that, even though the Planning Commission may be responsible for preparing the CIP, the Fort Gratiot Township Board of Trustees is always the final authority when it comes to allocating and spending money. Therefore, it is crucial that the Planning Commission work closely with the Board of Trustees and other Township officials every step of the way.

There are six major steps in the preparation of the CIP. The Planning Commission should:

1. Identify public capital facilities needed in the next six years to meet basic public service demands of Township residents.
2. Conduct special studies to further define specific public facility needs in advance of appropriating any funds for such a facility.
3. Provide Township residents with the opportunity to participate in the CIP process through public hearings.
4. Coordinate capital improvements with the Fort Gratiot Township Comprehensive Plan.
5. Reconcile capital improvement costs of the Fort Gratiot Township CIP with anticipated financial resources of the Township; identify all possible sources of revenues to aid in the financing of recommended public improvements.
6. Seek coordination of the Fort Gratiot Township CIP with similar programs of neighboring units of government and public utility companies that provide services in the Township.

The scope and extent of a CIP will vary greatly among municipalities. In small population, slowly growing municipalities, the need for financial planning of public improvements may seem minimal; whereas in larger population, more rapidly growing municipalities the CIP may be a very sophisticated document. Regardless of the size of the municipality, the CIP must be based on realistic financing. Therefore, a working knowledge of the Township's financial position—budget revenues, annual operating expenses, debt costs and cash reserves—is necessary.

Financing a CIP

The capital improvements program provides an overview of what elected officials and policy makers within the Township foresee both as short and long term issues

with respect to public investments, public facility needs and the ability of the Township to meet the investment requirements.

At this point, then, it is necessary to obtain a listing of all the sources of revenue available to the Township for financing public improvements. Among the financial sources that should be considered are: cash payments from general fund revenues, revenues from other operating funds, special assessments, general obligation (full faith and credit) bonds, revenue bonds, grants, loans or gifts.

In order to prepare a realistic set of capital project recommendations, however, it is also necessary to obtain a listing of the expenditures of the Township. This would include costs for all operations, maintenance, equipment and debt service.

Of all the expenditures a municipality incurs, debt service, of course, has priority, since it represents the Township's committed obligation to pay. Therefore, the real balance of CIP expenditures must be struck between the cost of operation and maintenance activities and capital expenditures. In short, the Township should not build that which it cannot afford to maintain.

If the Township is going to depend upon general fund revenues to finance the CIP, it will be necessary to analyze the sources of revenues for the general fund. These sources generally include property taxes, state and federal shared revenues, license and permit fees. The revenues for the life of the CIP will have to be projected from past and current general-fund revenues.

It may be possible to finance some public improvements, at least in part, from separate operating funds or voted special millage. Many public utilities operated by municipalities have special purpose funds designed to finance, operate, maintain and improve the utility system. These funds are, by law, separately accounted for and segregated from the general fund. The operating income for these funds comes from customer service bills and connection fees. Such funds should be evaluated in the same manner as recommended for the general fund.

In order to make use of the other possible sources of funding, the Planning Commission will need some specialized help. A planning commission, of course, cannot simply declare a special assessment or commit a community to bonding. If these sources of revenue are to be tapped, it will be necessary to work closely with the Board of Trustees and Township Attorney. Permission to sell full faith and credit bonds must be given by the electorate. If the Township uses bonding to finance its CIP, it will be necessary to include the debt service costs in each year's operating budget.

Regardless of how the CIP is financed, only part of the work is done when revenues have been estimated. It is then necessary to estimate projected expenses for the next six years. Each year as the CIP is updated, it is necessary to add another year's revenues and expenses.

Projecting expenses, especially those to be incurred by the general fund, is neither easy nor precise. The need for services, maintenance and operating costs and increases in personnel cannot be precisely predicted six years in advance.

Furthermore, it is necessary to make predictions for every department in the Township, as well for all those functions operated jointly with other units that draw from the Township's general fund. Some allowances must also be made for inflation.

Once revenues and expenses have been evaluated for the next six years, the two must be compared to determine how much the Township can afford, at least from these sources, for capital improvements. If the revenues the Township has calculated do not cover the expenses expected, the CIP may have to be scaled down, unless some additional means of financing can be found or cuts in operation expenses can be made.

Classification of Proposed Capital Improvement Projects

Once the evaluation of future revenues and expenditures is complete, the Planning Commission should make an inventory of all proposed public improvement projects. Quite likely, the cost of all the projects will far exceed anticipated financial resources. Therefore, it will be necessary to develop a system of project classification and priority selection that will balance the cost of the projects with the available money.

The procedure should ensure that the projects are judged objectively. The system should coordinate and time public projects to afford maximum public benefit and to ensure an adequate level of public service to developing neighborhood areas. One way to classify projects is to divide them into three categories:

PHYSICAL CAPITAL IMPROVEMENT PROJECTS

These are projects for land acquisition or for the development of physical assets in the Township. They include buying land for a new park, improving sidewalks, utilities, storm drains or public roads.

CAPITAL REPLACEMENT/MAINTENANCE PROJECTS

These projects include the replacement or major repair of a fixed tangible asset owned and used by the Township. This also includes replacement of an automobile, fire truck or construction of a replacement garage. Examples of capital maintenance would be resurfacing a public street or renovating a Township owned building.

CAPITAL PROJECT FEASIBILITY/NEEDS STUDY

Sometimes studies are necessary to clarify and define proposed projects. Often there is a general awareness of the need for projects of a particular type, but there is insufficient information available to demonstrate the scale, time, feasibility or cost of such a project. Such studies provide a firmer information base for future capital improvements that more accurately reflect existing and expected needs.

Setting Priorities

When the projects have been identified and classified, they must be placed in order of priority. At this point, the goals and policies of Township development contained in the comprehensive plan should be carefully reviewed. These goals, general as they may be, can serve as a guide to setting priorities for public improvements.

Some of the important factors that should be considered in judging the CIP proposals are:

- Protection of life.
- Maintenance or improvement of public health.
- Protection of property.
- Conservation of resources.
- Maintenance of physical property.
- Provision of necessary and basic public services.
- Replacement of obsolete facilities.
- Public comfort and convenience.
- Reduction in operating costs.
- Recreation value.
- Economic value.
- Social, cultural or aesthetic value.
- Potential effect on future developments.
- Relative value with respect to other services.

CIP Process in Detail

1. The Planning Commission requests all publicly supported agencies to submit a CIP budget form for every proposed project for at least the next six years. Each proposal form for each project should include:
 - Name and description of the project.
 - Estimated cost.
 - Proposed method of financing.
 - Agency assigned priority for the project if more than one is submitted.
 - How the project conforms to the Township's comprehensive plan and zoning ordinance.
 - Beneficiaries of the project.

- Estimated increase (decrease) in personnel, equipment, material and supply costs that will have to be added to the annual operating budget if the project is approved.
2. The Planning Commission summarizes the projects and forms the agencies of the total listing, along with the cost estimates of each project. This summary includes CIP proposals prepared by the Planning Commission itself.
 3. The Planning Commission reviews each project individually as to the agency's need and priority.
 4. The Planning Commission evaluates each of the projects, including its own; sets some preliminary priorities; and prepares a tentative Township CIP.
 5. The Planning Commission meets individually and collectively with the agencies and Township officials to resolve differences and come to some general agreement on projects.
 6. The Planning Commission convenes a public hearing.
 7. The Planning Commission prepares the final CIP and recommends it to the Board of Trustees.
 8. The Board of Trustees reviews the CIP, accepts and adopts it, or returns it to the Planning Commission with recommendations for amending.
 9. If the CIP has been returned, the Planning Commission reviews and deals with the Board of Trustees' recommendations and returns it to the Board for adoption.
 10. The Board of Trustees makes the final determination on the CIP. Upon adoption, the first year of the CIP becomes the capital budget portion of that year's annual Township budget.
 11. The CIP must be reviewed and updated annually. Priorities may be rearranged from one year to the next; funding may change, etc. Both the Commission and Board of Trustees must be alert to changes within the Township so that the CIP remains useful and current.

Proposed Projects

A number of projects have been suggested throughout the development of this Comprehensive Master Plan. These projects (along with various proposed projects listed in the five-year action plan of Township's current Recreation Plan, which are not listed here) could be included in the Township's next Capital Improvements Program. A brief description of each project follows and a summary of the proposed projects is given in Table 41.

WATER SUPPLY/WASTEWATER TREATMENT STUDY

Conduct one or more studies to determine the feasibility/desirability of constructing a water/wastewater treatment facilities in the Township versus purchasing capacity from the City of Port Huron, from the City of Detroit (from their water plant on Metcalf Road) or the City of Marysville. With its own

water/wastewater treatment plant, the Township could provide for its own water/wastewater needs as well as selling capacity to adjacent/nearby communities.

Total Cost: \$25,000

ACCESS ROAD AND PARKING LOT FOR NATURE CENTER

Construct a gravel access road and a 50-car parking lot at the northwest corner of the bicycle trail that runs within the wetlands nature center in Section 16. The access road and parking lot will have access to Parker Road.

Total Cost: \$40,000

ACQUIRE PARKLAND

Purchase 266 acres of land adjacent to the north of the existing Township Hall site in the southeast ¼ of Section 17 for the site of future Township parkland.

Total Cost: \$600,000

SEWER LINE EXTENSIONS

Extend sewer trunklines (at an estimated cost of \$70/foot) 10,580' along State Road, 7,790' along Pine Grove and 6,200' along Krafft Road, to the limits of the planned urban area. Also extend sewer lines along Meadowlawn Drive (2,640') and along Keewahdin from the landfill to State Road (9,170').

Total Cost: \$2,547,000

WATER LINE EXTENSION

Extend water trunkline along State Road from Keewahdin to Metcalf (16,000') to serve as a backup or to connect to the City of Detroit water system.

Total Cost: \$1,120,000

NEW TOWNSHIP HALL

Construct 9,000-sq. ft. single-story building (which should be sufficient to serve the expected 2030 Township population of 19,345 persons) to serve as the new Township Hall on Civic Center Property.

Total Cost: \$1,800,000

TOWNSHIP MEDIA CENTER

Construct a 12,000 square foot single-story building (which should be sufficient to serve the expected 2030 Township population of 19,345 persons) to serve as the new Township Media Center on Civic Center Property. Alternately, the media center could be constructed as part of the new Township Hall structure at a lower cost. **Total Cost:** \$2,400,000

PUBLIC SAFETY BUILDING

Expand the existing fire station on Keewahdin Road into the 1,876 square foot space occupied by the current Township Hall at a cost of \$100/sq. ft. Construct a

6,000 square foot addition (at a cost of \$200/sq. ft.) to this building to house the future police department. The new expanded structure would serve as the Township Public Safety Building. A building of this size should be sufficient to serve the expected 2030 Township population of 19,345 persons.
Total Cost: \$1,387,600

Table 41: Proposed Capital Improvement Projects

Proposed Project	Total Cost	Potential Funding Sources
Water Supply/Wastewater Treatment Study	\$25,000	General Funf
Nature Center Access Road and Parking Lot	\$40,000	CPRM; MNRTF
Sewer Line Extensions	\$2,547,000	W&S; Special Assessment
Water Line Extension	\$1,120,000	W&S; Special Assessment
New Township Hall	\$1,800,000	Voted Millage
Acquire Parkland	\$600,000	CPRM; MNRTF, LWCF, CMF
Township Media Center	\$2,400,000	Voted Millage
Public Safety Building	\$1,387,600	Voted Millage

The potential funding sources for the projects listed in Table 41 are as follows:

General Fund: Fort Gratiot Township General Fund

Voted Millage: Millage(s) approved by Township voters

W & S: Water & Sewer Fund

Special Assessment: Assessment on property specially benefiting from project

Revenue Bonds: Revenue Bonds secured by the net revenues of the project

CDBG-MSHDA: Community Development Block Grant-Housing

CDBG-MDB&IS: MI Dept. of Business & Industry Services-CDBG Economic Development

RDA: Rural Development Agency

CMF: Clean Michigan Fund

EPA: Environmental Protection Agency

MDEQ: Michigan Department of Environmental Quality

MDOT-EDF: Michigan Dept. of Transportation Economic Development Fund

MDOT-EF: Michigan Dept. of Transportation Enhancement Fund

MNRTF: Michigan Natural Resources Trust Fund

LWCF: Land & Water Conservation Fund

CPRM: County Parks & Recreation Millage

SAFETEA-LU: Federal Transportation Act Enhancement Fund

Capital Improvement Fund

Instead of, or in addition to a voted millage for specific capital improvement projects such as a library or a township hall, the Township should seek voter approval for an additional millage that would be set aside in a capital improvement fund. Such a fund would provide a more stable funding source for capital improvements, allowing the Township to undertake capital improvements as needed, without having to depend on millage or grant approval for each project.

For example, given the Township's 2005 taxable value of \$389,882,612, a one-mill capital improvements millage would result in \$389,882 being available per year for capital improvements. Although this amount is not sufficient by itself to fund most of the projects on the list above, this money could be used to finance one or more of these projects over time.

Road Improvements

The Township should consider seeking a voted millage specifically earmarked for road improvements. These funds should be used by the Township to match St. Clair County Road Commission funds that have been set aside for such township-matched road improvement projects. Doing so may expedite long-needed road improvements that have been delayed due to a lack of available County funds.

Implementation Strategies

It should be realized that the Comprehensive Master Plan represents what is felt to be the best future use of land based upon today's knowledge and trends. The Plan is not a rigid, unchanging document. Changes will be necessary and should be made not only to adjust to new trends as they become apparent, but also to allow flexibility in cases where an alternative use may be as desirable as the one shown on the Plan. Timing is a very important aspect. Some proposals should be carried out as soon as possible, especially those that require acquisition of land that will eventually become more expensive as development occurs. Other proposals, however, should be delayed until the need arises as the land use relationships indicated on the Plan begin to materialize.

The Comprehensive Master Plan should also serve as the guide for future zoning action. At first, the zoning map will not necessarily reflect planned land uses to a considerable extent. However, the Plan illustrates what would be most desirable and shows the direction which future zoning changes should take.

If the Plan is to be eventually realized, planning must be established and worked at on a continuing basis. The Planning Commission should continue to take an active role in reviewing proposed developments in the light of the long-range goals of the Township. Certainly, the Plan must not be regarded as a “straight jacket” for growth. Changing conditions and technology will necessitate revision in the future. The Comprehensive Master Plan should instead be thought of as a flexible framework within which public and private action may take place, thus producing a Township in which the citizens are afforded a maximum of convenience and enjoyment.

Implementing the Plan

There are three primary forms of action through which the policy recommendations of the Comprehensive Master Plan can be implemented:

1. Land Use Controls
2. Public Action
3. Public/Private Action

Within each form of action, there are specific activities that will aid in the implementation of the Master Plan. The following is a brief discussion of these various activities.

LAND USE CONTROLS

There are six land use control activities that the Township should consider undertaking or improving upon:

1. Updating the Zoning Ordinance
2. Updating Subdivision Regulations
3. Review & Update Regulations Governing Site Condominiums
4. Review & Update the Sign Ordinance
5. Site Plan Review
6. Code Enforcement

Updating the Zoning Ordinance

The Township upon adoption of the Comprehensive Master Plan should thoroughly review its zoning ordinance. The zoning map may be thought of as a very short-range plan that is designed to protect existing development from encroachment by incompatible uses and where possible, promotes future land use in accordance with the Comprehensive Master Plan. The Zoning Ordinance should be reviewed in relation to the Plan. Certain changes in the Zoning Ordinance, particularly in the Zoning Map, may be desirable to better reflect policies set forth in the Plan.

Updating Subdivision Regulations

Subdivision regulations are the primary means of ensuring adequate design of land and facilities in future residential areas. Thus, it is important that the Planning Commission review each new subdivision plat carefully when submitted for compliance with the subdivision ordinance of the Township. The subdivision plat should also be reviewed at each stage by the Township's consulting planner and engineer. Such reviews, if conducted properly, can prevent undesirable conditions from arising, conditions that can create development problems for decades.

Given the effect that subdivision regulations can have on future residential development, it is important that the Township's subdivision ordinance be reviewed in relation to the Master Plan. It may be necessary to update the

subdivision ordinance to better reflect the residential development goals and policies of the Plan.

The subdivision ordinance of the Township was originally adopted in 1972 and is based on the Michigan Subdivision Control Act of 1967, as amended.¹¹

Review & Update Regulations Governing Site Condominiums

Since the early 1970's, the condominium form of property ownership has become increasingly popular in Michigan, especially for residential property. Traditionally, a condominium development consists of one or more two-family (duplex) and/or multiple-family (triplex, quad, townhouse or "high-rise") residential structures on a single parcel. Each residential unit in the condominium development (known as a *condominium unit*) is owned individually, but the parcel on which the development is located and all related facilities (referred to as the *general commons area*), are owned jointly by all residents of the development. Generally, traditional condominium development is easily regulated by the normal provisions of local zoning ordinances for two-family and/or multiple-family residential zoning districts. Local governments in Michigan are permitted to regulate the development of condominiums by the Condominium Act of 1978.¹²

However, there is a new form of condominium development, referred to as a *site condominium* development (also known as *detached condominiums*), that makes normal regulatory practices difficult to apply. A site condominium development consists of several single-family residences, with each individually owned condominium unit consisting of a single-family residence plus a small area of land surrounding the residence called the *building envelope*. The remainder of the land in the site condominium development forms the commons area. Physically, site condominium developments resemble single-family residential subdivisions, but are built on a single unplatted parcel rather than a group of platted subdivision lots. Thus, site condominium developments cannot be regulated via a municipality's subdivision ordinance. Fortunately, Fort Gratiot Township already has ordinance provisions regulating site condominiums. However, these provisions should be reviewed and updated where needed to help implement the policies defined in the Master Plan.

The Future Land Use Plan Map reserves several large unplatted parcels for single-family residential development. Many of these parcels may be suitable for site condominium development. Thus, it would be advantageous for the Township to adopt regulations governing site condominium development, in the event that such a development is proposed in the future.

Site Plan Review

Site plan review is a process by which documents and drawings specified in the zoning ordinance are reviewed to ensure that a development proposal complies

¹¹Act 288 of the Public Acts of 1967, as amended; [MCL §560.101 et seq., MSA §26.430(101) et seq.]

¹²Act 59 of the Public Acts of 1978, as amended; [MCL §559.101 et seq.]

with local, state and federal regulations. As defined by Michigan law, a site plan is a plan, drawn to scale, showing the layout of proposed uses and structures. Unlike a plat—which only depicts the subdivision of a parcel into smaller lots along with necessary roads and easements—the site plan includes lot lines, streets, building sites, existing structures, reserved open space, landscaping, utilities, and any other required information. Site plans should be prepared and sealed by licensed professionals including land surveyors, engineers, architects, or landscape architects.

Site plan review can be applied to all development projects. State enabling legislation requires local site plan review for subdivision plats, planned unit developments (PUDs), cluster housing and special or conditional uses specified in the zoning ordinance. For other types of permitted uses to be subject to site plan review, the procedures and standards must be specified in the zoning ordinance. Such permitted uses may include:

- Multiple family residential;
- Site condominiums;
- Commercial and industrial uses;
- Institutional uses;
- Public projects, such as utilities.

Site plan review should also be required for any changes to existing development, such as expansions, demolition, moving of structures, etc. Individual single-family homes are usually exempt from site plan review, requiring only a plot plan, which may include drainage provisions for a building permit.

Site plans are reviewed to assure:

- Compliance with applicable zoning standards;
- Public facilities are adequate to serve the site;
- The layout is compatible with the topography and natural features of the site;
- Structures are appropriately sited and the property landscaped to reduce impacts on adjacent properties;
- Compliance with applicable local, state and federal regulations.

The following elements should also be covered in the site plan regulations and standards contained in the zoning ordinance:

- Safe traffic flow, parking, ingress and egress, emergency vehicle access;
- Loading and unloading of goods;
- Topography and soils;

- Stormwater management;
- Sanitary sewer and water (if applicable);
- On-site septic systems and wells;
- Gas, electric, and other utilities;
- Landscaping/buffering/screening/fencing;
- Trash and dumpsters;
- Signage;
- Open space;
- Natural hazards;
- Historic structures;
- Lighting;
- Accessory structures;

Site plan review can be an effective and powerful land use decision-making tool. Any deficiencies in compliance can result in denying the proposed use for the land. From the community's perspective, site plan review can be used to ensure that development projects are consistent with the goals, objectives and policies of the Master Plan and that standards of the zoning ordinance are met. Site plan review also works well to ensure that the development has a good physical design, that it relates to the presence of the community's infrastructure, that it is compatible with adjacent land uses and it will not have an adverse effect on the natural environment. It is a tool that can help a community achieve and maintain its desired character.

Fort Gratiot Township has provisions for site plan review in its zoning ordinance, but again, these should be reviewed as needed to help implement the policies defined in the Master Plan.

Code Enforcement

No matter how up-to-date the zoning, subdivision, or other land use ordinances may be, they are of little value unless the community has an effective code enforcement program. In order to provide an effective enforcement program, the community must have: a code enforcement officer with the financial and political backing to consistently enforce the ordinances; consistent procedures for dealing with code violations.

Code Enforcement Officer

State statutes (MCL §764.9c and §41.183) implicitly allow Townships to establish by ordinance, the position of Code Enforcement Officer. The ordinance establishing the position must designate the official or other person

to serve as the Code Enforcement Officer and the scope of his or her authority.

The state statutes also do not specify any specific official or other person as the Code Enforcement Officer, nor are the specific duties laid out, other than to state that the officer may issue appearance tickets for misdemeanors or citations for civil infractions. Most communities, however, may assign such duties to the Zoning Administrator or the Building Inspector. Currently one person in the Township handles building inspection, zoning administration and code enforcement of zoning and planning related ordinances. As the Township continues to grow, additional positions will need to be added to this department.

Code Enforcement Procedures

The following is a listing of the typical steps involved in code enforcement:¹³

1. The zoning ordinance (or subdivision, etc.) violations are “discovered” when the community becomes aware of their existence. The two primary means of discovery are active enforcement and complaint. Active enforcement occurs when the enforcement official seeks out violations by frequently monitoring properties in the community. For example, the enforcement official may periodically drive through residential areas looking for non-conforming uses. Complaint-based discovery occurs when an individual reports a possible violation to the Township. For example, someone reports that a neighbor is using a garage as an auto repair business.

No matter what form of discovery is involved, photographs or videotape recordings, if appropriate, showing the violation should be taken when an ordinance violation is discovered. These should always be dated and the location and time of day noted.

2. The property owner is notified in writing of the violation. The written notice should indicate: the nature of the violation, including the appropriate ordinance reference or a copy of the ordinance or provision; the name and address of the property owner (who is ultimately responsible for the violation); the date the violation was discovered and by whom; actions necessary to bring the situation into compliance; potential penalties, and a date by which the violation must be corrected.

A reasonable time limit should be given that is related to the effort needed to correct the violation. If the violation is a clear safety hazard, it should be corrected immediately. Shortly after the date given for correcting the violation, the enforcing officer should recheck the situation to ensure compliance has been achieved. However, note that the violator may also

¹³ *The Township Guide to Planning and Zoning*, pp. 186-189; 1998, Michigan Townships Association

appeal a zoning ordinance violation to the zoning board of appeals or request a variance.

If the recheck finds that the violation is still present, the enforcement officer may either proceed directly to legal action, or send a second notice. The second notice, which should be more strongly worded than the first, should be sent by return receipt mail. This notice may be prepared by either by the Township attorney or by the enforcement officer. If written by the enforcement officer, a copy should be sent to the Township attorney. The second notice should have the same information as the first, but will normally have a shorter completion date.

3. When written notices fail to produce compliance, the last step in the enforcement process is any legal action necessary to produce compliance. Depending on how the township zoning ordinance treats the violation, the violation may be enforced as a misdemeanor, a municipal civil infraction, or a Circuit Court injunction.

Until 1994, a violation of any township ordinance, including the zoning ordinance, could only be punishable as a criminal misdemeanor, subject to fines not exceeding \$500 and/or 90 days in jail. For violations involving misdemeanors, a notice to appear before the district court is served on the violator. If the violator fails to appear, a complaint and warrant for the violator's arrest and arraignment before the district court is issued.

Effective May 1, 1994, townships are authorized to decriminalize all or some of their infractions by amending ordinance penalty clauses to provide for civil infractions. PA 24 of 1994 amended the Township Zoning Act to either impose a penalty for violating an ordinance or designate the violation as a municipal civil infraction and impose a civil fine. The new Michigan Zoning Enabling Act (Act 10 of 2006) also continues this provision. Also, townships are authorized by the Municipal Civil Infractions statute (MCL §600.8701, *et seq.*) to establish by ordinance a municipal ordinance violations bureau to accept admissions of responsibility for municipal civil infractions and to retain the fines and costs received on such matters for the township. The bureau must use a fee schedule adopted by the township board designating the prescribed fines and costs for each violation.

The civil infractions process is similar to that used by police for speeding tickets and other moving violations. Township officials can write civil infractions tickets with little or no involvement by the township attorney. A district court judge makes the final decision if a defendant challenges a civil infraction ticket. The court has much more discretion in setting fines for civil infractions than misdemeanors, including the possibility of ordering the defendant to reimburse the township for its attorney fees, engineering fees or other associated costs. The court also has some equitable jurisdiction where a civil infraction is involved, with the authority to issue an order requiring the violator to cease and desist or

correct the situation, a power which is generally not present with a criminal misdemeanor.

In some situations, equitable relief such as an injunction or a mandatory order is more desirable. This may be accomplished more directly in Circuit Court by a written complaint and summons served on the violator. The township attorney will guide the actions of the enforcement officer in cases such as these. It is essential that all notes, pictures, videotape, copies of notices, copies of relevant ordinance provisions and any other materials related to the violation should be gathered and protected from loss. The enforcement officer should be aware of the legal process, including knowledge of depositions, testifying, and other relevant requirements.

PUBLIC ACTION

There are four other kinds of public action besides land use controls that the Township might consider using to implement the Master Plan:

1. Capital Improvements Budgeting
2. Tax Increment Financing
3. Special Assessments
4. Urban Renewal

Capital Improvements Budgeting

The Capital Improvements Budget is basically a financial plan. It is guided by and includes improvements indicated as needed in the Capital Improvements Program of the Comprehensive Master Plan. Improvements such as roads, sewer and water lines, parks, parking lots, etc. are included. The first step must be to determine the priority in which the improvements are to be provided. The Capital Improvements Budget covers a five or six year period and indicates the year in which a particular improvement is scheduled and the means of funding. At the end of the period, a new Capital Improvements Budget should be prepared. Sources of funds for improvements include:

- The general fund of the Township.
- Proceeds from the sale of bonds (general obligation, building authority or revenue bonds).
- Special assessment districts.
- Tax increment finance districts.
- Federal & State grants.

Tax Increment Financing

Tax increment financing (TIF) is a method of funding public investments in an area slated for development by capturing, for a time, all or a portion of the increased tax revenue that may result if the development stimulates private

investment. As private investments add to the tax base within the development area the increased tax revenues are placed in a special fund that can only be used for public purposes (and certain limited private uses) permitted by law. Public purposes and/or public improvements associated with a development program include the acquisition and clearance of buildings and land, relocation of residents, site improvements necessary to make land usable for new construction, street and utility construction or upgrading and planning and engineering.

Current State laws require that a community establish an eligible finance authority to serve as the organization responsible to oversee the planning and implementation of the tax increment plan in conjunction with the development program for the tax increment financing district. Once established an eligible finance authority has the responsibility to plan, arrange, finance and implement its development program in a variety of ways enumerated in the law. The eligible finance authority can issue both revenue bonds and tax increment bonds necessary to finance the eligible activities of the development program.

The following is a brief outline of the procedure to establish a tax increment financing district.

Procedure for Establishing Tax Increment Financing Districts:

1. Determine the necessity and establish the boundaries of the district. The necessity is determined by the governing body to be in the best interest of the public.
2. The governing body holds a public hearing. After the public hearing, the governing body may create the eligible finance authority and designate the district by resolution.
3. A development plan is prepared and approved by the eligible finance authority and governing body after the public hearing. The development plan shows the tax increment financing district that the plan pertains to. Also, the plan shows the assessed valuation of the district *before any new developments are built*, what the assessed valuation is expected to be *after the new private development occurs*, and what the *difference of the old and new assessed valuation is*. The difference is known as the **captured assessed value**. It is important to estimate the amount of captured assessed value that will be available each year. The available amount determines what type of public improvements and to what extent they can be made to aid in the development of the district.
4. A base year is declared following adoption of the plan.

Example of Tax Increment Financing:

To determine the actual amount of tax increment revenue available in any one year, simply multiply the captured assessed value of the proposed new development, here given as the equalized value of the relative market value of new development (i.e. the difference between the old and new market values of the district), by the total applicable tax rate of the municipality. The calculation in Figure 17 shows that, at most, \$120,000 per year is available to

make necessary public improvements for development in the tax increment financing district.

Figure 18: Tax Increment Revenue Available

Relative Mkt. Value of New Development	\$4,000,000
* Equalized Value	50%
= Captured Assessed Value	\$2,000,000
* Tax Rate	60 mills
= Tax Increment Revenue	\$120,000

When the eligible finance authority is planning on extensive construction activities such as buying property, demolition and clearance and constructing roads, sewers and water mains, \$120,000 is barely adequate to pay for the planning and engineering studies necessary to undertake the development program. Therefore, it is likely that some type of bond with longer payback terms will be needed to adequately finance the program. Eighty percent of tax increment revenues available in any one year can be used as principal and interest to retire or pay off the bond. In this example that figure is \$96,000 (see Figure 18).

The municipality must then sell a general obligation bond that will be financed by principal and interest payments of \$96,000 each year. The bond is further backed by the municipality’s tax base so that the debt payments could still be made if for some reason the tax increment revenue was not enough to make the payment.

Figure 19: Debt Retirement Revenue

Available Tax Increment Revenue	\$120,000
* Maximum Percent for Bond Retirement	80%
= Tax Increment Revenue Available for Annual Debt Retirement	\$96,000

Using the hypothetical bond terms of eight percent for thirty years, we find that \$96,000 per year will finance a bond of approximately \$1.1 million dollars. In other words, the eligible finance authority and the Township can directly finance over \$1 million worth of land purchases and development, public facility construction and other improvements within the development area from the new tax dollars that are generated by the new private investment of \$4 million.

Special Assessments

Special assessment is a financing mechanism used to secure funds for capital improvements in residential, commercial and industrial areas. Special assessment districts (SADs) are unique because they are based on the premise that where there are limited number of properties in the community benefiting from an improvement, such properties should pay the total cost of that improvement, rather than the entire community. When a capital improvement is needed, a special assessment district is established with boundaries encompassing all benefiting property owners. Each property owner is then assessed for his/her fair share of the total improvement cost. SADs are widely used in Michigan to finance drains, sidewalks, curbs and gutters, road improvements, and sanitary and storm sewer improvements.

Benefits of special assessment districts include:

- Special assessment districts offer local units of government flexibility in raising revenue. If only a portion of the property owners in the community desire certain capital improvements, SADs enable the community to only charge those properties which will specifically benefit from the improvement.
- SADs, unlike general property taxes, can be levied against all real property in a district.
- Special assessment statutes do not designate limits on the rate or duration of the levy. Some statutes allow the community to adjust the levy on an annual basis to meet operational costs and capital expenditures without public approval. However, a public hearing is required.

Limitations of special assessment districts:

- SADs increase administrative costs.
- SADs can be politically controversial and easily misused.
- Because special assessments are not taxes, property owners are not allowed to deduct them on their federal income taxes.

Special assessment districts may be initiated by the local governing body or by a citizen petition of not less 50% of the property owners of the proposed district. Once a district has been proposed, it takes five basic steps for establishment:

1. The legislative body of the community refers the proposed improvement to the community administrator for a preliminary report.
2. The legislative body reviews the material submitted and sets the date for a public hearing of necessity.
3. After a public hearing, the legislative body declares the proposed improvement a necessity and directs the preparation of construction plans and the production of the assessment roll.

4. The legislative body approves the construction plans and sets the date of the public hearing to confirm the assessment roll.
5. Final confirmation of the special assessment roll by the legislative body and authorization to proceed with the project.

Urban Renewal

Urban renewal, if applicable and desired, can be an effective tool in implementing certain aspects of a Master Plan. Land can be acquired by the Township, cleared and rebuilt. This thereby removes blight, obsolescence, and helps to achieve a larger tax base and a more stable and prosperous community.

PUBLIC/PRIVATE ACTION

Subsidized Housing

There is a variety of methods and programs designed to provide for and encourage the construction of subsidized housing for low- and moderate-income persons. There are two main types of subsidized housing: that in which the principal subsidy is low interest financing and that in which the rents are directly subsidized by the government. For the lowest income persons there is almost always a need for direct rent subsidy in order to make it feasible for them to take advantage of subsidized housing.

There are three public agencies that operate programs for the construction of subsidized housing:

1. U.S. Department of Housing and Urban Development (Detroit Area Office)
2. Rural Development Administration (Fowlerville Office)
3. Michigan State Housing Development Authority (Lansing)

These agencies provide low interest, long term financing to developers of subsidized housing. These agencies may also supply rent subsidy funds known as a "Section 8 Subsidy" together with the mortgage financing.

The construction of new subsidized housing has been drastically curtailed in recent years in an effort to control Federal spending. However, most programs are still in effect with a reduced level of funding. This tightening of funds has made the programs very competitive. Programs are designed for three types of developers: non-profit corporations (usually sponsored by a church, labor union or fraternal organization); public housing authorities; private limited-profit developers or syndicates.

Non-Subsidized Housing:

For many people, their need for apartments can often be met by the private sector through the construction of unsubsidized apartments and condominiums. The role of the Township in this instance is to set aside through zoning a supply of land suited for the construction of rental apartments and condominium apartments. These sites should be located as close as possible to commercial areas, so that

people may have convenient access to a variety of services. The sites should be serviced by adequate roads and public water and sewer.

Additional Strategies

Following are a few additional strategies that the Township may want to pursue in order to encourage and control development within the Township:

SUBAREA PLANS & STUDIES:

Within the Township, there are certain important areas and issues that need to be examined in greater detail than the Comprehensive Master Plan is able to provide. Such areas and issues are more adequately addressed in plans and studies, often known as *subarea plans* and *subarea studies*, which focus on a specific geographic area or a specific issue. The Township should consider undertaking the following subarea plans and studies:

Industrial Development Study & Plan

The Future Land Use Plan designates some of the undeveloped areas in the Township for light industrial uses such as, small-scale manufacturing, processing, warehousing, and research facilities, uses that do not result in nuisances or negative environmental impacts. However, the Plan does not indicate how light industrial uses should be developed. Thus, the Township needs to formulate an industrial development plan indicating where each of the various kinds of light industrial uses should be located. In particular, a proposal for a planned light industrial/research park should be developed.

Once the industrial development plan is in place, the Township will be in a better position to attract the kinds of industries that it needs.

Recreation Plan

Each year the Michigan Department of Natural Resources (DNR) offers recreation grants for the acquisition and development of parks and recreation facilities through the Michigan Natural Resources Trust Fund and the Land & Water Conservation Fund. Any local government unit that has a current recreation plan approved by the DNR is eligible to apply for one of these recreation grants. In order to be approved by the DNR, a recreation plan must determine the community's recreation needs and develop a five-year action plan of proposed recreation projects to meet those needs. Only those recreation projects included in the five-year action plan are eligible for recreation grant financing. The Township should update this plan every five years to ensure eligibility for recreation grants.

Bicycle Path Plan

In addition to the recreation plan, the Township should update the bicycle path plan prepared in the early 1990s to include connections to and compatibility with the County's proposed Bridge-to-Bay Trail system. The update should also coordinate bicycle paths in the Township with those proposed in Burtchville Township and the City of Port Huron.

Central Business District Study

A detailed plan would be prepared for the Township's central business district (CBD) located along State Highways M-25 and M-136 in the area between the southern border of the Township and just north of Carrigan Road. This study should be coordinated with the previously completed MDOT access management study. The area to be studied would also include lands immediately adjacent to the CBD in which planning needs to be done to determine compatible transitional future land use designations. Included in this study would be recommendations for improvements in some or all of the following areas:

- Road improvements;
- Future collector streets and/or secondary access roads and drives;
- Pedestrian circulation and safety, including bicycle paths;
- Access Management;
- Community identity;
- Sign controls;
- Landscaping, including street trees;
- Storm drainage.

This study would also examine and make recommendations regarding potential funding mechanisms required to implement the identified improvements, such as, but not limited to:

- Special Assessment Districts;
- State and Federal grants.

FARMLAND PRESERVATION

With regards to the Township's objective for preserving and protecting farmland, agricultural land uses and the rural character of the Township from development, the following tools may assist the Township in achieving those objectives:

Farmland Agreements (formerly P.A. 116)

An important tool used across the State in protecting farmland from urban development is Part 361 of the Natural Resources And Environmental Protection Act, P.A. 451 of 1994 (the terms of which were formally found in P.A. 116 of 1974). Under the terms of Part 361, an owner of certain kinds of agricultural lands may enter into a Development Rights Agreement with the State, whereby the landowner agrees to keep the land in question in agricultural use for at least ten years (or up to 90 years, as established in the agreement). In return for this Agreement, all property taxes paid in excess of 3.5% of the landowner's income will be refunded in the form of a State income tax credit. In addition, the property in question will be exempt from any local special assessments imposed during the

term of the agreement. If the landowner terminates the Agreement before it expires, all tax credits attributable to the Agreement received in the last seven years of the agreement must be repaid to the State, plus interest (except for special cases, where repayment terms may differ). Agreements may be renewed for a minimum 7-year term (up to 90 years total). If the landowner chooses to let the Agreement expire without renewal, then repayment of tax credits attributable to the Agreement received during the last seven years under the agreement is required (without interest).

Eligible agricultural lands include:

- An operating farm of more than 40 acres in size;
- An operating farm of 5 to 40 acres with a gross annual income of \$200 per tillable acre;
- An operating specialty farm (as designated by the Michigan Department of Agriculture) of at least 15 acres with a gross annual income of at least \$2,000.

At least 51% of the land in an operating farm must be under active cultivation or in pasture. The property owner does not have to provide public access to the land and the property may be sold. New owners, however, are bound by the agreement until it expires.

Although this is a State program, local communities are responsible for processing and approving applications to enroll in the program. Furthermore, the Township can encourage owners of prime and unique agricultural land within the community (and lands designated for agricultural use in the Master Plan) to enroll in the program.

Purchase of Development Rights

Development rights represent the right of a landowner to develop property to the extent allowed by law. All parcels of property have a variety of rights associated with them, such as mineral rights, access and utility easements, and development rights. These rights may be conveyed or sold off by the property owner to other parties.

A purchase of development rights program (PDR) is a means of compensating farmers for their willingness to accept a deed restriction on their land limiting or prohibiting future development of the land for non-agricultural purposes (i.e., giving up the development rights). Generally, landowners are compensated for the fair market value of their land, based on the difference between what it could be sold for on the open market with no restrictions and what it could be sold for once an easement restricting development is placed on the land. An easement is a restriction on private property that is legally binding on present and future landowners (the easement “runs with the land”).

PDR—State Program

Section 36111 of Part 361 of P.A. 451 of 1994 directed that all proceeds from expired or terminated farmland agreements be set aside for a state PDR

Program until October 1, 2000. After that date, all proceeds from expired or terminated farmland agreements, as well as all unexpended funds from the state PDR program were to be placed into the Agricultural Preservation Fund, effectively ending the state PDR program (at least in terms of direct purchases by the state).

The Agricultural Preservation Fund was created by Part 362 of P.A. 451 of 1994 to provide grants to eligible local units of government to purchase agricultural conservation easements from the owners of eligible farmland. Local units of government obtain grants from the Fund by submitting an application to the Agricultural Preservation Fund Board.

PDR—County Program

Some counties in Michigan have established (or are in the process of establishing) their own PDR programs to complement that run by the State. These county-level PDR programs are often supported by a specially designated millage. In 2004, St. Clair County established its own PDR program, administered by the St. Clair County Agricultural Preservation Board. The program is financed by the St. Clair County Farmland Preservation Fund, which is made up of funding from county, state, federal and private funding sources.

Owners of qualifying agricultural parcels may apply to the Agricultural Preservation Board to sell the development rights of those parcels during the annual application period. Qualifying agricultural parcels are those that have at least 51% of the parcels area devoted to active agricultural use and no more than 49% devoted to non-agricultural open space consisting of wetlands, woodlands or otherwise unusable land. Qualifying agricultural parcels must also meet requirements for local zoning and master planning designations.

After the application deadline, the Agricultural Preservation Board reviews submitted applications and ranks the applications according to selection criteria found in the ordinance establishing the program. The Board then prioritizes the top-scoring applications based on available funding, and submits this prioritized list to the County Board of Commissioners for preliminary approval.

The Agricultural Preservation Board appraises all parcels that it selects to purchase development rights of and then settles on purchase terms with the parcel owners. After final approval by the County Board of Commissioners, the PDR transactions are completed.

Agricultural Zoning Techniques

Various zoning techniques are available to be used by the Township for the protection of farmland from encroachment by development. However, please note that support for these measures in the agricultural community is often difficult to establish because the entire cost of preserving land which benefits all of society is unfairly put upon the individual land owner. The most common of these agricultural zoning techniques are: point/numerical zoning, sliding scale zoning, quarter/quarter zoning, exclusive use zoning and agricultural buffer zoning. Each

of these techniques may be used either alone or in combination with the other agricultural zoning techniques.

Point/Numerical Zoning

The point/numerical approach uses a series of specific standards to gauge the impacts of proposed non-agricultural development on farmland on a case-by-case basis. This is accomplished through the regulation of uniform non-farm uses as special land uses. New uses are permitted only if they meet the standards included in the zoning ordinance. These standards, which must be reasonable and necessary to achieve public objectives, are each assigned a range of point values (usually 0 to 5 points) to indicate the degree to which a proposed development meets each standard. Each standard awards higher points to the more desirable situation in terms of planning objectives. To be approved, the total number of points that a proposed development receives from all applicable standards must be greater than a minimum established threshold. Some examples of common standards are:

- The distance of the proposed development from the nearest major road;
- The distance of the proposed development from the nearest confined feedlot;
- The existing land use or cover of the land to be developed.

The U.S. Department of Agriculture, Soil Conservation Service, has devised guidelines that can help communities use a point/numerical system. Their program is called the Land Evaluation and Site Assessment (LESA) system.

Sliding Scale Zoning

Sliding scale zoning limits the number of lot splits allowed in agricultural areas for other than agricultural uses. The number of divisions (or lot splits of land) allowed depends on the size of the original parent parcel. The larger the size of the original parcel, the higher the number of lot splits allowed, up to a cap established by the community.

Requirements are placed on new splits to prevent the creation of inefficient or undesirable parcels. Requirements may include:

- Allowing only the division of land that is not well suited for agriculture or forestry;
- Maximum lot sizes (usually one to two acres);
- Minimum lot width-to-depth ratios (to prevent excessively long, narrow lots);
- Requirements that the lot have approved access to a public road (to prevent proliferation of substandard private roads). Some communities prohibit private roads in agricultural districts (or even prohibit them entirely).

Quarter/Quarter Zoning

Quarter/quarter zoning allows one residential non-farm lot split per 40 acres of farmland. (40 acres is equal to ¼ of a quarter section of a one square mile survey section of land and is known as a *quarter/quarter section*.) Once the residential non-farm lot (or lots if the farmer owns more than one quarter/quarter section) has been created, the landowner of the parent parcel is entitled to no further non-farm development. Parcel splits are recorded and monitored by the local unit of government. If the farmer owns multiple quarter/quarter sections, then all of the permitted lots may be concentrated on one of them.

The quarter/quarter system works best in areas where the average parcel sizes exceed 40 acres. To further protect present and future property owners, requirements can also be placed on new lot splits, to prevent the creation of inefficient or undesirable parcels. Requirements may include:

- The permitted lot(s) must be located on the portion of land that is not prime farmland, if possible;
- Maximum lot sizes (usually one to two acres);
- Minimum lot width-to-depth ratios (to prevent excessively long, narrow lots);
- Requirements that the lot have approved access to a public road (to prevent proliferation of substandard private roads). Some communities prohibit private roads in agricultural districts.
- Clustering of permitted lots from several quarter/quarter sections onto a single one, whereby more farmland remains concentrated on larger parcels.

Exclusive Use Zoning

An exclusive agricultural zone prohibits all non-farm dwellings and uses. Agriculturally related activities such as grain elevators, farm equipment repair facilities, etc. are permitted by special use permit. If extensive areas in the community are prime agricultural lands, with parcel sizes large enough to support viable agricultural operations (usually 40 acres or more), the best way to protect them is by prohibiting non-farm uses. Communities usually permit residences for family or workers employed on a farm.

Agricultural Buffer Zoning

Agricultural buffer zoning is a transition zoning technique that can be used to help protect the long-term integrity of prime or unique agricultural lands. A rural residential/agricultural zone is created in appropriate areas of the community, between more intensive development and large tracts of agricultural land. This transitional area, or buffer zone, allows for rural residential lifestyle opportunities and isolates agricultural operations from higher intensity uses. The buffer district should be placed in areas not

considered prime or unique for agriculture, and in areas with relatively smaller parcel sizes that are not well suited for agriculture.

The nature of regulations of these buffer districts will vary with each community. Minimum lot sizes typically range from 1 to 3 acres in these districts. Supplementary regulations that should be considered include:

- Minimum lot width-to-depth ratios (to prevent excessively long, narrow lots);
- Clustering options (to preserve open space and reduce cost of providing public services);
- Regulation of lot splits;
- Regulation of private roads (to prevent creation of substandard roads that the community may eventually be responsible for).

OPEN SPACE PRESERVATION

With regards to the Township's objectives for preserving and protecting open space from development, the following tools and techniques may assist the Township in achieving those objectives:

Land Acquisition

The most effective control over land use from the public perspective comes when the public owns the land. This is especially true when communities wish to set aside land for open space and conservation purposes. However, many communities, particularly rural ones, do not have the financial resources to purchase sufficient amounts of land.

Fortunately, there is Federal, State and County funding available to assist local communities in acquiring open space and conservation land. The Land and Water Conservation Fund, a Federal grant program, and the Michigan Natural Resources Trust Fund, a State grant program, both provide sources of funds for public acquisition of lands for recreation and conservation purposes. To qualify for funding under these two programs, communities must have a parks and recreation plan that complies with current Michigan Department of Natural Resources requirements. In addition, revenues from the St. Clair County Parks and Recreation Millage are distributed to the municipalities of the County, to be used to fund local recreation projects and programs, including land acquisition for parks.

Conservation Easements

A conservation easement is a method of preserving open space without purchasing all rights to a parcel of property. Rather than obtaining *fee simple*, or complete ownership, a community (or non-profit land trust or land conservancy) can purchase (similar to the purchase of development rights programs described earlier) or acquire by gift an easement to the property. Initiation of easements by the landowner is voluntary; however, after signing, the easement is an enforceable

document binding both parties. When an owner places a conservation easement on a parcel of property, certain rights to develop all or part of the land are transferred to another person or organization. When the easement document is properly signed and recorded in the county land records, owners cannot exercise the rights that have been given up.

Under Michigan law, conservation easements may extend for a limited period (such as 10 to 20 years) or they may be permanent. However, to benefit from Federal income tax and estate tax reductions, a permanent conservation easement must be granted. Conservation easements must be donated to a government agency, a university or a non-profit organization to be eligible for tax reductions.

Furthermore, conservation easements:

- Are very flexible; the owner may restrict, limit or decide how development will proceed on the subject parcel;
- Do not remove the land from the property tax rolls;
- Do not automatically allow public access to the subject parcel, unless that is part of the easement agreement;
- Do not limit the owner's right to lease or sell the subject parcel, but because the easement runs with the land, subsequent owners/lessors are bound by the easement agreement;
- May specify what the land may be used for in future years;
- May identify where structures may or may not be placed;
- May provide access for fishing or hunting;
- May provide for future activities such as construction of trails or other recreation facilities;
- May prohibit location of commercial and multifamily structures or billboards, or other uses on the subject parcel;
- May prohibit excavation or removal of gravel, soil and/or vegetation.

Local government officials can take several steps to encourage the use of conservation easements:

1. Identify priority resource areas where conservation easements would be beneficial for the protection of water quality, wildlife habitat and environmentally sensitive lands and resources.
2. Contact landowners in the selected areas, informing them of the option of easements and related financial incentives.
3. Encourage the participation of local land trust and land conservancy

organizations to promote the easement concept and to receive conservation easements if there is a high degree of citizen interest for the preservation of open space. Land trusts and land conservancies are non-profit organizations directly involved in protecting land for its natural, recreational, scenic, historical or agricultural value. Two land conservancies that serve St. Clair County are the Blue Water Land Conservancy and the Southeast Michigan Land Conservancy.

Open Space Agreements

Landowners may dedicate a portion of their development rights to either the State or the Township through the “open space” provisions in Part 361 of the Natural Resources And Environmental Protection Act, P.A. 451 of 1994. These provisions enable a landowner to enter into a development rights easement in exchange for property tax relief. The minimum time allotment for an Open Space Agreement is ten years. Agreements may be renewed if the property owner desires.

There are two open space options with which a property owner may become involved: *designated* open space lands or *local* open space lands. Designated lands are those recognized as unique or sensitive by the State and include open spaces with historic, riverfront, or shoreland areas. The program requires that the parcel be undeveloped, and recognized as either historic by Federal standards or included in areas designated for protection under State acts (e.g., area designated as a natural river per P.A. 231 of 1970, or high risk erosion area under Part 323 of the Natural Resources And Environmental Protection Act, P.A. 451 of 1994). Designated open space agreements are between the property owner and the State. There is no loss of property taxes to the local government for state designated areas.

Local open space lands are those areas approved by a local governing body to conserve natural or scenic resources, promote conservation of soils, wetlands, beaches, or preserve historic sites and idle potential farmland. Local open space agreements are between the property owner and the local unit of government. The local governing body provides a tax break to the property owner based on the difference between the value of the unrestricted land versus the value of restricted land under the agreement.

The property owner does not have to provide public access to the land (although the owner may do so), and the property may be sold. New owners, however, are bound by the agreement until it expires. Although the community loses taxes in the form of reduced assessments, it can avoid many of the high costs of providing public services to lands that have been prematurely developed.

The local community does have the right to place a lien on the property in an open space agreement and to collect ad valorem taxes for the last seven years of the agreement if it is sold after the agreement is expired, or if it is converted to a use prohibited by the former open space agreement.

Rural Clustering

Rural clustering is a set of techniques (primarily zoning) that focus on

preservation of open space in rural areas by encouraging new residential development to cluster in a few selected areas on a parent parcel, rather than being spread across the entire site. This permits large portions of the parent parcel to remain open. The dwelling units are clustered in areas that are screened from roadway views, out of sensitive environmental areas, avoiding prime farmland (unless there is no other location), and in locations where they can be effectively provided with services. Open spaces remaining after clustering are protected in perpetuity through a range of legal mechanisms (such as conservation easements). While the development rights of open space on a parcel approved for rural clustering will have been permanently retired, the land can still be actively farmed, used for woodlots, nurseries, pasture, or recreation. Ownership typically remains with a property owners association, a condominium association, or the open space can be transferred to a conservancy or the community. Two principal variations include:

1. Clustering options that create common landscaped open space for recreation by residents of clustered units in addition to the larger, more natural (unaltered) open space, and,
2. Cluster layouts that focus more on individual lot open space that is integrated with the larger, more natural open space area.

Figures 20 and 21 illustrate examples of a standard subdivision and a cluster subdivision on the same parcel.

Guidelines for rural clustering recommend that:

- Rural cluster zoning is most suitable in rural-to-suburban transition areas.
- Cluster district boundaries should be consistent with the boundaries of resource production areas and natural features.
- Total development in the district should be limited by gross density restrictions.
- Cluster projects should be carefully sited to minimize impact on neighbors, infrastructure systems, and the environment.
- Procedures for review and approval of cluster developments should be no more difficult than for standard subdivisions and should have incentives to encourage their use. Where they are a necessary contribution to an open space network, they should be mandatory.
- Standards for minimum and maximum project size should be established.
- Protected open space should be large enough and usable to achieve intended purposes.
- Residential development should be confined to identified cluster areas.
- Net density should reflect rural household activities such as gardening, raising animals, etc.

- The number of homesites per cluster should be limited (such as to a minimum of four and a maximum of eight).
- Lot dimensions, building heights, and setbacks should be compatible with rural character and provide the privacy, seclusion, and access to open space that are normally expected in rural areas.

Figure 20: Standard Subdivision

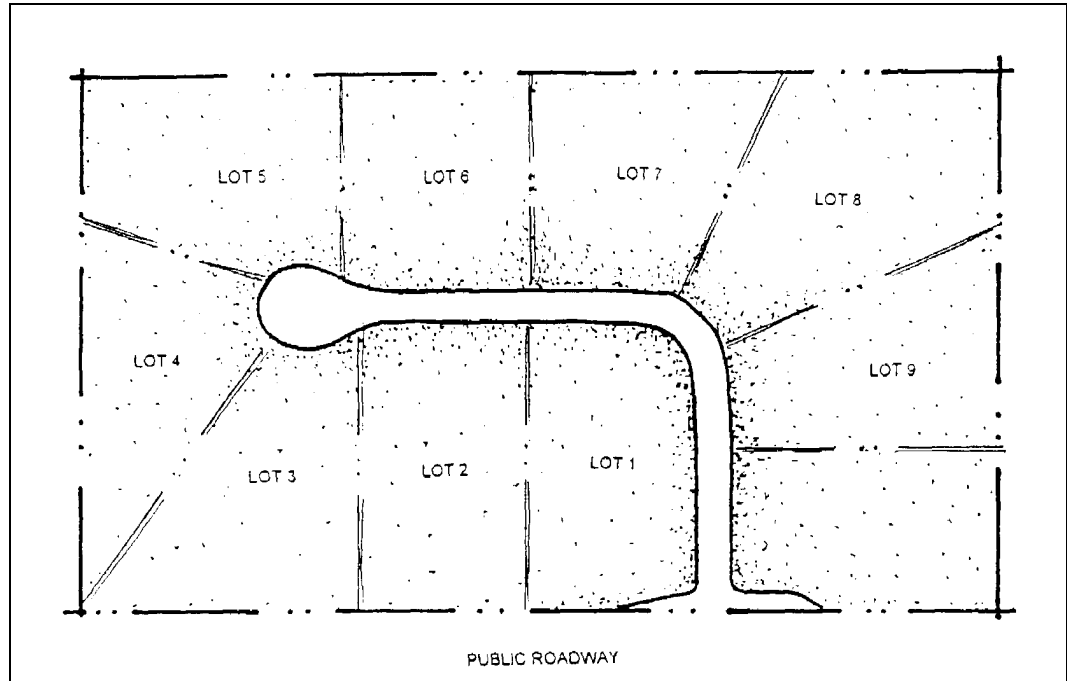
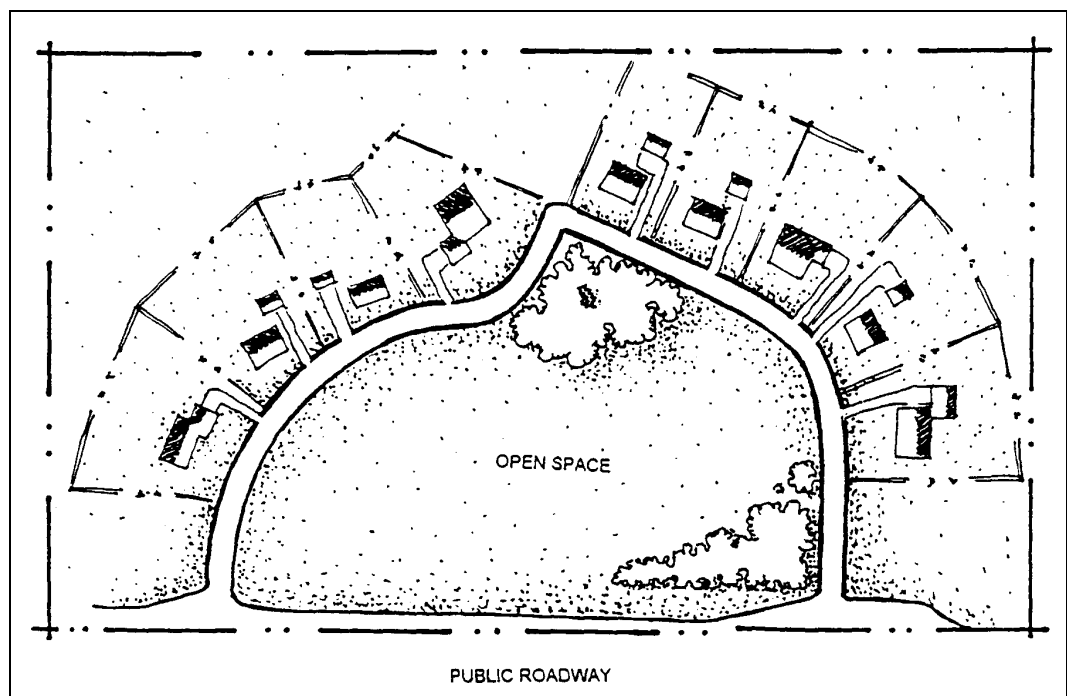


Figure 21: Cluster Subdivision



ACCESS MANAGEMENT

Access management is a development management technique designed to regulate the number and proximity of access points along transportation corridors, including highways, roads and streets. Access management requires the use of various tools for providing “reasonable,” but not unlimited, access to roadways. Access control tools include a variety of policy regulations and physical considerations to be implemented at various stages of development. When there are many curb cuts located along commercially developed transportation corridors, it causes traffic congestion, vehicular and pedestrian safety problems and driver confusion. Further, there is a negative impact on the visual character of the streetscape.

Access management of transportation corridors can be addressed through encouraging the use of marginal or parallel access roads to provide shared access to parcels rather than direct access to each parcel. This can be accomplished through the use of frontage roads, rear access roads, and with driveway/curb-cut regulations. A community’s master plan could contain policies regarding the use of marginal access roads in the community and show the sections of roads and streets in the master plan map that will require marginal access drives. Such policies and delineation should be reflected in the zoning ordinance and other appropriate ordinances and regulations.

Other considerations include:

- Provide flexible zoning to accommodate changes in frontage, setbacks, parking setbacks and access management requirements.
- Obtain rights-of-way for frontage roads or rear access roads.
- Regulate the number and spacing between driveways based on the speed limit and the distance from signalized intersections to reduce traffic hazard areas.
- Provide for safe and efficient traffic movement by reducing conflicts between through traffic and local traffic.
- Coordinate efforts with adjacent municipalities for more effective corridor access controls.
- Increase coordination between land use planning and transportation planning to foster a better understanding of land use/traffic relationships.
- Improve the aesthetics of the area.
- Provide pedestrian access.

The Township should review and update its access management provisions in the zoning ordinance in terms to better reflect the policies of the Master Plan. Specifically, the Township should review the success of the existing ordinance and study what other communities in Southeastern Michigan are doing in the area of access management.

URBAN SERVICE AREAS

Urban service areas are geographic areas within a community that are designated to have public infrastructure and services sufficient to support development at urban densities. Generally, public infrastructure includes: sanitary sewer, water, drainage, and roads. Further, it may also include such services as garbage collection, fire and police protection and parks and recreation.

Urban service areas can be an effective tool in managing the location, timing and extent of development in a community. Through the use of comprehensive planning and regulatory measures, communities can manage growth and development by coordinating land use decision making with provisions for adequate infrastructure.

Communities can direct new development to areas where facilities and services already exist or are planned to be phased in and only permit development when public services are adequate to support it. For example, it is important that on-site water and sewage disposal improvements (water and sewer lines or soils that can support a septic system and potable water) are adequate before a site plan is approved. Such an approach not only results in the most efficient use of infrastructure, but it also discourages premature development in areas not ready for it. Services can be provided in a more timely and cost effective manner while at the same time protecting natural resource areas and preserving community character.

Urban service areas must be based on the comprehensive master plan. The land use plan element could contain policies calling for the coordination of development with provisions for infrastructure. The plan map would direct higher density development in areas with existing infrastructure or designated to receive infrastructure improvements within the planning horizon. Only low-density development (that does not require substantial infrastructure) would be planned for areas not having adequate infrastructure or not scheduled for such service during the planning horizon.

Regulatory measures such as the zoning ordinance, subdivision ordinance, land division ordinance and capital improvements program can implement urban service areas as follows:

- The zoning map should reflect the phased development policy in the master plan by zoning areas with existing facilities for more intensive uses and areas not having infrastructure in place for lower intensity uses.
- Subdivision regulations should tie plat approvals to provisions requiring adequate infrastructure.
- A land division ordinance that deals with lot splits not covered by the State Plat Act should include provisions to ensure that adequate access (roads) is addressed before approving lot splits.
- The capital improvements program specifies when, where and how services will be provided, and can be used to phase infrastructure and service

development over a predetermined period of time. Priority infrastructure improvements contained in the CIP should coincide with those areas in the community targeted for immediate or near-term development.

These regulations should include flexibility in providing infrastructure. Development may be approved in an area currently without adequate infrastructure if the developer agrees to pay for the necessary improvements and service extensions.

GREEN INFRASTRUCTURE

Green infrastructure refers to an interconnected network of green space that conserves natural ecosystem values and functions and that provides associated benefits to human populations. The network of green spaces consists of “hubs” of natural areas such as: national, state, regional and local parks; wildlife refuges and nature preserves; farms and orchards; national and state forests; private woodlands and woodlots; other natural areas including floodplains and wetlands. These hubs are connected by “links”, such as: river, stream and drainage corridors, greenways and greenbelts.

As with a community’s built infrastructure (roads, bridges, sewer and water lines, other utilities, etc.), green infrastructure has important functions and benefits. Green infrastructure systems help protect and restore naturally functioning ecosystems and provide a framework for the proper location of future development. In doing so, they provide a diversity of ecological, social, and economic functions and benefits: enriched habitat and biodiversity; maintenance of natural landscape processes; cleaner air and water; increased recreational opportunities; improved health; and better connection to nature and sense of place. In fact, a community’s green infrastructure can be as important as its built infrastructure. To take advantage of these functions and benefits, communities (of all sizes) must have a comprehensive strategy to identify and map the elements of the green infrastructure and to protect these elements from improper development.

A map illustrating the green infrastructure within Fort Gratiot Township has been prepared and is a part of this document.

STORM WATER MANAGEMENT

Storm water runoff is precipitation in the form of rain or melted snow that flows over the ground and other surfaces and into drains (man-made and natural), streams, rivers and lakes. The quality and amount of storm water runoff can have serious impacts on the quality of streams, rivers and lakes. As storm water runs across yards and fields, it can pick up excess fertilizer and pesticides and as it runs across roads and parking lots, it can pick up debris, oil, grease, excess road salt and other materials. These materials, once they are carried into streams, rivers and lakes by the storm water runoff, can severely damage the ecosystems of those bodies of water. Impervious surfaces such as parking lots, roofs and roads can increase the flow rate of storm water runoff far beyond the natural rate. This can lead to overloaded drains, floodplains, wetlands and sewer systems. Storm water runoff flowing at a high rate can also lead to erosion of riverbanks and shorelines,

which can produce excess sedimentation that can also damage the ecosystems of streams, rivers and lakes.

In order to protect the quality of water in streams, rivers and lakes, communities should have policies and standards in place that encourage the use of storm water Best Management Practices (BMPs) whenever possible to minimize, collect and treat storm water. Storm water BMPs consist of methods or a combination of methods that prevent or reduce water pollution, such as the following examples:

- Require developers to include detention ponds that detain storm water, and let it out slowly (at the “natural” flow rate) until the pond is dry;
- Require developers to include retention ponds that “retain” storm water, holding it until it infiltrates into the ground or evaporates;
- Regularly clean and maintain municipal storm water systems;
- Encourage the preservation of natural vegetation along riverbanks and shorelines, to help filter pollutants and sedimentation from storm water;
- Make off-street parking requirements more flexible, allowing for smaller parking lots to reduce the amount of impervious surfaces in the community;
- Encourage parking lot landscaping that can also serve to filter and reduce the flow rate of storm water;
- Discourage the overuse of fertilizer and pesticides;
- Encourage the proper disposal of waste oil and other refuse;
- Encourage cluster housing developments that require fewer roadways and shorter driveways.
- Prohibit all physical connections to the storm water drainage system that convey any material other than stormwater;
- Implement measures to detect, correct and enforce against illegal dumping of materials into storm drains, lakes and streams,
- Implement spill prevention, containment, cleanup and disposal techniques to prevent or reduce the discharge of pollutants from commercial, industrial and municipal sources into stormwater.

A comprehensive listing of storm water Best Management Practices can be found in Chapter Six of St. Clair County’s Northeastern Watersheds Watershed Management Plan, which was adopted in 2006.

Appendix

Maps

- Existing Land Use
- Quaternary Geology
- Soil Limitations for Septic Systems
- Natural Resources
- Community Facilities
- Water & Sewer Service Areas
- Thoroughfare Plan
- Land Use Plan
- Planned Urban-Rural Service Areas
- Open Space Network/Green Infrastructure
- Watersheds