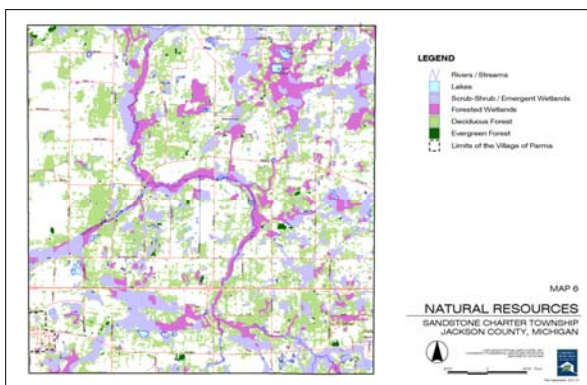
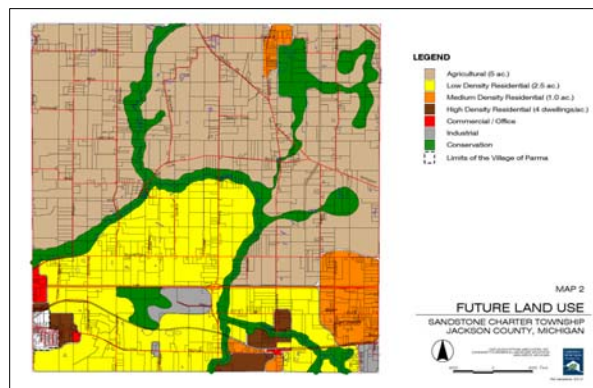


Sandstone Charter Township Jackson County, Michigan

Master Future Land Use Plan



Adopted March 4, 2008
Sandstone Charter Township Planning Commission

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Introduction

This document represents the revision and update of the Sandstone Charter Township Master Future Land Use Plan, adopted in 1998. Since the adoption of the 1998 plan, a number of changes have occurred both within the Township and the surrounding area. To ensure that development policies reflect current Township conditions, it is essential that the Land Use Plan be periodically reviewed and updated. The Sandstone Charter Township Land Use Plan presented here specifically excludes the incorporated Village of Parma, which is responsible for putting into place its own plan for future development as provided in the Municipal Planning Act, Act 285, 1931.

As part of this planning effort, a number of studies have been conducted to evaluate existing and future conditions in Sandstone Charter Township. A background study, summarized in this plan, was undertaken to update information from the previous 1998 plan and identify any new trends or changes within the Township. A comprehensive resident survey was conducted to help direct the goals, policies and recommendations of this plan, and a Township Visioning Session was completed on August 24, 2006 to help further define the desires of Township residents.

What is Planning?

Planning is a process involving the conscious application of policies relating to community-wide land use and growth/development issues. The Land Use Plan is the official document which establishes policies for the future physical development of the Township.

Sandstone Charter Township derives authority for formulation of a Land Use Plan from the Township Planning Act, Act 168, 1959. Section 6 of Act 168 directs the Planning Commission thus:

The planning commission shall make and adopt a basic plan as a guide for the development of unincorporated portions of the township. As a basis for the plan, the planning commission is hereby empowered to (1) make inquiries, investigations and surveys of all the resources of the township and (2) assemble and analyze data and formulate plans for the proper conservation and uses of all resources, including a determination of the extent of probable future need for the most advantageous utilities required to equip such lands.

It should be reiterated that Act 168 clearly identifies the Township Planning Commission as the internal agency charged with the responsibility to "make and adopt" the Land Use Plan. However, as the elected governing body of the Township, the Board of Trustees may adopt a Resolution of Concurrence which makes clear that the Board is in agreement with the goals, objectives, and policies as summarized in the Plan.

How is the Plan to be Used?

The Plan serves many functions and is to be used in a variety of ways:

- 1) serves as a general statement of Sandstone Charter Township's goals and policies and provides a single, comprehensive view of the community's plan for future development;
- 2) serves to direct daily decision-making, with goals and policies outlined in the plan guiding Planning Commission and Township Board of Trustees on zoning, land subdivision, capital improvements, and other matters relating to land use and development, and providing a stable, long-term basis for decision making;
- 3) provides the statutory basis upon which zoning decisions may be predicated, as specified in the Municipal Zoning Act 110, 2006 which requires that the zoning ordinance and zoning map be based upon a plan designed to promote the public health, safety, and general welfare;
- 4) coordinates private development and public improvements by recommending that public expenditures for such items as road improvements, utilities, and major community facilities be located in those portions of the Township identified in the Plan as being best suited to accommodate higher density development;
- 5) and functions as an educational tool, providing citizens, property owners, developers, adjacent communities and public agencies a clear indication of the Township's proposed direction for the future.

Thus, the Sandstone Land Use Plan is the officially adopted document setting forth the agenda for achievement of targeted goals and policies aimed at achieving unified, coordinated, long-range Township development. In this capacity, the Plan establishes the basis upon which zoning and land use decisions may be made. However, it must be understood that the Land Use Plan

does not itself place any legal restriction upon private property; this responsibility falls to the Zoning Ordinance.

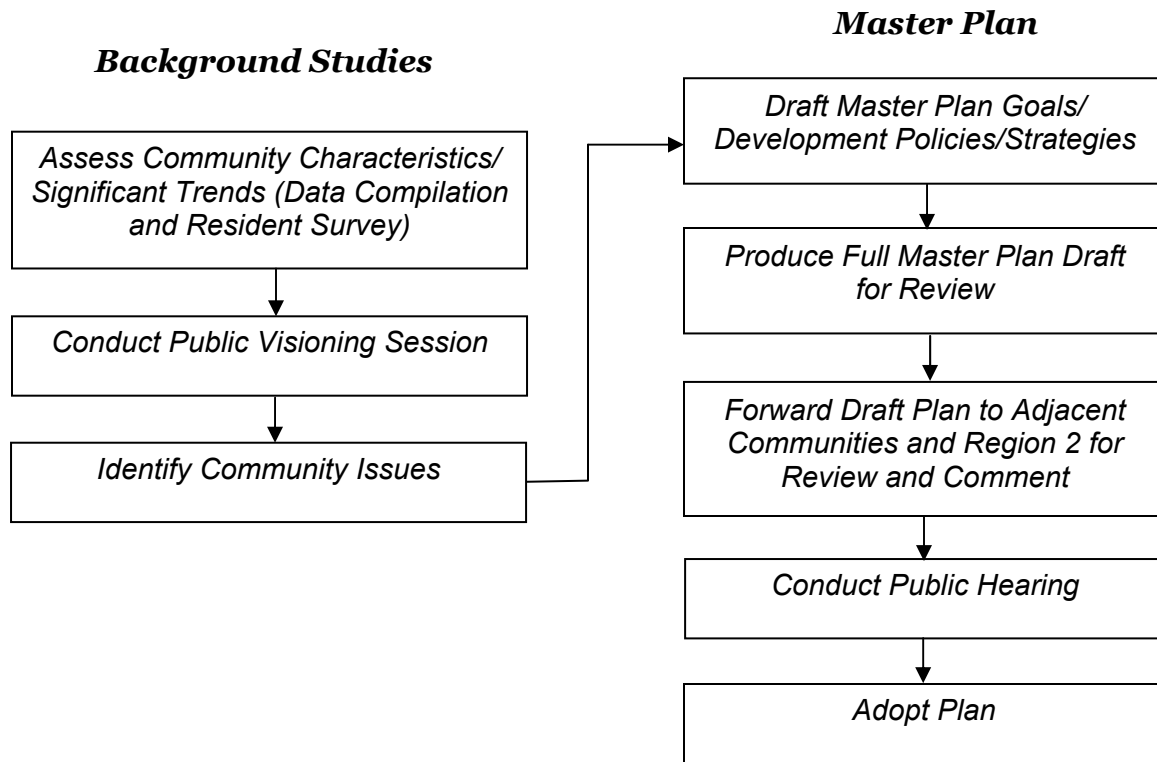
Plan Process

The preparation of this plan consists of two major study elements: Background Studies and Master Future Land Use Plan. These elements are described below and shown in Figure 1.

Background Studies – The Background Studies consist of basic data and information that establish a baseline of conditions in the Township. Background Studies consist of three components: community characteristics, significant trends and identification of community issues. While not technically part of the background studies, the community wide survey as well as the community visioning session are also vital components in determining both community trends and issues.

Master Future Land Use Plan – The Master Future Land Use Plan represents the long range view of the Township, focusing on more of the traditional elements considered in planning such as future land use, thoroughfares, and community facilities. As part of the Plan, specific goals and objectives and strategies are also identified. Specific strategies are intended to address those goals and issues identified through the Master Plan process. The end result is a document that takes a targeted approach to the solution of specific issues.

FIGURE 1: COMMUNITY PLANNING PROCESS



Plan Organization

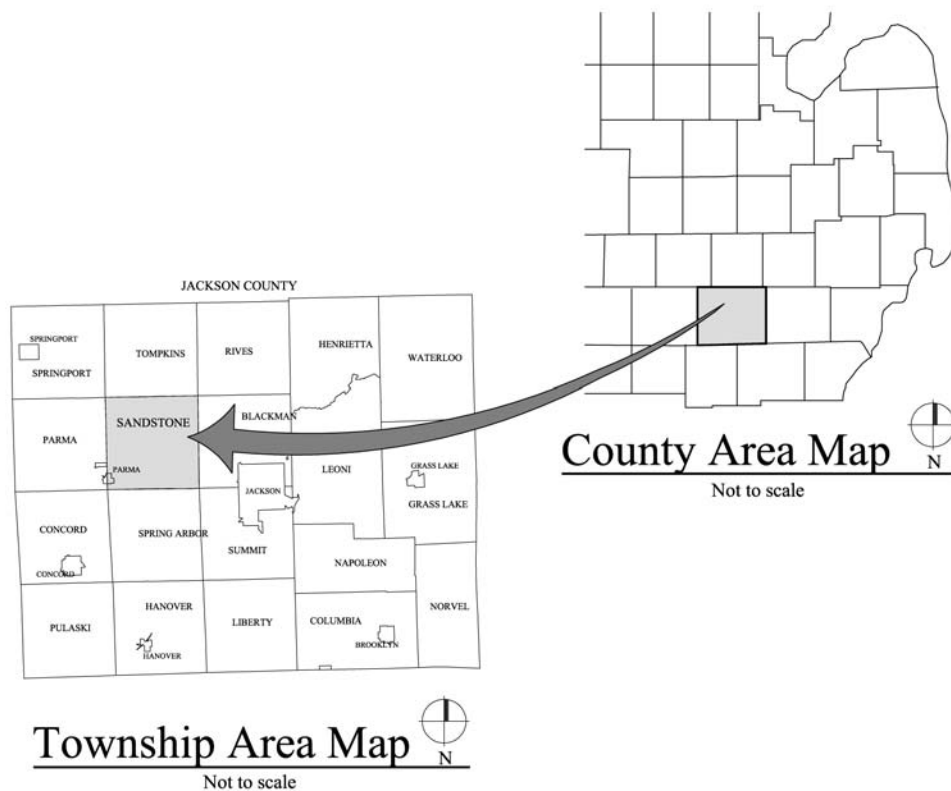
The Sandstone Charter Township Master Future Land Use Plan is comprised of five basic sections. The "Community Goals and Policies" section summarizes goals and policies which provide a framework for structuring the final plan. The "Future Land Use Plan" and "Thoroughfare Plan" each result from the combining of current conditions with a vision of the future. The "Implementation" section briefly summarizes those tools to be employed to carry out the goals and policies recommendations. The "Background Summary," included as part of the appendix, discusses current conditions and projected trends and documents the point from which planning may be initiated. The full results of the Township Visioning Session as well as the Township survey will also be included in the appendix of this plan. While the starting point (existing conditions) is unalterable, end results may be modified and directed through judicious application of the community policies established in the plan.

Regional Context

General Location

Originally part of the Township of Spring Arbor, Sandstone was established in 1837 by act of the State Legislature. It incorporated as a charter township in 2000 due to increased commercial and industrial development and the need for expanded municipal powers. Sandstone Charter Township is situated in the northwesterly portion of Jackson County, approximately two and one-half miles west of the City of Jackson. The Township is bordered north, east, south, and west by Tompkins Township, Blackman Township, Spring Arbor Township, and Parma Township/Village of Parma, respectively. Urbanized areas in close proximity to the Township include the City of Jackson (two and one-half miles to the east), the City of Battle Creek (36 miles to the west), and the City of Ann Arbor (46 miles to the east). A portion of the Village of Parma occupies the Township along the westerly boundary and is the only incorporated government entity within Sandstone Charter Township. (see Map 1: Regional Context).

MAP 1: REGIONAL CONTEXT



Highway Corridors

Access to the Federal/Regional highway system is provided within the Township's boundaries via full interchanges at both Dearing and Parma Roads. Another access to I-94 is provided by an interchange at the northerly terminus of M-60, less than one and one half miles east of the Township. I-94 traverses the Township east/west, and provides the major highway link between Detroit and Chicago and other interstate destinations. The I-94 corridor represents somewhat of a barrier, between the southerly one-third of Sandstone Charter Township and the northerly two-thirds. However, adjacent section line roads facilitate traffic dispersal from the I-94 interchanges to all reaches of the Township.

Michigan Avenue, also known as "Old US 12" located one mile south of I-94, offers an alternative east/west route through the Township, linking the City of Jackson to the Village of Chelsea in Washtenaw County to the east, and to the City of Albion in Calhoun County to the west. Both I-94 and Michigan Avenue intersect US-127, approximately six miles east of Sandstone Charter Township, thus providing access to the City of Lansing and Michigan State University to the north and both Hillsdale and Lenawee Counties to the south.

Railroads

Conrail maintains a rail line to accommodate the Detroit/Chicago Amtrak passenger line, running through both the City of Jackson and Sandstone Charter Township. The Albion Railroad Depot and the Jackson Railroad Depot provide the regional point of passenger access to the rail line.

Airports

The general aviation facility nearest to the Township is approximately two and one-half miles east, in the vicinity of Airport Road and Wildwood Avenue in the City of Jackson. Major airports include Lansing's Capital City Airport to the north and Wayne County's Metropolitan Airport, approximately one and one-quarter hours east, via I-94.

Community Goals and Policies

Goals and Policies

The Sandstone Charter Township Planning Commission recognizes that the establishment of adequate, realistic development goals and policies is essential to the creation of a workable Master Future Land Use Plan. Prior to the development of goals and objectives, the residents and business owners of the Township were given the opportunity to provide their input on the future direction of Sandstone Charter Township. A rather intensive public input program was implemented consisting of two (2) parts as described below:

Master Plan Visioning Workshop

On August 24, 2006, the Sandstone Charter Township Planning Commission conducted a Visioning Workshop. The purpose of the workshop was to provide Township residents a way to contribute to the Master Plan process through public participation.

The workshop was open to the public and was advertised via a press release in the Jackson Citizen Patriot newspaper and through a survey sent to Township residents. Participants at the workshop broke into four (4) groups to discuss the following land use issues:

- Housing Issues
- Commercial & Industrial Land Use/Economic Development
- Parks, Open space, and Natural Features
- Transportation Issues
- Community Image and Aesthetics

Each of the four (4) groups discussed the land use issues noted above through a “visioning” or “brainstorming” exercise. Ideas or “visions” that came out of the small group sessions were written on “flip charts” and then taped to the walls. Participants were then directed to vote on their top five (5) visions to help come to group consensus.

Of all votes cast, the following is a listing of the top two (2) visions of each group:

Group 1

Low Density with rural atmosphere
Favor large acre lots

Group 2

Keep more farmland
Fewer, smaller developments – larger lots

Group 3

Stay rural
Not become Blackman Township

Group 4

Rural is good
2 1/2 acres is good

It is very clear from the Township Visioning session that the maintenance of the Township's rural atmosphere and the preference for large lot development received overwhelming consensus among attendees. For a full accounting of all vision statements and results, please see Appendix "A".

Master Plan Survey

In the fall of 2006, a 50 question survey was sent to all property owners in Sandstone Charter Township. The 363 surveys (22.6%) returned were tabulated, analyzed, and discussed by the Commission (See Appendix "B"). In this way, an assessment of citizens' attitudes was obtained prior to making decisions required in formulating the Master Land Use Plan.

The survey was divided into five (5) broad topic areas.

- Part A: Community Planning Issues
- Part B: Community Services Issues
- Part C: Community Millage Issues

- Part D: Community Demographic Information
- Part E: Other Community Issues

With regard to Community Planning Issues, the survey indicated that the overwhelming priority of respondents is to maintain existing rural agricultural/residential character, to restrict certain high density development and to protect natural features. Those that responded felt that lot sizes should be larger than one acre and that apartments, townhouses, condominiums and manufactured housing should be restricted.

In terms of home occupations, it was felt that employment should be limited to resident family members; in residential districts, home occupations should be limited to the primary residents; and, in agricultural districts, home occupation should be allowed within an accessory structure. It was also clear that respondents wanted home occupation violations to be enforced.

With regard to commercial development in the Township, the survey revealed a few key points. A majority of the respondents agreed that “small-scale neighborhood commercial (groceries, pharmacies, convenience stores, etc.)” should be encouraged. The encouragement of additional office, industrial, and research parks did not have support.

While not directly considered “community services”, a number of questions were asked with regard to the importance of natural features in the Township. The impacts to these features may, however, have effects on water well quality and stormwater “run off” and therefore have an impact on community services.

The above comments are only a brief summary of the key findings of the Township Visioning Session and Master Plan Survey. For a full accounting of both, please see Appendix A and Appendix B at the end of this report.

Using the full visioning report and survey, the Sandstone Charter Township Planning Commission has formulated the following community goals and policies to serve as the basis for the future development of the Sandstone Community. Goals are the general statements that define the direction and character of future development. Policies set forth the framework for action and form the basis upon which more detailed development decisions may be made. Adoption of policies does not commit Sandstone Charter Township to any particular recommendation, but, rather constitutes a commitment to take actions consistent with policy guidelines.

Goals

The following statements reflect the primary goals of Sandstone Charter Township:

- Maintain the rural character and preserve the local characteristics of Sandstone Charter Township including a viable, stable, agricultural industry. It shall be the Township's goal to encourage the retention and preservation of farmland in agricultural production as well as the preservation of general open space. It is a primary goal of Sandstone Charter Township to maintain its agricultural heritage, culture, and way of life.
- Preserve and protect the natural resources including woodlands, lakes, streams, and watersheds that are essential to help maintain the rural character and aesthetic qualities of Sandstone Charter Township.
- Guide the development of the Township in a manner which will create, preserve and enhance the living environment of the existing and future residential areas of the community.
- Promote quality, job producing economic development within the Township. In addition to the production of jobs, commercial development that serves the needs of Township residents should be encouraged.
- Provide for timely and efficient governmental services providing quality service to Township residents without the need for additional millage from the taxpayers of Sandstone Charter Township.

Agricultural/Open Space Goal

Maintain the rural character and preserve the local characteristics of Sandstone Charter Township including a viable, stable, agricultural industry. It shall be the Township's goal to encourage the retention and preservation of farmland in agricultural production as well as the preservation of general open space. It is a primary goal of Sandstone Charter Township to maintain its agricultural heritage, culture, and way of life.

Policies

- 1) The Township shall identify prime agricultural lands and prime agricultural soils for the concentration of farmland preservation efforts. The identification of such soils shall be considered as a part of any development proposals.
- 2) The Township shall discourage non-agricultural development of important farm lands through the Master Land Use Plan and Zoning Map.
- 3) The Township shall explore the enrollment of Public Act 116, Farmland Agreements, Purchase of Development Rights (PDR), Conservation Easements, or other means to maintain the viability of agriculture and open space in the community.
- 4) In meeting the above policy, the Township will consider adopting a Purchase of Development Rights (PDR) Ordinance in an effort to enroll properties into this program.
- 5) The Township strongly discourages the extension of municipal sewer and water into prime farmland areas.
- 6) The Township will strive to identify and preserve historic centennial farmsteads.

Natural Resource Goal

Preserve and protect natural resources including woodlands, wetlands, lakes, streams, and watersheds that are essential to help maintain the rural character and aesthetic qualities of Sandstone Charter Township.

Policies

- 1) The Township shall promote preservation of the balance of woodlands, watercourses and open spaces in the Township that creates the rural aesthetic which is central to the community's character.
- 2) The Township shall review all proposed development in light of potential impact upon waterways, wetlands, woodlands and natural resource areas, and groundwater.
- 3) The Township shall promote efforts to preserve and improve natural vegetation buffers around watercourses (streams and drainage ways) to reduce erosion, cleanse stormwater and promote groundwater recharge.
- 4) The Township should consider the impacts of development on groundwater recharge areas, since groundwater is the primary source of drinking water.
- 5) The Township shall consider adopting ordinance language to help ensure the protection of important natural features including woodlands, wetlands, and groundwater recharge areas.

Residential Goal

Guide the development of the Township in a manner which will create, preserve and enhance the living environment of the existing and future residential areas of the community.

Policies

- 1) Promote quality single-family housing at a low density which will maintain the rural character of the community.
- 2) Promote the development of a variety of housing types and residential living environments to accommodate and reflect the various income levels and age groups within the Township.
- 3) Propose only low density/agricultural (5.0 acres or greater) land uses in areas where natural resource conditions are least capable of supporting development. Natural resource considerations should include soils, woodlands, wetlands, rivers, bodies of water and steep slopes. Man-made resource considerations include roads and access to municipal services.
- 4) Propose low density (2.5 acres) residential and medium density (1.0 acre) residential uses in areas where the natural resources or infrastructure are capable of supporting such development, i.e. adequate soils to support septic systems, as well as adequate roads and other factors that may affect density such as natural features, etc.
- 5) Higher density residential development should only be planned for areas where it is likely that adjacent municipal sewer system(s) can be extended. At this time higher density residential is planned only adjacent to the Village of Parma.

- 6) Restrict multi-family residential districts and mobile home parks to locations which have direct access to municipally-owned sewer and water facilities.

Commercial/Economic Development Goal

Promote quality, job producing economic development within the Township. New economic development should diversify the tax base and help maintain low millage rates in Sandstone Charter Township. In addition to the production of jobs, commercial development that serves the needs of Township residents should be encouraged. The expansion of agricultural uses of land should be considered a part of the economic development goal of the Township.

Policies

- 1) Provide adequate zoning, and infrastructure for the expansion of agriculturally-based industry.
- 2) Provide job opportunities for local residents through economic expansion including limited expansion of commercial and industrial property.
- 3) Discourage the introduction of new commercial and industrial development beyond the scope outlined in the Township Master Plan. New commercial development should be developed primarily for the local needs of Township residents.
- 4) Encourage new commercial/industrial development to selected areas within the Township and to selected areas with frontage along Michigan Avenue as well as selected locations with frontage on I-94.

Government Services/Transportation Goal

Provide for timely and efficient governmental services providing quality service to Township residents without the need for additional millage from the taxpayers of Sandstone Charter Township.

Policies

- 1) Coordinate road improvements with the Jackson County Road Commission. Encourage the County to initiate road improvement projects in key areas as noted below.
 - Improve the County Farm and Dearing Road intersection with a four (4) way stop. A traffic signal should be considered.
 - Improve the County Farm and Sandstone Road intersection with a four (4) way stop. A traffic light should be considered.
 - Improve safety at Michigan Avenue and Dearing Road including turn lanes and a left turn signal.
 - Repave County Farm Road between Blackman Road and Glasgow Road.
 - Improve Blackman & Michigan Avenue Intersection – RR Trestle causes back-up due to blind corner and one-lane configuration.
 - Work with the Jackson County Road Commission and other applicable agencies to review speed limits on selected roadways and to reduce speeds where possible.
- 2) Limit residential density to help reduce traffic on local roads and the related need for road maintenance.
- 3) Improve the overall code enforcement function of Sandstone Charter Township.

Future Land Use Plan

As indicated earlier, the Master Plan is more than a series of maps. Goals establish a direction. Policies, represented in both graphic and narrative form, identify the more specific manner in which the goals are to be implemented.

The Future Land Use map, provided on the following page, serves as a graphic representation of the Township's goals and policies. The Future Land Use map is not a zoning map, but rather a generalized guide to the desired future land use patterns within the Township. It is not necessarily intended to follow existing lot lines. Generally, the future land use categories follow established boundaries such as roads, rivers, etc.

In the course of preparing the plan, several factors were considered: existing development patterns, demographic trends, regional influences, sewer and water service areas, natural resource conditions, and road patterns. In addition to these factors, the plan considered the comments and opinions gathered during the community-wide visioning session and Township Master Plan Survey, as well as numerous meetings with the Township Planning Commission. To this extent, it reflects general policy toward development and redevelopment within the Township.

Land Use Plan Categories

The section below provides a description of each of the future land use categories used in the future land use map. Each category below provides a general description and intent, and a listing of appropriate uses and their corresponding zoning classifications, where applicable.

Agricultural

Intent – The intent of this category is to preserve agricultural lands, as well as other significant natural features, including woodlands and wetlands and to establish low density residential and compatible open space uses.

MAP 2: FUTURE LAND USE PLAN

Description – The recommended density in these areas is for one dwelling unit per five (5) acres. Areas planned for Agricultural are found where existing land use patterns support this type of density, areas with “prime agricultural soils,” areas with an existing road system not suitable for higher density residential development, as well as areas that have been found to have significant natural features that would best be preserve through the reduction of residential density. Significant natural features include forested wetlands, water courses, lakes, and wooded areas.

Appropriate Use – Agricultural / Farming uses including compatible open space related land uses, as well as very low density single-family detached dwellings.

Low Density Residential

Intent – It is the intent of this category to accommodate low density non-farm residential uses, as well as existing agricultural land uses, and to aid in the preserving of natural resource features.

Description – The recommended density in these areas is proposed to be one (1) dwelling unit per two and one-half (2.5) acres. A lack of public sewer and water services eliminates the suitability of this land for more intense land uses. Low Density Residential is planned for areas with similar land use characteristics, i.e. areas with existing land use patterns of 2.5 acres or greater, and areas where low density development may help preserve significant natural features.

Appropriate Use – Desirable land uses and elements of the Low Density Residential category include:

- Farming operations
- Single family dwellings on parcels 2 1/2 acres in size or greater.
- Scenic road corridors, defined by tree-lined borders and narrow road widths.
- Landscape features and landmarks such as old orchards, outbuildings such as silos and barns, fences and sound farm structures.
- Scenic views and features consisting of natural and cultural features.

- Community support facilities such as churches, schools, and public buildings.

Medium Density Residential

Intent – It is the intent of this category to accommodate medium density residential land use in areas of the Township that are most likely to feel the pressure of growth within the Township.

Description – The recommended density of the Medium Density Residential category is one dwelling unit per one (1) acre. Areas planned for this category are generally found in areas of the Township that have developed in a residential pattern. These areas are generally not actively farmed and have access to adequate roadways and soils suitable for on-site septic systems. Consideration has also been given to the Jackson County Regional Plan as developed by Region 2 Planning.

Appropriate Use – Desirable land uses and elements of the Medium Density Residential Land Use are:

- Single-family residences in either clustered or conventional subdivision/site condominium development.
- Parks, open spaces and conservation areas.
- Community support facilities such as churches, schools, and public buildings.

High Density Multiple-Family Residential

Intent – High density multiple-family (attached) residential land use is planned for selected areas of the Township able to accommodate higher density residential land use and offers the opportunity for a variety of housing types within the Sandstone Community.

Description – The recommended residential density for this district is four (4) dwelling units per acre. Units may be attached or detached. Areas only in proximity to existing municipal services, i.e. sewer and water, are to be contained in this category. It is recognized that municipal utilities are necessary to accommodate High Density Multiple-Family Residential and shall only be permitted in those areas served or planned to be served by municipal services.

Appropriate Uses – Desirable uses and elements of the High Density Multiple-Family Residential category include:

- Single-family residences, attached and detached.
- Parks, open spaces, and conservation areas.
- Community support facilities such as churches, schools, and public buildings.

Commercial/Office Land Use

Intent – It is proposed that commercial land uses be comprised predominantly of the types of businesses devoted to serving the convenience needs of Sandstone’s residents, although provision is also made to accommodate some office service uses as well as highway-oriented commercial uses. It is the intent to site commercial/office uses at major roadway intersections, while also acknowledging the existing locations of these types of uses within the Township.

Description – Commercial/office uses are generally planned at major roadway intersections, while also acknowledging the existing locations of these types of uses within the Township. As noted above, it is the primary goal to allow these facilities for the needs of the residents of Sandstone Charter Township, e.g. local commercial/office rather than regional type facilities, i.e. land uses that serve the greater Jackson County community including “big-box” retail type uses.

Appropriate Uses – Desirable land uses and elements of the Commercial designation are:

- Commercial uses and activities as described in the C-1 Zoning District.
- Commercial uses and activities as described in the C-2 Zoning District.

Industrial Land Use

Intent – It is the intent to provide limited areas for industrial land use for the creation of jobs and the promotion of economic development for Sandstone Charter Township.

Description – The site of the MACI manufacturing facility and adjacent vacant property currently owned by the Local District Finance Authority is one of the two major areas targeted for industrial development. The other area is located south of the Michigan Avenue/Blackman

Road intersection. Several other industrial uses are clustered at various Michigan Avenue intersections.

Appropriate Uses – Uses as permitted in the LI, Limited Industrial Zoning District would be appropriate in this category.

Open Space / Recreation

Intent: Land designated as Conservation is intended to provide areas for an open space system which preserves and enhances floodplains, woodlands, and wetland areas. It is not the intention to prohibit development within areas identified as Open Space/Recreation, but rather to raise the awareness of significant natural features that should be considered in any development proposal.

Description: This category is also intended to protect and preserve the unique Township natural resources while broadening recreational opportunities and an appropriate use of the land. Residential land use may be permitted within the Open Space/Recreation designated areas at a density of one unit per five (5) acres. Low density residential land use will help to preserve significant natural features as identified.

Relationship to Physical and Natural Features: Land in this use category generally includes environmentally sensitive areas where natural features need to be protected to preserve a balanced ecosystem.

Appropriate Uses:

- Public or private conservation area
- Active and passive recreational activities
- Low density residential land use

Thoroughfare Plan

The purpose of the road network within Sandstone Charter Township is to provide for the safe and efficient movement of people and goods. Adequate roads are essential for commerce and daily activities. Given the rural setting of the Township and that the majority of residents live in low density single-family development, the private automobile will continue to be the dominant mode of transportation.

Roadway Classification and Responsibility

Roadway classifications are often confusing because planning agencies use the classifications for different purposes. Administrative jurisdictions identify roads in terms of governmental responsibility for construction and maintenance. Roadway classifications are also used to determine eligibility for state funding and federal aid. Functional classifications are used to group streets and highways into classes, or systems, according to the character of traffic service they are intended to provide.

Administrative Jurisdiction

Act 51 of the Public Acts of 1951, as amended, creates a fund into which specific transportation taxes are deposited, sets priorities for the use of transportation revenues, and charges county road commissions with the responsibility of classifying county primary and local roads. The classifications developed by the county road commissions are subject to Michigan Department of Transportation (MDOT) approval. Roads designated as primary roads must be of “the greatest importance”. This determination is based on traffic volumes, primary generators of traffic served and other factors.

MDOT and the Jackson County Road Commission (JCRC) share responsibility for the operation and maintenance of the road network within Sandstone Charter Township. In the Township, MDOT is responsible for maintenance and improvement of I-94 and M-50.

The remainder of the Township’s roads falls under the jurisdiction of the JCRC. By designating a road as part of the County Primary System, State and Federal weight and gas tax revenues can be obtained for maintenance. All public roads not classified as interstate, state, or primary roads are local roads.

Functional Classification

The Transportation Plan presented on the following page proposes the hierarchy of transportation routes based upon the National Functional Classification (NFC) System. NFC is a planning tool which has been used by federal, state and local transportation agencies since the late 1960's. Functional classifications are used to group streets and highways into classes, or systems, according to the character of traffic service they are intended to provide. The NFC designation also determines whether a road is eligible for federal funds, either as part of the National Highway System (usually limited to principal arterials) or through the Surface Transportation Program. Federal-aid roads include: all Principal Arterials, all Minor Arterials, all Urban Collectors, and all Rural Major Collectors.

Principal Arterials

These roadways are at the top of the classification hierarchy. The primary function of such roadways is to carry relatively long distance, through-travel movements. Examples include interstates and other freeways as well as state routes between larger cities. The major federal interstate highway route between Detroit and Chicago is I-94, which traverses the southerly one-third of Sandstone Charter Township. Interchanges are located at Dearing and Parma Roads.

Minor Arterials

Minor Arterials include roads connecting intra-urban land uses. These roads tend to accommodate slightly shorter trips than principal arterials. State highway M-50, the Township's only designated Minor Arterial, passes through the extreme northeast corner of the community, connecting Jackson with Charlotte to the northwest, and Monroe to the southeast.

Major Collectors

Major Collectors provide access and mobility within residential, commercial, or industrial use and connect Local Roads to Arterials. Major Collectors generally carry more traffic than Minor Collectors. Sandstone Charter Township's Major Collector roads include Michigan Avenue and County Farm Road (east/west); Dearing and North Parma Roads, and Blackman Road, between Michigan Avenue and County Farm Road (north south); and Springport Road, which bisects the northeasterly quadrant of the community in a northwest/southeast alignment.

MAP 3: NATIONAL FUNCTIONAL CLASSIFICATIONS MAP

Minor Collectors

Minor Collectors also provide access amongst varying land uses, but generally have less traffic than Major Collectors. There are no Minor Collectors located within Sandstone Charter Township.

Local Roads

Local Roads provide access to individual properties and typically have moderate speeds. The improvement of Local Roads typically rates the lowest priority. The remainder of the Township roads are classified as Local Roads.

Use for Planning

Functional Classification can and should be used as a planning tool in helping to determine the locations of certain land uses. Uses, either permitted by right or those permitted after special approval, that generate significant amounts of traffic (i.e. traffic that is out of character with the adjacent uses of land) should be considered only if they have frontage on a major collector. Uses that generate significant amounts of traffic should be prohibited in areas that have frontage only on local roads as depicted on Map 3.

Road Right-of-Way Plan

The road right-of-way plan consists of a map that indicates the existing right-of-way widths for roads in Sandstone Charter Township. Right-of-way widths are established based on research that indicates required road specifications to provide various levels of service. The Master Right-of-Way Plan published by Jackson County, and adopted by the Sandstone Charter Township Board and Planning Commission is an important planning document because setbacks and other development standards should be established in relationship to existing or future right-of-way widths. Map 4 provides the existing road right-of-way widths for the road system within Sandstone Charter Township.

MAP 4: EXISTING RIGHTS-OF-WAY MAP

Traffic Volumes

The following traffic volumes are 24-hour, one-way, traffic counts, based upon information provided by the Jackson County Road Commission. The links indicated in the table below feature average daily traffic greater than 1,000 vehicles.

TABLE 1: HIGHEST AVERAGE DAILY TRAFFIC (ADT) VOLUMES BY ROADWAY LINK

Date	Direction	Road Name	Location	A D T
5/26/2004	W	W. MICHIGAN	O'BRIEN & BLACKMAN	3542
6/25/2002	W	W. MICHIGAN	SANDSTONE & O'BRIEN	3498
5/26/2004	E	W. MICHIGAN	O'BRIEN & BLACKMAN	3453
6/25/2002	E	W. MICHIGAN	SANDSTONE & O'BRIEN	3102
8/8/2005	W	W. MICHIGAN	DEARING & SANDSTONE	2765
8/8/2005	E	W. MICHIGAN	DEARING & SANDSTONE	2407
5/10/2005	N	DEARING	I-94 & MACI BLVD.	2123
8/8/2005	W	W. MICHIGAN	CHAPEL & DEARING	2091
5/4/2005	N	DEARING	MACI BLVD. & W. MICHIGAN	2043
8/8/2005	E	W. MICHIGAN	CHAPEL & DEARING	1980
5/10/2005	S	DEARING	I-94 & MACI BLVD.	1953
6/2/2003	W	W. MICHIGAN	EAST VILLAGE LIMITS - PARMA	1950
5/4/2005	S	DEARING	MACI BLVD. & W. MICHIGAN	1924
6/2/2003	E	W. MICHIGAN	EAST VILLAGE LIMITS - PARMA	1836
2006	S	N. PARMA	COUNTY FARM & I-94	1807
8/8/2005	W	COUNTY FARM	BAILEY & BLACKMAN	1601
2006	N	N. PARMA	COUNTY FARM & I-94	1511
6/2/2003	W	W. MICHIGAN	PARMA & CHAPEL	1468
6/2/2003	W	W. MICHIGAN	IN VILLAGE	1468
2006	N	N. PARMA	I-94 & MICHIGAN	1373
2006	S	N. PARMA	I-94 & MICHIGAN	1356
8/8/2005	E	COUNTY FARM	BAILEY & BLACKMAN	1295
2006	N	N. PARMA	MACKIE & COUNTY FARM	1273
6/2/2003	E	W. MICHIGAN	PARMA & CHAPEL	1265
6/2/2003	E	W. MICHIGAN	IN VILLAGE	1265
2006	S	N. PARMA	MACKIE & COUNTY FARM	1241
7/22/2004	S	DEARING	COUNTY FARM & I-94	1210
8/8/2005	W	COUNTY FARM	DEARING & SANDSTONE	1181
2001	E	SPRINGPORT	BENN & BLACKMAN	1167
5/24/2000	W	COUNTY FARM	SANDSTONE & BAILEY	1165
7/22/2004	N	DEARING	COUNTY FARM & I-94	1148
5/10/2005	W	COUNTY FARM	WELLMAN & DEARING	1137
2001	W	SPRINGPORT	BENN & BLACKMAN	1074
8/8/2005	E	COUNTY FARM	DEARING & SANDSTONE	1027
5/10/2005	E	COUNTY FARM	WELLMAN & DEARING	1005

Source: Jackson County Road Commission

According to the Michigan Association of Planning (MAP) publication *Managing Traffic in Your Community* the following represents acceptable levels of service (LOS) for the various types of roadways found in Sandstone Charter Township.

TABLE 2: GENERALIZED 24 HOUR CAPACITIES

Roadway Width	LOS Acceptable Capacity (Average Daily Traffic)
2 lane collector	8,000 to 10,000
2 lane arterial	12,000 to 14,000
3 lanes	14,000 to 16,000

Level of service (LOS) mathematically measures traffic operations, and is used to determine if a road is operating at ideal, average, or poor efficiency. LOS is based on vehicle delays for various movements and is measured during peak hours, and considers a number of factors, including: the number and frequency of turning movements that disrupt the flow of traffic; the speed limit; the number of lanes; the type of land use; and stops required for traffic signals and stop signs.

According to the roadway capacities provided above and the traffic counts obtained from the Jackson County Road Commission (JCRC), the current roadway system within the Township is operating within acceptable levels. Roadway widening is not required to accommodate increased traffic levels in the near future.

Traffic Accident Data

The Michigan Office of Highway Safety Planning publishes traffic accident data by community. In 2005, Sandstone Charter Township experienced a total of 261 automobile crashes in the Township on its roadway system. (2005 data is the most recent data available.) The majority of accidents (222) resulted in property damage alone, with the remainder of accidents involving personal injury (39). The Township experienced no fatal crashes in 2005. In addition, none of the crashes reported involved a person under the influence of alcohol or illegal drugs.

Desired Roadway Improvements

An item in the resident survey asked respondents to identify roadways and intersections that they feel need improvement. The most frequently mentioned improvements include:

- A traffic light and widening at the intersection at County Farm Road and Dearing Road received 32 comments;
- Traffic control devices at the Dearing, Glasgow, and Sandstone Road intersections with Michigan Avenue received 10 comments; and
- Widening of the tunnel on Blackman Road that travels under the railroad track was mentioned by 9 respondents.

Other desired roadway improvements were noted on the survey, including:

- Reduce the speed limit from 55 to 45 on County Farm Road at the intersections of Blackman and N. Parma roads
- Limit the truck traffic along this corridor and widen the intersections
- Allow parallel parking only at the party store at Sandstone and Michigan Avenue
- Reduce the speed limit along Michigan Avenue at Glasgow to 45 miles per hour.

A full summary of all survey comments are included in Appendix B of this document.

Implementation

The Township Master Plan serves as a broad framework within which the Township will guide future land use. Implementation of this plan will require the ongoing efforts of Township officials, Planning Commissioners, Board of Appeals members, neighboring agencies and citizens. The effectiveness of the plan relies upon the diligence with which its provisions are acted upon.

- 1) Consider Purchase of Development Rights (PDR) Ordinance to allow Township to apply for state funding. The purchase of development rights will help to permanently preserve open space.
- 2) Consider the adoption of natural feature preservation regulations including:
 - a) Woodlands Preservation Regulations
 - b) Wetland Protection Regulations
 - c) Groundwater Protection Regulations
- 3) Review the Township Zoning Ordinance for compliance with the adopted Master Plan. Consider appropriate Zoning changes including the revision of residential density pursuant to the adopted Future Land Use Plan.
- 4) In keeping with the policy of maintaining low density residential development in areas least capable of supporting development, the following implementation strategies/techniques should be considered:
 - a) **Large Lot Zoning:** A minimum lot size is set (usually 40 to 160 acres) with one residence per lot allowed. Lot sizes in this technique vary tremendously, and can range from 10 to 700 acres. Lot sizes of three to five acres are not considered large lot zoning. If parcels are in excess of 40 acres, this technique can better protect larger parcels while allowing some development and flexibility. The larger the lot size, the lower the overall population density. Lower densities are desirable for environmentally sensitive areas. The disadvantage of this technique is that density standards or minimum lot sizes must not be too small (parcels become too small to protect natural resources) or too large (unlikely to gain political support). Small minimum lot size increases consumption of land, land

speculation and leapfrog development. This technique has high risk of creating low density urban sprawl spread across the landscape and has not been very successful at protecting natural resources unless the lots are quite large.

- b) **Quarter/Quarter Zoning:** This is a variation of large lot zoning. The name refers to 1/4 of 1/4 of 640 acres, or about 40 acres. This is roughly equal to a 1/4 of 1/4 section of a United States Geographical Service topographic quadrangle. It is a fairly straightforward technique, with each landowner being entitled to one buildable lot per 40 acres of farmland. Once the entitled lots have been built, the entitlement for the entire parcel is utilized. Usually, performance standards for setbacks, septic, and road access are required as well. The one buildable lot is one acre in size. This is more restrictive than large lot zoning and results in densities far less than 1 Dwelling Unit (DU) per 40 acres. It is designed to maintain large tracts of land. However, this technique cannot be applied everywhere. It has had most success in rural areas showing moderate growth pressure. It can only work where ownership of large parcels is by few individuals (i.e., this would not work in areas with heavily fractured ownership). It is often used as a tool where farmland protection is the goal; however, development may be pushed onto more environmentally sensitive lands.
- c) **Sliding Scale Zoning:** This technique allows each landowner a certain number of buildable lots based upon the size of the parcel. The number of potential buildable lots decreases as the parcel increases in size. Thus, tract size governs density. Smaller tracts are allowed to have higher densities than larger ones. Both minimum and maximum lot sizes are set (usually one and two acres, respectfully). Sliding scale zoning can be coupled with standards that restrict development to the least productive soils or restrict development on environmentally sensitive lands such as steep slopes. These standards help direct the location of development to protect important natural resources. Sliding scale zoning encourages cluster development, which splits smaller parcels further to direct growth onto already fragmented land. This leaves larger, undivided land undeveloped, it directs growth to smaller, already fragmented parcels, and may create affordable housing. The main advantage of sliding scale zoning is limited subdivision of environmentally sensitive and prime agricultural lands. Farmers and large landowners have supported it but sliding scale zoning can meet the needs of small landowners too. The disadvantage is that it can be rezoned, like

other zoning techniques. This is especially significant after development allotments are used. When this happens, landowners may pressure local governments for more lots. It also requires more administration and ongoing monitoring.

- d) **Open Space Zoning:** This technique uses clustering and other creative designs of building lots to permanently retain open space. Clustering of buildings is heavily relied upon because less land is consumed. There is much variation in use of this technique and many communities throughout the northeast have incorporated open space zoning.

One variation mandates Open Space Development Design, or Conservation Subdivisions. Here, a community can designate a district where new subdivision development is not permitted to consume more than a certain percentage (often 50%) of any parcel. The remaining land is permanently restricted and further subdivision is not allowed.

Some regulations have a sliding scale for setting aside open space. The sliding scale allows the gross density to rise only if the net area consumed by development is reduced. Thus, as more open space is preserved, the number of lots can increase, but the maximum lot size decreases.

Open space zoning implemented through an overlay district, tied to specific environmentally sensitive areas, is another variation. It allows variable lot sizes and land uses, retains open space, recreational areas, scenic areas, and environmentally sensitive areas and preserves prime farmlands. It can also promote affordable housing because the smaller lot sizes require fewer roads, utilities and other infrastructure, reducing the costs of development. However, this technique requires more effort to create and implement properly and unless open space is permanently set aside through a conservation easement, rezoning can erode open space and protected lands.

- e) **Overlay Districts:** A resource protection overlay district can direct development away from sensitive or environmentally important lands. Overlays are commonly used to increase protection of specific stream, scenic, watershed, or other sensitive lands. It is a set of regulations that are in addition to the base zoning district and is usually applied to specific locations within a community.

Open space development design and other standards protecting resources can be incorporated into an overlay district. Techniques such as conservation subdivisions, buffer strips, and numerous performance standards are usually included in overlay regulations. Overlay districts are often more politically acceptable because it is not a question of if an area can be developed, but rather how. The underlying densities are not changed. They are frequently used to maintain rural character and protect resources such as streams, wetlands, aquifers, watersheds, etc.

- 5) To help ensure that public improvements are coordinated with the Master Plan, consider the development of a five-year Capital Improvements Plan.

It should be noted that the list of implementation strategies is not in any ranked order. These are the most common and feasible options currently available to the Township in implementing this plan. As new legislation and court action occurs, it is entirely feasible that new options will be available while some existing ones will be altered or eliminated.

The plan was designed to be flexible by being adaptable to changing circumstances without weakening established goals and policies. The effective implementation of this plan will require long-term cooperation and effort on the part of Township officials, staff, developers, landowners and citizens. An informed and involved citizenry is therefore essential to the success of this plan.

Background Summary

This section of the Master Future Land Use Plan: 1) provides an inventory of past growth and development trends; 2) assesses current community conditions; and 3) makes projections. All of these factors collectively establish those necessary benchmarks from which the community planning program may realistically proceed. Significant findings in these three areas follow.

Population and Housing

Historic Population Trends

The Sandstone Charter Township population (excluding the Village of Parma) increased by over 90 percent between 1950 and 1980, as reported by the U.S. Bureau of Census (see Table 2). A particularly large increase (nearly 30%) occurred during the decade between 1960 and 1970. Growth continued at a rate of approximately 20 percent between 1970 and 1980; however, there was zero population growth from 1980 to 1990. From 1990 to 2000, Sandstone Charter Township experienced approximately a 15% increase in population.

During the period of 1980 to 1990, the County experienced a 1.2 percent loss of population. Two of the local units of government bordering the Sandstone Community, Parma Township and Parma Village, during this period lost population at rates of 8.3 and 6.2 percent, respectively. During this period the remaining bordering units, Spring Arbor, Blackman, and Tompkins Townships, experienced relatively modest population gains of 1.0, 3.8, and 7.9 percent, respectively. Parallel to Sandstone Charter Township, the local units of government bordering Sandstone Charter Township and Jackson County experienced increases in population between 1990 and 2000. Tompkins Township experienced the greatest percentage increase (approximately 19%) followed by Sandstone Charter Township.

TABLE 3: POPULATION TRENDS (1950-2000)

Governmental Unit	1950	% Increase 1950-1960	1960	% Increase 1960-1970	1970	% Increase 1970-1980	1980	% Increase 1980-1990	1990	% Increase 1990-2000	2000
Jackson County	107,925	22.3%	131,994	8.5%	143,274	5.7%	151,495	-1.1%	149,756	5.8%	158,422
Sandstone Charter Township	1,708	24.8%	2,132	28.7%	2,743	20.3%	3,300	0.0%	3,300	15.2%	3,801
Blackman Township	12,903	24.5%	16,060	5.8%	16,997	16.1%	19,741	3.8%	20,492	11.3%	22,800
Parma Township	1,384	23.0%	1,702	25.6%	2,138	27.0%	2,715	-8.3%	2,491	8.2%	2,696
Parma Village	—	—	770	14.3%	880	-0.8%	873	-6.2%	819	10.7%	907
Spring Arbor Township	1,874	93.8%	3,631	55.6%	5,650	21.6%	6,868	1.0%	6,939	9.2%	7,577
Tompkins Township	1,168	18.8%	1,388	32.4%	1,838	17.1%	2,152	7.9%	2,321	18.8%	2,758

Source: U.S. Census Bureau

Population Projections

The ability to accurately project the population of a local unit of government is difficult at best, with the difficulty increasing the further into the future one looks. With this in mind, projections of Sandstone Charter Township's population have been made for the years 2000 through 2025. Projections are predicated upon two basic assumptions: 1) the average number of new housing starts annually will not change; and 2) the persons per dwelling unit reported in the 2000 U.S. Census will remain constant.

TABLE 4: POPULATION PROJECTIONS (2000-2025)

	Projection Year				
	2005	2010	2015	2020	2025
Sandstone Charter Township	3,420	3,625	3,862	4,125	4,398
Jackson County	164,920	167,498	171,160	175,527	179,826

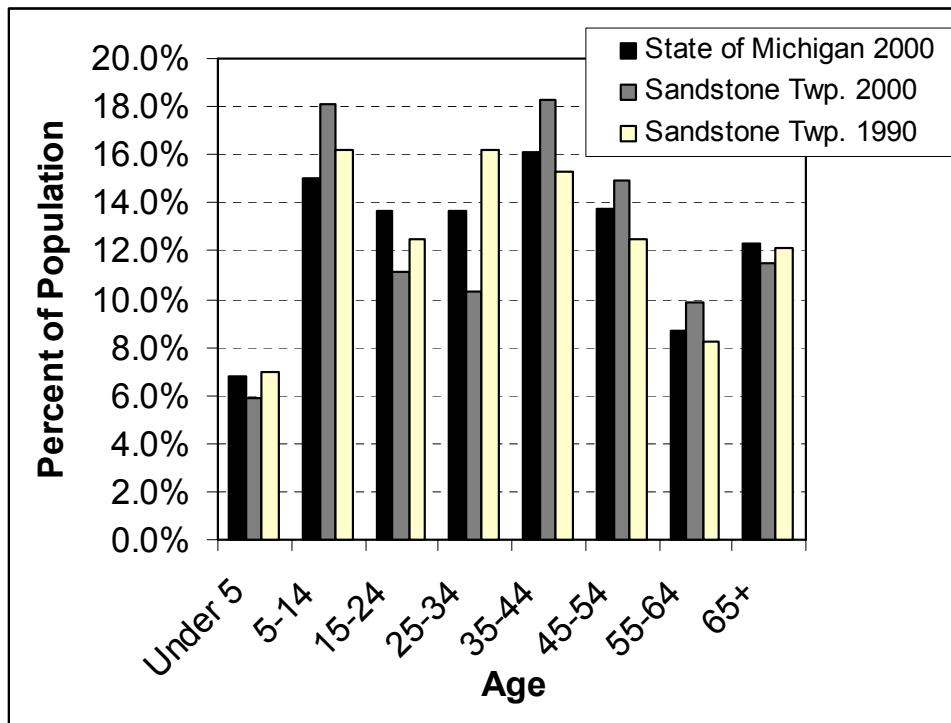
Source: Planning Region II, Jackson County

Age/Gender/Racial Composition of Population

Age

Figure 2 reveals that approximately 64% of the Township population is under the age of 45. The 2000 Census shows the age groups of '5-14' and '35-44' have the greatest shares of population. The median age for the Township was 33.9 years in 1990 and increased to 37.5 years in 2000. This value is essentially the same as the county average (36.6) and slightly higher than the national average (35.3).

FIGURE 2: POPULATION DISTRIBUTION BY AGE GROUP



Source: U.S. Census Bureau

Gender

The 1990 Census reported that Sandstone's population was 47.9 percent male and 52.1 percent female. According to the 2000 Census, the percentage of male and female residents is evenly split at 50 percent. The County's gender composition is similar with 51 percent male and 49 percent female residents.

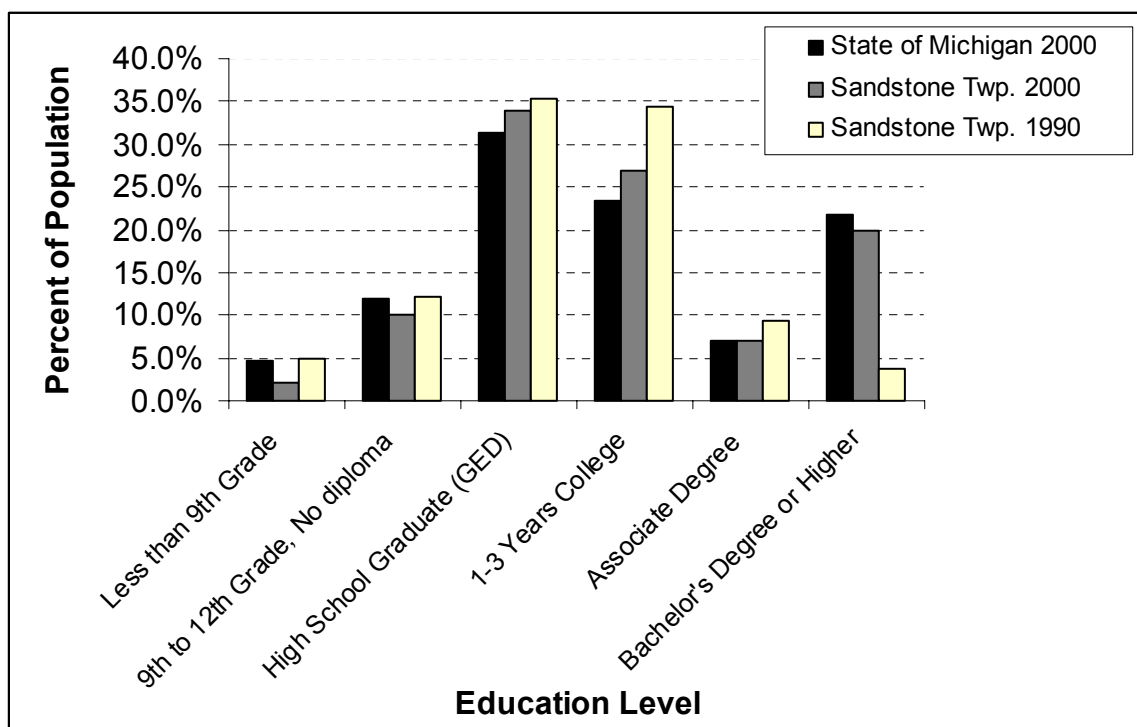
Race

Racial composition reflected in the 2000 Census indicates that the County-wide population is 88.5 percent white, while the proportion of white residents in the Township's population is 97.4 percent. Roughly 11.5 percent of the County population is non-white, with 7.9 percent African-American and 2.2 percent of the non-white group being comprised of those of Hispanic background. In Sandstone Charter Township, 1 percent of the population is classified as Hispanic according to the 2000 Census.

Educational Attainment

Figure 3 documents educational attainment as revealed in the 2000 Census, and compares the Township's demographics with the State of Michigan and the 1990 Census figures. The average Sandstone Charter Township resident is better educated in 2000 than in 1990. Of the Township's residents over the age of 25 in 2000, 88.2 percent have graduated from high school (only 83 percent in 1990). Also, 20.4 percent of Township residents possess a bachelor's degree or higher (only 13.2 percent in 1990). The Township also compares favorably to the County, where 84.2 percent of residents have a high school diploma and 16.3 percent possess a bachelors degree or higher.

FIGURE 3: EDUCATIONAL ATTAINMENT FOR PERSONS OVER 25



Source: U.S. Census Bureau

Housing Characteristics

The 2000 U.S. Census tallied 1,358 total housing units in the Township, an increase of approximately 16 percent over the 1,168 reported by the 1990 U.S. Census. The average number of persons per household has decreased slightly since the 1990 U.S. Census, from 2.87 to 2.80 in 2000.

Housing Starts 2000-2005

The Region II Planning Commission has compiled a table of annual housing starts between 2000 and 2005 for Sandstone Charter Township (see Table 4). This data indicates that during the 2000-2005 period Sandstone's housing stock increased by 157 dwelling units, or an annual average of 26 units. The average cost per unit during this time period was \$114, 507.

TABLE 5: HOUSING STARTS (2000-2005)

	Single-Family*			
Year	Buildings	Units	Const. Cost	Avg. Cost per Unit
2000	26	26	\$1,290,000	\$49,615
2001	31	31	\$3,875,000	\$125,000
2002	35	35	\$4,496,000	\$128,457
2003	26	26	\$3,272,000	\$125,846
2004	16	16	\$1,824,011	\$114,001
2005	23	23	\$3,220,592	\$140,026
	157	157	\$17,977,603	\$114,507

(* All residential building permits issued during this period were single family.)

Source: Region II Planning

Housing Unit Type

The majority of the Township's housing stock is single-family housing (92.3 percent), with the remainder consisting of multiple-family units on scattered sites (see Table 5). The percentage of single-family detached homes in Sandstone's housing stock is approximately 16 percent greater than in Jackson County as a whole. Nearly 87.6 percent of all dwellings are owner-occupied compared to 76.5 percent for the County.

TABLE 6: HOUSING COMPOSITION (1990-2000)

	Sandstone Charter Township 1990	Jackson County 1990	Sandstone Charter Township 2000	Jackson County 2000
Single Family	1,021 (87.4%)	43,205 (74.5%)	1,233 (92.3%)	48,103 (76.5%)
Multiple Family	113 (9.7%)	9,850 (17.0 %)	86 (6.4%)	9,713 (15.4%)
Mobile Home	34 (2.9%)	4,924 (8.5%)	16 (1.2%)	4,846 (7.7%)
Boat, RV, Van, etc.	—	—	—	244 (0.4%)
TOTAL	<i>1168 (100%)</i>	<i>57,979 (100%)</i>	<i>1,335 (100%)</i>	<i>62,906 (100%)</i>

Source: U.S. Census Bureau

Housing Value/Contract Rent

Roughly 39 percent of Sandstone Charter Township's owner occupied units have values of \$100,000-\$149,000, while only 25.7 percent of homes County-wide fall within this range. The County-wide median value of single-family homes is \$96,900, significantly less than Sandstone's \$116,400 median home value (see Table 6).

A total of 86.6 percent of the rental units in the Township fall within the \$300 to \$999 per month rental range, while County-wide the proportion in this rental range is 78.1 percent, or approximately 8.5 percent less than the Township. The monthly median rent County-wide is \$505, while the Township median is \$513, a relatively minor difference (see Table 6).

**TABLE 7: OWNER OCCUPIED HOUSING & CONTRACT RENT VALUES
(2000)**

	Sandstone Charter Township 2000		Jackson County 2000	
	Number of Units	Percent	Number of Units	Percent
Specified owner-occupied units	815	100.0	34,639	100.0
VALUE				
Less than \$50,000	45	5.5	4,107	11.9
\$50,000 to \$99,999	242	29.7	14,295	41.3
\$100,000 to \$149,999	318	39.0	8,893	25.7
\$150,000 to \$199,999	128	15.7	4,464	12.9
\$200,000 to \$299,999	65	8.0	2,134	6.2
\$300,000 to \$499,999	17	2.1	548	1.6
\$500,000 to \$999,999	0	0.0	184	0.5
\$1,000,000 or more	0	0.0	14	0.0
Median (dollars)	116,400		96,900	
Specified renter-occupied units	149	100.0	13,361	100.0
GROSS RENT				
Less than \$200	0	0.0	1,067	8.0
\$200 to \$299	7	4.7	919	6.9
\$300 to \$499	53	35.6	4,217	31.6
\$500 to \$749	56	37.6	4,838	36.2
\$750 to \$999	20	13.4	1,370	10.3
\$1,000 to \$1,499	0	0.0	216	1.6
\$1,500 or more	0	0.0	67	0.5
No cash rent	13	8.7	667	5.0
Median (dollars)	513		505	

Source: U.S. Census Bureau

Age of Housing

More than 20 percent of Sandstone's housing was constructed in 1939 or earlier, while approximately 26 percent of housing County-wide is this old. Since 1970-1979, housing construction has decreased steadily in Sandstone Charter Township. A similar pattern is also noted for Jackson County.

TABLE 8: AGE OF HOUSING

	Sandstone Charter Township		Jackson County	
Year Structure Built	Number	Percent	Number	Percent
1999 to March 2000	25	1.9	1,241	2.0
1995 to 1998	102	7.6	3,604	5.7
1990 to 1994	124	9.3	3,497	5.6
1980 to 1989	155	11.6	5,138	8.2
1970 to 1979	259	19.4	10,238	16.3
1960 to 1969	143	10.7	8,562	13.6
1940 to 1959	218	16.3	14,395	22.9
1939 or earlier	309	23.1	16,231	25.8

Source: U.S. Census Bureau 2000

Economic Base

Consideration of the local economic base is included in the planning process to ensure that land reserved for commercial, office, industrial and mixed uses is of adequate size and location to meet the aspirations of the community. Economic activities may create job opportunities for local residents and contribute to the improvement of the Township tax base. While economic development is important, it is essential that uses be located in areas which are compatible with surrounding land uses and are adequately served by utilities, services and transportation. Factors considered in the evaluation of the local economy include existing employment within the Township and tax base.

Table 9 provides the total assessment value of the four primary land uses in Sandstone Charter Township.

TABLE 9: TOWNSHIP ASSESSED VALUE

Agriculture	\$25,872,232
Commercial	\$5,219,163
Industrial	\$15,350,624
Residential	\$112,093,397

Source: Jackson County

Community Facilities

Roads

With the lone exception of I-94 all of the major roads lying within the Township are maintained by the Jackson County Road Commission; however, the Township does provide some funds from its general operating budget for local roadway maintenance/improvement projects. All but five miles of the local system are classified as County primaries or are paved local roads. This system offers adequate circulation Township-wide and also affords relatively easy access to I-94 and neighboring jurisdictions in Jackson County.

Utilities

All Township dwellings, commercial uses, and most industrial uses currently rely on individual wells for sources of potable water and on septic systems for disposal of effluent. The Hurst Industrial Park in the extreme southeastern portion of the Township is served with utilities. Both water and sewer services have also been extended to the MACI manufacturing facility at the southwest corner of the I-94 Dearing Road intersection. Summit Township water main enters Sandstone via O'Brien Road and traverses the Michigan Avenue right-of-way westerly to Dearing Road, then northerly to MACI and southerly to Spring Arbor Township. Spring Arbor Township sanitary sewer main has been extended northerly along Dearing Road to the MACI site. Both of these services were extended exclusively to serve the needs of the MACI operation. However, it is from these sources, Summit and Spring Arbor Townships that Sandstone could most logically provide for higher density/intensity of land uses in the future. Map 5 provides the locations of public sanitary sewer and water main within the Township as well as their origin.

Public Safety

Both police and fire services are provided under joint service agreements with the Village of Parma and Parma Township.

MAP 5: PUBLIC UTILITIES

Police Department

The joint police department is manned by two full-time officials, a chief and one full-time officer who runs the second shift. Police services are expanded during the summer season with as many as four part-time bike patrol officers who primarily patrol the Village. The department has three motor vehicles, with two that patrol the Township.

Fire Department

The joint fire department is operated by a total complement of 27 volunteers, including one chief, two assistant chiefs, one captain, and one lieutenant. All officers meet state requirements for fire fighter hazardous materials certification.

Fire fighting activities are based at the 6,400 square foot steel pole barn fire station, located on a two acre site at 297 North Union, in the Village of Parma. In addition to the central dispatch/meeting room and seven bays, the station houses officer training and equipment storage rooms. The department has at its disposal three engines, one tanker, one grass fire truck, and one rescue unit which is dispatched via Jackson County 911 central dispatch.

Parks and Recreation

The Township itself does not provide recreation facilities or programs. However, nearby County and State Parks, as well as privately operated facilities, offer a variety of both passive and active recreation pursuits for Township residents. While it does not currently provide recreation opportunities, the Township may consider forming a recreation committee or interest group.

Natural Resources

Sandstone Charter Township's landscape may be characterized as varied, including lakes, wetlands, woodlands, open space, significant slopes, and drainage ways. The following table illustrates how much acreage in the Township is comprised of lakes, wetlands, and woodlands. (See Map 5 - Generalized Natural Resources for locations of these features.)

TABLE 10: ACREAGE OF NATURAL FEATURES

Feature	Acreage
Lakes/Open Water	183 acres
Wetlands	4,808 acres
Woodlands	7,284 acres

Watershed

A “watershed” is an area of land that drains to a common point. All of the Township’s lakes, wetlands and streams drain to the northwest into the Grand River, which eventually drains to Lake Michigan to the east. The Grand River Watershed is divided into smaller sub-watersheds (or sub-basins). The following map shows the three sub-watersheds contained in Sandstone Charter Township. The basin with the most land area (identified by #27) is called the Middle Branch of Sandstone Creek. The small area to the southeast is called the Sandstone Blackman Drain, and the area to the northwest is called Sandstone Creek Lower Branch.

FIGURE 4: SANDSTONE CHARTER TOWNSHIP SUBWATERSHEDS



Source: Upper Grand River Watershed Plan

The Upper Grand River Watershed Management Plan, drafted by the Grand River Inter-County Drainage Board in 2003, provides some information about these three sub-watersheds and their current quality.

- The Lower Branch of Sandstone Creek was ranked second (out of 37 sub-watersheds) in having the most land area in natural vegetated cover within 100 feet of the creek. Ninety percent of the land within 100 feet of the Lower Branch

Sandstone Creek was in a naturally vegetated state, versus in development or agricultural uses. This is significant because a “riparian buffer” or naturally vegetated area near a water body, will protect the water quality and aquatic habitat from human activities, such as development.

- The Lower Branch of Sandstone Creek also ranked fourth (out of 37 sub-watersheds) in having the most land area in natural vegetated cover with 500 feet of the creek. The Plan reports that 75% of the land within 500 feet of the creek is in natural vegetation. The larger a riparian buffer is, the better it will protect the water resource.

Wetlands

The Township has a considerable amount of wetlands, particularly next to Sandstone Creek and Mackey Brook. These wetlands have differing types of vegetation from emergent or marsh (grasses and wildflowers) plants, to shrub plant communities, to forested vegetation cover. Also as part of the wetland complexes are a number of small ponds and lakes. Two relatively large lakes occur in the northeast corner of the Township: North Lake (13 acres) and South Lake (15 acres).

As studied in the Upper Grand River Watershed Management Plan, approximately 97% of wetlands that existed in the Lower Branch Sandstone Creek sub-watershed in 1800 still exist today. This sub-watershed is ranked first (out of 37 sub-watersheds) in remaining wetlands. The Middle Branch of Sandstone Creek is ranked fourth, with 73% of its wetlands remaining. Wetlands provide many important functions, such as flood prevention and temporary flood storage, groundwater recharge, sediment capture and storage, water quality filtering, and wildlife habitat. Because of the important functions wetlands provide, they should be preserved into the future.

Woodlands

Woodlands are scattered across the Township, and make up a considerable amount of land cover. Most are characterized as deciduous forests (7,151 acres), but there are a few areas of evergreen forests (133 acres). Forested wetlands occur adjacent to the stream systems within the community, and make up the important vegetative buffer that protect water quality and enhance groundwater recharge.

Soils

Soils outside of wetland/waterway areas are considered generally suitable for either agricultural activities or development. (See Map 6, Most Productive Soils.) Soils on this map were classified as most productive based on a point system. The ranking was developed using the production figures for all the generally grown crops in Jackson County, including corn, corn silage, winter wheat, oats, soy beans and alfalfa hay.

Groundwater Recharge Areas

Sandstone Charter Township relies heavily on private wells to provide drinking water to its residents. Groundwater and areas of groundwater recharge should be protected from possible contamination.

Groundwater is comprised of the portion of rainfall that does not evaporate or transpire from plants. The process in which water percolates down through the soil until it reaches the saturated zone of an aquifer is called aquifer or groundwater recharge. Percolating water may reach the aquifer at any point, but aquifer recharge takes place principally in defined areas called aquifer (groundwater) recharge areas. These areas occur where the aquifer is overlain by highly permeable material and groundwater flow is mostly downward into the aquifer.

Careful site planning is needed to protect the recharge areas. The number and types of constraints which can threaten groundwater are diverse, ranging from chemicals and petroleum products and wastes, to pesticides, fertilizers, human sewage, industrial wastewater and salt.

The duration type and intensity of the harmful activities will determine the degree of risk that is posed to both groundwater quality and quantity. These activities may introduce pollutants into groundwater either intentionally or unintentionally. Because such activities often involve land development, they may be long-lasting and relatively irreversible. Thus, proper siting, engineering, design, and land management can significantly reduce potential groundwater hazard.

As seen from Map 7, areas of groundwater recharge can be found in various locations throughout the Township. The information on this map provides an estimate of annual groundwater recharge for each public land survey section in the Township. Areas shown on the map with a higher rate of groundwater recharge (inches/year) are more susceptible to groundwater contamination.

MAP 6: NATURAL RESOURCES MAP

MAP 7: MOST PRODUCTIVE SOILS MAP

MAP 8: ESTIMATED GROUNDWATER RECHARGE MAP

Existing Land Uses

Sandstone Charter Township's land area is primarily devoted to agricultural, open space, and low density non-farm residential land uses (see Table 6 and Map 6 - Existing Land Use).

Agricultural

The majority of the Township's land area is found within this category, which includes both fallow and cultivated agricultural lands. Agricultural activities are evident in all areas of the Township to some degree; however, they are particularly dominant in that portion of the Township lying north of I-94. Recent calculations reveal that between five and six percent of the Township's total land area is enrolled in the PA 116 Farmland/Open Space Preservation Program. The greatest proportion of the Township's PA 116 lands (nearly 90 percent) are located north of I-94. (see Map 6 – Existing Land Use)

Farmstead/Single-Family Residential

Farmsteads that are generally sited on large parcels with sizable land holdings behind them either under cultivation or lying fallow are dominant features throughout the Township. Homes on parcels of one acre or more are dispersed along virtually all of the Township's roadways, although there has been some small measure of residential subdivision development of varying lot sizes both north and south of I-94.

Multiple-Family Residential

This type of housing is quite limited, and is currently confined to a half dozen relatively small sites in the general vicinity of the Michigan Avenue/Sandstone Road intersection and a single site on the west side of Harrington Road, a short distance north of Michigan Avenue.

Manufactured Home Parks

Presently there are no manufactured home parks located in the community. However, a parcel has been re-zoned to accommodate manufactured homes, but construction has not begun at this time.

Public/Quasi-Public

Several public/quasi-public land uses (churches, cemeteries, utility corridors, and the Township hall) are dispersed throughout the Township.

MAP 9: EXISTING LAND USE MAP

Open Space/Recreation

The Township's open spaces for the most part are privately owned, consisting of major wetlands or wooded sites. The Burr Oak Golf Course on North Parma Road, north of the Village, is the dominant recreational use in the Township. This facility is privately owned.

Historic Sites

A variety of historic sites, including several centennial farms and homes constructed by original 19th century settlers, are scattered throughout the Township.

Commercial

The Township's commercial uses are generally modest in scope and, in general, are located along Michigan Avenue.

Industrial

Industrial sites are confined to five general locations. Several industrial operations are sited along Thorrez and McDivitt streets in the industrial subdivision south of the Michigan Avenue/Blackman Road intersection. Other groupings of industrial uses are located at and near the Michigan Avenue/Sandstone intersection and at Michigan Avenue and Chapel Road. The only industrial use north of I-94 is sited off North Parma Road at the I-94 ramp.

By far the most significant of Sandstone's industrial uses is the Michigan Automotive Compressor, Inc. (MACI) manufacturing facility located at the southwest corner of the I-94/Dearing Road intersection. The facility embraces several thousand square feet and is sited on a parcel of more than 100 acres owned by the Local District Finance Authority.

Parcel Size Analysis

In evaluating the existing land uses throughout the Township, a “parcel size” analysis was also conducted. This analysis mapped parcels that were 2.5 acres or smaller, 5 acres or smaller, and 10 acres or smaller on three separate maps. See the corresponding maps on the following pages. The analysis identified land use patterns that contain relatively smaller parcels, higher densities, and potential for further splits. The patterns found through this analysis were used to determine potential uses in the Future Land Use Plan.

MAP10: PARCEL SIZE MAP – 2.5 ACRES AND LESS

MAP 11: PARCEL SIZE MAP – 5 ACRES AND LESS

MAP 12: PARCEL SIZE MAP – 10 ACRES AND LESS

Appendix A – Visioning Workshop Results

The following is a summary of the comments received at the Township Master Plan/Visioning Workshop held August 24, 2006. The workshop was held at the Western Community Center Auditorium (High School).

Those in attendance were broken into four (4) groups to discuss and come to consensus on the following topics: Transportation, Housing, Commercial & Industrial Land Use, and Parks/Open Space. Each participant voted on their top priorities as discussed by their respective groups.

Appendix A contains the following information:

- 1) Group vision statements on the above named categories and the resulting votes on each statement. The higher the vote, the higher the consensus on that particular vision statement.
- 2) The flyer used to promote the workshop. The workshop was also advertised in the local newspaper (*Citizen Patriot*) as well as the survey that was mailed to all households within the Township.
- 3) Full PowerPoint presentation as presented at the Master Plan/Visioning Workshop on August 24, 2006. This presentation explained the visioning process as well as providing important background information on Sandstone Charter Township.

Group 1

Transportation

Lower speed limits on all roads	0
Dearing/Michigan – schools – safety	4
Blackman Rd. – I-94 exits & entrances	1
More police patrolling	0
Welman/Benn – N. Wellman should be thru; Benn should be stop	0
Support JTA for transportation	0
Path on County Farm for pedestrian & bicycles	0
County Farm has no shoulders-restrict bicycles 10-20 years	0
Retain what we have non – we are rural – safe-quiet-have access	0

Housing

Specific local control	4
Discourage residential development	0
Favor large acre lots	6
Preserve open land	0
No big developments	2
No multiple family	0
Low density with rural atmosphere	16
More adequate options for elderly	0
Limited scope on elderly housing	0
Preserve rural atmosphere	4
Lot size-minimum 10 acres	2

Commercial & Industrial Land Use

Discourage north of I-94	1
Commercial development stay in areas zoned for commercial	0
Industrial development – discourage it	4
Do not be active in bringing in business	0
Encourage development only in zoned areas	0

Parks – Open Space

Enough existing County parks	0
Large lots – provide room to play	0
Protect environment	0
Protect ground water & recharge area	4

Group 2

Fewer smaller developments – larger lots	13
Better Schools – will attract growth in population	0
More commercial use	2
More small business	5
Well head protection	4
Keep more farmland	16
Ethanol production	0
Purchase development rights for farms	3
Enforcement of Ordinances	1
Why have zoning?	1
Park maintenance & cost	0
Retirement housing development	1
Park (no water park)	0
Recycle center	2
1 – 1 ½ acre min. lots	0
School population issues	0
Multi family grain	0
More home occupation	6
More fire & police protection	1
More population = transportation issues	0
Water & Sewer additional in population	0
DSL/cable/internet services improvements	1

Group 3

Stay Rural	13
Large lots – not subdivisions with a minimum of 5 acres	3
Frontage issues should determine lot size	0
No undesirable sounds or smells	0
Do not move existing farm opportunities	4
Restrict development to single family	2
Concern about sewers for developments	0
Not become Blackman Township	13
Avoid traffic, noise, killing animals, concern for crime with more density – concentration of many people	3
No garbage smells but country life entails smells	0
25 years from now people will be elderly so look at multiple housing like condos/apartment For senior citizens but no on a spot basis.	0
Limit facilities for elderly	0
Encourage commercial development near highway – I-94 (133 Dearing & Exit 130)	0
No development for commerce beyond County Farm- north of 94 or south of Michigan Avenue	0
Only small amount of land reserved for commercial development	0
Companies would have to build own roads	0
Limit pollution	1
Who would maintain the new roads	0
Industry in own area can't expect all business	1
Continue the zoning limitations we have	4

No park development	0
No more increased traffic	1
Don't widen roads	0
Build buffers around developments	0
Control density by zoning, lot size, roads	1
Concern for transportation for elderly	1
Nice variety of homes in various price ranges	0
Put funds into Fire Dept.	0
Get rid of police for Township	1
Increase police for Township	0
Restrict development along rivers and waterways, swamps	0
No increased traffic	0
No mileage for transportation not a Township issue	0
Enforce existing codes – junk, sanitation property, lines, building codes, written complaints (but anonymously if possible)	9
Improvement enforcement	1
Who says we need to conform to adjacent townships	0
Existing zoning be grandfathered	1
No plans for bike or pedestrian paths	0
No public sidewalks wanted	0
No “sign ordinance” (allow signs)	0
Limit size/lighting on signs	0
Limit commercial – non farming vehicles at private businesses	0

Group 4

Master Plan – lost site of individual to details	4
Common sense – some for commercial some not for commercial	1
Commercial & Industrial between I-94 & Michigan Ave.	3
Need more jobs – progressive	1
In-home okay as long as employees limit family or 1-2 employees	9
Nothing disturbing to neighbors	1
Why difference in sizes?	0
Ag. Size same	1
No residential	0
No subs	3
Cluster homes	1
Elderly housing	0
Low income housing	1
No low income – builders should build for people who want small homes	2
No high density	1
2 1/2 acres good	5
1 acre parcel	3
No commercial	5
Between I-94 & Michigan Ave. development	2
Rural is good	9
Parks – yes	1
Open space – yes	0
Environmental – yes water quality	6

Lower speed limits on County Farm	0
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Rumble strips on Michigan Avenue & Dearing before light	4
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Code Enforcement	0
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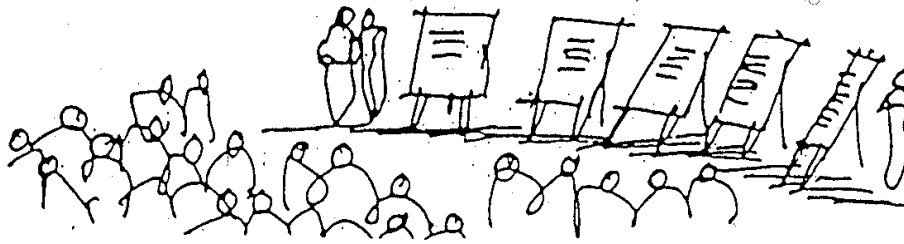
More Communication with tax payers	2
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Burning Issues

1 & 2 categories

#1 Support is not bother neighbors	8
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#2 Support is not bother neighbors	14
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SANDSTONE CHARTER TOWNSHIP MASTER PLAN / VISIONING WORKSHOP

AUGUST 24, 2006
7:00 P.M. - 9:00 P.M.
at the Western Community Center Auditorium (High School)
1400 S. Dearing Road

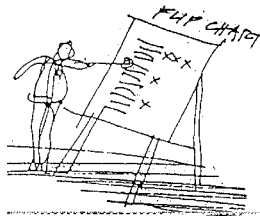
*Please come and help plan the future of our community.
Your involvement will help chart the course of
Sandstone's future.*

Do not miss this opportunity to contribute!

Join your neighbors and Township officials who will be participating in small and large group discussions about the issues that are important to you. The workshop is informal, but is dependent upon your participation.
Complimentary refreshments will be served.

Tell Us **Your** Ideas On.....

- Housing and Neighborhood Issues
- Commercial and Industrial Land Use / Economic Development
- Parks, Open Space, and Natural Feature Presentation
- Transportation Issues
- Community Image and Aesthetics



Sponsored By: Sandstone Charter Township
Questions – Please call Douglas Lewan, Township Planning Consultant (734) 662-2200

(Insert Visioning Workshop PowerPoint Presentation Here)

Appendix B –Master Plan Survey Results

Appendix B contains information on the Township wide Community Planning Resident Survey. The survey was sent to all property owners within the Township based on the property tax roll as provided by the Sandstone Charter Township Assessor. Of approximately 1,600 surveys mailed out, 363 surveys (22.6%) were returned.

The resident survey, as well as the Visioning Workshop, were critical in developing the Township Goals and Policies.

The following information is provided in Appendix B:

- Survey Results Summary
- Memorandum and sample survey

(Insert Survey Results Summary 12-19-06 Here)

Sandstone Charter Township

7940 County Farm Road

P.O. Box 288

Parma, MI 49269

www.sandstonechartertownship.net

Phone # 517-784-4712

SANDSTONE CHARTER TOWNSHIP **MASTER PLAN SURVEY – PUBLIC INPUT**

TO: All Interested Township Residents, Business Owners, and Property Owners

FROM: The Sandstone Charter Township Planning Commission

DATE: August 4, 2006

RE: Master Plan Survey and Township Wide Visioning Session

The Sandstone Charter Township Planning Commission is in the initial stages of updating the 1998 Master Land Use Plan and seeks your input in the process. Public input is a vital part of the process in the development of the Master Plan, and we need your help.

The Township is planning on two (2) primary ways of obtaining public input for the document:

1. **Survey (attached)** - We would ask that you take a few minutes to complete the attached survey. The survey covers a wide variety of issues. Once compiled it will help the Planning Commission to develop a set of goals and policies for the future of the Township.

After completing the survey please fold it in half (on the dotted line) with the return address and postage showing, and tape it together and drop it in the mail.

2. **Township Wide Visioning Session** – The Visioning Session will be an open public session that will help to garner the opinions of members of the community on a variety of topics relevant to Sandstone Charter Township. All members of the public are welcome to attend the Visioning Session and to participate in the process.

Please mark your calendars for the Visioning Session to be held **August 24, 2006** from 7:00 p.m. to 9:00 p.m. at the Western Community Center Auditorium (High School) located at 1400 S. Dearing Road.

These are two very important ways that you can have a say in the future of Sandstone Charter Township. ***Don't miss these opportunities to be heard.*** If you have any additional questions or comments on the Master Plan process please contact our Township Planning Consultant, Doug Lewan, at (734)662-2200.

Please return the completed pre-stamped questionnaire by mailing it before September 22, 2006. After this date, you may drop it off at the Sandstone Charter Township offices located at 7940 County Farm Road.

(Insert Survey Blank Survey Here)