

LIMESTONE COUNTY
COMPREHENSIVE PLAN

1983

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Abstract:

The Comprehensive Plan presents a development plan for Limestone County, covering a planning period of 1982-2000. This Plan includes plans for land use, community facilities, transportation, and a capital improvements program and capital improvements budget. Also included is a program for overall plan implementation which emphasizes various avenues of cooperative endeavors to be undertaken by the municipalities and county government. The Plan stresses several "growth corridors" in Limestone County where future urban growth should occur because public facilities, utilities, and transportation services can be most easily developed in these corridor areas.

CHAPTER 1

INTRODUCTION

Today's increasing population growth, the pace of urbanization and the resultant problems point to the critical need for comprehensive planning. Local officials and citizens alike are becoming increasingly aware of the effects of haphazard development. They are concerned not only with technological and economic development, but also with trends in population growth and distribution, employment, land use development, environmental quality, housing, the provision of adequate public facilities and services and their implications for the future of Limestone County.

Metropolitan Huntsville, of which Limestone County is a part, is a rapidly urbanizing area. The Huntsville SMSA which comprises Madison, Marshall, and Limestone Counties has grown from 201,879 in 1960 to 308,593 in 1980. According to recent population projections, the SMSA will contain over 500,000 persons by the year 2000.

The steady growth of the region's population and economy will result in the expenditure of millions of dollars over the next twenty-year period for housing, industrial expansion and construction, and for public services and facilities. Since investment in these facilities will have a far reaching impact on Limestone County's development, decisions for expenditures can best be guided by effectively related public policies and programs. Thus, the need for realistic county planning is becoming increasingly evident in Limestone County.

INTENT

The Limestone County Comprehensive Plan has as its basic intent the establishment of a long-range public policy which provides for the coordinated development of all elements of the county to create a satisfying and efficient environment for its residents; and the development of short-range development activities designed to implement short-range objectives and development policies.

The Comprehensive Plan must consider all aspects of county activity, providing policies and guiding future decisions relative to countywide development and land use. Its recommendations bear directly upon the decision-making of public bodies within the county, coordinating public decisions of a wide variety of governmental boards or commissions so that decisions may be mutually reinforcing.

The Plan is also intended for use by the private sector. Since the Plan is based upon citizen involvement, it reflects preferences on the part of

residents of Limestone County that should be respected and reinforced by the private business community.

The Plan is general in nature, and its policy recommendations concentrate upon issues countywide in scope. The policies will provide a guide for determining which uses are appropriate in which areas and when development should take place.

GOALS

The planning process involves many different elements which include the establishment of goals and objectives followed by the formulation of some means of achieving the desired goals. The Limestone County planning program is concerned with the future of the county--its environment, its economy, and above all the welfare of its people. The goals selected for the Limestone County plan provide the basic framework for the physical arrangement of land uses and the social and economic development of the county.

The goals selected for the Limestone County plan include:

- Develop a strong, diversified economic base, and provide for the orderly distribution of employment opportunities throughout the county.
- Protect and manage the diverse and valuable land, water, and air resources of the county for the use and enjoyment of present and future generations.
- Develop and maintain a harmoniously balanced ecological system for the county in the context of regional problems and solutions and develop methods that enable man to continue physical development of the county without detriment to the environment.
- Provide all residents with opportunities for a wide range of economic, social, educational, health, commercial, and recreational activities and facilities.
- Provide safe and adequate housing for all county residents with an opportunity for choice among alternative living environments.
- Promote a safe, efficient, and functional transportation system to serve the needs of all citizens and to support all segments of the economic base in the movement of goods and people.
- Coordinate future urban and agricultural development in order to provide a harmonious arrangement of activities for total development in the county. Reserve prime agricultural and forest lands and promote proper and intensive cultivation of agricultural areas.

PROCESS

The planning process, although varying from county to county, consists of several interrelated and continuing activities. The Comprehensive Plan is not

simply a product of the Limestone County Commission. Many county citizens and all local governments within the county have been involved in the process; and the Plan is, in large part, a product of the advice, assistance, and comment of the people and governments of Limestone County.

The process of planning for countywide development, as employed in Limestone County, can be summarized in the following outline of major steps:

Phase I

1. Research and Analysis
2. Problem Identification and Goal Formulation
3. Development and Evaluation of Alternatives
4. Development and Refinement of Plan Proposal
5. Plan Adoption

Phase II

1. Implementation Activities
2. Other Comprehensive Planning Activities
3. Updating and Revision

Citizens and local governments have been involved in the process of the major steps in Phase I, and it is the intent to maintain opportunities for citizen participation and increased local governments involvement throughout Phase II.

COMPONENTS OF COMPREHENSIVE PLAN

The Comprehensive Plan for Limestone County, presented in the following sections, consists of five interrelated elements:

1. The Population and Economic Analyses presents an analysis of age, sex, race, income, employment, education, and other characteristics of the population essential to the development of functional plans. Projections of the population and employment are also presented to form a basis for future recommendations.
2. The Community Facilities Plan proposes a system of public facilities for the county designed to provide a level of public services and facilities appropriate to the existing and anticipated size and composition of the population.
3. The Housing Element is prepared in accordance with the Housing and Urban Development Act of 1968 and the Housing and Community Development Act of 1974. The Housing work program analyzes the existing housing market in terms of condition, supply and demand. Housing policies are developed which insure the provisions of an adequate supply of housing and a decent residential environment throughout the county.
4. The Major Thoroughfare Plan proposes a circulation system for the movement of people and goods in Limestone County. It is based primarily on

proposals of the Alabama Highway Department. Additional recommendations for highway improvements are made by the Limestone County Board of Commissioners and TARCOG. Recommendations include improvements to the local thoroughfares serving Limestone County designed primarily to improve traffic flow and reduce traffic conflicts and congestion.

5. The Future Land Use Plan identifies the location and intensity of future county development. Policies are presented in order to provide specific criteria to be applied in evaluating proposed projects.

Accordingly, the Plan recognizes the broad structure of the county and deals with policies, objectives, and standards rather than the detailed static allocations of specific land uses. The policies and objectives form the basis for more specific county and municipal plans which can and should be prepared.

In order to create a more effective, responsive county planning process in Limestone County over the next six years, the report offers a series of recommendations.

These include:

1. Techniques for Improving the County Planning Process

- a. The establishment of a voluntary association of elected and appointed local officials to meet regularly to recommend major county planning and capital improvements programming decision. An organization of this nature would promote awareness of common county problems and improve communication among area officials. A County Planning Commission could function in this capacity.
- b. The undertaking by such an association of a coordinated review and scheduling of capital improvements programs for major thoroughfares, sewer and water services, etc. Proper scheduling of these programs would guide the development process in accordance with public objectives.
- c. The establishment of a Limestone County Information Service to provide a common base of factual knowledge to public and private investors and to enable them to evaluate their actions. Vital information which would be gathered and stored and disseminated periodically would include:
 - 1) Trend information concerning past and current data on the county's population, economy, and land development.
 - 2) Program information concerning existing and programmed county public improvements and federal and state aid programs for county development including open space, transportation, and public facilities.
- d. The revision and coordination every five years of the County Comprehensive Plan.

dwelling units in the county, approximately 2,351 units were considered substandard. By the year 2000, approximately 20,000 additional dwelling units will be required to house the county's population. The Plan, therefore, establishes a set of policies to encourage sound housing development for people of every age, sex, race, income level and origin.

5. The Comprehensive Plan proposes the development of a coordinated transportation system, including arterials, collectors, and local roads. Alabama Highway 53 should be four-laned from Huntsville to Ardmore, and the four-laning of the U.S. 72 bridge over the Elk River should be completed. Policy guidelines are presented to provide adequate circulation means for people and goods in relation to present and future land use patterns.
6. The Comprehensive Plan encourages greater variety and flexibility in residential development. It encourages a diversity of life styles through a variety of dwelling types and their integration with well planned open space, well located commercial facilities and the preservation of needed environmental amenities. Population density criteria for residential areas are presented within which a variety of dwelling types can be achieved and within which future services can be adequately planned and provided. Development corridors are delineated along major highways of the county having growth potential. The uses included in these sectors are those that have a strong necessity for accessibility.
7. The Comprehensive Plan recognizes the need for well balanced and well planned commercial development. The Plan maintains that an increase in pre-planned, multi-purpose shopping centers should be encouraged and strip commercial development along major thoroughfares discouraged. A balanced pattern of community shopping areas throughout the county should be encouraged with adequate provision for the transportation system.
8. The Plan proposes that industrial development is expected to increase during the planning period. Most of the industrial development areas are located within or near the major urban areas. The county has existing natural assets, including rail, highway, and water transportation which will continue to aid its industrial growth. Public utilities services, including water, sewer, and gas are needed in the attraction of additional industry. Policies are presented which should be utilized when determining location of industrial sites within the county.
9. The Comprehensive Plan recognizes the importance of open space as a major aspect of environmental quality. It proposes to reserve prime agricultural land in the county for exclusive agricultural use. It proposes that every effort be made to preserve the natural open space and recreational resources of the county. Of particular concern are the land and water areas along major streams and the Tennessee River.
10. The Plan emphasizes the need for continued coordination efforts to keep pace with new approaches to problem solving.

2. Development Policies for Limestone County

The report formulates policies for county land uses: housing, industry, commerce, and open space; for public facilities and services: water, sewer, recreation, health, fire and police protection, solid waste and administration, and for transportation and other factors concerned with county development.

The policies are designed to provide a clear and consistent framework for the Comprehensive Plan and for programs designed to implement the plan. They would provide a direct basis for public and private action.

The policies represent what is both desirable and feasible for county development. They are based on analyses of the population and economy as well as land development trends. The policies proposed are intended to provide an action program directed toward implementation of the Limestone County Comprehensive Plan.

SUMMARY

The proposed actions and programs presented in the Plan are individual policy statements relating to each of many aspects of the physical environment such as: land use, transportation, open space, etc. Therefore, the Comprehensive Plan establishes a unified policy program to guide the future development of Limestone County. The following is a condensed summary of this policy program:

1. The Comprehensive Plan assumes a population increase in Limestone County of approximately 19,000 residents between 1980 and the year 2000. Public facilities and services are proposed to be extended and expanded in order to adequately serve this projected population. The Plan also proposes a decrease in net migration, a higher median age, and an increase in the educational level of Marshall County residents.
2. The Plan proposes, by the year 2000, that employment in the county should rise to approximately 21,000 workers, an increase of over 60% during the planning period. Several economic characteristics include: a general decrease in the significance of agriculture as a major employing force in the County; the trend to a predominantly young labor force, a declining unemployment rate, a rising median family income, an unusual strength in retail sales and wholesale trade, and a need for further diversification of the county industrial base in order to broaden its economic stability.
3. The Plan emphasizes the programming of capital-level public services to serve the county residents as the population increases and the demand for more and varied public facilities and services increases. In order to provide county residents with adequate public facilities and services, over \$4,745,000 in capital expenditures must be allocated by the year 2000.
4. The Comprehensive Plan proposes the improvement of the overall housing stock within the county by the year 2000. In 1982, of the total

CHAPTER 2

FACTORS AFFECTING DEVELOPMENT

The physical characteristics of Limestone County have been major influences on the quality and location of development in the County. A knowledge and understanding of the man-made and natural characteristics is vitally important to the comprehensive planning process since these characteristics provide the basis upon which physical development plans are formulated. The natural resources as well as the existing land use pattern will act as physical and geographical limitations upon the county's potential for future physical growth and development.

TOPOGRAPHY

The entire county of Limestone lies within the Tennessee Valley District of the Highland Rim Section of the State. This section falls within the Interior Low Plateaus area of north Alabama.

The land surface is a rolling upland with elevation ranging from 556 feet above main sea level in the south to 40 feet in the north, and 719.9 feet at the courthouse in Athens. The smoothest parts are on the broad ridge tips between the main creeks. Green briar, Mooresville, Belle Mina, and Harris are settlements of some of the smoother areas. The surface is generally more rolling adjacent to the major stream channels, and specially so near the Tennessee River.

The Plateau section, locally known as the gray lands, occupies the rest of the county north of the Limestone Valleys. This section has wide variations in surface relief--several large areas are almost level to undulating or gently sloping, while other areas, particularly in the northwestern parts of the county, are badly dissected. The largest of these extends northeastward from north of Blackburn School to a point near the northeastern corner of the county. The highest elevations on the Plateau are 800 to 850 feet above sea level, and the elevation at the railroad station in Elkmont is 803.9 feet. The roughest and most broken areas are along the Elk River and Sugar Creek in the North-western part of the county. The largest streams in that area have cut narrow gorges 75 to 200 feet deep and in places along these streams, there are bedrock precipices up to 100 or more feet in height.

This dissected area is characterized by narrow valleys and narrow, winding, steep-side ridges and knolls. The slopes often range to 60 or 70 percent.

The Alluvial Plains section includes nearly level to undulating first bottoms and stream terraces along the Tennessee and the Elk Rivers, and along some of the larger creeks. The areas in this physiographic subdivision are from a few feet to more than a mile wide. The first bottoms are subject to overflow from streams where they are not protected by the system of dams

upstream on the Tennessee River and its tributaries. In addition to the areas original alluvium, there are some large shallow depressions, or sinks, throughout the county that consist of local alluvium. Most of these depressions are subject to at least temporary inundation during periods of heavy rainfall. The stream terraces are often as much as 100 feet overflow.

PHYSIOGRAPHY

Limestone County is a part of the Highland Rim section of the Interior Low Plateaus physiographic province of the United States. It lies in the Tennessee Valley and is comprised of three physiographic subdivisions: the Limestone Valleys, the Plateau, and the Alluvial Plains. The first two of these subdivisions cover most of the county, whereas the Alluvial Plains occur along the rivers and creeks throughout the area.

The Limestone Valleys, locally called the red lands, include the southeastern quarter of the county as well as other smaller areas along the Elk River and the eastern border of the county. This section ranges from about 12 miles in width in the eastern part to about one mile in the western.

CLIMATE

Limestone County has a temperate climate and abundant rainfall. Temperature extremes are rare and, during the winter, periods of freezing weather rarely last longer than two days. Long term rainfall and temperature records are not available for Limestone County, but records for the Huntsville area show an average annual rainfall of about 52 inches, an average summer temperature of 80°F, an average winter temperature of 46°F, and an annual average of 62°F. Periods of heaviest rainfall generally occur during January, February, and March; periods of lowest rainfall usually occur during July, August and September.

MINERALS

Several types of rock masses and minerals are located within the county. The formations and deposits are of varying industrial utility. Among them are limestone, chert, phosphate, potash, shales, asphaltic limestone, sand, sandstone, and asphaltic sandstone. Limestone underlies a considerable portion of the county and is found in many instances in large outcropping beds with little or no overburden. A large supply of this stone is adequate for extensive use as aggregates, fertilizer component, and through its lime derivative, in the manufacture of cements and various other products.

DRAINAGE

The Tennessee River and its tributaries comprise the drainage system of the county. Some drainage is through subterranean outlets in sinks; and in localities where most of the drainage is through these underground passages, the surface drainage system is not developed. Surface drainage is adequate for agriculture, except in parts of the first bottoms and in some of the sinks and depressions.

Limestone County occupies parts of two sections of the Interior Low Plateaus physiographic province. The northern part of the county is drained by the Elk River in the Nashville Basin section. The remainder of the county, drained by the Tennessee River, is in the Highland Rim Section.

Knobby steep-sided hills, narrow elongated drainage divides capped by the Fort Payne Chert, and narrow valleys underlain by the Chickamauga Limestone are characteristic of the Nashville Basin in Limestone County.

The topography of the Highland Rim section in Limestone County is typically a low, broad rolling upland. Drainage divides are low and local relief is subdued, except in the area near the Elk River where stream gradients are steeper.

The north-central and northwestern parts of the county are drained by the Elk River. Larger streams in this part of the county are, from east to west, Ragsdale, Mill, Shoal, Sulfur, and Sugar Creeks.

The drainage in the southern part of the Limestone County is south to the Tennessee River by four major streams which are, from east to west, Limestone, Piney, Swan, and Round Island Creeks.

WATER RESOURCES

The most developable natural resources in the county appears to be water. It is valuable obviously in supplying commercial, residential, and industrial users, but perhaps its greatest possibilities lie in the field of recreation and tourism. If Limestone County were to effectively utilize its water resources as other such ideally positioned areas have done, it would find that its economy would be directly influenced by the available tourist trade dollars.

Wheeler Lake, formed by the impounded waters of the Tennessee River, is located in the county. This reservoir was created by the Tennessee Valley Authority by constructing Joe Wheeler Dam for flood control, water navigation, and hydroelectric generating purposes.

Elk River, located in the western portion of the county, is also navigable for several miles above its confluence with the Tennessee River.

Municipal water systems are provided within all of the incorporated areas of the county. Wells, springs, lakes, streams, and cisterns furnish ample water for urban use and agriculture. Drinking water can be had in all parts of the county; however, wells must be sunk to considerable depth on the upland plateaus.

GROUND WATER

Ground water in the Chickamauga Limestone occurs in openings along joint and bedding-plane systems. Some of these openings have been enlarged through the solvent action of moving ground water to form solution activities. Wells drilled in the Limestone must penetrate one or more of these water-bearing openings or cavities to be successful. Large water-bearing openings in the Chickamauga are few, but wells penetrating these openings supply water that is adequate in quantity and quality for domestic or stock use.

The Chattanooga Shale is not considered an aquifer in Limestone County because of its relatively impermeable character and slight thickness.

SOIL ANALYSIS

The various types of soils exhibited in Limestone County will affect any proposed land development that takes place in this area. Soils in particular will affect land development in that certain soil groups cannot support urban uses, and the areas included in these groups should be reserved as agricultural or open space lands.

A description of each soil group's effect on land development is provided in the following paragraphs. There are four major soil groups exhibited in Limestone County.

Soil Group Number 1: This group consists of Decatur, Cookeville, and Dewey types. This group consists of level area soils located basically south of U.S. 72, spanning the southern third of Limestone County. Limitations for urban development in this group are moderate; the low strength characteristics of this group are its only major drawback. Urban development with on-site septic tank can occur with only slight limitations in this group's area. This area also consists of prime agricultural land.

Soil Group Number 2: This group consists of Dickson, Sango, and Taft soils. The area covered by this group approximates the northeastern quarter of the county, the central area of the county, and the upland ridges west of the Elk River. The limitations on urban development are moderate, excepting development without public sewer service. In this case, limitations are severe; therefore, public sewer service, not septic tanks, should be provided for areas covered by this soil group. This area consists of prime agricultural land, as does the area covered by Group Number 1, although not to the extent of coverage as exhibited in Group Number 1.

Soil Group Number 3: This soil group consists of Bodine and Fullerton soils. The areas of the county covered by this group consist of the Elk River watershed, excepting floodplain areas and upland areas in Soil Group Number 2. Limitations on urban development in this area is severe, due to slope characteristics. However, urban development can take place, provided adequate foundations are used and public sewer service is provided. These areas, in general, do not exhibit areas of prime agricultural land. However, forest development can take place in this group as it can in all of the other three groups.

Soil Group Number 4: This group consists of Guthrie, Abernathy, and Lindside soils. Land in flood plans consist of this soil group. Due to the propensity for flooding in this soil group, no urban development should take place in areas covered by this group. Agriculture and forest development are the best uses for land use in this group.

This information is scaled for use at the countywide level only. General planning considerations for land use of an areawide nature can be supported by this level of information.

A developer interested in subdividing or developing land should consult the District Conservationist at the County agricultural service center on West Washington street in Athens for any information needed for the purpose of local land development.

TABLE II-1

EXISTING LAND USE LIMESTONE COUNTY

	URBAN			RURAL			OTHER			TOTAL
	(City of Athens)			(Unincorporated)			Ardmore, Elkmont, Lester and Mooresville			
	Acres	% Total	% Dev.	Acres	% Total	% Dev.	Acres	% Total	% Dev.	
Residential	1,287	9.0	36.0	4,901	1.1	30.5	248	7.4	42.3	5,436
Commercial	350	2.5	9.7	185	0.0	1.4	32	0.9	5.5	567
Industrial	200	1.4	5.6	540	0.2	4.2	30	0.9	5.1	770
Social, Cultural, and Governmental	374	2.6	10.5	560	0.2	4.4	103	3.1	17.6	1,037
Transportation										
Com. & Util.	1,364	9.5	38.2	7,625	2.1	59.5	173	5.2	29.5	9,162
Forests	915	6.4		77,640	22.3		345	10.3		78,900
Agri. and Vacant	9,764	68.6		241,088	70.0		2,406	72.2		253,258
Water				14,390	4.1					14,390
TOTAL	14,254	100		345,929			3,337			363,520

SOURCE: TARCOG Field Survey, July 1982

EXISTING LAND USE

A description and analysis of the existing use of the land in a given area is a vital segment of the total planning process. An understanding of such information can provide invaluable insight into both past and present development trends in Limestone County. It is an awareness of the implications of these trends which make it possible for public officials and private citizens to understand the positive and negative aspects of development. By showing the magnitude and location of different types of land use, it is often possible to depict developmental problems which may adversely affect the growth of the county before they reach crisis proportions.

LAND USE CLASSIFICATION

During the summer months of 1982, a survey of existing land use was conducted throughout the county. The results of this survey provided the basic data on land use characteristics and activities presented in the following analysis.

The following categories were established to classify existing land use according to function. A brief description of these categories are as follows:

1. Residential Development--Land on which structures housing one or more families, persons, or households are located.
2. Commercial Development--Land on which commercial establishments such as retailers, wholesalers, and service facilities are located.
3. Industrial Development--Land on which goods are processed, manufactured, or stored.
4. Social and Cultural Development--Land used to provide facilities for educational, recreational, religious, cultural, local government, and social functions.
5. Transportation Development--Land used for federal, state, county, and municipal roads, highways, railroads, airports, waterways, and utilities.
6. Forestry and Agricultural Development--Land on which federal, state, and private woodland crop and pasture land exists, as well as cultivated local.

LAND USE ANALYSIS

The Existing Land Use Map for the county illustrates land used for residential, commercial, industrial, social, cultural, and governmental, forested areas and agricultural purposes. The major urban center of the county is the City of Athens, characterized by a strong and clearly identifiable central business district and a great variety of land usage on a more intensive level than at other points within the county. Secondary concentrations of urban growth are located in the smaller towns of Ardmore, Elkmont, Lester, and Mooresville.

This spread of urban uses across the countryside may be described as "urban sprawl." Major problems accompany such sprawl. The lack of community facilities or the distance from established community facilities is one of the major problems. Lack of public water and sewerage facilities is a problem also in many

of these areas. In some cases where homes have been lined along an existing highway, they have increased traffic conflict and have reduced the effectiveness of the highways as well as adding danger to the roadside users. Furthermore, such urban development of both residential and commercial uses has tended to cut off the larger tracts of land between the roads, thus stringing buildings out over a maximum distance, increasing servicing costs and reducing the effectiveness of the highway. With all this, in many cases, such frontage development results in a cluttered and congested appearance. Where privacy and sense of spaciousness were prime motivating factors in bringing development into the countryside, it would appear that the end result may frustrate the original intent.

RESIDENTIAL DEVELOPMENT

The land use analysis of Limestone County's residential development reveals that there are approximately 14,300 year-round occupied dwelling units. One third of the total population resides in the five incorporated areas of the county: Ardmore, Athens, Elkmont, Lester, and Mooresville. There is also a sizable population residing in areas along the major roads and highways where rural community water systems serve the rural nonfarm residents. Athens is by far the most densely populated area in the county.

From the late 1930s to the early 1960s, Limestone County sustained a long-term decline in total population. It appears, however, that the trend has reversed itself since 1960; and Limestone County is now experiencing a population increase. Most of the new housing development is taking place in the eastern portion of the county with the heaviest concentration in the Capshaw French Mill area. These developments consist primarily of middle income housing. There is also a significant number of new dwelling units in the Browns Ferry Road area. In both cases, rural community water systems, in addition to nearness to Huntsville and Athens, have spurred this growth in eastern Limestone County. The heaviest concentration of mobile home parks is in the area east of Tanner and in the Athens urban area. Fort Hampton is also growing.

The residential development in Limestone County consist primarily of the single-family dwelling unit. The limited number of multi-family structures are found in the municipalities, primarily Athens. A structural conditions analysis of year-round dwelling units in Limestone County indicated a substantial amount of substandard housing. Dilapidated and deteriorating dwelling units are found scattered throughout the county with the largest concentrations in the rural areas west of Athens. The relatively high percentage of tenant farmers in this area is a primary factor responsible for the high concentration of substandard units. This condition also exists in south and southwest Limestone County.

GROWTH PROSPECTS

Potential in expected residential development in Limestone County depends primarily on population increases. It is expected that the majority of the growth will take place in and around the City of Athens and the TVA proposed new rural community of Elkmont Village. Limestone County's new housing will be mainly single-family units with the majority of multi-family construction taking place in the City of Athens, and the Town of Ardmore. Provided the Town Elkmont constructs a sanitary sewer system, then Elkmont will also witness new multifamily construction.

Over the next eighteen years, new dwelling unit construction is expected to proceed at an average annual rate of 580 units in Limestone County inclusive of the municipalities.

Interviews with realtors and developers indicated that their major criteria for new subdivision locations are (in general order of priority): 1) land costs, 2) availability of water and sewer service, 3) amenity, 4) protective zoning and the character of nearby land, 5) prestige, and 6) the nearness of existing roads giving access to shopping and employment. The interviews further indicated probable future growth in the immediate Athens Area, eastward along U.S. 72, south from the City of Athens toward Tanner, north and east of Athens toward the Town of Elkmont, and west of Athens along U.S. 72. Secondary growth centers would develop near Lester, Salem, Belle Mina, and Greenbrier.

OPPORTUNITIES FOR ACTION

The future residential pattern will continue to be one that is dispersed and discontinuous. However, given that reality, public policy can and should encourage a higher quality and a greater variety of development.

Opportunities for improving the standard of residential development include:

1. Constructing public works in advance of the development in urban density areas.
2. Preventing the intrusion of incompatible uses into residential neighborhoods.
3. Encouraging higher standards in subdivision design.
4. Providing information on county growth trends and the housing market.
5. Stimulating the construction of a variety of housing types.

Use of the above techniques can encourage the provision of a greater variety of housing types, including rental and sale housing, for all income levels. So can the adoption of land use regulations allowing a range of multi-family development from townhouses and condominiums.

The major means of encouraging better residential development are average density zoning and planned neighborhood unit and new town districts. All stimulate innovations in the design and grouping of housing. They provide more useable open space to residents and reduce public utility costs.

With the increasing cost of conventional single-family housing, it is projected that multi-family housing will play an important role in residential expansion. It is essential that multi-family development be served efficiently by public facilities. High density apartments generate heavy traffic and should have access to routes with a high traffic-carrying capacity. They also require public sewer and water service.

TABLE II-2

ESTIMATED DWELLING UNIT CONSTRUCTION, 1970-2000

Jurisdiction	1970 Total Units	1980 Total Units	1990 Total Units	2000 Total Units	1970-2000 New Units
Athens	4,588	5,598	6,790	8,258	3,670
Ardmore	287	402	500	600	313
Elkmont	135	171	400*	500	365
Lester	25	40	45	55	30
Mooreville	31	28	45	50	19
Limestone County	<u>7,641</u>	<u>10,258</u>	<u>10,680</u>	<u>11,816</u>	<u>4,195</u>
TOTAL	12,677	16,497	18,460	21,229	8,552

SOURCE: U.S. Bureau of the Census (Alabama) 1970, and TARCOG Staff Projections.

* Increase in 1980-2000 period assumes annexation of Elk River Development Association new community by Town of Elkmont.

The lack of advanced utilities planning has typified many suburban governments whose rapid growth was unanticipated. Now, however, the dimensions of growth can be foreseen in Limestone County. In accordance with Plan proposals, the local governments should take advantage of available financial aids to provide essential facilities in advance of development. These aids are described in the section on public improvements.

An information Service can considerably improve developers' responsiveness to housing demand. It would issue periodic summaries of residential construction trends and projections of housing need according to income, family size, and other demographic factors. Typically, subdivision and apartment builders act on the basis of hunch or past trends. They lack a factual basis for anticipating new needs and tend to construct only a few units at a time to see if their product will sell. Thus, they fail to make full use of economies of scale. They also miss opportunities to capture unserved portions of the housing market.

COMMERCIAL DEVELOPMENT

The level of commercial land use activity in Limestone County is influenced by several factors, the most important being strong competition from surrounding urban centers. The development of retail and service establishments has suffered

because of the number of variety of shopping facilities in neighboring Huntsville and Decatur. Also, major thoroughfares linking the county with Birmingham and Nashville make it feasible to do wholesale trading in these larger urban areas.

Athens, the county seat, has the largest number and greatest concentration of commercial establishments in the county. A new shopping center, which opened in 1981, has helped to retain some of the retail income previously spent in other cities. The other incorporated towns have negligible amounts of land in commercial use. The land use survey did, however, reveal a scattering of strip commercial development throughout the county with the greatest concentration along U/S. 72, a major traffic artery in Limestone County which does not have controlled or limited access standards enforced along the right-of-way. A higher quality of strip commercial has also concentrated along U.S. 31 another multilane route.

GROWTH PROSPECTS

Commercial, in the past has not been a major source of income for Limestone County due to the proximity of the large retailing centers of Decatur and Huntsville. It will, however, play an increasing role in the future due to the projected rate of population increase and the trend of increasing family income.

The major concentration of commercial areas will continue to be in the Athens area. The Athens Central Business District should attract only limited retail growth and continue to gain in office use. Other commercial concentrations will develop in the communities of Elkmont and Ardmore with limited development in Lester and Mooresville. The U.S. 72 and I-65 interchange provides a location for regional development as does the I-65 and Alabama 20 interchange, west of Mooresville. The construction of I-565 will accentuate this potential, at this location.

OPPORTUNITIES FOR ACTION

The following opportunities for public action can help promote well-balanced and well-planned commercial development in Limestone County.

1. The stimulation of pre-planned multi-purpose shopping centers.
2. The encouragement of shopping center locations at access points to high-speed transportation routes (I-65, I-565, U.S. 72, U.S. 31).
3. The encouragement of a balanced pattern of community shopping areas throughout the county.
4. The limiting of highway commercial areas to access points to high speed transportation routes.

Over the next eighteen years, the most important type of commercial development in Limestone County will be the construction of planned shopping centers. Cohesive centers, built according to single design, with adequate quantities of off-street parking, are preferable to the unplanned commercial ribbons along major thoroughfares. Planned centers also act as magnets attracting other uses, such as offices, apartments, and major community facilities.

Land use policies should encourage the development of multi-purpose centers which incorporate offices and community facilities in addition to retail and service uses.

Shopping center developers will place importance upon sites at interchanges to high-speed arterials and along major county roads. This type of site enables the center to maximize the size of its trade area, which depends on travel time rather than physical distance. It also gives the center exposure value, that is, visibility to motorists. Locational and site development policies should encourage the location of shopping centers near interchanges, but at the same time assure that the traffic-carrying capacity of the interchanges and major roads are protected.

Since future population growth will take place in many portions of the county, land use planning should provide for a balanced pattern of shopping areas to maximize choice for the population.

Careful planning is needed also for local or neighborhood and community shopping centers. These centers typically serve 5,000 to 10,000 people. They are characterized by a supermarket and smaller retail stores and service establishments, such as restaurants, hardware, drug stores, and dry cleaners. The planned local shopping center generates moderately heavy traffic and should be directly accessible to major throughfares.

The future development of planned shopping centers should diminish the pressure for strip development along major highways. The number of highway commercial sites should be strictly limited through land use regulations. They should be related primarily to the Interstate highway arterial network so that the needs of travelers can efficiently be served. Further, they should be so located that no conflicts result with traffic attracted by shopping centers. Finally, in order to reduce hazards and congestion, development policies should clearly limit the number of entrances and exits from highway commercial areas to throughfares.

INDUSTRIAL DEVELOPMENT

Limestone County remains the least industrialized of the five counties in the TARCOG Region. Its geographic proximity to both the Huntsville and Decatur has tended to restrain a full range of industrial diversification. There is, however, a promising trend toward diversification that is most noticeable in Athens, Ardmore, and Elkmont, near J. C. Calhoun Community College.

The county's historical over-dependence on low-wage and low-skill industries is readily apparent. There are only a few types of industry with relatively high or moderate wage rates. The county's industrial potential, however, is excellent. Its excellent transportation access, a large number of prime sites, abundance of power and other required utilities, and a large and accessible labor force offer advantages few other areas in Alabama can provide. The industry is primarily centered on Athens where both sewer and water service exist. Similar development at a lesser scale, appears prime for Ardmore, where water and sewer service are also available, and near J. C. Calhoun Community College.

Manufacturing activity in Limestone County is expected to increase sharply during the planning period. Over wider geographic areas, however, Limestone County must compete with established manufacturing centers, such as the cities of Decatur and Huntsville.

The county has existing natural assets which will aid its industrial growth. Certain established manufacturing groups will continue to expand and attract supporting activities. Limestone County's excellent rail, highway, air, and water transportation will be of benefit in attracting industry. These facilities, in addition to rapidly-growing regional markets, should stimulate further wholesale activity.

OPPORTUNITIES FOR ACTION

Limestone County faces increased competition from metropolitan areas desiring new industry. If the county is to capture its projected share of growth, strong public action must promote an attractive industrial environment. There are several opportunities for stimulating local economic growth through improved industrial planning. They include:

1. Continued utilization of the Athens-Limestone Development Committee to provide a consolidated effort to promote, and to finance industrial development projects via the Athens Industrial Development Board.
2. Recognition in plans and land use regulations of the new locational mobility of light industry and wholesaling and the special locational needs of heavy industry.
3. Coordinated planning of roads and utilities for areas with high industrial potential.
4. Public encouragement and assistance to planned industrial districts.

Limestone County's significant portion of its labor force that is employed at Cummings Research Park, and at the NASA Marshall Space Flight Center and at the U.S. Army Missile Command and Missile and Munitions Center and school provide a solid basis upon which to attract high-technology industry similar to the above-listed economic activities located in adjacent Madison County.

To be more specific, ancillary high technology-oriented service companies economically linked to Madison County's high-technology "base" could be developed at Athens, Ardmore, Elkmont and in South Limestone County. The excellent rail and highway connections directly to western Madison County could foster such interrelationships in economic-industrial development. However, such firms and companies prefer, albeit almost insist, upon locating in a planned industrial park. The characteristics of these parks are discussed below.

The planned industrial park offers a desirable alternative to scattered industrial growth that has characterized many areas in the past. Industrialists are not unlike homeowners; they are interested in an overall plan and in what

types of neighbors they might have. Planned industrial parks with adequate street systems, flexible site provisions and protective restrictions can be designed to most readily meet the broad, and sometimes specific, needs of a multiplicity of industries.

Planned industrial parks can also provide a full complement of services and utilities to small industries which, individually, do not have the resources to develop them. They also isolate industries from other uses and, at the same time, insure good design and environmental standards. They have been used as valuable devices for attracting new industry and increasing local tax revenues.

It is vitally important that the governmental jurisdictions in the county program necessary public improvements, including sewer and water services and highways, for areas of high industrial potential. The Land Use Plan specifically identifies these areas.

Future planning for the county must also take into account the locational mobility of light industry and wholesaling. A diverse number of employment centers, close to but compatible with residential areas, can materially decrease travel time to and from work. Policies should be framed to allow a variety of light industrial and wholesale locations, yet insure adequate highway access and utility service.

At the same time, the special character and requirements of heavy industry should be recognized. Its need for port and rail facilities and its potential noxiousness to other land uses suggest restricted locations close to present areas of similar activity. Such development has its future in South Limestone County, near the General Motors Saginaw Steering Gear Division Plant.

SOCIAL, CULTURAL, AND GOVERNMENTAL

Broad diversification and numerous facilities provide Limestone County residents with a high quality of outdoor recreational opportunities. The Wheeler Lake Reservoir of the Tennessee River forms the southern boundary of the county and has a large number of facilities for numerous types of outdoor activities. There are 115 miles of streams stocked, and controlled fishing is allowed. The Elk River area has some 59 acres with hiking, boating, and outdoor cooking facilities available.

The City of Athens and other municipalities maintain mostly small parks, but the county is fortunate to have large outdoor facilities located primarily near water resources. However, these facilities are underdeveloped for recreational use because most of the land is wildlife refuge.

The level of educational, health, recreational, and other cultural and social facilities is an important part of a county's total development. These facilities are necessary for an environment which provides a healthful, wholesome, and pleasant living environment. These are also the major attributes which enhance the human values of an area, and hence its attraction to newcomers and industry.

There are two school systems in Limestone County providing elementary, junior high, and senior high level education for some 12,000 students. The schools are scattered throughout the county, but located strategically near growth centers. Limestone County also has the services of two institutions of higher learning-- Athens College, located in Athens, and Calhoun Junior College, located near the southern boundary of the county of U.S. 31. Medical facilities include two hospitals, the Limestone - Athens Hospital in Athens, and the Jackson Hospital located in the Town of Lester.

Most of the major government activity centers are located in Athens, the county seat. Large conservation areas along the western and southern boundaries of Limestone County are owned by the U.S. Department of the Interior. The most recently established major government installation is the Brown's Ferry Nuclear Plant on the Tennessee River. This facility is owned and operated by the Tennessee Valley Authority.

TRANSPORTATION DEVELOPMENT

Limestone County is served by main lines of both the Louisville and Nashville Railway passes in an east-west direction through the communities of Belle Mina and Greenbrier. The Louisville and Nashville line passes in a north south direction serving the communities of Tanner, Athens, and Elkmont. The county has over 1,000 miles of federal, state, and local roads and highways. The two major highways are U.S. Highway 72, a four-lane highway going east and west. In addition, Interstate 65, a limited access corridor, passes immediately east of Athens, and parallel U.S. 31, also a four-lane highway. Alabama 20 runs east from U.S. 31 at Decatur to Huntsville; its corridor will be utilized by the new I-565.

The Tennessee River, south of Athens, is a year-round navigable waterway connecting all points in the Tennessee Valley to the country's great inland waterway system, primarily the Mississippi River system and tributary systems.

Limestone County's nearness to the Huntsville/Madison County Jetplex and the location of Pryor Field in south-central Limestone County make air transportation easily accessible to the county's population, business, and industry.

FORESTED AREAS

Of the 363,520 acres of land in Limestone County, an estimated 78,900 acres are in forest lands which are not withdrawn from utilization and are producing, or capable of producing crops of timber. A great variety of southern pines and hardwoods are found in these forests growing on sites ranging from the dry, shallow soils of mountain ridges to the rich, well-drained bottomland soils of river valleys. The majority of the forest are located in the northern two thirds of the county in the Highlands Rim Region of the Appalachian Mountains. Most of the timber throughout the county is of oak and gum species of hardwood, which are best suited to both the soil and climate of the region.

Forest lands at the present account for roughly one-fifth of the total land area in the county but have been decreasing in this respect for the past decade. Survey reports published in 1936, 1953, 1963, and 1973 by the U.S. Forest Service indicated the proportion of the forest lands to total land areas for the county to be 24.5 percent, 25.3 percent, 28.1 percent and 20.5 percent, respectively. Though a strong increase occurred from the thirties until the early sixties, total acreage since that time has declined such that present figures are nearly 21 percent less than what they were reported to be in 1963.

The increases in forest acreage from 1936 to 1963 reflect a period in the county's history when population dwindled, county economic growth slowed, and many acres of agricultural land were abandoned and allowed to revert back to forest land. The early 1960's, however, saw an upswing in the population, urban and industrial growth, and agricultural activities. During this period of time, thousands of acres of forest lands began to undergo the process of conversion to agricultural and other land uses associated with economic growth. Luckily, land which is not directly suited to row-crop or pastureland is, particularly in the Lester-Salem area, being converted to forest use. This is a positive trend which should be encouraged countywide.

DEVELOPMENT ISSUES

A primary consideration of the Limestone County planning program is to bring many factors which affect the development of the county into focus in order to develop a planned course for future activities. This section of the report identifies and describes major issues impacting the county and provides some direction for future action by the county leaders. For each issue a series of objectives is presented which indicates some action to be taken to resolve the concerns.

COUNTY GROWTH AND DEVELOPMENT

ISSUES

I. Land Use

Lack of land use controls has contributed to blight and congestion in unincorporated county areas.

ACTION OBJECTIVES

- Increase the awareness of mutual problems within the county and the need for an effective framework for developing solutions to these problems.
- Support the enactment of new legislation which would permit counties to exercise land use controls (subdivision and zoning regulations) in unincorporated Limestone County.
- Development of land use controls should be consistent with planned improvements of major public expenditures, such as transportation routes, water and sewer facilities.

Development of the unincorporated areas of the county is hindered due to the lack of sound planning policies.

ACTION OBJECTIVES

- Residential areas should be located within convenient travel time of shopping areas, employment centers and community facilities and where public utilities can be readily provided.

- Areas should be designed for future industrial development based upon factors such as future expansion, public utilities, transportation facilities, and proximity to population centers.
- Provide for a balanced distribution of commercial and personal service in planned sites throughout the county.
- Provide the opportunity for the county population to choose from a variety of life styles, densities, and housing types.
- Support and encourage policies which stimulate the concentration of new development of the unincorporated areas with adequate public facilities.

Growth in the unincorporated areas of the county has occurred in an uncoordinated, uncontrolled manner.

ACTION OBJECTIVES

- Maintain an awareness of the need for proper design, scale, density control, openspace, and other environmental considerations in the planning and development of residential areas.
- Discourage haphazard, unplanned commercial development and promote the grouping of compatible retail and service outlets into functional commercial centers.

II. ECONOMIC DEVELOPMENT

The development of the county to its fullest economic potential should be continually encouraged.

ACTION OBJECTIVES

- Areas which enable industrial firms to share common transportation, utilities, and service facilities should be given preference.
- Achieve a land use pattern which insures the most productive use of land within the county.
- Maintain a highly competitive and aggressive posture in economic development efforts in order to retain existing employers, attract new industries and create a sufficient number of new job opportunities to meet the requirements of a growing population.
- Strive to eliminate problems which may hamper local efforts to promote new economic development, e.g., housing, transportation, and utilities.
- Recognize the changing role of agriculture in the county economy and the potential impact this will have on existing and potential markets and land use patterns.

HUMAN RESOURCES

I. HOUSING

What measures can be taken to insure the continued maintenance of the existing housing stock or insure its replacement in accordance with county goals?

ACTION OBJECTIVES

- Work to eliminate all substandard housing and to provide sufficient housing in quantity, type, location, and cost to accommodate the anticipated increase in county population.
- The housing distribution in the county should be directly related to overall county development plan and the capacity to provide essential services in the unincorporated areas.
- Information on the housing market should be periodically furnished to residential developers.

The Provision of social services activities are limited throughout the county.

ACTION OBJECTIVES

- Encourage economic development which provides ample employment opportunities for both the highly skilled and relatively unskilled segments of the county's population.
- Encourage the acquisition of land for public facilities prior to the time that it is actually needed and in locations which are convenient to projected service areas.

TRANSPORTATION

How can the county transportation system best accommodate the travel demands of the county residents?

ACTION OBJECTIVES

- The street and highway system should be planned, designed, and developed in accordance with the anticipated future land use and activity patterns of the county.

- Establish a functional transportation system of primary and secondary thoroughfares, capable of moving people and goods safely and efficiently.
- The county transportation system should coordinate and integrate the various modes of travel-- highways arterial and local streets, as well as public transportation facilities, ports, rail, and air--such that these facilities are mutually complementary.

The transportation system of the county should be effectively used to direct future development.

ACTION OBJECTIVES

- Transportation services should be provided and managed so as to reduce the expenditures of human and fiscal resources and be sensitive to existing and projected energy requirements.
- The transportation system should be utilized as a means to shape county development patterns as well as a device to relieve the problems which other growth factors create.

NATURAL RESOURCES

I. ENVIRONMENTAL QUALITY

What policies should be enacted by local government to reduce the adverse effects of urban and rural land use on air and water quality?

ACTION OBJECTIVES

- Encourage the adoption of floodplain zoning regulations to minimize potential loss and damage due to flooding.
- The potential environmental impacts of all plans and decisions relating to county development, land use, and transportation improvements should be carefully considered.
- Maintain a balance between wildlife, the capacity of land to sustain it, and the projected human population of the county.
- Land not designated for development in the county development plan should remain in attractive open space by preventing haphazard, premature, and poorly designed development in such areas.

II. AGRICULTURE

If agriculture is considered an activity worth saving in future years, can effective preservation measures be correlated with economical staging of urban development so as not to disturb rural areas unnecessarily and so that the costs of government services be kept to a minimum?

ACTION OBJECTIVES

- The disruption of productive agricultural land and natural resources should be avoided in the design of new highways and other transportation improvements.
- Protect prime agricultural soils from urban encroachment by channeling intensive development to less productive land.
- Provide for a smooth and orderly flow of land resources out of agriculture and into non-farm uses as the need arises for the replacement of rural land by urban expansion.

III. OPEN SPACE, PARKS, AND RECREATION

Which lands can provide the most meaningful open space system based upon our human and environmental priorities and our ability to pay direct and indirect costs of preservation.

ACTION OBJECTIVES

- Provide recreation and open space areas throughout the county which are convenient to users, accessible, and which enhance the unique character and quality of such areas.
- Support the enactment of appropriate land use controls to preserve outstanding natural resources within the county.
- Emphasize natural beauty in recreation and open space planning and encourage a conservation and resource development approach in considering the recreation needs of the county.
- Utilize open space effectively by providing service to developing areas through the provision of recreation space, scenic and historic sites, flood control, and resource conservation.
- Multiple use should be made of open space areas.

PUBLIC UTILITIES

Should the provision of public services be used to control where and when land development in the unincorporated areas of county will occur?

ACTION OBJECTIVES

- Encourage land development patterns which would permit the most economical extension of public utilities.
- Discourage the extension of public utilities to areas which would promote premature development.
- Coordinate the future land use plan for the county with the plans for public utilities by providing such facilities only in areas designed for development.

CHAPTER 3

POPULATION AND ECONOMIC DEVELOPMENT

POPULATION

GROWTH TRENDS IN REGION

Limestone County is located within the immediate sphere of the influence of Metropolitan Statistical Area, one of the strongest growth areas in the State. Prior to June of 1983, Limestone County was a part of the 3-county Huntsville Standard Metropolitan Statistical Area (SMSA) and was removed from the SMSA (along with Marshall County) due to a slow-down in population growth rate, rather than a lessening of economic ties to Huntsville growth trends.

Much of the region's recent population changes is related to the decline in the importance of agriculture and the growing role of industry and commerce. The decreasing demand for farm workers up to about 1960 resulted in a steady out-migration of the local labor force to other areas with more manufacturing job opportunities. By the mid 1960's, manufacturing and services employment had begun to develop strongly, spearheaded by the aerospace/defense boom in Huntsville, and the significant secondary non-aerospace manufacturing growth promoted by Huntsville's Industrial Development Association.

The first dramatic impact period in the region (and the Limestone County area) began about 1950 with the decision by the U.S. Government to move the heart of the nation's missile and rocket development team to Huntsville. During these early years, the Redstone Arsenal complex and the supporting industries in Huntsville were the focus of the nation's space effort. Huntsville grew from a city of little more than 15,000 in 1950 to the state's third metropolis in 1970 with more than 137,000 people.

By 1970, the government funded aerospace/defense boom in Huntsville had undergone drastic reductions, and the private manufacturing sector (ie. Dunlop, PPG, GET) had become the dominant growth force.

In the mid and late 70's national economic recession trends, coupled with energy related manufacturing priority changes caused a slow-down in the region's private sector manufacturing growth.

As the job opportunities increased in Huntsville, the adjacent areas such as Limestone County were impacted as well. Much of the growth in Limestone County from 1955-1970 was a result of this spin-off effect of expanding employment in Huntsville. The close economic association with the Huntsville economy was formally recognized in 1963 when the Huntsville Standard Metropolitan Statistical Area (SMSA) was expanded to include Limestone County.

In the 1970's Limestone County added several substantial private sector manufacturing concerns to its basic economy (ie. Martec, Conn Ltd., Mobile Home Manufacturing, DAB and General Motors) to offset the reduced area jobs in Huntsville's declining aerospace/defense market. By the late 1970's, however, many of these local national manufacturing firms were forced to either reduce employment or curtail expansion plans due to national economic and energy cost factors. This once again forced Limestone County residents to migrate from the area in search of productive employment.

POPULATION

GROWTH TRENDS IN THE REGION

Limestone County began its development when migrating homesteaders and families in search of productive farm land settled in the county. The agricultural development of the county from 1820 to 1880 resulted in an increase of population from 9,871 to 21,600. From 1880 to 1920 the status of agriculture, locally, experienced a steady growth. It was during this period that cotton emerged as the major crop with livestock and field crops also experiencing sizeable increases in production. Population during this period increased from 21,600 in 1880 to 31,341.

Since 1920, population growth in the county has been slow and erratic, increasing from 31,341 in 1920 to the 1980 level of 46,005. During this period, Limestone County experienced the same out-migration that affected many other non-urban counties in the United States.

TABLE III - 1

PERCENT OF POPULATION CHANGE

Area	1900-1910	1920	1930	1940	1950	1960	1970	1980
Limestone County	20.1	16.6	16.9	-2.7	0.3	2.1	14.2	10.3
Huntsville SMSA	11.8	11.7	22.5	.6	6.6	41.6	48.3	9.3
TARCOG Region	14.0	13.5	12.1	5.1	2.3	13.5	29.8	13.8

SOURCE: U.S. Census of Population 1900-1980.

The 1960-1980 period, however, saw a substantial increase in population and the County experienced its highest rate of growth since 1930. This increase in population was primarily the result of the increased employment opportunities in Huntsville and Decatur: the construction of the Brown's Ferry Nuclear Plant and an increase in industrial development in the county in the 1960-1975 period.

TABLE III - 2
1980 POPULATION DISTRIBUTION BY RACE

Area	Total Population	Black		Minority Other Minority		Total Minority	
		No.	% Total	No.	% Total	No.	% Total
DeKalb County	53,658	939	1.75	181	.34	1,120	2.09
Jackson County	51,407	2,150	4.18	267	.52	2,417	4.70
Limestone County	46,005	6,539	14.21	115	.25	6,654	14.46
Ardmore	1,096	8	.73	5	.46	13	1.19
Athens	14,558	2,450	16.83	46	.32	2,496	17.16
Elkmont	429	82	19.11	0	0.0	82	19.11
Lester	117	0	0.0	0	0.0	0	0.0
Mooresville	58	12	20.69	0	0.0	12	20.69
Rural Area*	27,371	3,987	14.57	64	.23	4,051	14.80
Madison County	196,966	39,069	19.84	3,115	1.58	42,184	21.42
Marshall County	65,622	1,016	1.55	162	.25	1,178	1.80
TARCOG Region	413,658	49,713	12.02	3,840	.93	53,553	12.95
Alabama	3,890,061	995,623	25.59	24,750	.64	1,020,373	26.23
USA	226,544,825	26,488,218	11.69	11,675,817	5.15	38,164,035	16.85

* Unincorporated portion of county.

SOURCE: U.S. Census, 1980 Advance Report - PHVC2

TABLE III - 3
 POPULATION ESTIMATE AND PROJECTIONS 1980-1990
 BY RACE, SEX AND SELECTED AGE GROUPS
 (AS OF JULY 1)

LIMESTONE COUNTY

Race, Sex Age Group	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Total	46,000	47,300	47,700	48,100	48,400	48,800	49,200	49,500	49,800	50,200	50,400
0-4	3,526	3,670	3,730	3,800	3,850	3,920	3,980	4,030	4,090	4,150	4,200
5-9	3,728	3,830	3,870	3,900	3,930	3,950	3,990	4,030	4,040	4,080	4,100
10-14	4,230	4,210	4,130	4,050	3,960	3,898	3,810	3,710	3,640	3,560	3,490
15-19	4,536	4,500	4,420	4,320	4,240	4,150	4,060	3,980	3,880	3,790	3,730
20-24	3,969	4,010	3,980	3,960	3,940	3,910	3,890	3,860	3,830	3,810	3,780
25-29	3,533	3,650	3,680	3,720	3,760	3,790	3,840	3,880	3,910	3,950	3,970
30-34	3,345	3,450	3,500	3,550	3,590	3,630	3,680	3,710	3,760	3,800	3,830
35-39	2,849	2,960	3,000	3,050	3,110	3,150	3,200	3,240	3,300	3,340	3,380
40-44	2,619	2,780	2,860	2,940	3,020	3,110	3,170	3,270	3,350	3,430	3,490
45-49	2,451	2,560	2,590	2,650	2,690	2,740	2,770	2,820	2,870	2,900	2,940
50-54	2,259	2,350	2,380	2,430	2,450	2,500	2,540	2,560	2,610	2,640	2,670
55-59	2,178	2,240	2,260	2,280	2,290	2,320	2,340	2,370	2,360	2,390	2,410
60-64	1,877	1,950	1,960	1,990	2,010	2,020	2,050	2,070	2,090	2,120	2,130
65 & Over	4,905	5,150	5,290	5,420	5,540	5,698	5,830	5,960	6,080	6,220	6,320
PERCENT DISTRIBUTION											
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
0-4	7.67	7.76	7.82	7.90	7.95	8.03	8.09	8.14	8.21	8.27	8.33
5-9	8.10	8.10	8.11	8.11	8.12	8.09	8.11	8.14	8.11	8.13	8.13
10-14	9.20	8.90	8.66	8.42	8.18	7.97	7.74	7.49	7.31	7.09	6.92
15-19	9.86	9.51	9.27	8.98	8.76	8.50	8.25	8.04	7.79	7.55	7.40
20-24	8.63	8.48	8.34	8.23	8.14	8.01	7.91	7.80	7.69	7.59	7.50
25-29	7.68	7.72	7.71	7.73	7.77	7.77	7.80	7.84	7.85	7.87	7.88
30-34	7.27	7.29	7.34	7.38	7.42	7.44	7.48	7.49	7.55	7.57	7.60
35-39	6.19	6.26	6.29	6.34	6.43	6.45	6.51	6.55	6.63	6.65	6.71
40-44	5.69	5.88	6.00	6.11	6.24	6.37	6.44	6.61	6.73	6.83	6.92
45-49	5.33	5.41	5.43	5.51	5.56	5.61	5.63	5.70	5.76	5.78	5.83
50-54	4.91	4.97	4.99	5.05	5.06	5.12	5.16	5.17	5.24	5.26	5.30
55-59	4.73	4.74	4.76	4.74	4.73	4.75	4.76	4.79	4.74	4.76	4.78
60-64	4.08	4.12	4.11	4.14	4.15	4.14	4.17	4.16	4.20	4.22	4.23
65 & Over	10.66	10.89	11.09	11.27	11.45	11.66	11.85	12.04	12.21	12.39	12.54

SOURCE: Alabama State Data Center, Center For Business and Economic Research, The University of Alabama.

NOTE: Details Do Not Necessarily Add To Totals Due to Rounding.

In addition, the local manufacturing growth, in the mid 1970's (previously highlighted) contributed substantially to the retention of local population which would have out-migrated as a result of regional job slow downs. By 1979-82, however, the stagnation of the local manufacturing sector had again created an out-migration trend.

The current population as of July 1, 1983 is estimated at 48,100, representing a 4.6 percent increase since 1980.

COUNTY GROWTH TRENDS

Current national population trends have included a shift from rural areas to urbanized areas. Limestone County is also experiencing this shift in population, evidenced by the decrease in rural population in the county from 74.4 percent in 1960 to 65.5 percent in 1970 and 59.5 percent in 1980. Despite this trend, the proportion of the population of the county that could be considered urban is still significantly below the state average.

Because of the location of Limestone County and the growth of North Alabama, in the counties adjacent to the Tennessee River, the county can be expected to become increasingly more urban in the future.

In Limestone County, the City of Athens is the only significant urban area. In the future, with the projected growth south from the City of Athens to the Tennessee River and east of the City of Athens toward the Huntsville Madison County Jetport, an increasing proportion of Limestone County residents may be classified as "urban county" (those persons living in small communities and in urban-type developments that are not incorporated.)

The size and location of this "urban county" population will pose several problems for Limestone County in the future. This type of geographic "sprawl" development is usually difficult to serve with water and sewer facilities as well as other community facilities and services and is not presently controlled by or afforded the benefit of land use controls such as zoning and subdivision regulations. Because of these and other factors, it is extremely important to plan at the county level to keep this rapid type of growth from developing in a haphazard manner costly to both citizens and local governments.

POPULATION COMPOSITION

The composition of the population by age, sex, and racial groups and trends related to this composition are important planning factors. Changes in the age, sex, and racial structures affect facets of county government such as housing, schools, recreation needs, facilities for the elderly, welfare programs, and the provision of public utilities and services. Such changes also affect various types of retail sales, the labor force, and the overall economic productivity and potential of the community.

The most notable changes in the age composition of the TARCOG region's population since 1950 have been the growing proportion of older people and the decline in the very young. The rapidly increasing proportion of elderly has been caused by: 1) the out-migration of the younger, more productive residents; 2) a slight in-migration of those at retirement age; along with 3) a steady decline in the region's birth rate; and 4) an increased life expectancy through health and nutritional service advances.

Limestone County's age composition has changed considerably during the 1960-1980 period as in most rural counties. The under-five population declined (from 12.0 to 7.5 percent of total population) and the 5 to 14 group decreased (by more than 450 (from 23.2 percent of 17.4 percent) each of the other age groups increased their proportional share of the population.

The "aging" of the population, through reduced birth rates, out-migration and increased longevity was the most dramatic in the 15-34 years-old "prime workforce" group and the 55 and over "older" and "retired" workforce age group.

The 15-34 year-old group grew by 52.7 percent from 1960 (10,054 persons) to 1980 (15,355 persons) and rose from 27.5 percent to 33.4 percent of the total population. The age 55 plus population group increased by almost 3,500 in the decade, from 15.0 percent of total population to 19.4 percent.

The median age in Limestone County in 1980 was 29.2 years, an increase of 3.5 years over the 1970 figure of 25.7, and 4.8 years above the 1960 level of 24.4 years. Limestone's 1980 median age was the same as the state-wide average, however the 13.6 percent increase from 1970 was almost double the state increase rate of 7.4 percent from 1970-80.

Sex

The sex ratio (the number of males to females) is also indicative of trends which may be taking place in the county. Generally, females comprise a large percentage of the total population. This is due to two basic factors: 1) females have a longer life expectancy, and 2) females have less tendency to out-migrate. In this respect, females predominate in the Limestone County population.

In 1970 there were 96.2 males per 100 females in Limestone County and in 1980 this had decreased to 95.2 males per 100 females, a 1.0 percent decrease in the proportion of males. Both the national and the state ratio of males to females was 95 and 92.5 respectively of males per 100 females in 1980. Table II indicates that the population of Limestone County is becoming increasingly more female in its makeup. The primary reason for this trend is that the previous outmigration trend of males has continued because of recent local and regional reductions in employment opportunities available to males in the county.

The limited data which is available for 1980-1983 indicates that due to a lack of major new industrial development in Limestone County during this period

there will be only a minor slow down, but no reverse in the out-migration of males unless new industries, which employ, primarily, males at high-wage levels locate in the region, and ideally in Limestone County itself.

TABLE III - 4

PERCENT DISTRIBUTION OF THE POPULATION BY SEX

Area	1960		1970		1980	
	Male	Female	Male	Female	Male	Female
City of Athens	47.4	52.6	47.9	52.1	46.5	53.5
Limestone County	49.4	50.6	49.0	51.0	47.6	52.4
TARCOG Region	49.6	50.4	49.0	51.0	48.7	51.3
Alabama	48.7	51.3	48.2	51.8	46.3	53.7

SOURCE: 1960, 1970 and 1980 U.S. Census of Population

Race

The TARCOG region's racial composition has changed only slightly in the past twenty years. The most readily apparent change has been the gradual decline in the percentage of Blacks in Limestone and Marshall Counties.

Limestone County has registered increases in White population and decreases in Black population for each of the past two decades. The gain in white population was, by far, the greatest during the most recent decade--over 19 percent compared to just under 5 percent in the 1950-1960 period. Limestone County had (proportionately) the largest Black population in the TARCOG counties at 17 percent in 1970. This percentage has declined during each of the past three decades from almost 23 percent in 1950 to approximately 17 percent in 1970, and just over 14.2 percent in 1980. In 1980, the Madison County population reached 19.8 percent Black (21.4 percent total minority) and eclipsed Limestone as both absolute and proportional minority/Black populated county in the TARCOG region.

In Athens in 1970, Blacks comprised 17.6 percent of the population. By 1980, this had dropped to 16.8 percent. It should be pointed out that the Black population in Athens increased substantially during the 1960-1970 period. In 1960, the Black population was 1,161 or 12.4 percent of the population, and in 1970, 2,536 or 17.6 percent. This represents an increase of 1,375 or 118.4 percent. This increase was basically due to a large annexation to the city during the 60's in which 4,933 people were added to Athens with approximately 25-30 percent of them being Black.

The 1970-80 decrease in the Black population (proportionally) can be traced to three primary factors: 1) a decline in birth rates; 2) out-migration to

nearby counties (especially Madison) for jobs; and 3) the fact that most of the 1970-80 annexation to the City of Athens was predominantly White subdivisions.

PROJECTED POPULATION

The following population projections are designed to depict an estimate of future growth, based upon the assumption that existing long-term trends in population continue into future decades.

The provision of adequate public facilities such as schools, parks, health facilities, and water and sewer are predicted based upon an analysis of such population projection. All facility needs in Limestone County follow directly from an analysis of the needs created by future population based upon recognized development standards for such facilities.

TABLE III - 5

POPULATION TRENDS AND PROJECTIONS BY AGE GROUP
LIMESTONE COUNTY
1960-2000

Age Group	1960	1970	1980	1990	2000
0-4	4,383	4,159	3,453	4,200	4,875
5-14	8,456	8,908	8,000	7,590	9,815
15-24	5,713	7,366	8,518	7,510	8,385
25-34	4,341	5,341	6,837	7,800	10,400
35-44	4,338	4,620	5,485	6,870	9,750
45-54	3,802	4,211	4,777	5,610	6,825
55-64	2,668	3,454	4,031	4,540	5,850
65+	<u>2,812</u>	<u>3,640</u>	<u>4,904</u>	<u>6,320</u>	<u>9,100</u>
TOTAL	36,513	41,699	46,005	50,400	65,000

SOURCE: 1960, 1970 and 1980 figures, U.S. Census of Population; 1990-2000 figures, Modified Step-Down Method. ADO and TARCOG.

Limestone County's population can be expected to return to an increasing growth rate once the full impact of percent developments, such as the slow-down and subsequent rehiring at the General Motors Plant are felt in the county. Recent developments, elsewhere in the economy will tend to attract population, as will other projected industrial and commercial concerns locating in close proximity to the City of Athens. Without additional slow downs at large major facilities such as the General Motors Plant, Limestone County's location in the Huntsville Metropolitan Statistical Area and the county's access to markets in cities such as Decatur, Birmingham, and Nashville will tend to provide an impetus for a return of economic growth and development in Limestone County.

EDUCATION

A high educational level is considered a good indicator of the ability to obtain suitable employment and earn an adequate income. The increasing complexity and technical nature of society makes education more and more important. The level of education determines to a large degree the quality of the available labor force in an area, and in turn, the wage level of the industries which can be attracted to an area.

LEVEL OF ATTAINMENT

While the educational level of Limestone County improved significantly between 1970 and 1980 it was still below the education level of the United States, the State, and the TARCOG Region. The percentage of persons 25 years old and over who had at least a high school education was also below other geographic areas. State-wide in 1980, 56.6 percent of the population 25 years old and over had at least a high school education compared to only 50.7 percent in Limestone County. Both the State and Limestone County lagged the national rate of 78.7 percent high school graduates.

TABLE III - 6
EDUCATIONAL ATTAINMENT, 1960-1970-1980
LIMESTONE COUNTY, ALABAMA

School Years Completed	1960	%	1970	%	1980	%
<u>Persons 25 years old and over</u>	17,957	100.0	21,185	100.0	26,034	100.0
No school years completed	645	3.6	433	2.0	7,887	30.0
Elementary 1-4 years	2,995	16.7	2,057	9.7		
5-8 years	6,817	38.0	6,252	29.5		
High School 1-3 years	3,205	17.8	4,484	21.2	4,950	19.0
4 years	2,692	15.0	5,239	24.7	8,272	31.8
College 1-3 years	876	4.9	1,411	6.7	2,648	10.2
4 years or more	727	4.0	1,309	6.2	2,277	8.7
Median School Years Completed	8.3	-	10.3	-	12.0	-
Percent High School Graduates	-	23.8	-	37.1	-	50.7

SOURCE: 1960, 1970 and 1980 U.S. Census of Population.

However the Limestone County growth in High School graduate percentage from 1970-80 was over 13.5 percent, and as such, was significantly above the State increase of only 5.3 percent, and indicating a strong effort at the county level to overcome past deficiencies. This growth effort is also reflected by the fact that the Limestone County median school years figure of 12.0 years was only .3 years below the state-wide average, as opposed to .5 years below the state in 1970.

ECONOMIC DEVELOPMENT

An analysis of income and its distribution is important for four major reasons: First, income reflects the vitality of the county's economic growth and development. Second, income reflects the ability of the community to afford needed services and facilities. Third, income determines the potential for local capital investment and influences the demand for goods and services; and finally, income directly reflects education levels and the ability to afford adequate privately financed housing.

INCOME

Tables III-7 thru III-11 show a comparison of income distribution from 1970 and 1980 in Limestone County, Alabama, and the U.S.A. While all categories are not comparable for the period due to Census Category changes, two distinct trend facts are observable for the four broad income categories, 0-\$4,999, 0-\$9,999, 0-\$14,999, and 0-\$25,000. First, despite the semi affluent "rural suburbs" surrounding the City of Athens, "rural" Limestone County* has an income distribution denoting less affluence (by these major income groups.) See Table III-7) than the statewide average; and secondly, from 1970 to 1980, the actual increase in families earning more than \$25,000 was less than the statewide average on both an absolute and relative change percentage basis. This reflects the decrease in high pay aerospace jobs in Huntsville and a lack of private sector job growth at comparable pay levels in Limestone County and the fluctuating status of the GM workforce.

INCOME TRENDS

In comparison with the statewide average, Limestone County's 1970 median family income figure of \$6,820 ranked 19th and was 93.9 percent of the state median income. This relatively high median family income reflected the county's dependence in the Huntsville SMSA which ranked highest in income in the State's metropolitan areas.

By 1980 the countywide median family income had grown by 139.5 percent to \$16,303, and risen from 93.9 percent of the state median to 99.7 percent. The 139.5 percent growth rate was significantly above both the State and U.S.A. increases of 125.1 and 107.6 percent, respectively.

A significant measure of this family income growth took place in "rural" Limestone County, as can be noted by the fact that Athens' relative growth was only 118.9 percent and that the City actually lost proportional ground against the State median family income from 1970 when they were 111.6 percent to 1980 when their median was only 108.5 percent of the state figures.

These statistics are reflective of the fact that the proportion of 2 or more family members working in Limestone County is above the State average, and has increased dramatically since the 1970 Census; and, the fact that even

* Limestone County minus the City of Athens.

TABLE III-7

INCOME DISTRIBUTION BY FAMILY, LIMESTONE COUNTY,
TARCOG REGION AND ALABAMA, 1979 INCOME/1980 CENSUS

	LIMESTONE (TOTAL)		Athens		Rural Limestone		TARCOG		Alabama	
	No.	% Total	No.	% Total	No.	% Total	No.	% Total	No.	% Total
Total Families	12,639	100.0	4,065	100.0	8,574	100.0	114,941	100.0	1,042,571	100.0
Less than \$2,500	426	3.4	117	2.9	309	3.6	4,063	3.5	46,342	4.4
\$2,500 to \$4,999	954	7.5	291	7.2	663	7.7	7,551	6.6	72,708	7.0
\$5,000 to \$7,499	1,014	8.0	356	8.8	658	7.7	9,610	8.4	90,327	8.7
\$7,500 to \$9,999	1,044	8.3	303	7.5	741	8.6	9,473	8.2	89,322	8.6
\$10,000 to \$12,499	1,178	9.3	310	7.6	868	10.1	10,576	9.2	95,018	9.1
\$12,500 to \$14,999	1,141	9.0	367	9.0	774	9.0	9,170	8.0	80,568	7.7
\$15,000 to \$17,499	1,079	8.5	258	6.3	821	9.6	9,858	8.6	86,852	8.3
\$17,500 to \$19,999	981	7.8	305	7.5	676	7.9	8,426	7.3	75,833	7.3
\$20,000 to \$22,499	1,011	8.0	233	5.7	778	9.1	8,241	7.2	77,006	7.4
\$22,500 to \$24,999	763	6.0	277	6.8	486	5.7	6,280	5.5	59,575	5.7
\$25,000 to \$27,499	603	4.8	247	6.1	356	4.2	6,085	5.3	56,469	5.4
\$27,500 to \$29,999	421	3.3	168	4.1	253	3.0	4,564	4.0	41,831	4.0
\$30,000 to \$34,999	731	5.8	279	6.9	452	5.3	6,992	6.1	62,908	6.0
\$35,000 to \$39,999	406	3.2	137	3.4	269	3.1	4,864	4.2	38,361	3.7
\$40,000 to \$49,999	474	3.8	240	5.9	234	2.7	5,111	4.4	35,659	3.4
\$50,000 to \$74,999	311	2.5	145	3.6	166	1.9	3,149	2.7	22,928	2.2
\$75,000 or more	102	.8	32	.8	70	.8	928	.8	10,864	1.0
Median	\$16,303	-	\$17,750	-	NA	-	\$16,825	-	\$16,353	-
Mean	\$18,821	-	\$20,446	-	NA	-	\$19,800	-	\$19,249	-

SOURCE: U.S. Census of Population and Housing, 1980. Summary Tape File 3A, 1982.

TABLE III-8
 FAMILY INCOME-1970
 LIMESTONE COUNTY, CITY OF ATHENS

	Total Limestone Cty.		City of Athens		"Rural Limestone"	
	Number	Percent	Number	Percent	Number	Percent
All Families	10,642	100.0	3,712	100.0	6,930	100.0
Under \$1,000	423	4.0	151	4.0	272	3.9
\$1,000-\$2,999	1,648	15.5	387	10.3	1,264	18.2
\$3,000-\$4,999	1,666	15.5	523	14.0	1,143	16.5
\$5,000-\$6,999	1,748	16.5	563	15.2	1,185	17.1
\$7,000-\$9,999	2,157	20.3	658	17.7	1,449	21.6
\$10,000-\$14,999	2,088	19.5	884	23.8	1,204	17.4
\$15,000-\$24,999	714	6.7	385	10.4	329	4.7
\$25,000 +	218	2.0	161	4.3	57	.8

SOURCE: U.S. Census of Population, 1970.

TABLE III-9
 FAMILY INCOME DISTRIBUTION
 LIMESTONE, ALABAMA USA
 PERCENTAGE DISTRIBUTION CHANGE
 BY INCOME RANGES, 1970 AND 1980

	Total Limestone	Athens	"Rural" Limestone	Alabama	USA
Percent W/Income Less Than \$5,000					
1970	35.0	28.3	38.6	32.6	19.1
1980	10.9	10.1	11.3	11.4	7.0
Percent W/Income Less Than \$10,000					
1970	71.8	61.2	77.3	68.2	50.9
1980	27.2	26.4	27.6	28.7	20.6
Percent W/Income Less Than \$15,000					
1970	91.3	85.0	94.7	88.1	77.7
1980	45.5	43.0	46.7	45.5	36.2
Percent W/Income Less Than \$25,000					
1970	98.0	95.4	99.4	97.6	95.4
1980	75.8	69.3	79.0	74.2	65.6

SOURCE: U.S. Census, 1970 and 1980

TABLE III-10
 MEDIAN FAMILY INCOME 1970-1980
 TARCOG, ALABAMA AND THE U.S.A.

	1970		1980		Dollar Value Percent Change 1970-80
	Dollar Value	Percent of State Median	Dollar Value	Percent of State Median	
DeKalb	\$ 5,316	73.2	\$13,901	85.0	161.5
Jackson	\$ 6,372	87.7	\$15,706	96.0	146.5
Limestone	\$ 6,820	93.9	\$16,303	99.7	139.5
Madison	\$10,439	143.7	\$19,350	118.3	85.4
Marshall	\$ 6,596	90.8	\$14,754	90.2	123.7
TARCOG	\$ 7,950	109.4	\$16,825	102.9	111.6
Alabama	\$ 7,266	100.0	\$16,353	100.0	125.1
USA	\$ 9,590	132.0	\$19,908	121.7	107.6

SOURCE: U.S. Census of Population and Housing, 1980 Summary Tape File 3A, 1982. and U.S. Census of Population and Housing, 1970.

TABLE III-11

TARCOG REGION PER CAPITA INCOME, 1972, 1974, 1975, 1977, and 1979 (1980 Census)

Per Capita Income	1972	1974	1975	1977	(census 1980)
					1979
ALABAMA	\$2,974	\$3,629	\$3,899	\$4,712	\$ 5,908
<u>DEKALB COUNTY</u>	2,320*	2,842*	3,021*	3,761*	5,294*
Collinsville	2,554*	3,072*	3,246*	3,871*	4,511*
Crossville	2,590*	3,102*	3,330*	3,787*	4,403*
Fort Payne	3,099	3,794	3,947	4,786	6,043
Fyffe	2,542*	3,184*	3,547*	4,456*	5,000*
Geraldine	3,039	3,817	3,908	5,013	5,626*
Hammondville	2,335*	2,926*	3,101*	3,781*	5,688*
Henager	2,415*	3,011*	3,173*	3,877*	5,096*
Ider	2,400*	3,007*	3,187*	3,886*	5,188*
Lakeview	2,364*	2,961*	3,139*	3,827*	5,520*
Mentone	2,589*	3,007*	2,935*	3,724*	5,348*
Powell Crossroads	2,144*	2,675	2,820*	3,445*	8,310
Rainsville	2,513*	3,189*	3,433*	4,299*	5,502*
Shilo	1,596*	2,000*	2,120*	2,584*	5,598*
Sylvania	2,195*	2,750*	2,856*	3,453*	5,003*
Valley Head	2,618*	3,271*	3,458*	4,221*	5,086*
<u>JACKSON COUNTY</u>	\$2,676*	\$3,358*	\$3,551	\$4,489*	\$ 5,452*
Bridgeport	2,485*	3,170*	3,356*	4,179*	5,148*
Dutton	2,751	3,806	3,907	4,601*	5,294*
Hollywood	2,248*	3,029*	3,341*	4,325*	5,059*
Paint Rock	2,365*	3,437*	3,553*	4,387*	4,558*
Pisgah	2,983	3,837	3,958	4,886	5,174*
Scottsboro	3,483	4,305	4,597	5,859	6,697
Section	3,307	3,841	4,014	4,908	4,982*
Stevenson	2,883*	3,602*	3,674*	4,632*	5,355*
Woodville	3,529	4,539	4,693	5,793	5,719*
<u>LIMESTONE COUNTY</u>	\$2,681*	\$3,263*	\$3,477*	\$4,300*	\$ 5,645*
Ardmore	2,686*	3,488*	3,735*	4,612*	4,655*
Athens	3,271	4,008	4,267	5,307	6,397
Elkmont	3,832	3,984	4,111	5,087	5,154*
Lester	2,518*	3,288*	3,504*	4,338*	4,669*
Mooreville	3,496	4,565	4,866	5,023	13,617
<u>MADISON COUNTY</u>	\$3,840	\$4,517	\$4,780	\$5,655	\$ 7,050
Gurley	2,887*	3,808	4,027	4,858	4,806*
Huntsville	4,225	4,997	5,265	6,145	7,661
Madison	3,629	3,984	4,198	4,900	7,630
New Hope	3,239	3,956	4,220	5,299	5,461*
Owens Cross Roads	2,160*	2,849*	2,968*	3,758*	4,776*
Triana	1,440*	1,901*	3,008*	2,423*	2,524*
<u>MARSHALL COUNTY</u>	\$2,794*	\$3,359*	\$3,598*	\$4,392*	\$ 5,439*
Albertville	3,097	3,650	3,863*	4,721	5,652*
Arab	3,425	4,156	4,450	5,292	6,503
Boaz	2,702*	3,225*	3,434*	4,134*	5,262*
Douglas	--	--	--	--	4,594*
Grant	3,021	3,654	3,897	4,728	6,926
Guntersville	3,262	3,912	4,253	5,040	5,899*
Union Grove	2,714*	3,313*	3,533*	4,286*	4,406*
UNITES STATES	\$3,781	--	--	--	7,371

*Below State Average

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Reports, "Population Estimates and Projections" (Series P-25) 1977, 1979, and 1980 and U.S. Census, 1980. (Revised, TARCOG 5/83)

in 1980, almost 30 percent of all personal wage and salary income and 38 percent of all County residents jobs are derived outside Limestone County.

INCOME LEVEL

Income levels in both Limestone County and the TARCOG Region have traditionally been below State and National Averages. In 1970 the per capita income in Limestone County was 85.6 percent of the State figure and 63.0 percent of the United States; however, by 1980 the percentage had risen only to 85.9 percent of the state and 67.1 percent of the national figure. This indicates that the Limestone County growth rate of 157 percent in per capita income, while it exceeded the national average, was not significantly above the Alabama average.

Most of the slow down in growth income in Limestone County occurred from 1979 through 1983. Only the 1979-80 per capita growth rate of 5.3 percent was below the State or national average for the entire period 1975-80.

POVERTY STATUS

According to the 1970 Census, 2,300 or 21.7 percent of the families in Limestone County had income less than the poverty level.* This figure was slightly above the state average of 20.7 percent and over twice the U.S. average of 10.7 percent.

By the 1980 Census, the Limestone figure had dropped to 1771 families, or 14.01 percent of all families, just below the state index of 14.8 percent and only about 50 percent above the U.S. average of 9.58 percent of all families below poverty level.

The 1980 distribution of total poverty level persons by age and race is shown in Tables III-12 and III-14. The county-wide poverty level of 31.77 percent for Blacks was significantly below the state rate of 38.51 percent, and only slightly above the national average of 29.84 percent. When the City of Athens is factored out of the county-wide figures, a "rural" below poverty rate of 28.62 percent for Blacks is revealed, which while higher than either the county, state or national poverty figure for total (all races) persons, was below even the national poverty rate for Blacks.

On an age basis, the poverty indicators for Limestone County are about the same for both Athens and the "rural county" remainder. About 16.8 percent of all persons in the county have incomes "below poverty" with the largest proportional concentration (35.7 percent) being those 65 and over. These figures are below the state average of 18.88 percent of total persons, but above the state age 65+ average of 28.38 percent. This indicates that the "elderly/retired" population in Limestone County is partially "trapped" by fixed income type finances

* This status, based on Bureau of the Census definition originated by Social Security Administration, provides a range of poverty income cutoffs adjusted by such factors as family size, sex of the family head, number of children under 18 years of age, and farm and non-farm residence.

TABLE III-12
 POVERTY INDICATORS, TOTAL HOUSEHOLDS,¹ BY
 TYPE, 1980 CENSUS

	Total Households	Poverty Levels Households			
		Below 100%		Below 125%	
		No.	%	No.	%
DeKalb	19,324	4,432	22.94	5,871	30.38
Jackson	17,560	3,276	18.66	4,542	25.87
Limestone	15,328	2,954	19.27	3,942	25.72
Madison	67,450	9,254	13.72	12,614	18.70
Marshall	23,591	4,668	19.79	6,443	27.31
TARCOG	143,253	24,584	17.16	33,412	23.27
SMSA	106,369	16,876	15.87	22,999	21.62
Alabama	1,342,369	264,009	19.67	350,280	26.09

¹ Households = Families + non-family householders

SOURCE: U.S. Census, 1980, Census of Population and Housing, Summary Tape File 3A, produced by the center for Business and Economic Research, The University of Alabama, 1982.

TABLE III-15

LIMESTONE COUNTY WORK FORCE
1960-1970-1980

	1960	1970	1980	% Change 1960 - 70	% Change 1970 - 80
Employed	11,281	14,653	17,679	+29.8	+20.7
Agriculture, Forestry, Fisheries and Mining	2,817	1,425	919	-49.4	-35.5
Construction	1,116	1,322	1,280	+18.4	- 3.2
Manufacturing	2,304	3,836	6,011	+66.5	+56.7
Transportation, Communica- tions, and Public Utilities	461	951	777	+106.3	-18.3
Wholesale and Retail Trade	1,784	2,522	3,032	+ 43.2	+20.2
Finance, Insurance and Real Estate Services	2,027	3,221	3,579	+ 56.4	+11.1
Government	494	1,037	1,622	+109.0	+56.4

NOTE: This data is by place of residence of workers, not by jobs in Limestone County.

SOURCE: 1960, 1970 and 1980 U.S. Census of Population

TABLE III-13

POVERTY STATUS 1979/80 BY AGE FOR PERSONS

Age	Limestone			TARCOG	Alabama
	Limestone Total	Athens City	Limestone "Rural"		
(TOTAL PERSONS*)					
Total	45,514	14,167	31,347	406,524	3,813,014
Under 55	36,797	10,840	25,957	322,803	3,033,310
55 thru 59	2,038	834	1,204	19,460	188,791
60 thru 64	1,980	674	1,306	16,296	169,033
65 and over	4,699	1,819	2,880	37,945	421,880
(PERSONS BELOW POVERTY LEVEL)					
Total	7,672	2,386	5,286	63,352	719,765
Under 55	5,356	1,518	3,838	45,685	541,148
55 thru 59	269	139	130	2,691	27,674
60 thru 64	369	141	228	3,291	31,216
65 and over	1,678	588	1,090	11,685	119,727
(PERCENTAGE OF PERSONS BELOW POVERTY LEVEL)					
Total	16.86	16.84	16.86	15.58	18.88
Under 55	14.56	14.00	14.79	13.73	17.84
55 thru 59	13.20	16.67	10.80	13.83	14.66
60 thru 64	18.64	20.92	17.50	20.20	18.47
65 and over	35.71	32.35	37.85	30.79	28.38

Total persons counted for income/poverty evaluation, not total persons.

SOURCE: U.S. Census of Population and Housing, 1980. Summary Tape File 3A., 1982

TABLE III-14

PERSONS BELOW POVERTY LEVEL BY RACE
LIMESTONE COUNTY AND THE STATE OF ALABAMA
1980

	Limestone Total	Athens City	Limestone "Rural"	Alabama (State)
Total Persons (No)	45,514	14,167	31,347	3,813,014
White	38,796	11,715	27,081	2,818,578
Black	6,525	2,402	4,123	971,436
Other	193	50	143	23,000
Total Persons Below Poverty Level (No)	7,719	2,386	5,333	719,765
White	5,627	1,493	4,134	340,967
Black	2,073	893	1,180	374,098
Other	19	0	19	4,700
% of Persons Below Poverty Level				
Total	16.96	16.84	17.01	18.88
White	14.50	12.74	15.27	12.10
Black	31.77	37.18	28.62	38.51
Other	9.84	0	13.29	20.43

SOURCE: U.S. CENSUS, 1980, Summary Tape File 3A.

which have not kept pace with the rising economy in the rest of the county income sectors. Nationally, Limestone County exceeds both the total persons poverty level rate of 12.40 percent and the age 65+ group rate of 14.83 percent, indicating the efforts of both low/moderate wage levels and retirement benefits from such industries.

EMPLOYMENT/WORKFORCE

As with other areas in the Southeast, Limestone County's economy is still in a state of growth and transition. Long dependent on agriculture as its economic base, the county has moved from an agriculturally-oriented economy to one of manufacturing and services. Limestone County is not as well developed in this transition as is the Southeast as a whole, or many of its neighboring large urban areas; however, the shift is occurring and has significance in relation to the county's future in terms of economic development.

Limestone County's economic growth has been both aided and deterred by many factors. On one hand the early 1960's aerospace/defense economic growth in nearby Huntsville, the location of the Brown's Ferry Nuclear Plant in the County in the 1970's, and the selection of Limestone for a General Motors plant, all injected significant numbers of high paying jobs into the area.

At the same time, however, the aerospace/defense development also retarded (and often precluded) significant wholesale, retail and financial sector growth in the county due to strong established competition in Huntsville and Decatur and the fact that these markets were able to absorb immediate growth and had the established infrastructures and financial base to develop additional capacity quickly. By the same token, the Brown's Ferry construction impact was only temporary in nature, but the county was forced to absorb a significant cost in public services and facilities to serve the work force due to both local and federal errors in establishing proper mitigation cost indexes to apply for federal (TVA) impact funds.

Current major industrial growth in the county has centered around either high-wage national/international market goods such as automotive parts and accessories and machinery and metal parts, which have experienced severe employment fluctuations due to market conditions and changes in consumer patterns. The remaining growth areas of the Limestone County economy, agribusiness/services, food processing and textiles/apparel are traditionally slow growth and low/moderate pay employment, which, while they aid growth in the long run, are normally not sufficient to allow for "catch-up" growth to offset previous slow economic development.

The purpose of this section of the report is to look at the economy in detail, determine its strengths and weaknesses, and identify potentials for future growth. Various aspects of the economy which together have made the county's economy what it is will be analyzed, including manufacturing, retail and wholesale trades, services, and agriculture. Also, included in this analysis will be general features of the economy and characteristics of the labor force.

TABLE III-16

TOTAL CIVILIAN LABOR FORCE BY MAJOR SECTOR, ANNUAL AVERAGES,¹ 1970-1975
LIMESTONE COUNTY, ALABAMA

	1970	1971	1972	1973	1974	1975
<u>TOTAL CIVILIAN LABOR FORCE²</u>	16,600	17,000	17,070	16,700	16,980	17,210
Total Unemployment	1,050	930	780	830	1,060	1,400
(Rate-%)	6.3%	5.5%	4.6%	5.0%	6.3%	8.2%
Total Employment	15,550	16,070	16,290	15,870	15,920	15,810
<u>NONAGRICULTURAL EMPLOYMENT</u>						
Wage & Salary ³	8,400	8,800	9,300	9,400	9,400	9,300
o <u>Manufacturing</u>	1,500	1,700	2,100	2,200	2,300	2,100
Durable Goods	400	500	700	600	600	600
Fabricated Metals	NA	NA	NA	NA	NA	NA
Machinery (Inc. Elect.)	NA	NA	NA	100	100	100
"Other" Durable Goods	400	500	700	500	500	500
Nondurable Goods	1,100	1,200	1,400	1,600	1,700	1,500
Food & Kindred Prod.	700	700	800	800	900	800
Textiles & Apparel	400	400	500	700	700	700
Paper, Print. & Pub.	-D-	100	100	100	100	0
"Other"	0	0	0	0	0	0
o <u>Nonmanufacturing</u>	6,900	7,100	7,200	7,200	7,130	7,200
Construction	400	400	400	300	300	400
Trans. Comm. & Pub. Util.	100	100	100	100	100	100
Wholesale & Retail Trade	1,300	1,400	1,400	1,600	1,630	1,600
Fin. Ins., and Real Es.	100	100	100	100	100	100
Service ⁴	900	800	800	900	800	800
Government ⁵	4,100	4,300	4,400	4,200	4,200	4,200
Federal	104	107	105	121	128	2,330
State & Local	3,996	4,193	4,295	4,079	4,072	1,870
<u>AGRICULTURAL EMPLOYMENT⁶</u>	1,800	1,700	1,500	1,400	1,400	1,300

TABLE III-17

TOTAL CIVILIAN LABOR FORCE BY MAJOR SECTOR, ANNUAL AVERAGES,¹ 1976-1981
LIMESTONE COUNTY, ALABAMA

	1976	1977	1978	1979	1980	1981
<u>TOTAL CIVILIAN LABOR FORCE²</u>	17,740	18,480	19,710	20,510	20,890	21,440
Total Unemployment	1,310	1,450	1,310	1,560	2,160	2,450
(Rate-%)	7.4%	7.8%	6.6%	7.6%	10.3%	11.4%
Total Employment	16,430	17,030	18,400	18,950	18,730	18,990
<u>NONAGRICULTURAL EMPLOYMENT</u>						
Wage & Salary ³	10,340	11,120	12,070	12,610	12,670	13,410
o <u>Manufacturing</u>	3,050	3,740	4,250	4,680	4,460	4,560
Durable Goods	1,530	2,110	2,560	2,950	2,810	3,040
Fabricated Metals	250	290	-D-	-D-	-D-	-D-
Machinery (In. Elect)	510	600	-D-	-D-	-D-	-D-
"Other" Durable Goods	770	1,220	-D-	-D-	-D-	-D-
Nondurable Goods	1,520	1,630	1,690	1,730	1,650	1,520
Food & Kindred Pro.	740	720	820	870	890	820
Textiles & Apparel	710	820	820	810	710	610
Paper, Print. & Pub.	40	40	-D-	-D-	-D-	-D-
"Other"	30	100	50	60	180	90
o <u>Nonmanufacturing</u>	7,290	7,380	7,820	7,930	8,210	8,850
Construction	350	410	500	510	420	410
Trans. Comm. & Pub. Util.	80	100	100	120	140	130
Wholesale & Retail Trade	1,770	1,940	1,930	1,940	1,900	2,000
Fin. Ins., and Real Es.	180	190	220	220	220	220
Service ⁴	710	880	940	880	840	960
Government ⁵	4,200	3,860	4,030	4,260	4,690	5,130
Federal	2,070	1,380	1,550	1,780	2,100	2,560
State & Local	2,130	2,480	2,480	2,480	2,590	2,570
AGRICULTURAL EMPLOYMENT ⁶	1,560	1,120	1,120	1,110	1,090	1,070

TABLE III-18

TOTAL CIVILIAN LABOR FORCE BY MAJOR SECTOR (ANNUAL AVERAGES) PERCENT CHANGE
1970, 1975, 1980, LIMESTONE COUNTY, ALABAMA

	1970	1975	1980	Percentage Change	
				1970-75	1975-80
<u>TOTAL CIVILIAN LABOR FORCE</u>	16,600	17,210	20,890	3.7	21.4
Total Unemployment	1,050	1,400	2,160	33.3	54.3
(Rate %)	6.3%	8.2%	10.3%	-	-
Total Employment	15,550	15,810	18,730	1.7	18.5
<u>NONAGRICULTURAL EMPLOYMENT</u>					
Wage & Salary	8,400	9,300	12,670	10.7	36.2
o <u>Manufacturing</u>	1,500	2,100	4,460	40.0	112.4
Durable Goods	400	600	2,810	50.0	368.3
Fabricated Metals	NA	NA	-D-	-	-
Machinery (Inc. Elect.)	NA	100	-D-	-	-
"Other" Durable Goods	400	500	-D-	25.0	-
Nondurable Goods	1,100	1,500	1,560	36.4	10.0
Food & Kindred Prod.	700	800	890	14.3	11.3
Textiles & Apparel	400	700	710	42.9	1.4
Paper, Print. & Pub.	-D-	0	-D-	-	-
"Other"	0	0	180	-	-
o <u>Nonmanufacturing</u>	6,900	7,200	8,210	4.3	14.0
Construction	400	400	420	0	5.0
Trans. Comm. & Pub. Util.	100	100	140	0	40.0
Wholesale & Retail Trade	1,300	1,600	1,900	23.1	18.8
Fin. Ins., and Real Es.	100	100	220	0	120.0
Service	900	800	840	-11.1	5.0
Government	4,100	4,200	4,690	2.4	11.7
Federal	NA	2,330	2,100	NA	-9.9
State & Local	NA	1,870	2,590	NA	38.5
<u>AGRICULTURAL EMPLOYMENT</u>	1,800	1,300	1,090	-27.8	-16.2

TABLE III-19
LABOR FORCE PARTICIPATION
INDICATORS, 1980 CENSUS
LIMESTONE COUNTY, ALABAMA, U.S.A.

	Male	Female	Total
Total Persons 16+ years of age -	15,955	17,438	33,393
Total Civilian Labor Force -	11,686	7,698	19,384
Employed -	10,670	7,015	17,685
Unemployed -	1,016	683	1,699
Not In Labor Force -	4,269	9,740	14,009
Labor Force Participation Rate			
Limestone County	73.2	55.9	58.0
Alabama	71.3	45.2	57.4
U.S. A.	74.7	49.8	61.6

Other Indicators

1 Total Employed Female	
o Limestone County	39.7
o Alabama	41.7
o U.S.A.	42.6
2 Total Unemployed Female	
o Limestone County	40.2
o Alabama	47.4
o U.S. A.	42.4
3 Total Families with 2 or more Workers	
o Limestone County	52.6
o Alabama	50.9
o U.S.A.	54.2

SOURCE: U.S. Census, 1980

TABLE III-20
TOTAL CIVILIAN LABOR FORCE BY MAJOR SECTOR, ANNUAL AVERAGES, PERCENT CHANGE 1980-82
LIMESTONE COUNTY, ALABAMA, 1980-82

	1980	1982	Percent Change
TOTAL CIVILIAN LABOR FORCE²	20,890	22,750	8.9
Total Unemployment	2,160	3,110	44.0
(Rate-1)	10.3%	13.7	-
Total Employment	18,730	19,640	4.9
NONAGRICULTURAL EMPLOYMENT			
Wage & Salary ³	12,670	13,230	4.4
• Manufacturing	4,460	4,540	1.8
Durable Goods	2,810	2,960	5.3
Fabricated Metals	-D-	-D-	-
Machinery (Inc. Elect.)	-D-	-D-	-
"Other" Durable Goods	-D-	-D-	-
Nondurable Goods	1,650	2,580	-4.2
Food & Kindred Prod.	890	350	-4.5
Textiles & Apparel	710	700	-1.4
Paper, Print. & Pub.	-D-	-D-	-
"Other"	180	30	-83.3
• Nonmanufacturing	8,120	6,690	5.8
Construction	420	370	-11.9
Trans. Comm. & Pub. Util.	140	130	-7.1
Wholesale & Retail Trade	1,900	2,000	5.3
Fin. Ins., and Real Est. Service ⁴	220	220	0
Government ⁵	840	940	11.9
Federal	4,690	5,030	7.2
State & Local	2,100	2,470	17.6
2,590			
AGRICULTURAL EMPLOYMENT⁶	1,090	1,050	-3.7

One measure of the economic base of an area is the summation of all employment opportunities available to the residents of that area and to commuters from nearby areas. The potential of an area for economic growth is limited by its ability to create employment opportunities for its people and to attract new people.

Tables III-15 thru III-20 show the changes in total employment by industry for the period 1970-1980 by both place of residence and place of work definition. During this decade, the total civilian workforce (all those people able to, and desiring work) rose by 25.8 percent, while total employment rose by 20.5 percent. This figure reflects all Limestone County residents, no matter where they actually worked.* Table III-18 shows that manufacturing and government were the main growth areas of resident employment. The fact that the total civilian workforce rose at a higher rate than total employment is indicative of both a decline in job availability and the fact that proportionally more women and normally "retired" elderly persons were forced into the market due to economic pressures.

In the county, from 1970-1980, the total number of jobs (employment) created rose by 50.8 percent with manufacturing and wholesale and retail trades creating the largest proportional job impacts (see tables III-16 and III-17.) In 1970 54.0 percent of all persons living in Limestone County could find work (in theory) in Limestone County; that is, there were enough total jobs for 8,400 persons of the 15,550 working employed persons living in the county (discounting the number of jobs in Limestone County which were actually held by residents of areas outside the county.) This "job gap" of 7,158 jobs represented the need for Limestone County residents to commute (or eventually out-migrate) to find work. By 1980, there were 67.6 percent as many jobs in Limestone County as there were residents employed, indicating substantial improvement in local job opportunity but still need for more jobs to stabilize resident employment based out-migration tendencies.

This work/job commuting need is borne out by the fact that in 1980, according to the U.S. Census, 86.3 percent of all jobs in Limestone County were held by Limestone County residents, but 38 percent of all Limestone County residents work outside Limestone County (Madison and Morgan County account for about 80 percent of all job out-commuting from Limestone County.)

WORKFORCE TRENDS

The total number of persons living in Limestone County increased from 41,699 in 1970 to 46,005 in 1980, this was an increase of 10.3 percent. Major changes in the proportions of these persons employed, and their employment within the major sectors of the economy have occurred during the last decade. Tables III-18 thru III-19 indicate some of the transitions made during this decade.

*As defined as "workforce" eligible (not including students disabled persons and persons not actively seeking work)

Recent advances in technology have had a great impact on agricultural and manufacturing employment. These sectors of the economy have become more productive and are furnishing the nation's higher levels of personal income and increased leisure that in turn have placed a higher demand throughout the nation on all types of services resulting in increased employment and higher proportion of employment in the services sector of the economy.

LABOR FORCE COMPOSITION

The make up of both the existing and potential labor force can be one of the greatest assets or liabilities the community can possess. The characteristics of the people who make up the labor force and the skills which they possess significantly affect any area's potential for industrial development. Moreover, the labor force, primarily, determines the quality of industries which locate in an area.

Employment Status of Population--Of the total population 16 years old and over, in Limestone County 19,384 or 58.0 percent, were in the labor force in 1980. Of the total female population, approximately 56 percent were working women. Among males, 73.2 percent were in the labor force.

This represents a significant transition from the 1970 period when total labor force participation rate was 54.6 percent with under 33 percent participation by women and a participation rate of over 76 percent for males. It indicates a rise in female oriented employment in the county combined with economic pressures to cause more women to enter the labor force and a small loss in male labor force participation.

On a state and national comparison basis, the 1980 total labor force participation rate of 73.2 percent was higher than the Alabama figure of 71.3 percent and just below the national average of 74.7 percent. The female participation rate of 55.9 percent was above both the state and national figures; however, the actual percent of females employed (39.7 percent of the total employment) was below both the state and national levels.

The proportion of families with 2 or more workers in Limestone County in 1980 was 52.6 percent. This was above the state figure of 50.9 percent, but below the nationwide average of 54.2 percent.

Age Composition--Generally, new industries are easier to attract to an area which has a predominantly young labor force. The labor force of Limestone County contains a relatively high proportion of young workers. In 1970, approximately 51 percent of the county's workers were between 14 and 34 years of age compared to the state percentage of 43. Presently, no 1980 census data is available to challenge this data, but indicators such as female labor force participation and presence of children (detailed below) would indicate that the work force has aged from 1970 just based upon the injection of older female workers alone.

Sex Composition--In 1980, females accounted for 39.7 percent of the Limestone County total civilian labor force as compared to 33.7 percent in 1970.

There is strong evidence of the fact that most local females work to supplement family income. In 1970, 65.3 percent of the county's female labor force were married, and 86 percent had children under 6 years of age. By 1980, the percentage with children under 6 had dropped to just over 15 percent, indicating strongly that the decision to work was economically motivated in families at the middle-age level as well as for single parents and young couples just starting out.

Working women are a common and both necessary and desired situation in our society and the trend is increasing. However, long-term growth of the economy hinges on the ability of the area to provide jobs for men, or at least at wage/occupational levels traditionally associated with male employment. Several of Limestone County's industries provide employment opportunities primarily for women. If the county is to halt male out-migration and raise wage levels, additional industries must be attracted which provide employment for skilled males at adequate wage levels. This is in part due to the fact that our society is still male job income oriented and in most family situations male job opportunity still is the primary factor (usually for economic reasons) in determining migration and job related relocations.

Race Composition--The proportion of Blacks in the labor force in Limestone County was low. In 1970, 13.8 percent of the labor force was comprised of Blacks, compared to 17.2 percent of the total population. By 1980, the Black proportion of the civilian labor force had dropped to 13.4 percent, while the Black population had fallen to 14.2 percent of total population. Blacks made up 12.7 percent of all persons employed in 1980 and had a total labor force participation rate of 58.8 percent with a male rate of 63.3 percent and a female rate of 54.7 percent. The overall Black labor force participation rate 58.8 percent (due to the fact that 52 percent of all Black employees are female) is actually .8 percent above the county-wide rate for all races, however, the "participation" in unemployment (as a part of the "labor force") was 13.7 percent, compared with a total rate of 8.8 percent unemployment countywide.

Many of these persons who are unemployed have been displaced from farms. Generally, Blacks have fewer skills and are not as well educated as Whites. Basic education and training programs should be instituted to correct this situation.

Worker Mobility--As was discussed previously in this study, a significant number of residents are leaving the area because of the lack of employment opportunities. Other people though unable to secure employment locally choose to remain in the county since they are able to find employment in neighboring counties principally, Madison and Morgan.

In 1970, 5,481 workers or 37.6 percent of the total 14,653 residing in Limestone County worked in neighboring counties. Included in this figure were 1,628 Athens' residents or 33.3 percent of that city's work force.

By 1980, this figure was still about 40 percent countywide and represented about 6,400 residents working outside Limestone County. Madison County was

still the leading market with about 2,750 of the jobs, and Morgan County a close second at 2,550 jobs.

COMPONENTS OF THE ECONOMY

The economy of Limestone County is comprised of several economic activities, each affecting total economic change. The purpose of this section of the report is to analyze past trends in the various sectors of Limestone County's economy, point out strengths and weaknesses, and evaluate their potential for future growth and development.

AGRICULTURE

Agriculture, until the mid 1970's had long been a principal source of income and basic employment for Limestone County. As previously shown, up until 1950, Limestone County has consistently had a higher proportion of its labor force engaged in agriculture than any other occupation. However, from the mid 1950 through 1965 the county experienced a gradual change, away, from a predominantly agricultural economy to a more diversified one with manufacturing now assuming the most important role of private sector employment growth.

The trend in agriculture in Limestone County seems to be a universal one throughout the South. While the number of farms is decreasing, the number of acres per farm is increasing. The gross number of acres involved in farming activity is decreasing, however, agriculture is still a major industry in terms of value and income in Limestone County.

The number of farms in Limestone County declined from 4,399 in 1949 to 4,176 in 1959 to 2,025 in 1971, and 1,436 in 1974 and 1,220 in the most recent (1978) Census of Agriculture. Most of this decline came in the period between 1952 and 1959. There was a concurrent increase in the average size of farms in this period. The average size farm increased from 110.4 acres in 1959 to 150.0 acres in 1971 and 200 acres in 1978.

In relation to the increased acreage per farm, the average value per farm has increased proportionately. The average value per farm* has risen from \$15,979 in 1959, \$30,514 in 1964 to \$89,630 in 1974 and \$192,113 in 1978. The size and value increase trend is revealed clearly by the fact that from 1974-1978, the average value per acre* of a farm in Limestone County rose by 69.7 percent from \$532 to \$903. At the state level, average value per acre increased by 75 percent for the same period, but the statewide average value per acre in 1978 was only \$637, or just over 70 percent of the Limestone County average value per acre.

One of the major changes that has taken place in Limestone County's agricultural industry during the past two decades, was the tremendous percentage increase of livestock production. Livestock production made up, in 1939, about one fifth of the value of all farm products. By 1964, this segment made up

* total value land and buildings

TABLE III-21
LIMESTONE COUNTY CENSUS OF AGRICULTURE
SELECTED ITEMS AND DEFINITIONAL EQUIVELANCIES
1974 AND 1978

	All farms	
	1978	1974
Farms and land in farms:		
Farms.....number..	1 220	1 436
Land in farms.....acres..	244 048	241 833
Average size of farm.....acres..	200	168
Value of land and buildings: ¹		
Average per farm.....dollars..	192 113	89 630
Average per acre.....dollars..	903	532
Farms by size:		
Less than 10 acres.....number..	89	67
10 to 49 acres.....number..	355	491
50 to 179 acres.....number..	458	571
180 to 499 acres.....number..	189	200
500 to 999 acres.....number..	83	64
1,000 to 1,999 acres.....number..	36	35
2,000 acres or more.....number..	10	8
Agricultural products sold and farm related income:		
Market value of products sold ²\$1,000..	28 840	23 915
Average per farm.....dollars..	23 639	16 654
Crops.....\$1,000..	21 384	17 397
Livestock and livestock products.....\$1,000..	(D)	4 888
Poultry and poultry products.....\$1,000..	(D)	1 575
Farms by value of sales:		
Sales of \$20,000 or more.....number..	241	221
\$100,000 or more.....number..	76	60
\$40,000 to \$99,999.....number..	71	88
\$20,000 to \$39,999.....number..	94	73
Sales of less than \$20,000.....number..	979	1 215
\$10,000 to \$19,999.....number..	150	148
\$5,000 to \$9,999.....number..	212	208
\$2,500 to \$4,999.....number..	265	232
Less than \$2,500.....number..	352	627
Farms by type of organization:		
Individual or family.....number..	1 094	(NA)
Partnership.....number..	108	(NA)
Corporation.....number..	15	(NA)
Family held.....number..	15	(NA)
Other than family held.....number..	-	(NA)
Other—cooperatives, estates or trusts, institutional, etc.....number..	3	(NA)
Operator characteristics:		
Tenure of operator:		
Full owner.....farms..	717	963
Part owner.....farms..	369	354
Tenant.....farms..	134	119

Appendix. Effect of Definition Change for Selected Items: 1978 and 1974

	Definition used for 1974 and 1978		Definition used for 1959, 1964, and 1969		Operations excluded by current definition but not by 1959 definition	
	1978	1974	1978	1974	1978	1974
All farms.....number..	1 220	1 436	1 377	1 585	157	149
Farms with sales less than \$2,500.....number..	352	627	509	776	157	149
Land in farms.....acres..	244 048	241 833	247 957	244 712	3 909	2 879
Total cropland.....acres..	172 475	164 465	174 178	165 667	1 703	1 202
Harvested cropland.....acres..	128 981	110 528	129 386	110 746	385	218
Value of agricultural products sold.....\$1,000..	28 840	23 915	28 878	23 960	38	45
Crops.....\$1,000..	21 384	17 397	21 396	17 418	12	19
Livestock, poultry, and their products.....\$1,000..	7 456	6 463	7 482	6 488	25	25
Cattle and calves inventory.....number..	28 314	39 149	26 833	39 454	319	305
Hogs and pigs inventory.....number..	10 891	7 187	10 925	7 264	34	77
Chickens 3 months old or older inventory.....number..	(D)	150 654	(D)	150 837	349	183

source: U.S. Census of Agriculture, 1978

over 30 percent of the total sales, in 1974 the figure returned to about 20 percent of total sales, and in 1978 the ownership had concentrated to such a degree that sales figures were withheld for census disclosure reasons.

By 1978, crop sales accounted for 74 percent of all farm receipts in Limestone County, up slightly from 72 percent in 1972. The total value of farm products sold increased by 20.6 percent over the same period and livestock sales data was not available. The production of crops and their sales value continued to increase over the last several years, and the production and sale of livestock has decreased relative to that of crops.

Despite the decline in the number of farms, farm operators, and acreage in farms, progress in agricultural technology has made possible an increase in the dollar value of all farm products sold in the county. From 1974 to 1978 alone, the value of all products sold increased by approximately 21 percent in Limestone County, compared with the state, however, this rate was only one half the Alabama increase of 41.3 percent.

There exists, however a unique relationship between farming, farm values of crops sold, and farm employment incomes and wages. While the above increases occurred from 1974-78 in crop and farm values, when costs of production and other items are related to actual income, a different growth trend appears. From 1975-1980 total proprietors (farm) income dropped from \$8,712,000 to \$7,789,000--a loss of 45 percent. Additionally, in terms of wages and salaries paid, farm generated income also fell from \$10,619,000 to \$7,802,000 (a loss of 26.5 percent) for the same period. In other words, the costs of farming have reduced proprietors incomes and at the same time, scale and mechanization have reduced the number of workers needed--and their associated total income. This trend while not as severe as in Limestone County, is present at both the state and U.S. level.

In terms of employment, agriculture is rapidly decreasing as a major industry. In 1960, approximately 25 percent of the employed persons in Limestone County were farm workers. By 1970, one Limestone County worker in ten was engaged in farming, with the number of farmers and farm workers declining by over 1,390 during the 1960 to 1970 period. From 1970-1980, an additional 700 jobs were lost in the agricultural sector (a 39 percent decline) leaving agriculture as about 6 percent of total employment for Limestone County residents:

The single most important ramification resulting from the rapidly-changing status of agriculture is the need to retain and provide employment for the people displaced from the farms. Failure to do so in the past was one, if not the, major factor responsible for the large outmigration from the county. In recent years, much has been accomplished along these lines; industrial and technical education has been accelerated and expanded, and new employment opportunities have been created, however there is still room for improvement.

MANUFACTURING

Limestone County's total 1982 manufacturing employment was 4,528 and total wages and salaries derived from manufacturing were \$87,934,700. This represents the smallest total manufacturing employment of all TARCOG Counties, but the fourth largest gross wage and salary payment. In per capita (worker) terms, the figure comes to \$19,420, which exceeds the state-wide average by over \$3,125. This was the highest average wage and salary in the entire TARCOG region for manufacturing employment, exceeding even the Madison County average of \$18,285. The General Motors employment at their Saginaw Steering facility is primarily responsible for this abnormal average wage and salary impact as most other manufacturing employment is at or below state-wide wage averages.

Between 1970 and 1980, manufacturing replaced agriculture as the dominate employment and income factor in the Limestone County economy. The most dramatic transition took place in the second half or the decade from 1975-80. During this period manufacturing employment rose 112.4 percent, with about 90 percent of this growth in the durable goods sector. Corresponding by total in the manufacturing wages and salaries rose by 432 percent, from 19.5 percent of total personal wages and salary income in 1975, to 37.6 percent in 1980.

Major Trends -- Significant changes first began taking place in Limestone County after 1966. In that year, only about 800 of the county's jobs were in the manufacturing sector. During three of the next four years, manufacturing employment increased by at least 25 percent per year. After a decline between 1968 and 1969, the 1969-1970 period registered a 50 percent increase. During the last half of the 1960's (when Huntsville and Madison County were losing aerospace jobs and were less able to offer employment to residents of Limestone County), a variety of new industries moved to Limestone County while at the same time many other industries, though primarily textile and apparel firms, expanded their employment. Between 1964 and 1970, inclusive, some 2,000 more jobs in new or expanded industry were announced but the actual increase in manufacturing employment during the period was only about 1,000 jobs.

The General Motors Plant in 1973 (and subsequent expansions) and the Steel-case office furniture facility in 1979 were the major employers and income impacts of the decade for 1970-80. The total 1982 workforce estimate for the two facilities is about 2,125, or about 47 percent of the counties total manufacturing employment (70 percent of all durable goods manufacturing.) It is further estimated that due to the pay scales of these facilities they contribute about 70 percent of all wages and salaries paid in manufacturing in the county and about 25 percent of all non-governmental (state/local and federal) wages and salary income in the county..

From 1975-1982 the total non-durable goods manufacturing sector has only gained 80 jobs, or an increase of 5.3 percent. (ie. food and kindered products and textiles and related products.)

Indexes of Concentration. Indexes of concentration (IC's) are a useful statistical tool measuring an area's specialization within the manufacturing sector. An IC of greater than 100 indicates that the industry exceeds the

TABLE III-22
INDEX OF EMPLOYMENT AND PAYROLL CONCENTRATION, ALABAMA COMPARISON, LIMESTONE COUNTY, 1970-1980

	1970		1973		1977		1980	
	ICE ³	ICP ⁴	ICE ³	ICP ⁴	ICE ³	ICE ⁴	ICP ³	ICP ⁴
Total, All Reported Units ¹	100.0	100.0	100.0	100.0	100	100	100	100
Agriculture, Forestry, & Fisheries	320.0	366.6	383.3	375.0	480	214	129	--
Contract Construction	139.4	135.2	96.0	100.0	55	46	48	34
Manufacturing	76.4	71.5	87.1	80.8	159	153	165	182
Food & Kindred Products	-	-	-	-	-	-	386-E	--
Apparel & Other Textile Products	-	-	227.3	305.5	275	292	180	125
Electrical Equipment & Supplies	646.1	706.2	-	-	539	496	209	170
"Other" and -D- Items ²	NAP	NAP	NAP	NAP	-	-	--	--
Transportation & Other Public Utilities	30.1	30.4	25.4	24.4	15	13	20	12
Wholesale Trade	53.8	61.5	57.8	59.7	57	13	62	41
Retail Trade	159.6	208.8	151.6	203.0	109	129	108	102
Finance, Insurance, & Real Estate	72.2	79.6	60.0	75.4	45	49	63	54
Services	135.1	162.3	124.6	149.5	65	63	52	52
Unclassified Establishments	77.8	100.0	85.7	125.0	71	70	75	--

¹ Figures represent employment covered by the Federal Insurance Contributions Act (FICA) only. Data for the following types of employment, covered in whole, or in part by the Social Security Program, are excluded from the basic tabulations of this table - Government employees, self-employed persons, farm workers, and domestic service workers reported separately. Also, Railroad employment subject to the Railroad Retirement Act are not included.

² Includes all items not specifically enumerated and not enumerated because of Disclosure rules. Category is not comparable for the U.S. and Counties in some cases because of overall differences in employment distribution patterns at the two levels.

³ ICE = Index of Employment Concentration $ICE = \frac{\% \text{ Total Employment Limestone}}{\% \text{ Total Employment U.S.A.}} \times 100$

⁴ ICP = Index of Payroll Concentration $ICP = \frac{\% \text{ of Total Payrolls Limestone}}{\% \text{ of Total Payrolls U.S.A.}} \times 100$

D = Figures not available due to disclosure of individual statistics.

NAP = Category not applicable to calculations.

SOURCE: U.S. Bureau of the Census, County Business Patterns, 1970, 1973, 1977 and 1980
U.S. Government Printing Office, Washington, D.C., 1971, 1974, 1979, 1982

TABLE III-23

INDEX OF EMPLOYMENT AND PAYROLL CONCENTRATION, USA COMPARISON, LIMESTONE COUNTY, 1970-1980

	1970		1973		1977		1980	
	I _{CE} ³	I _{CP} ⁴						
Total, All Reported Units ¹	100.0	100.0	100.0	100.0	100	100	100	100
Agriculture, Forestry, & Fisheries	533.3	550.0	575.0	750.0	584	288	159	--
Contract Construction	164.2	141.1	118.0	108.2	75	58	60	40
Manufacturing	88.1	79.9	103.1	91.6	180	170	202	207
Food & Kindred Products	-	-	-	-	-	-	459	--
Apparel & Other Textile Products	-	-	543.5	687.5	737	734	553	466
Electrical Equipment & Supplies	254.5	289.7	-	-	295	264	135	100
"Other" and -D- Items ²	NAP	NAP	NAP	NAP	-	-	--	--
Transportation & Other Public Utilities	28.3	29.2	22.7	23.0	14	12	20	13
Wholesale Trade	50.0	55.1	53.6	54.1	37	45	60	37
Retail Trade	149.7	203.9	142.6	204.6	102	131	100	98
Finance, Insurance, & Real Estate	60.9	70.1	48.5	64.8	31	41	50	42
Services	109.2	128.4	99.5	113.2	50	48	40	33
Unclassified Establishments	87.5	100.0	100.0	125.0	92	88	83	--

¹ Figures represent employment covered by the Federal Insurance Contributions Act (FICA) only. Data for the following types of employment, covered in whole, or in part by the Social Security Program, are excluded from the basic tabulations of this table - Government employees, self-employed persons, farm workers, and domestic service workers reported separately. Also, Railroad employment subject to the Railroad Retirement Act are not included.

² Includes all items not specifically enumerated and not enumerated because of Disclosure rules. Category is not comparable for the U.S. and Counties in some cases because of overall differences in employment distribution patterns at the two levels.

³ I_{CE} = Index of Employment Concentration $I_{CE} = \frac{\% \text{ Total Employment Limestone}}{\% \text{ Total Employment U.S.A.}} \times 100$

⁴ I_{CP} = Index of Payroll Concentration $I_{CP} = \frac{\% \text{ of Total Payrolls Limestone}}{\% \text{ of Total Payrolls U.S.A.}} \times 100$

D = Figures not available due to disclosure of individual statistics.

NAP = Category not applicable to calculations.

SOURCE: U.S. Bureau of the Census, County Business Patterns, 1970, 1974, 1977, and 1980

U.S. Government Printing Office, Washington, D.C., 1971, 1974, 1979, 1982

national average in employment, or payroll, an IC of less than 100 indicates the industry to be underdeveloped relative to the industry's position relative to the state or national economy.

Limestone County's specialization (within the non-durable manufacturing category) in the food, textile, and apparel groups is firmly established by using Location Quotients. The food and kindred group, made up primarily of poultry producers, had an IC (employment/U.S. based) of 459 in 1980, down slightly from its index of 493 in 1970, showing that Limestone County, during that ten-year period, was decreasing its food and kindred employment in relation to the nation's employment in this category. However, employment dependence/concentration in this sector is still four times the national average and the state index of 386.

The combined textiles and apparels groups showed an overall steady trend over the decade, starting with an index of 544 in 1970, peaking at an index of 737 in 1977 and being back at about 550 by 1980. This was reflective of both nationwide trends and relative advances in durable goods manufacturing employment. With a workforce level of about 700, textiles/apparels are still a major economic factor in the Limestone County economy.

Due to disclosure rules and the limited size of the manufacturing sector in Limestone County, no other indexes can be compared. The index for total manufacturing, however, which reflects strongly the impacts of General Motors, Steelcase and Brown Stoveworks shows an enormous growth trend from 88 in 1970 to over double the national average at 202 in 1980.

Income from Manufacturing--In 1970, the typical annual earnings of a manufacturing employee in Limestone County was \$3,979, the lowest for any of the five counties in the region. While data on most of the industries represented in the county were withheld because their small numbers present a disclosure problem, it was apparent that the industry mix was comprised heavily of low-wage low-skill types.

By 1976, the average manufacturing wage and salary earnings had risen to \$6,972, and by 1982, due to the high wage industries outlined previously, the level was \$19,420, almost 15 percent above the statewide average, and exceeding all counties in the TARCOG region. Estimates of manufacturing income excluding the GM and Steelcase facilities, however, show a manufacturing wage level about 20 percent below the statewide average. For instance, in 1980 the per capita wage in the combined apparel and textiles sector was \$6,630 in Limestone County and averaged \$9,111 statewide. Electrical equipment and supplies averaged \$10,458 in wages and salaries in Limestone and \$12,963 statewide.

Problems and Opportunities--The employment mix of an over-dependence on high-wage, highly volatile/fluctuating employment industries and low-wage manufacturing creates many problems for the county. Limestone may be considered to be a county with a moderate-sized manufacturing base, most industries (excluding GM) are still predominantly low wage in nature and do not promote in the work force or discourage out-commuting for moderate wage employment.

TABLE III-24
LIMESTONE COUNTY, 1975 and 1980
PERSONAL INCOME BY MAJOR SOURCES, AMOUNTS AND CHANGES
(All figures in \$1,000's)

Item	1975	1980	Percent	Percent	
			Change	Distribution	
			1975-1980	1975	1980
TOTAL Labor and Proprietors Income by Place of Work 1/					
By Type	84,811	234,236	176.1	100.0	100.0
Wage and Salary Disbursements	63,433	193,834	205.5	74.7	82.7
Other Labor Income	4,246	23,460	452.5	5.0	10.0
Proprietors Income 2/	17,132	16,942	-1.1	20.2	7.2
Farm	8,712	4,789	-45.0	10.2	2.0
Nonfarm 2/	8,420	12,153	44.3	9.9	5.1
By Industry	84,811	234,236	176.1	100.0	100.0
Farm	10,619	7,802	-26.5	12.5	3.3
Nonfarm	74,192	226,434	205.2	87.4	96.6
Private	46,945	137,067	191.9	55.3	58.5
Ag. and Other 3/	284	1,488	423.9	.3	.6
Mining	0	0	.0	.0	.0
Construction	5,207	6,694	28.5	6.1	2.8
Manufacturing	16,587	88,212	431.8	19.5	37.6
Non-Durable Goods	10,586	15,778	49.0	12.4	6.7
Durable Goods	6,001	72,434	1,107.0	7.0	30.9
Transportation and Public Utilities	1,270	2,493	96.2	1.4	1.0
Wholesale Trade	3,211	5,934	84.8	3.7	2.5
Retail Trade	10,750	15,833	47.2	12.6	6.7
Finance, Insurance, and Real Estate	1,392	3,741	168.7	1.6	1.5
Services	8,244	12,672	53.7	9.7	5.4
Government and Government Enterprises	27,247	89,367	227.9	32.1	38.1
Federal, Civilian	11,551	60,509	423.8	13.6	25.8
Federal, Military	679	868	27.8	.8	.3
State and Local	15,017	27,990	86.3	17.7	11.9

TABLE III-25
 PERSONAL INCOME BY MAJOR SOURCES
 OF EMPLOYMENT SECTOR PERCENT OF TOTAL PERSONAL
 WAGE AND SALARY INCOME AND PERCENT CHANGE
 1975-1980, LIMESTONE COUNTY, ALABAMA, AND THE USA

	1975-80	1975	1980
<u>Manufacturing</u>			
Limestone	431.8	19.5	37.6
Alabama	80.4	26.9	28.7
USA	72.9	25.2	25.9
<u>Wholesale Trade</u>			
Limestone	84.8	3.7	2.5
Alabama	69.3	6.1	6.2
USA	73.9	6.6	6.9
<u>Retail Trade</u>			
Limestone	47.2	12.6	6.7
Alabama	58.2	9.7	9.1
USA	59.0	10.2	9.6
<u>Services</u>			
Limestone	53.7	9.7	5.4
Alabama	76.4	12.8	13.4
USA	82.8	16.2	17.6
<u>Federal Govt.</u>			
Limestone	423.8	13.6	25.8
Alabama	48.6	7.2	6.3
USA	44.9	4.3	3.7
<u>State and Local</u>			
<u>Government</u>			
Limestone	86.3	17.7	11.9
Alabama	79.8	11.2	11.9
USA	55.1	11.9	10.9
<u>Agriculture</u>			
Limestone	-26.5	12.5	3.3
Alabama	-21.8	3.5	1.6
USA	-3.3	3.1	1.8

NOTE: All figures refer to total income by place of work in Limestone County.

SOURCE: U.S. Bureau of Economic Analysis, 1982.

TABLE III-27

LIMESTONE COUNTY AND THE STATE OF ALABAMA ANNUAL AVERAGE PAYROLL*
 PER WORKER AS A PERCENTAGE OF THE U.S. ANNUAL AVERAGE
 PAYROLL PER WORKER, 1967, 1970, 1973, 1974, AND 1976

	1967*	1970*	1973*	1976*	1980
LIMESTONE					
<u>Total, All Units</u>	54.4	57.0	56.5	62.3	86.5
Contract Construction	69.6	48.5	51.6	55.1	58.5
Manufacturing	41.4	51.7	50.1	55.5	89.3
Trans. & Pub. Util.	63.1	59.4	57.1	67.6	55.2
Wholesale Trade	60.4	63.6	56.4	54.2	54.3
Retail Trade	75.1	78.0	81.0	91.1	85.3
Fin., Ins. & Real Est Services	71.8	66.9	74.6	77.0	74.2
	67.9	67.1	64.3	56.3	70.8
ALABAMA					
<u>Total, All Units</u>	83.3	83.8	84.2	87.0	87.3
Contract Construction	93.9	74.5	74.1	78.6	80.9
Manufacturing	82.2	81.1	80.5	81.0	81.4
Trans. & Pub. Util.	83.2	85.1	87.8	89.6	90.6
Wholesale Trade	82.3	81.2	82.0	82.3	82.0
Retail Trade	84.8	87.7	89.9	93.2	90.4
Fin., Ins. & Real Est. Services	90.2	89.4	89.6	88.8	87.6
	77.1	81.7	79.9	86.0	86.8

*Based upon 1st quarter multiple payroll, not total payrolls.

SOURCE: Derived from: U.S. Bureau of the Census, County Business Patterns, 1967, 1970, 1973, 1974, 1976 and 1980. Alabama, CBP 67-2, 70-2, 73-2 and 80-2. Government Printing Office, Washington, D.C., 1968, 1971, 1974, 1977, 1978, and 1982.
 TARCOG 8/83

The international nature of the automotive and petro-fuels trade makes local prediction and economic planning for "down" cycles difficult, if not impossible. Therefore, it is paramount that the county concentrate its efforts on attracting additional moderate skill/payroll industry to the area to stabilize growth and revenue. The county is presently experiencing an economic growth "slump" in the manufacturing sector.

The unemployment rate in Limestone County has reflected nationwide and statewide trends, although the diversity of employment opportunities resulting from previous aggressive industrial development program have somewhat insulated the community from rapid upturns and downturns in the unemployment rate. Due to the fact that Limestone County was included in the Huntsville SMSA by 1970, estimates of the county unemployment rates are contrasted to SMSA rate since 1970. The county unemployment rate in 1970 was 6.0% in contrast to the SMSA's rate of 4.4%. This rate increased in 1975 (mid-decade) following a steady 1970-1974 reduction. The national recession affected Limestone to a greater extent than it did the SMSA. The county's 1975 unemployment rate increased to almost 10%, and the SMSA's increased to 7.9%. In 1977 the unemployment rate decreased to 9.1% and the SMSA decreased to 7.6%. During the 1970-1977 period, the employed labor force increased through industrial and commercial expansion, thereby somewhat lessening the impact of nationwide recessionary and unemployment trends. Athens has become the undisputed commercial and industrial center in Limestone County.

By February of 1983, however, the SMSA rate had risen to 12.9 percent, Limestone County had a rate of 15.8 percent and Athens (the major employment center) was estimated to have a rate of just over 15 percent. This is reflective of the severe slow-down in the automotive industry and general manufacturing downturns.

In Limestone County, from 1981 to 1982, based upon annual average figures, there was a net county-wide loss of 220 jobs. Manufacturing employment declined by 40 jobs (net) with, the bulk of the nonmanufacturing loss being in the "government" sector (140 jobs lost). These unemployment figures would be more severe if it were not for the fact that an estimated 25 percent of the Limestone County work force commutes to Huntsville (Madison County) and Decatur (Morgan County) which have a more solid manufacturing growth rate.

It is significant to note, that no new industry has located in Limestone County for the past two years, and that less than 100 jobs have been officially announced from expanding industries for the same 2-year period.

The promising recent developments in manufacturing and the trend toward diversification that is most noticeable in the variety of new industries. The fabricated metals and electrical machinery industries were among the new types of industries with relatively high growth rates and at least moderate wage rates that have joined the county's roll of industries in the past few years. Chemical, primary metal and instrument manufacturing firms were among the other, though smaller, new acquisitions. While the location of a General Motors plant in south Limestone County is evidence of the trend toward industrial expansion in this area, the plant is still to employ 6,000 by the year 2000.

While overall, despite the current recession, the county appears to be moving toward a stronger and more diversified manufacturing base, and its excellent transportation access, its large number of industrial sites, the abundance of power and other required utilities and the labor force potential offer advantages few other areas in Alabama can provide, there are still problems which can be attacked locally.

The location of the Steelcase facility in the site ready building prepared by a previous unsuccessful location effort point out the value of a site ready shell structure as an attracting force for employment growth. In addition, the concentration of some effort on upgrading the local industrial parks design; land reserves and planned development image would probably be of great benefit in attracting new industries.

TABLE III-28
MANUFACTURING EMPLOYMENT
LIMESTONE COUNTY

Year	Employment	Change From Previous Year
1970	1,500	+ 25.0
1971	1,700	+ 13.3
1972	2,100	+ 23.5
1973	2,200	+ 4.8
1974	2,300	+ 4.5
1975	2,100	- 8.7
1976	3,050	+ 45.2
1977	3,740	+ 18.4
1978	4,250	+ 13.6
1979	4,680	+ 10.1
1980	4,460	- 4.7
1981	4,560	+ 2.2
1982	4,540	- .4

TOTAL CHANGE 1970-1982 = 202.7%

SOURCE: Alabama Employment Service, 1983

NON-MANUFACTURING

Non-manufacturing is that segment of the economy generally referred to as the service/trades sector. Traditionally, growth in the non-manufacturing sector is dependent upon both the growth and development of the manufacturing segment of the economy, and the proximity to other large regional trade centers.

During the 1970-1980 period, non-manufacturing employment in Limestone County increased by 1,310 workers, or about 14 percent. Nationally, relative to the manufacturing sector, the non-manufacturing sector is growing at a faster rate in terms of employment and wages, and has a larger proportion of non-supervisory and production workers. In terms of sensitivity to cyclical fluctuations of the national business cycle, only the construction component is markedly sensitive, and none are highly sensitive. Most are either highly or markedly insensitive, indicating that an economy heavy in non-manufacturing is one which is better able to weather the ups and downs of the nation. In Limestone County, the growth of manufacturing employment and regional market patterns have caused non-manufacturing employment to be somewhat retarded in growth and lag both state and national averages as to both employment and payrolls/wages and salary levels.

Construction--Generally, the growth of the construction industry is closely but not completely tied to the growth of the area in which it is located.

Employment in the non government related construction industry remained almost constant at a level of about 400 workers from 1970 to 1980. As a percent of total non-manufacturing employment in the county, it declined from 7.8 percent in 1970 to 5.1 percent in 1980.

Per capita worker wages and salaries in construction in Limestone County in 1982 averaged \$11,051; this was about 35 percent below the state-wide average construction wage of \$16,966.

Transportation, Communication, and Utilities--Employment in the transportation, communications and utility industry has also changed very little during the 1970-1980 period. As a percent of total non-manufacturing employment, it increased slightly from 1.5 percent in 1970 to 1.7 percent in 1980, but the actual worker increase was only 40 persons as with the other non-manufacturing sectors, average wages were lower than the state-wide average of \$21,019 by almost \$7,100--or almost 34 percent. Part of this discrepancy can be accounted for by the fact that the high pay scale government employment in utilities at Brown's Ferry is not averaged into this sector.

Government--The various combined levels of government--federal, state, and local--are still (1980) the largest sector employers in Limestone County, employing over 37 percent of the total civilian work force. During the 1975 to 1982 period, approximately 830 workers were added to the total government payrolls in Limestone County. Of these, 690 (83 percent) were state and local employees.

The major reason for the large fluctuations in Government employment over the 1970-82 period was the construction and subsequent modification and update

of the nuclear power plant at Brown's Ferry by the Tennessee Valley Authority. Included in the 4,200 employees in 1970 were approximately 3,100 workers at the Brown's Ferry site. Although the majority of these workers were construction workers, they are paid by the Federal government; therefore, they were classified as government rather than construction workers. Presently, there are still about 2,000 workers employed at Brown's Ferry (1982) and the number may fluctuate by 300-400 at any given time with project requirements.

The state and local average "government" payroll in Limestone County in 1982 was \$12,204, compared with a statewide average of \$13,043. For Federal government civilian employment in 1981, the average Limestone County payroll was about \$24,000, compared with a statewide average of just under \$22,000. This federal payroll figure for Limestone County reflected the high construction scale wages at Brown's Ferry, rather than the predominance of General Schedule (GS) wages statewide.

Finance, Insurance, and Real Estate (FIRE)--The finance, insurance, and real estate industry normally accounts for a very small portion of the total employment in any locality. This is especially true in Limestone County where both the rural nature of the county and the proximity to both regional markets (Huntsville and Decatur) and national markets (Nashville) have kept employment in this sector low.

While total employment in the FIRE sector has increased by 120 percent between 1970 and 1980; this only represented an actual job increase of 120 jobs over the decade. Much of this increase can be traced to the overall transition in the banking and finance industry statewide and the opening of new BANKCORP Branch offices in the Athens area to vie for the high salary deposits from the General Motors Plant.

Average wages in the Limestone County FIRE sector were \$12,871 in 1982, about 16 percent below the statewide average of \$15,403.

TRADE

The trade sector of the economy is comprised of two major activities--wholesale and retail. The level of trade and service activity in Athens and Limestone County is influenced by several factors, two of the most important still being a low per capita income and strong competition from Huntsville and Decatur, which draw many dollars of trade away from Athens.

Retail Trade--Retail trade in Limestone County is still "shadowed" by the proximity of both Huntsville and Decatur as major regional marketing centers. The growth rate for retail sales in Limestone has shown significant effort at "catch-up" growth during the past six years.

Table III-29 shows the total retail sales by major sector in Limestone County from 1976 through 1982. The growth rate for total sales from 1976-71 was 35.5 percent which was significantly above the state average rate of 25.2 percent.

TABLE III-29

TOTAL RETAIL SALES, LIMESTONE COUNTY 1976-82

(Figures in \$1,000's)

DESCRIPTION	1976	1977	1978	1979	1980	1981	1982
Food	22,783	24,007	27,066	28,071	31,423	32,341	36,812
Gen'l Stores w/Food and Gas	2,945	3,147	3,436	4,372	3,064	3,922	4,799
Gen'l Merchandise	6,940	5,985	4,970	4,786	5,138	5,243	5,066
Apparel	2,519	2,820	3,082	3,867	3,751	4,533	5,076
Furniture, Furnishings, etc.	1,907	2,257	2,638	2,664	2,579	2,870	2,866
Automotive	19,746	21,481	25,518	22,574	18,670	21,097	23,692
Gasoline Service Stations	6,648	7,682	9,101	14,455	18,930	18,455	14,455
Lumber and Building Mat's	2,179	2,909	5,108	4,318	7,563	9,992	8,674
Hardware and Farm Impl's	5,588	7,921	9,051	11,530	8,014	4,363	4,074
Eating Places	4,388	4,782	5,657	5,915	5,493	4,617	4,204
Drug Stores	1,603	1,983	2,805	3,095	3,413	3,695	4,146
All Other Retail	12,183	10,845	12,979	14,683	13,007	13,447	11,083
Total Sales at Retail	89,428	95,819	111,411	120,330	121,045	124,576	124,947
Nonretail and Unclassified	12,301	15,889	17,538	17,551	20,270	22,416	22,850
Total All Sales at Retail	101,730	111,708	128,949	137,881	141,315	146,992	147,797

* SOURCE: Center for Business and Economic Research, The University of Alabama, 1977-84

From 1979-82, however, even though total sales increased an additional 7.2 percent retail growth fell behind significantly behind the statewide average increase of 13.5 percent.

U.S. Census retail sales growth trends, while comparable at the county level for some indexes such as total sales, payrolls and employment force growth are not a representative measure for Limestone County, for two reasons: (1) the last census data for retail trade published is 1977 (1982 is not in print) which does not reflect recent slow-down trends in the county; (2) the national "market" average figures do not reflect the actual Alabama market conditions in which Limestone County is located in terms of both competing spheres of influence and prevailing wage and consumption patterns. For this reason, all data in this section will be based primarily upon statewide averages rather than any national indexes.

Athens, the county seat, is the dominant retail force in Limestone County. With a 1980 population of 14,558 it is the only community with more than 1,000 people and is centrally located within the county. In 1977 two out of every three retail establishments were located in Athens and it accounted for greater than 80 percent of the county's retail sales and almost 90 percent of its retail payroll.

Table III-30 which shows the per capita retail sales in Limestone County, TARCOG, and Alabama points out the significance of regional markets in developing retail trade. The Limestone total 1981 per capita sales figure of \$3,195 was only 59.9 percent of the statewide average of \$5,333; however, even Madison County (a strong regional market) with per capita total sales of \$4,245 could only come up to 79.6 percent of the state average. This points out the fact that both potential market size and development of a sales infrastructure are important to a retail trade market*.

Total county employment in retail trade and wholesale trade combined, rose by 600 persons from 1,300 in 1970, to 1,900 in 1980. This 46.2 percent growth was slightly above the state average by 1982 an additional 100 workers were employed in the trades bringing the total to 2,000 workers.

In payrolls and related income characteristics, however, retail trade in Limestone County lags the state (and national) figures significantly. The 1982 average wage and salary paid in the combined wholesale and retail trades was \$9,627, only about 87 percent of the statewide average of \$11,084. In relative income terms, total wages and salaries from retail trade grew by 47.2 percent in Limestone County from 1975-1980, compared with growth rates of 58 and 59 percents respectively at the state and national level. While retail generated wage income averaged about 9.3 percent of total income state and nationwide, it only contributed 6.7 percent of total income countywide in Limestone County in 1980. This fact reflects both the below average wages and the strong impact of manufacturing on the overall income structure.

* Based upon 1980 Census population figures.

TABLE III-30
TOTAL RETAIL SALES, SALES DISTRIBUTION AND PER CAPITIA SALES, LIMESTONE COUNTY
TARCOG, AND ALABAMA, 1901
(TOTAL SALES FIGURES IN \$1,000's)

DESCRIPTION	LIMESTONE			TARCOG			ALABAMA		
	SALES	% TOTAL	PER CAPITA \$	SALES	% TOTAL	PER CAPITA \$	SALES	% TOTAL	PER CAPITA \$
Food	32,341	22.0	\$ 703	315,478	20.0	\$ 763	3,562,106	17.2	\$ 916
Gen'l Stores w/Food and Gas	3,922	2.7	85	30,799	2.0	74	319,357	1.5	82
Gen'l Merchandise	5,243	3.6	114	58,409	3.7	141	2,188,441	10.5	563
Apparel	4,533	3.1	98	38,423	2.4	93	485,420	2.3	125
Furniture, Furnishings, etc.	2,870	2.0	62	45,950	2.9	111	526,266	2.5	135
Automotive	21,097	14.4	459	268,424	17.0	649	2,591,610	12.5	666
Gasoline Service Stations	18,455	12.6	401	85,129	5.4	206	1,381,287	6.7	355
Lumber and Building Mat's	9,992	6.8	217	77,898	4.9	188	843,908	4.1	217
Hardware and Farm Impl's	4,363	3.0	95	41,241	2.6	100	384,012	1.9	99
Eating Places	4,617	3.1	100	98,993	6.3	239	1,035,630	5.0	266
Drug Stores	3,695	2.5	80	26,399	1.7	64	454,906	2.2	117
All Other Retail	13,447	9.1	292	232,054	14.7	561	2,442,527	11.8	628
Total Sales at Retail	124,576	84.8	2708	1,319,273	83.6	3189	16,215,533	78.2	4,168
Nonretail and Unclassified	22,416	15.2	487	259,407	16.4	627	453,047	21.8	116
Total All Sales at Retail	146,992	100.0	\$3,195	1,578,680	100.0	\$3,816	20,746,000	100.0	\$5,333

Per Capita Figures Based Upon 1980 Census Population

*Source: Center for Business and Economic Research, The University of Alabama, 1982

LIMESTONE COUNTY RETAIL TRADE
SALES, PAYROLLS, AND EMPLOYEES, 1963, 1967, 1972 and 1977

	Sales ¹ (In \$1,000's)			
	1963	1967	1972	1977
Building Materials, Hardware, Garden Supply, Farm, Mobile Home Dealers	4,746	3,232	6,635	7,679
General Merchandise Group Stores	3,085	3,324	5,275	D
Food Stores	8,273	9,112	13,926	26,500
Automotive Dealers	8,082	9,728	13,652	21,060
Gasoline Service Stations	3,033	3,447	5,579	8,479
Apparel & Accessory Stores	1,663	1,962	3,375	5,224
Furniture, Home Furnishings and Equipment Stores	1,922	1,506	2,800	4,130
Eating and Drinking Places	1,238	1,119	3,008	D
Drug Stores and Proprietary Stores	890	1,231	(D)	3,342
Miscellaneous Retail Stores	3,093	3,162	(D)	7,436
Retail Trade, Total	37,140	38,442	60,521	95,457
Payroll ² (\$1,000's) - Total	2,998	3,241	5,423	9,022
Paid Employees ³	1,022	1,013	1,180	1,454

¹ Total, All Establishments

² For those Establishments with Payroll

³ For Establishments with Payroll, Week of March 12 for 1967, 1972 and 1977, and the week of Nov. 15, 1963

D Withheld to Avoid Disclosure of Individual Figures

NA = Data not available

SOURCE: U.S. Census, Census of Retail Trade, Alabama, 1963, 1967, 1972 and 1977.

TABLE III-32

RETAIL TRADE AND SELECTED SERVICES DATA
LIMESTONE COUNTY AND ALABAMA
1967, 1972 and 1977

	1967		1971		1977	
	Number	Index	Number	Index	Number	Index
LIMESTONE COUNTY						
<u>Retail Trade</u>						
Retail Sales (\$000's)	38,442	100	60,521	157	95,457	248
No. of Establishments	316	100	384	122	360	114
Sales Per Estab. (\$000's)	122	100	158	130	265	218
Sales: Income Ratio (%)	50.7		50.4		47.9	
<u>Selected Services</u>						
Total Receipts (\$000's)	2,487	100	4,664	188	7,093	285
No. of Establishments	154	100	223	145	201	131
Receipts/Estab. (\$000's)	16	100	21	130	35	219
Receipts: Income Ratio (%)	3.3		3.9		3.6	
ALABAMA						
<u>Retail Trade</u>						
Total Sales (\$000's)	4,120,340	100	6,583,615	160	10,704,902	260
No. of Establishments	28,752	100	32,401	113	31,582	110
Sales Per Estab. (\$000's)	143	100	203	142	339	237
Sales: Income Ratio (%)	53.1		54.5		51.4	
<u>Selected Services</u>						
Total Receipts (\$000's)	573,796	100	1,119,812	195	1,695,790	296
No. of Establishments	14,782	100	20,380	138	21,878	148
Receipts/Estab. (\$000's)	39	100	55	142	78	200
Receipts: Income Ratio (%)	7.4		9.3		8.1	

NOTE: The following indices, using 1967 as the base year indicate changes in prices nationally:

	1967	1972	1977
All Consumer Commodities	100	121	175
Services Less Rent	100	136	202

SOURCES: U.S. Bureau of the Census, Census of Business, 1967:
Census of Retail Trade, 1972, 1977;
Census of Selected Services, 1972, 1977.
U.S. Bureau of the Census, Statistical Abstract of the United States
U.S. Bureau of Economic Analysis, Unpublished Data from the Regional
Economics Information System.

TABLE III-33

PER CAPITA WHOLESALE SALES FOR TARCOG COUNTIES
 THE DISTRICT, THE STATE, AND THE USA
 1958, 1967, 1972, and 1977

County	1958	1967	1972	1977	PERCENTAGE INCREASE		
					1958-1967	1967-1972	1972-1977
DeKalb	\$ 235	\$ 425	\$1,043	\$1,586	+81	+145	+52
Jackson	278	440	842	950	+58	+ 91	+13
Limestone	188	202	591	990	+ 7	+193	+68
Madison	494	824	1,273	2,601	+67	+ 54	+104
Marshall	1,063	1,768	2,326	3,285	+66	+ 32	+41
Region	482	812	1,277	2,198	+68	+ 57	+72
Alabama	885	1,305	2,141	3,844	+47	+ 64	+80
USA	1,902	2,328	3,283	5,772	+22	+ 41	+76

Source: Census of Business, 1958, 1967, 1972, and 1977. Wholesale Trade: Alabama, U.S.A. Summary.

Wholesale Trade--Limestone County's total wholesale sales were the lowest among the five TARCOC counties in both 1972 and 1977. The strong influence of large nearby cities (Birmingham and Nashville) 90 to 100 miles away, is felt in this trade activity just as it is in retailing. It should be noted that while Limestone's wholesale trade total sales from 1972 to 1977 rose by 74.7 percent, this figure was significantly below both the statewide average of 88.2 percent and the national figure of 84.1 percent. From 1972 to 1977, the actual number of establishments listed as wholesalers dropped from 46 to 44 in the county.

Relative growth due to income from the wholesale sector has been above average in Limestone County. From 1975-80, total wages and salaries rose by 84.8 percent significantly above both the state and national figures of 69.3 and 73.9 percent respectively.

As would be expected from the retail discussion previously, per capita wages in wholesaling are below both the state and national averages. In 1980, the Limestone County figure was just over 54 percent of the national average and 67 percent of the statewide figure. In relative terms since 1967, the per capita worker wage and salary in wholesale trade has gone down (as a percentage of the U.S. average) every year since 1970 (see table III-33).

Limestone County's position with respect to water, rail, air, and highway transportation routes offers an excellent opportunity to tap the large north Alabama wholesale market. This sector of the county's economy should be among the most promising over the other areas in terms of these competitive advantages and should be a leading potential source of new jobs over the next several decades.

Service--The service activities of the nonmanufacturing sector of the economy are perhaps the most diversified and include business and repair services, personal services, amusement, entertainment, recreation services, and hotel, motel, and tourist courts.

The per capita wage and salary in the services sector is also below the state average in Limestone County. In 1982, county service workers averaged \$9,402, which was \$3,390 or 26.5 percent below the statewide average service wage of \$12,792.

The growth of services sector employment from 1970 to 1980 was erratic in Limestone County due in part to the reduction of aerospace/defense employment and employees and some service related government contracts. From 1970-75, service employment actually reduced from 900 to 800 workers, with only a rise back to 840 employees by 1980 and 940 by 1982.

The total wages and salaries paid out in the services sector from 1975-80 rose by only 53.7 percent in Limestone County, compared with 76.4 percent in Alabama and 82.8 percent nationwide.

EMPLOYMENT PROJECTIONS

Limestone County, as a part of the Huntsville metropolitan area, is expected to share in its growth. Total employment is expected to rise from 13,800 in 1980 to 17,662 in 1990 and then increase to over 21,000 by the year 2000.

TABLE III-34

PROJECTED EMPLOYMENT FOR LIMESTONE COUNTY
1990-2000

	1980	1990	2000
TOTAL EMPLOYMENT	13,800	17,662	21,054
<u>Manufacturing</u>	4,460	6,759	7,959
<u>Durable Goods</u>	2,810	3,823	4,540
Lumber Products & Furn.	NA	104	111
Primary Metals	NA	84	98
Fabricated Metals & Ord.	NA	775	779
Machinery, including Elect.	1,500	2,195	2,767
Transportation Equipment	NA	151	163
Other Durable Goods	NA	514	622
Non-Durable Goods	1,650	2,936	3,419
Food & Kindred Products	900	1,238	1,476
Textile & Apparel	710	824	878
Paper, Printing & Pub.	NA	244	312
Chemical & Allied Prod.	NA	158	206
Petroleum Refining	NA	NA	NA
Other Non-Durable Goods	NA	472	547
<u>Non-Manufacturing</u>	8,240	10,314	12,560
Construction	420	612	683
Trans., Comm. & Public Util.	140	277	366
Wholesale & Retail Trade	1,900	2,047	2,236
Finance, Ins. & Real Est.	220	357	460
Service (except H'holds)	840	1,379	2,784
Government	4,690	5,642	6,031
<u>All Other Non-Agricultural</u>			
<u>Agricultural</u>	1,100	589	535

SOURCE: Industrial Land Potential Study (for DeKalb, Jackson, Limestone, Madison, and Marshall Counties) TARCOG, June, 1976 (Revised, 1983.)

As Limestone County continues to become more urban in nature, the type of employment should reflect this change. The proportion of agricultural workers will continue to decrease while the percentage of blue and white collar workers will increase. (See Table III-34)

POLICIES

The future does not always conform to the trends of the past, and there is good evidence that the growth trend will increase in Limestone County. The two basic policy questions facing the county are: How much growth should be provided for, and where should it take place? An additional question that is inevitably involved in an attempt to answer these questions is: To what extent can Limestone County chart its own course in the area of future population growth.

The question of population growth in Limestone County relates far more to human values associated with quality of life than to the physical availability of space. Less than 10 percent of Limestone County's land area is developed at the present time. If the entire land area of the county were developed at a density comparable to the average density of the developed portions of the City of Athens, the County would contain more than 1,750,000 people. However, there would be no agricultural lands, no wetlands or wooded wildlife areas, and relatively little open space recreational use. The effects of such development on water quality, air quality, social organization, etc. are impossible to quantify at this point in time, although parallels could be drawn with urban areas that currently contain more than 1,750,000 people. Growth policy for Limestone County relates to how much growth is considered desirable by residents and to population pressures placed upon the county by migration and internal expansion, not to the amount of space that is immediately available.

The following policies have been adopted by the Limestone County Rural Development Committee:

1. Provide for moderate population growth at a steady level somewhat above the growth rate of the 1970's.

Current population projections for Limestone County in the year 2000 project a population of 65,000. It is suggested that Limestone County use this projection as a guide for long-range planning and that estimates of current population be made in order to monitor population growth performance.

2. Encourage a greater proportion of future population growth to occur in the cities and towns of the county.
3. Assist the smaller cities and towns in assessing their growth potential and attracting additional population and development.
4. Permit local variation in growth policy based upon local potential and preferences where such variations would support major county objectives and promote inclusiveness.

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5. Prevent the institution of policies or practices within the county that exclude people from living or working in any community on the basis of race, sex, national origin, income level or religious affiliation.
 6. Utilize the physical distribution and arrangement of land uses as one method for overcoming and preventing the spatial segregation of various population groups.
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CHAPTER 4

HOUSING

The Congress of the United States established a national goal in the Housing Act of 1949 calling for "a decent house and suitable living environment for every American family." This goal was reaffirmed by the Housing Acts of 1954, 1968, and 1970. The Housing and Community Development Act of 1977 has been the latest reaffirmation of this 30-year old Congressional goal.

Limestone County and, in particular, the rural areas of Limestone County present housing conditions that do not indicate satisfactory progress towards meeting this national goal. Seventeen percent of unincorporated Limestone County's residential structures exhibit either needs for costly major repairs or are dilapidated beyond repair. This percentage far exceeds the National percentage of under ten percent. In order for Limestone County to develop a program with the purpose of implementing the national housing goal and improving local housing conditions, the following housing element was prepared.

This element will analyze the present and projected housing demand for Limestone County, particularly for the unincorporated area of Limestone County. In addition, the present condition of housing, the current problems associated with housing, the obstacles to the solution of these problems, efforts previously undertaken to promote improved housing conditions, and a proposed housing program for the meeting of current and future housing needs in Limestone County will be presented.

THE BACKGROUND TO HOUSING

Housing is a complex subject which depends on the interplay of many factors. To a large extent, the housing situation is dependent upon the overall growth and economic conditions of the County. Among the important facts to be considered are a continuing growth rate, expanding employment, income disparity between urban and rural areas of the county, the sporadic nature of housing construction, a gradual but discernable shift from single-family towards multi-family construction particularly in the immediate Athens area, continuing home ownership trends in single-family housing, and increasingly rapid land use change in developing areas that were predominantly rural in nature.

POPULATION GROWTH

Limestone County has witnessed a moderate, but steady increase in population growth since 1960. The 1960 population of 36,513 increased 5,186 people to 41,699 in 1970, and this population increased 4,306 people to 46,005 in 1980, the most recent decennial census count. It is projected that Limestone

County will increase by 4,395 people by 1990, and have a 1990 population of 50,400. This growth in population over the next ten years is considered to be a continuation of the current moderate, albeit steady growth exhibited over the previous twenty years. Between 1990 and the year 2000, population growth is expected to accelerate, and the population will increase by 14,600 to 65,000. Limestone County's acquisition of new industrial development (including limited high-technology development in eastern/southeastern Limestone County) is projected to assist this trend in accelerated population growth.

The implications for housing are clear. In total, Limestone County must prepare for a housing unit increase adequate to support an almost 50 percent increase in the number of persons residing in the county in 1980. In the unincorporated area, Limestone County must prepare for the provision of adequate shelter for a similar 50 percent increase in population. Failure to do so will simply compound the present difficulties in relieving the backlog of inadequate housing already present in unincorporated Limestone County; this housing consists of seventeen of all existing residential structures.

HOUSING RESOURCES

In order to better understand the nature of the Limestone County housing situation, particularly in rural Limestone County, factors such as housing condition, housing age, vacancy information, housing value, and the demand for additional housing are necessary to take into account.

HOUSING CONDITION

Housing condition information provides insight into how well existing residential structures are serving as adequate shelter for their inhabitants. This information can best be inventoried through an exterior survey of all residential structures in the planning area (unincorporated Limestone County). In accordance with this need, the Top of Alabama Regional Council of Governments (TARCOG) conducted an exterior survey in the summer of 1982. Table IV-1 presents the housing conditions data for unincorporated Limestone County.

TABLE IV-1

HOUSING STRUCTURAL CONDITIONS LIMESTONE COUNTY UNINCORPORATED AREA

Classification	Number	Percent of Total (Conventional Structures)
Sound	9,188	66.1
Minor Repair	2,362	16.9
Major Repair	1,497	10.7
Dilapidated	854	6.3
Total	13,901	100.0 (96.9 percent of total structures)
Mobile Homes	438	3.1 (percent of total structures)
Total	14,339	100.0

SOURCE: TARCOG Structural Conditions Field Survey, Summer, 1982.

TABLE IV-2
LIMESTONE COUNTY, CHANGE IN DWELLING UNITS, 1960-1970-1980

Structure Units	1960	1970	1980	1970-1980		1970-1980	
				Numerical Change	Percentage Change	Numerical Change	Percentage Change
One	9,737	11,243	13,569	+1,506	+15.4	2,326	+20.7
Two or more	625	734	1,263	+ 109	+17.4	529	+72.1
Mobile Homes	<u>145</u>	<u>700</u>	<u>1,521</u>	<u>+ 555</u>	<u>+382.8</u>	<u>821</u>	<u>+117.3</u>
Total	10,507	12,677	16,353	+2,170	+ 20.7	3,676	+29.0

SOURCE: U.S. Census of Housing, 1960, 1970, 1980

TABLE IV-3
TARCOG HOUSING TRENDS, TOTAL UNITS
1970-1980 CENSUS

AREA	1970	1980	CHANGE 1970-80	
			NUMBER	PERCENT
DeKalb County	14,729	20,888	6,159	41.8
Jackson County	12,966	19,620	6,654	51.3
Limestone County	12,677	16,497	3,820	30.1
Ardmore	287	402	115	40.1
Athens	4,563	5,598	1,035	22.7
Elkmont	135	171	36	26.7
Lester	25	40	15	60.0
Mooresville	31	28	-3	-9.7
Rural Area*	7,636	10,258	2,622	34.3
Madison County	56,826	71,123	14,297	25.2
Marshall County	18,555	26,669	8,114	43.7
TARCOG Region	115,753	154,797	39,044	33.7
Alabama	1,120,239	1,462,738	342,499	30.9
U.S.A.	68,704,320	88,277,345	19,573,025	28.5

*Unincorporated portion of county.

SOURCE: U.S. CENSUS, 1970, 1980.

TABLE IV-4
HOUSING SUMMARY 1980 TARCOG REGION

	LIMESTONE								
	DeKalb	Jackson	Total Limestone	Athens	"Rural" Limestone	Madison	Marshall	TARCOG	Alabama
Families	15,471	14,616	12,690	4,043	8,647	52,620	18,902	114,299	1,038,881
Persons	53,658	51,407	46,005	14,558	31,447	196,966	65,622	413,658	3,893,888
Households	19,247	17,689	15,858	5,287	10,571	67,082	23,489	142,865	1,341,856
Total Units	20,888	19,620	16,497	5,598	10,899	71,123	26,669	154,797	1,467,374
Year Round	20,620	19,320	16,358	5,597	10,761	71,040	25,716	153,049	1,450,011
Occupied Units	19,247	17,689	15,358	5,287	10,071	67,082	23,489	142,865	1,341,856
Owner Total	15,010	13,200	11,321	3,406	7,915	44,800	17,604	101,935	941,219
Occupied	78.0	74.6	73.7	65.4	78.6	66.8	74.9	71.4	70.1
Renter Total	4,237	4,489	4,087	1,881	2,156	22,282	5,885	40,930	400,637
Occupied	22.0	25.4	26.3	34.6	21.4	33.2	25.1	28.6	29.9

U.S. Census of Population and Housing, 1980 - Summary Tape File 3A 1982

TABLE IV-5
POPULATION HOUSING UNITS AND PERSONS
PER HOUSEHOLD, 1970-1980

	1970-1980 Percent Change		Persons Per Household			
	Total Population	Total Housing Units	Number		Change 1970-80	
			1970	1980	No.	Percent
DeKalb	27.8	41.8	3.1095	2.7879	-.3216	-10.34%
Jackson	31.1	51.3	3.2630	2.9061	-.3569	-10.94%
Limestone	10.3	30.1	3.4634	2.9955	-.4679	-13.51%
Madison	5.5	25.2	3.5150	2.9362	-.5788	-16.47%
Marshall	21.0	43.7	3.1682	2.7937	-.3745	-11.82%
TARCOG	13.8	33.7	3.3752	2.8954	-.4798	-14.22%
Alabama	12.9	30.9	3.2526	2.9008	-.352	-10.81%

SOURCE: U.S. Census, 1970, 1980.

TABLE IV-6

OCCUPIED HOUSING UNITS BY NUMBER AND PERCENTAGE DISTRIBUTION
BY TENURE BY JURISDICTION, 1980

	DeKalb	Jackson	Limestone		Madison	Marshall	TARCOG	Alabama	
			Total Limestone	Athens Limestone					
NUMBER									
Total Units	19,247	17,689	15,358	5,287	10,071	67,082	23,489	142,865	1,241,856
Owner	15,010	13,200	11,321	3,406	7,915	44,800	17,604	101,935	841,219
Renter	4,237	4,489	4,037	1,881	2,156	22,282	5,885	40,930	400,637
PERCENTAGE									
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Owner	78.0	74.6	73.7	65.4	78.6	66.8	74.9	71.4	70.1
Renter	22.0	25.4	26.3	34.6	21.4	33.2	25.1	28.6	29.9

Totals may not add due to rounding.

SOURCE: U.S. Census of Population and Housing, 1980. Summary Tape File 1A., 1982

TABLE IV-7

TARCOG REGION
HOUSEHOLD DISTRIBUTION BY RACE AND TENURE, 1980

	DeKalb	Jackson	LIMESTONE		Madison	Marshall	TARCOG	Alabama	
			Total Limestone	Athens Limestone					
Households Total	19,247	17,689	15,358	5,287	10,571	67,082	23,489	142,865	1,341,856
• White	18,893	16,933	13,504	4,547	8,957	55,384	23,135	127,849	1,040,347
Owner	14,801	12,697	10,067	2,923	7,144	38,859	17,414	93,838	771,468
Renter	4,092	4,236	3,437	1,624	1,813	16,525	5,721	34,011	268,879
• Minority*	354	756	1,854	740	1,114	11,698	354	15,016	301,509
Owner	209	503	1,254	483	771	5,941	190	8,097	159,751
Renter	145	253	600	257	343	5,757	164	6,919	141,758

* Black plus all other minority groups.

SOURCE: U.S. Census of Population and Housing, 1980 Summary Tape File 3A, 1982.

TABLE IV-8

LIMESTONE COUNTY: OCCUPIED HOUSING UNITS CONDITIONS BY AGE, RACE, AND FAMILY SIZE STATUS, 1980 CENSUS

		<u>Total Units</u>	<u>Percentage</u>	<u>Distribution</u>
			<u>by Category</u>	<u>Total</u>
Renter:	Total	4,037	100.00	26.3
	Elderly	1,007	24.9	6.6
	Negro	560	13.87	3.6
Owner:	Total	11,321	100.00	73.7
	Elderly	2,903	25.6	18.9
	Negro	1,525	11.06	8.2
Total:	Total	15,358	100.00	100.0
	Elderly	3,910	25.5	25.5
	Negro	1,812	11.80	11.8
Renter:	Total H'holds	4,037	100.00	26.3
	1-4 pers H'holds	3,375	83.60	22.0
	5+ pers H'holds	662	16.40	4.3
Owner:	Total H'holds	11,321	100.00	73.7
	1-4 pers H'holds	9,634	85.10	62.7
	5+ pers H'holds	1,687	14.90	11.0
Total:	Total H'holds	15,358	100.00	100.0
	1-4 pers H'holds	13,009	84.71	84.7
	5+ pers H'holds	2,349	15.29	15.3

Totals May Not Add Due to Rounding

SOURCE: U.S. Census 1980 and TARCOG Staff Calculations, 1982

The classifications of condition as utilized in the field survey are presently as follows:

1. Sound - housing obviously needing only present maintenance in order to maintain a high standard of livability.
2. Minor Repair - housing needing conservation, i.e., some new shingling, electrical work, and other minor repairs to maintain quality livability.
3. Major Repair - housing needing rehabilitation, i.e., re-roofing (as opposed to single repairs) and new plumbing systems, joists, tuck pointing, and electrical systems in order to remove substandard features.
4. Dilapidated - housing obviously too deteriorated to be worthy of rehabilitation costs. This situation exists where the cost of a new home would probably be below the cost of extensive rehabilitation efforts.

Note: Mobile homes, due to their factory-site manufacturing characteristics were not rated but were counted in the survey.

The unincorporated area of Limestone County in 1982 comprised 14,339 residential structures. Of the 14,339 structures, 438 were mobile homes (3.1 percent of total structures) and the remaining 13,901 structures were conventionally built (comprising 96.9 percent of the total). The percentage of mobile homes in unincorporated Limestone County is indicative of the lower median family incomes prevalent in rural areas in Alabama. Of the 13,901 structures analyzed by condition, 2,351 structures or 17.0 percent were classified as currently substandard (needing major repairs or dilapidated). The remaining 11,550 structures or 83.0 percent were classified as being of standard condition (sound or needing minor repairs only). The substandard structures are fairly evenly scattered throughout the unincorporated area with very few true "concentrations" or clusters of substandard housing. Concentrations exist in the Burgreen Gin area, Salem area, Pine Ridge-Hampton area.

Concentrations exist in the latter six areas primarily due to the fact that these areas consist of developed but unincorporated communities with larger concentrations of housing in all four classifications.

Throughout rural Limestone County, numerous abandoned former sharecropper homes and abandoned farmsteads exhibit dilapidated housing conditions; such abandoned structures are testimony to changing agricultural technology and the resultant consolidation of numerous farmer family owned farming units. These abandoned structures have for the most part been "written off" the local housing market by realtors and owners due to their poor structural conditions.

These concentrations, however, are extremely scattered, and do not lend themselves to a housing rehabilitation program, using "concentrations" as a base for rehabilitation. A countywide housing effort should correct this issue, though.

Renter-Occupied Housing Lacking One or More Plumbing Facilities

According to the 1980 Census of Housing, a house lacking one more plumbing facilities does not have one or more of the following: private flush

TABLE IV-9

REGIONAL HOUSING UNITS BY TENURE, OCCUPANCY
AND PLUMBING FACILITIES, 1980

	LIMESTONE							
	DeKalb	Jackson	Limestone Total	Athens City	Limestone "Rural"	Madison	Marshall	TARCOG
Total Units*	20,888	18,620	16,497	5,598	10,899	71,040	25,716	153,761
Units Lacking**	1,293	1,250	1,068	155	913	1,344	937	5,893
Occupied Units	19,247	17,689	15,358	5,287	10,071	67,082	23,489	142,865
Units Lacking	893	905	809	120	689	1,023	563	4,192
Owner	15,010	13,200	11,321	3,406	7,915	44,800	17,604	101,935
Units Lacking	431	410	331	46	285	375	269	1,816
Renter	4,237	4,489	4,037	1,881	2,156	22,282	5,885	40,930
Units Lacking	462	495	478	74	404	648	294	2,377
Vacant Units*	1,641	1,931	1,139	310	829	3,958	2,227	10,896
Units Lacking	400	345	260	35	225	321	374	1,701

* Year Round Units

** Lacking one or more plumbing facilities.

SOURCE: U.S. Census of Population and Housing, 1980. Summary Tape File 1A., 1982.

TABLE IV-10

REGIONAL HOUSING UNITS LACKING PLUMBING FACILITIES
PERCENTAGE DISTRIBUTION BY OCCUPANCY AND TENURE
BY JURISDICTION, 1980

	DeKalb	Jackson	LIMESTONE			Madison	Marshall	TARCOG
			Total Limestone	Athens	"Rural" Limestone			
Total Units*	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Occupied Units	69.1	72.4	75.7	77.4	75.5	76.1	60.1	71.1
Owner	33.3	32.8	31.0	29.7	31.2	27.9	28.7	30.8
Renter	35.8	39.6	44.7	47.7	44.3	48.2	31.4	40.3
Vacant Units*	30.9	27.6	24.3	22.6	24.5	23.9	39.9	28.9

* Year Round Units Note-totals May Not Add Due to Rounding

SOURCE: U.S. Census of Population and Housing, 1980 Summary Tape File 1a., 1982.

TABLE IV-11

PERCENTAGE OF REGIONAL HOUSING UNITS LACKING PLUMBING FACILITIES
BY TENURE AND OCCUPANCY BY JURISDICTION - 1980

	DeKalb	Jackson	Total Limestone	LIMESTONE		Madison	Marshall	TARCOG	Alabama
				Athens	"Rural" Limestone				
Total Units*	6.19	6.37	6.48	2.80	8.40	1.89	3.64	3.83	5.17
Occupied Units	4.64	5.12	5.27	2.30	6.80	1.52	2.40	2.93	4.20
Owner	2.87	3.11	2.92	1.40	3.60	0.84	1.53	1.78	2.91
Renter	10.90	11.03	11.84	3.90	18.70	2.91	5.00	5.81	7.72
Vacant Units*	24.38	17.87	22.83	11.30	27.10	8.11	16.79	15.61	17.30

* Year Round Units ** Lacking one or more plumbing facilities.

Note: Totals May Not Add Due to Rounding

SOURCE: U.S. Census of Population and Housing, 1980 Summary Tape File 1A. 1982

toilet, hot piped water, and private bath. Within the TARCOG region, a high proportion of housing lacked one or more of these essential plumbing facilities. Among the renter-occupied units, those occupied by Blacks had a significantly higher percentage without one or more plumbing facilities. According to the 1980 Census of Housing, 35 percent of all rental units occupied by Blacks in Limestone County lacked one or more plumbing facilities. While the total population fared somewhat better, a high percentage of all occupied housing lacked one or more plumbing facilities. The percentage of total occupied rental units lacking one or more plumbing facilities in Limestone County was 8.8 percent compared to 35.9 for Blacks. It can be assumed that almost all housing units that lack a private toilet, hot piped water, or private bath should be considered to be substandard.

Owner-Occupied Housing Units Lacking One or More Plumbing Facilities

In every TARCOG county, a much smaller percentage of owner-occupied housing units lacked one or more plumbing facilities than was the case with renter-occupied units. More than four times the percentage of Black owner-occupied units lacked one or more plumbing facilities than was the case with total occupied units. The gap between the Black population and the total county population in this respect was generally greater for owner-occupied units than for renter-occupied units. The percentage of total owner-occupied housing units lacking one or more plumbing facilities in Limestone County was 3.0 percent compared to 14.0 percent for Blacks.

Limestone County's greater share of units without indoor plumbing can be attributed to the existence of a large proportion of rural housing not yet served by rural or community water systems. The expansion of utilities in this county should provide more opportunities for the provision of more indoor plumbing facilities.

Overcrowding

As a general guide, housing units with more than one person per room are considered overcrowded. Within the TARCOG Region, overcrowding in Black occupied housing units was far in excess of that found in all housing units. The percentage of overcrowding for all units in Limestone County was 5.4 compared to 4.2 percent for the Region and 16.7 percent for Black housing.

HOUSING NEEDS

In order to accurately ascertain the present and future need for housing throughout Limestone County, an analysis of the existing housing stock and population needing housing has been made. These factors will be reviewed in the following paragraphs.

Growth of the economic base, not only in Limestone County itself but in neighboring Huntsville and Decatur, should propel the county's population level from 46,005 in 1980 to 50,400 in 1990. The number of people living in group quarters is high here primarily because of the several hundred dormitory residents at Athens College. Households in 1990 should reach 20,700. By the

year 2000, the county's population and households will total 65,000 and 24,074, respectively.

Household size in Limestone County has dropped from 3.26 persons in 1970 to 2.99 in 1980. It is anticipated to drop to 2.70 by 1990, and to remain at this level through the year 2000. The number of households in 1990 is projected to be 20,070 (population in households, divided by persons per household). Eight hundred and twenty-nine vacant houses, also a part of the housing stock, raises the total housing inventory in 1990 to approximately 20,899. The year 1990 should witness a total housing inventory of 20,899 houses; and by the year 2000, Limestone County's total housing inventory should approximate 24,974 units.

HOUSING PROBLEMS

The basic fact to be acknowledged concerning housing in Limestone County is that the national goal of a "decent home in a suitable living environment" has not been fulfilled for all families. There are, and have been, insufficient opportunities for this ideal to be accomplished at prices many people can afford.

The majority of the county residents live in well-maintained housing units of ample size in sound condition. At the same time, there have been and still are severe housing problems for certain groups of people. These include racial minorities, welfare recipients, and other poor people--the young, the elderly, and the large family of low or moderate income.

Current forecasts indicate that by the year 2000 there will be 65,000 people living in the county needing a total of approximately 24,900 dwelling units. In addition to ameliorating existing housing problems, a major challenge to the county is the manner in which housing and its related environment is to be provided for the future population.

For the convenience of description, the primary problems are labeled:

Economic--An insufficient supply of housing for low- and moderate-income households.

Social--Poverty and discrimination.

Physical--The needs of an increasing population.

ECONOMIC PROBLEMS: AN INSUFFICIENT SUPPLY OF HOUSING FOR LOW- AND MODERATE-INCOME HOUSEHOLDS

Housing Price

The prices for housing are normally set in the context of a market with prices paid for new housing establishing levels for prices of used housing.

Developers produce housing for consumer markets where they detect a demand to which they respond, as a result of such demand, development of a residential nature will probably occur eastward from Athens toward west-central Huntsville and toward the Huntsville/Madison County Jetplex. During the current decade, an additional 5,300 units will comprise the demand for new housing in Limestone County, and the decade 1990-2000 will witness yet an additional demand for 4,350 new units on a countywide basis. This projected demand takes into consideration expected losses in county housing stock, due to deterioration, natural disaster, and other expected but unforeseen occurrences.

DEMAND BY TENANCY

The shift toward greater home ownership is quite strong in Limestone County. Using past trends, it has been projected that the proportion of families owning their own homes shows this expected change in tenancy.

During the decade 1980-1990, the percentage of homeowners to total residents will rise to approximately 80 percent, and this trend should stabilize throughout the next decade. Between 1980 and 1990, new housing units should be subdivided between owner and rental units as follows: 3,900 and 1,400. The market for the decade 1990-2000 is projected to include approximately 3,480 owner-occupied units (including mobile homes) and 870 rental units.

DEMAND BY PRICE RANGE

Median family income in Limestone County is \$16,252 per year, slightly above the maximum income level for admission into public housing for a family of six. In addition, the minority population is quite large, and since most of the Black families have very low incomes, a substantial proportion of the county's housing demand is the low-cost housing field. Limestone County's median family income compares unfavorably with the United States median (\$19,928), Alabama median (\$16,353) and the TARCOG region median (\$16,825).

During the decade 1980 to 1990, substantial new economic development, such as the General Motors Plant, should assist in substantially lowering the proportion of the low-income housing market in the county. However, this market will, nevertheless, remain an integral and important part of the Limestone County housing market. The moderate income market would stabilize and the middle-income and higher-income markets would rise somewhat. These trends should all stabilize through the next decade, 1990 to 2000.

PHYSICAL PROBLEMS: AN INCREASING POPULATION AND URBAN DEVELOPMENT ARE PRESENTING PROBLEMS IN AFFORDING AN ADEQUATE LIVING ENVIRONMENT FOR NEW HOUSING DEVELOPMENTS.

Growth Generation

Limestone County's growth pattern has traditionally witnessed urban growth in and around Athens and, to a lesser extent, in the remaining municipalities in the county. However, various public and private investments have now directed

TABLE IV-13

POPULATION, HOUSING UNIT
ESTIMATES, 1985, 1990

	Population		Population		Population	
	1985	1990	1985	1990	1985	1990
DeKalb	60,000	56,000	2.6679	2.5479	22,490	25,511
Jackson	56,000	61,000	2.7634	2.6434	20,265	23,076
Limestone	50,000	56,000	2.8455	2.7055	17,572	2,070
Madison	213,500	230,000	2.7362	2.5350	78,028	90,730
Marshall	70,000	75,000	2.7000	2.5825	25,926	29,014
TARCOG	449,500	484,500	2.7362	2.5757	164,281	188,106

SOURCE: TARCOG Projections based on U.S. Census 1970 and 1980 and State of Alabama, Department of Public Health, Birth, Death and Fertility tables, 1980.

new urban growth into the I-65/U.S. 31 corridor and encouraged new residential growth in a north-south pattern from Pryor north to Elkmont. Second, the four-laning of U.S. 72 (Huntsville-Athens) and Alabama 20 (Huntsville-Decatur) have both initiated an east-west and northeast-southwest residential growth pattern in the southeastern quadrant of the county. The combination of the above three patterns, or corridors of growth form a triangular pattern in Limestone and western Madison Counties, enclosed by U.S. 31, U.S. 72, and Alabama 20. Improved access along Alabama routes 53 and 251 have caused yet another exurban residential growth pattern in the northeastern part of the county. In each of these cases, new residential development has occurred without the benefit of adequate water and sewer service. During the last four years (1979-1983), Limestone County has heavily invested in rural water systems designed to serve these high growth potential areas.

However, the provision of adequate housing will continue to be difficult without the provision of necessary public service support facilities in the form of water, sewer, fire protection, and solid waste disposal. Virtually every one of these support services are inadequate in unincorporated areas, and these services will need to be strengthened in order for new housing to develop in an environment conducive to sound housing development.

The proposed new communities near Elkmont represent future growth potential in north-central Limestone County. The county will need to drastically upgrade services in this area before this growth potential can take place.

Substandard Housing

There are 10,071 housing units in Limestone County outside the City of Athens. Of these 10,071 units, 854 units, or 8.5 percent, are dilapidated. There are 3,859 units, or 38.3 percent, in some stage of deteriorating condition. The remaining 5,358 units, or 53.2 percent, are in sound condition. It is obvious that a substantial number of units in Limestone County are substandard to some degree---46.8 percent. This percentage of substandard units compared unfavorably with regional, state, and nationwide statistics. This large percentage of substandard housing represents a potential massive rehabilitation and clearance effort needed before substantial progress can be made in improving housing conditions in Limestone County.

HOUSING OBSTACLES

Solutions to the housing problems in Limestone County will be found as problems are faced. The supply of housing for the elderly and low-income households must be increased, the burden of poverty needs to be relieved, the range of housing choice expanded to all persons, and private and public efforts need to be mobilized and directed. Some solutions to these problems may be effectively pursued by resources within the County of Limestone, while others are more significantly affected at regional, state, and national levels. It should also be acknowledged that solutions to the housing and housing-related problems of poverty are found in the treatment of symptoms rather than cure or prevention.

1. There are two major areas of economic obstacles. Most important is the rising cost of housing. The current high interest rates and the rising cost of land and construction virtually eliminates the possibility of a low- or moderate-income family being able to afford a home. In addition, present state usury laws do not allow interest rates to be set at competitive levels for conventional mortgages. The second major economic obstacle is the present shortage of federal funds. The Alabama Housing Finance Authority is making headway in providing below-market interest rate financing for areas meeting chronic economic distress standards. Substantial areas of rural Limestone County do meet these standards.
2. Inadequate family income is a major obstacle to securing standard housing not only in Limestone County, but in most counties in the United States. According to the 1980 U.S. Census of Housing, 2,224 families or 17.2 percent of the total in the county had annual incomes under the federally designed poverty level. An additional 6,318 families or 48.4 percent had annual incomes under \$16,000. Many of these families are elderly, living where the heads of households are unable to find adequate employment because of low educational levels.
3. There is a current shortage of local mortgage financing sources seriously restricting local developments. The Alabama Housing Finance Authority is mitigating this situation, to a degree.
4. Local, state, and federal funds for comprehensive planning and implementation are inadequate to permit the county and the region to formulate adequate programs. This is true, not only with respect to controlling standards of new development, but also with respect to eliminating substandard living conditions and providing standard dwelling units.
5. Present state legislation does not provide permissive authority to counties such as Limestone to formally undertake the following endeavors: county planning (via a Planning Commission), land use controls, and building and housing codes. Each one of these endeavors can assist in promoting both high quality new housing, and in protecting existing high quality residential areas. Limestone County government is denied the use of these programs simply because counties do not have permissive legislation authorizing their use for unincorporated areas. The State, however, does now allow counties to enact subdivision controls and flood-prone areas land use controls.
6. Public services for growth areas in Limestone County are substandard contrasted to the rate of new growth occurring in these areas.
7. The appearance of substandard housing throughout Limestone County represents both a visual and psychological negative deterrant to new investments in standard housing. Property values have traditionally been depressed in these areas--another obstacle to the construction or improvement of housing in Limestone County.
8. There is no continually maintained information center in Limestone County on opportunities for low- and moderate-income housing resources. Despite

the demand for such housing, as stated in this housing element, the low incomes of such residents preclude them from utilizing the conventional owner or rental market.

Developers, realtors, and financial institutions have particularly critical needs for up-to-date information. Consumers are important users of housing information. There is an urgent need to improve the quality and quantity of useful housing information reaching low income households on available housing, housing programs, and financial aids which are available.

OBJECTIVES

The first step in solving the housing problem in Limestone County is the establishment of objectives followed by the formulation of some means of achieving the desired objectives. The county's planning program is concerned with the future of the county-its environment, its economy, and above all, the welfare of its people. The objectives selected for the County Housing Element provide the basic framework for the solution of the county's housing problems.

The county's primary objective in housing is the provision of decent, safe, and sanitary housing for all its residents. While this objective is understandably a long-range goal, the specific objectives used to arrive at the overall goal are discussed below:

1. Upgrade the capacity of Limestone County residents to improve their own housing through an increased standard of living. It is necessary that a program for improving the income level in Limestone County be expanded. Improving local employment opportunities and increasing the educational level are essential if any housing programs are to have a permanent effect.
2. Expand the choice in housing. Encourage local developers to construct additional single family housing units, particularly three and four bedroom units.
3. Eliminate further deterioration of the county's existing housing supply. Enact a housing code and use possible special revenue sharing funds for housing and community development. Local implementation of this measure will first take legislative action, via either a statewide or local bill.
4. Increase the number of low-cost housing units. Encourage local developers to build low cost housing.
5. Make available public utilities and services to all growth areas of the county. In order that available housing sites in Limestone County are utilized to their greatest potential, adequate public facilities and services must be provided. These services should be emphasized, particularly, in the new communities area near Elkmont.

6. Eliminate all dilapidated dwelling units in the county. Greater emphasis should be placed on the removal of all dilapidated dwelling units. First priority should be given to vacant units.
7. Increase mortgage sources for all income levels in Limestone County. Needed mortgage monies are presently in scarce supply countywide. New manufacturing companies such as General Motors could provide a revolving fund for its employees in local lending institutions. This activity could significantly supplement the state mortgage bond program.

STATEMENT OF PLANNING ACTIVITIES

PREVIOUS PLANNING ACTIVITIES

Although Limestone County has not previously engaged in comprehensive planning before FY 1974, 1975, the county had prepared an areawide water and sewer plan through funding provided by the Farmers Home Administration. This activity was undertaken in the late 1960's. In addition, Limestone County has been an active member of the Top of Alabama Regional Council of Governments since TARCOG's inception in 1969; and as a result, the county has been included in the regional planning program.

CURRENT PLANNING ACTIVITIES

The Limestone County Commission is presently in the process of developing a planning program with technical assistance provided by the Top of Alabama Regional Council of Governments. Planning activities currently underway include the Comprehensive Plan. This Plan, amends, and refines the 1976 Comprehensive Plan.

FUTURE PLANNING ACTIVITIES

In the near future, as indicated by the dates provided, the following planning activities of interest to housing are to be undertaken:

<u>Activity</u>	<u>Year</u>	<u>Estimated Cost</u>
Economic Development Plan	1984-1985	\$16,000
Continue Housing Program	1985-1986	4,000
Land Use Controls	1986-1987	10,000
Subdivision Regulations	1986-1987	6,000
Continue Housing Program	1986-1987	4,000

In the preceding years, the following actions have been undertaken in Limestone County to provide additional housing and alleviate housing problems.

1. Constructed rural water systems to serve rural residential areas; East Limestone, Tanner, Belle Mina, Fort Hampton, and North Limestone.
2. Constructed 53 dwelling units for low income and elderly residents (Top of Alabama Regional Housing Authority).
3. Constructed community fire departments (Clements, South Limestone, Pleasant Grove, Elkmont, Owens, and East Limestone areas for rural residential areas).

FUTURE IMPLEMENTING ACTIONS ✓

Future actions are necessary to meet the objectives of this study and are designed to alleviate housing problems and overcome obstacles to the solution of these problems.

CHAPTER 5

COMMUNITY FACILITIES

As an integral part of the Comprehensive Plan, the Community Facilities Plan has as its objective the programming of the capital-level public services to serve the resident population of the county through the planning period. Since the County Commission is the only available source of public service at the local level in unincorporated areas, the Community Facilities Plan will emphasize the need for county-level services to such areas. However, the Plan will also recognize the need for countywide involvement by the County government regarding policies directed at guiding countywide growth, development, and environmental protection.

Services provided countywide by County government include the following:

1. County administration
2. County Sheriff (civil papers and court administration)
3. County Tax Collection and Assessment
4. County Courts
5. Health and Social Services

Services provided primarily to residents in the unincorporated areas include:

1. Water Service
2. Sewer Service
3. Fire Protection
4. County Sheriff (road patrols; includes Mooresville and Lester)
5. Library Service
6. County Highways
7. County Schools
8. Parks (in conjunction with municipal parks)

The Community Facilities Plan will analyze the needs of county public services for two time periods, short-range (1982-1990) and long-range (1991-2000). These two periods comprise the total planning period for the Comprehensive Plan. Each function is analyzed as follows:

COUNTY ADMINISTRATION

The County of Limestone administers county services from three major facilities both located in the county seat, Athens. The Courthouse Building on

Courthouse Square in downtown Athens is the original county administrative facility. This structure was constructed in 1918 and refurbished in 1939 and 1978. Constitutional and some statutory offices (excepting the County Commission) are administered herein. This facility, being recently renovated, is in adequate condition, and should remain so for the foreseeable future. However, there is no off-street parking space available at this facility.

The second administrative structure used by the county is the Limestone County Courthouse Annex. This facility was built in 1966 to relieve acute overcrowding of offices in the old Courthouse. The new building is located at Jefferson and Green Streets. This building houses the Sheriff's and Civil Defense Department (and jail), and the water and education boards as well as several smaller, non-constitutional agencies. Off-street parking, and building conditions is adequate for the foreseeable future.

The third administrative structure utilized by the county is the Washington Street annex, located on the north side of Washington Street, west of Jefferson Street. This building, renovated in 1981 from its prior use as the Athens main post office, houses the County Commission office, county engineering office, and data processing functions, as well as data storage. This recently-renovated structure is adequate for the foreseeable future, and also has adequate off-street parking space.

Please refer to the chart depicting county government organization for location of agencies relative to the County Commission.

RECOMMENDATIONS (1982-1990)

1. Off-street parking for the County Courthouse (the original seat of Limestone County Government) should be provided; however, this should be accomplished in cooperation with the city and downtown property owners, in conjunction with long-range plans for the City of Athens Downtown Area Revitalization Program (Athens City Planner).
2. Maintain current quality facilities via repairs, as necessary.

RECOMMENDATIONS (1991-2000)

Since adequate room for building expansion exists at the Annex number two site, this site should be used for any building additions to the county administrative facilities during this segment of the planning period. Additional parking facilities should be acquired at the time of any proposed additions.

POLICIES

1. All County administrative facilities should be maintained in central Athens since such facilities should be readily available to the public in a central location.

2. Additional county departments should be organized directly under the County Commission rather than through quasi-independent boards. This policy should be followed where such a policy is not contrary to state legislation.

COUNTY SHERIFF'S DEPARTMENT

The direct patrolling duties of the unincorporated areas of the county and the Towns of Mooresville and Lester is the responsibility of the Limestone County Sheriff's Department. The department's headquarters are located at the Court-house Annex. Manpower, including deputies and investigators, totals 37 personnel. Estimates of need calculate an additional need for 6 deputies. Patrol cars total 9, and estimates place the need for patrol cars at 6 vehicles. The State Public Safety Department places 5 state troopers on intermittent duty in Limestone County. These troopers are permanently stationed in Decatur. Jail facilities are considered adequate by local and state officials; however, one additional jailer is deemed needed locally. Booking space is also needed at the jail. Limestone County Sheriff's vehicles and Athens City Police vehicles all have radio communication with their respective headquarters and with each other. In addition, the Sheriff's Department has radio communications with the State Patrol at Decatur.

STANDARDS

1. One deputy per 2,000 population (inclusive of total county population.)
2. One vehicle (radio equipped) per two deputies at a minimum, per one deputy preferred.
3. Offices maintained in a central county location.

RECOMMENDATIONS (1982-1990)

1. Employ an additional two deputies.
2. Acquire an additional two radio-equipped vehicles.
3. Reallocate office space in Sheriff's Department for additional booking space at the jail.

RECOMMENDATIONS (1991-2000)

1. Any long-range approach to improving law enforcement in Limestone County would probably involve a separation of civil and criminal duties, either by establishing separate sections of the Sheriff's Department or by limiting the Sheriff's Department to civil duties and establishing a separate county-wide police department. The latter approach is becoming more popular in urbanizing counties. The police department would be responsible only for criminal law enforcement. There are two basic alternatives:

- a. Expand the sheriff's department to two well-defined divisions; that of civil duties and that of law enforcement.
 - b. Limit the sheriff's department to civil duties, and establish a county-wide police department to be responsible for police protection throughout the county. This agency should be well paid and well trained.
2. Employ additional personnel and acquire additional vehicles in accordance with the following table:

TABLE V-1

LIMESTONE COUNTY SHERIFF'S DEPARTMENT
PERSONNEL AND VEHICULAR NEEDS, 1985-2000

	Additional Police Needed	Additional Vehicles Needed
1985	1	1
1990	1	1
1995	2	2
2000	2	2

POLICIES

The following policies are designed to promote adequate police protection in the planning area:

1. Police headquarters should be located in the center of their service area in order to enable rapid response.
2. Training programs could be instituted which would include Athens, Elkmont, Ardmore, and the Limestone County Sheriff's Office with a County Coordinator.
3. Replace all vehicles at 50,000 miles.

FIRE PROTECTION

Fire protection throughout Limestone County does not comprise total coverage. Municipal fire departments service the cities and towns of Athens, Ardmore, and Elkmont in addition to nearby rural or suburban areas. Limestone County maintains two trucks for rural fire protection. The remaining rural fire protection offered Limestone County are the six rural volunteer fire departments, established with the assistance of the Alabama Forestry Commission and the Civil Defense Program.

Therefore, approximately 65 percent of the unincorporated areas of Limestone County have no fire protection.

STANDARDS

SOURCE: American Insurance Association, Fire Department Standards Distribution of Company Response to Alarms--Changes effective January, 1962, Special Interest Bulletin No. 315; 85 John Street, New York, New York, January, 1963.

STATION FACILITIES

1. New fire stations should be designed with a minimum of two bays and should provide all necessary facilities which would make it useable as a full-time manned station. For one-story building, the minimum area of the lot and floor should be:
 - a. One company station--100 feet by 120 feet (approximately 3,660 square feet of floor area).
 - b. Two company stations--125 feet by 125 feet (approximately 4,750 square feet of floor area).
 - c. Three company station--180 feet by 125 feet (calculate floor area from actual requirements).
 - d. The area necessary to handle one pumper is roughly 15 by 30 feet; 15 by 55-60 feet for an aerial ladder truck and unit; and 15 by 45 feet for a Quad.
2. Hillside locations or sites located on a steep slope should be avoided.
3. The streets onto which fire equipment are moved out should lead naturally across the community or service area connecting the fire truck lane with arteries and streets going to all directions of the service area covered by the fire station.
4. The immediate vicinity of a fire station should be clear of land uses which make it difficult or dangerous for quick use of fire equipment (e.g., auto parking in close proximity to fire stations heavily traveled, inaccessible one-way streets, etc.)
5. Entrances onto a major thoroughfare for fire equipment should be provided with adequate signalization to stop all traffic approaching the station, insuring adequate response of fire equipment.
6. An area divided by natural or man-made barriers (e.g., rivers, bluffs, at-grade rail lines, etc.) which present the possibility of delay might require additional stations to provide adequate protection.
7. Fire stations should be designed so that both ends of the building permit entrance and exit for fire apparatus. Preferably the stations should be located near a major intersection of arterial routes, thus providing for quick response to any point within the service area covered by the fire station.

8. Fire stations should be designed so that a separate bay is provided for ambulance or life squad equipment where needed.

TABLE V-2

FIRE FLOW (GPM)	NUMBER OF COMPANIES REQUIRED
2,000 GPM or under* pumper companies	One company within 1- $\frac{1}{2}$ miles and 2 pumper companies within four miles
Ladder companies	One company within two miles

RECOMMENDATIONS (1982-1990)

1. Based upon present urban growth patterns in Limestone County, pumper companies (2 each) should be located in the following communities in the county:
 - a. Lester-Salem
 - b. Brown's Ferry
 - c. Greenbrier
 - d. Hays Mill
 - e. Belle Mina/North
2. It is recommended that a paid, fulltime fire marshall be appointed for Limestone County. The fire marshall would coordinate all fire fighting and fire prevention activities within the county. Specific duties would include:
 - a. Aid in the organization and development of rural fire districts.
 - b. Make periodic inspections of all rural departments.
 - c. Implement the State Enabling Legislation for Limestone County.
 - d. Act as training officer for rural departments.
 - e. Inspect public schools and other places of public gatherings.
3. Consideration should be given to the provision of formal fire protection districts based upon the areas denoted in the Recommendation No. 1. The district could provide tax funds for the desired facilities, materials, personnel, and services, such as training, fire alarm and prevention. Therefore, these districts would be in a position to seek a 9 or 8 American Insurance Association rating.
4. A countywide fire association should be organized to act as a policy-making body.

RECOMMENDATIONS (1991-2000)

1. As growth continues in Limestone County, additional stations comprising two companies each should be located in the following communities:
 - a. Thatch
 - b. Johnson School
 - c. Carey
2. By 1990, a countywide alert system should be established which would provide for mutual assistance between all municipalities and the rural county system. Calhoun Junior College should establish a fire school similar to that which exists at the University of Alabama, Tuscaloosa.

POLICIES

1. Fire stations should be planned, programmed, and constructed; and fire services organized to enable the classification of the county's fire defenses to class 9 or 8.
2. All industrial areas and areas planned for intensive development should be within 1 3/4 mile for a fire station.
3. All rural single-family residential areas should be within four travel miles of a fire station.
4. Fire stations should be located in the center of their fire protection service areas.
5. Fire station service areas should not be split by impassible barriers such as major thoroughfares and major streams.
6. Fire stations should be located near intersections of arterial highways where alternative response routes to all parts of their fire protection districts exist. However, fire stations should not be located within 1,000 feet of major intersections where congestion is likely to occur.
7. Priority on the construction, equipping, and manning of fire stations in the Limestone County Planning Area should occur in the planned industrial and urban density areas of the area.

COUNTY HIGHWAY

The Limestone County Engineering Department whose headquarters are located in the Courthouse Annex, services a total of 960 miles of county roads. Of this 960 miles, 850 miles are paved and the remaining 110 miles consists of either gravel or dirt surface. Of the 850 miles of paved roads, 135 miles are placed under the "Federal Aid Secondary" System. This FAS system provides federal funds for the construction and reconstruction of county roads considered locally to be collector routes (providing connections from rural areas

to state and federal routes). These FAS roads are numbered by the county, other county routes either have road names or are unnamed. No truly countywide road numbering or naming system exists, but one is being implemented.

Maintenance and repair facilities for all county vehicles are located at the county repair shop at Athens. However, operating crews report to four different field locations, one in each of the four County Commissioner's districts. As funds allow, each Commissioner can pave roads, buy equipment, and employ work crews. As a matter of policy, the County Engineering Department Director is consulted on major decisions, such as road paving priorities and capital equipment expenditures. The maintenance of four different equipment and work locations is favored locally since services can then be rendered more quickly throughout the county, as opposed to a central garage for all operations. Limestone County maintains a much higher percentage of paved roads contrasted with other rural counties.

RECOMMENDATIONS (1982-1990)

1. Even though several subfacilities are needed throughout the county for direct maintenance, the total road maintenance system should be coordinated as a unit by the Department Director.
2. A yearly road paving program should be continued as a program budget by the County Commission. This yearly budget by the County Commission should be developed from a three-year short-range program.
3. The ratio of employees to equipment should be increased toward a one-to-one basis so that the present equipment does not remain idle.
4. Minimum road width and drainage standards should be established for the policy of accepting new roads into the county system. Forty-foot roadway widths with six-inch bases, surface paving, and sixty foot rights-of-way are recommended as the basis upon which to formulate minimum street acceptance standards.
5. County subdivision regulations should be enforced by the County Commission. These regulations will provide for the provision of public services, such as utilities. Such standards could be based upon existing regulations in force by the City of Athens. State legislation has been passed in order for all counties to adopt and enforce such regulations.
6. A five-year program of equipment purchases should be established and a yearly purchasing reserve budget developed from this five-year program.
7. A countywide road numbering or naming system should be established and coordinated with adjacent counties.

RECOMMENDATIONS (1991-2000)

1. Maintain and update five-year program for purchases.

2. Maintain level of road maintenance commensurate with mileage of paved and unpaved roads.

POLICIES

1. Minimum standards for road maintenance used for FAS roads should be used for all county roads.
2. County roads serving only one resident (dead-end) or open land only should be reverted to the property owner.
3. All areas not within $\frac{1}{4}$ miles of a paved road should be served with paved roads first before adjacent areas are served.
4. All subdivision streets should be required to be paved before acceptance by the county.

REFUSE COLLECTION AND DISPOSAL

Refuse collection and disposal is a problem today regardless of whether people live in a rural or urban area. This is a problem of the community as well as the individual and continual disregard on the part of either will certainly result in unnecessary environmental problems and annoyances. Lack of understanding, carelessness and indifference is largely responsible for many of our present problems. Frequently, individual effort is wasted without public control; but at the same time, efforts of public agencies are doomed to follow without support of individual citizens.

In the overall environmental picture of Limestone County, the problem is how to handle our present estimated volume of 34,000 tons of refuse produced annually. By the year 2000, this amount will increase to 50,000 tons.

INVENTORY

There are three methods of refuse collection, all of which are in use in Limestone County: 1) by the individual, 2) by private contract collectors who are paid by the individual receiving the service, and 3) by a governmental agency using public funds. Refuse disposal is normally accomplished by 1) the individual who utilizes his own land or disposal areas belonging to private or public agencies, or 2) by governmental agencies who utilize publicly owned disposal areas.

Limestone County and the City of Athens jointly maintain the city-owned landfill of 69 acres. The county licenses private haulers who provide waste collection service. These haulers are assessed a fee by the county, and this fee is given to the City of Athens for use in landfill equipment purchases. The Tri-County Health Department has closed open dumps in Limestone County and all haulers are required to use the landfill or another method of disposal approved by the Health Department. The county has not adopted ordinances related to soil waste collection and disposal.

No longer is the old-fashioned, unsanitary refuse dump acceptable in today's society as a means of refuse disposal. According to the State Solid Waste Disposal Act of 1971, the only acceptable means of disposal in the State will be either a sanitary landfill, or alternate methods meeting ADEM (Solid Wastewater Division) requirements.

The problem of developing an adequate refuse disposal program in Limestone County is compounded by 1) the county's present low population density, 2) the lack of available funds, and 3) the fact that development is taking place simultaneously in southern Limestone adjacent to Decatur and in eastern Limestone which is beginning to feel the effects of its proximity to Huntsville and in central Limestone near Athens.

Based on the factors of projected population growth, annual production of 1,500 pounds of refuse per person and four acres of landfill per 10,000 population per year, the following land requirements for Limestone County were developed:

TABLE V-3
SANITARY LANDFILL REQUIREMENTS
LIMESTONE COUNTY, 1982-2000

Planning Period	Acres Needed
1982-1985	28.7
1986-1990	30.3
1991-1995	31.9
1996-2000	13.5
	<u>104.4</u> Total

SOURCE: U.S. Public Health Service, Environmental Health Planning Guide, 1962.

RECOMMENDATIONS (1982-1990)

To protect the health of the people and to prevent the depreciation of the county's environment, the following plan for storage, collection, and disposal of refuse is recommended;

1. Limestone County should acquire one centrally located site sufficient for the purpose of serving the urbanizing area (recommended size, 50-75 acres). In addition, several smaller sites (5 acre minimum) should be acquired to serve the rural areas of the county. These smaller sites would be served by a circuit rider. If properly planned, the larger site could be utilized as a future recreation facility. The Athens landfill could continue to be used as a central facility provided it is expanded to handle countywide waste needs in the future.

2. Limestone County should adopt an ordinance to require all householders and commercial establishments to provide containers approved by the Health Department.
3. It is recommended that house-to-house collection be left to private enterprise and disposal at landfill sites to be the responsibility of the homeowner. The private agencies, however, should continue to be regulated as is the present case.

RECOMMENDATIONS (1991-2000)

1. Limestone County should consider the expansion of needed landfill sites based upon the standards and Table included in the section preceding Recommendations.
2. The circuit rider system should be expanded concurrently with the need for expanded landfill sites.

POLICIES

1. Reuse of landfill site for recreation use if soils will allow such reuse.
2. Develop sanitation budget on both a line item and objective (program) budget.
3. Policy for extension of service:

TABLE V-4

POPULATION DENSITY	EQUIVALENT LOT SIZE	SERVICE ECONOMIC JUSTIFICATION
Over 2,500 persons/ square mile	Less than 1 acre	Justified
1,000-2,500 persons/ square mile	1 to 2 acres	Probably Justified
500-1,000 persons/ square mile	2 to 4 acres	Not Normally Justified
Less than 500 persons/ square mile	Over 4 acres	Rarely Justified

EDUCATION

The education of the children of any county is the largest single item of public expense. Considering the complexity of today's modern society, the

public educational system has a pronounced function to perform for every child in the county. Without adequate formal training, employment opportunities are limited and the opportunities for advancement are poor. The education of county residents is directly related to the standard of living and its prospects for growth and progress in the future.

INVENTORY

The Limestone County Board of Education operates 12 schools in the county school system. The service area of the county system includes all of Limestone County except the City of Athens and the Athens-Limestone Vocational Technical Center (a county school).

There are presently thirteen (13) schools in the Limestone County School System. The following is a review of September 1982 enrollment.

<u>School</u>	<u>Grades</u>	<u>Enrollment</u>
Tanner Primary	K-3	159
Reid	K-6	167
Johnson Jr. High	K-9	283
Mooresville-Belle Mina	K-6	161
Owens Jr. High	K-9	537
Piney Chapel	K-9	430
Ardmore	K-12	916
Clements	K-12	946
East Limestone	K-12	1,007
Elkmont	K-12	724
Tanner	K-12	701
West Limestone	K-12	737
		<u>6,768</u>

All teachers are professionally certified and schools meet State accreditation requirement. Graduating seniors totals 471. Pupil-teacher ratio for grades K-6 is 19:1 and grades 7-12 is 16:1.

STANDARDS

The following school standards have been developed by the Alabama State Department of Education, Division of Departmental Services. The standards herein are standards designed to maintain minimum facility development throughout the state.

MODERN TRNEDS IN BUILDINGS AND SITES

For some time much thought and attention has been given to the improvement of instruction in our public schools. Improved methods of teaching and the reorganization of the program to meet modern needs and demands have necessitated more attention being given to adequate facilities to house a desirable program.

Some of the reasons for larger school centers are as follows:

1. A broader educational program may be offered; consequently, the children will be given greater educational opportunities.
2. The holding power of larger schools tends to be greater than that of smaller schools. This should result in a larger percentage of school children being given the opportunity as well as the desire to obtain a more complete and useful education.
3. Better qualified teachers are attracted to larger, well-planned and well-equipped schools.
4. More adequate facilities, equipment, and other teaching aids are often available.
5. Transportation, if properly carried out, is less hazardous than when pupils walk on dangerous highways to schools.
6. Larger school centers require larger and more permanent types of school buildings than small school centers. As a rule, buildings at large school centers are more economical to maintain than are several scattered small school buildings at different centers.
7. The school buildings and grounds for larger schools contribute more, in all probability, to the general attractiveness of the community.

SCHOOL PROGRAMS

In school plant planning, much thought must be given not only to the number of classrooms needed to accommodate pupils, but also to special facilities necessary so that a satisfactory program can function. Some of these special facilities are as follows: auditorium, lunchroom activities space, visual aids room, library space, science rooms (especially science laboratories), physical education facilities (both inside and outside), vocational home economics, vocational agriculture, trades, and industry, rooms for music including band, conference rooms, health and sanitation facilities, administration offices, and others as the program demands. The passage by Congress of the National Defense Education Act and the Elementary and Secondary Education Act makes it desirable to take advantage of the assistance offered to provide a program of the highest quality.

SITE SIZE

1. Elementary School

Pupil Number: 0-100; Site Size: 5 acres
Additional 100 pupils; additional 5 acres

2. Junior High School

Pupil Number: 1-100; Site Size: 10 acres
Additional 100 pupils; additional 10 acres

3. Senior High School

Pupil Number: 1-100; Site Size: 15 acres
Additional 100 pupils; additional acre

Minimum: 25 acres (includes 12-grade schools)

RECOMMENDATIONS (1982-1990)

1. Rehabilitate the existing physical plants of those high schools necessary to obtain Southern Association of Colleges and Schools standards, as well as to maintain State certification.
2. Modernize the physical plants of those elementary and junior high schools required to attain Southern Association of College and Schools accreditation, and to retain State certification as necessary.
3. Add acreage to the following school sites in order to enable these sites to meet minimum state standards:
 - a. 11 acres to Ardmore High
 - b. 6 acres to Clements High
 - c. 11 acres to West Limestone High
 - d. 9.5 acres to Mooresville-Belle Mina Junior High

Note: These schools have adjacent tracts of open land available at the site.

RECOMMENDATIONS (1991-2000)

1. Continue land acquisition program through the year 2000, if funds are unavailable for successful completion of land acquisition during the period 1982-1990. Classroom additions and rehabilitation projects should have first priority during prior period.
2. The facilities at Ardmore High, East Limestone High, Elkmont High, and Tanner High are located in areas expected to experience significant growth during the latter part of the planning period (1991-2000). Therefore, these high schools and their elementary and junior high school feeder areas should plan for further capital improvements during the period 1982-2000. All improvements, such as additional classrooms, should be designed to meet the minimum standards as described in this section on Education.

POLICIES

1. Elementary Schools

Each school should be related to a community as centrally as possible within its service area, within a half hour bus travel time. It should be conveniently located for both walking and transported students.

2. Junior High Schools

Each school should be related to an outlying community as centrally as possible within its service area consistent with transportation routes servicing the area and be within one hour bus travel time of all students. Community use of the school facilities is a factor to be considered in site location.

NUMBER OF TEACHERS

Elementary Schools: 6 teachers; one teacher per grade
Junior High Schools: 6 teachers; two teachers per grade
Senior High Schools: 6 teachers; two teachers per grade

OTHER FACTORS

In the purchase of new sites or where major expansion is planned to an existing school plant, care must be taken to provide for safe and healthful conditions. Where water and sewer lines are not available and where there is any doubt about finding a suitable water supply and the ability to provide for sewage disposal, county health authorities should be asked for advice and assistance. It cannot be too strongly emphasized that adequate, safe, and healthful sites for the location of school plant facilities must be secured.

3. Senior High Schools

Each school should be located within one hour maximum bus travel time of all students in each direction. Community use of school facilities will influence location.

Note: Policies regarding pupil/teacher ratio, site size, and other physical factors should be based upon minimum standards developed by the State Department of Education. These standards are presented in this plan.

SPECIAL EDUCATION FACILITIES

Facilities in this category include colleges and universities, vocational and technical schools, and other special educational facilities. These facilities are separated from other educational facilities because of their unique educational characteristics. These institutions perform services ranging from teaching basics to people who are otherwise unable to obtain an education, to teaching technical skills, to providing higher education for professions. Funding comes from city, county, state, and federal agencies.

LIMESTONE AREA VOCATIONAL-TECHNICAL SCHOOL

The Limestone Area Vocational-Technical School is located on Sanderfer Road in southwest Athens. The facility is situated on a 30-acre site, and was constructed in 1970 and has been recently expanded. It is in sound structural

condition. The school is operated through the Limestone County Board of Education and serves all school systems within the county. It accommodates 608 students in grades 10-12 and is staffed by _____ vocational instructors. There is no central library; rather, each department contains its own technical library for student use.

CALHON COMMUNITY JUNIOR COLLEGE

Calhoun Community Junior College is a two year, state-supported, co-educational institution located adjacent to U.S. Hwy. 31 in the extreme southern part of Limestone County. The campus consists of an administration-classroom building, Natural Sciences building, Allied Health building, library, physical education complex, Student Union Center, Rehabilitation Center, and classroom buildings for occupational programs on a 60-acre site. The curricula offered includes university-paralleled (transfer) programs leading to an Associate's degree, two-year career programs, and occupational programs. The college is fully accredited by the Southern Association of Colleges and Schools, and credits accrued at Calhoun are transferable to any college or university.

During 1972-1973, the enrollment was 3,800. It has increased to 4,200 in 1974-1975; currently, some 5,000-6,000 students are enrolled.

The facility operates under a five-year master plan which calls for purchase of an additional 75 acres and expansion of classroom facilities at existing buildings.

ATHENS STATE COLLEGE

Athens State College is located within walking distance of downtown Athens. It is the oldest institution of higher learning in Alabama, having been established in 1822 as a school for girls. It has been co-educational since 1931. The campus occupies a 44-acre site.

The College jointed the Post-Secondary Division of the State Department of Education in 1975. It is Alabama's only upper division institution. It serves the graduates of the junior colleges and technical schools of the area. Its program includes major divisions of business education, natural science and mathematics, humanities, and social science.

Students may pursue three degree programs: (1) Bachelor of Arts, (2) Bachelor of Science including a Bachelor of Science in Technology, and (3) Bachelor of Science in Education. Included in these programs are pre-professional and pre-graduate concentrations and courses leading to elementary and secondary teacher certification.

Enrollment during the 1977-1978 school year was approximately 1450 students. Although many of the students are from the area, students come from all over the United States and several foreign countries. This brings together a wide variety of customs and cultures to enhance learning experiences.

RECOMMENDATIONS

1. Athens State College should be maintained as an upper-division degree-granting institution. Adequate support should be provided this facility whether this support is private, state, and/or federal in nature to preserve its upper division status.
2. The various five-year capital programs of these Limestone County area institutions should be implemented and updated as the need arises.

PUBLIC HEALTH FACILITIES

Health care facilities and services are essential elements in a comprehensive community program designed to substantially improve the well-being of Limestone County residents. Population projections for Limestone County indicate that an increasing percentage of county residents will be in the 65-and-over age category. This increasing number of elderly residents will require additional health facilities in the future.

ATHENS-LIMESTONE HOSPITAL

Nineteen physicians practice at Athens-Limestone Hospital and represent the following medical specialties: Family Practice, Obstetrics, Pediatrics, Ophthalmology, Surgery, Internal Medicine, Radiology, and Pathology. Additionally, specialists in Cardiology, Thoracic Surgery, Urology, ENT, Neurological Surgery, and Orthopedics have consulting privileges at Athens-Limestone Hospital.

Athens-Limestone Hospital is a 91-bed general hospital offering a full range of diagnostic x-ray, nuclear medicine, ultrasound, and laboratory services plus 24-hour emergency physician care, ambulance service, intensive care unit, physical therapy, respiratory therapy, pharmacy, endoscopy, outpatient surgery, and a birthing room.

A 3.3 million dollar expansion project has recently been completed which includes a new laboratory, x-ray department, business office, and new front entrance to the hospital. The new addition is sufficiently stressed to add two additional floors to meet future needs.

RECOMMENDATIONS

Continue to implement the current expansion program, as previously described. Westward expansion into the floodprone area should be coordinated with the Athens City Planner in order to minimize any flooding potential.

JACKSON MEMORIAL HOSPITAL

The Jackson Memorial Hospital is located in the Town of Lester in northwest Limestone County. The service area of this hospital extends into adjacent Lauderdale County, Alabama and Giles County, Tennessee.

D. E. Jackson Hospital is fully accredited by the Joint Commission on Accreditation of Hospitals. The hospital operates a fully equipped surgical unit and offers comprehensive laboratory and radiology services, and the services of nine physicians. A registered dietitian offers dietetic counselling and both in-patient and out-patient pharmacy services are provided by a registered pharmacist. The Cardio-Pulmonary department has recently been expanded by adding a treadmill, an EEG machine, electrocardiogram equipment, and an in-house blood gas machine. The hospital's Community Services department and Education department work together to provide the community with education programs as a community service, and is now providing the community with 24-hour, 7 days-a-week physician staffed Emergency Room.

RECOMMENDATIONS

Implement current plans to expand, as services require. The Lester Road connection to Buck Island Road in Salem should be improved, for easier access to other areas of Limestone County and to Lauderdale County as well.

TRI-COUNTY HEALTH DISTRICT

The Limestone County branch of the Health District is located at 310 West Elm Street in Athens. This building, constructed in 1973, is in sound condition.

The Health Center provides the services listed below normally without charge.

Personal Services:

- Vital Statistics Records
- Present programs of interest to the public or specific groups
- Nutritional Instruction
- Intake Nurse available on Thursdays

Clinical Services:

- Maternity Clinic held weekly
- Child Health Clinic held each Tuesday ages 0-2
- Weekly clinic for diagnosis and treatment of venereal disease
- Clinics for diagnosis and treatment of tuberculosis-appointment
- Immunization clinic held weekly
- Family Planning services

Women, Infant, Children (WIC) is a program that provides certain foods to specific persons who are financially and medically eligible.

A program of School Health Nursing is administered in each school within Limestone County.

The Environmental Health Division conducts a program of inspection and permitting for all food handling establishments, motels, dairies, and swimming pools, septic tank installations and solid waste enforcement.

The Air Pollution Control division of ADEM conducts a program of inspection and permitting of potential air pollution sources.

RECOMMENDATIONS

Employ a minimum of four additional sanitarians during the planning period. This increase in staff should enable the center to surpass the American Public Health Association's standards for sanitation staff. The increased residential development in areas not served by sewers has drastically increased the need for sanitary inspections.

POLICIES

1. The increasing number of elderly individuals in Limestone County should be considered in any proposals for health development planning programming.
2. Health clinics and other out-patient medical and health services should continue to be provided in central locations where the given facility will have access and visibility to the public.
3. Local health and hospital agencies should coordinate local plans with the areawide health planning proposed to be reinstated via the North Alabama Health Systems Agency.
4. Local plans for physical facilities should be undertaken according to standards utilized by the Bureau of Health Facilities Construction, Alabama State Department of Health.
5. Small health facilities such as doctor's offices and private clinics are encouraged to locate in rural community centers.
6. Special, small, public health clinics should be established in mobile health units provided to areas of low-income housing, especially in outlying areas.

ELECTRIC POWER AND NATURAL GAS

Utilities using wires--electric power, telephone, telegraph, fire alarm, and police call box systems are the elements under consideration in this section. This plan is concerned with the location of these wires in addition to the location of the buildings required in the operation of utilities using wires.

Limestone County is within the power service area of the Tennessee Valley Authority. Electric energy is furnished to both urban and rural areas of the county through public power utilities. The Tennessee Valley Authority furnishes power to the City of Athens. Athens has a franchise for distribution of power to the entire county.

Generating plants within or near the area include three dams and two steam plants representing an installed generating capacity of 3,403,000 kilowatts including the following installations: Widows Creek Steam Plant--1,175,000

kilowatts; Colbert Steam Plant--1,300,000 kilowatts; Wilson Dam--598,000 kilowatts; Wheeler Dam--259,000 kilowatts and Guntersville Dam--72,900 kilowatts.

An additional source of electric power has been activated at the Browns Ferry Nuclear Plant, which produces the largest single capacity of all plants in TVA's Alabama District; 4,000,000 kilowatts.

GAS DISTRIBUTION SYSTEM

Gas is delivered to consumers primarily for heating purposes under uniform but comparatively low pressures. Gas lines can follow topography but are usually laid with a slight gradient to allow for the drainage of water caused by condensation.

The transmission lines of the Alabama-Tennessee Natural Gas Company supply the county. The transmission lines run in close proximity to the river, railroads, and highways, affording easy access for natural gas to many properties considered as desirable industrial sites.

Areas served by natural gas include Alabama Hwy. 20 through southeastern Limestone County and areas along U.S. 31 from Decatur north to Athens.

PUBLIC UTILITIES POLICIES

Utilities having the greatest influence upon urban growth patterns are the water and sewer systems. These systems are relatively costly and areas into which they can be economically extended are largely determined by topographic conditions and natural barriers. The extension of these systems to serve scattered, low density development becomes costly because a greater length of line must be installed to serve each individual customer. At the same time, the provision of other services including transportation, schools, garbage collection, etc., becomes more costly. It follows then that a more compact development pattern for an urban area generally leads to greater economy in the provision of governmental services. Since the availability of water and sewer services can determine where and how urban growth can occur, policies affecting the extension of these utilities have a controlling influence over urban growth patterns. Water and sewer extension policies, therefore, are the most effective means available to a community to guide development in accordance with planned objectives for future growth.

Urban growth patterns are shaped, to a large extent, by utility service policies. This is because the presence or absence of utilities can determine where urban growth will occur and where it will not. When utility service policies are coordinated with an area's objectives for future growth, a more attractive and efficient urban environment can be created. Conversely, the lack of sound utility service policies can lead to chaotic development patterns and higher costs for government services.

Utility services normally associated with urban growth include electricity, gas, telephone, water, and sewer. In terms of controlling urban development

patterns, however, electric, gas, and telephone services exert little influence. Urban growth can take place with or without a gas distribution system because alternative fuels and power supplies are available. While electric and telephone services are the major concern of public policies for these two utilities.

WATER AND SEWER POLICIES

1. Establish an urban service district beyond which water and sewer extensions will not be made except for industrial or other necessary purposes.

The limits of such an urban service district should be mutually agreed upon by the governing bodies of the municipalities and Limestone County. These limits could be reviewed annually and necessary adjustments made with the consent of all governments. The urban service district should contain only those portions of the county which are either 1) urbanized, 2) experiencing urbanization, or 3) suited for early urbanization. In defining the district boundaries, due consideration must be given to the capital programming requirements of the local governments or districts and their financial ability to extend services.

2. Establish means of providing water and sewer services on an area-wide basis.

Eighty-five percent of the municipal water supply in Limestone County is provided through the Athens Water System. It is logical, therefore, that this system continue to be expanded to meet future needs of the county. This could be accomplished through supplying water to other systems through contractual agreements and by extending the Athens system into unincorporated areas.

3. Priorities for extending water and sewer services should be in the following order:

- a. To developed areas where there exists an immediate threat to public health.
- b. To developing areas. The timely and planned extension of services to developing areas provides an opportunity to shape urban growth patterns and achieve maximum economy and efficiency of service.
- c. To developed areas without urgent public health or safety problems. Where development patterns have already been established, water and sewer extension policies will have a minimum effect upon future development patterns. While water and sewer services should eventually be provided to these areas to prevent future health problems and to encourage urbanization, priority for their extension to such areas would be relatively low.
- d. To areas subject to development within five to ten years. Extension policies should anticipate short-range requirements for urban growth and lead such growth into appropriate patterns that maximize economy and efficiency of services.

4. Urban density patterns should be permitted only in areas served by water and sewer systems.

Septic tanks and wells present health problems when permitted on the smaller lots characteristic of urban density. County land use and subdivision regulations should be adopted, and their provisions should require large lots for areas not served by water and sewer systems. Such provisions would not only prevent health problems, but would also encourage appropriate urban development patterns. Such action would require local legislation via the State Legislature.

5. Withhold water and sewer extensions into areas that will be developed at low, non-urban densities.

This policy would prevent premature development of land not yet ripe for urban development and eliminate the high cost required to provide urban services to such areas.

6. Withhold the extension of water and sewer services to areas not suited for urban development.

There are areas, such as flood plains, airport influence zones, or isolated land areas within the boundaries of the Wheeler Wildlife Refuge, that should not be developed to urban densities. By withholding water services from such areas, flood damage can be reduced, pressures to restrict the airport would be minimized, and proposed acquisitions of land for the Wildlife Refuge would be prevented by unwise urban development.

7. Locate water and sewer lines and facilities only when they conform to the County Comprehensive Plan for development and are coordinated with other related services or improvements.

The control over extensions of water and sewer facilities is the most important tool available to local governing officials to implement a comprehensive plan for areawide growth. It is essential that such extensions be coordinated with other prerequisites for urban growth, including road and street construction, public facilities, and major private developments.

8. Major elements of the water and sewer systems must be planned on an areawide basis.

Major elements of these two systems include major mains and outfalls, treatment plants, and water reservoirs. These elements must be planned on an areawide basis if long-range needs are to be met and economies of scale achieved.

9. Water and sewer extensions should be accomplished simultaneously.

Where water is extended to unsewered areas, septic tanks or package sewer treatment plants are required. Such facilities for treating waste are temporary measures at best and generally lead to pollution and health

problems. Sound urban development requires both water and sewer services. When they are provided in initial stages of development, healthy urban growth can occur. When one or both are absent, blighting conditions frequently arise.

10. All costs and charges for construction and service should be borne by benefitted property owners or individuals.

The cost of facilities that serve entire water and sewer service areas, such as reservoirs, treatment plants, major mains and major outfalls, should be borne by all benefitted property owners within such service areas. Services extended at the request of private individuals or developers should be paid for by such individuals or developers.

11. Future water systems serving the unincorporated areas of Limestone County should be financed cooperatively by the prospective customers in the area and by the County Commission. In addition, each new water system should be established under the control and administration of the County Commission, via the Water Authority.

Administration of the system should be the responsibility of the County Water Authority, and the County Engineering Department should provide necessary engineering studies in cooperation with consulting firms if needed.

12. All available water resources for the Limestone County areas should be utilized when necessary and feasible.

Impending growth requires the assurance of an abundant water supply for residential and economic activities. The county government should study all long-range possibilities to improve an areawide water system.

13. Limestone County government should own, manage, and operate sanitary sewer systems in unincorporated areas, such as Pryor, Tanner, and French Mill, via the County Water Authority.

If municipalities annex such territory after a sanitary sewer system is provided, an agreement for transfer of control of the system to the municipality should be entered into by Limestone County and the given municipality.

Such an agreement should also be made where an area becomes incorporated as a new municipality upon completion of a sewer system.

14. In areas where a municipality extends services to unincorporated areas, an agreement should be entered into defining the financial and planning responsibility of the county and the municipality.

This type of an agreement should assist in defining the county role in financing collection lines into presently unincorporated areas.

15. The use of septic tanks in all but low density residential areas should be discouraged.

Septic tanks in built-up areas are likely to cause pollution of soil and ground water supplies. Because they are a potential health danger, they should only be used in non-urban areas.

16. Policy for Extension of Water Service

POPULATION DENSITY	EQUIVALENT LOT SIZE	SERVICE ECONOMIC JUSTIFICATION
Over 2,500 persons/ square mile	Less than 1 acre	Justified
1,000-2,500 persons/ square mile	1 to 2 acres	Probably Justified
500-1,000 persons/ square mile	2 to 4 acres	Not Normally Justified
Less than 500 persons/ square mile	Over 4 acres	Rarely Justified

17. Policy for Extension of Sewer Service

POPULATION DENSITY	EQUIVALENT LOT SIZE	SERVICE ECONOMIC JUSTIFICATION
Over 5,000 persons/ square mile	Less than $\frac{1}{2}$ acre	Justified
2,500-5,000 persons/ square mile	$\frac{1}{2}$ to 1 acre	Normally Justified
1,000-2,500 persons/ square mile	1 to 2 acres	Not Normally Justified
Less than 1,000 persons/square mile	Over 2 acres	Rarely Justified

UTILITY WIRE DISTRIBUTION POLICIES

Electric power and telephone distribution in the United States have developed primarily as overhead systems. Those few underground systems that do exist are found primarily in central business districts and in a few exclusive residential sections. The overhead system of distribution was originally adopted

because of its minimum construction costs, flexibility and simplicity of construction.

In the early stages of developing the electrical distribution in the United States, only a few lines were needed to serve residential areas. In later decades, the expanding use of appliances and electric heating greatly increased capacity requirements. In addition, many other lines have been added to the poles, including those for street lighting, emergency alarm circuits, telephones, and television cables. The growing ugliness of the cluttered overhead system has brought about attempts to improve its looks. For the most part, however, little has been done to nullify the objectionable aesthetic features of overhead wiring.

Because of the objectional features of the overhead system, there has been a growing interest in placing distribution systems for electric and telephone service underground. Recent innovations and improved techniques for burying these distribution systems have gone far to reduce costs and eliminate many of objections voiced by utility companies and developers. These advances indicate that the development of underground systems will soon mature to the point of general acceptance--from an economical as well as technical standpoint.

In the meantime, public policies concerning the location and appearance of overhead lines should be strengthened. Policies that should be considered for Limestone County and Athens include the following:

1. Encourage utility companies and developers to bury distribution systems where economically feasible or where aesthetic consideration require such burial.
 - a. Tree trimming. The underground system eliminates the need for tree trimming which, for overhead systems, might run as high as \$4 to \$7 per year per pole.
 - b. Ice and storage drainage. Wind and ice storms can cause widespread damage to overhead systems while having no effect on buried systems.
 - c. Reduced exposure to accidents. Buried systems eliminate or drastically reduce accidents caused by: construction equipment making contact with wires; automobiles breaking poles; falling trees breaking lines; pole top fires; animals shorting out lines; wire fatigue; unauthorized persons climbing poles; and many others.
2. Regulate the location of overhead distribution lines in new land subdivision.
3. All bond issues regarding street lighting should offer only ornamental standards with underground wiring.
4. Where feasible, new apartment areas should be served by underground wiring.

5. The City of Athens and other service districts should be encouraged to replace unsightly overhead facilities with more attractive, modern standard, poles, transformers, etc.

Policies for Water, Sewer, Gas, and Electric Utilities Installed Jointly

1. In newly developing areas, developers and/or public and private utility agencies or companies should be encouraged to provide as complete a utility system as possible commensurate with the type of development.
2. Trunk utility lines should be installed in advance or at the time of development in accordance with a general plan for the area. Local or service utility lines should be installed as needed.
3. The solution to specialized utility problems created by a particular type of use (such as abnormal or peak load power and water requirements or unusual sewage disposal problems of certain types of industries) should be worked out by the community and the parties responsible.
4. Where possible, underground utilities should be grouped and located where accessible.
5. All utility buildings and structures such as telephone exchange buildings, transformer stations, sewage disposal plants, pumping stations, water towers, and reservoirs should be located adjoining non-residential uses wherever possible.
6. Functions related to utility operations, which are not directly related to the delivery of a service to a residential area (such as office management, collection of service charges, storage of materials or vehicles, maintenance and repair), should be located in commercial or industrial areas.
7. Public or private utility buildings transformer stations, sewage disposal plants, pumping stations, water towers, reservoirs, etc., should be designed, landscaped and maintained in such a manner so as to minimize the adverse effects on adjoining uses. This is of particular importance in residential areas.

RECREATION

Recreation has long been recognized as an essential element in the life pattern of all normal individuals and families. The demand for recreational spaces and facilities is increasing rather dramatically as a result of more leisure time being available (shorter work week, longer vacations, better mobility) and the increase in disposable income per household.

The Recreation Plan for Limestone County attempts to coordinate the public, semi-public and private sectors which provide for the leisure time needs of

the people in the county. The county of Limestone should provide for the daily recreation needs required by its residents, especially those residents in unincorporated areas.

The location and quality of Limestone County's recreation and open space system has a significant influence on the overall mental and physical well-being of all citizens. Parks and open spaces meet human needs for outdoor exercise, mental refreshment, identity, orientation and experimentation. Open parks and recreation spaces are important public facilities which serve to improve and stabilize communities, as well as maintain property values. In addition, most large and many small industrial firms consider the provision of recreation facilities an important priority item in any community's roster of civic assets.

INVENTORY

Although Limestone County is endowed with a large amount of open space acreage, this open space is not developed for active recreational use. The county is severely deficient in county and regional park acreage.

Table V-5 depicts the existing park acreage used for recreation within Limestone County. These figures include existing park acreage in all municipalities as well. At present, the City of Athens and the Towns of Elkmont and Ardmore have local park facilities.

Although the Comprehensive Plan will concentrate on local needs and plans for county, regional, and rural community parks, parks located in Athens will be considered in the analysis of countywide park needs since many residents of unincorporated Limestone County utilize Athens' facilities.

TABLE V-5
EXISTING RECREATION AREAS: LIMESTONE COUNTY

Recreation Category	Acres	Administering Agency	Location
Lucy Branch Boat Launch	45	Limestone County	Tennessee River
Elk River Lodge	45	State Dept of Conservation	Elk River
Lee High Fishing Camp	45	State Dept. of Conservation	Elk River
Elkmont Park	13	Town of Elkmont	Elkmont
Neighborhood Parks	17	City of Athens	Athens
Community Park	18	City of Athens	Athens
Ardmore Park	11	Town of Ardmore	Ardmore
<u>Conservation Area</u>			
Wheeler Wildlife Refuge/ TVA Reservation	13,960	U.S. Dept. of Interior/TVA	Tennessee River

SOURCE: Regional Open Space Plan, TARCOG, Huntsville, AL, April, 1973, as updated 1982.

The standards upon which the Recreation Plan for Limestone County is based are similar to those adopted in the TARCOG Regional Parks and Open Space Plan. Until more sensitive measures of recreation space demand are developed (participation rates for specific recreational activities by population type), the acres per thousand population standard can substitute as a guide to be followed. In total, there should be a minimum of ten (10) acres of local park land for every 1,000 residents. This ratio is, in turn, divided among the park sub-types as shown in Table

TABLE V-6
ACREAGE STANDARDS FOR OPEN SPACE LANDS
AND FACILITIES

Type of Facility	Open Space Category	Acres Per 1,000 Persons
Neighborhood Park	Public Recreation	2
Community Park	Public Recreation	3
City-Wide Park	Public Recreation and Scenic Areas	5
Rural Community Park	Public Recreation	10
County Park	Public Recreation, Scenic Areas, Historic Sites	10
Regionwide Standard for Local Parks		20*
Regional Park	Public Recreation, Scenic Areas, Historic Sites Conservation Areas	20
Regionwide Standard for Regional and Local Parks		40

* The figure of 20 acres includes county parks, and/or rural community parks, or urban-level parks (neighborhood, community, and city-wide parks), depending upon the size of the municipality.

SOURCE: Alabama's Statewide Comprehensive Outdoor Recreation Plan, 1980; Alabama Dept. of Conservation and Natural Resources, Montgomery, AL; and TARCOG staff, 1973, updated 1982.

PARK CLASSIFICATIONS

Rural Community Park--The Rural Community Park is intended to serve the needs of the small community and is utilized as the basic proposal in this

plan for municipalities of 2,500 or less. Basically, this park, if properly developed and located, would serve the recreation needs of the residents of the area. A minimum size of five acres is recommended with the primary emphasis on active recreation. In addition, this type of park can be developed for densely-settled, unincorporated, rural communities in parts of Limestone County which are remote from other recreation facilities.

County Park--This particular park would serve a large part of the county. The range of population served by such a facility would be from 10,000 to 40,000 people, and the minimum acreage for such a park is 100 acres. Acreage may fluctuate from 100 acres to 400 acres. It is recommended by this plan that 10 acres per thousand of population be developed for county recreation activities. Included in this roster of activities could be facilities for day camps, golf courses, swimming, a lake for boating, both winter and summer sports, interior roads, and off-street parking.

This type of park should be developed by county and state governments with assistance from federal outdoor recreation programs where available. Surplus federal land could be used for such facilities, and private donations by large landowners could be extremely helpful.

Regional Park--This type of park facility is intended to serve the open space needs of several counties. Such a facility should serve a minimum of 40,000 people. A minimum of 250 acres should be developed to the extent that 20 acres per thousand population be developed in Limestone County.

This park may include all previously mentioned facilities for both active and passive recreation as well as extensive open space areas, particularly unique areas such as caves and waterfalls.

A combination of counties, the state, or federal government should have the responsibility for developing parks at the regional level. State and federal assistance is necessary for the development of this level of park since the size of the facility clearly outstrips local resources.

As with the county park, surplus federal land is especially helpful in setting aside land for such a facility as are private donations.

The remaining three types of parks--neighborhood, community and citywide--would be developed by the respective municipalities in the county. Athens is the only city in Limestone County that will be of the population size necessary to support the development of neighborhood, community, and citywide parks. The Towns of Lester, and Mooresville would develop one Rural Community Park each in their respective municipalities as Elkmont and Ardmore already have one each of these parks.

Table V-7 depicts the acreage in parks needed by the year 2000 in Limestone County. County government will be totally or partially responsible for assisting in the development of county and regional parks. In addition, residents of certain unincorporated rural communities may request assistance of the County Commission in developing rural community parks. This Table considers rural community park needs for municipalities only since it would be extremely

difficult to assess unincorporated areas to attempt to advocate its need to the County Commission, usually through a community development club.

TABLE V-7
PROJECTED GROSS ACRE NEEDS: LIMESTONE COUNTY

Limestone County	Existing		1982	Net Acreage to be added			Total Added Acreage 1974-2000
	Parks	Acreage		1982	1990	2000	
Neighborhood Parks	3	17	6	8	8	19	41
Community Parks	1	18	24	12	12	18	66
Citywide Parks	0	0	70	20	20	30	140
Rural Community Parks	2	24	8	6	7	0	23
County Parks	3	115	305	60	80	115	560
Regional Parks	0	0	840	120	160	220	1,340
TOTAL	9	174	1,253	226	281	382	2,070

SOURCE: TARCOG

RECOMMENDATIONS (1982-1990)

1. Develop three 125-acre county parks; two of these parks should be located in the watersheds of Piney and Limestone Creeks, and a third should be located in the upper portion of Swan Creek near Elkmont. This latter park could assist in serving the county park needs of the proposed Elkmont Village, a new community recommended by the TVA and Elk River Development Association.
2. Limestone County, in cooperation with the TVA, should develop approximately 1,500 acres of regional park along the Elk River upstream from the Lee Hi Fishing Camp. This park can be located between this camp and the Gallus Island vicinity of the Elk River. Coordination between Limestone County and ERDA and TVA will be needed regarding regional park locations in this vicinity since the proposed new communities will also be developed east of this area. Proper coordination between agencies could assure the residents of the new communities an additional source of park land. Lucy Branch Park should be renovated and expanded, as these facilities, serving a low-income area are inadequate.
3. Rural Community Parks should be considered for the unincorporated communities of Tanner, Capshaw, French Mill, and Blackburn during this period. Also, additional park acreage will be needed in the vicinity of Pryor once residential development occurs in relation to the new General Motors Plant, being expanded. The incorporated towns of Mooresville and Lester should each develop a rural community park for local park needs. Ardmore and Elkmont already have such parks, although they should be expanded.

RECOMMENDATIONS (1991-2000)

1. Two 100-acre county parks should be developed; one in the southwestern part of the county near Browns Ferry Road, and one in the far northwestern part of the county, southwest of Lester. The beautiful rolling countryside in this vicinity offers innumerable opportunities for recreation development in this area.
2. Approximately 400 acres should be added to the Elk River Regional Park initiated during the 1981-1990 period. Continued coordination should be maintained between the Department of Interior, TVA, and ERDA in the location selection of additional park acquisitions.
3. Additional rural community park needs should be met for the unincorporated communities of Thatch, Salem, Owens School, Belle Mina, Fairview, and Greenbrier during this segment of the planning period. The municipalities under 2,500 population should be adequately served by the rural community parks developed during the 1983-1990 period.

POLICIES

The following policies are designed to assist the County Commission and other interested agencies and groups in the decision-making process when sites for new parks and recreation areas are considered. The policies are oriented toward rural community parks, county parks, and regional parks.

Rural Community Parks

1. Sites to be used for rural community parks should be reasonably flat to permit their development for active recreation.
2. Sites for rural community parks should be accessible to the user group they are intended to serve. These parks should be located and designed to serve one town or community.
3. The multipurpose use of school grounds to meet local active park needs should be encouraged.
4. The County Commission should seek assistance from the County Board of Education and local landowners willing to lease or donate land for park sites before the county attempts to purchase land for a rural community park in any area. Community interest is, therefore, a key factor in determining what community will develop a rural community park.

County Parks

1. Features of sites for county parks should be used to their best advantage in park development. Examples of such features are streams, rock outcrops, topography, and the relationship of the park to adjoining development.
2. Sites for county parks should be acquired in advance of need.

3. Direct purchase should be made of sites for proposed county parks. Ownership in fee simple will guarantee that the County Commission has complete control of the site and facilities.

Regional Parks

1. Although the location of regional parks and reservations is dependent on available areas of scenic and inspirational quality, such areas should be within convenient travel time from all major portions of the county in order to provide necessary relief from day-to-day living.
2. Preserves, which are areas of historical, ecological, archaeological, or other scientific value or areas of outstanding scenic or wilderness character, must necessarily be acquired where they occur with no relationship to population or development.
3. Any reduction in amount of leased state forest or park lands or intermingling private forest should be discouraged, and any steps taken to preserve natural characteristics of natural park areas should be supported.
4. Any sponsoring agency developing regional parks in Limestone County should coordinate its efforts with the following agencies:
 - a. County Commission
 - b. State Department of Conservation
 - c. State Forestry Commission
 - d. Tennessee Valley Authority
 - e. U.S. Department of Interior (National Park Service)
 - f. Elk River Development Association

WATER SERVICE

The availability of water is crucial to any type of development. Water system development is a key element of community planning in four basic ways: supply, quality, quantity and distribution. This portion of the plan is concerned primarily with quantity and distribution.

EXISTING SERVICE - The cities of Athens, Ardmore, Mooresville, Elkmont, and Lester and the "Areas" of Belle Mina and Greenbriar are served by individual water systems. Several small unincorporated communities in the South Central portion of the County are served by the South Limestone Water System which receives water from Athens and Decatur. The East Limestone Water System serves the East Central portion of the County. The Fort Hampton Water System serves the Western and Southwestern portion of the County, and the North Limestone Water System primarily serves the Northeastern portion of the County. While these eleven total systems cover a large portion of the County, coverage within each of these areas is not complete, and there are large portions of the local governments forming unincorporated County totally unserved.

TARCOG has adopted a Regional Water Plan which provides for the planned water service to all feasible areas of the TARCOG region, including Limestone County. All systems proposed in this Limestone County Comprehensive Plan conform to the Regional Water Plan.

The Limestone County Commission, along with the Limestone County Water Authority, has historically performed the role of local project sponsor for rural and community water systems in Limestone County. Therefore, the County Government recognizes the role needed to be performed by the County Commission in promoting sound and orderly development in the unincorporated areas of the County.

INVENTORY OF LIMESTONE COUNTY COMMUNITY AND RURAL SYSTEMS

1. Ardmore
2. Mooresville-Belle Mina Water Authority
3. Elkmont
4. Lester
5. East Limestone Water System (County-owned)
6. South Limestone Water System (County-owned)
7. Fort Hampton Water System (County-Owned)
8. North Limestone Water System (County-Owned)

1. Ardmore: The Ardmore water system supplies approximately 2,000 residents (1980) in Alabama and Tennessee with an average of about 105,000 gallons per day of potable water from two wells located in Ardmore, Tennessee. An additional 5,000 gallons per day is supplied to local industry for an average total

demand on the system of 110,000 gallons per day. The present capacity of the system is 160,000 gallons per day or 120 gallons per minute. After chlorination, the water is stored in two elevated tanks of 75,000 - and 150,000 - gallons. The system does not extend beyond the Ardmore Town limits in Alabama, but does extend about two miles northwest of the City in Tennessee.

2. Mooreville - Belle Mina: The Mooreville-Belle Mina Water Authority supplies approximately 7000 residents of South-East Limestone County with an estimated 100,000 gallons per minute from the Horton Spring. The service area includes the three communities of Belle Mina, Greenbriar and Mooreville which have a total population of 2,500. A 100,000-gallon elevated tank located midway between Greenbriar and Belle Mina furnishes storage for the system. The system is capable of pumping and chlorinating 144,000 gallons per day from the 2,800,000 gallons per day spring. The distribution system, consisting of 6-inch diameter and smaller pipes was completed in 1966, and an extension is currently being made north of Mooreville.

3. Elkmont: The Elkmont Water system services approximately 200 customers in and around Elkmont, pumping on the average of 47,000 gallons per day from the Gilbert Spring. Storage consists of a 60,000-gallons elevated storage tank in Elkmont which is part of the Water System. There is a 50,000-gallon elevated tank in the middle of town that holds a reserve for a private bonded cotton warehouse facility only and is not a part of the public water system. The existing system consists of 6-inch diameter lines, with a large majority of total length being smaller diameter lines. A project is currently underway for the installation of new large diameter pipe lines throughout town. Additional storage will be added in the industrial park area, and mechanical and electrical improvements at the source will be included. The old system was completed in 1964. Treatment is limited to chlorination of the water from the 216,000 gallon per day spring.

4. Lester: Water distribution system serves about 30 customers with an average of about 10,000 gallons per day of potable water from two deep wells which have a total capacity of 100,000 gallons per day. The present distribution system, completed in 1970, consists of pipes in sizes of 6 inches and smaller. Treatment is limited to chlorination, and storage is provided by a 50,000-gallon elevated tank.

5. East Limestone Water System: The East Limestone Water System was completed in the early 1970's and is attached to the Eastern perimeter of the Athens Water system. It depends on Athens distribution for its source of water. At the point of tie-in near the intersection of Nick Davis Road and the City Limits, the East Limestone System consists of a booster station capable of producing 150 gallons per minute or 216,000 gallons per day, depending upon the City of Athens ability to supply water. The distribution system serves the East Central portion of the County and supplies water to residential customers, and also serves East Limestone High School. The East Limestone Water System stores its water in 2 centrally located elevated tanks of 250,000 - gallons capacity. At the time of writing this plan, all of the water users are residential or small commercial subscribers. In 1984, however, this system will supply water to a new prison facility presently under construction by the State of Alabama Department of Corrections, (approximately 1,200 inmates and staff).

6. South Limestone Water System: Decatur has a 16-inch water line extending across Wheeler Reservoir into Limestone County to furnish the southern part of the South Limestone Water System with potable water. The City of Decatur has an agreement with the County Water Authority to furnish up to 4,000,000 gallons per day, primarily for industrial development. This agreement provides a supply of potable water for the Decatur-Athens Pryor Field as well as Tanner Primary and High School.

An estimated 50,000 to 75,000 gallons per day of potable water is now being used with the major user being the John C. Calhoun State Junior College, which has a student enrollment of approximately 4,200 and a staff and faculty numbering 80. The General Motors Saginaw Steering Gear Division Plant is the second largest user. The area has approximately 100 permanent residents. No storage capacity is located in the area.

7. Fort Hampton Water System: The point of tie-in to the City of Athens Water system is near the intersection of Highway 99 and Elm Street, and is a master meter connection only, with no pumping required. The Fort Hampton Water System is a distribution system which relies entirely on the City of Athens for supply and storage from the Elm Street tank. In this extensive system (which serves the West Central and South West portion of the County) 1,054 subscribers are served. The distribution system consists primarily of 6" distribution main with a minimum amount of smaller diameter pipe. This system is part of the county water system.

8. North Limestone Water System: The North Limestone Water System, which covers and serves the North East Quadrant of Limestone County, connects to the Northern perimeter of the City of Athens Water System and depends on this system for its supply. At the intersection of Highway 127 and Sewell Road, which is the point of tie-in to the City of Athens system, a pumping facility has been installed which is capable of pumping 400 gallons per minute or 5,760,000 gallons per day, depending upon the ability of the City of Athens to supply water to the point of tie-in. The system is supplied water through a 10-inch diameter transmission main from the booster station at Highway 127 to a 500,000-gallon storage tank northeast of Elkmont near the Tennessee State Line. This central transmission main and storage tank provide the flows and pressure for the extensive distribution system, serving 1,350 customers, including 1,328 residential customers. Johnson Jr. High School is among the largest facilities served. No large industrial type consumers are served by this system, which is part of the county system. There is a connection to the Ardmore system, which can provide the Ardmore system with water in emergencies as well as for the Town of Elkmont.

STANDARDS - The following standards for county--wide service have been developed in order to promote sound utility development in urbanizing areas. These standards should promote the provision of potable water to customers and establish adequate minimum standards for rural fire protection.

1. Maintain 2 minimum pipe size of 6 inches where economically feasible.
2. Maintain fire hydrants spaced at a maximum distance of 1,000 feet between hydrants where economically feasible.
3. Maintain no dead-end lines if possible.
4. Maintain a minimum residual pressure of 40 PSI at periods of peak flow at all lines.

5. Maintain direct County Commission administration and Water Authority administration of all lines in all unincorporated areas.

RECOMMENDATIONS - The recommendations for County water service for the period 1984 - 2000 will be made on a system by system basis. Prioritization of projects among systems is based on several factors, including but not limited to: present demand, unforeseen future demands, and reliability of the City of Athens sources.

1. Ardmore - These recommendations are for improvements to an existing system.)
 - a. Present supply capacity of 160,000 gallons per day should be expanded to 210,000 gallons per day.
 - b. Connection should be made to the Lincoln County Utility District for reserve water supplies (the system is already connected to the North Limestone System.)
2. Mooresville-Belle Mina Water and Fire Protection Authority (These recommendations are for improvements to the existing system.)
 - a. Tie a metered connection to the South Limestone Water System for a reliable source.
 - b. Add 100,000 gallons storage tank at a strategic point of the system.
 - c. Extend lines to unserved customers within the Authority's jurisdictional area.
3. Elkmont - (A new construction program is imminent and when implemented should satisfy the requirements during the period 1984 - 2000)
4. Lester/Salem - These recommendations are for improvements to an existing system:)
 - a. Construct a 100,000-gallon storage tank between Lester and Salem.
 - b. Provide connection between Lester and Minor Hill, Tennessee, to provide a continued potable water supply for the Lester System.
5. East Limestone Water System - (The recommendations are for improvement to an existing system.)
 - a. Add distribution lines to serve more subscribers in the areas not served by the East Limestone System.
 - b. Provide a connection from the South Limestone System to the East Limestone System from old U.S. Highway 31 south through Peets Corner to the East Limestone System along U.S. Highway 72 East.

- c. Provide additional connections between the East Limestone and North Limestone Water Systems north of Nick Davis Road.
6. South Limestone Water System - (These recommendations are for improvements to an existing system.)
- a. Construct connection between this system and the Athens system near Tanner.
 - b. Construction connection between the South Limestone system and Mooresville Bell Mina system along Alabama 20.
 - c. Construct a 400,000-gallon storage tank near Tanner.
7. Fort Hampton Water System And Limestone Water System - (The following recommendation is made relative to these two large existing systems.)
- a. Provide additional sources. This can be accomplished by locating and providing ground water sources or by constructing alternate facilities near the City of Athens treatment plant which could pump and store water, making it available for use in the North Limestone and Fort Hampton Systems.
 - b. Improve flows and pressures and reliability by accomplishing the above items.
 - c. Fill in distribution system in areas heretofore eliminated because of lack of feasibility. These are isolated and unserved pockets of population surrounded by existing systems.
8. West Limestone Water System - (These recommendations are for a new system, added to the Limestone County System.)
- a. Construct a connection between this system (proposed) and the current system on S.R. 99 (Buck Island Bridge), to the 24" diameter City of Athens transmission line.
 - b. Construct 101,000 linear feet of PVC pipe 6" or longer in diameter, and 70,000 linear feet of 3" diameter PVC pipe.
 - c. Construct a 500,000 storage tank.

SEWER SERVICE

The disposal of sewage is one of the major problems confronting local governmental units. Within urban areas, individual disposal methods become unsatisfactory and more unified systems must be developed. A sewerage system is a network of drains and sewers used to collect the liquid wastes of an area for subsequent treatment, at a wastewater treatment facility.

Although most of the unincorporated area of Limestone County will not experience a degree of urban development warranting sewer service, this plan will recommend sewer service in selected areas of the county where such service is proposed to be feasible.

In order for local authorities to utilize federal funds for sewer system development, the proposed systems must conform to the regional sewer plan developed for that area. Local proposals for sewer system development were therefore reviewed for conformance to the TARCOG Regional Sewer Plan. The proposals developed by the Limestone County Comprehensive Plan were found to be in conformance with this regional plan.

INVENTORY OF EXISTING SYSTEMS

The only public waste water disposal systems in Limestone County serve the cities of Athens and Ardmore, and the County-owned system serving the General Motors Plant-Saginaw Steering Gear Division - J.C. Calhoun Community College-Pryor Field Subarea.

Three Institutions-- the East Limestone and Tanner Schools, and the Jackson Hospital at Lester are served by small prefabricated plants. Due to the nature of these small plants, they cannot expand to serve surrounding development. Therefore they are not considered to be part of the larger system proposed in this Plan.

ATHENS

Athens' sewer system is the largest facility of this type in Limestone County. The present treatment plant can process 4,500,000 gallons per day. Under current proposals, areas surrounding the urbanized central area of Athens will be provided with sewer before 1990. Since community facility studies of Athens have explored the characteristics, needs, and plans of this system in greater detail, these studies should be consulted for more detail on this system, in the office of the Athens City planner.

ARDMORE

The Ardmore sewer system, completed in 1969, now serves most of the two towns' residents. At the design flow of 220,000 gal/day and the design loading of 2,200 population equivalents, the extended aeration treatment plant should remove 90 percent of the BOD (Biological Oxygen Demand). The present estimated average flow to the treatment plant is 140,000 gal/day, including about 4,000

gal/day from local industry. Because of the high strength of the industrial wastes, the total loading is estimated at 2,000 population equivalents. After treatment, the waste water is discharged into Piney Creek near mile 39.0. Problems in the system include an excessive amount of infiltration. The town has recently prepared an engineering study to alleviate this problem, and is on the ADEM priority list for eventual funding, now that Ardmore's infiltration/inflow study has been completed.

SMALL TREATMENT PLANTS

Three institutions in Limestone County are served by small package sewage treatment plants. The Tanner school is in an area proposed to be served by the county waste water system (provided the city of Athens does not annex Tanner.) The two schools should connect to the larger systems when completed. Jackson Hospital, a small hospital at Lester, is located in a area expected to experience very little growth and the hospital will probably have to continue to rely on package treatment. The East Limestone School is in an area expected to undergo considerable growth during the time span of this report, but it will probably prove to be economically infeasible to incorporate in an area system.

STANDARDS

1. Provide service with a minimum size line of 8 inches.
2. Provide a treatment design capacity in excess of present need at a minimum of ten years service.
3. Consolidate sewer interceptor and collection systems into one unitary treatment system on a watershed basis.
4. Discourage the expansion of package treatment plants. Encourage surrounding service areas to be served by a conventional treatment system.
5. Encourage the use of secondary (biological) treatment as well as primary (solids removal) treatment. The Alabama Department of Environmental Management (ADEM) requires a minimum of secondary treatment, as well as primary treatment. Systems should be designed so as to incorporate tertiary treatment at a later date.

RECOMMENDATIONS (1983-2000)

(UNINCORPORATED LIMESTONE COUNTY)

SOUTH LIMESTONE COUNTY (Pryor Field-General Motors-Community College Area-- Existing System)

The County of Limestone has been funded by the Environmental Protection Agency for a grant to enable them to connect with the Decatur Waste water disposal system. This connection is made by means of a 16-inch force main under the Tennessee River (Wheeler Lake). Included in the system is an addition to the Decatur waste treatment plant to accommodate the additional volume of domestic and industrial waste from south Limestone County. The area in South Limestone County served includes a large industrial complex, including the General Motors Plant, Junior College, and Pryor Field Airport. The system should be expanded to the Spring Branch Creek watershed along I-65 and I-565.

TANNER (System Proposed for Development)

The area should develop a waste water collection system to serve both Tanner and the residential areas along U.S. Hwy 31. The number of gallons to be served by this system by 2000 should be about 200,000 gal/day. No industrial wastes are expected to be treated by the municipal system. A 300,000 gal/day capacity sewage treatment is proposed. The receiving stream for the treated effluent should be Spring Creek (7-day, ten-year recurrence interval flow of 160,000 gal/day) which flows into the relatively shallow Spring Creek embayment of Wheeler Reservoir. (Eventual incorporation into the Athens city system may void this recommendation).

The treatment facility should be designed in accordance with the definition of "best practicable treatment" (secondary treatment and nitrification). The ADEM is responsible for determining what additional levels of waste treatment beyond best practicable may be required.

OTHER AREAS OF LIMESTONE COUNTY

The incorporated areas of Lester and Mooresville are not expected to undergo urban development to a level needing sanitary sewer systems. In addition, areas undergoing development in unincorporated areas, such as East Limestone County, are also considered to have a level of development which could not feasible support a sanitary sewer system between 1983-2000. These areas must continue to rely on septic tanks and tile fields where percolation tests indicate proper soil conditions. A possible exception to these general statements could be the French Mill area.

CHAPTER 6

TRANSPORTATION PLAN

Future transportation planning must strike a balance between the regional and local aspects of the total problem if it is to be successful. Where an area is part of a metropolitan region and is located along one or more of its major transportation corridors, as is the case in Limestone County, a substantial amount of traffic traveling into or out of the region as well as to and from local points must be accommodated. It is also important to take into account the need to preserve the character of the area surrounding the road. A network of roads which is established without a proper consideration for this need could result in substantial deterioration of the environment.

One of the most difficult problems faced by a rapidly growing county is providing for the roads and highways necessary to serve present and future development. It is therefore an important facet of the Limestone County Comprehensive Plan to thoroughly consider the characteristics and functioning of the county's present road system with a view towards increasing safety, convenience, and efficiency, particularly in light of future plans and projections.

For the most part, the existing state road alignments provide the basic network of major roads, and the existing county roads provide the basic network of collector roads in the county. Together these handle the bulk of present and future traffic movements through and between various sections of Limestone County.

GOALS

One of the first steps in the transportation planning process is to define transportation goals. With this in mind, the Limestone County Commission has adopted the following transportation goals:

- To maintain a continuous review and updating of the major street and highway plan jointly by the Limestone County Commission, County Engineering Department, the Top of Alabama Regional Council of Governments, and, where state highways are involved with the Alabama Highway Department.
- To cooperate with other governmental agencies toward development of a coordinated transportation system for Limestone County. This system should:

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1. Minimize travel times between the various areas of activity.
 2. Provide for the free flow of people and goods through and within the county and eliminate lack of access to isolated areas of the county.
 3. Minimize the amount of land required for circulation within the limits of convenience.
 4. Minimize the hazards and undesirable effects of airport facilities in surrounding areas.
 5. Ensure that adequate parking will be present for all facilities which have need of it.
 6. Systematically upgrade all substandard roads in Limestone County which are deemed necessary to service the residents of the county.
 7. Provide a highway network which is orderly and can be understood by visitors and residents unfamiliar with its arrangement.
 8. Ensure safety and convenience of pedestrians by minimizing the conflicts of major pedestrian and vehicular paths.
 9. Encourage the orderly and timely development of both commercial and general aviation where necessary and feasible.
 10. Encourage the provision of rail service to all functions in the planning region which require it.
 11. Promote the consolidation of rail lines and the elimination of unnecessary duplicate tracks and railroad grade crossings wherever possible.
 12. Program the balanced expansion of air transportation facilities to keep pace with growing needs.
- To establish a priority listing for the project units in the total system.
- To reserve right-of-way and provide for frontage improvements as a condition to all land development as required for the future transportation network.
- To establish design criteria and maintenance procedures for landscaping of major streets and highways to make such roadways more pleasant for the traveling public while minimizing the detrimental effects of major traffic ways on abutting properties.
- To provide a system for coordination and management of existing and proposed facilities with adequate preventative maintenance.

- To promote the enhancement of harmonious transportation corridor land use relationships that support the economic, physical and social development of the county.
- To develop, in accordance with the Comprehensive Plan, scenic routes leading to major recreational areas.
- To develop capital improvements programming to effectively implement transportation projects according to physical and financial constraints and priorities.
- To increase citizen participation in the development and evaluation of both short and long-range transportation plans.
- To establish a well-structured classification of roads and highways designed to perform the different functions and intrinsic land use considerations and travel patterns and demands in the county.
- To insure that the transportation system serves to coordinate and complement all other community service functions, land use activities, and environmental considerations.

FUNCTIONAL CLASSIFICATION

The development of an effective traffic circulation system requires the allocation of functions to different categories of roads. Each type of road serves a different purpose in the circulation pattern and, therefore, should be constructed and maintained according to its function.

In 1968, the United States Department of Transportation began a program of functional classification of all public streets and roads in the nation. Road classification in Alabama is the responsibility of the Alabama Highway Department working in conjunction with a state highway classification committee and the local transportation coordinating committee.

For the purposes of this study, the state has been divided into rural areas and urban areas. In rural areas, the following classifications have been developed:

- Rural Principal Arterial System
 - Interstate System
 - Other Principal Arterials

- Rural Minor Arterial Road System

- Rural Collector Road System
 - Major Collector Roads
 - Minor Collector Roads

- Rural Local Road System

In urban areas, the following classifications have been developed:

Urban Principal Arterial System

- Interstate
- Other Freeways and Expressways
- Other Principal Arterials

Urban Minor Arterial Street System

Urban Collector Street System

Urban Local Street System

In the transportation plan for Limestone County, the following road classifications are utilized:

Principal Arterials--Major streets and roads used for high volume traffic movement to, within, and through the county.

Major Collectors--Major streets and roads used for traffic of moderate-to-fast speeds and relatively high traffic volumes between communities to be required in Lester, East Limestone, and Tanner. Many of these roads should be widened where possible and extensive maintenance completed. In addition, all roads will require improved marking. All unpaved roads in this area should be graded and paved.

An organized road identification system and road markers should be implemented for all county-maintained roads not bearing route numbers. Most county roads do not have either names or numbers, and most roads have no markings. Roads bearing name signs are not marked according to any uniform marking system.

IMPROVEMENT PROGRAM

The Limestone County Planning Program recommends the construction of the following new roads, in the order indicated, in order to open up areas of the county presently isolated and to allow for the full development of these areas.

Arterials

1. The State Highway Department proposes the construction of Interstate 565 to commence at a new interchange with I-65, of the present I-65 Alabama 20 interchange. The new I-565 will course east-northeast, south of Greenbrier, into Madison County. An interchange will be provided at Mooresville. Consideration should also be given to interchanges at Greenbrier and County Line Road. The one at Greenbrier is already approved by the ASHD.
2. Alabama 53 is proposed by the State Highway Department to be improved along the current alignment through northeastern Limestone County. This route would provide an arterial route from Huntsville to I-65

near Ardmore. The improved route would then run west along Elkwood Section Road to I-65. This route would then traverse the railroad tracks south of Ardmore to interchange with I-65 at the existing Ardmore (south) interchange.

Collectors

1. The county road from the I-65 Thatch Interchange to Elkmont has been constructed to Federal Aid Secondary Road standards. This road serves the Elkmont Industrial Park with access to I-65. In addition, this road will be extended eastward to connect with the proposed Principal Arterial realignment in the Alabama Highway 53 traffic corridor. This road is also proposed to be extended west to State Road 127, to the entrance to the TVA-sponsored Elkmont Rural Village. Thus, Rural Village traffic will gain direct access to I-65, to the east, and along the route, to the Elkmont Industrial Park.
2. Realignment of County Road 84 from Alabama Highway 127 to County Road 90. This realignment will provide western county employment access to the proposed industrial area north of Athens and I-65.
3. New routing of County Road 24 east and west of County Road 29. No present routing exists for this proposed realignment.
4. Shanghai Road (County Road) should be added to the Federal Aid Secondary System to provide access from the rapidly developing West Limestone County area eastward to the economic hub of Limestone County, the urban area of Athens.

Local Roads

1. The county road from Lester to Beulah Church needs complete reconstruction, including new bridges for Sugar Creek and its tributaries.
2. New alignments will eventually be needed in south Limestone County near the General Motors Plant area. Airport Road, Pryor Road, and intersecting routes will need either repaving or realignment, depending upon the new growth in the area.

POLICIES

The following set of policies describes overall policies to guide decision-making regarding any given transportation effort; in addition, a further set of policies pertains to specific areas of transportation planning and implementation:

1. The safety and traffic-carrying capacity of interchange areas and arterial corridors should be protected from adverse land development. (Interchange areas and arterial corridors attract intensive areawide growth which can ultimately undermine the efficiency and safe use of

these routes. County development should not be discouraged from locating near these routes as effective access to the transportation system is needed by major land uses. However, regulations should assure that the intensive growth will not overtax thoroughfare capacity. New development should meet acceptable site standards: access control, the provision of suitable service roads, off-street parking and loading, etc.)

2. A diversified highway system, which includes the use of the same routes in appropriate areas, should be created in the county.
3. Establish a well-structured transportation system to insure unity of community, convenience of citizens, and operation of public institutional and commercial facilities by allowing persons to move about easily, safely and without significant interruption.
4. Promote the enhancement of harmonious transportation corridor-land use and sector relationships that support the economic, physical, and social development of the county.
5. Develop capital improvements programming to effectively implement transportation projects according to physical and financial constraints and priorities.
6. Increase citizen participation in the development and evaluation of both short- and long-range transportation plans.
7. Insure that the transportation system serves to coordinate and complement all other community service functions, land use activities, and environmental considerations.
8. Encourage sound development patterns in the Athens central business area through coordination and best use of various travel methods which aid new land development and redevelopment of decaying areas.

THOROUGHFARES

1. Establish a current and viable thoroughfare system for the area which sets forth provision for the development, redevelopment, improvement, extension and revision of arterials, collectors, and other (local) county roads.
2. The thoroughfare plan must be within the reasonable and foreseeable financial capabilities of the community and should follow the improvement schedule established in the adopted Limestone County Comprehensive Plan subject to most recent localized evaluations.
3. The planned thoroughfare system should be designed and implemented to operate as a total and integrated system to accommodate and serve existing and anticipated travel demand efficiently.

4. Establish a well-structured hierarchy of streets designed to perform the different functions basic to land use considerations and travel patterns and demands in the county area.
5. The thoroughfare plan should reflect the high standards of geometric design as well as high aesthetic standards and attractive landscaping.
6. The thoroughfare system should provide effective connections with air and rail travel facilities and reflect the use of major streets and highways by all users.
7. Rights-of-way for major transportation routes should be acquired or legally established in advance or at the time of development in accordance with the Comprehensive Plan. Lesser transportation routes, which directly serve and are dependent upon the design of adjoining land uses, should not be established until the time of land development.
8. The arterial should serve as a connecting link between residential and rural areas and their major service facilities such as community business areas, community civic or cultural centers, and secondary schools.
9. The collector should serve as a connecting link between residential and rural neighborhoods as well as accommodating the lesser traffic volumes generated between residential and rural communities.
10. The collector should serve as a connecting link between residential areas and those facilities which serve primarily one community or parts of several neighborhoods such as neighborhood commercial area, junior high school, or community recreation center.
11. The collector should be located where it can collect and distribute traffic from arterial routes to less important streets or directly to traffic destinations.

Local county roads should be located within areas where they are designed to collect and distribute local traffic only and serve those facilities located within the area, such as the elementary school.

Local county roads should be located on a rural community boundaries where they are designed to serve more than one area or larger facilities such as junior high schools, community parks and recreation centers, and churches.

CHAPTER 7

LAND USE PLAN

The Limestone County Land Use Plan is proposed as an instrument for combining county development objectives, public and private action programs and specific improvement projects into a unified policy instrument.

A land use plan holds no legal status, but can serve as a basis for more definitive legislative and administrative measures such as land use controls and policies regarding the extension of public services and facilities. The plan must be general and flexible in order to be adaptable to changing physical, social, economic, and technological patterns which may occur during the planning period.

GOALS AND OBJECTIVES

Recognition of community needs and attitudes is a necessary prerequisite to the development of a land use plan. The following land use goals and objectives have been formulated for Limestone County:

GOAL: ACHIEVE A BALANCE AMONG VARIOUS LAND USES TO ACCOMMODATE A DIVERSITY OF TOTAL LIFE STYLES WHICH WILL FULFILL THE REQUIREMENTS OF COUNTY RESIDENTS.

Objective 1: Promote a variety of housing types and a high level of efficiency in residential development patterns.

- a. Encourage the development of mixtures of dwelling types in order to provide more heterogeneous development
- b. Encourage the assembly of land into large tracts at suitable locations to be developed with compatible mixtures of residential densities and other land uses.

Objective 2: Promote the spatial distribution of various land uses which will result in a compatible relationship of land use activities.

- a. Residential areas should contain the necessary supporting local service uses and should have adequate access through the transportation system to employment, commercial, and secondary school facilities.
- b. Regional commercial uses should be located in centers of concentrated activity, or those areas reasonably projected as centers.
- c. Other commercial development should be located along major thoroughfares and should have limited access in order to minimize traffic conflicts and maximize traffic efficiency.

d. Industrial uses should have direct access to highways and railroads, and reasonable access to airport facilities and residential areas.

Objective 3: Provide land for a wide variety of employment opportunities for the residents.

a. Provide the opportunity for expansion of employment areas to assist in keeping the facilities in scale with demand and technological advances.

b. Provide a variety of desirable sites for industrial uses adequate both for present use and future expansion.

c. Provide for industrial park development while providing locations for those industries which economically require more densely developed land.

d. Provide industrial sites at suitable locations adjacent to high volume traffic arteries which are in demand for their visibility potential.

e. Provide industrial sites adjacent to the Huntsville-Madison Jetplex for use by high technology-oriented companies. The eastern side (Madison County side) of the Jetplex has acquired several high-technology companies; the western side (Limestone county side) also has potential for such development.

LAND USE PROPOSALS

The Land Use Plan identifies the proposed development pattern of Limestone County by delineating the location, type, and intensity of the various land use categories. These categories of land use, described below are: medium and high density urban development, low density urban development, rural density residential and agricultural development, major areas of industrial potential, and open space and conservation.

For the purpose of guiding development, the land area within Limestone County has been classified according to intensity of use. The specific recommendations as to the most suitable density for the various sections of the county were based on the consideration of various factors:

a. Areas presently served or planned to be served in the future by public water and sewer service are most suitable for higher densities of development.

b. Land capabilities should be important factors in determining development density. For those areas not served by public water and sewer service, areas with soil and topographic conditions most suitable for building construction should be utilized for higher density development. Lands least able to support more intensive uses should be maintained for lower density development. Areas of open space and ecological significance are most appropriate for the low densities of development.

c. Higher density development is more appropriate in areas with greater road access opportunities. With the automobile as the prime mode of transportation in Limestone County, densities of development should relate to the major roadways.

d. Areas having greater proximity to other public facilities and services are most suitable for developments of higher densities.

MEDIUM-HIGH DENSITY DEVELOPMENT

Urban development should occur contiguous to existing areas of high density development where urban services and facilities are available or can be provided. Medium and high density development areas, as indicated on the Land Use Plan Map, will be serviced with public water and sewer service.

The primary land use in these development areas are residential, with a wide range of housing as to type and with a minimum density of four dwelling units per acre. Lot sizes will consist of an average of 10,000 square feet. The high cost of public services, such as paved streets, water and sewer, and other facilities is the major reason for the densities that are proposed.

The medium and high density urban development areas include industrial sites, commercial areas suitable for convenience shopping, in addition to areas of open space with supporting community facilities in close proximity, such as schools, parks and playgrounds.

HIGH INTENSITY DEVELOPMENT SECTORS

Access to the major transportation network is a major requirement in the location of county land uses. As land uses become more intensive, there is an increasing importance for access to major transportation arteries. Accessibility to the major thoroughfare network is a major factor in influencing the local land use development pattern.

High intensity development sectors are directly tied to the major highways of the county. In Limestone County, these include corridor development sectors. The Corridor Development Sectors are contained within 1,000 feet of either side of a major thoroughfare as indicated on the Plan. Only portions of highways having growth potential are delineated as development corridors. The portions of the highway system provide major access to urbanizing areas of the county. Uses that would be restricted to the locations in the corridors include high density multi-family housing, offices and community shopping centers. These are uses which have a strong necessity for accessibility, but are less dependent on high-speed traffic facilities.

LOW DENSITY URBAN DEVELOPMENT

The low density urban development areas are generally areas of primarily residential development with a lower development density. Lot sizes will generally consist of a minimum of 15,000 square feet. Areas included in this category will be provided with water service as a minimum and will include, in addition to residential land use, other supporting uses such as schools, parks, small commercial centers, and limited industrial development.

RURAL DENSITY RESIDENTIAL AND AGRICULTURAL

Rural density residential and agricultural areas, as designated on the Land Use Plan, are those areas where the development of urban densities is undesirable or unfeasible at this time due to remoteness, impermeability, or shallowness of soils, the absence of the necessary urban services, or the continuation of farming or agricultural activities.

Rural development areas contain low-density residential development and occasional convenience commercial establishments. A major objective of these areas is to accommodate land uses which do not demand a high level of urban services, i.e., water and sewer service.

Areas designated as Rural Density and Agricultural should maintain lot sizes a minimum of 40,000 square feet in order to provide both a well and septic tank. The use of high-quality farm land should be discouraged for excessive use by non-farm rural residential development.

MAJOR AREAS OF INDUSTRIAL POTENTIAL

Most industrial development areas within Limestone County are located within or near the major urban areas. Guidelines proposed for the development of industrial areas include: (1) efficient and convenient access to transportation facilities, including rail, highway, air and water; (2) a central location with respect to labor, raw materials, and markets; (3) sufficient, suitable land which is free from construction and drainage problems with sufficient reserve for future expansion; (4) adequate and reliable sources of utilities, including water, waste disposal, and power; (5) protection from encroachment of residential and other possible conflicting land uses; (6) location so as to minimize obnoxious external effects on neighboring non-industrial land uses; and (7) location within easy commuting distance to living areas and other work areas so that activities related to one another can easily satisfy mutual access roads.

Several areas have been designated for industrial growth as shown on the Land Use Plan. The areas indicated are sites with a minimum size of 100 acres. Smaller sites may be developed within the urban density areas. The policies concerning industrial location should be utilized when determining the location of sites within the urban density areas.

The Tennessee Valley Authority initially identified several of the industrial sites indicated on the Land Use Plan. All the sites designated are characterized by acceptable soil and terrain patterns and by access to at least one transportation mode.

OPEN SPACE AND CONSERVATION

The areas within Limestone County, which have been designated as open space and conservation areas, include land along the Tennessee River, Wheeler Lake (including Limestone's portion of Joe Wheeler State Park and the Tennessee Valley Authority's reservation areas) and the Elk River, as well as Piney Creek, Limestone Creek, Swan Creek, Sulphur Creek, Round Island Creek, Sugar Creek, and Mill Creek, and lesser streams, and their respective tributaries.

The open space and conservation areas of the County should remain in their natural state with all types of development discouraged. Recreational, agricultural, and forestry purposes could, however, be served.

LAND USE POLICIES

The policies recommended in this section represent what is feasible as well as desirable for an orderly growth and development pattern in Limestone County. They are designed to provide a clear and consistent basis for the Comprehensive Plan and for government programs designed to implement the Plan. These policies, if accepted, can be translated directly into a public action plan.

The primary goal to be achieved through the Limestone County Planning Program is the creation of an environment that adequately meets the physical, social and economic needs of the County's residents.

RESIDENTIAL DEVELOPMENT

1. A greater variety and broader range of residential housing types and densities should be encouraged so that a choice of housing is available for all Limestone County residents.
2. Subdivision development on soils not suitable for residential development should be discouraged.
3. Housing for low- and moderate-income residents should be supported in a variety of communities in Limestone County. The location of such housing should also be supported in areas experiencing growth or increased employment opportunities.
4. The development of unsewered housing in areas where public sewer is available or planned should be discouraged.
5. Safe, adequate and sound design and construction standards for all types and cost levels of housing should be encouraged.
6. The development of planned residential areas large enough to meet a variety of housing needs as well as commercial and open space uses should be encouraged.
7. Existing housing areas should be recognized and efforts for improvement and rehabilitation should be supported and encouraged.
8. Distribute and design public facilities to provide maximum service to residential areas.
9. Residential development should be related to existing and proposed employment areas, community facilities and the transportation system.
10. Legislation which would permit governmental regulations (including building and housing codes, land use and subdivision regulations) that assist in providing for adequate housing should be supported and encouraged. The County Engineer is implementing what enabling legislation he currently has to utilize.

11. Residential density patterns which relate to natural and man-made assets should be developed.
12. Avoid wasteful use of prime agricultural land and conserve valuable land and water resources for the future in residential development.
13. Residential development, except rural density, should be provided with public improvements prior to development. Medium density housing in the county should be required to have public sewer and water facilities. By furnishing public facilities in advance of development, local governments can guide development and insure the efficient use of public expenditures.
14. Housing market data, including forecasts on market activities and population projections and trends, should be furnished to residential developers in order to serve the housing needs of the county more effectively.
15. Policy for residential densities:

POLICLY FOR RESIDENTIAL DENSITIES

Density Type	Units Per Acre - Sq. Ft. Per Unit	Utilities Required	
High Density	4.8/12.5*	9,000/12,000 + 3,000* for each additional unit	Water and Sewer
Medium Density	4.1	10,500	Water and Sewer
Low Density	2.8	15,000	Water/On-site Septic Tank
Rural/Agricultural Density	1.0	43,560	On-site well/on-site septic tank

* Multi-family structures only

HIGH DENSITY RESIDENTIAL DEVELOPMET

1. The location of housing in areas served by public utilities, including sanitary sewers should be encouraged.
2. Areas of high densities should be dependent on the amount and types of public improvements available or planned. Multi-family residential development should:
 - a. Be located adjacent to major thoroughfare route;

- b. Have sanitary sewers with minimum line size of eight (8) inches, storm sewers, and water lines a minimum of six (6) inches.
- c. Have all public improvements in existence or programmed in the capital improvements budget before development occurs;
- d. Have fire protection service within 1 3/4 miles.
- e. A maximum allowed density of five (5) single family dwelling units may be employed in high density urban residential development areas. A maximum of 12.5 multi-family dwelling units may be allowed in the high density residential areas.

3. All high density development proposed for Limestone County by either public or private agencies should take place in the areas described in the Comprehensive Plan.

MEDIUM DENSITY RESIDENTIAL DEVELOPMENT

- 1. Water lines with a minimum size of six (6) inches and sanitary sewer with lines a minimum of eight (8) inches should be provided to all areas designated for medium and high density residential development.
- 2. All land uses not devoted to residential needs should be excluded from all residential areas. Distribution of non-residential land uses intended to serve residential uses of land, such as shopping centers and churches, should be located on the basis of providing convenient access to county residents.
- 3. Medium density residential development should be separated from high density development and other non-residential uses with open space buffers.
- 4. Medium density residential areas should be developed with convenient ease of movement from living areas to work and leisure-time areas.
- 5. A maximum allowed density in outlying rural areas should be two (2) dwelling units per gross acre. Where outlying areas are susceptible to urban residential development, the density should be allowed to at least four units per acre provided standards for urban development are also met.

LOW DENSITY RESIDENTIAL DEVELOPMENT

- 1. Water service with a minimum line size of six (6) inches should be provided in these areas.
- 2. Sewer service with a minimum line size of eight (8) inches should be provided in these areas, if feasible, provided higher density areas are served with such service first on a priority basis.
- 3. A maximum density of 2.8 dwelling units per gross acre should be provided in these low density areas.

RURAL AND AGRICULTURAL RESIDENTIAL DEVELOPMENT

1. A maximum density of one housing unit per gross acre should be encouraged in areas of the county where:
 - a. A rural character or estate uses are existing or proposed.
 - b. Slopes exceed 20 percent or the area is subject to flood hazard.
2. In those portions of the county now predominantly rural in character, residential densities of no more than three units per gross acre should be encouraged adjoining existing town center development. Such areas would be in the vicinity of the towns of Lester and Mooresville.

COMMERCIAL DEVELOPMENT

1. Commercial areas should be located so as to have a maximum accessibility to trade area population.
2. Commercial development should be discouraged on soils that are not suitable for commercial development.
3. Strip commercial development should be contained in concentrated groups by providing controlled points of egress and ingress.
4. Provide for the location of all commercial sites so that convenient and safe access can be provided for customers, employees and suppliers.
5. Scattered commercial locations should be discouraged in agricultural areas where they may result in disruptive travel patterns or become incompatible with agricultural activities.
6. Multi-purpose commercial center development should be strongly encouraged. These centers contain a variety of commercial, cultural, and recreational facilities and are designed to satisfy the needs of area residents in one place at one time.
7. Ensure that commercial development be served by public utilities including sanitary sewers, with the possible exception of highway commercial centers that are properly located but beyond the reach of public utilities.
8. Adequate provision should be made for off-street parking, access and internal vehicular circulation to minimize commercial traffic conflicts with through traffic movements on adjacent thoroughfares.

CONVENIENCE COMMERCIAL DEVELOPMENT

1. Convenience commercial area needs normally can be served adequately by 2 to 3 acres of developed commercial land.

2. Convenient access to a convenience commercial area is provided by streets which are designed to carry the additional traffic generated by the business facility, as well as residential traffic from the surrounding commercial trading or service area.

3. A convenience commercial area should be located at the junction of two minor collectors, or a minor and a major collector, central within its trade area and at a point best serving two or more elementary school service areas or parts thereof.

COMMUNITY COMMERCIAL DEVELOPMENT

1. Total developed land area requirements for community commercial areas may range from 3 to 5 acres, depending upon the potential trade area population, the design of the business area, and the amount of land allocated for general commercial uses within the commercial area.

2. Community commercial centers should provide multi-faceted business, office, and retail services to areas of 1,000 to 10,000 population.

3. The community commercial center area should be located at the junction of a minor arterial and major collector or at the intersection of two major collectors.

4. Community commercial centers require detailed consideration of traffic access and exit, adequate off-street, parking and loading facilities, proper size and shape of tract, service by public utilities, and relationship to adjacent residential areas.

HIGHWAY COMMERCIAL DEVELOPMENT

1. The development of highway commercial centers and intersection areas should be controlled so as to avoid disruptive travel patterns and traffic conflicts.

2. Strip commercial areas along streets and highways as well as development of commercial uses improperly related to surrounding land uses should be avoided.

3. A balanced distribution of commercial centers should be encouraged in the County. County and local centers should be located so that all residential areas are adequately served and travel times in reaching commercial centers are minimized.

4. Special highway commercial districts should be developed which would require coordinated consolidation of existing centers, provisions for sufficient off-street parking and off-street loading facilities, well located but not excessive egress points, and provision for buffering when such commercial districts abutt residential areas.

5. Organized, linear highway-oriented commercial districts of a compact nature should replace the uncontrolled strip commercial pattern.

INDUSTRIAL DEVELOPMENT

1. Locate industrial areas where fast, convenient access to transportation facilities, including rail, highway and air, can be provided. The area near the Jetplex and near Saginaw Steering Gear are such areas.
2. Encourage the clustering of industrial uses in planned industrial parks in or adjacent to existing centers of development.
3. Isolated industrial locations in agricultural areas should be discouraged where they may result in environmental deterioration or disruptive travel patterns or become incompatible with agricultural activities.
4. Located industries in areas where they will have adequate expansion space to meet anticipated future needs. Expansion of industry at the present sites should be encouraged.
5. Locate industrial areas so that they are readily accessible from residential areas and are visually and functionally compatible with them.
6. In the location of industries, an adequate and reliable supply of utilities should be available: water, waste disposal, power and fuel.
7. Recognize the need for new industry and employment opportunities for smaller outlying towns and communities as well as the major urbanizing areas and to encourage this industrial development.
8. Encourage industrial development on soils that are suitable for industrial development. The standard for determining suitability shall be soils that do not have severe or very severe limitations for industrial development as determined by the U.S. Soil Conservation service survey of Limestone County. The land area should be capable of being graded without undue expense and should not have a slope of over five percent.
9. Industrial development should be within reasonable location to raw materials, source of labor supply, and market demand.
10. Public improvements should be provided in advance for areas with a high industrial development potential.

LIGHT INDUSTRIAL DEVELOPMENT

1. A wide range of locational choices should be made available within the county to highly mobile light industry and wholesaling uses.
2. Light industrial uses should be located in a manner where these uses can provide a transition from non-industrial land use to heavy industrial land use.
3. Light industrial uses should have access to Principal Arterials and/or Major Collector routes.
4. The attraction of light, non-polluting industry should be encouraged and provided with appropriate locations, sufficient land for expansion, and sites protected from encroachment of other land uses.

5. Landscaping and open space should be provided as buffers between an otherwise detrimental industrial use and sound residential neighborhoods.

HEAVY INDUSTRIAL DEVELOPMENT

1. Industrial performance standards should be adopted and enforced regarding the level of dust, smoke, noise, glare and odor emitted from an industrial use.

2. Industrial areas should be located with access provided only to major transportation routes which include principal arterial routes, major collectors, major railroad lines and navigable bodies of water in order that residential areas may be free of industrial traffic.

3. Certain industrial uses generate heavy traffic, noise, smoke or other nuisances and should be located where it is feasible to provide an adequate transition, such as light industrial areas, commercial areas or open space, to adjoining land use types.

4. Industrial areas not meeting industrial performance standards should be improved or eliminated so as to eliminate any blighting influence from surrounding non-industrial uses.

CONSERVATION AREA DEVELOPMENT

1. Land along rivers, streams, lakes, wetlands or other areas of significant topography including forests and woodlands should be acquired and/or preserved as open space.

2. Immediate attention should be given to the preservation of open space corridors within the inner area of the county where pressures for urbanization are greatest.

3. Adequate open space areas should be provided throughout the county which would discourage urban development in areas more suitable for open space, retraining the aesthetic quality that only open space can provide.

4. All available implementing and financial devices should be used for open space preservation.

5. State and federal allocation of financial resources should be encouraged for parks and open space to urbanizing areas.

6. Local communities should be supported as well as encouraged in their efforts to provide parks and open space for the community residents.

CHAPTER 8

IMPLEMENTATION

The Comprehensive Plan is of little value to the County unless it can serve as an effective guide for both public and private decisions which fashion the County. However, the effectiveness of the Plan is primarily dependent on two major factors. First, the public should be reasonably informed about all facets of anticipated changes expressed in the form of proposals to be met within the fulfillment of goals and objectives, and the opportunities thus created for them due to long range planning efforts. Second, the plan should seriously be used in its advisory capacity as a creative tool to shape the county's growth and its environment. Therefore, a specific program of implementing actions is necessary to achieve positive results in carrying out the Limestone County Comprehensive Plan.

In order to initiate this continuing program of planning implementation, Limestone County should establish a Planning Commission to update and revise the Comprehensive Plan. This organization will be described in detail as to the legal and administrative duties to undertake Plan fulfillment.

PLANNING COMMISSION

Alabama counties do not possess the comprehensive planning authority necessary to control the development of territory lying outside the boundaries of incorporated municipalities nor the authority to establish County Planning Commissions. Therefore, in order to establish a Planning Commission, Limestone County would require special legislation. The Planning Commission, which represents all governmental as well as citizen interests in the County, would assist in guiding land use and capital improvement decisions at the county level in order to promote new development without damaging the County's environment or economy. The organization, composed of nine members, including two elected officials, one official in public service representing the development arm of local government, and six citizens chosen for civic interests and involvement by the local governing body, can provide a valuable service in bringing the county citizens into the countywide planning process. In order to organize such an organization of Limestone County citizens interested in the growth and development of the county, the present Limestone County Rural Development Committee could provide the basis for the initiation of a planning commission.

DEVELOPMENT CONTROLS

LAND USE CONTROL

Land use control measures should be established to serve the public health, safety and general welfare and to provide the social, economic and physical advantages resulting from an orderly planned use of land resources. This implementation measure can assist in preserving prime agricultural land from

premature and uncontrolled urban development, not conforming to the Comprehensive Plan. Land use policies and controls can also serve to protect residential property values as well as commercial and industrial investment. The County will require local legislation to implement land use control procedures. The land use regulations should be applied in accordance with all principles and policies of the Comprehensive Plan. Additional guidelines in the implementation of land use control measures are:

- a. All land use regulations and policies should be coordinated with the same of incorporated places within the county and bordering counties and cities.
- b. The amount of land in each land use category should not be in excess of the foreseeable need plus a reasonable margin for individual choice.

SUBDIVISION REGULATIONS

The control of land subdivision is the means by which private land development can be brought into conformity with the Comprehensive Plan and the public interest. These regulations establish minimum standards of design and construction for all new land development, insure the installation of utilities that may be economically serviced and maintained, insure a coordinated system and sufficient open spaces for recreation and other public services, and establish correlation with adjacent existing or possible future subdivisions. These controls are necessary if orderly, economical and sound development is to be achieved. Through the adoption and enforcement of such regulations, the design and quality of land development will be improved, resulting in improved living conditions and stability of property values for county residents. Local legislation will also be needed for Limestone County to benefit from these regulations.

BUILDING AND HOUSING CODES

These legal codes (including electrical, plumbing and fire codes) insure safe and sound building construction. They can be enacted to apply to new and remodeling construction and to old-buildings as well.

Local legislation is needed to give the Limestone County Commission authority for the adoption and enforcement of these codes. If such legislation is approved, it is recommended that the Southern Standard Building and Housing Codes, as amended, be adopted by Limestone County.

SANITARY CODES

Sanitary codes are official controls established by the State and/or County to assure the adequate and safe provisions of water and the proper disposal of sewage in residential subdivisions and for other areas where the public requires such service.

Public water supplies and sewage disposal systems currently must be approved by the State Department of Environmental Management. This State Agency has certain regulations regarding the disposal of sewage which must be met. The Tri-County Health Department has established certain requirements for water supply and sewage

disposal systems which must be met. All county and municipal agencies should, therefore, cooperate in the rapid but fair and equal enforcement of these codes.

COOPERATIVE AGREEMENTS

Cooperative agreements include any agreement between two or more agencies, whether public, semi-public, or private, wherein any projects related to the Comprehensive Plan may be jointly or cooperatively planned, financed, constructed, or administered to be, beneficial to the public.

A primary example of cooperative agreements between operating agencies or departments in Limestone County is in the case of school and recreational facilities. The use of school facilities by recreation and other community groups is allowed by schools throughout the county, in such areas as Tanner and Capshaw, for instance.

Any cooperative arrangement should be encouraged where it is in accordance with the Comprehensive Plan and where there are recognizable benefits to be derived. This is easily recognized in the cooperative agreement between the Commission and County Water Authority, and the City-County Landfill Program.

CITIZEN PARTICIPATION

Citizen participation is undoubtedly one of the most important factors determining the success of the Comprehensive Plan. An informed citizenry that is willing to work to achieve the goals set forth in the Comprehensive Plan is a tremendous asset.

Successful citizen participation could be achieved through a public education program designed to inform the County residents of the various efforts involved in the planning process. Experience has shown that such a public information program yields a valuable sounding board technique from which valid suggestions and criticisms usually result. Thus, these suggestions can be integrated into the future goals and plans of Limestone County.

CAPITAL IMPROVEMENTS PROGRAMMING AND BUDGETING

The recommended Capital Improvements Program and Budget of Limestone County is a major step toward the implementation of the County's plans for future development. The Capital Improvements Program and Budget should prove beneficial to the County Commission in preparing the county's annual budget. Although the Capital Improvements Program covers a period of at least fifteen years in the future, and the Budget six years, it must be kept flexible and reviewed and updated each year to keep pace with changing conditions within the County. Capital improvements are major projects requiring the expenditure of public funds over and above annual operating expenses for the purchase, construction, or replacement of the physical needs of the county on the basis of a system of priorities. The capital improvements program is normally coordinated by a County Planning Commission with the cooperation of the operating departments for the purpose of 1) establishing a coordinated program for all county public construction projects, and 2) establishing a method for review of all proposed projects to determine if the plans conform to the Comprehensive Plan. The budget and program presentation that follows is guided by the following policies.

1. Where projects are related to each other in final use, their construction desirably should be timed so as to be mutually beneficial.
2. Buildings construction priorities should be established, to the greatest extent possible, on the basis of greatest existing need.
3. Sites for future projects should be acquired in advance of need while vacant land is still available.
4. Public funds should be allocated on the basis of the official capital improvement program.

Many elements of the Comprehensive Plan cannot be implemented through the county's day-to-day administration. These elements require direct action by the county through the acquisition of property and/or construction of public works. Financing of capital expenditures must be evaluated and considered in the county's annual budget. Expenditures for all proposed improvements should be established in a long-range capital improvement program.

ADVANTAGES OF CAPITAL PROGRAMMING

Limestone County can derive considerable benefits from a systematic approach to planning capital projects. These benefits are, however, dependent upon a strong legislative commitment to the program and firm executive leadership in carrying it out.

Some of the advantages of capital programming are:

- a. Capital projects can be brought into line with county objectives, anticipated growth, and financial capabilities. By planning projects ahead, those that are needed or desired the most will be constructed first.
- b. Advance programming of public works on an orderly basis will help avoid the possibility of costly mistakes. Local officials will be guided in making sound annual budget decisions.
- c. The capital improvements program keeps the public informed about future construction plans of the county. Also, knowledge about the future physical needs of the county and the financial ability of the local government to fulfill these needs is a valuable aid to private investors.
- d. Coordination of capital improvements programming by the county agencies can reduce scheduling problems, conflicting and overlapping projects, and overemphasis of any government function.
- e. Capital improvements programming offers public officials an opportunity to plan the location, timing, and financing of needed improvements in the interest of the entire county. Furthermore, adequate planning and cooperation of various agencies assist in reducing duplication as well as cost of such capital projects and avoid public inconveniences.

- f. Preparation of a capital program improves the local government's change of obtaining available Federal and State aid for planning, construction and financing capital improvements.

ANALYSIS

In comparison to other TARCOG Region counties, Limestone County has a relatively sound, stable financial structure. The county's revenues are obviously increasing, with efforts being made to keep expenditures within collected revenues. Ad valorem taxes are not exceedingly high, and the county's bonded indebtedness is not at its legal limit. In terms of financing future capital projects, the major dependence would seem to rest on current revenue and revenue bonds.

It is recognized that limited federal funds are available and may be utilized for various projects, such as the acquisition and development of recreation areas. It is also recognized that the Alabama State Highway Department will be responsible for implementing portions of the Limestone County Transportation Plan. Financial assistance from such sources was not made a part of this Capital Improvements Budget because of the unpredictable nature of funding by the agencies. This does not imply that such funds should be rejected or not sought after, but rather that the capital improvements listed in this budget are needed now; and emphasis has been placed on funds that are available locally or can be obtained by a bond issue. Should federal or state aid be offered or agreed upon, then such funds should be used.

RECOMMENDATIONS

1. The county should actively solicit federal and state grants. Many federal and state programs have been available for the construction of community facilities. The Housing and Community Development Act of 1974 provides funds for most community facilities, except central administrative facilities.
2. The county should seriously consider creation of a Reserve Fund earmarked for capital improvements.
3. The county should consider the organization of utility service districts in order to finance certain services of less than countywide scope, unless these services directly relate to a system truly countywide in scope (such as water service).

CAPITAL IMPROVEMENTS BUDGET

The objective of the Capital Improvements Budget is to maintain a proper balance between operation and capital expenditures in relation to revenues. In doing so, this Budget should not be confused with the Annual Operating Budget. The Annual Budget is a program of financial obligations for a one year period, including all items that are both recurring and nonrecurring needs regardless of size of expenditure. The Capital Improvement Budget itemizes only those items anticipated as capital outlays during the next six years.

It should be noted that all costs listed in this budget are estimates and intended to be used as guidelines only. The primary function of these estimates is to give the governing body and Limestone County citizens some general costs in order that they might see how these will affect the future budgets of Limestone County.

Past annual financial statements for Limestone County have been analyzed to determine trends of revenues and operating expenditures. This effort was undertaken so that projections of financial statistics could be made and capital improvements could be scheduled in light of the county's ability to pay. Table depicts past revenues and expenditures, fiscal years 1976-1982, and projected revenues and expenditures, 1983-1990,

It should be noted that despite the expected surplus shown in the table for the budget period, inflation will be expected to reduce the county's ability to finance capital improvements without the availability of revenue bonding and federal aid. Therefore, professional budgeting procedures, aggressive use of available bonding options, and aggressive use of federal domestic assistance programs should enable the county to implement its Capital Budget according to the Budget's recommended schedule.

Provided the county works diligently at increasing its revenue potential, the following projects should be funded. These projects will promote economic development; hence, additional revenues will eventually accrue Limestone County.

The projects listed on the next page were drawn from the Community Facilities Plan.

TABLE VIII-1
LIMESTONE COUNTY
REVENUES AND EXPENDITURES
PROJECTED SIX-YEAR BUDGET PERIOD (1983-1989)
(FIGURES IN MILLIONS)

Projection	1983-1984	1984-1985	1985-1986	1986-1987	1987-1988	1988-1989
Revenues	5.00	5.65	6.50	7.50	8.50	10.00
Expenditures	4.60	5.00	6.00	7.80	8.00	9.00
Excess(Deficit)	.40	.65	.50	(.30)	.50	1.00

SOURCE: TARCOG

TABLE VIII-2
LIMESTONE COUNTY, COUNTY-WIDE TAX RATE
BY MILLS BY FISCAL YEAR OF LAST MAJOR CHANGE

	1981-82	1978-79	1976-77
TOTAL	10.5	34.5	23.0
State	6.5	6.5	6.5
General	2.5	2.5	2.5
Soldier	1.0	1.0	1.0
School	3.0	3.0	3.0
County	24.0	28.0	16.5
General	7.0	8.5	5.0
Road & Bridge	3.5	4.5	2.5
Hospital	3.0	3.5	2.0
Reappraisal	2.0	2.0	0
School (County)	5.5	6.5	4.0
School (Dist.)	1.0	1.0	1.0

SOURCE: State of Alabama, Department of Examiners of Public Accounts, 1973-1981.

TABLE VIII-3
CAPITAL IMPROVEMENTS PROGRAM

Project	Department	COST		Funding Source	Fiscal Year
		Federal	Local	Federal/Local	
1 Police Car	Sheriff	\$ -0-	900	CB	1983-1984
1 Pumper	Fire	Note: FmHA Loan	80,000	RDA/GA	1983-1984
1 Fire Station	Fire	Note: FmHA Loan	147,500	RDA/GO	1983-1984
Equipment Purchase	Engineering	N/A	N/A	RDA/GO	1983-1984
School Renovations	Education*	N/A	N/A	DE/ARC/GO	1983-1984
East and South Limestone Systems	Water	\$260,700	\$158,000	RDA/LN/REV CDBG	1983-1984
1 Police Car	Sheriff	\$ -0-	\$ 9,000	CB	1985-1986
1 Pumper	Fire	Note: FmHA Loan	80,000	RDA/GO	1985-1986
1 Fire Station	Fire	Note: FmHA Loan	147,500	RDA/GO	1985-1986
Equipment Purchase	Engineering	N/A	N/A	RDA/GO	1985-1986
School Renovations	Education	N/A	N/A	DE/ARC/GO	1985-1986
Belle Mina System	Water	\$ 504,000	\$ 12,600	RDA/ARD/GO	1985-1986
Lester-Salem System	Water	350,000	719,300	RDA/CDBG/GO	1985-1986
South Limestone System	Water	80,000	20,000	RDA/CDBG/GO	1985-1986
County Park	Recreation	252,800	63,200	NPS/ARC/GO	1985-1986
2 Police Cars	Sheriff	\$ -0-	\$ 18,000	CB	1987-1988
1 Pumper	Fire	Note: FmHA Loan	80,000	RDA/GO	1987-1988
1 Fire Station	Fire	Note: FmHA Loan	147,500	RDA/GO	1987-1988
Equipment Purchase	Engineering	N/A	N/A	RDA/GO	1987-1988
School Renovations	Education	N/A	N/A	DE/ARC/GO	1987-1988
North Limestone System	Water	\$ 243,200	\$ 60,800	RDA/ARC/REV	1987-1988
County Park	Recreation	252,800	63,200	NPS/RDA/ARC/GO	1987-1988

FUNDING SOURCE ABBREVIATIONS

CB - County Budget
 GO - General Obligation Bonds
 REV - Revenue Bonds
 DOT - U.S. Department of Transportation
 HUD - U.S. Department of Housing & Urban Development
 RDA - Rural Development Act
 EPA - Environmental Protection Agency

EDA - Economic Development Agency
 ARC - Appalachian Regional Commission
 DON - Donation
 CDBG - Community Development Block Grant Program
 NPS - National Park Service
 LN - Local Bank Loan (Community Facilities)
 DE - Department of Education

TABLE VIII-3
CAPITAL IMPROVEMENTS PROGRAM

Project	Department	COST		Funding Source Federal/Local	Fiscal Year
		Federal	Local		
Cont.					
1 Police Car	Sheriff	\$	\$ 9,000	CB	1989-1990
1 Pumper	Fire	Note: FmHA Loan	180,000	RDA/GO	1989-1990
1 Fire Station	Fire	Note: FmHA Loan	147,500	RDA/GO	1989-1990
Equipment Purchase	Engineering	N/A	N/A	RDA/GO	1989-1990
School Renovation	Education	N/A	N/A	DE/ARC/GO	1989-1990
South Limestone System	Water	\$ 120,000	\$ 30,000	RDA/CDBG/REV	1989-1990
Belle Mina System	Water	128,000	32,000	RDA/CDBG/REV	1989-1990
County Park	Recreation	252,800	63,200	NPS/RDA/GO	1989-1990
1 Police Car	Sheriff	\$ -0-	\$ 9,000	LEAA/CB	1991-1995
1 Pumper	Fire	Note: FmHA Loan	180,000	RDA/GO	1991-1995
1 Fire Station	Fire	Note: FmHA Loan	147,500	RDA/GO	1991-1995
Equipment Purchase	Engineering	N/A	N/A	RDA/GO	1991-1995
School Renovations	Education	N/A	N/A	DE/ARC/GO	1991-1995
East Limestone System	Water	\$ 64,800	\$ 16,200	RDA/ARC/REV	1991-1995
Tanner System	Water	122,000	18,000	RDA/ARC/REV	1991-1995
County Park	Recreation	252,000	63,200	NPS/RDA/ARC/GO	1991-1995
1 Pumper	Fire	Note: FmHA Loan	\$180,000	RDA/GO	1995-2000
1 Fire Station	Fire	Note: FmHA Loan	147,500	RDA/GO	1995-2000
Equipment Purchase	Engineering	N/A	N/A	RDA/GO	1995-2000
School Renovations	Education	N/A	N/A	DE/ARC/GO	1995-2000
Rural Community Park	Recreation	\$ 60,000	\$ 60,000	RDA/NPS/ARC/GO	1995-2000

Funding Source Abbreviations: See page 160

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TABLE VIII-4

LIMESTONE COUNTY, FINANCIAL SUMMARY OF COUNTY GOVERNMENT
1972-82 IN SELECTED FISCAL YEARS

	1972-73	1974-75	1976-77	1978-79	1980-81	1981-82
Revenues						
State	979,857	1,285,584	1,624,467	1,356,765		
Federal	485,776	584,652	1,852,859	1,041,792		
Local	1,140,316	1,527,482	2,010,659	3,322,647		
Other	50,777	217,081	1,118,600	350,000		
Total	2,656,726	3,614,799	6,606,585	6,071,204	7,314,370	5,733,361
Expenditures	2,177,787	4,604,997	6,063,273	5,635,395	7,311,244	5,219,814
Expenditures Paid	2,177,787	4,560,997	5,849,725	5,534,795	7,261,244	4,988,109
Warrants Paid	60,000	44,000	213,548	100,600	50,000	231,705
Outstanding Indebtedness	932,587	1,419,266	2,304,000	3,539,000	4,470,753	1,725,648
Assessed Property Valuation	38,475,820	44,391,230	50,556,900	78,941,747	84,832,160	
Regular	24,815,900	25,943,710	28,317,540	57,168,987	57,854,120	53,307,240
Corporate	3,160,630	3,708,800	4,843,540	5,074,840	4,559,120	2,189,170
Utilities	4,563,380	5,262,380	5,646,860	6,339,740	5,046,120	5,448,480
Motor Vehicles	5,935,910	7,801,740	9,553,880	8,537,980	15,467,420	10,674,100
Act 1000	-0-	1,674,600	2,195,170	1,820,200	-0-	-0-
Act 48	-0-	-0-	-0-	-0-	1,905,380	4,801,180
Constitutional Debt Limit*	1,346,653	1,553,693	2,527,850	3,947,087	4,241,608	3,821,009
Indebtedness Chargeable to Limit	295,000	252,000	207,000	480,000	470,000	420,000
"Surplus" debt	1,051,653	1,301,693	2,320,850	3,467,087	3,771,608	3,401,009

Max Dept of Revenue
334-242
1525

All Value Property Tax
10,000,000

* Changed from 3½% assessed value to 5% in 1976-77

SOURCE: State of Alabama, Department of Examiners of Public Accounts, 1974-1983

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TABLE VIII-5

LIMESTONE COUNTY

COMBINED STATEMENT OF REVENUE, EXPENDITURES
FOR FISCAL YEAR ENDING JULY 1983

	Total	General <u>Fund</u>	Special <u>Revenues</u>	Capital <u>Projects</u>	Debt <u>Services</u>	Trusts & <u>Agency</u>
REVENUES						
Taxes	1,418,634	513,370	905,264			
Licenses & Permits	82,090	24,797	57,293			
Intergovernmental	2,176,284	378,323	1,681,447	99,269		17,245
Charges For Services	239,969	233,239				6,732
Misc. Revenue	187,454	30,278	153,686	1,566	490	1,434
* Total Revenue	4,104,431	1,180,007	2,797,690	100,835	490	25,411
EXPENDITURES						
General Govt.	785,755	631,029	137,481			17,245
Public Safety	675,798	668,784	2,512	4,502		
Highways & Roads	1,584,948		1,584,948			
Sanitation	3,000		2,000			
Health	172,808	432	172,376			
Welfare	114,147	63,471	50,676			
Cultural & Rec	19,175	15,709	3,466			
Education	59,469	33,399	26,070			
* Total Current Expenditure	3,414,100	1,412,823	1,979,521	4,502		17,245
Capital Outlay (500)	309,444	43,826	63,733	200,459		1,426
Debt Service - Principal	101,733				101,733	
- Interest	26,756				26,756	
Intergovernmental	107,682	21,214	86,468			
Total Expenditures	3,959,715	1,477,863	2,129,730	204,962	128,489	18,671

SOURCE: Limestone County Commission, 1983

PRESENT REVENUE/EXPENDITURE PATTERNS

As a result of the combination of statewide property tax reappraisal and subsequent readjustment of county mileages, an interesting transition has taken place in the county's assessed property valuation (and the associated tax receipts.) Total assessed valuation was just over \$50.5 million in 1976-77, and as a result of reappraisal activities, jumped \$28.4 million (56.3 percent) by fiscal year 1978-79. However, an examination of the sub components of total assessed valuation reveals that there was a \$28.9 million (102 percent) change in the "regular" or ad valorem portion of the valuation and an actual increase of less than 10 percent in the combined corporate and utilities valuation. This was indicative of the fact that corporate and utility properties were already assessed in an accurate and up-to-date manner, and that it was private/personal property which was outdated and undervalued in its assessment (especially rural "farm land".)

Because of this transfer of almost 90 percent of the increased assessment/reappraisal to the individual private taxpayers (and voters) there was a downwards revision of the countywide proportion of the tax mileage in fiscal year 1978-79. This reduction from 28 mills to 24 mills effected the general/ad valorem tax base by 1.5 mills (a reduction of almost 20 percent). The road and bridge fund tax base by 1 mill, or 22.2 percent; the hospital revenue base by .5 mills (14.3 percent) and the countywide school district millage by 1 mill or 15.4 percent (see tables VIII-3 thru VIII-5).

In other words, in FY 1978-79, the potential tax millage on the total assessed value of the county at \$83.94 million at 28 mills was \$2,350,320; whereas by 1981-82, with an assessed value of \$76.42 million, and a 24 mill effective tax rate, only \$1,834,080 of potential taxes was available--a decrease of \$516,240 or about 22 percent. (not counting exempt properties or actual taxes)

It is little wonder then that when the decreasing property valuation and decreasing millage was combined with an overall economic slow-down with reduced sales tax receipts and some user fees, the county's total revenues fell from 7,314,370 in FY 1981 to 5,733,361 in FY 1982. Part of this reduction in funding can be observed in the fact that total state and local government employment reduced from 2,590 in 1980 to 2,470 (-5 percent) in 1982.

In current (FY 1983) expenditure terms,* Limestone County spent as follows (by "function"):

General Government	20.4%
Public Safety	17.5%
Highway and Roads	41.1%
Sanitation	.1%
Health	4.5%
Welfare	3.0%
Culture and Recreation	.5%
Education	1.5%
Capital Outlay	8.0%
Debt Service	3.3%

* Net of any intergovernmental transfers, excluding hospital and school system

Unfortunately, the 1982 Census of Governments data is not available at the county or county-wide population grouping level at this time. However, it is felt from examination of current state and county data, that the 1977 Census relationships are probably fairly representative of existing conditions. In 1977, Limestone County had general revenues in excess of \$99 per capita from all sources. This figure exceeded both the state-wide total county average of \$95 and the Alabama county population size group (ACPSG) figure of \$76. Obviously, since the Alabama total county average, lagged the U.S. per capita general revenue total. County average figure by almost \$125 (132 percent) Limestone County fared little better on a national comparison for per capita revenue with either counties of population size 25,000-50,000. For this reason, most of the comparisons made in this section will be to relative state averages, and not national averages.

Tables VIII-6 thru VIII-14 compare the 1972-77 revenues and expenditures on a per capita basis for Limestone County, Alabama, and the USA. The following, still existant, trends and observations can be made from this data:

Per Capita Taxes

- 1977 per capita taxes of \$35.65 were 88 percent of the state wide average and about 21 percent above the average for all Alabama counties of population 25,000-50,000.
- From 1972-1977, however, per capita taxes in Limestone County grew by only 25.7 percent, which was significantly below both the state rates of 50.1 percent total counties and 45.0 percent for counties of population size 25,000-50,000.
- Also, in 1977, the per capita property tax in Limestone County was significantly below both state relative averages, while the per capita sales was over 13 percent above the state-wide average, double the Alabama 25,000-50,000 population county group figure and even twice both the U.S. all county average and the U.S. all 25,000-50,000 population county group figure (\$7.37).

This points out, that, while per capita incomes are rising in Limestone County, they are still significantly below both state and national averages and the reliance on regressively characterized sales taxes for the major portion of tax revenues rather than property and use taxes (or user related fees) is dangerous both in terms of slowing economic growth and reducing county revenue during economically recessive times.

Per Capita Education Expenditures

- The 1977 per capita expenditure of \$12.77 was over twice the state-wide all county average, and three times the Alabama 25,000-50,000 population county group. This figure was, however as would be expected, significantly below the national figure of around 40, where property taxes are keyed to education spending.

TABLE VIII-6

LIMESTONE COUNTY, FINANCIAL STATISTICS
 BY UNITS OF GOVERNMENT, 1977
 (FIGURES ALL IN \$1,000's)

	Total	County government	Municipalities	School districts	Special districts
REVENUE					
GENERAL REVENUE, EXCLUDING INTERLOCAL,					
TOTAL	19 063	4 300	2 760	9 302	2 721
INTERGOVERNMENTAL REVENUE	10 322	2 407	327	7 423	165
STATE GOVERNMENT ONLY	9 008	1 966	156	7 257	5
GENERAL REVENUE FROM OWN SOURCES	8 761	1 893	2 433	1 079	2 556
TAXES	3 500	1 544	1 614	342	-
PROPERTY	960	447	191	342	-
OTHER	2 520	1 097	1 423	-	-
CHARGES AND MISCELLANEOUS	5 261	349	819	1 537	2 556
CURRENT CHARGES	4 451	64	556	1 475	2 556
OTHER	610	285	263	62	-
UTILITY REVENUE	9 563	189	9 394	-	-
WATER SUPPLY	936	189	747	-	-
OTHER	8 647	-	8 647	-	-
EXPENDITURE					
DIRECT GENERAL EXPENDITURE	19 565	4 419	1 932	10 127	3 087
CAPITAL OUTLAY	2 448	2 101	121	198	28
EDUCATION SERVICES:					
EDUCATION	10 048	-	-	10 048	-
SALARIES AND WAGES	6 307	-	-	6 307	-
LIBRARY	25	19	6	-	-
SOCIAL SERVICES AND INCOME MAINTENANCE:					
PUBLIC WELFARE	10	10	-	-	-
HOSPITAL	2 947	-	-	-	2 947
HEALTH	92	89	3	-	-
TRANSPORTATION:					
HIGHWAY	2 056	1 644	414	-	-
CAPITAL OUTLAY	279	222	57	-	-
PUBLIC SAFETY:					
POLICE PROTECTION	531	212	319	-	-
FIRE PROTECTION	166	3	163	-	-
CORRECTION	64	64	-	-	-
PROTECTIVE INSPECTION AND REGULATION	13	-	13	-	-
ENVIRONMENT AND HOUSING:					
SEWERAGE	1 816	1 682	134	-	-
CAPITAL OUTLAY	1 624	1 624	-	-	-
SANITATION OTHER THAN SEWERAGE	260	31	229	-	-
PARKS AND RECREATION	127	5	122	-	-
HOUSING AND URBAN RENEWAL	87	-	-	-	87
GOVERNMENTAL ADMINISTRATION:					
FINANCIAL ADMINISTRATION	104	74	28	-	-
GENERAL CONTROL	348	181	167	-	-
GENERAL PUBLIC BUILDINGS	374	355	21	-	-
INTEREST ON GENERAL DEBT	273	21	124	79	49
OTHER AND UNALLOCABLE	220	27	189	-	4
UTILITY EXPENDITURE	9 555	1 050	8 505	-	-
WATER SUPPLY	1 774	1 050	724	-	-
OTHER	7 781	-	7 781	-	-
DEBT					
DEBT OUTSTANDING, TOTAL	16 387	2 409	12 009	1 188	781
LONG-TERM	16 049	2 349	11 731	1 188	781
LOCAL SCHOOLS	3 331	-	2 183	1 188	-
UTILITIES	9 731	1 509	8 222	-	-
OTHER	2 987	840	1 366	-	781

SOURCE: U.S. Census of Governments, 1977

TABLE VIII-7

PER CAPITA GOVERNMENT COUNTY REVENUE AND EXPENDITURES
(ALL UNITS OF GOVERNMENT INCLUDED)
BY SIZE OF COUNTY, 1977

	United States		Alabama	
	All Counties Average	w/ pop. 10,000- 50,000	All Counties Average	w/ pop. 10,000- 50,000
GENERAL REVENUE, EXCLUDING INTERLOCAL	840.25	605.76	527.69	454.99
INTERGOVERNMENTAL REVENUE	360.57	292.61	244.91	246.46
FROM FEDERAL GOVERNMENT	77.69	42.99	56.86	29.91
GENERAL REVENUE SHARING	20.63	19.14	18.68	15.37
FROM STATE GOVERNMENT	262.66	249.61	188.05	218.55
FROM LOCAL SOURCES	479.68	313.15	282.73	208.53
TAXES	351.27	200.28	130.69	74.19
PROPERTY	282.85	174.73	53.00	33.01
OTHER	68.44	25.55	77.69	41.19
CHARGES AND MISCELLANEOUS	128.41	112.88	152.04	134.33
DIRECT GENERAL EXPENDITURE	802.20	600.85	527.04	444.15
CAPITAL OUTLAY	103.14	84.54	78.14	39.66
OTHER	699.06	516.31	448.91	404.48
EDUCATION SERVICES:				
EDUCATION	355.29	319.55	222.47	225.66
SALARIES AND WAGES	231.00	198.40	139.56	143.54
LIBRARY	5.55	2.50	2.57	.69
SOCIAL SERVICES AND INCOME MAINTENANCE:				
PUBLIC WELFARE	55.77	17.62	2.35	.47
CASH ASSISTANCE AND VENDOR PAYMENTS	37.27	8.52	.08	.03
HOSPITAL	41.84	45.14	75.24	65.05
SALARIES AND WAGES	21.73	21.64	35.67	33.01
HEALTH	13.66	6.62	6.54	2.74
OTHER04	-	-	-
TRANSPORTATION:				
HIGHWAY	43.20	54.84	39.85	43.81
CAPITAL OUTLAY	14.14	14.36	10.26	7.19
OTHER	9.18	2.39	4.73	.48
PUBLIC SAFETY:				
POLICE PROTECTION	41.65	20.93	24.66	17.46
SALARIES AND WAGES	32.07	14.11	18.07	11.62
FIRE PROTECTION	20.71	8.16	13.16	4.67
CORRECTION	7.51	2.75	2.83	1.42
PROTECTIVE INSPECTION AND REGULATION	2.17	.40	1.50	.18
ENVIRONMENT AND HOUSING:				
SEWERAGE	31.97	16.73	23.98	9.16
CAPITAL OUTLAY	21.18	10.79	17.21	5.13
SANITATION OTHER THAN SEWERAGE	11.14	5.48	9.39	6.63
NATURAL RESOURCES	4.53	5.07	.72	1.21
PARKS AND RECREATION	18.26	6.63	13.61	4.38
HOUSING AND URBAN RENEWAL	15.04	4.37	11.63	7.20
GOVERNMENTAL ADMINISTRATION:				
FINANCIAL ADMINISTRATION	10.63	8.40	7.24	4.56
GENERAL CONTROL	21.11	15.13	12.28	10.72
GENERAL PUBLIC BUILDINGS	8.84	5.76	5.09	3.61
INTEREST ON GENERAL DEBT	29.46	16.35	21.93	16.39
OTHER AND UNALLOCABLE	54.63	35.41	25.23	17.64
UTILITY REVENUE:	48.54	69.11	91.16	80.58
UTILITY EXPENDITURE:	97.34	78.67	96.59	85.12
PAYMENTS TO STATE GOVERNMENT	8.94	1.81	.84	1.29
GENERAL DEBT OUTSTANDING:				
LONG-TERM	622.39	374.89	512.76	364.13
LOCAL SCHOOLS	159.16	145.76	61.88	40.05
OTHER	417.12	214.82	421.95	310.80
CASH AND SECURITY HOLDINGS, TOTAL	445.40	339.76	253.39	127.01

NOTE: Figures reflect all combined governmental units, county, municipal, and districts.

SOURCE: U.S. Census of Governments, 1977.

TABLE VIII-8

LIMESTONE COUNTY, ALL UNITS OF GOVERNMENT,
REVENUES AND EXPENDITURES, TOTAL AND
PER CAPITA FIGURES - 1977

	Amount	Per Capita
REVENUE, EXCLUDING INTERLOCAL, TOTAL	28 666	661.88
GENERAL REVENUE ONLY	19 083	440.61
INTERGOVERNMENTAL REVENUE FROM STATE	9 008	207.99
INTERGOVERNMENTAL REVENUE FROM FEDERAL GOVERNMENT	1 314	30.34
GENERAL REVENUE SHARING	450	10.39
REVENUE FROM OWN SOURCES	18 344	423.55
GENERAL REVENUE FROM OWN SOURCES	8 761	202.29
TAXES	3 500	80.81
PROPERTY	980	22.63
SALES AND GROSS RECEIPTS	2 044	47.19
INCOME	-	-
OTHER	476	10.99
CHARGES AND MISCELLANEOUS	5 261	121.47
CURRENT CHARGES	4 651	107.39
OTHER	610	14.08
UTILITY REVENUE	9 583	221.27
WATER SUPPLY	936	21.61
OTHER	8 647	199.65
LIQUOR STORES REVENUE	-	-
EMPLOYEE RETIREMENT REVENUE	-	-
EXPENDITURE, TOTAL	29 120	672.36
INTERGOVERNMENTAL EXPENDITURE TO STATE	-	-
DIRECT EXPENDITURE	29 120	672.36
SALARIES AND WAGES	10 998	253.94
DIRECT GENERAL EXPENDITURE	19 565	451.74
CAPITAL OUTLAY	2 448	56.52
OTHER	17 117	395.22
EDUCATION SERVICES:	10 048	232.00
EDUCATION	6 307	145.62
SALARIES AND WAGES	25	.58
LIBRARY	-	-
SOCIAL SERVICES AND INCOME MAINTENANCE:	10	.23
PUBLIC WELFARE	2 947	68.04
HOSPITALS	1 271	29.35
SALARIES AND WAGES	92	2.12
HEALTH	-	-
TRANSPORTATION:	2 058	47.52
HIGHWAY	279	6.44
CAPITAL OUTLAY	-	-
AIRPORTS	-	-
PARKING FACILITIES	-	-
WATER TRANSPORT AND TERMINALS	-	-
PUBLIC SAFETY:	531	12.26
POLICE PROTECTION	343	7.92
SALARIES AND WAGES	166	3.83
FIRE PROTECTION	124	2.86
SALARIES AND WAGES	77	1.78
OTHER	-	-
ENVIRONMENT AND HOUSING:	1 816	41.93
SEWERAGE	1 624	37.50
CAPITAL OUTLAY	1 260	6.00
SANITATION OTHER THAN SEWERAGE	127	2.93
PARKS AND RECREATION	87	2.01
HOUSING AND URBAN RENEWAL	-	-
CAPITAL OUTLAY	-	-
GOVERNMENTAL ADMINISTRATION:	104	2.40
FINANCIAL ADMINISTRATION	348	8.04
GENERAL CONTROL	376	8.68
GENERAL PUBLIC BUILDINGS	273	6.30
INTEREST ON GENERAL DEBT	220	5.08
OTHER AND UNALLOCABLE	-	-
UTILITY EXPENDITURE	9 555	220.62
WATER SUPPLY	1 774	40.96
OTHER	7 781	179.66
LIQUOR STORES EXPENDITURE	-	-
EMPLOYEE RETIREMENT EXPENDITURE	-	-
DEBT OUTSTANDING, TOTAL	16 387	378.37
LONG-TERM	16 049	370.56
FULL FAITH AND CREDIT	4 897	108.45
NONGUARANTEED	11 352	262.11
SHORT TERM	338	7.80
LONG-TERM DEBT BY PURPOSE:	3 331	76.91
LOCAL SCHOOLS	9 731	224.68
UTILITIES	2 987	68.97
OTHER	1 217	28.10
LONG-TERM DEBT ISSUED	615	14.20
LONG-TERM DEBT RETIRED	172	3.97
CHANGE IN DEBT DURING YEAR	-	-
CASH AND SECURITY HOLDINGS, TOTAL	6 220	143.62
EMPLOYEE RETIREMENT	-	-
OTHER	5 724	132.16
CASH AND DEPOSITS	496	11.45
SECURITIES	496	11.45
FEDERAL	-	-

SOURCE: U.S. Census of Governments, 1977.

TABLE VIII-9

LIMESTONE COUNTY COUNTY-WIDE UNIT OF
GOVERNMENT, REVENUES AND EXPENDITURES FOR 1977

	Total Dollars (\$1,000s)	Per Capita
Population, 1975 (estimated)	43,310	
Date of End of Fiscal Year	9/30	
General Revenue	4,305	99.40
Intergovernmental Revenue	2,412	55.69
Taxes	1,544	35.65
Property	447	10.32
Sales	892	20.60
Income	-	-
Charges and Miscellaneous	349	8.06
General Expenditure, All Functions	4,972	114.80
Capital Outlay	2,101	48.51
Other	2,871	66.29
Education Services		
Education	553	12.77
Salaries and Wages	-	-
Library	19	.44
Social Services and Income Maintenance		
Public Welfare	10	.23
Cash Assistance Payments	-	-
Hospital	-	-
Salaries and Wages	-	-
Health	89	2.05
Transportation		
Highway	1,644	37.96
Capital Outlay	222	5.13
Other	-	-
Public Safety		
Police Protection	212	4.84
Salaries and Wages	136	3.14
Correction	64	1.48
Other	3	.07
Environment and Housing		
Sewerage	1,682	38.83
Capital Outlay	1,624	37.50
Natural Resources	4	.09
Parks and Recreation	5	.12
Other	51	.72
Governmental Administration		
Financial Administration	76	1.75
Salaries and Wages	66	1.52
General Control	181	4.18
General Public Buildings	355	8.20
Interest on General Debt	21	.48
Other and Unallocable	23	.53
Total Debt Outstanding At End of Fiscal Year	2,409	55.62
Exhibit Salaries and Wages	1,043	24.08

County only - Includes no municipalities

SOURCE: U.S. Census of Government 1977.

TABLE VIII-10

PER CAPITA REVENUES AND EXPENDITURES
FOR ALABAMA AND U.S. COUNTIES, 1977

	USA		ALABAMA	
	All County Governments Average	All Counties w/ Population 25,000-50,000	All County Government Average	All Counties w/ Population 25,000-50,000
GENERAL REVENUE	219.94	184.94	95.07	75.91
INTERGOVERNMENTAL REVENUE	99.14	85.91	40.87	37.84
FROM FEDERAL GOVERNMENT	19.70	15.14	14.23	7.75
FROM STATE GOVERNMENT	75.61	67.65	24.83	29.38
TAXES	84.57	84.64	40.97	29.34
PROPERTY	68.85	47.29	18.63	15.40
SALES	10.40	7.37	18.22	10.18
INCOME	2.03	0.69	-	-
CHARGES AND MISCELLANEOUS	36.21	40.41	13.73	8.84
GENERAL EXPENDITURE, ALL FUNCTIONS	218.04	185.14	94.84	73.05
CAPITAL OUTLAY ONLY	26.63	25.48	18.38	8.09
EDUCATION SERVICES:				
EDUCATION	34.69	43.31	5.23	7.29
SALARIES AND WAGES	19.01	24.65	0.02	-
LIBRARY	1.82	1.38	0.74	0.49
SOCIAL SERVICES AND INCOME MAINTENANCE:				
PUBLIC WELFARE	41.25	19.85	2.19	0.39
HOSPITAL	22.47	23.41	9.55	8.24
HEALTH	10.27	7.20	5.69	1.94
TRANSPORTATION:				
HIGHWAY	20.35	30.23	24.55	24.55
OTHER	1.44	0.47	0.10	0.31
PUBLIC SAFETY:				
POLICE PROTECTION	10.18	8.29	5.16	4.82
CORRECTION	6.62	2.75	2.43	1.22
OTHER	2.32	1.29	0.33	0.05
ENVIRONMENT AND HOUSING:				
SEWERAGE	5.19	1.72	7.71	2.12
NATURAL RESOURCES	2.94	2.31	0.69	0.97
PARKS AND RECREATION	4.59	1.79	3.43	0.36
OTHER	1.74	1.80	1.75	2.10
GOVERNMENTAL ADMINISTRATION:				
FINANCIAL ADMINISTRATION	5.77	5.44	4.53	2.98
GENERAL CONTROL	13.50	9.63	6.80	4.87
GENERAL PUBLIC BUILDINGS	3.04	4.41	3.19	2.76
INTEREST ON GENERAL DEBT	5.30	4.49	2.14	0.88
OTHER AND UNALLOCABLE	22.17	15.38	10.61	6.69
TOTAL DEBT OUTSTANDING AT THE END OF FISCAL YEAR	119.43	94.55	41.01	20.21
EXHIBIT: SALARIES AND WAGES	87.05	78.06	39.57	24.22

NOTE: County-wide government only, includes no municipalities

SOURCE: U.S. Census of Governments, 1977.

TABLE VIII- 11

LIMESTONE COUNTY, COUNTY-WIDE UNIT OF
GOVERNMENT*, REVENUES AND
EXPENDITURES SUMMARY, 1972

	Total in \$1,000's	Per Capita
Population, 1970	41,699	-
Date of End of Fiscal Year	9/30	-
General Revenue	2,363	56.67
Intergovernmental Revenue	939	22.52
Tax Revenue	1,182	28.35
Charges and Miscellaneous	242	5.80
General Expenditures, All Functions	2,549	61.13
Capital Outlay	171	4.10
Other	2,378	57.03
Education	475	11.39
Capital Outlay	-	-
Other	475	11.39
Highways	1,420	34.05
Public Welfare	39	.94
Hospitals	22	.53
Health	15	.36
Police Protection	91	2.18
Parks and Recreation	1	.02
Natural Resources	40	.96
Correction	47	1.13
Financial Administration	35	.84
General Control	161	3.86
General Public Buildings	38	.91
Interest on General Debt	34	.82
Other and Unallocable	131	3.14
Exhibit: County Contributions to Own Retirement Systems		
Total Debt Outstanding at End of Fiscal Year	822	19.71

* County only, includes no municipalities

SOURCE: U.S. Census of Governments, 1972.

TABLE VIII-12

STATE OF ALABAMA, SUMMARY OF COUNTY-WIDE
GOVERNMENT FINANCES, 1972

	All	Units of Population
	Units	25,000- 50,000
	Amount (1,000's)	
GENERAL REVENUE	182 488	27 710
INTERGOVERNMENTAL REVENUE	64 957	13 535
TAX REVENUE	92 909	12 607
PROPERTY TAXES ONLY	45 729	6 674
CHARGES AND MISCELLANEOUS	24 539	1 548
GENERAL EXPENDITURE, ALL FUNCTIONS	184 573	25 887
CAPITAL OUTLAY	36 255	2 632
OTHER	150 318	23 255
EDUCATION	13 437	3 552
CAPITAL OUTLAY	97	-
OTHER	13 390	3 552
HIGHWAYS	59 944	11 826
PUBLIC WELFARE	4 691	559
HOSPITALS	22 396	848
HEALTH	10 959	609
POLICE PROTECTION	7 901	1 378
PARKS AND RECREATION	6 336	37
NATURAL RESOURCES	1 644	425
CORRECTION	2 727	404
FINANCIAL ADMINISTRATION	5 040	624
GENERAL CONTROL	14 201	2 219
GENERAL PUBLIC BUILDINGS	4 698	878
INTEREST ON GENERAL DEBT	5 767	428
OTHER AND UNALLOCABLE	26 772	2 096
TOTAL DEBT OUTSTANDING AT END OF FISCAL YEAR	121 115	11 426
	Per Capita	
GENERAL REVENUE	52.46	44.50
INTERGOVERNMENTAL REVENUE	18.46	21.74
TAX REVENUE	26.97	20.25
PROPERTY TAXES ONLY	13.28	10.72
CHARGES AND MISCELLANEOUS	7.12	2.52
GENERAL EXPENDITURE, ALL FUNCTIONS	54.17	41.57
CAPITAL OUTLAY	10.53	4.23
OTHER	43.64	37.35
EDUCATION	3.90	5.70
CAPITAL OUTLAY	0.01	-
OTHER	3.89	5.70
HIGHWAYS	17.42	18.99
PUBLIC WELFARE	1.34	0.90
HOSPITALS	6.50	1.34
HEALTH	3.18	0.98
POLICE PROTECTION	2.29	2.21
PARKS AND RECREATION	1.84	0.06
NATURAL RESOURCES	0.48	0.48
CORRECTION	0.79	0.45
FINANCIAL ADMINISTRATION	1.47	1.00
GENERAL CONTROL	4.12	3.56
GENERAL PUBLIC BUILDINGS	1.36	1.41
INTEREST ON GENERAL DEBT	1.87	0.49
OTHER AND UNALLOCABLE	7.77	3.37
TOTAL DEBT OUTSTANDING AT END OF FISCAL YEAR	35.16	18.35

NOTE: County units only, no municipalities included

SOURCE: U.S. Census of Governments, 1972.

TABLE VIII-13

PER CAPITA COUNTY-WIDE UNIT OF GOVERNMENTS
 REVENUE EXPENDITURE COMPARISON, LIMESTONE, ALABAMA
 AND U.S.A. 1972 and 1977

	<u>Limestone</u>		<u>Alabama</u>		Same Size County <u>Alabama</u>		USA 1977	
	1977	1972	1977	1972	1977	1972	<u>All</u> Counties	<u>Same Size</u> Counties
General Revenue	99.40	56.67	95.07	52.96	75.91	44.50	219.94	184.96
Taxes	35.65	28.35	40.47	26.97	29.36	20.25	84.57	58.64
Property	10.32	NA	18.63	13.28	15.40	10.72	68.85	47.29
Sales	20.60	NA	18.22	NA	10.18	NA	10.40	7.37
Charges & Misc.	8.06	5.80	13.73	7.12	8.86	2.52	36.21	40.41
Capital Outlay	48.51	4.10	18.35	10.53	8.09	4.23	26.63	25.48
Education	12.77	11.39	5.23	3.90	7.29	5.70	34.69	43.31
Public Welfare	.23	.94	2.19	1.36	.39	.90	41.25	19.85
Health	2.05	.36	5.69	3.18	1.94	.98	10.27	7.20
Highways	37.96	34.05	24.55	17.42	24.55	18.99	20.35	30.23
Capital	5.13	NA	-NA-	-NA-	-NA-	-NA-	-NA-	-NA-
Public Safety	6.44	3.31	7.92	3.08	6.09	2.86	19.12	12.33
Sewerage	38.83	NA	7.71	NA	2.12	NA	5.19	1.72
Capital	37.50	NA	NA	NA	NA	NA	NA	NA
Government Admin.	14.13	5.61	14.52	6.95	10.61	5.97	24.31	19.48
Interest on Gen. Debt	.48	.82	2.16	1.67	.88	.69	5.30	4.49
Total Debt Outstanding	55.62	19.71	41.01	35.16	20.21	18.35	19.43	96.55

Note: "Same size counties" 15 counties with population of 25,000

SOURCE: Derived from Census of Governments 1972-1977

TABLE VIII-14

PER CAPITA REVENUE AND EXPENDITURES, COUNTY-WIDE
 UNITS OF GOVERNMENT, PERCENTAGE CHANGE 1972-77
 FOR SELECTED AREAS, LIMESTONE COUNTY AND ALABAMA

	Limestone County	Alabama	
		All Counties	Same Size Counties
General Revenue	75.4	79.5	70.6
Taxes	25.7	50.1	45.0
Property	-	-	-
Sales	-	-	-
Charges & Misc.	39.0	97.8	251.6
Capital Outlay	NR	74.3	91.3
Education	12.1	34.1	27.9
Public Welfare	-75.5	61.0	-56.7
Health	469.4	78.9	98.0
Highways	11.5	40.9	29.3
Capital	-	-	-
Public Safety	94.6	149.1	112.9
Sewerage	-	-	-
Capital	-	-	-
Government Admin.	151.9	108.3	77.7
Interest on Gen. Debt	-41.5	29.3	27.5
Total Debt Outstanding	182.2	16.6	10.1

NOTE: Same size counties are those of population 25,000-50,000

SOURCE: Derived from U.S. Census of Governments, 1972-1977

- Due to this high level of relative spending, the change in spending 1977-77 only increased by 12.1 percent in Limestone County, compared with the relative state-wide figures of 34.1 (total) and 27.9 percent (25,000-50,000 counties).

This is indicative of the fact that once an education system reaches a certain size range, minimum program standards and transportation and facility costs combine to create a total cost which rapidly becomes less and less independent on total pupil/population size. In this area, the county needs to seek aid through the state legislature in increasing minimum program supports on a general system size and program approach, rather than just a per pupil cost allocation. In addition, any additional pooling and combining of efforts with the city school system should be explored thoroughly. Program standards and transportation and facility costs combine to create a total cost which rapidly becomes less and less independent on total pupil/population size. In this area, the county needs to seek aid through the state legislature in increasing minimum program supports on a general system size and program approach, rather than just a per pupil cost allocation. In addition, any additional pooling and combining of efforts with the city school system should be explored thoroughly.

Per Capita Highway/Road Expenditures

- 1977 per capita highway expenditure by Limestone County was almost \$38. This figure was over 50 percent above the state-wide average (and same size county average) of \$24.55. In addition, this figure was also almost twice the USA all county average from the same period. This is especially significant when one notes that only 13.5 percent of that amount was expended on capital outlay, meaning that 86.5 percent of the money was primarily spent on just routine maintenance and repair.
- As with education, due to the high per capita base operating expenditure, the change in expenditure from 1972-77 was significantly below the state-wide averages of 30-41 percent.

It should be pointed out that Limestone County has a proportionally large network of roads to maintain for a rural county. Also, despite the fact that gasoline tax revenues are earmarked to the highway function, Limestone County's work commuting patterns are such that the purchase of a significant amount of gasoline (and tax paid) outside the county is assured. Therefore, despite the job creation factor involved in the county highway maintenance, serious consideration should be given to shifting all or a significant portion of the responsibility to the state (ie...in the 1983 actual current/operating expenditures sector, 46.4 percent of all monies went for "highways and roads")

Per Capita Government Administration Expenditures

- 1977 per capita "cost of government" expenditures in Limestone County were \$14.13, which was favorably comparable with the Alabama countywide average of \$14.52, and significantly below the national average for counties with population of 25,000-50,000 of 19.48.
- From 1972-77, government per capita administrative expenditures rose by almost 152 percent in Limestone County, significantly above the Alabama total and "same size" county indexes of 108 percent and 78 percent res-

pectively. However, much of this increased rate of expenditure can be traced to the implementation of modern governmental procedures and increases in employment necessary to gear up to provide public services for the population growth associated with the manufacturing boom in this period.

In general, the County Commission has done an admirable job of balancing costs and services of government administration over the last decade. While some progress has been slow, the county has not over extended itself on a basis of sudden economic peakings as evidenced by the minimal levels of cutbacks required during the past two years economic slowdown.

Per Capita Debt Expenditures

- In terms of total 1977 per capita debt, Limestone County significantly outstripped both state-wide comparison bases. This was primarily due to county-wide water and sewer related projects.
- The size of the per capita debt increase from 1972-77 can be reduced to a very reasonable level when a balance is struck between the earmarked/revenue incurred debt and the general obligation debt. For the most part, Limestone County's debts are related to activities such as water and sewer and health/hospital services where the projects are self amortizing. In FY 1981-82, for instance while the county listed almost 4.5 million in outstanding indebtedness, less than \$.5 million was chargeable to the county's "full faith and credit" constitutional debt limit of almost \$3.8 million dollars.

The county's debt picture is sound and well grounded in "pay as you go" project orientation. This policy has helped somewhat to control growth in the county into the Athens-Decatur and Athens-Huntsville corridors through water system expansions based upon economically feasible (self supporting) population concentrations rather than just general geographical growth.

SOURCES OF AVAILABLE REVENUE

I. Motor Vehicle Tax Revenues

With the exception of raising the property tax on the automobile, no additional tax of this nature is practical in Limestone County since, first, the County Commuter patterns have made private transportation a necessity, and second, municipal taxes of this type are already rising as a national trend.

II. Gasoline Tax Revenue

Limestone County levies the full Alabama authorized gasoline tax to cover the operation of the county road system and associated functions of regulation by the Sheriff's Department. This present trends in gasoline prices and the recut increase of the Federal gas tax make any increase in this tax (requiring local legislation) unfeasible.

III. Cigarette and Tobacco Tax Revenues

The cigarette and tobacco products tax is currently not levied by Limestone County. State-wide, twelve counties do utilize this form of revenue production and in 1979-1980, it produced an estimated 12 million dollars at the county level. Jackson County, similar to Limestone County in socio-economic characteristics, received a yield of almost \$50,000 in 1982 through use of a county two cents (2¢) per pack tax. The unpopular general nature of such a tax could be offset in the county by earmarking the tax for a primary local program such as health or education. Such a tax should produce some additional revenue.

IV. ABC Revenues

The revenues from the State ABC Board, while of a sensitive nature, and primarily a local discretionary matter, are worthy of note at this point. From a purely revenue standpoint, a highly potential source of revenue is being lost and a present source of revenue may be reduced. Limestone County is presently a dry county, bordered by two wet areas, Madison County, Alabama, and Tennessee. Sales revenues (especially for beer and wine) are being lost to these neighboring regions. Also, in FY 1981-82, Limestone County received less than 5 percent of the total general fund revenues, from ABC taxes. The State Legislature is still holding (and expected to pass if new debate cloture rules go into effect) a bill to remove all revenues from the sale of beer and alcoholic beverages from dry counties.

Realizing that this is a local decision, this plan does not make a recommendation in this regard, it only points out the fact that definite revenue potential does exist in the local sale of beverages, and a future revenue loss to Limestone and other dry counties is a real probability. Proposed plans at the state and local levels to earmark substantial portions of such a tax to education (i.e. 3¢ on a can of beer) might provide a valid justification for this type of revenue in counties such as Limestone.

V. User Charges and Gross Earning Revenues

Madison and Morgan Counties levy usage-based charges for services such as garbage removal and sewage disposal. While Limestone County lacks the industrial base to support such a program countywide at present, some portion of the county services might be financed through such a mechanism.

The gross earnings or so-called occupational taxes at the local/municipal level are currently popular in revenue analysis. In Kentucky, Michigan, Maryland, Ohio, and Pennsylvania the concept has proved viable; and Gadsden and Birmingham have adopted similar measures. The concept ideal of a "piggyback" local income tax, however, comes from the fact that it provides more equity as a taxing basis than the sales tax. In an area such as Limestone County, such a levy would not be practical at present due to the strong out of county commuter work patterns and the detrimental effect it would produce to new industries still in their beginning stages.

VI. Sales Tax Revenues

The most obvious source of revenue to the county is the sales tax. The state currently authorizes eighteen of its counties to levy additional taxes beyond the state's four cents. The mechanism is efficient and economical to the counties since the state collects and administers the funds for all but two of the counties. However, Limestone County presently has a three cents (3¢) sales tax countywide with the City of Athens levying three cents.

Theoretically, the county could raise its tax an additional one cent, but in reality, this could not be done without endangering seriously its position of economic competition since Huntsville, the nearest major trade area also has a three cent rate. Such an increase would be expected to return approximately one-fourth of one percent of the state-based tax return if it were to be applied--it is not recommended at this time.

This type of revenue increase has the economic advantage of a low cost of collection since the existing State System would be used.

Limestone County, however, is still a low-income county by national per capita income standards with almost 20 percent of its families having incomes below the poverty level (U.S. Census, 1980). A sales tax is by nature a regressive tax, and its burden falls heaviest on those least able to pay. The Alabama rate of four cents is exceeded by only six states in the nation, and most of these states exclude basic items, such as food and medicine. Industrial growth, and associated rises in per capita income, is of primary importance to Limestone County to maintain the modest progress experienced in the past decade. No revenue measure which would seriously handicap this growth should be considered between 1983 and 1989.

VII. Excise/Luxury Tax Revenues

The collections for excise/luxury taxes in Limestone County are not unduly large, even considering the low-level per capita incomes. The tax rate structure for the State of Alabama is low, with almost 60 percent of the states having personal income taxes with higher rates. (See State and Local Finances, 1972-77, Advisory Commission on Intergovernmental Relations, Washington, D.C.) This state trend suggests that various forms of selected local excise taxes probably hold the best low-burden revenue potential for Limestone County as long as low Alabama State rates are in effect.

VIII. Revenue Sharing

Federal Revenue sharing monies are presently available, but speculative source of revenue for local governmental units. The major reservation about Federal revenue-sharing programs is their relation to cutbacks in general Federal expenditure policies. Nationally, counties have been on the temporary receiving end of general Federal revenue sharing as net additions to total county revenues, while losing revenues from reduced and non-equalizing Federal programs and reduction and elimination of categorical grants programs. This means that revenue-sharing should be viewed as supplemental in nature by Limestone County due to their unstable nature. Capital improvements and equipment purchase of future revenue production-oriented investments represent the most productive uses for revenue sharing funds.

In FY 1983, Limestone County had received just under \$322,000 in Federal revenue-sharing funds. The bulk of the monies had either been spent, or earmarked for the following projects:

- *Operating expenses and salaries for the Tax Assessor's and Tax Collector's Offices
- *Court House Renovation/Expansion
- *Hospital/Health Expenditures
- *Property Reassessment

Revenue-sharing funds are highly advantageous to the county. High value, single-item projects such as the water system and property tax reassessment support the theory of revenue-sharing utilization for growth-oriented, single-item projects. The county should make a specified effort to see that functions of the Tax Collector and Tax Assessor do not become dependent on this type of funds, except for the increased work load period associated with the property tax re-evaluation.

Future revenue-sharing funds would probably be well invested in other such single-item projects of the same type such as increased county fire protection equipment, industrial water and sewerage facilities, and perhaps, revenue-oriented, open space and park recreational developments along the Tennessee River. All of the possible proposals for such facilities are described in the Comprehensive Plan.

IX. Tennessee Valley Authority Payment In-Lieu of Taxes

The TVA "reimburses" County, City, and Town Governments for revenue that would otherwise have been collected by local governments as property tax, if TVA were a privately-owned utility. These revenues, which were earmarked for local governments by the State Legislature in 1983, constituted \$476,700 of revenue in FY 1982. It is expected that said revenues will increase by 5-6 % until 1990, when the percentage increase will cease. Nevertheless, rising utility use by consumers and value-added-by-inflation will generally assist in maintaining an absolute dollar increase in revenues.

X. Future Bonded Indebtedness

Limestone County is presently using 10.9 percent of its authorized debt limit. Since the 1980-1981 fiscal year, the percentage of debt limit authorization used has risen above 15.0 percent due to the need to provide portable water service to the county's developing urban and industrial areas. It is expected that the amount of earmarked debt, as a percentage of the constitutional debt limit, will once more drop below 10 percent after four to five years. The water system expansion projects are being amortized on schedule, and the county's assessed valuation is continuing to increase. The water system improvements installed between 1980 and 1983 are already providing impetus to new growth. This growth is assisting in amortizing the bonds presently outstanding and in increasing the total assessed valuation of countywide property.

Provided future trends in bonding capacity follow trends over the last ten years, Limestone County should be in a position to maintain a reserve of non-obligated bonding capacity, sufficient to meet the needs of the Capital Improvements Budget. This plan strongly recommends that capital expenditures under \$25,000 in cost be paid for via the general fund. This policy would allow the county to reserve its unobligated bonding capacity for larger capital projects, such as public works endeavors. (these programs refer to non-revenue based bonds)

IMPLEMENTATION PROGRAM

This implementation program is designed to assist the county in effectuating the plan proposals and making this Comprehensive Plan a reality. To relate more specifically some of the measures for implementation with the land use plan of Limestone County, the following recommendations are given. Short range (1983-1989) has reference to items that can be accomplished in the first one to six years of the planning period. Long range (1990-2000) items would be completed in the remaining years of the planning period.

MEDIUM-HIGH DENSITY DEVELOPMENT

(1983-1989)

1. Land use regulations should be enacted as recommended by the Limestone County Planning Program in order to provide for controlled and coordinated growth in the urban and rural areas of the County. A full-time administrator should be hired to enact the land use regulations.

2. Building and housing codes should be enacted to insure sound new construction and development as well as to upgrade older, unsound structures.

3. Better housing is needed for many Limestone County residents. A housing program should be implemented to encourage the development of public housing units for low-income families. Federal loans could be utilized to purchase, remodel and rent existing housing for the development of public housing units. New housing units could be built through a housing authority or by other non-profit corporations which are eligible for Federal loans for construction of low-rent housing. The Top of Alabama Regional Housing Authority has initiated variable programs in this area.

4. The Comprehensive Plan of Limestone County should be publicized through the news media as well as public hearings to enlist public interest. The Board of County Commissioners should follow-up public interest with the formal adoption of the Plan. Citizen groups should be informed of the overall planning efforts and asked to help with its promotion as a long-range goal.

(1990-2000)

1. Land use regulations should be continually encouraged and administered in Limestone County to protect growing urban- and rural-residential areas.

2. Capital improvements should be scheduled annually in the Capital Improvements Program based on the land use plan, community facilities plan and county growth trends.

3. The county planning program should be continued in order to update physical plans to meet growth needs and to assist county leaders in anticipating these needs as far in advance as practicable.

AGRICULTURAL, RURAL AND LOW DENSITY DEVELOPMENT

(1983-1989)

1. Land use policies and provisions in the Land Use Plan should be adopted to protect prime agricultural land from rampant speculation efforts and undesirable growth effects.

2. Rural community leaders and interested citizens should be encouraged in their efforts to improve housing conditions, local economic and education levels, as well as local recreational facilities. Improvements in these local communities could be promoted through such programs as (FHA) Rural Development Loans and Rural Housing Loans, and through programs sponsored by the Appalachian Regional Commission.

3. Overall community development and land conservation programs should be encouraged and promoted through coordination with soil, agricultural and other county agencies.

(1999-2000)

1. Limestone County should continue to implement major county road improvements through coordination with other local governments as well as the Alabama Highway Department and the U.S. Department of Transportation. Financial plans for major expenditures for road improvements should be included in the County Capital Improvements Program.

2. Rural community development and improvement efforts should be continued through the coordination of land management and environmental improvement programs of county, regional, state, and federal agencies, especially the Limestone County Rural Development Committee.

INDUSTRIAL AND COMMERCIAL DEVELOPMENT

(1983-1989)

1. Land use regulations and policies should be adopted in order to promote industrial development and to reserve prime industrial land in Limestone County.

2. Desirable standards for new industrial development should be encouraged through the enactment of performance requirements and encouragement of private landowner's use of restrictive covenants.

3. Land use regulations and policies should be adopted to emphasize desirable commercial development in Limestone County.

4. Compact commercial development should be encouraged in order to avoid scattered, strip development along major roads and highways. Utility policies via utility permit refusal can discourage strip development.

5. Commercial recreation and tourism should be promoted through a development commission (or "tourist commission") to encourage this type of activity for Limestone County. This type of "industry" could be greatly increased through proper coordination and promotion. The successful trade record of the Athens-Limestone Development Committee could possibly be transferred to a similar trade record for tourism.

(1990-2000)

1. The expanded use of industrial educational facilities by residents of all county communities should be encouraged in order to promote better income levels countywide. This increased education and training will encourage more diversified industrial development with more and better job opportunities.

2. The Comprehensive Plan as well as land use regulations should be continually updated in order to keep pace with growth trends in the county in regard to additional commercial areas needed to complement residential and industrial development.

3. The conservation of water, forests and other natural resources in industrial and commercial growth should be continually emphasized through land use control as well as cooperation from private developers.

FORESTRY, OPEN SPACE AND CONSERVATION

(1983-1989)

1. Potential recreation sites should be acquired through private efforts, a Limestone County Park Board, possible Federal assistance through the Land and Water Conservation Fund, or a combination of these efforts--particularly in areas of historical significance or where natural and scenic features exist.

2. Potential recreation sites should be given particular attention for protection of forests and conservation resources through proper land management. The Alabama Forestry Commission can provide assistance in this effort.

3. Commercial recreation ventures should be encouraged and aided by the county government when in conformance with the Limestone County Land Use Plan and overall county improvement. This may be accomplished through long-term leasing of public property to individuals, or firms, federal cost sharing, or state assistance--and may require special legislation in some cases. Such efforts could mean much to Limestone County, both in economic and recreational benefits.

(1990-2000)

1. Acquisition efforts for prime recreational land should continue, particularly in the vicinity of the Elk River, the Piney Creek, Limestone Creek and Sugar Creek area, the Joe Wheeler State Park area and such natural features as caves, hills, and the lake.

2. A Limestone County Park Board should be given support in an attempt to provide funding for varied activities for all age groups.

3. Protection of forest resources from destructive effects of fire, insects, disease and uncontrolled grazing should be emphasized.

4. The public understanding and education concerning the environmental conservation of all county natural resources should be promoted.

TRANSPORTATION

(1983-1989)

1. Countywide transportation plans in conjunction with the Planning and Programming Division of the Highway Department should be adopted. Cooperative planning when necessary, should include coordination with the Metropolitan Planning Organization in neighboring Madison County.

2. Implementation of the Shanghai Road improvement in the western section of the county should begin as early as possible.

3. The four-laning of Alabama Highway 53 from Huntsville to Ardmore should begin, and a new alignment due west from Highway 53 to I-65 via Elkwood Section Road should be initiated, for a relocated State Highway 53.

4. A new two-lane bridge for U.S. 72 should span the Elk River, parallel to the existing U.S. 72 Elk Rover bridge.

5. Community beautification as well as rural county road improvements should be encouraged through civic organizations and other interested county residents. The Rural Development Committee can be of assistance in this effort.

6. County subdivision regulations should be promoted and adopted to provide for improved transportation facilities in the county.

(1990-2000)

1. The Transportation Plan, including the arterial highways, collector roads and local roads should be further implemented.

2. Thoroughfare improvements should be included in updating plans to serve developing residential, commercial industrial and recreational areas.

CONCLUSION

The need for a continuing planning program in Limestone County will become increasingly important in view of the projected population increase of approximately 56,000 residents by the year 1990, and 65,000 by the year 2000.

This Plan has attempted to fulfill the need for planning the future development of Limestone County. The primary objective of the Comprehensive Plan is to provide a policy framework for future decision making by the County leaders. Another objective is the prevention of uncoordinated, uncontrolled, scattered development patterns throughout the county, as is the preservation of Limestone County's outstanding natural and scenic beauty and prime agricultural land. The Plan insures proper locations for residential, commercial, industrial and recreational as well as a transportation system consisting of efficient and safe thoroughfares.

APPENDIX

ENVIRONMENTAL ASSESSMENT

1. A summary or abstract of the proposed plan(s) or policies:

The Comprehensive Plan presents a development plan for Limestone County, covering a planning period of 1982-2000. This Plan includes plans for land use, community facilities, transportation, and a capital improvements program and capital improvements budget. Also included is a program for overall plan implementation, which emphasizes various avenues of cooperative endeavors to be undertaken by the municipalities and county government. The Plan stresses several "growth corridors" in Limestone County where future urban growth should occur because public facilities, utilities, and transportation services can be most easily developed in these corridor areas.

2. The environmental impact (beneficial as well as adverse) of the proposed plan(s) or policies, if they are carried out:

Implementation of this plan will result in the improvement of the physical, social, and economic environmental sectors. This will be accomplished by providing a system of streets and pattern of land use commensurate with public utilities and services.

3. Any adverse environmental effects which cannot be avoided should the proposed plan(s) or policies be implemented:

Implementation of the proposed plan will lead to the physical improvement of the existing manmade environment and the alteration of the natural environment. Construction activities will be involved during implementation, therefore creating unavoidable adverse impacts (i.e. noise, dust, disruption to surface water run-off, inconvenience to people, etc.). All unavoidable adverse impacts are temporary in nature and with proper precautions they can be lessened. In addition, adverse impacts will be lessened due to the length of time needed to implement the proposed project. Based on a eighteen year planning period, development and construction of this project will not take place all at one time.

4. Alternative to the proposed plan(s) or policies and an analysis of those alternatives:

There are several possible alternatives to this plan due to its flexibility and nature. The plan provides guidance for development over an eighteen year period and, therefore, it must be flexible enough to be altered when necessary.

There is one major alternative and that is no planned growth. However, the residents and government of Limestone County decided against this alternative when they entered into the Comprehensive Planning Program.

5. The relationship, under the proposed plan(s) or policies, between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity:

The proposed plans and policies give direction for the construction of physical improvements that will allow man to live in better harmony with his environment. These short-term uses of man's environment are designed to enhance this relationship and increase the long-term productivity of both. However, the proposed plan will have to be properly supervised and controlled if this type of relationship is to be attained.

6. Any irreversible and irretrievable commitments of resources which would be involved if the proposed plan(s) or policies should be implemented:

Implementation of the proposed plan would commit three irreversible resources; namely the use of land, the use of building materials, and the removal of vegetation in various areas of the county. However, the commitment of these resources cannot be avoided if development is to take place, in accordance with a plan or without a plan.

7. A statement setting forth applicable Federal, State, and local environmental controls:

The Federal Environmental Controls utilized in analyzing development plans and projects are the following:

1. Federal Water Quality Act of 1965
2. 1966 Clean Water Restoration Act,
3. 1963 Clean Air Act,
4. 1967 Air Quality Act,
5. Solid waste Disposal Act of 1965, and
6. Resource Recovery Act of 1970,
7. N.E.P.A., 1970 (P.L. 91-190),
8. HUD Handbook, 1390.2 Noise Abatement and Control, 8/2/71,
9. Flood Disaster Protection Act, 1973,
10. Water Pollution Control Act, 1972,
11. Clean Air Act, 1967-1970,
12. Water Pollution Control Act, 1974,
13. Coastal Zone Act, 1972 (not applicable),
14. Fish and Wildlife Coordination Act, 1958,
15. National Historic Preservation Act, 1964, Executive Order 11953,
16. Historic and Archaeological Act, 1974,
17. Protection of Historic and Cultural Properties, Reg. (1/25/74)
39 FR 3366,
18. Local Controls: These controls will include zoning ordinances, subdivision regulations, housing, building, and fire prevention codes.

The State and local agencies responsible for developing rules and regulations for the above Federal programs are:

1. Alabama Air Pollution Control Commission,
2. Alabama Water Improvement Commission
3. Alabama State Health Department, and
4. Local Health Departments.

In addition, several Federal agencies, namely the Environmental Protection Agency (EPA), the Council on Environmental Quality (CEQ) which was created by the National Environmental Policy Act of 1970, and the Office of Environmental Control which was created by the Environmental Quality Improvement Act of 1970, require that attention be paid to certain environmental considerations. When Federal monies are used in various phases of the proposed project, it will be necessary to be cognizant of applicable Federal regulations.