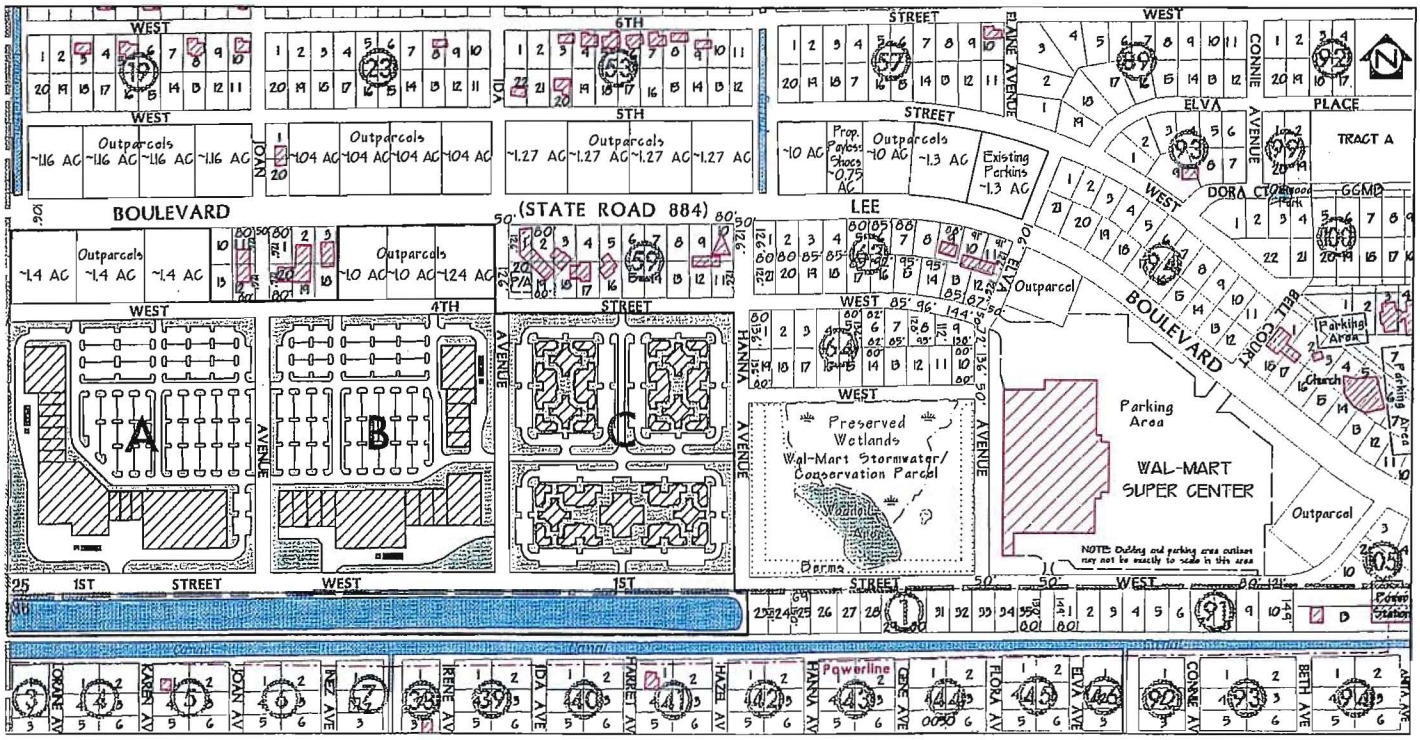

Lehigh Acres
Commercial Land Use Study

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Final Report
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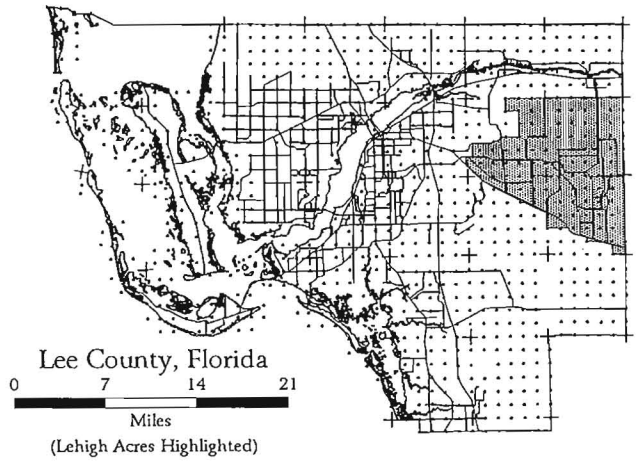
Executive Summary

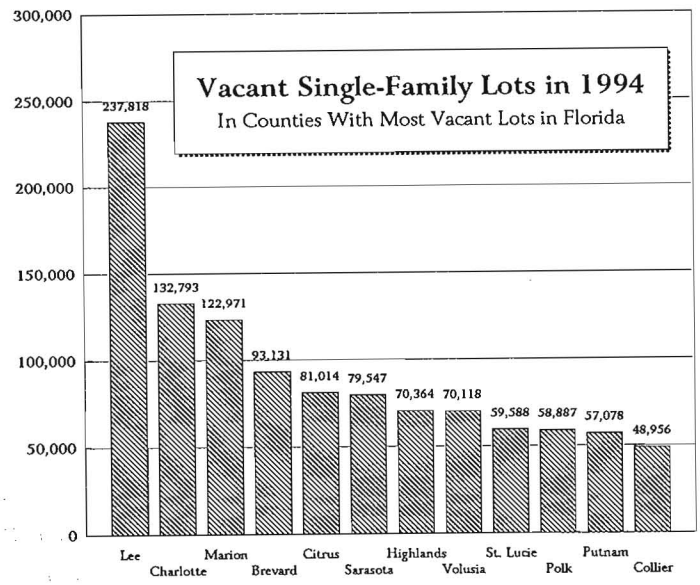
Lehigh Acres Commercial Land Use Study

Lehigh Acres is located in eastern Lee County, Florida. It encompasses a total of 96 square miles and now has a peak season population of about 30,000. These totals amount to 12% of Lee County's land area and 7½% of its population.

Initial development of Lehigh Acres began in the mid-1950s. Most of the community's land has been platted into separate building lots and sold to individuals around the world.

Lehigh Acres is one of the largest such "lot-sales" communities in Florida, with almost 120,000 existing lots and a projected population (if fully built) of about 342,000 people. That is almost as many people as now live in *all* of Lee County.





Lee County contains two of the largest lot-sales communities in the nation, Lehigh Acres and Cape Coral. As a result, Lee County has by far the largest number of vacant single-family lots of any county in Florida.

Lehigh Acres has many assets and has been growing very quickly in recent years. However, it has several inherent physical problems that are quite severe, but which can be remedied. This study is the beginning of the planning process to identify the best solutions and the means to carry them out.

Lehigh Acres today contains two distinct communities. The first is its coherent core area, pleasantly suburban in character and provided with all services. This compact core is surrounded in every direction by sparsely settled land. Individual lot owners can build homes almost anywhere by installing a private well and septic system. The resulting setting seems spacious and almost rural in character, although continuing growth will result in a traditional suburban character.

Lehigh Acres has become popular in recent years in part because of its affordability, with its abundance of vacant lots keeping land costs low. Lehigh Acres retains a traditional "home-town" feel, and has many active community organizations. Since Colonial Boulevard was extended to Lehigh Acres, it makes Lehigh very accessible to the concentration of jobs and shopping in central Lee County.

Lehigh Acres' many assets are offset by a number of serious difficulties. The coherence of the core neighborhoods is not being replicated today on a large scale. The provision of public utilities such as water and sewer service may become quite expensive, and road maintenance costs are very high, with a limited number of homes and businesses provided tax revenue for a vast areas. The major road network in Lehigh Acres is severely flawed, being made up of occasional two-lane roads with many gaps that threaten overall continuity. Employment and shopping opportunities for future residents will be very limited by the lack of unplatted land for businesses. This study focuses primarily on the shortage of land for shopping purposes, and addresses the inadequacies of the major road network through the year 2020.

Summary of Forecasts

	1990 (actual)		*1996 (actual)*		*2020*		*Build-out*	
Permanent Population	22,409		27,763		91,733		342,063	
	#	*Acres*	#	*Acres*	#	*Acres*	#	*Acres*
Neighborhood Centers	4	34	4	34	13	130	50	500
Community Centers	1	7	3	48	5	125	17	425
Regional Centers	0	0	0	0	1	100	2	200
All other office, retail, and services				107		97		540
TOTALS:				189		452		1,665

Initial forecasts were prepared for future population levels and distribution in Lehigh Acres. By the year 2020, an estimated 91,733 people will make their permanent home in Lehigh Acres.

These population levels will require commercial land far beyond what available today. Specific commercial land requirements were forecasted based on actual ratios from other communities with similar characteristics. The table to the left summarize the forecasts of population and commercial land.

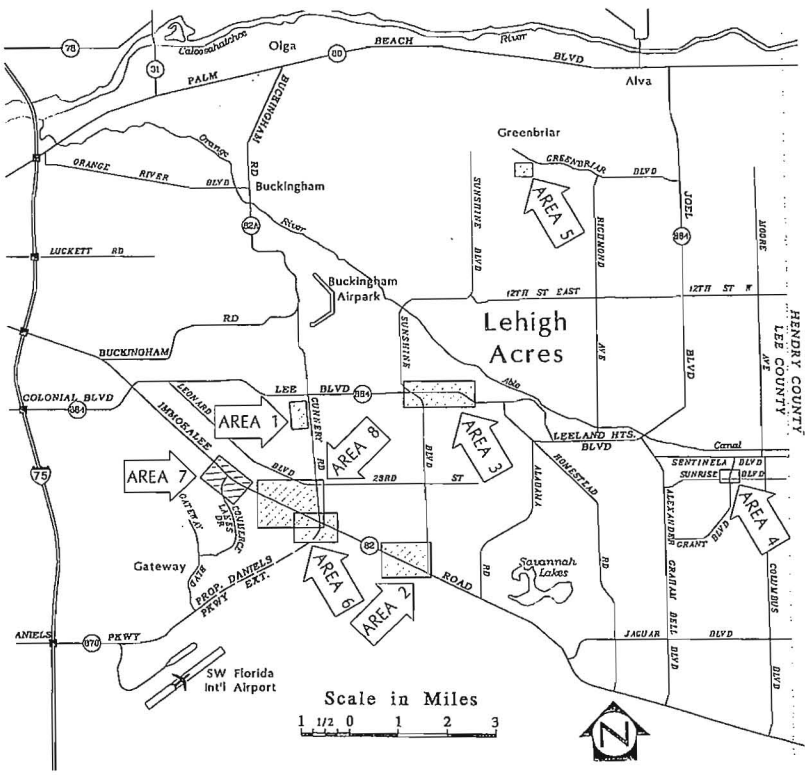
About 2% of the land in Lehigh Acres currently has commercial zoning, far less than the typical 5% commercial allocation for an entire community. Even if all of this zoned land were actually available and usable for commercial development, it would provide only enough space for about 38% of the build-out population of Lehigh Acres. An even greater problem, though, is that much of the remaining commercially zoned land suffers from serious flaws. Two of these flaws are:

- Premature platting of excellent commercial sites into single-family lots, which were sold off to individual buyers, many with deed restrictions against commercial uses.
- Provision of commercial land as shallow commercial strips, sold off into individual parcels in the same manner as single-family lots.

Six concepts were developed to experiment with different methods of remedying the shortage of commercial land. These included:

- Allow convenient shops within neighborhoods
- Deepen existing commercially zoned strips
- Assemble shopping center sites from existing lots
- Identify major new commercial locations not meeting current planning standards
- Place major new commercial locations outside Lehigh Acres
- Reconfigure access to commercially zoned strips

These concepts were translated to actual commercial site plans at eight actual locations around Lehigh Acres, as shown in the map below.



Following the preparation of these site plans and their presentation at a public meeting in Lehigh Acres, the more promising solutions were ranked as the basis for the next stage of analysis, which was to identify a commercial land-use pattern to match future residential growth. These priorities take advantage of the simplest solutions first (such as modifying regulations) and then progressing to the more complex solutions as far as needed to provide a reasonable balance of commercial land in the future.

— Priority #1: Modify Unneeded Regulatory Constraints

Today's Lee Plan standards for commercial growth are the same in Lehigh Acres as throughout Lee County; given the pre-platted situation in Lehigh Acres, the current standards are needlessly restrictive. Regulations are easier to change than fragmented ownership, unsuitable soils, or an inadequate road network.

— Priority #2: Give Priority to Parcels Under Unified Ownership

Any remaining unplatted tracts, or platted tracts whose lots have never been sold off, must be recognized as valuable resources. These tracts can provide a relatively simple means of retrofitting Lehigh Acres for its shortage of commercial land (as well as for future schools, parks, and multifamily housing).

— Priority #3: Reconfigure Existing Commercial Strips

Some of the existing commercial strips are of little real value, but others are in prime locations for actual commercial uses. Many have lots that are deep enough for at least some commercial uses. Positive attributes for commercial strips include: near an existing or future major intersection; lot depths of 175 feet or more; and ownership that is not fragmented. At the best locations, the strips could be deepened further to provide shopping center sites.

— Priority #4: Enable Neighborhood-Scale Commercial Uses

The small-scale commercial alternative would be more likely to succeed if it were officially sanctioned in county regulations. This could be done through a Lee Plan policy and either a special zoning district or a redevelopment overlay district.

— Priority #5: Fill Remaining Gaps Through Lot Assembly

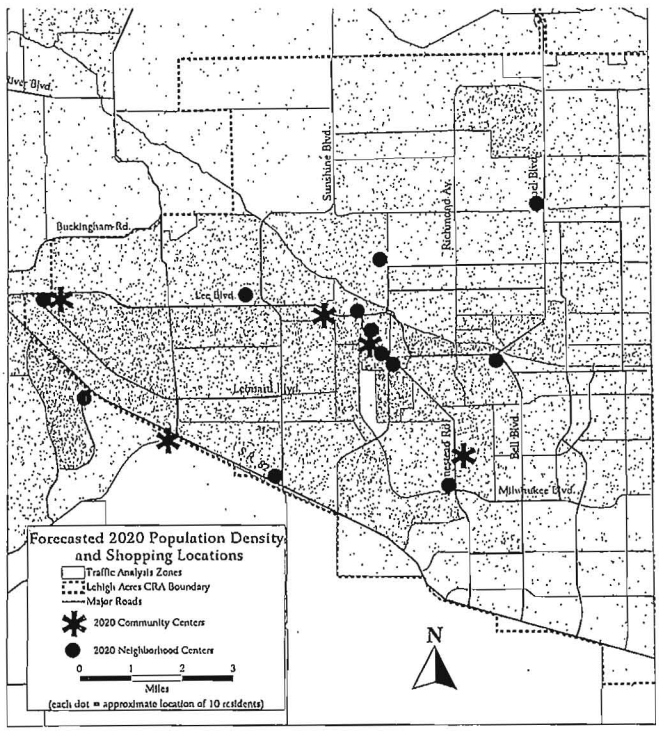
After experimenting with the higher priorities above, and after taking into account the usefulness of the off-site options (e.g., Daniels, Commerce Lakes, Colonial intersections with S.R. 82), some gaps may still remain where there are insufficient commercial alternatives. To fill these gaps, the difficult task of lot assembly may be required. Private land assembly should be encouraged, and the very best remaining locations should be considered for governmental assembly. The use of the CRA's powers of eminent domain would be required in most cases, and acquisition costs may be high. Alternative cooperative arrangements should be considered prior to the use of eminent domain, such as voluntary purchases, lot swaps, or development agreements with existing owners or participating developers.

Using these five priorities, specific potential commercial sites in Lehigh Acres were identified, mapped, and evaluated. An initial target for commercial acreage was 2080 acres, 125% of the demand at build-out. Additional potential acreage was also identified, for a total of 3015 acres.

Summary of Competing Land Uses	
	Build-out Acres
Public school acreage	1260
Community park acreage	599
Church and synagogue acreage	737
Multifamily & other public uses	????
TOTAL	> 2596
compare to forecasted need for commercial acreage:	1665
compare to prime acreage for "Lehigh Commercial" land:	2132
compare to maximum available commercial acreage:	3015

To complicate matters, many of these same sites will also be in demand for other land uses not provided by the original developers: schools, parks, utilities, and multi-family sites. Forecasts were prepared to quantify demands for future public schools, community parks, and churches/synagogues. These three uses alone will consume about 2600 acres at build-out of Lehigh Acres.

All of the above computations have been for the full build-out. However, other than for the pre-platted communities such as Lehigh Acres, most of the Lee Plan has a target year of 2020. For instance, road and utility planning is typically based on the land-use forecasts for the year 2020. To ensure consistency with these portions of the Lee Plan, a year 2020 commercial plan was developed, as shown below.



To balance the legitimate land needs for commercial development with the other missing land-use components, this study proposes a "Lehigh Commercial" land-use designation that strongly encourages commercial uses but also allows schools, parks, other public uses, churches, and multifamily development. Two other proposed designations identify other types of potential commercial land:

- The possible assembly of larger commercial sites from vacant platted lots at key locations; and
- An effort to reclaim much of the existing commercial strip by reconfiguring its access, to take full advantage of the continuous "rear access" road provided by the original developer.

In addition, some nearby land outside Lehigh Acres has been identified as very suitable for providing for the shopping needs of residents. Some of this land, for instance at the intersection of S.R. 82 and the proposed Daniels Parkway Extension, requires Lee Plan amendments in order to be used commercially.

In any case, Lee County needs to designate the prime "Lehigh Commercial" acreage in a manner that eliminates its conversion to conventional single-family lots and ensures that any other future residential uses will not consume more than a small portion of this land. Yet it must do this in a manner that encourages rather than punishes the landowners, many of whom will have to hold these parcels for an extended period of time before commercial market demand reaches them. This requires a delicate balance between potentially competing interests and between private property rights and long-term public needs. If the ultimate resolution of this balancing act does not protect enough commercial land, then lot assembly techniques would be required (rather than being a desirable but optional program).

The traffic impacts of the proposed plan for commercial development were simulated using a computerized travel model developed by the Lee County Metropolitan Planning Organization (MPO). This model was modified to use the assumptions for residential and commercial development prepared during this study. By modelling the resulting traffic patterns and volumes, any deficiencies in the existing and proposed road network can be identified.

This simulation showed that the total number of car trips originating at homes in Lehigh Acres would be reduced, with a better balance between trip origins (from homes) and trip destinations (to jobs, shopping, and schools). The result is reduced demand for road capacity between Lehigh Acres and the rest of Lee County because more trips can be made wholly within Lehigh Acres. This saves on roadbuilding costs and will make Lehigh Acres' residents less dependent on extended car trips for everyday needs.

The overall road system previously planned for Lehigh Acres for the year 2020 should be improved by adding a number of relatively inexpensive "missing links" into the future network. With these links, five new east-west corridors can be created to supplement Lee Boulevard and S.R. 82, now the only continuous east-west roads.

Although these new corridors only have enough right-of-way for two lanes at present, when added to the other improvements already planned by the MPO, they will provide adequate road capacity through the year 2020.

NEW EAST-WEST CORRIDORS

A. An extension of Centennial and Sunset, running from Buckingham Road to Sunshine Boulevard.
B. An extension of Leonard and 23rd Street, to connect S.R. 82 to Beth Stacey Boulevard.
C. An extension to Grant and 40th Street, to connect S.R. 82 to Bell Boulevard
D. An extension to Sunrise, to connect Beth Stacey Boulevard to Bell Boulevard
E. Improvements to 61st Street W, to connect Greenbriar to Cemetery Road

Although there is no travel simulation model that predicts traffic for years beyond 2020, it is clear that serious road deficiencies will develop in Lehigh Acres in later years. At a minimum, the additional 2020 improvements should be added to Lee County's official plans, and right-of-way for the missing links should be obtained now before homes are built on the lots that will be needed. (Engineering design and construction of the links can await actual demand and available funding.)

As a prelude to the important planning for longer-term road needs, a number of specific changes are proposed to Lee County's Official Trafficways Map. These changes will delete several infeasible road corridors and add a number of others which will clearly be needed for future levels of traffic. Two corridors outside Lehigh Acres should be included on this map: an extension of Sunshine northward to S.R. 80, and a connection from Alabama (or Sunshine) to Alico Road.

This report concludes with a discussion of methods to implement its recommendations, and specific language to be used to amend the Lee Plan to incorporate the new commercial land-use designations for Lehigh Acres. These designations would become "overlays" on the Future Land Use Map. Actual rezoning of land covered by these overlays would be pursued by landowners in accordance with this plan. Additional recommendations are provided for amendments to the land development code.

COPIES OF THE COMPLETE STUDY CAN BE OBTAINED FROM:

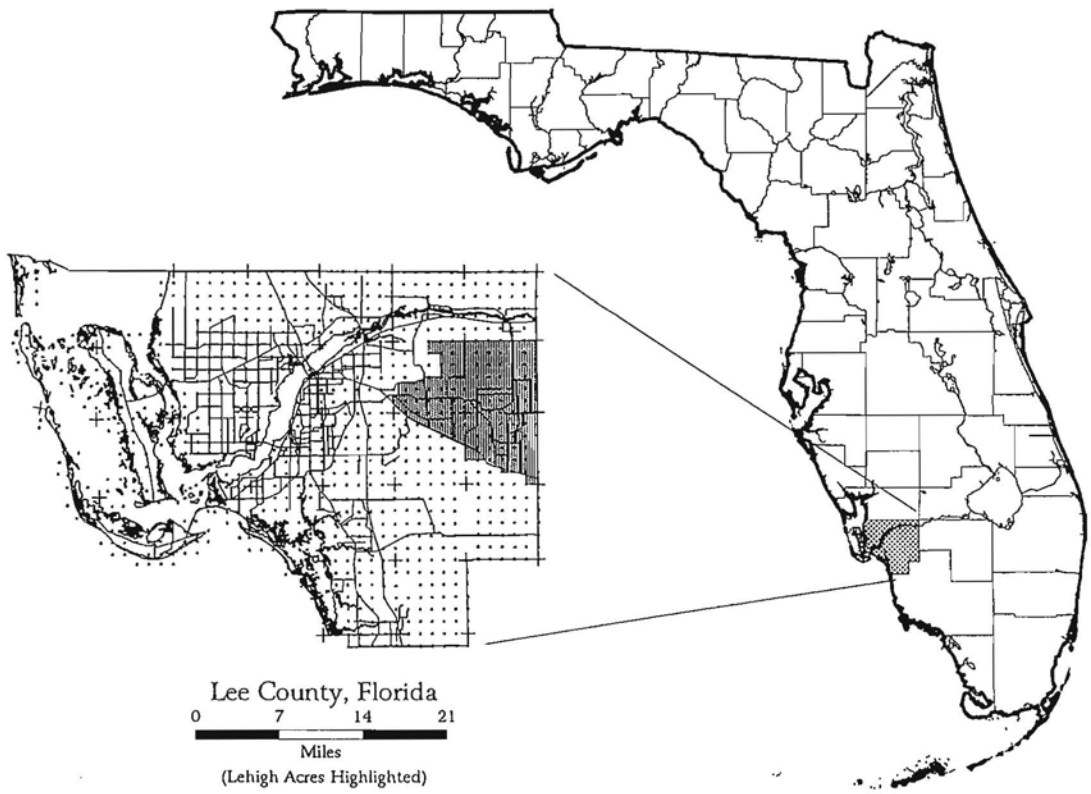
Lee County Community Redevelopment Agency
1857 Jackson Street, P.O. Box 398
Fort Myers, Florida 33902
(941) 335-2510

1. Lehigh Acres: Its Promise and Problems

Lehigh Acres is located in eastern Lee County, Florida, between State Routes 80 and 82, adjoining Hendry County on the east. Figure 1.1 illustrates this location.

Lehigh Acres encompasses a total of 96 square miles and has a current permanent population of about 28,000. These totals amount to 12% of Lee County's land area and 7½% of its population. Lehigh Acres has not incorporated as an independent municipality and is therefore governed by the Lee County Board of Commissioners and several independent special districts.

Figure 1.1

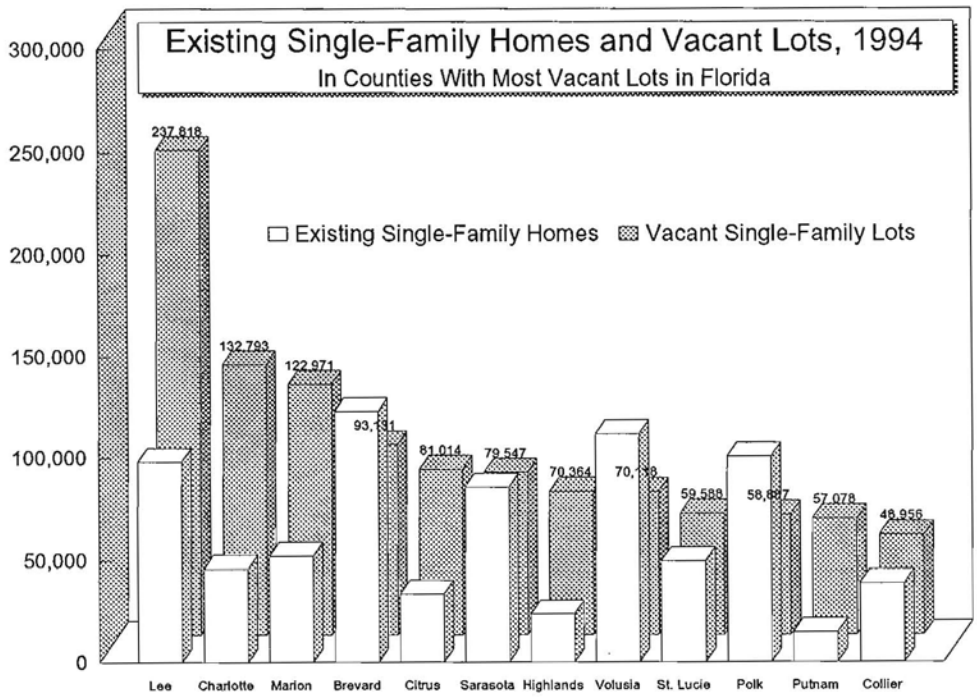


1(a) The Platted Lands Problem

Initial development of Lehigh Acres began in the mid-1950s. Most of the community's land has been platted into separate building lots and sold to individuals around the world. Lehigh Acres is one of the largest such "lot-sales" communities in Florida, with almost 120,000 existing lots and a projected population (if fully built) of about 342,000 people.

Other large-scale platted communities in Florida include Cape Coral, Port Charlotte, Port St. Lucie, Silver Spring Shores, and Golden Gate Estates. Lee County, because it contains Lehigh Acres *and* Cape Coral, has by far the largest number of vacant single-family lots of any county in Florida (see data in Figure 1.2).

Figure 1.2



SOURCE: Florida Ad Valorem Valuations & Tax Data, Florda Department of Revenue

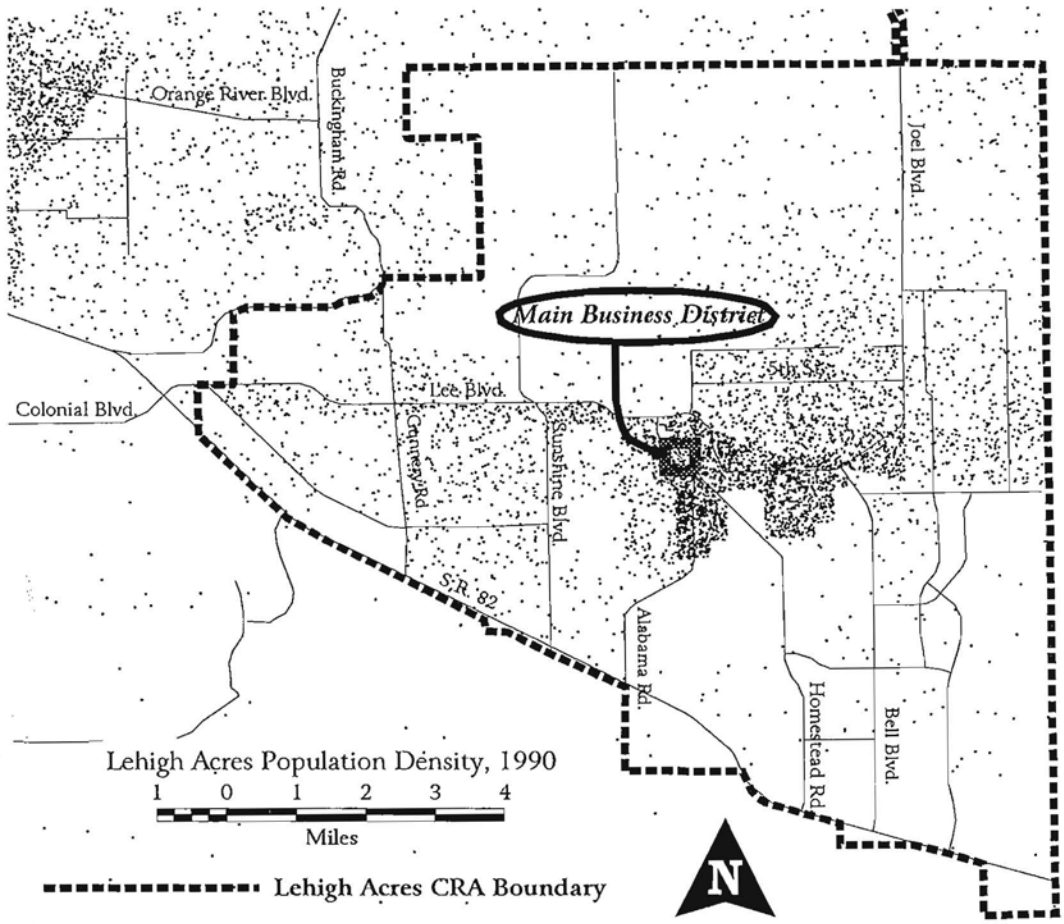
Lot-sales or "pre-platted" communities have many common characteristics that influence their stages of development and their ultimate character. Lehigh Acres shares many of their typical physical problems. Some of these inherent physical problems are severe but can be remedied. This study is the beginning of the planning process to identify the best solutions and the means to carry them out.

1(b) Lehigh Acres Today

Lehigh Acres today contains two distinct communities. The first is its coherent core area, pleasantly suburban in character, with convenient shopping, cultural and civic facilities, and full public utilities. Most homes in this portion of Lehigh Acres were built by the original development company, which owned the water/sewer utility and actively swapped core lots to outlying lot owners who were unable to build there because the roads were not yet in place.

This compact core of Lehigh Acres is surrounded in every direction by sparsely settled land. Now that almost all roads have been completed, lot owners can build on their outlying lots once they install a private well and septic system. The resulting setting seems spacious and almost rural in character, although continuing growth will result in a traditional suburban character. Figure 1.3 illustrates the population distribution based on the 1990 Census, with each dot representing the approximate location of 5 permanent residents.

Figure 1.3



Further residential development in Lehigh Acres will occur in three somewhat different ways:

- Construction of individual homes on existing platted lots;
- Development of entirely new neighborhoods on previously unplatted tracts (or, in a few cases, on platted tracts where the lots were never sold off), such as Bethany Trace, Varsity Lakes, and Westminster; and

- Development of entirely new communities on remaining vacant land, such as the proposed Village on the Lakes retirement community being planned by Enterprise Lehigh Inc.

Due to the tremendous surplus of platted lots, the construction of individual homes on them will ultimately account for the greatest number of new homes. However, in the near future the second and third methods will be very important, in part because of the marketing efforts provided by larger developers and also because these new neighborhoods are being hooked up to central water and sewer service. The extension of these services will, incidentally, make them available to additional land along the path of the new lines, encouraging further growth in those areas.

The growth rate in Lehigh Acres has been strong in recent years. This reflects a number of positive factors:

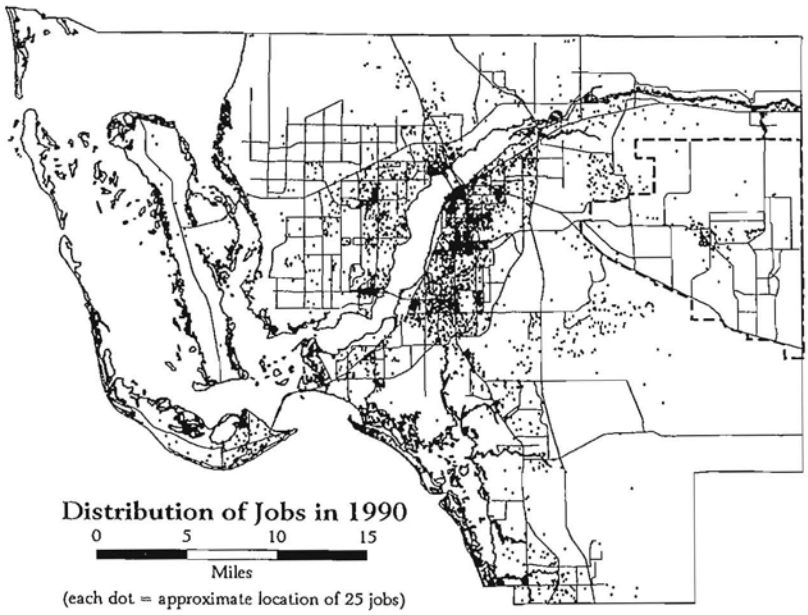
- Single-family homes on individual lots remain very popular, and the abundance of vacant lots in Lehigh Acres keeps land values low, making them affordable even for first-time buyers. This abundance has fueled the recent demographic changes in Lehigh Acres from a retirement community to one well-represented by all age groups.
- Contrary to current development trends, Lehigh Acres has almost no gates or guardhouses, leaving the community with a traditional "home-town" feel that is absent in many newer subdivisions, yet highly prized by homebuyers.
- Lehigh Acres has many active community organizations and its own fire and ambulance service, all of which foster a strong sense of community.
- Since Colonial Boulevard has been extended to S.R. 82, Lehigh Acres has become much more accessible to the concentrations of jobs and shopping in central Lee County. The extension of Daniels Parkway will have a similar effect.
- Lehigh Acres has become an integrated community, relatively free of the racial tensions that result from separate "our" and "their" neighbor-hoods.
- This integration has the potential to make Lehigh Acres one of the few communities in Lee County where mandatory busing of school children can be eliminated. The appeal of local schools remains strong even in today's mobile society.
- Growth trends in Lee County have been moving eastward for a number of years as land costs in the coastal areas have skyrocketed. Lehigh Acres can absorb much of this new demand. Important public facilities are being located nearby, such as the Southwest Florida International Airport and the new Florida Gulf Coast University, which will provide many new opportunities for east Lee County residents.

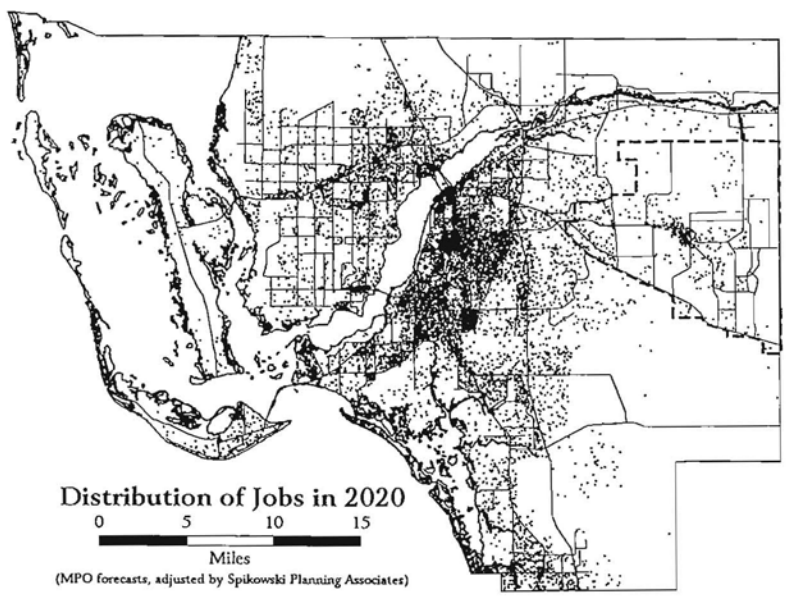
- Lehigh Acres has been able to capture a greater share of new entry-level housing in recent years as a result of the large assessments that Cape Coral has imposed to provide potable water, sewer, irrigation, and drainage systems there. However, this advantage is not permanent since Lehigh Acres is also lacking water and sewer lines in most locations and will face the same problems as it matures.

These many assets are offset by a number of serious difficulties, all of which have the potential to reduce the attractiveness of Lehigh Acres as a place to live and work:

- The coherence of the neighborhoods in the central core area is not being replicated today. The conditions causing this coherence no longer exist, and there is little opportunity to recreate them.
- The new scattered development pattern makes the provision of public utilities such as water and sewer service very difficult and expensive, and ultimately disruptive to neighborhoods. Road maintenance costs are very high, with a limited number of homes provided the tax revenue needed to keep the vast road network from crumbling.
- Because the water and sewer utility is privately owned, the options for financing needed expansions are limited. Publicly owned utilities have the ability to use governmental powers to tax and to levy special assessments in order to spread costs in an equitable manner. Public entities can also combine the retrofitting process with road and drainage improvements to create important economies of scale.
- The road network in Lehigh Acres is severely flawed. Unlike Cape Coral, where there is a full network of four-lane roads spaced almost every mile, Lehigh Acres' network is made up of occasional two-lane roads with many gaps that threaten the overall continuity of the system. Homesites have direct access to almost all arterial roads, leading to the unsafe situation of homeowners being forced to repeatedly back out onto those roads. Adequate road rights-of-way were not provided during the original platting process.
- Employment opportunities for future residents will be very limited by the lack of space for businesses, causing major commuting difficulties in the long run and expensive external infrastructure. Figure 1.4 shows the actual distribution of jobs in 1990 and the forecasted distribution in 2020. Lehigh Acres is poorly represented in both, in part because of its lack of unplatted land and in part because of established regional patterns centered around Fort Myers.
- The shortage of land for employment is also reflected in the shortage shopping center land, very little of which was put aside during the platting process.

Figure 1.4





This study will focus on the shortage of commercial land and the inadequacies of the road network. The first step in assessing the future demands for is to understand the character of the existing and future population of Lehigh Acres, the subject of the next section of this report.

2. Demographic Profile of Lehigh Acres Residents in 1990

The section describes the most important characteristics of the population of Lehigh Acres, based primarily on a detailed analysis of the 1990 U.S. Census. These characteristics are compared to similar communities (especially to Cape Coral), as well as to Lee County as a whole. Observations about these characteristics form the basis of the forecasts of future conditions that will be found in later sections of this report.

2(a) Population Totals Since 1960

Table 2-1 depicts the growth in population of Lehigh Acres and the existing cities in Lee County from 1960 to 1990. Table 2-2 translates this data into the percentage of population growth by decade. Note that all population totals from the U.S. Census count each person *at their usual place of residence*. In communities with a large seasonal population, this means that many people are not counted even though they live there for a significant portion of each year. About 8% of all dwelling units in Lehigh Acres are counted as being "vacant" simply because their occupants have their "usual place of residence" somewhere else. (Estimates of the *peak-season population* of Lehigh Acres are provided later in Table 3-3.)

In the past decade, Cape Coral had the highest percentage of growth at 133.6%, followed by Lehigh Acres at 96%, Lee County at 63.3%, Sanibel at 62.6%, and Fort Myers at 23.4%.

Sanibel has very little land for further growth. Growth in Fort Myers will be strongly linked to the land it annexes from unincorporated Lee County rather than internal growth. Therefore, in the remaining demographic analyses of Lehigh Acres, the primary comparison areas will be Cape Coral and all of Lee County. Because of their vast inventory of buildable lots, Cape Coral and Lehigh Acres will be two of the areas of strongest future growth in Lee County (as well as in southwest Florida).

Table 2-1

Population Changes Lehigh Acres and Comparison Areas — 1960 to 1990				
	1960	*1970*	*1980*	*1990*
Lehigh Acres[1]	—	4,394	11,371	22,283
Lee County	54,539	105,216	205,266	335,113
Fort Myers	22,523	27,351	36,636	45,206
Cape Coral	—	10,193	32,103	74,991
Sanibel	—	—	3,363	5,468

Note 1: Lehigh Acres data from ZIP Codes 33936 and 33971 combined
Source: U.S. Census of Population 1960, 1970, 1980, 1990

Table 2-2

Percent Change in Population Lehigh Acres and Comparison Areas — 1960 to 1990			
	1960-1970	*1970-1980*	*1980-1990*
Lehigh Acres[1]	—	158.8%	96.0%
Lee County	92.9%	95.1%	63.3%
Fort Myers	21.4%	33.9%	23.4%
Cape Coral	—	215.0%	133.6%
Sanibel	—	—	62.6%

Note 1: Lehigh Acres data from ZIP Codes 33936 and 33971 combined
Source: U.S. Census of Population 1960, 1970, 1980, 1990

2(b) Age

In Florida, large-scale platted communities are initially populated with an influx of northerly retirees in their early decades of growth. As a platted community grows, it generally develops more balanced age and social characteristics reflecting its region.

Table 2-3 tabulates an analysis of population by age distribution by age groups or cohorts (e.g., 5 to 9 years of age) for Lehigh Acres, Lee County and Cape Coral for the year 1990.

In Lehigh Acres, the percent of the total population that is 14 years and younger is 19.1%, greater than that for Lee County at 16.6% and Cape Coral at 18.2%. Lehigh Acres has a larger portion of its population of school age than Lee County or Cape Coral. This reflects the recent trend of younger and larger families moving into Lehigh Acres in the decade from 1980 to 1990. Figure 2.1 illustrates these trends graphically.

In the age group 25 to 34 years of age, Lehigh Acres' distribution of population is comparable to Lee County and Cape Coral. This age group includes the many younger families now raising children.

In the 65-and-over category, Lehigh Acres leads the region, as a percent of the total population, with 27.5%, compared to Lee County at 24.8% and Cape Coral at 22.0%. This age group in Lehigh Acres represents the very large percentage of retirees that predominated in the initial decades of development. By 1990, Lehigh Acres had developed an age distribution curve with three peaks, with a high percent of the total population being young and a high percent old, yet having a very substantial proportion in the 25 to 34 age group as well. Lehigh Acres has a lower percentage in the 20 to 24 range and the 35 to 65 range.

Table 2-4 tabulates the age distribution of population in Lehigh Acres in 1980 and 1990 for comparison and for identification of trends from the decade 1980 to 1990. Figure 2.2 depicts the age distribution of Lehigh Acres graphically, comparing it back to the very different patterns from 1970 and 1980. In those decades, the younger population was heavily outnumbered by retirees. During the 1980s, this pattern changed dramatically, as clearly indicated in this figure.

Table 2-3

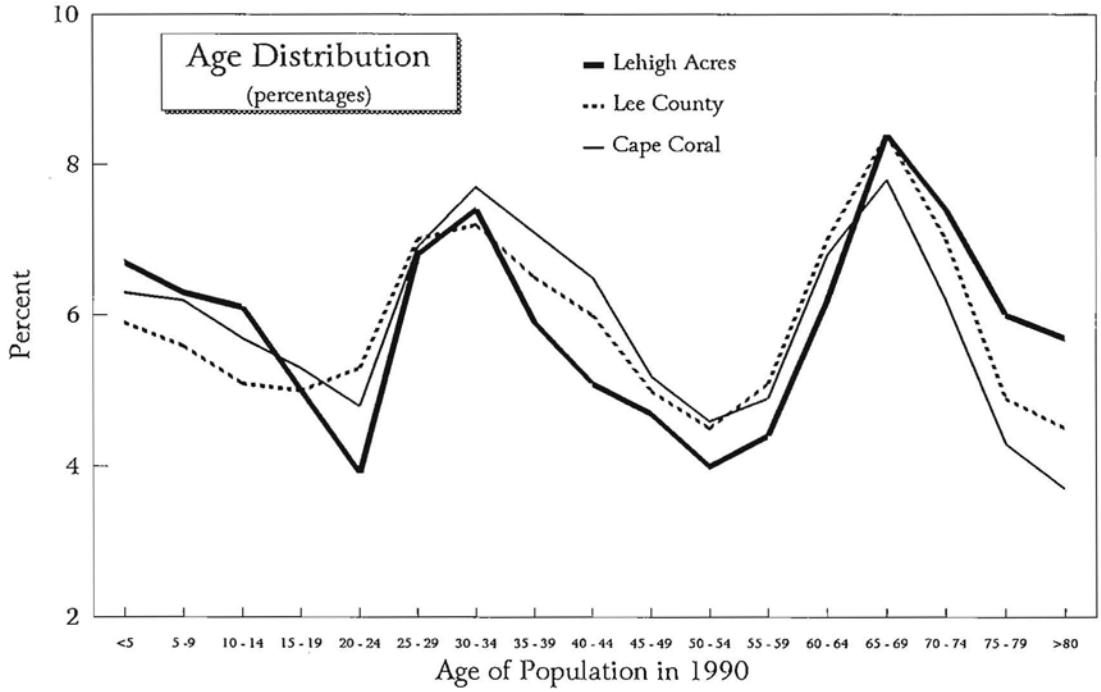
Age Distribution Lehigh Acres and Comparison Areas — 1990						
	Lehigh Acres[1]		*Lee County*		*Cape Coral*	
Age Group	*Number*	*Percent*	*Number*	*Percent*	*Number*	*Percent*
Under 5	1,498	6.7%	19,935	5.9	4,692	6.3
5 - 9	1,396	6.3	18,698	5.6	4,650	6.2
10 - 14	1,369	6.1	16,995	5.1	4,309	5.7
15 - 19	1,122	5.0	16,888	5.0	4,012	5.3
20 - 24	869	3.9	17,682	5.3	3,634	4.8
25 - 29	1,526	6.8	23,308	7.0	5,206	6.9
30 - 34	1,639	7.4	24,063	7.2	5,786	7.7
35 - 39	1,316	5.9	21,842	6.5	5,298	7.1
40 - 44	1,130	5.1	20,013	6.0	4,896	6.5
45 - 49	1,037	4.7	16,807	5.0	3,919	5.2
50 - 54	886	4.0	15,182	4.5	3,348	4.6
55 - 59	980	4.4	17,207	5.1	3,682	4.9
60 - 64	1,373	6.2	23,490	7.0	5,062	6.8
65 - 69	1,878	8.4	28,028	8.4	5,873	7.8
70 - 74	1,643	7.4	23,396	7.0	4,643	6.2
75 - 79	1,334	6.0	16,483	4.9	3,246	4.3
80 and Over	1,287	5.7	15,096	4.5	2,735	3.7
Totals	**22,283**	**100.0**	**335,113**	**100.0**	**74,991**	**100.0**

Note 1: Lehigh Acres data from ZIP Codes 33936 and 33971 combined
Source: U.S. Census of Population 1990

In 1980, the age group under 54 years of age accounted for 41.6% of the total population of Lehigh Acres. In 1990, this age group accounted for 61.8%. This is a substantial change in the younger population.

Every age group under 54 years of age on Table 2-2 increased substantially from 1980 to 1990 with the exception of 15 to 24 age group. As the 5 to 14 group in 1990 ages until the year 2000, the 15 to 24 age group will then show a substantial increase.

Figure 2.1

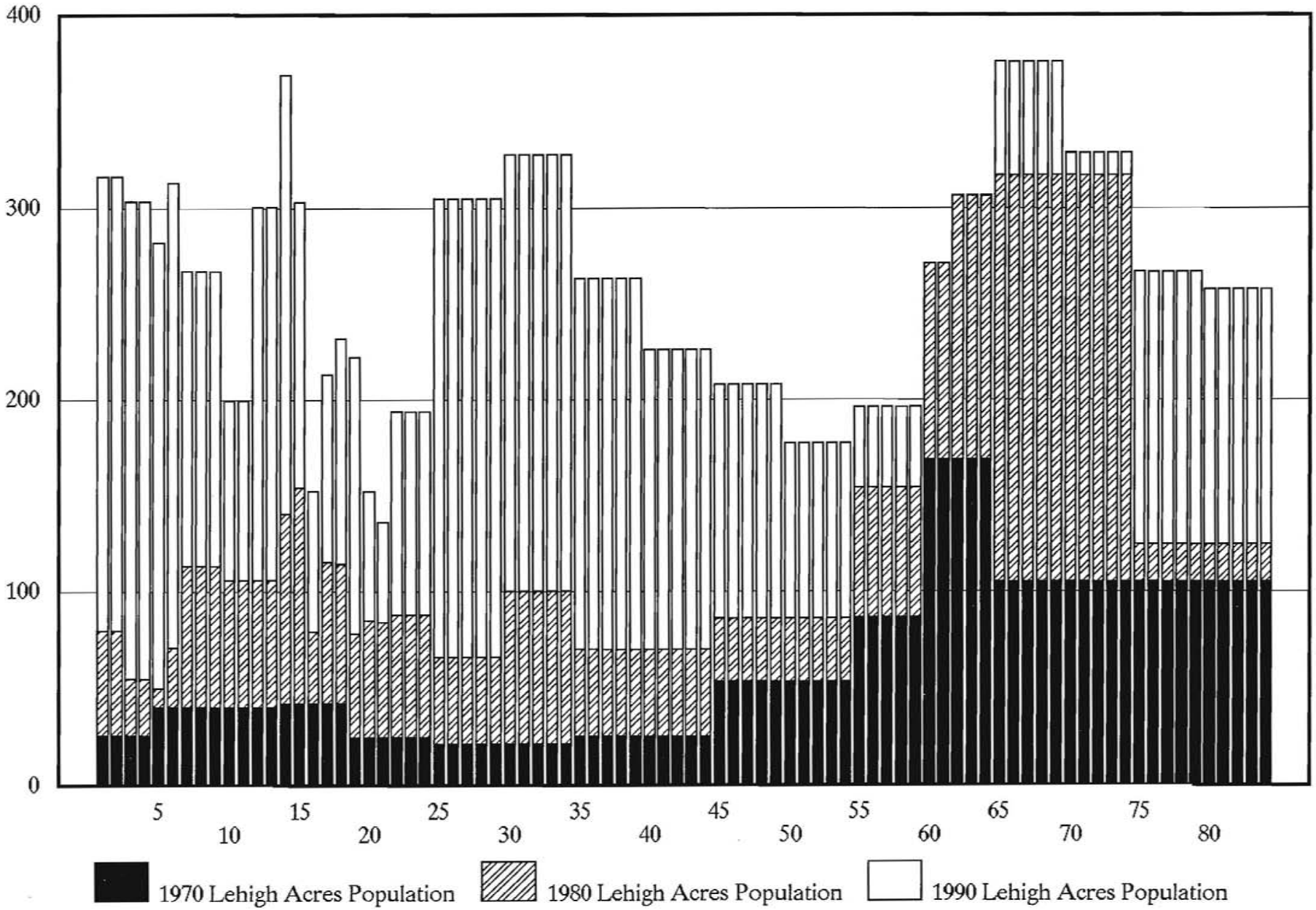


Likewise in 1990, all age groups 55 years and older decrease substantially from 1980, with the exception of the 75-years-and-older group. The reason for the over-75 increase as a percent of total population in 1990 is because of the large 65 to 74 age group in 1980 that still resides in the community.

The recent change in age characteristics in Lehigh Acres is also reflected geographically. Figure 2.3 shows the median age in each census block-group in 1990. A clear pattern emerges, with the older population living in the areas built-up earlier and the younger population dominating in the outlying areas, especially in the southwest portion of Lehigh Acres.

In conclusion, there has been a dramatic change in the demographic characteristics of the population in 1980 to 1990 from a larger older population to a larger younger population. This change affects school enrollment, household income, and housing values, as will be seen in the following sub-sections.

LEHIGH ACRES AGE PROFILES: 1970, 1980 & 1990



Average Number of Permanent Residents at a Given Age, Derived from U.S. Censuses

Figure 2.2

Figure 2.3

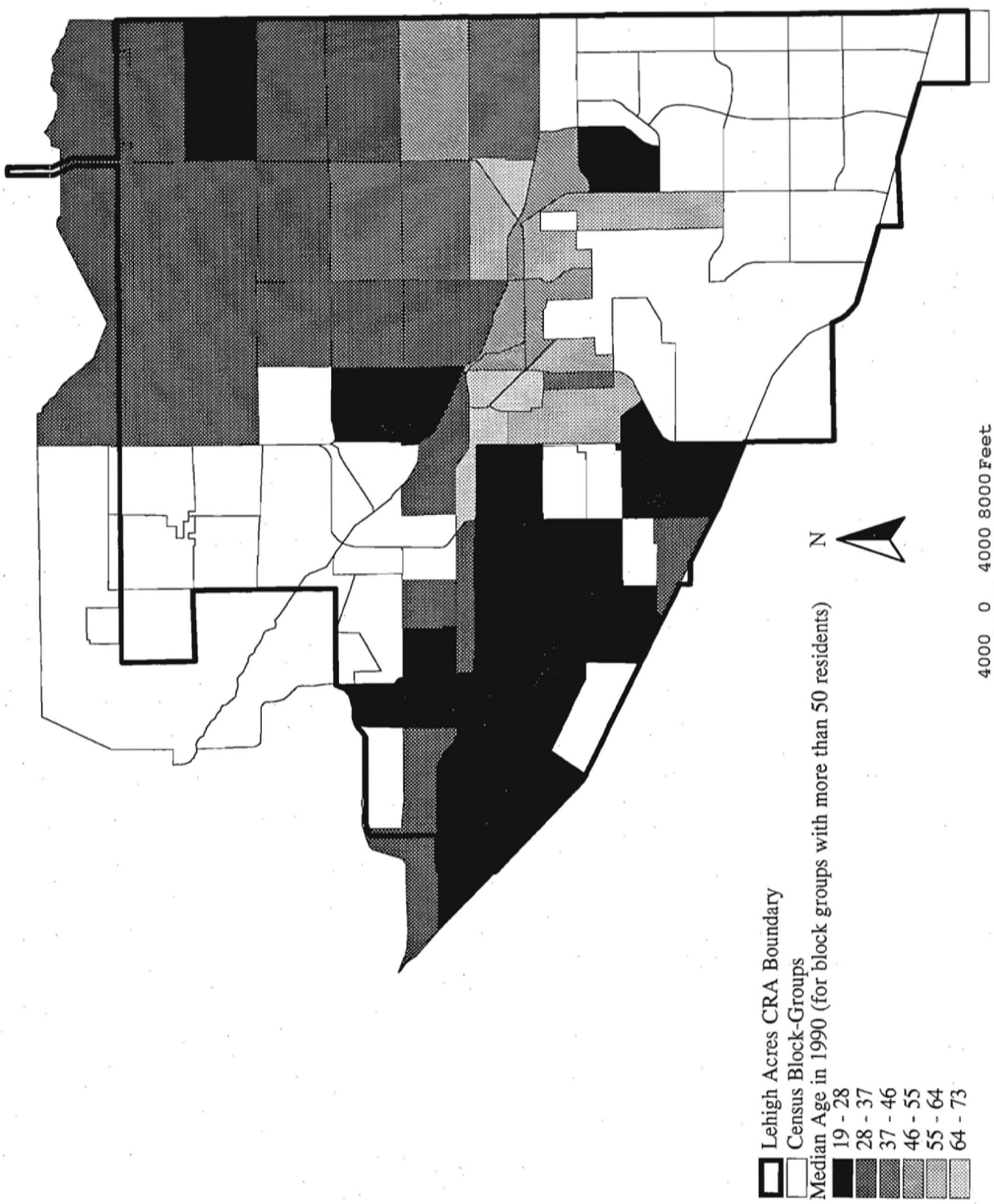

Lehigh Acres CRA Boundary
Census Block-Groups
Median Age in 1990 (for block groups with more than 50 residents)
19 - 28
28 - 37
37 - 46
46 - 55
55 - 64
64 - 73
N
4000 0 4000 8000 Feet

Table 2-4

Age Distribution Lehigh Acres[1] — 1980 to 1990				
	1980		*1990*	
Age Group	*Number*	*Percent*	*Number*	*Percent*
Under 5	341	3.0	1,498	6.7
5 - 14	1,023	9.0	2,765	12.4
15 - 24	972	8.5	1,991	8.9
25 - 34	831	7.3	3,165	14.2
35 - 44	701	6.2	2,446	11.0
45 - 54	857	7.6	1,923	8.6
55 - 64	2,232	19.6	2,353	10.6
65 - 74	3,171	27.9	3,521	15.8
75 - 84	1,093	9.6	2,145	9.7
85 and Over	150	1.3	476	2.1
Totals	**11,371**	**100.0**	**22,283**	**100.0**

Note 1: Lehigh Acres data from ZIP Codes 33936 and 33971 combined
Source: U.S. Census of Population 1990

2(c) Income

Table 2-5 tabulates the distribution of household incomes for Lehigh Acres and comparison areas in 1989. Lehigh Acres has the largest percent of households with incomes under $25,000. This reflects the large number of elderly households that in-migrated from 1960 to 1980, many of whom had substantial assets but limited sources of regular income.

Table 2-5

Average Household Incomes Lehigh Acres and Comparison Areas — 1989						
Household Income	*Lehigh Acres*[1]		*Lee County*		*Cape Coral*	
	Number	*Percent*	*Number*	*Percent*	*Number*	*Percent*
Less than $5,000	376	4.1	5,647	4.0	789	2.7
$5,000 to $9,999	782	8.5	10,292	7.3	1,492	5.0
$10,000 to $14,999	1,081	11.8	13,633	9.7	2,449	8.2
$15,000 to $24,999	2,348	25.6	30,617	21.9	6,237	21.0
$25,000 to $34,999	1,599	17.4	26,527	18.9	6,261	21.1
$35,000 to $49,999	1,863	20.3	25,741	18.4	6,338	21.3
$50,000 to 74,999	872	9.5	17,155	12.3	4,263	14.3
$75,000 to $99,999	171	1.9	4,826	3.5	962	3.2
$100,000 or more	80	0.9	5,608	4.0	958	3.2
Total	**9,172**	**100.0**	**140,046**	**100.0**	**29,749**	**100.0**
Median Household Income	**$25,827**		**$28,448**		**$31,177**	
Per Capita Income	**$11,982**		**$15,623**		**$14,934**	

Note 1: Lehigh Acres data from ZIP Codes 33936 and 33971 combined
Source: U.S. Census of Population 1990

Figure 2.4

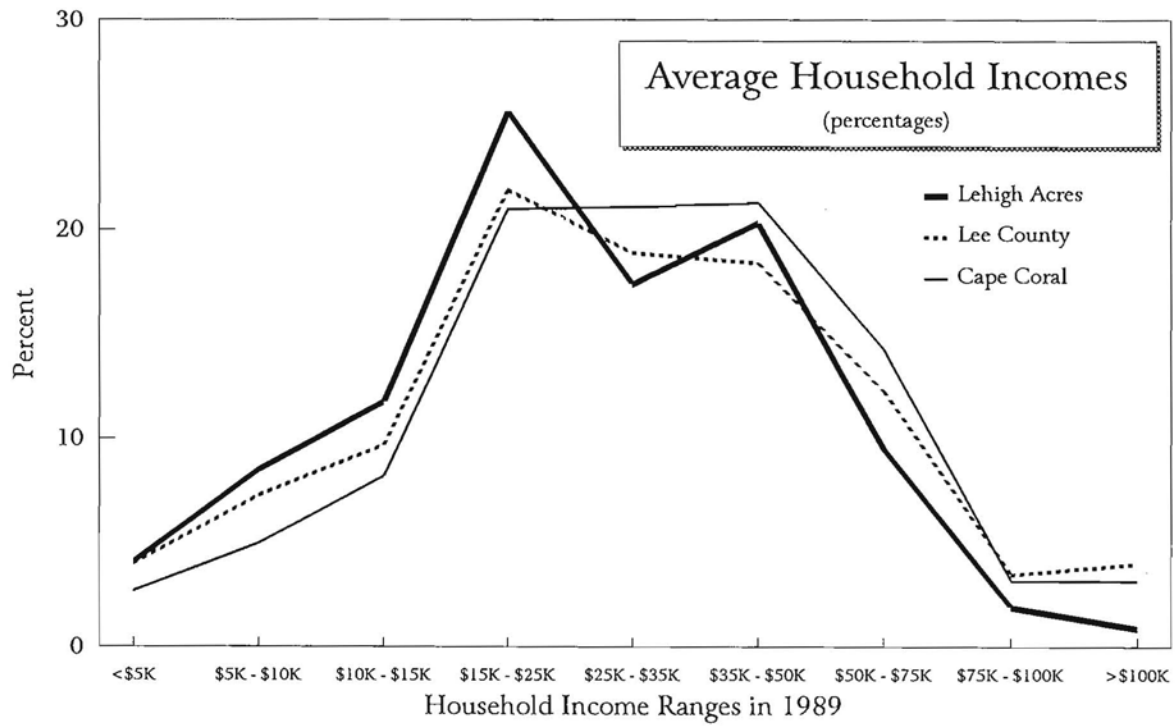


Figure 2.4 illustrates this same data (by percentages). In the income levels from $25,000 to $50,000, Lehigh Acres is somewhat equivalent to the region. This segment represents the younger working households.

Lehigh's distribution of household incomes of $75,000 and above is below that of the region. Lehigh Acres has not yet established a normal portion of its households in the upper income levels.

Lehigh Acres has the lowest median household income and the lowest per capita income. This reflects the large portion of elderly households with limited current incomes.

2(d) Educational Attainment

Table 2-6 tabulates the school enrollment and educational attainment levels of the residents of Lehigh Acres compared to Lee County and Cape Coral.

Table 2-6

Education Lehigh Acres and Comparison Areas — 1990						
	Lehigh Acres[1]		*Lee County*		*Cape Coral*	
	Number	*Percent*	*Number*	*Percent*	*Number*	*Percent*
School Enrollment						
Persons 3 Years and Over & Enrolled In:						
Any School	4,279	19.2	59,636	17.8	14,249	19.0
Pre-primary School	270	6.3	4,425	7.4	1,070	7.5
Elementary or High School	3,275	76.5	42,600	71.4	10,408	73.0
College	734	17.2	12,611	21.1	2,771	19.4
Educational Attainment						
Persons 25 Year and Over	16,029	71.9	245,559	73.3	53,770	71.6
Less than 9th Grade	1,282	8.0	17,582	7.2	2,817	5.2
9th to 12th, No Diploma	2,864	17.9	39,144	15.9	7,203	13.4
High School Graduate	6,111	38.1	82,953	33.8	19,673	36.6
Some College	3,129	19.5	51,499	21.0	12,281	22.8
Associate's Degree	922	5.8	13,989	5.7	3,610	6.7
Bachelor's Degree	1,047	6.5	26,371	10.7	5,514	10.3
Graduate or Professional Degree	674	4.2	14,021	5.7	2,672	5.0
High School Graduate or Higher	11,883	74.1	188,833	76.9	41,078	76.4
Bachelor's Degree or Higher	1,721	10.7	40,392	16.4	8,186	15.2

Note 1: Lehigh Acres data from ZIP Codes 33936 and 33971 combined
Source: U.S. Census of Population 1990

Lehigh Acres has 19.2% of all persons 3 years and over enrolled in school. This is higher than Lee County at 17.8% and the City of Cape Coral at 19.0%. This reflects the previous analysis of age distribution showing a growing younger population. Lehigh Acres falls behind the region and Cape Coral in percent enrolled in pre-primary school.

The enrollment in elementary and high school for Lehigh Acres is 76.5% of the total population enrolled. This is higher than Lee County and Cape Coral. However, enrollment in Lehigh Acres for college is lower. College enrollment will increase as the large high school population moves into their college years.

Lehigh Acres has 8% of its population that is 25 years or older with less than 9th grade education, and 17.9% with 9th to 12th grade education. This is substantially greater than Cape Coral and more in line with Lee County. The group with lower educational levels is likely to be the older population that moved in from 1960 to 1980. This age group had lower educational levels nationally.

2(e) Employment

Lehigh Acres has 52% of its population over 16 years of age in the labor force (see Table 2-7). This is a lower rate than either Lee County and Cape Coral, due to the larger elderly population in Lehigh Acres.

The percent of males participating in the labor force is equivalent to Lee County, but less than Cape Coral. The number of females participating in the labor force is less than the comparable areas.

Table 2-8 shows the distribution of the labor force by occupation, and Table 2-9 the distribution of the labor force by industry (regardless of occupation within that industry).

Table 2-7

Labor Force Lehigh Acres and Comparison Areas — 1990			
Labor Force Status	***Lehigh Acres*[1]**	***Lee County***	***Cape Coral***
Persons 16 Years and Over:	17,717	276,143	60,417
Percent of Total Population that is 16 Years and Over	79.5	82.4	80.6
Persons 16 Years and Over in the Labor Force:	9,204	151,410	34,545
Percent 16 Years and Over in the Labor Force	52.0	54.8	57.2
Employed	8,911	144,465	32,991
Unemployed	293	6,727	1,502
Percent Unemployed	3.2	4.4	4.4
Males 16 Years and Over:	8,190	131,608	28,720
In the Labor Force	4,854	81,409	18,384
Percent in the Labor Force	59.3	61.9	64.0
Females 16 Years and Over:	9,527	144,535	31,697
In the Labor Force	4,350	70,001	16,161
Percent in the Labor Force	45.7	48.4	51.0

Note 1: Lehigh Acres data from ZIP Codes 33936 and 33971 combined
Source: U.S. Census of Population 1990

Table 2-8

Labor Force by Occupation Lehigh Acres and Comparison Areas — 1990						
Occupation	*Lehigh Acres*[1]		*Lee County*		*Cape Coral*	
	Number[2]	*Percent*[3]	*Number*	*Percent*	*Number*	*Percent*
Executive, Administrative, Managerial	933	10.5%	17,478	12.1%	4,238	12.8%
Professional Specialty	925	10.4%	15,281	10.6%	3,290	10.0%
Technicians	336	3.8%	4,373	3.0%	1,147	3.5%
Sales	1,134	12.7%	23,553	16.3%	5,736	17.4%
Administrative Support	1,480	16.6%	22,335	15.5%	5,704	17.3%
Private Household Occupations	24	0.3%	441	0.3%	101	0.3%
Protective Services	231	2.6%	2,829	2.0%	716	2.2%
Other Service Occupations	1,079	12.1%	18,660	12.9%	3,906	11.8%
Farming, Forestry, Fishing	273	3.1%	4,233	2.9%	465	1.4%
Precision Production, Craft & Repair	1,429	16.0%	19,198	13.3%	4,306	13.1%
Machine Operators	319	3.6%	4,364	3.0%	841	2.5%
Transportation	426	4.8%	5,958	4.1%	1,197	3.6%
Handlers, Laborers	322	3.6%	5,762	4.0%	1,344	4.1%
Total	**8,911**	**100.0%**	**144,465**	**100.0%**	**32,991**	**100.0%**

Note 1: Lehigh Acres data from ZIP Codes 33936 and 33971 combined
Note 2: Number of Employees Note 3: Percent of Employees
Source: U.S. Census of Population 1990

Table 2-9

Labor Force by Industry Lehigh Acres and Comparison Areas — 1990						
Industry	*Lehigh Acres*[1]		*Lee County*		*Cape Coral*	
	Number[2]	*Percent*[3]	*Number*	*Percent*	*Number*	*Percent*
Agriculture, Forestry, Fishing & Mining	365	4.1	4,781	3.3	605	1.8
Construction	1,198	13.4	16,599	11.5	3,565	10.8
Manufacturing	549	6.2	8,994	6.2	2,295	7.0
Transportation	343	3.8	5,826	4.0	1,432	4.3
Communications & Utilities	301	3.4	4,417	3.1	1,046	3.2
Wholesale & Retail Trade	1,896	21.3	37,446	25.9	8,757	26.5
Finance, Insurance, Real Estate	863	9.7	13,045	9.0	3,143	9.5
Services	2,935	32.9	47,600	32.9	10,645	32.3
Public Administration	461	5.2	5,757	4.1	1,509	4.6
Total	**8,911**	**100.0**	**144,465**	**100.0**	**32,991**	**100.0**

Note 1: Lehigh Acres data from ZIP Codes 33936 and 33971 combined
Note 2: Number of Employees Note 3: Percent of Employees
Source: U.S. Census of Population 1990

Lehigh Acres has a lower percentage of employees in the Executive category than the comparison areas. It is equivalent in the area of Professional category, and higher in Technicians. The lower percent (12.7) in the sales category is probably due to the small number of retail jobs in Lehigh Acres. Interestingly, Lehigh Acres leads in precision production, machine operators, and transportation as a percent of the labor force.

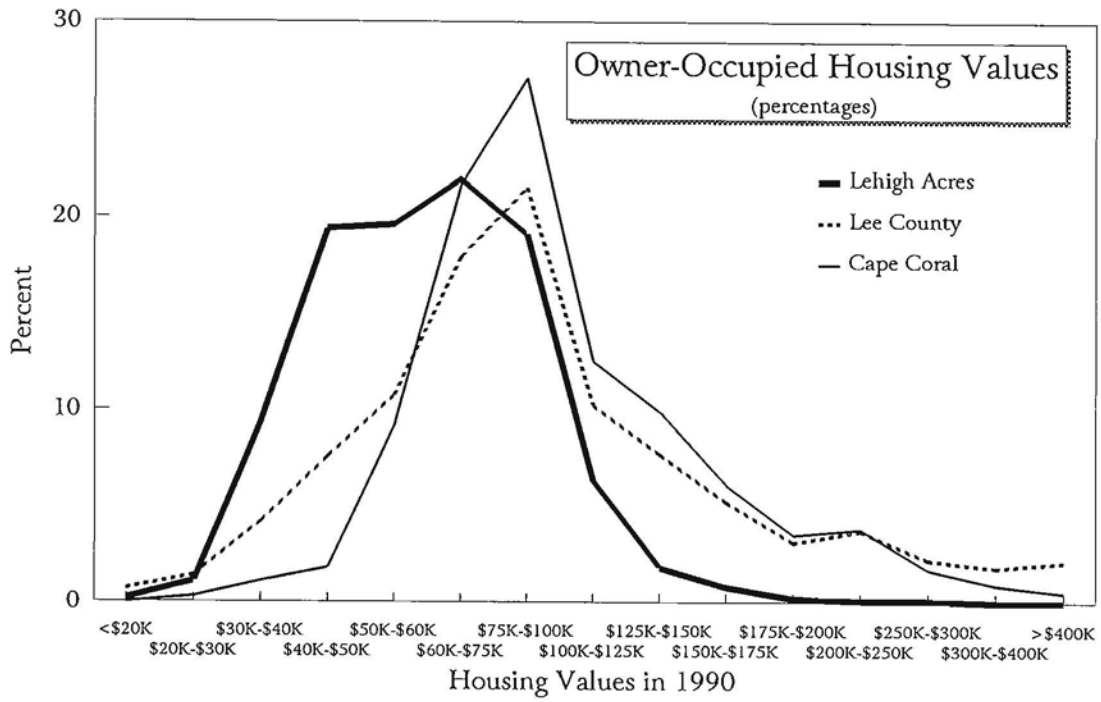
Lehigh Acres has a greater percent of its labor force in agriculture, construction and public administration than the comparable areas, and is somewhat equivalent in all the other categories except wholesale and retail trade.

In conclusion, Lehigh's labor force is similar to the region and represents a strong middle class of younger workers with skills and trades consistent with middle income households.

2(f) Housing

Table 2-10 tabulates the distribution of owner-occupied housing values for Lehigh Acres and comparison areas. In Lehigh Acres in 1990, fully 48.6% of all owner-occupied units had values under $60,000 or less, compared to Lee County with 24.6% and Cape Coral with 12.4%. This large amount of affordable housing compared with Lee County and Cape Coral is partially due to the large amount of smaller and older housing built for retirees from 1960 to 1980. It also reflects the low cost of buildable single-family lots that result from the vast supply of such lots. Figure 2.5 illustrates this same data (by percentages).

Figure 2.5



The percent of owner-occupied housing with values from $60,000 to $99,999 is similar to the region and reflects the newer and younger households with children and better-paying jobs.

Table 2-10

Owner-Occupied Housing Values Lehigh Acres and Comparison Areas — 1990						
	Lehigh Acres[1]		*Lee County*		*Cape Coral*	
Value	*Units*	*Percent*	*Units*	*Percent*	*Units*	*Percent*
Less than $19,999	14	0.2	493	0.7	0	0.0
$20,000 to $29,999	73	1.1	941	1.4	49	0.3
$30,000 to $39,999	638	9.4	2,809	4.2	209	1.1
$40,000 to $49,999	1,316	19.4	5,100	7.6	362	1.8
$50,000 to $59,999	1,339	19.6	7,236	10.7	1,795	9.2
$60,000 to $74,999	1,488	21.9	12,050	17.9	4,226	21.6
$75,000 to $99,999	1,297	19.1	14,483	21.5	5,301	27.1
$100,000 to $124,999	430	6.3	6,900	10.2	2,452	12.5
$125,000 to $149,999	126	1.8	5,170	7.7	1,942	9.9
$150,000 to $174,999	51	0.8	3,489	5.2	1,187	6.1
$175,000 to $199,999	11	0.2	2,099	3.1	689	3.5
$200,000 to $249,000	5	0.1	2,482	3.7	749	3.8
$250,000 to $299,999	5	0.1	1,476	2.2	345	1.7
$300,000 to $399,999	0	0.0	1,231	1.8	169	0.9
$400,000 or more	0	0.0	1,404	2.1	104	0.5
Total	**6,793**	**100.0**	**67,363**	**100.0**	**19,579**	**100.0**
Median Housing Value	**$61,700**		**$83,700**		**$89,800**	

Note 1: Lehigh Acres data from ZIP Codes 33936 and 33971 combined
Source: U.S. Census of Population 1990

Lehigh Acres ranks low in the $100,000-and-over category because the community has not reached population levels that attract very high income households and because little land is available for the amenity-rich neighborhoods desired by these households.

Figure 2.6 illustrates the geographic distribution of median housing values through Lehigh Acres. Much of the least expensive housing is found in the earliest areas developed and in the sparsely settled areas in the western part of the community.

2(g) Population Density

As is apparent from even a casual drive through Lehigh Acres, development levels are not uniform. Until recent years, the original development company did not encourage outside builders in Lehigh Acres, and strongly encouraged its potential homebuyers to acquire or trade for a lot in the center of town where water and sewer service was already available. As a result, many of these central neighborhoods are effectively "built-out" already, whereas there are still many areas in Lehigh Acres where there is not a single home on entire blocks. This characteristic is changing rapidly, as will be discussed later. Figure 2.7 illustrates the population density as it existed in 1990.

2(h) Demographic Summary

Table 2-11 summarizes some of the most interesting data discussed previously in this report.

2(i) Lehigh Acres Boundaries and Other Census Notes

The preceding demographic analysis discusses only a small portion of the demographic data available from the 1990 Census. The following suggestions should prove helpful to those wishing to examine the original data further.

Census data are organized in a variety of geographic formats. County and state designations are self-explanatory. Data *within* counties are organized in many ways including by incorporated cities, "census designated places," census tracts, census "block groups," etc. There are two explicit "Lehigh Acres" designations, neither of which are especially useful. There is a "Lehigh Acres census designated place" which only includes the central core of Lehigh Acres, and also a "Lehigh Acres county subdivision" which extends all the way south to Corkscrew Road and west to Six Mile Cypress Parkway.

Figure 2.6

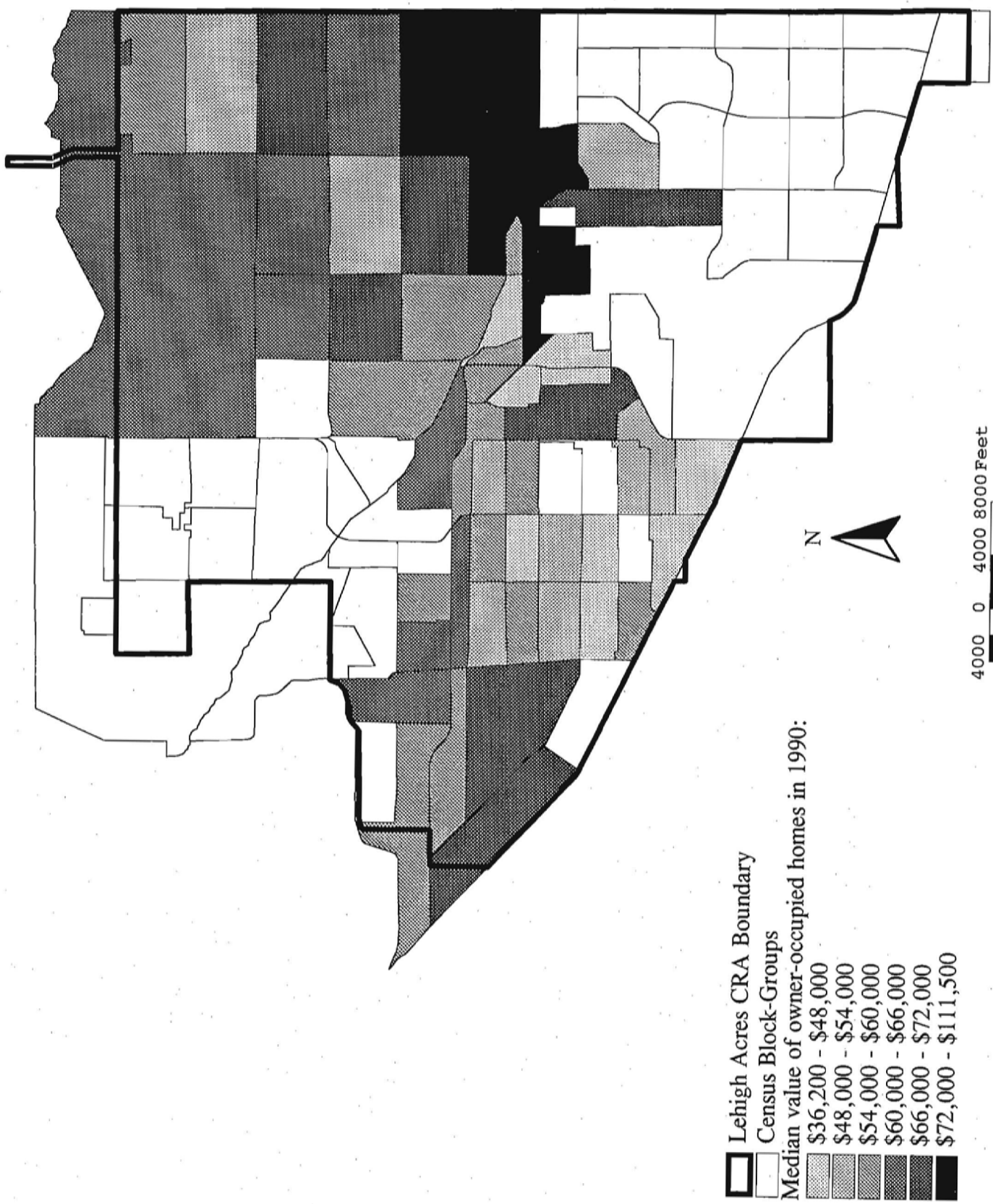

Lehigh Acres CRA Boundary
Census Block-Groups
Median value of owner-occupied homes in 1990:
$36,200 - $48,000
$48,000 - $54,000
$54,000 - $60,000
$60,000 - $66,000
$66,000 - $72,000
$72,000 - $111,500
N
4000 0 4000 8000 Feet

Figure 2.7

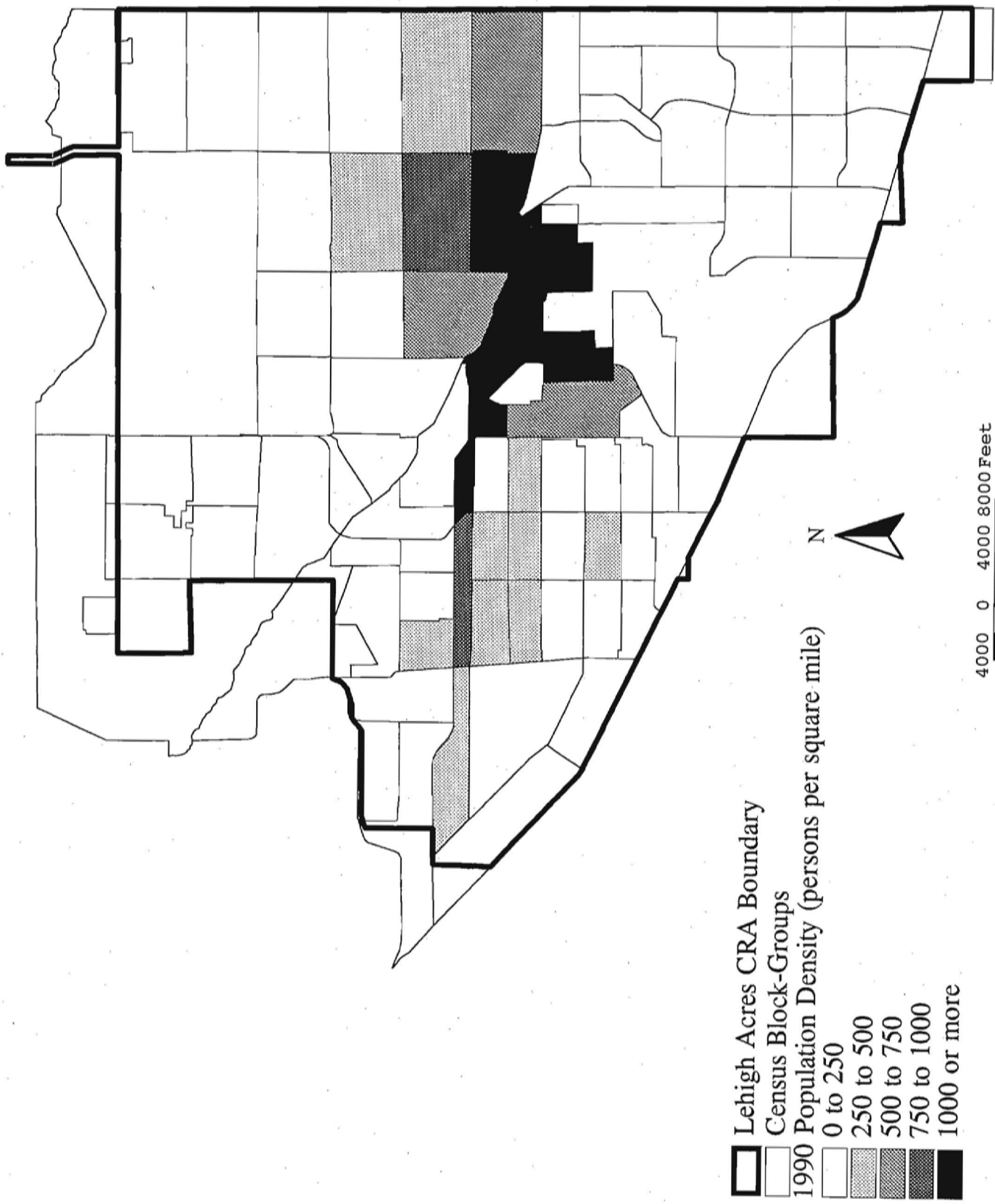

Lehigh Acres CRA Boundary
Census Block-Groups
1990 Population Density (persons per square mile)
0 to 250
250 to 500
500 to 750
750 to 1000
1000 or more
N
4000 0 4000 8000 Feet

Table 2-11

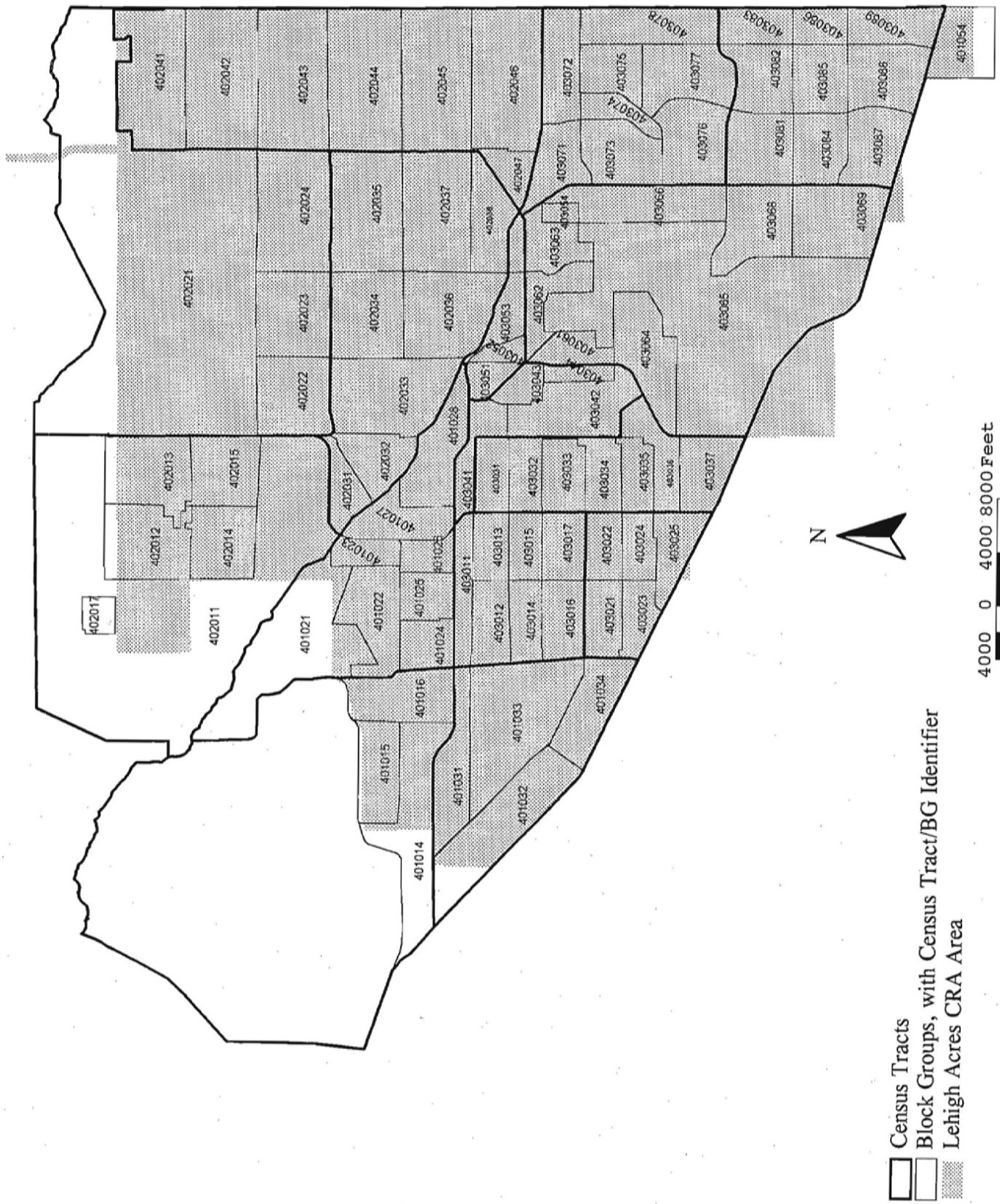
Characteristics of the Population and Housing Lehigh Acres and Comparison Areas — 1990			
	Lehigh Acres[1]	*Lee County*	*Cape Coral*
Population	22,283	335,113	74,991
Household Size	2.44	2.33	2.50
Percent 65 Year & Over	27.5%	24.8%	22.0%
Percent 19 Years & Under	24.1%	21.6%	23.5%
Percent 25 Years & Over With Less than 9th Grade	8.0%	7.2%	5.2%
Percent 25 Years & Over with High School Grad. +	74.1%	76.9%	76.4%
Percent 16 Years + In Labor Force	52.0%	54.8%	57.2%
Median Housing Value	$61,700	$83,700	$89,800
Median Household Income	$25,827	$28,448	$31,177
Per Capita Income	$11,282	$15,623	$14,934

Note 1: Lehigh Acres data from ZIP Codes 33936 and 33971 combined
Source: U.S. Census of Population 1990

The most accurate data results from combining the smallest geographic level containing all available data, known as a *block group*. Figure 2.8 shows the census tracts and block groups that are contained within the Lehigh Acres CRA boundary or bisected by it. A detailed analysis was made of the exact *permanent* population in Lehigh Acres counted by the 1990 census, yielding a total of 22,409 persons. (See the next section of this report for the *peak-season* population in 1990, and estimates for later years.)

An easier way to use the 1990 Census is to combine the data provided for ZIP codes 33936 and 33971. Although the full range of data isn't available in ZIP code format, the most important portions are. The geographic area covered by these two ZIP codes is very close to the Lehigh Acres CRA boundary, and the total population of 22,283 is only ½ of 1% lower than the total from the block group computations. Data for the combination of these ZIP codes have been used in this report for the

Figure 2.8


Census Tracts
Block Groups, with Census Tract/BG Identifier
Lehigh Acres CRA Area
N
4000 0 4000 8000 Feet

overall demographic portrait of Lehigh Acres; block group data have been used for the maps showing differing characteristics of portions of Lehigh Acres and for the exact population and housing unit counts.

3. Growth And Development Since 1990

The 1990 Census provides the best data on population and housing characteristics of individual communities. In high-growth communities, however, this data can quickly become outdated.

The state of Florida provides highly accurate estimates each year of the number of people residing in each county and incorporated city. The primary method used for these estimates is counting the number of housing units added or removed from the housing stock since the previous census, and assuming that their residents are typical of the surrounding community.

For this report, a similar method has been used to estimate the increase in Lehigh Acres population from 1990 through April 1, 1995. Tables 3-1 and 3-2 show the number and type of building permits issued by Lee County for land in Lehigh Acres from 1984 through 1994. That period included the boom years of the late 1980s and the recession years of the early 1990s. An average of about 430 new dwelling units were built per year throughout this period, almost identical to the average of 425 new dwellings reported by the Census for the decade 1980 to 1990. These housing unit counts were verified against careful block-by-block counts made by Southern States Utilities' engineers, with no important differences detected.

Given the typical three-month period for the construction of new homes, all permits issued beginning on January 1, 1990, are assumed not to have been counted in the 1990 census (which was based on residence as of April 1, 1990). Therefore, the permit totals for calendar years 1990, 1991, and 1992, and fiscal years 1993 and 1994, have been totalled to approximate the number of new dwelling units in place by April 1, 1995, which was 1888 units more than were counted in the census. This number is converted to population by deleting the units expected to be vacant and multiplying by the average number of person per household. The results are contained in Table 3-3. (The full calculations, along with computations of the peak season population, are illustrated in Table 4-2 in the next section of this report.)

Table 3-1

Building Permits Issued for New Dwelling Units in Lehigh Acres											
Type	*1984*	*1985*	*1986*	*1987*	*1988*	*1989*	*1990*	*1991*	*1992*	*Total*	*Annual Average*
Single-family	301	428	257	473	485	473	386	297	295	3,395	377
Duplex	2	16	20	40	38	26	18	12	32	204	23
Multi-family		103	28	40	79	24				274	30
all types:	303	547	305	553	602	523	404	309	327	3,873	430

Source: Lee County Planning Division staff memorandum, April 6, 1993

Table 3-2

New Dwelling Units for Which Impact Fees Were Paid to the Lehigh Acres Fire District, By Fiscal Year							
Type	*89-90*	*90-91*	*91-92*	*92-93*	*93-94*	*Total*	*Annual Average*
Single-family	320	323	276	370	385	1,674	335
Duplex	14	12	28	16	12	82	16
Multi-family				65		65	13
all types:	334	335	304	451	397	1,821	364

Source: Derived from annual summaries of "Collections By Impact Fee Type" prepared by the Lee County Codes and Building Services Division.

Table 3-3

Permanent and Peak-Season Population, 1990 and 1995		
	Permanent Population	***Peak Season Population[1]***
April 1, 1990	22,409	24,476
April 1, 1995[1]	26,686	28,834

Note 1: See Table 4-2 for derivation
Source: U.S. Census of Population for 1990 permanent population and vacancy factors

4. Population Forecasts For Future Years

4(a) Forecasting Methods

There are three basic models for projecting future growth of communities, whether small cities or large metropolitan areas. An analyst must choose the most appropriate model to create a forecast of reasonable accuracy. The three basic models are:

- ***Cohort Component Model:*** This method "ages" the various age groups in the population into the future and applies the appropriate birth and death rates. It also requires an estimate of the level of in- and out-migration. This method can be quite accurate when forecasting population up to 10 or 20 years into the future. But in south Florida, the amount of in-migration is very large, especially for growing communities such as Lehigh Acres. When high levels of in-migration are expected over long periods of time, this model becomes less relevant because it focuses on the aging of the *current* population while providing little assistance in forecasting the critical rate of in-migration. Therefore this model would not accurately forecast long-term growth in Lehigh Acres.

- ***Simple Curve-fitting or Extrapolation Model:*** This method plots past population levels over time and then extends the same line or curve into the future to project future population levels. In the early stages of growth in south Florida and especially in pre-platted communities, these growth curves are often linear. Merely extending that linear curve into the future greatly underestimates future growth. Growth curves other than linear ones can also be used, such as exponential or parabolic curves, depending on past growth trends. A shortcoming of this method, especially when used for long-term projections, is that it only looks to totals of past growth to project the future. Recent changes in the composition of the current population are not factored in; nor are long-term impediments or limits to growth; nor are resources such as large supplies of inexpensive building sizes. All of these factors are relevant here. Therefore this model is not the most appropriate one for use in Lehigh Acres.

- ***Sigmoid Model:*** Many biological populations (including cities) tend to grow at a rate over time that imitates a logistic or sigmoid curve. That is, population grows at an increasing rate (exponential) until it reaches an inflection point, then grows at decreasing rates to an upper limit. The upper limit for large scale pre-platted communities such as Lehigh Acres can be precisely defined by calculating the total number of housing units that could be built on platted lots and then adding the capacity for additional housing units on unplatted land

(based on current land development regulations). The type of population curves developed under this model are similar to Gompertz curves.[1]

The sigmoid model is a more sophisticated variation of an extrapolation model. It will be more accurate for forecasting future growth in Lehigh Acres than the others because more local factors are integrated into the model. The key variables in using the sigmoid model are discussed in the following sub-sections.

4(b) "Build-Out" Capacity of Lehigh Acres

The Lee County Planning Division has inventoried all vacant land in Lehigh Acres to determine its reasonable development potential if all land within the community were fully developed. Single-family and duplex lots were assumed to have one and two dwelling units each respectively. Unplatted land was assigned a development density of 3.5 dwelling units per acre after deleting 16% of the land for non-residential purposes Commercially zoned land was assumed to be fully developed for that purpose, with no residential units included. No conversion of existing residential land into other uses was assumed in these computations. Table 4-1 summarizes this inventory.

Table 4-1

Build-out Capacity of Lehigh Acres, in Dwelling Units					
	Township and Range				
	45/27	44/27	44/26	45/26	ALL
Platted Single-Family Lots	37,222	38,925	30,137	10,941	117,225
Duplex Units on Platted Lots	5,016	2,096	6,988	3,664	17,764
Dwelling Units on Unplatted Land	6,885	7,359	2,688	107	17,039
TOTALS:	49,123	48,380	39,813	14,712	152,028

[1] *Community Analysis and Planning Techniques*, by Richard E. Klosterman, Rowman & Littlefield Publishers, 1990.

From this estimate of "build-out" dwelling units of 152,028, the resulting permanent population can be calculated by deleting the 10% of units considered "vacant" during the peak season and multiplying by the projected household size of 2.5 persons per household. The result would be a permanent population of 342,063 and a peak-season population of 357,266.[2]

This number should be considered a very upper limit for Lehigh Acres. There are many factors that could develop which would preclude ultimate full build-out: an inadequate road network; restricted shopping and employment opportunities; more attractive residential options in other nearby locations; or changes in the national economy that retard or reverse in-migration to Florida. Even if full build-out is ultimately reached, the maximum population may not materialize because of vacant lots that are held for yard space; residential land converted to park, school, and commercial sites; the construction of single-family homes on duplex lots; etc. But build-out population totals are useful nonetheless as "ballpark" figures for general planning purposes.

4(c) Forecasted Population for Lehigh Acres

Once data is obtained on population growth over time in the early stages of development (from Table 2-1) and the upper limit of growth has been calculated (from Table 4-1), the approximate shape of the growth curve must still be determined. The remaining variable is the rate of growth in the near future. The question here is: will it be steep as Cape Coral's (a waterfront platted community) or flatter such as in Silver Springs Shores (an inland platted community).

Several studies have been conducted to determine the logistic curves for large platted communities in south Florida.[3] These communities can be categorized as either coastal such as Cape Coral or Port St. Lucie, or inland such as Lehigh Acres or Silver Spring Shores. The growth of coastal communities has been much faster than inland communities.

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[2]Lee County computed the peak build-out population variously as 356,829 [*Evaluation and Appraisal Report for the Future Land Use Element*, Figure 14B in *Staff Response to DCA Objections, Recommendations, and Comments*, as adopted November 1, 1994], and as 404,413, ibid., page 10, Future Land Use (Map).

[3]*Population Study* [Port Charlotte, North Port, Villages of DeSoto, Port LaBelle, Port Malabar, and Port St. Lucie], May 1981, Paul G. Van Buskirk and Associates; *Port Charlotte Area Growth Model*, October 1981, Paul G. Van Buskirk and Associates; *Port LaBelle New Community*, March 1982, Dr. John M Degrove, Dr. James C. Nicholas, Dr. Earl M. Starnes, Nancy Stroud J.D., Paul G. Van Buskirk P.E. A.I.C.P.

Given the population data for Lehigh Acres from 1960 through 1995 and its upper limit, the logistic curve that best fits Lehigh Acres is that of Port Charlotte, adjusted for a somewhat slower growth curve to factor out the coastal characteristics of the developed portions of Port Charlotte.

Port Charlotte is a very large platted community in Charlotte County with buildout at 125,000 dwelling units. While Port Charlotte is in part a coastal community, the coastal areas are fully developed, with most development now occurring on its many thousands of platted inland lots. Port Charlotte is also experiencing change in age distribution of its population over time, from a predominately retirement community to a younger population and higher household sizes. Lehigh Acres has additional growth generators with the opening of Florida Gulf Coast University, the continued expansion of the Southwest Florida International Airport, movement of industry into Gateway, and the extension of Daniels Parkway to S.R. 82.

Table 4-2 shows the resulting projections of additional housing units for each year until the year 2040 and then by decades until 2070 The number of housing units are then translated to population based on household size and vacancy rates that, through time, will approach rates typical of the region.

Table 4-2

Forecasted Permanent and Peak-Season Population						
Year	*Add't Housing Units*	*Total Housing Units*	*House-hold Size*	*Vacancy Rate*	*Permanent Population*	*Peak Season Pop.*
1990	*(1990 Census)*	10,632	2.45	13.9%	22,409	24,485
1991	404 *(90 permits)*	11,036	2.45	13.8%	23,320	25,416
1992	309 *(91 permits)*	11,345	2.45	13.6%	24,015	26,128
1993	327 *(92 permits)*	11,672	2.45	13.4%	24,764	26,881
1994	451 *(93 permits)*	12,123	2.45	13.2%	25,781	27,919
1995	397 *(94 permits)*	12,520	2.45	13.0%	26,686	28,834
1996	475	12,995	2.45	12.8%	27,763	29,927
1997	510	13,505	2.46	12.6%	29,036	31,229
1998	549	14,054	2.46	12.4%	30,286	32,498
1999	593	14,647	2.46	12.2%	31,636	33,870
2000	642	15,289	2.46	12.0%	33,098	35,354
2001	696	15,985	2.46	11.8%	34,683	36,964
2002	755	16,740	2.46	11.6%	36,403	38,710
2003	818	17,558	2.46	11.4%	38,269	40,601
2004	884	18,442	2.46	11.2%	40,286	42,645

Year	*Add't Housing Units*	*Total Housing Units*	*House-hold Size*	*Vacancy Rate*	*Permanent Population*	*Peak Season Pop.*
2005	952	19,394	2.46	11.0%	42,461	44,847
2006	1,021	20,415	2.46	10.8%	44,797	47,208
2007	1,090	21,505	2.47	10.6%	47,487	49,930
2008	1,158	22,663	2.47	10.4%	50,156	52,619
2009	1,224	23,887	2.47	10.2%	52,983	55,461
2010	1,288	25,175	2.47	10.0%	55,964	58,451
2011	1,350	26,525	2.47	10.0%	58,965	61,586
2012	1,410	27,935	2.47	10.0%	62,100	64,859
2013	1,468	29,403	2.47	10.0%	65,363	68,268
2014	1,524	30,927	2.47	10.0%	68,751	71,806
2015	1,577	32,504	2.47	10.0%	72,256	75,468
2016	1,627	34,131	2.47	10.0%	75,873	79,245
2017	1,675	35,806	2.48	10.0%	79,919	83,471
2018	1,721	37,527	2.48	10.0%	83,760	87,483
2019	1,765	39,292	2.48	10.0%	87,700	91,598
2020	1,807	41,099	2.48	10.0%	91,733	95,810
2021	1,847	42,946	2.48	10.0%	95,855	100,116
2022	1,885	44,831	2.48	10.0%	100,063	104,510
2023	1,921	46,752	2.48	10.0%	104,350	108,988
2024	1,955	48,707	2.48	10.0%	108,714	113,546
2025	1,987	50,694	2.48	10.0%	113,149	118,178
2026	2,017	52,711	2.49	10.0%	118,125	123,375
2027	2,045	54,756	2.49	10.0%	122,708	128,162
2028	2,071	56,827	2.49	10.0%	127,349	133,009
2029	2,095	58,922	2.49	10.0%	132,044	137,913
2030	2,117	61,039	2.49	10.0%	136,788	142,868
2031	2,136	63,175	2.49	10.0%	141,575	147,867
2032	2,152	65,327	2.49	10.0%	146,398	152,904
2033	2,165	67,492	2.49	10.0%	151,250	157,972
2034	2,175	69,667	2.49	10.0%	156,124	163,063
2035	2,182	71,849	2.49	10.0%	161,014	168,170
2036	2,186	74,035	2.50	10.0%	166,579	173,982
2037	2,187	76,222	2.50	10.0%	171,500	179,122
2038	2,185	78,407	2.50	10.0%	176,416	184,256
2039	2,180	80,587	2.50	10.0%	181,321	189,379
2040	2,172	82,759	2.50	10.0%	186,208	194,484
2045	10,635	93,394	2.50	10.0%	210,137	219,476
2050	9,985	103,379	2.50	10.0%	232,603	242,941
2060	16,520	119,899	2.50	10.0%	269,773	281,763
2070	9,420	129,319	2.50	10.0%	290,968	303,900
(build-out)		152,028	2.50	10.0%	342,063	357,266

Figure 4.1 illustrates the previous data on new building permits issued in Lehigh Acres since 1984 and its relationship to the projections of additional housing units for future years from Table 4-2. A careful examination of the projection curve indicates that the *rate* of additional growth to be increasing until the year 2010 and then beginning to slow slightly thereafter.

Figure 4.2 illustrates the historic and projected growth of Lehigh Acres in context with other portions of Lee County.[4] Under these projections, Lehigh Acres will rise from its 6.7% share of Lee County's 1990 total population to 11.5% by 2020.

Independent population forecasts have been prepared recently for Lehigh Acres by the Lee County Planning Division and by the Lee County Metropolitan Planning Organization (a transportation planning coalition between county, city, and state governments). The Planning Division averaged eight statistical projection methods for permanent population, and added 12% to reach a peak-season population. The MPO determined the build-out population and scaled it back to its expectations for the year 2020 peak-season population, then deleted about 3% to reach the permanent population. Table 4-3 summarizes the forecasts from all three sources, which establish a range of local professional opinion about the rate of future growth in Lehigh Acres.

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[4]Lehigh Acres data from this report has been added to data illustrated in Figure1.1-1 of *Water Supply Master Plan 1993 - 2030, Volume 1*, Lee County Regional Water Supply Authority, November 1993.

Table 4-3

Population Forecasts for the Year 2020		
	Permanent Population	Peak-Season Population
Lee County Planning Division[5]	85,631	95,606
Lehigh Acres Commercial Land Use Study	91,733	95,810
Lee County Metropolitan Planning Organization[6]	110,673	113,881

[5]*Evaluation and Appraisal Report for the Future Land Use Element*, Page 25 of Exhibit B, Lee County Planning Division, May 4, 1994.

[6]Estimate by Spikowski Planning Associates based on analysis of data file *20zdata.wk4* (input data for the year 2020 travel model)

Figure 4.1

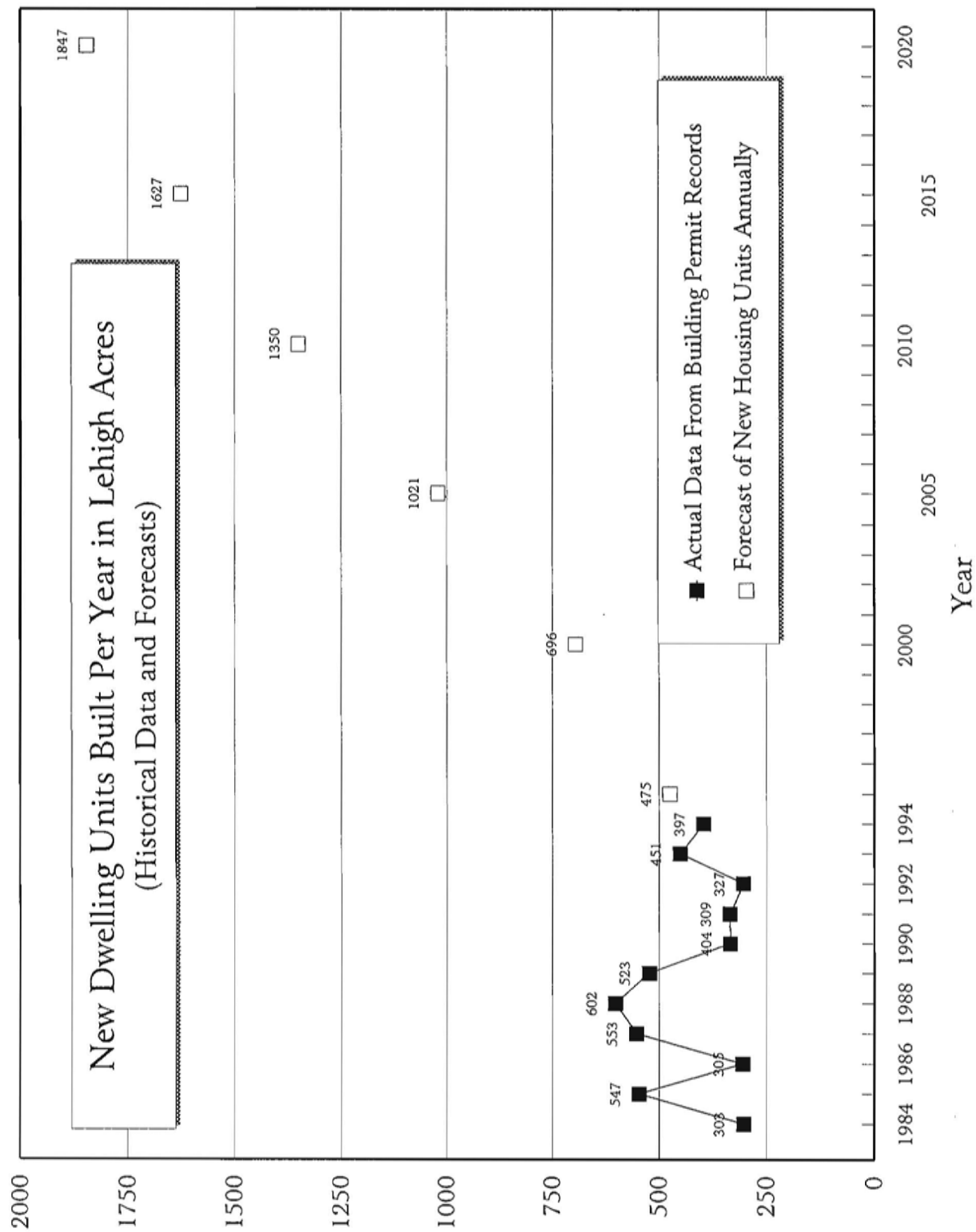
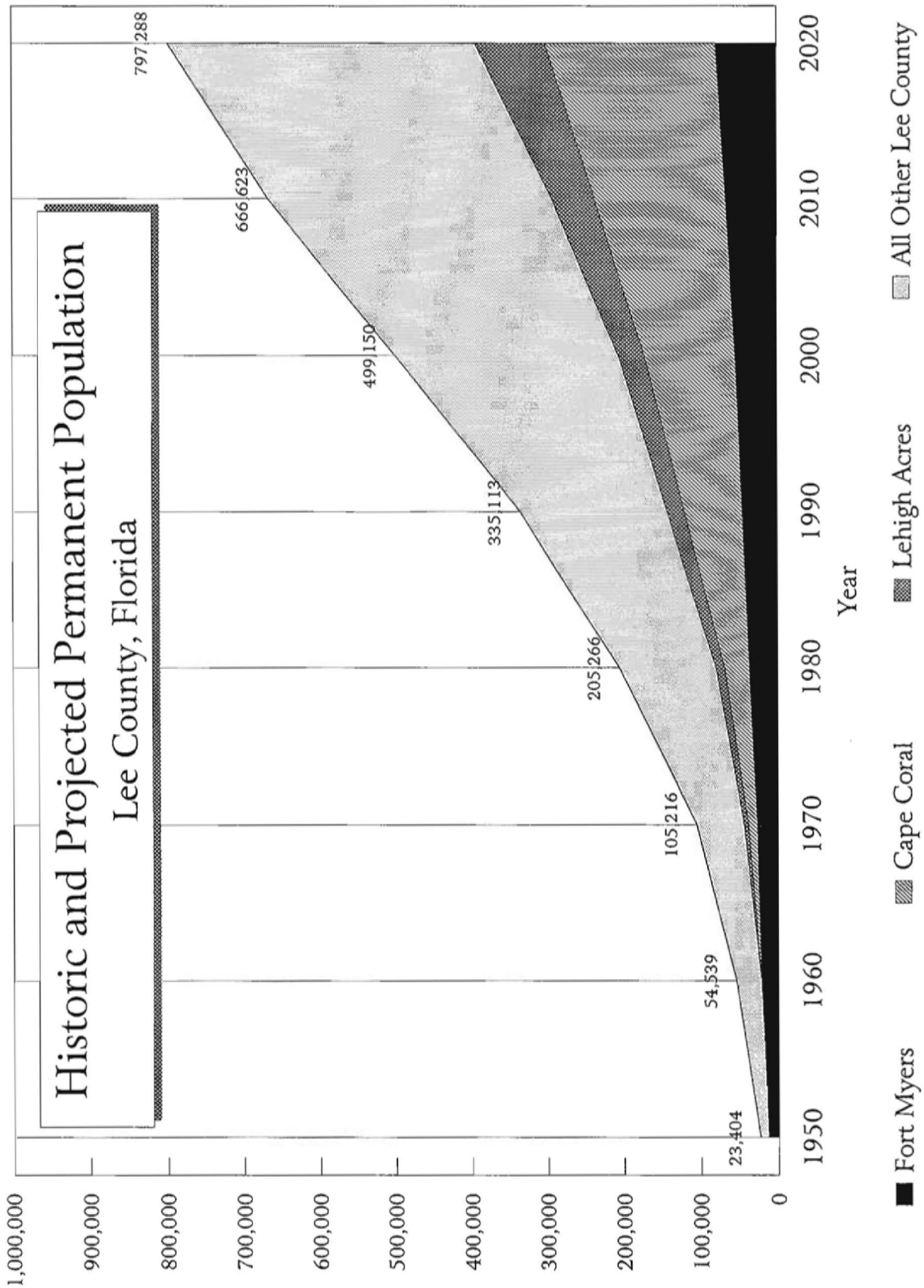

New Dwelling Units Built Per Year in Lehigh Acres
(Historical Data and Forecasts)
Actual Data From Building Permit Records
Forecast of New Housing Units Annually
Year
2000
1750
1500
1250
1000
750
500
250
0
1984 1986 1988 1990 1992 1994 2000 2005 2010 2015 2020
1847
1627
1350
1021
696
475
451
397
327
309
404
523
602
553
547
305
303

Figure 4.2


Historic and Projected Permanent Population
Lee County, Florida
1,000,000
900,000
800,000
700,000
600,000
500,000
400,000
300,000
200,000
100,000
0
1950
1960
1970
1980
1990
2000
2010
2020
Year
23,404
54,539
105,216
205,266
335,113
499,150
666,623
797,288
Fort Myers
Cape Coral
Lehigh Acres
All Other Lee County

5. Commercial Land Forecasts for Future Years

5(a) Forecasting Methods

There are several models to estimate the amount of commercial land necessary to meet the demand of population for retail trade and services. The model selected was determined from household income, disposable income, and propensity to spend money on retail trade and services by standard industrial code categories for emerging metropolitan areas in south Florida.[7,8] The model selected uses these values:

- 40 square feet of building area per person for retail trade
- 13 square feet of building area per person for office facilities for services
- the land area required is 4.5 times the building area to account for parking, drainage, and other land use regulations.

These ratios are similar to the national standard reported by the Urban Land Institute in 1968 of one acre of commercial land for every 200 residents.[9] That national standard is slightly lower than the south Florida model, which computes to 1.09 commercial acres for every 200 residents.

This model was tested for its reasonableness specifically as applied to Lehigh Acres. Table 5-1 illustrates a comparison between its application to Lehigh Acres and actual 1996 conditions. This comparison uses the population estimates from this report and a detailed inventory of existing commercial land uses found in Section 6.

Under 1996 Lehigh Acres conditions, the model predictions are reasonably close for building square footage (10% high) but somewhat low for land area (20% low).

An examination of the model as it applies to Lehigh Acres indicates that the conversion factor from building space to land was quite accurate for neighborhood and community shopping areas (see Tables 5-2 and 5-3). But the conversion factor was low when applied to land used by many free-standing retail uses, especially those in outlying areas where land is currently less expensive. These observations suggest that the model will in fact be useful in projecting future conditions because the value of retail and office locations will increase as their supply (relative to population)

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[7] *A Model to Estimate Gross Building Area in the Commercial Sector In An Area, Over Time*, by Arthur O. Wittman, University of Florida masters thesis, 1982.

[8] *Design Parameters for Port LaBelle*, October 1980, Paul G. Van Buskirk and Associates

[9] As cited in Wittman, 1982

dwindles. This will cause more efficient use of commercial land in the future, similar to that found in the today's valuable shopping center locations.

Table 5-1

Commercial Land Requirements For 1996, Actual Vs. Predicted (Retail Trade and Office/Services)							
	Permanent Population	*Retail Trade*		*Office/Services*		*Total*	
		SF	*Acres*	*SF*	*Acres*	*SF*	*Acres*
Actual (4/1/96)	27,763	*(this data not available separately)*				1,337,211	189.5
Predictions from selected model	27,763	1,110,520	114.7	360,919	37.3	1,471,439	152.0

Table 5-2

Land Now Used For Neighborhood Shopping Centers in Lehigh Acres					
	Gross Building Size (in SF)	Site Size (in acres)	Site Size (in SF)	Actual Site-to-Building Ratio	Overall Ratio Predicted By Model
Homestead Shopping Center	69,443	5.65	246,114	3.5	4.5
Sunshine Shopping Plaza	122,136	12.49	544,064	4.5	4.5
Homestead Plaza	97,168	11.55	503,118	5.2	4.5
Lee Blvd. Shopping Center	38,793	4.63	201,683	5.2	4.5
TOTALS FOR ALL:	327,540	34.32	1,494,979		
AVERAGES:	81,885	8.58	373,745	4.6	4.5

Table 5-3

Land Now Used For Community Shopping in Lehigh Acres					
	Gross Building Size (in SF)	Site Size (in acres)	Site Size (in SF)	Actual Site-to-Building Ratio	Overall Ratio Predicted By Model
Wal-Mart	210,830	30.47	1,327,273	6.3	4.5
KMart	109,808	10.65	463,914	4.2	4.5
Bealls	66,930	7.15	311,454	4.7	4.5
TOTALS FOR ALL:	387,568	48.27	2,102,641		
AVERAGES:	129,189	16.09	700,880	5.4	4.5

5(b) Commercial Land Needs in Future Years

Future commercial sites must be accessible to the population being served and be of adequate size and shape. Much commercial development occurs outside of conventional shopping centers, of course, and will continue to due so especially in Lehigh Acres due to severe physical constraints resulting from the excess of pre-platted lands. But modern shopping centers are prized by shoppers today because of their familiarity and convenience. The following shopping center standards are typical in the industry:

- Neighborhood shopping centers, anchored by a supermarket, with up to 100,000 square feet of building space on a 10-acre parcel, serving a neighborhood population of 7,000 people;

- Community shopping centers, anchored by a discount or junior department store, with up to 250,000 square feet of building space on a 25-acre parcel, serving a community population of about 20,000 people;

- Regional shopping centers, anchored by department stores, with up to 1,000,000 square feet of building space on a 100-acre parcel, serving a region of 150,000 people.

Interpreting these standards as to Lehigh Acres today, there are four neighborhood centers (Homestead Shopping Center, Sunshine Shopping Plaza, Homestead Plaza, and the Lee Boulevard Shopping Center); two community centers (Wal-Mart and the Bealls/KMart combination); and no regional centers.

Table 5-4 assesses the future demand for conventional shopping centers based on the above standards as applied to the projected future population of Lehigh Acres. This table shows the remaining commercial space from the model allocated to "all other" office, retail, and services.

Table 5-4

Summary of Commercial Land-Use Forecasts				
	2020		*Build-out*	
Permanent Population	91,733		342,063	
	#	*Acres*	*#*	*Acres*
Neighborhood Centers	13	130	50	500
Community Centers	5	125	17	425
Regional Centers	1	100	2	200
All other office, retail, and services		97		540
Totals:		452		1,665

6. Today's Commercial Development Patterns

6(a) General Pattern

Most commercial development in Lehigh Acres today is located near the geographic center of the community and just west of the current population center, situated for maximum exposure to travellers between Lehigh Acres and central Lee County.

The original commercial core of Lehigh Acres lies along both sides of Homestead Road from Beth Stacey Boulevard southeast almost to Arthur Avenue. This core is not a traditional downtown but contains a cluster of auto-oriented shopping centers and free-standing stores, offices, and public buildings. This core now contains 688,000 square feet of commercial floor space, or about 43% of the total commercial space in Lehigh Acres.

The other and still-emerging commercial concentration lies along Lee Boulevard from Sunshine Boulevard to Leeland Heights Boulevard. With the recent opening of the large Wal-Mart center, this portion of Lee Boulevard now has 559,000 square feet of floor space, or 35% of the total commercial space in Lehigh Acres. Commercial development is not continuous along either side of Lee Boulevard at present. However, existing commercial zoning will likely result in continuous commercial development along both sides from Sunshine Boulevard to Elva Avenue (across from Wal-Mart) and along the north side east of East Pointe Hospital.

Both of these concentrations have experienced strong commercial growth in recent years. Most other commercially zoned land in Lehigh Acres remains vacant. The following discussion provides further detail on existing levels of commercial development.

6(b) Existing Commercial Land Use Inventory

A thorough survey of existing commercial land uses was conducted for this study. This survey began with a 1994 inventory of all existing land uses prepared by the Lee County Planning Division. Commercial uses identified in that inventory were verified on the ground, and additional commercial uses were identified through field inspections. The Property Appraiser's records of all commercial uses were used to determine the square-footage of existing buildings and the precise acreage used commercially. Where only a part of a parcel was being used commercially, an estimate was made of the current commercial acreage.

Table 6-1 contains the complete inventory, which includes parcel number, landowners' and business names, street address, and current zoning category. Table

S-T-R-A-P Number	Landowners Name	Business or Center Name	Street Address	ZIP code	gross bldg. size in square feet	lot size in acres	current zoning
Retail and office/service establishments:							
25-44-26-03-00024.0010	Murphy, Lawrence + Eliz.	Animal Medical Center	2919 5th St. W	71	4,782	0.46	C-2
30-44-26-01-00008.0210	Sentinel Finance Co.	Bailey's Auto Body	5507 8th St. SW	71	4,188	0.98	IL
30-44-26-02-00000.A010	LaBelle Chrysler Plymouth	Lehigh Quality Motors	801 Abrams Bl.	71	840	1.01	C-2
32-44-27-24-00000.000A	Executive Plaza (condo)	Executive Plaza	45 Alabama Rd.	36	8,100	0.63	CC
31-44-27-05-00008.0040	Norris, Don + Roley, William	Car wash	1200 Business Way	36	1,540	0.27	C-2
31-44-27-05-00008.0050	Janney, Donald	Lehigh Lanes	1244 Business Way	36	13,035	1.42	C-2
31-44-27-05-00008.0080	Lehigh Publishing Co.	News-Star	1250 Business Way	36	2,620	0.18	C-2
32-44-27-02-00014.0010	Bagans Realty & Develop.	C. Bagans Realty	30 Colorado Rd.	36	2,968	0.48	CPD
30-44-27-00-00001.0040	Morgan, John M., Tr c/o SSU	Southern States Utilities	500 Construction Ln.	36	3,628	0.44	CG
30-44-27-00-00001.0210	Horseling & Lorenz	Expert Auto Body, Sunny Realty	501 Construction Ln.	36	4,500	0.57	CG
32-44-27-03-00018.0080	King, John + Judith	Beauty shop	901 Filmore Av.	36	4,209	0.34	RS-1
32-44-27-03-00015.0180	Pletcher, Steve + Pamela	Auto parts	1102 Filmore Av.	36	2,460	0.35	C-2
04-45-26-05-00010.0420	Lambertucci, Paul	Parts Repair	1581 Gretchen Av.	71	2,400	0.41	C-2
33-44-26-07-00007.0210	Tannassee, Oscar + Rajmatie	L & L Automotive Services	140 Gunnery Rd. S.	71	1,800	0.19	C-2
33-44-26-07-00007.0410	Donawa, Hollis + Vere	Centene's; transmission shop	336 Gunnery Rd. S.	71	4,269	0.19	C-2
32-44-27-01-00002.0220	Culver, Michael + Vicki	Culver Carpet	9 Homestead Rd. N.	36	3,000	0.39	CPD
32-44-27-01-00004.0010	Lehigh Shopping Center Assoc.	***Homestead Shopping Center***	25 Homestead Rd. N.	36	69,443	5.65	C-2
32-44-27-01-00005.0020	Tannassee, Lynn R.	Tannassee Realty	38 Homestead Rd. N.	36	2,698	0.27	C-1A
31-44-27-05-00001.0020	Drake, Thomas G.	Landex, PourHouse Lounge	1100 Homestead Rd. N.	36	4,272	1.07	C-2
31-44-27-05-00011.0020	Merit Petroleum Co.	Shell service station	1105 Homestead Rd. N.	36	3,463	0.62	C-2
31-44-27-05-00007.0000	Lennar Florida Retail	***Sunshine Shopping Plaza***	1107 Homestead Rd. N.	36	122,136	12.49	C-2
31-44-27-05-00006.30B0	Sun Bank	SunBank	1110 Homestead Rd. N.	36	9,304	1.88	C-2
31-44-27-05-00006.0000	First Union National Bank	First Union Bank	1130 Homestead Rd. N.	36	4,220	1.73	C-2
31-44-27-17-00000.0010	Southern Management Corp.	Burger King	1160 Homestead Rd. N.	36	4,795	1.14	C-2
31-44-27-05-00007.001A	Edgemont Realty Partners	Circle K	1181 Homestead Rd. N.	36	3,082	0.64	C-2
31-44-27-05-00001.0060	K-Mart	***Kmart***	1200 Homestead Rd. N.	36	109,808	10.65	C-2
31-44-27-05-00008.0020	Schoninger, Howard, Tr.	***Beall's, Lehigh Acres Shoppes***	1209 Homestead Rd. N.	36	66,930	7.15	C-2
31-44-27-05-00001.0090	Lehigh Acres Town Center	Checkers	1240 Homestead Rd. N.	36	756	0.83	C-2
31-44-27-05-00008.002A	McDonalds Corp.	McDonalds	1245 Homestead Rd. N.	36	3,513	0.72	C-2
31-44-27-05-00008.0010	Tri-County Community Bank	Tri-County Community Bank	1261 Homestead Rd. N.	36	19,893	3.32	C-2
31-44-27-05-00004.0020	Morgan, John E.	First of America Bank	1300 Homestead Rd. N.	36	6,825	0.71	C-2
31-44-27-05-00002.0010	Fabyan Fidelco Ltd.	***Homestead Plaza***	1302 Homestead Rd. N.	36	97,168	11.55	C-2
31-44-27-05-00009.0020	Morgan, John M.	Sun & Comfort, A&W Guns	1303 Homestead Rd. N.	36	7,091	0.62	C-2
31-44-27-05-00009.004A	Phebus, James D.	Victoria Station Plaza	1305 Homestead Rd. N.	36	8,908	0.70	C-2
31-44-27-05-00009.004B	Chiarelli, Salvatore	Chiarelli Plaza	1315 Homestead Rd. N.	36	9,333	0.69	C-2
31-44-27-05-00009.0040	Fish, Allen	Big "A" Auto Parts	1331 Homestead Rd. N.	36	4,200	0.49	C-2
31-44-27-05-00009.004C	Sparky's Oil Co.	Shell Food Mart	1351 Homestead Rd. N.	36	4,269	0.99	C-2
31-44-27-05-00001.0050	Barnett Bank	Barnett Bank	1360 Homestead Rd. N.	36	5,882	1.38	C-2
31-44-27-05-00001.0030	Conti, Stephen	Lehigh Realty	1380 Homestead Rd. N.	36	2,589	0.69	C-2
31-44-27-02-00011.0010	O'Sullivan, C.P.	Preferred Properties real estate	1400 Homestead Rd. N.	36	3,030	0.32	CPD
31-44-27-02-00011.0020	O'Sullivan, C.P.	Preferred Properties real estate	1408 Homestead Rd. N.	36	2,112	0.29	CPD
31-44-27-02-00011.0030	O'Sullivan, C.P.	Preferred Properties real estate	1412 Homestead Rd. N.	36	1,890	0.25	CPD
05-45-27-00-00010.0080	Kiwanis	Kiwanis Thrift Store	15 Homestead Rd. S.	36	4,200	1.85	C-2
05-45-27-00-00010.0040	Griebel, D.D.	Veterinarian's office	21 Homestead Rd. S.	36	2,106	0.21	C-2
09-45-27-00-00001.001B	McConley, Wayne + Glenda	Dodsons window tinting	212 Homestead Rd. S.	36	3,499	1.32	C-2
09-45-27-00-00001.0020	Mocarsky, James + Karen	Mokar Automobile Repair	214 Homestead Rd. S.	36	5,600	0.60	C-2
25-44-26-05-00059.0010	Camron Corp.	Camron sales office	402 Ida Av.	71	7,558	1.18	C-2

Table 6-1, continued

S-T-R-A-P Number	Landowners Name	Business or Center Name	Street Address	ZIP code	gross bldg. size in square feet	lot size in acres	current zoning
25-44-26-04-00029.0010	Johnson, Samuel V., Tr.	FlexBon Plaza	402 Joan Av.	71	10,818	0.92	C-2
25-44-26-04-00025.0110	Stout, Nathan + Ann	Professional offices	403 Joan Av.	71	4,480	0.46	C-2
34-44-27-00-00001.0110	Admiral Lehigh Resort Ltd.	Corporate offices	205 Joel Bl.	36	43,719	3.32	C-1A
34-44-27-00-00001.0010	Lehigh Corp.	Corporate offices	226 Joel Bl.	36	23,800	6.73	CPD
34-44-27-00-00001.0040	Chevron Oil Co.	Chevron station	233 Joel Bl.	36	1,820	0.57	CC
26-44-27-13-00050.0060	VHW Inc.	Jack's Market	510 Joel Bl.	36	8,000	1.15	C-2
26-44-27-13-00050.0030	Lake Camille Partnership	Lake Camille Plaza	518 Joel Bl.	36	6,328	0.66	C-1
26-44-27-13-00050.0010	Southland Corp.	7-11 store	530 Joel Bl.	36	2,952	0.65	C-1
03-44-27-01-0000A.0040	McCullough, Joseph + Arlene	Sunny Palms Beauty Shop	2201 Joel Bl.	20	5,440	0.46	C-1A
03-44-27-01-0000A.0060	Duff, John + Lois	Sunny Palms TV	2219 Joel Bl.	20	5,440	0.44	C-1A
02-44-27-00-00000.101A	Driscoll, Robert J.	23rd Street Produce	2300 Joel Bl.	20	1,176	0.69	CC
31-44-27-02-00006.0160	Anderson, Fred + Emme	Investment & Tax Strategies	1401 Kimdale St.	36	2,200	0.26	CPD
26-44-27-13-00048.0010	Gismo Inc.	Inside Cafe	2305 Lakeview	36	3,259	1.10	CC
32-44-27-04-00028.0170	Owen, Carolyn	Carolyn's Beauty Salon	116 Lee Bl.	36	1,073	0.23	CPD
32-44-27-04-00028.0070	Anthony, David C.	Medical office	124 Lee Bl.	36	1,519	0.46	CPD
32-44-27-04-00028.0010	Parker, Stephen	Medical services	130 Lee Bl.	36	2,263	0.34	CS-1
32-44-27-06-00004.0220	United Telephone of Florida	Sprint/United Telephone	190 Lee Bl.	36	5,185	1.01	C-2
32-44-27-06-00004.0210	GTE Mobilnet	Radio tower	194 Lee Bl.	36	384	0.48	C-2
32-44-27-12-00003.0130	Perch, Barry	Taylor Court Office Center	302 Lee Bl.	36	3,848	1.88	C-2
32-44-27-11-00055.0080	Hickerson, Beverly	Lee Boulevard Center	391 Lee Bl.	36	8,800	0.87	CPD
32-44-27-12-00003.0060	Wallace, Robert	Medical office	400 Lee Bl.	36	2,160	0.42	C-2
32-44-27-11-00055.0010	Alcantara & Hickerson	Re/Max Classic Properties	411 Lee Bl.	36	2,197	0.74	CPD
32-44-27-12-00003.0040	Pavese, Garner	Liberty Homes, vacant offices	440 Lee Bl.	36	3,239	0.47	C-2
32-44-27-12-00003.0020	Smith, Janet M.	Jan's Workshop	500 Lee Bl.	36	1,911	0.25	C-2
29-44-27-16-00000.000A	International Plaza (condo)	City Paint, King Ludwig rest.	902 Lee Bl.	36	13,139	0.50	C-2
29-44-27-14-00000.000A	Royal Plaza (condo)	Royal Plaza	904 Lee Bl.	36	8,201	0.80	C-2
29-44-27-13-00000.000A	Park Place (condo)	Park Place	1000 Lee Bl.	36	11,760	1.39	C-1A
30-44-27-00-00001.006A	B+J Corp.	Farley Funeral Home	1100 Lee Bl.	36	7,673	1.12	C-1A
30-44-27-00-00001.0240	White, Robert + Iris	Bob White Centre	1130 Lee Bl.	36	3,811	0.71	C-1A
30-44-27-08-00000.00CE	Coral Plaza (condo)	Coral Plaza	1140 Lee Bl.	36	16,370	1.47	C-1A
30-44-27-07-00000.000A	Pinewood Med. Plaza (condo)	Pinewood Medical Plaza	1154 Lee Bl.	36	16,634	2.50	C-1A
30-44-27-00-00001.0170	Schreiner Enterprises, Inc.	Former garden center	1170 Lee Bl.	36	1,725	0.25	C-1A
30-44-27-00-00001.0030	Zimmerman Lehigh Property	Scotty's Hardware	1250 Lee Bl.	36	8,975	0.78	C-1A
30-44-27-00-00001.0220	Schaere, Bryant	Donut shop	1350 Lee Bl.	36	1,780	0.58	C-1A
30-44-27-00-00001.0130	Drake, Thomas, Tr.	Mobil Mart	1360 Lee Bl.	36	1,344	1.09	CC
30-44-27-00-00001.008B	Gulf Palms Partnership	***Lee Blvd. Shopping Center***	1400 Lee Bl.	36	38,793	4.63	C-1A
30-44-27-00-00001.008A	Chevron Oil Co.	Chevron service station	1490 Lee Bl.	36	584	0.64	CC
30-44-27-00-00001.0250	Healthcare Realty Trust Inc.	East Pointe Medical Offices	1520 Lee Bl.	36	34,650	8.35	CS-1
25-44-26-00-00008.0000	Society First Federal	Society First Federal branch	2511 Lee Bl.	71	2,375	1.50	CPD
25-44-26-07-00007.0000	Wal-Mart Stores Inc.	***Wal-Mart***	2523 Lee Bl.	71	210,830	30.47	CPD
25-44-26-14-00000.0010	Perkins Restaurants	Perkins	2700 Lee Bl.	71	4,589	1.29	C-2
25-44-26-05-00063.0110	Anderson Funeral Home	Anderson Funeral Home	2701 Lee Bl.	71	5,143	0.52	C-2
25-44-26-05-00063.0090	Galante, Gary + Sandra	Commercial Battery & Products	2705 Lee Bl.	71	2,000	0.25	C-2
25-44-26-04-00029.0030	Cooper, Charles + Delphine	Town & Country Hardware	2915 Lee Bl.	71	3,240	0.46	C-2
25-44-26-03-00024-0020	DRP Company of Alabama	Sherwin-Williams	2918 Lee Bl.	71	5,000	0.69	C-2
25-44-26-03-00020-0080	Fischer, John + Fleming, Ken	Hardee's	3004 Lee Bl.	71	3,700	1.16	C-2
26-44-26-10-00062.0090	Palladeno, Leo + Lisa	Lehigh Home Decorating	3200 Lee Bl.	71	11,690	0.32	C-2
26-44-26-11-00077.0010	Handy Food Stores	Handy Food Store	3205 Lee Bl.	71	2,870	1.36	C-2
26-44-26-10-00062.0040	Freeman, R.C. + Laura et. al.	Reflections, Essex Real Estate	3210 Lee Bl.	71	4,200	0.39	C-2

S-T-R-A-P Number	Landowners Name	Business or Center Name	Street Address	ZIP code	gross bldg. size in square feet	lot size in acres	current zoning
26-44-26-11-00067.0090	Spot Not Partnership	Captain Spot Not (carwash)	3303 Lee Bl.	71	2,080	0.47	C-2
26-44-26-11-00067.0070	Weipert, Terry + Cheryl	Lehigh Automotive Center	3305 Lee Bl.	71	2,080	0.47	C-2
28-44-26-06-00058.0010	Bagans Construction Co.	C. Bagans Realty World	4409 Lee Bl.	71	1,824	0.25	RS-1
29-44-26-00-00001.1010	Morgan, John M., Tr.	AIM Engineering	5300 Lee Bl.	71	9,748	4.13	CPD
30-44-26-01-00001.0010	Lehigh Corp.	Lehigh Welcome Center	5651 Lee Bl.	71	4,036	1.14	C-2
32-44-27-02-00013.0050	Technorad Inc.	I and E (real estate)	700 Leeland Hgts. W.	36	1,650	0.63	CS-1
32-44-27-02-00013.0040	Goodlad Insurance Agency	State Farm insurance	702 Leeland Hgts. W.	36	1,800	0.46	CS-1
32-44-27-03-00020.0030	Masuda, Ulla	California Mall	801 Leeland Hgts. W.	36	2,325	0.34	CPD
32-44-27-03-00021.0030	Katz, Joseph + Rachel	Katz Plumbing	901 Leeland Hgts. W.	36	1,716	0.34	CPD
32-44-27-01-00005.0550	Bateman, J.R.	Roy Inc. real estate	1000 Leeland Hgts. W.	36	1,512	0.15	C-1A
32-44-27-03-00015.0150	Morgan, John M., Tr.	Guardian Title	1103 Leeland Hgts. W.	36	1,063	0.27	C-2
30-44-26-01-00002.001A	Stone, Warren + Imelda	Stone's Lawn Products	603 Leonard Bl.	71	2,160	0.66	IL
31-44-27-05-00008.0090	Morgan, John M., Tr.	Lehigh Cinema	200 Plaza Dr.	36	4,320	1.41	C-2
31-44-27-05-00009.0020	Morgan, John M., Tr.	Flea market	201 Plaza Dr.	36	7,149	0.75	C-2
31-44-27-16-00000.0010	Perch, Barry	Attorney's office	222 Plaza Dr.	36	3,540	0.52	C-2
31-44-27-16-00000.0020	Lehigh Park Plaza	Lehigh Medical Plaza	228 Plaza Dr.	36	9,330	0.35	C-2
31-44-27-05-00011.0010	Olliff, Jon R.	Medical offices	1001 South Loop Bl.	36	3,924	1.04	C-2
31-44-27-05-00007.0020	Morgan, John M.	Vacant building	1154 South Loop Bl.	36	1,023	0.50	C-2
26-44-26-11-00073.0010	D'Alessandro, Frank et al.	Discount Auto Parts	403 Sunshine Bl.	71	6,500	1.44	C-2
27-43-27-00-00026.0010	Lauer, Todd + Julie	IntraCoastal Real Estate	21870 S.R. 80	20	1,080	0.35	CC
31-44-26-00-00001.0030	Kadek Enterprises of FL	Lee Memorial Park	12777 S.R. 82	13	18,677	4.50	CS-1
31-44-27-05-00012.0010	Freiherr, Reinhard	Medical Center Plaza VI	60 Westminster St.	36	11,675	1.22	CS-1
			SUBTOTAL:		*1,337,211*	*189.48*	*acres*

Table 2-2

Hotels, hospitals, fraternal lodges, and institutional/government uses located on commercial lands:

31-44-27-05-00005.30C0	LA Lodge Post 323	Frank Lyons memorial hall	1110 Ashlar Av.	36	9,500	0.63	C-2
31-44-27-05-00005.0010	LA Lodge #344	American Legion parking lot	1120 Ashlar Av.	36	0	1.00	C-2
31-44-27-05-00005.0020	LA Lodge Post 323	American Legion hall	1124 Ashlar Av.	36	6,918	1.02	C-2
06-45-27-00-00001.0010	Community Health Assoc.	Community Health complex	11 Beth Stacey Bl.	36	11,713	6.78	CFPD
33-44-26-07-00007.0270	Lehigh Acres Fire Control	Fire station	308 Gunnery Rd. S.	71	5,043	0.60	C-2
31-44-27-05-00006.30A0	Morgan, John M., Tr.	Post office	1120 Homestead Rd. N.	36	7,353	0.86	C-2
31-44-27-05-00009.0010	Lee County	Community center & library	1299 Homestead Rd. N.	36	12,734	2.00	C-2
05-45-27-00-00010.0010	Lehigh Acres Fire Control	Fire station	11 Homestead Rd. S.	36	8,766	2.00	C-2
05-45-27-00-00010.0050	VFW of United States	VFW hall	25 Homestead Rd. S.	36	4,216	1.69	C-2
05-45-27-00-00010.0070	Lehigh Acres Columbian Inc.	Knights of Columbus hall	29 Homestead Rd. S.	36	7,980	1.94	C-2
09-45-27-00-00001.001A	Lehigh Acres Lodge 2226	Moose Lodge	210 Homestead Rd. S.	36	5,688	2.23	C-2
34-44-27-00-00001.0100	Admiral Lehigh Resort Ltd.	Golf cart storage & maintenance	201 Joel Bl.	36	19,460	3.00	C-1A
34-44-27-00-00001.0030	Admiral Lehigh Resort Ltd.	Admiral Lehigh Golf & Resort	225 Joel Bl.	36	84,081	8.10	C-1A
34-44-27-00-00001.1000	Morgan, John M., Tr.	Lehigh Auditorium	235 Joel Bl.	36	18,094	3.79	CC
23-44-27-07-00025.0020	Lehigh Acres Fire Control	Fire station	1000 Joel Bl.	36	7,087	0.99	C-2
23-44-27-07-00025.0030	Elks Lodge #2602	Elks Lodge	1050 Joel Bl.	36	12,555	2.01	C-2
30-44-27-00-00001.0070	East Pointe Hospital Inc.	East Pointe Hospital	1500 Lee Bl.	36	82,585	15.66	CS-1
32-44-27-03-00022.0020	CIS South Florida	Sheriff's office	1003 Leeland Hgts. W.	36	1,330	0.34	RS-1
31-44-27-05-00009.0030	Lee County	Senior Center	219 Plaza Dr.	36	13,991	1.00	C-2
26-44-26-04-00018.A030	Fleet Reserve	Fleet Reserve hall	500 Sunshine Bl.	71	2,500	0.80	C-2
			SUBTOTAL:		*305,103*	*54.64*	*acres*
			GRAND TOTAL:		*1,642,314*	*244.12*	*acres*

6-2 contains a similar inventory for certain quasi-commercial uses that usually occur on commercially zoned lands, including hospitals, motels, fraternal lodges, government buildings, and non-profit groups. Figure 6.1 identifies both kinds of commercial uses on a map of Lehigh Acres. (The quasi-commercial uses are not included in the following discussions of future commercial land-use demands.)

Commercial development in Lehigh Acres today can be characterized as reasonably concentrated but primarily automobile-oriented, with no traditional pedestrian-oriented downtown. About 53½% of Lehigh's total commercial space is located in shopping centers. Shopping centers are typically categorized as follows:

- ***Neighborhood shopping centers***, usually anchored by a grocery store, have up to 100,000 square feet of building space on 10-acre parcels. Lehigh Acres has three neighborhood shopping centers anchored by grocery stores and one smaller shopping center of similar character but without a grocery store.

- ***Community shopping centers***, usually anchored by a discount or junior department store, have up to 250,000 square feet of building space on 25-acre parcels. These centers serve a larger geographic area because they contain a wider variety of goods (although they often contain a grocery store as well). Lehigh's new Wal-Mart can be considered a community shopping center by itself due to its size and selection of merchandise and services. Another concentration of community shopping is made up of the expanded Kmart and the new Bealls stores, located directly across from each other on Homestead Road.

- ***Regional shopping centers***, anchored by department stores, have up to 1,000,000 square feet of building space. There are none in or adjoining Lehigh Acres at present.

Table 6-3 summarizes Lehigh's shopping centers and shows their proportion of all commercial uses throughout the community.

Figure 6.1

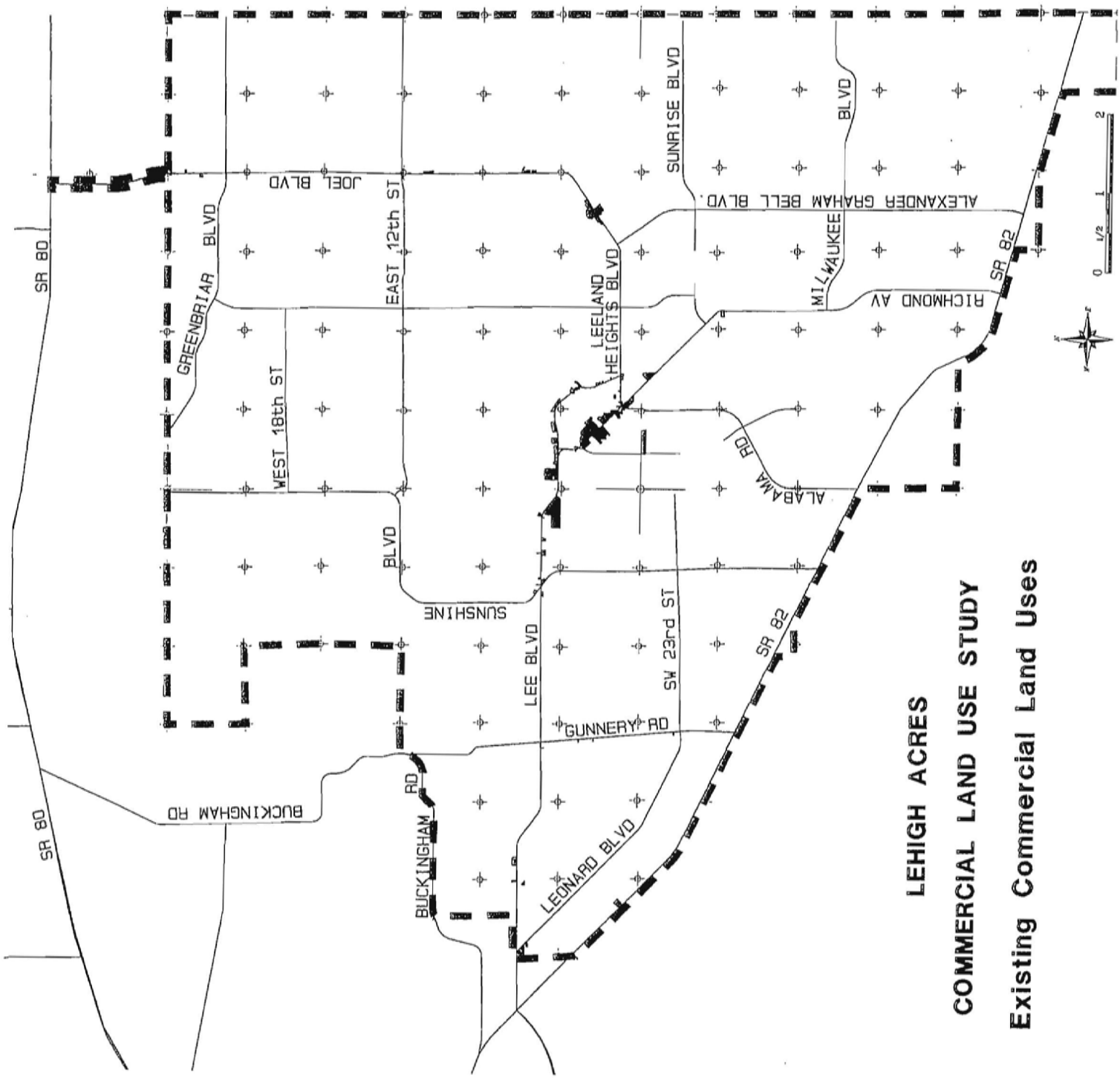
LEHIGH ACRES
COMMERCIAL LAND USE STUDY
Existing Commercial Land Uses
SR 80
SR 82
JOEL BLVD
GREENBRIAR BLVD
EAST 12th ST
WEST 18th ST
LEELAND HEIGHTS BLVD
SUNRISE BLVD
ALEXANDER GRAHAM BELL BLVD
MILWAUKEE BLVD
RICHMOND AV
ALABAMA RD
SUNSHINE BLVD
LEE BLVD
SW 23rd ST
GUNNERY RD
BUCKINGHAM RD
LEONARD BLVD
0 1/2 1 2

Table 6-3

Neighborhood and Community Shopping Centers			
	Gross Building Size (in SF)	Site Size (in acres)	Percentage of All Commercial Space (in SF)
Homestead Shopping Center	69,443	5.65	5.2%
Sunshine Shopping Plaza	122,136	12.49	9.1%
Homestead Plaza	97,168	11.55	7.3%
Lee Blvd. Shopping Center	38,793	4.63	2.9%
ALL NEIGHBORHOOD SHOPPING:	*327,540*	*34.32*	*24.5%*
Wal-Mart	210,830	30.47	15.8%
Kmart	109,808	10.65	8.2%
Bealls	66,930	7.15	5.0%
ALL COMMUNITY SHOPPING:	*387,568*	*48.27*	*29.0%*
ALL NEIGHBORHOOD & COMMUNITY SHOPPING:	*715,108*	*82.59*	*53.5%*
ALL RETAIL AND OFFICE/SERVICE USES IN LEHIGH ACRES:	*1,337,211*	*189.48*	*100.0%*

7. Today's Supply of Commercially Zoned Land

7(a) Description of Commercial Zoning Categories

The current supply of commercially zoned land was examined to compare it to the amount that will be required as Lehigh Acres develops.

Zoning in Lehigh Acres is controlled by the Board of Commissioners in the same manner as for all other unincorporated land. Commercial zoning categories in Lee County include the following types:

Table 7-1

Lee County Zoning Categories Allowing Commercial Uses	
C-1A Pre-1978 mixed-use category	CH Highway commercial
C-1 Pre-1978 mixed-use category	CT Tourist commercial
C-2 Pre-1978 mixed-use category	CP Commercial parking
C-2A Limited mixed-use category	CA Commercial amusement/recreation
CN-1 Neighborhood commercial	CI Intensive commercial
CN-2 Neighborhood commercial	CR Rural commercial
CC Community commercial	CM Marine commercial
CG General commercial	RPD Residential Planned Development
CS-1 Special commercial office	CPD Commercial Planned Development
CS-2 Special commercial office	MPD Mixed Use Planned Development

Most commercially zoned land in Lehigh Acres is in the C-2 category. This zoning category allows an uncontrolled mix of light and intense commercial uses, some industrial uses, and all types of residences. However, regardless of current zoning, many kinds of commercial and industrial uses are allowed on a piece of property only if it is located in accordance with certain standards found in the Lee County Comprehensive Plan (see Section 9 of this report).

7(b) Location and Quantity of Existing Commercial Zoning

Existing commercial zoning in Lehigh Acres has been mapped in Figure 7.1, at the same scale as the previous map of existing commercial uses.

A comparison of the two maps indicates the physical configuration of the remaining vacant commercial land. The Homestead Road commercial core has about 83 acres now in commercial use, with about 34 vacant acres remaining (mostly located along the Taylor Lane Extension and Business Way, rather than fronting directly on Homestead Road). The main commercial strip along Lee Boulevard has about 84 acres now in commercial use out of a total of about 195 acres. Much of the remaining acreage, especially east of the hospital, has inferior access, odd-shaped lot configurations, or non-commercial uses already in place. There are other commercial strips (mostly vacant) at the western end of Lee Boulevard, along the west side of Gunnery Road south of Lee, along almost the entire north side of S.R. 82, and in small segments along Joel Boulevard. Commercial zoning is also in place at several other small sites, especially in the southeast portions of Lehigh Acres.

The total acreage of land in Lehigh Acres currently zoned for any commercial purposes is 1193.2 acres.[10] This amounts to less than 2% of all land in Lehigh Acres, far less than the typical 5% commercial allocation for an entire community.[11] Even if all of this zoned land were actually available and usable for commercial development, it would provide only enough space for about 40% of the build-out population of Lehigh Acres.[12] An even greater problem, though, is that much of the remaining commercially zoned land suffers from one or more serious flaws either because of its size or physical configuration, its location relative to the expected population, current regulatory standards, or other factors. The following section will analyze these and other constraints on future commercial development in Lehigh Acres.

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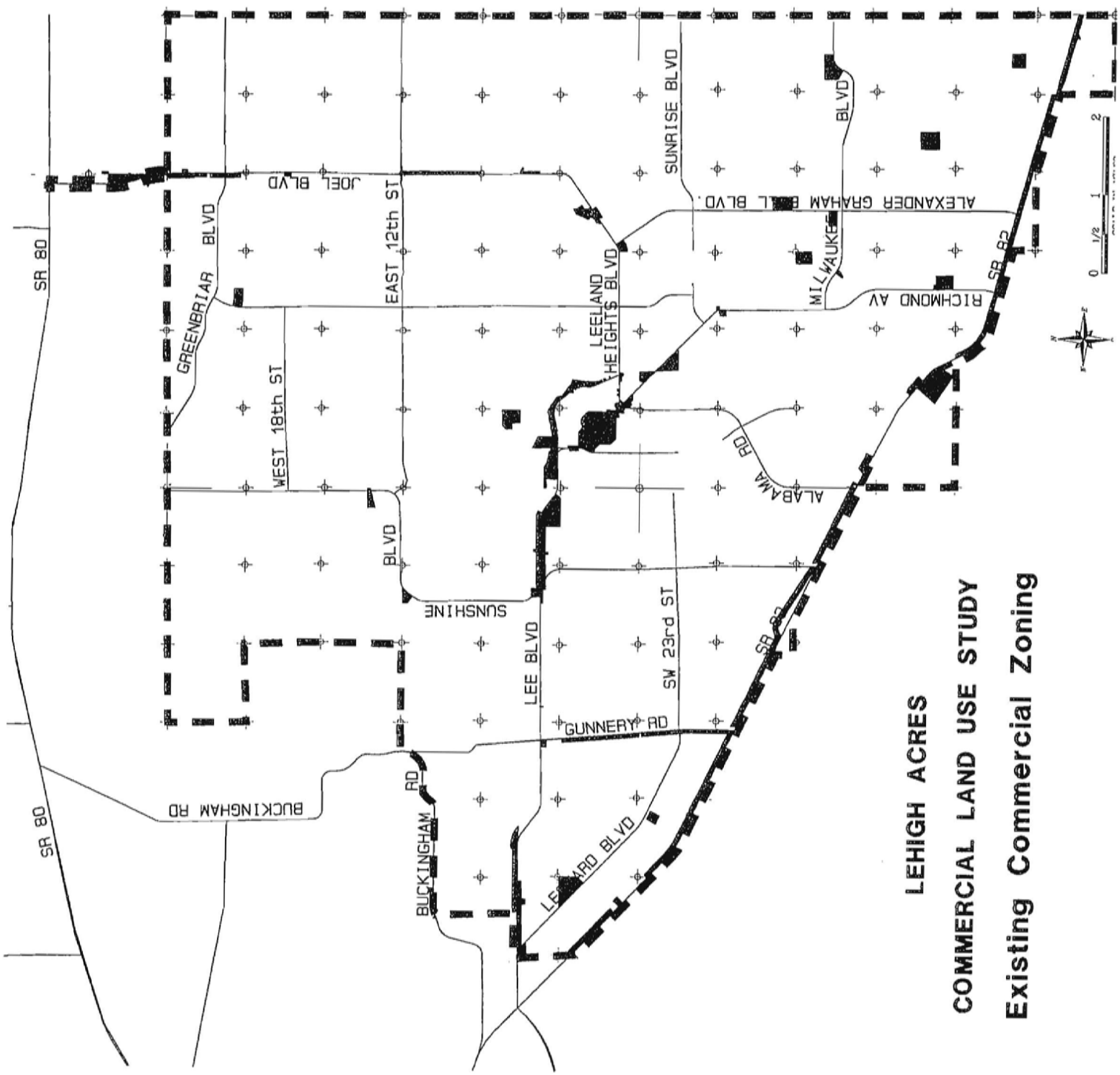
[10]Data provided by the Lee County Property Appraiser, June 1, 1995, by deleting zoned road rights-of-way from the total commercial acreage within the Lehigh Acres CRA area. This total includes commercially zoned land within powerline or other easements and commercial land now being used for hospitals, motels, fraternal lodges, governments buildings, etc.

[11]*Community Builders Handbook*, Urban Land Institute, Washington, D.C., 1968, pp. 130-131

[12]Calculated as follows: 1193.20 commercially zoned acres is 4.9 times the current commercially used acres (244.12 acres, from Tables 6-1 and 6-2), and could serve up to 4.9 times the 1996 population of 27,763 permanent residents. The resulting population would be 136,039, or 39.8% of the build-out population of 342,063.

Figure 7.1


LEHIGH ACRES
COMMERCIAL LAND USE STUDY
Existing Commercial Zoning
SR 80
JOEL BLVD
GREENBRIAR BLVD
EAST 12th ST
WEST 18th ST
SUNRISE BLVD
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ALEXANDER GRAHAM BELL BLVD
MILWAUKEE BLVD
RICHMOND AV
SR 82
ALABAMA RD
SUNSHINE BLVD
LEE BLVD
SW 23rd ST
GUNNERY RD
BUCKINGHAM RD
BUCKINGHAM RD
LEELAND BLVD
0 1/2 1 2

8. Constraints on Future Commercial Development

Large pre-platted communities frequently have too little commercial land. *Outside* of pre-platted communities there is rarely a shortage of commercial land; in fact, surpluses of commercial sites are typical. Surpluses can cause planning problems also, for instance:

- creating uncertainty on the part of adjoining landowners over the ultimate use of strategic parcels;
- making it difficult for public agencies to program future road improvements; and
- allowing commercial development to spread out excessively in ways that are inconvenient to shoppers and which interfere with the flow of traffic on major arteries.

In large pre-platted communities, shortages of commercial land can result from a lack of foresight by the initial developers and be aggravated by unexpected demographic changes in the population. This type of shortage is often difficult to remedy, and especially so when prime commercial locations have already been subdivided into small lots and sold off to individual owners. The following sub-sections examine these and other factors that inhibit the private land market from correcting this imbalance in land uses.

8(a) Premature Residential Platting and Scattered Ownership

In the early stages of the development of a lot-sales community there is little actual demand for retail or service uses. In many communities that were marketed for future retirement homes, little or no land was put aside for employment centers either. As long as the marketing of lots for future homesites was profitable, there was little or no incentive for a developer to put aside adequate amounts of land for future commercial use. This was the case for the original developers of Lehigh Acres, who began with no experience in land development and who made land-use decisions of enormous significance without the kind of outside oversight that is now taken for granted.

The earliest development, even before the name Lehigh Acres was selected, was known as Leeland Heights and was planned to be at most a small retirement community, with little or no commercial demand. In response to very strong installment sales of these early lots, development was expanded to the north (in Township 44S, Range 27E and north of the Able Canal). The result is today's northern Lehigh Acres, a beautifully wooded landscape divided almost totally into half-acre residential lots, still with virtually no commercial land.

At least at two points in the earliest planning of Lehigh Acres, some commercial development had been anticipated. One of the earliest available sales maps shows two long strips of land as "reserved for commercial property, schools and churches." One strip was 4½ miles long, running north and south about three blocks west of Richmond Avenue. In the original plats prepared in January of 1956, a 250-foot-wide strip was left unplatted there. But in replats prepared later that year, the entire strip was subdivided into residential lots. The other strip was even longer, running 6 miles east and west along what is now Twelfth Street. This strip was up to 450 feet wide. In a replat later in 1956, the western edge of what became the Baker Canal was first shown. Over the following 5 years, this entire strip was replatted to include the right-of-way for the entire Baker Canal, Twelfth Street itself, and very small multi-family lots on both sides of Twelfth. Today there are no commercial sites at all in this area.

Maps from a few years later give no indication of either of these commercial strips, but do show a wider strip of land on both sides of Joel Boulevard with the following notation: "Business & Commercial Reservation: Shopping, Business, Professional, Schools, Churches." This strip was planned to run from the golf course north to Sixteenth Street. The original plats from early 1956 again left much of this strip unplatted, but later replats converted most of it to residential lots, many of which are now fully occupied. A few remnants of this strip are in commercial use today. Another large portion of it (north of Twelfth Street) was never zoned commercially nor platted but is currently being planned for estate homes. The reason for this conversion is similar to that from four decades ago: the land is marketable today for residential use, while viable commercial use seems too far in the future to justify simply holding the land until actual commercial use is warranted.

Commercial development first occurred on Homestead Road near Leeland Heights Boulevard with a store built by the original developer. This store became the southern edge of Lehigh Acres' well-located commercial core which now extends northwest along Homestead Road. The rest of the core area was laid out in 1966 on previously unplatted land. By 1995, nearly every parcel with frontage on Homestead Road has been put to commercial use.

As platting of Lehigh Acres then proceeded to the west and northwest of this commercial core, a slightly increasing amount of commercial land was put aside, for instance along portions of Lee Boulevard. But only in the later portion of Lehigh Acres (to the southeast) was anywhere near sufficient land put aside for commercial purposes. Even then, much of this commercial land was platted into small lots and sold to individuals instead of being held intact, resulting in a premature commitment of commercial land to fragmented parcels.

This fragmentation of what little commercial land was provided now works against its practical use and prevents the creation of large shopping centers that have become popular in the decades since. The purchasers of these fragmented lots paid a premium for them, often more than they are worth even today. They can be understandably reluctant to sell at a loss to private individuals who might otherwise be able to assemble larger sites, even though this assembly might make the land marketable for actual commercial development.

8(b) Shallow Commercial Strips

There is a second major problem on top of the fragmented ownership pattern of much of Lehigh's remaining commercial land. As can be seen by visually comparing Figures 6.1 and 7.1, much of the vacant commercial land is located along major roads in shallow strips or ribbons. Almost the entire length of S.R. 82 has a commercially zoned strip along its north side. Individual lots are typically 50 feet wide and 175 to 185 feet deep. East of Gunnery Road many lots are about 85 feet wide and 130 feet deep. A strip of 175-foot-deep lots are on the west side of Gunnery from Douglas Avenue to S.R. 82.

Current planning theory favors shopping centers over shallow commercial strips, as illustrated by the following quotations from typical planning sources:

- "The community that has no strip commercial development or high-way commercial development is singularly blessed. These types of development are almost never proposed where none already exists..."[13]
- "In contrast to concentrated commercial areas, strip commercial developments require that a person seeking a reasonable range of goods and services must travel a maximum distance from the point of first to last purchase.... Since the strip commercial area is undesirable as a prime location for most businesses, it is increasingly occupied by marginal enterprises with a high mortality rate.... Certainly there is little prospect that a substantial part of the frontage now zoned strip commercial can ever be used for constructive purposes without extensive and expansive public renewal action."[14]
- "As the traffic artery strip zoned for business develops for that purpose (if it ever does), curb cuts and driveways will be required for access to developed properties. If there is to be any successful result for the business enterprises, traffic will increase with each developing parcel. As

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[13] *The Practice of Local Government Planning*, edited by Frank S. So et al., International City Management Association, 1979.

[14] *Planning Cities*, by Frederick H. Bair, Jr., American Planning Association, 1979.

traffic increases and scattered turnoffs or driveways are created, congestion and traffic accidents will multiply."[15]

- "[C]onvert strips into discrete concentrations where possible, and [ ] prevent the creation or proliferation of new strips. In instances where existing strips cannot realistically be broken up or where new strips are inevitable, there should be a concerted effort to apply design standards (both regulatory and public improvement) that will minimize traffic, environmental, and aesthetic problems and remove blighting influences on nearby development and vacant land."[16]

Whatever the shortcomings of the strip commercial pattern, wholesale abandonment of Lehigh's commercial strips would not be prudent. The existing and available strips are of varying character and suitability, some having offsetting advantages not typically found. Given the serious shortage of commercial land in Lehigh Acres, some of those strips can be used as-is, or be made usable, and become one part of an overall solution. Other strips that are not suitable for retail uses may be suitable for office or multifamily development.

Besides fragmentation of ownership, the biggest Lehigh-specific problem of commercial strips is their shallow depth. The minimum recommended depth for commercial strips is 200 to 300 feet to accommodate the buildings, adequate parking, and landscaped buffering along the road and behind the businesses.[17] A depth of 600 feet is ideal for shopping centers. But the majority of remaining commercial strips in Lehigh Acres are only 175 to 185 feet deep, and some are as shallow as 130 feet. The major exceptions are along Lee Boulevard (on both sides from Sunshine Boulevard east to Wal-Mart and on the north side from Alvin Avenue eastward about one mile), where the strips average 250 feet deep.

On the positive side, nearly all of the shallower strips back up to a continuous access or "reverse frontage" road. This road is called Meadow Road on the north side of S.R. 82 and Gretchen Avenue on the west side of Gunnery. If vehicular access from these commercial strips were limited to this access road, some of the drawbacks of strip commercial would be avoided (although additional traffic would be forced to flow past homes on the other side of Meadow and Gretchen). This arrangement may not work as well for businesses that rely on impulse stops, such as convenience stores

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[15] *The Citizen's Guide to Zoning*, by Herbert H. Smith, American Planning Association, 1983.

[16] *Commercial Land Use Needs in Lee County*, prepared by Thomas H. Roberts & Associates for Lee County, January 1987.

[17] *The Practice of Local Government Planning*, edited by Frank S. So et al., International City Management Association, 1979.

or service stations, unless they adjoined an public street connecting to the arterial road. But it would be acceptable for other businesses such as offices that want visibility from a major road but can accept less convenient access for their customers.

Various potential modifications to commercial strips will be illustrated later in this report.

8(c) Deed Restrictions

With most land in Lehigh Acres having been sold as homesites, it is not surprising that a large number of lots were sold with deed restrictions governing allowable types of construction and seeking to prevent commercial intrusion into neighborhoods. Deed restrictions against commercial development may prove to be a significant impediment and block the creation of a commercial area in some otherwise very desirable locations. In other cases, the restrictions are no longer valid or can be waived through technical and legal procedures. No general guidelines can be given here because of the variety of deed restrictions that were used at different periods during the development of Lehigh Acres.

8(d) Proximity to Existing Neighborhoods

Given the above limitations on shopping opportunities in Lehigh Acres, it is perhaps not surprising that many conflicts have arisen in recent years when landowners have sought commercial zoning for their property. Because there has been no comprehensive attempt to resolve the shortage of commercial land, owners of land along major roads in populated areas have been seeking commercial zoning on their own. In many of these cases, the land in question is already surrounded by homes on many or all adjoining lots.

The potential for continuing neighborhood conflict is obvious. Similar conflicts will arise through time whenever commercial proposals are made in or near developed residential neighborhoods. After neighborhoods have been built up, there is little choice but to judge each proposal on its individual merits through the county's rezoning process.

To minimize these conflicts in the future, though, as many decisions about commercial locations as possible should be made well in advance of intensive development of nearby residential neighborhoods. This allows those who cannot tolerate nearby commercial activity to build their homes further away. The impression that property values will be lowered by proximity to commercial areas is often incorrect.[18]

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[18] *Empirical Modeling of the Relative Impacts of Various Sizes of Shopping Centers on the Values of Surrounding Residential Properties*, by R. Sirpal, Journal of Real Estate Research 9, 4: 487-506, 1994

But anyone's sense of being forced from their home by intruding commercial development will exacerbate the already difficult task of redesigning a community for proper levels of commercial development.

8(e) Environmental Problems

The vast network of canals throughout Lehigh Acres has dried up most of the original wetlands, seeming to resolve a common environmental problem for developers. But deep muck soils below former wetlands can provide an even greater impediment to any kind of development. As with deed restrictions, little general guidance can be provided, but the problem must be recognized and investigated in locations with any reasonable probability of muck soils.

Another potential environmental constraint on commercial development is caused by Lehigh Acres' proximity to some of Lee County's finest *underground* water resources. These constraints can take two forms, either the existing legal constraints on the intense use of any unplatted land south of S.R. 82 as found in Lee County's Comprehensive Plan, or the potential constraints that may result from the installation of shallow wellfields into the high-yielding aquifers near S.R. 82 from about Gunnery Road to the east about four or five miles.[19] Certain land uses are typically restricted near shallow wellfields, especially service stations and users of pesticides (due to potential contamination in the case of leaks or spills).

8(f) Inadequate Road Network

Lehigh Acres shares many problems with other pre-platted or lot-sales communities. But a particular problem in Lehigh is the absence of an adequate network of roads within the community. Although localized road deficiencies can be *caused* by a successful shopping center, the absence of shopping centers is even worse. When residents must travel not only through their community but then outside it as well to obtain everyday goods and services, overall travel is increased well beyond that which is inevitable.

Cape Coral was designed with an internal road network that, despite a few major shortcomings, will be adequate through its build-out. Cape Coral is criss-crossed by a grid of major boulevards, often only one mile apart. Many of these roads already provide four travel lanes. Compare that network with the primitive network within Lehigh Acres. The imminent widening of Lee Boulevard will resolve much of the current congestion, but future improvements will not be as easy to accomplish because adequate rights-of-way are rarely available where needed.

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[19] *Water Supply Master Plan 1993 - 2030, Volume 1*, Lee County Regional Water Supply Authority, November 1993.

Sections 14 and 15 of this report will address Lehigh's road needs through the year 2020. Longer-term problems, if not studied and planned for, will become more difficult to solve with each passing year.

8(g) Use of Modern Planning Standards in Pre-Platted Communities

The constraints discussed above are numerous and very serious. In addition, there are certain regulatory constraints that, as applied to Lehigh Acres, are hurting rather than helping to resolve the shortage of commercial land. The following section will describe the currently regulatory framework for commercial land in Lee County and prepare for a later discussion of changes that could be made to these standards.

9. Comprehensive Planning Standards for Commercial Development

9(a) Lee Plan — 1984 Through 1994

In 1984 Lee County adopted its first modern "comprehensive plan," known since then as the Lee Plan. Despite some attempts during the preparation of that plan to address the unique aspects of Lehigh Acres, the plan as adopted blessed the continued development of Lehigh and otherwise had little practical effect there.

As to future commercial development throughout Lee County, the 1984 plan adopted commercial site location standards that survived until late 1994 with only minor changes. The purpose of these standards was to distinguish between various types of larger commercial developments and require them to be located only near intersections of certain classes of roads. For instance, "community shopping centers" must have direct access to two arterial roads; "neighborhood shopping centers" must have access to at least one arterial and one collector road; and convenience or "minor commercial" stores must have access to at least one collector and one local road. Some commercial uses such as motels and offices are not required to meet any of these standards.

New commercial developments are permitted only if they comply with these site location standards. This was true even if commercial zoning for a property had been approved prior to the 1984 Lee Plan. This retroactivity created a particular problem in Lehigh Acres since the usual surplus of commercially zoned land did not exist. Most of the commercial land that had been provided was already zoned commercially. Despite that zoning, much of the land was severely restricted by the site location standards, particularly the commercial strips.

The limitations that these standards imposed on vacant commercial strips was not accidental; the standards were intended to encourage the consolidation of commercial development near major intersections and to discourage further development of commercial strips. But there is no evidence that alternative commercial patterns for Lehigh Acres had been considered when the standards were imposed.

By the early 1990s, two factors were forcing a change in the Lee Plan's generally laissez-faire attitude towards Lehigh Acres. First, commercial rezonings were becoming a source of continuing conflict, with the Lee Plan's site location standards seeming to provide little useful guidance given the constraints discussed in the previous section. Second, litigation over the Lee Plan dragged on between Lee County and the Florida Department of Community Affairs, the state land planning agency. Two continuing questions were:

- whether the plan adequately controlled "urban sprawl," raising the question of whether Lehigh Acres was an example of urban sprawl that should be controlled or a resource of moderate-cost homesites that needed protection; and
- whether the commercial locational standards were so lenient as to provide little guidance whatever, or a reasonable attempt to manage growth, or a cumbersome deterrent to responsible development.

One of the results of the litigation was the redesignation of unplatted land south of S.R. 82 to a new Lee Plan category that restricted development densities to one dwelling units per ten acres. Another was a less-site-specific means of allocating growth known as the "Year 2010 Overlay," which was repealed in 1994 following many problems with its implementation. (The 1994 amendments are discussed in the next subsection, although they are not in effect at this time due to a pending challenge by the Department of Community Affairs and several private organizations.)

9(b) Lee Plan — Pending Amendments

In November 1994, many amendments were made to the Lee Plan in response to a formal "evaluation and appraisal" review of the entire plan. All land in Lehigh Acres was reclassified on the Future Land Use Map to a new "vested community" category. This new category would have little effect on actual development except in unplatted areas, where some parcels will be restricted to a maximum of four dwelling units per acre.[20]

Another 1994 amendment has more potential significance to future commercial development in Lehigh Acres. In response to frequent criticisms of the commercial site location standards in the previous plan, a new map was adopted to identify certain major road intersections as automatically qualifying for certain levels of commercial development. The relevant parts of this map are included here as Figure 9.1.[21] Its significance to Lehigh Acres is that only eight major intersections in or adjoining the Lehigh CRA area are shown on this map as being suitable for neighborhood or commercial shopping centers. (Other locations aren't completely precluded if the intersections meet certain definitions in the Florida Administrative Code, but those definitions are still more of a hindrance than in help in the Lehigh Acres context.) Given all of the constraints on potential commercial land in Lehigh Acres, more flexibility than this will be required to take advantage of the limited opportunities available.

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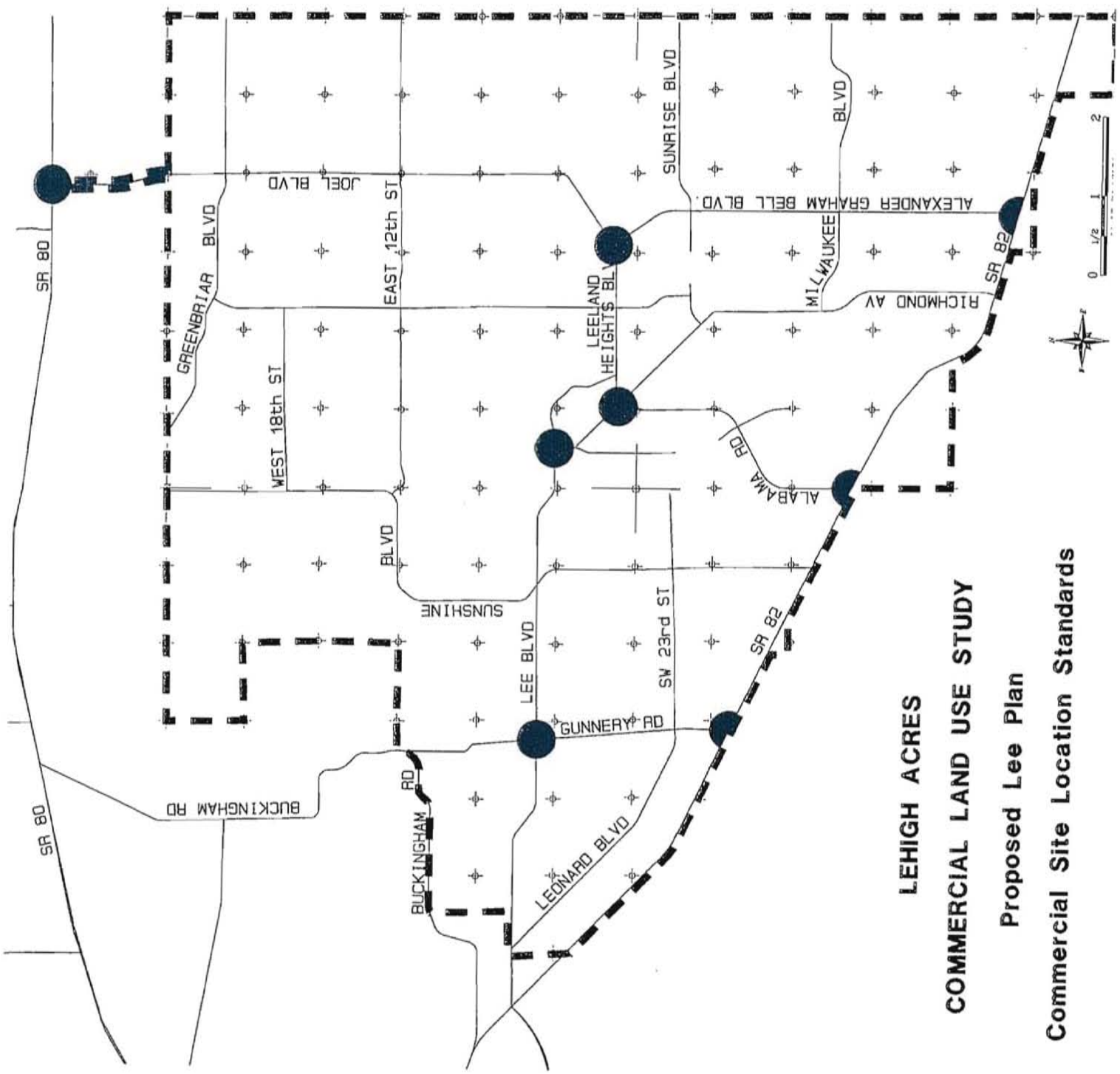
[20]See new Policy 1.1.5, as adopted by Ordinance No. 94-30.

[21]Excerpted from Map 16 and Policy 6.1.2(12), as adopted by Ordinance No. 94-30.

Figure 9.1


LEHIGH ACRES
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SR 80
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ALABAMA RD
SUNSHINE BLVD
LEE BLVD
SW 23rd ST
GUNNERY RD
BUCKINGHAM RD
BUCKINGHAM RD
LEONARD BLVD
0 1/2 1 2

10. Alternative Configurations of Commercial Land

10(a) Six Concepts for Providing Additional Commercial Land

Following an initial examination of possible types of commercial expansion, six concepts were selected for further analysis. Some of these concepts are not mutually exclusive, but for clarity they will first be described separately.

Concept A: Allow Convenient Shops Within Neighborhoods

Much of this study has focused on identifying large parcels of land for future shopping center sites. Residential areas are typically seen as needing protection from the adverse impacts of nearby commercial development. Yet many communities find some internal commercial uses are not only inoffensive but actually a positive attribute. An alternative explored in this study is how such internal commercial uses might be designed and located to benefit surrounding neighborhoods.

Concept B: Assemble Shopping Center Sites from Existing Lots

Fragmented land ownership is the greatest hindrance to identifying additional commercial locations. Assembly of larger parcels from the existing scattered ownership pattern could reverse this problem. In some cases, assembly can be done by private entities purchasing land from willing sellers or developing an agreement among several property owners to act cooperatively. More likely, a governmental entity would assemble land through a combination of voluntary purchases and the exercise of the power of eminent domain (condemnation). The Community Redevelopment Agency is the only entity with the type of eminent domain powers that would be needed for this type of assembly. In the case of governmental assembly, the assembled parcels would then be resold through some equitable means to private developers, with any value created by the assembly being re-used for further land assembly or other public purposes.

Concept C: Identify Major New Commercial Locations Not Meeting Current Site Location Standards

This alternative would involve making whatever regulatory changes are necessary to allow commercial development on suitable parcels that do not meet the site location standards or other requirements of the adopted Lee Plan.

Concept D: Site Major New Commercial Locations Outside Lehigh Acres

The placement of major new commercial locations near but just outside Lehigh Acres has the potential of meeting some of the community's needs with

relatively little effort or impact. If these locations were along the routine travel patterns of Lehigh Acres' commuters, some of the commercial demand could be met without causing excessive travel to and from these shopping centers. Commercial locations near the western edge of Lehigh Acres could also draw from residents of the Gateway community, enhancing the viability of their businesses.

Concept E: Deepen Existing Commercially Zoned Strips

A previous discussion identified the planning shortcomings of commercial strips. In particular, the commercial strips along Gunnery Road and S.R. 82 are too shallow for many modern commercial uses. One alternative would be to enhance the viability of strategic portions of these commercial strips by extending commercial zoning to the rear. The resulting deeper commercial parcels would provide far more flexibility to prospective businesses.

Concept F: Reconfigure Access to Commercially Zoned Strips

Deepening a shallow commercial strip is not the only available alternative; some of the existing strips may be "salvageable" in other ways. Lehigh Acres' existing commercial strips were examined in detail to determine existing levels of development; ownership patterns; lot widths and depths; soil and access limitations; proximity to future development; and relative scarcity of nearby commercial alternatives. Table 10-1 provides a summary of the data developed during this analysis.

The major alternative strategies to deepening the existing commercial strips fall within the following three categories:

— **Strategy A: Legalize Continued Use in Their Present Configuration**

This strategy is to accept the existence of some (or all) of the shallow commercial strips and eliminate governmental restrictions on their use. The primary impediments include a county requirement that a 40-foot-wide parallel access road be built along the entire length of S.R. 82; a county prohibition on most retail uses beyond 330 feet of the intersection of an existing street with a collector or arterial road; and county and state restrictions on permanent access to arterial roads at points spaced more frequently than 660 feet.

Table 10-1
Comparative Data on Existing Commercial Strips

	Which side?	Section/Twp/Range	Lot size: width	depth	Ownership pattern	Typical zoning	Rear access available?	Potential soil limitations?
S.R. 82 STRIPS:								
Westerly edge to cemetery	north	31- 44-26	50	175	fragmented	C-2	Meadow Road	minor
Cemetery to Gunnery	north	4, 5, 9- 45-26	50	175	fragmented	C-2	Meadow Road	minor
First mile east of Gunnery	north	9, 10- 45-26	80	136	single owner	C-2	Meadow Road	intermittent
First mile west of Sunshine	north	11, 14- 45-26	80	186	single owner	C-2	Meadow Road	minor
Sunshine to Alabama	north	13- 45-26	80	136	single owner	C-2	Meadow Road	minor
Jaguar to 1 mile before county line	north	27-29, 35- 45-27	50	175	fragmented	C-2	Meadow Road	intermittent
Last mile before county line	north	36- 45-27	50	175	lots in pairs	RS-1	Meadow Road	minor
" " " " " "	south	36- 45-27	50	165	fragmented	C-1A, CC	Briarcliffe and Naples	minor
GUNNERY ROAD STRIP:								
Douglas to S.R. 82	west	4-45-26, 33- 44-26	50	175	fragmented	C-2	Gretchen Avenue	none
LEE BOULEVARD STRIPS:								
Alvin to canal	north	29, 30- 44-26	various	300	large parcels	C-2, CPD	Brookfield Street	minor
Welcome center to 8th Street	south	30- 44-26	50	176	single owner	C-2, IL	8th Street	minor
Sunshine to Wal-Mart	north	25, 26- 44-26	80	252	single owner	CG, C-2	Fifth Street West	none
" " " " "	south	25, 26- 44-26	80	252	single owner	C-2, CPD	Fourth Street West	none
Hospital to Coolidge	north	29, 30, 32- 44-27	various	various	fragmented	C-2, C-1A, CC, CG	none	none
Coolidge to Leeland Heights	east	32- 44-27	40	125	lots in pairs	CS-1+2, RS-1, models	none	none
LEELAND HEIGHTS STRIPS:								
Homestead to California	north	32- 44-27	125	120	fragmented	C-2, CPD, RS-1	none	none
California to Lee	north	32- 44-27	40	120	lots in pairs	RS-1	none	none
" " " "	south	32- 44-27	160	125	fragmented	CS-1, RS-1	none	none
BELL STRIP:								
Theodore Vail to Mirror Lakes Drive	east	15- 45-27	(wide)	250	large parcels	RM-2	Thomas Sherwin Ave.	minor
JOEL BOULEVARD STRIPS:								
8th to 12th Streets	east	23- 44-27	(wide)	125	large parcels	C-2	Edward Avenue	none
12th to 16th Streets	west	15- 44-27	(wide)	460-515	single owner	RS-1	Gerald Avenue	none
Mabry to Jetridge	east	2- 44-27	(wide)	150	single owner	RS-1	Edward Avenue	none
Ocean Park to Ridgemont Drives	west	3- 44-27	(wide)	250	single owner	C-1A, RS-1	Spartan and Olsen	minor
22nd to 24th Streets	west	3- 44-27	50	180-200	fragmented	C-1A	none	minor

— **Strategy B: Restrict or Eliminate Commercial Uses at Some Locations**

This strategy is to clearly restrict or eliminate future commercial uses in those strips that are least favorable to commercial development. The approach could simply maintain, or strengthen considerably, the current regulatory impediments to commercial uses. This could involve either Lee Plan changes, or setting a minimum number of contiguous lots in order to construct a commercial development, or rezoning the property out of its existing C-2 zoning into another zoning category. Or the Community Redevelopment Agency could acquire this land from the current owners, either voluntarily or more likely through eminent domain. Once acquired, the lots could be reconfigured to improve commercial suitability and re-sold, or held for future public purposes such as highway beautification or water retention.

— **Strategy C: Mitigate the Negative Traffic Aspects of the Strip**

A third strategy is a major rehabilitation of some commercial strips: keeping their current lot widths, depths, and even fragmented ownership, but reconfiguring their vehicular access. This strategy appeared promising and was selected as Concept F for further exploration through this study.

10(b) Illustrating the Six Concepts

The next step in the evaluation of these six concepts was to select actual locations within Lehigh Acres where each could be tested. Maps were created of each area, specifically including its surrounding neighborhood because the external impacts of each alternative is an important part of the analysis. Each concept was then illustrated by creating an actual site plan showing how commercial development might be placed on the property and how landscaping and open space might soften impacts on surrounding properties.

Eight specific areas were selected. Figure 10.1 identifies the boundaries of each site on a map of Lehigh Acres. Table 10-2 describes the general location of each and identifies which of the commercial concepts have been illustrated in that area. The overlap between some of the concepts is apparent from this matrix, with five of the eight areas using two or more concepts.

Figure 10.1

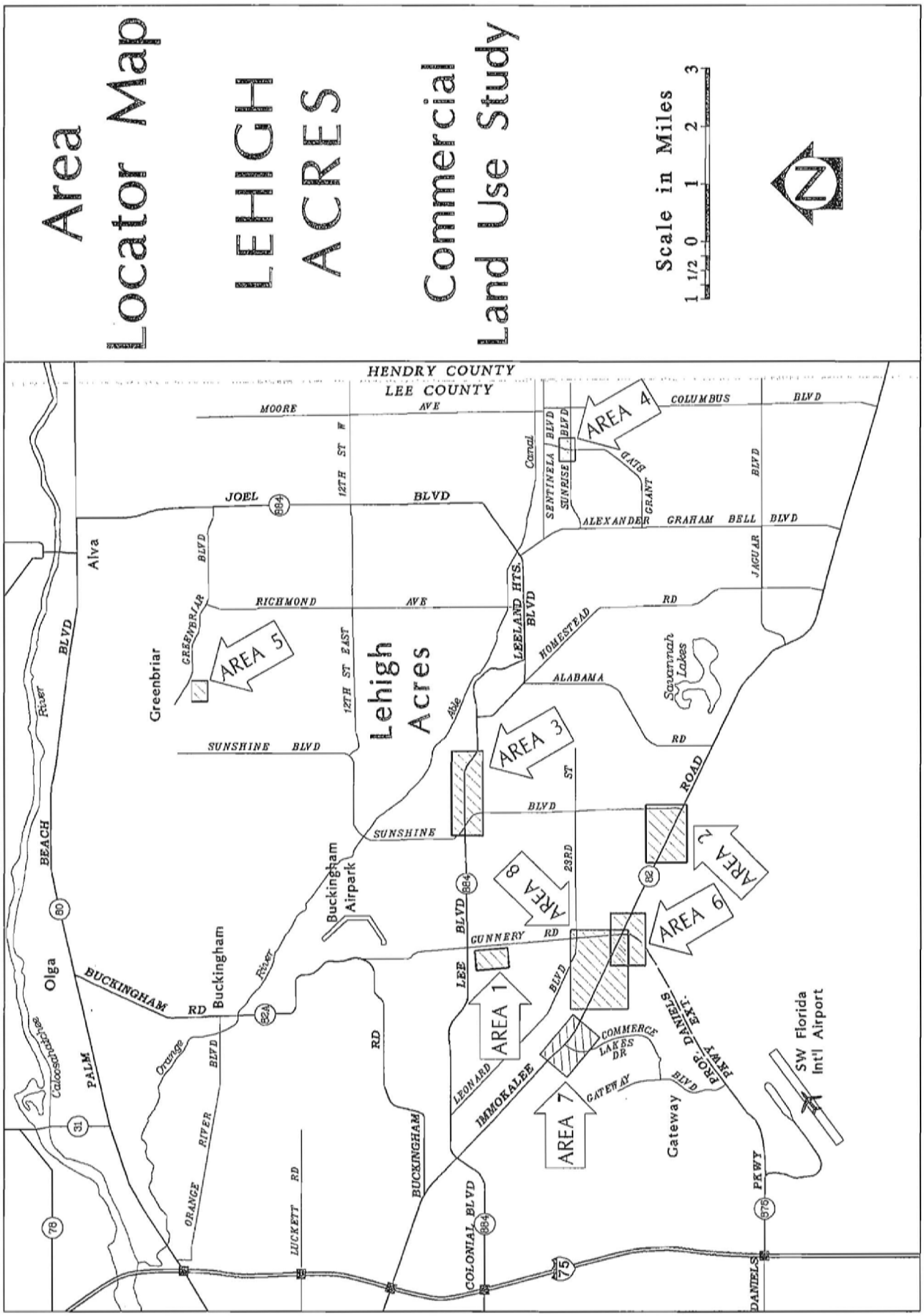

Area Locator Map
LEHIGH ACRES
Commercial Land Use Study
Scale in Miles
1 1/2 0 1 2 3
N
HENDRY COUNTY
LEE COUNTY
Lehigh Acres
Greenbriar
Alva
Olga
Buckingham
Gateway
Savannah Lakes
Buckingham Airpark
SW Florida Int'l Airport
AREA 1
AREA 2
AREA 3
AREA 4
AREA 5
AREA 6
AREA 7
AREA 8
MOORE AVE
JOEL BLVD
RICHMOND AVE
SUNSHINE BLVD
GUNNERY RD
LEELAND HTS. BLVD
HOMESTEAD RD
ALABAMA RD
SUNSHINE BLVD
COLUMBUS BLVD
ALEXANDER GRAHAM BELL BLVD
GATEWAY BLVD
COMMERCE LAKES DR
IMMOKALEE RD
LEONARD ST
BUCKINGHAM RD
COLONIAL BLVD
DANIELS PKWY
PROF. DANIELS EXT. PKWY
LUCKETT RD
ORANGE RIVER BLVD
PALM BEACH BLVD
Caloosahatchee River
Orange River
Able Canal
12TH ST W
12TH ST EAST
23RD ST
JAGUAR BLVD
GRANT BLVD
SENTINELA BLVD
SUNRISE BLVD
GREENBRIAR BLVD

Table 10-2

Matrix of Concepts and Specific Commercial Site Plans							
Six Concepts→		A	B	C	D	E	F
Eight Areas #	Location	*allow convenient neighbor-hood shops*	*assemble large shopping center sites*	*locations not meeting current standards*	*locations outside Lehigh Acres*	*deepen existing commercial strips*	*modify access to strips*
1	Gunnery at Douglas		X	X		X	
2	Sunshine at S.R. 82		X	X		X	
3	Lee (Sunshine to Wal-Mart)		X				
4	Grant at Sunrise	X					
5	Greenbriar	X		X			
6	Daniels at S.R. 82			X	X		
7	Commerce Lakes at S.R. 82				X		
8	Gunnery at S.R. 82			X			X

10(c) Eight Individual Commercial Site Plans

Each of the eight areas is discussed separately below. Note that at least two drawings are included for each. The first is a map showing current conditions on the site, including existing buildings shown by cross-hatching. The second is the exact same area but with a commercial site plan, most illustrating potential buildings, parking lots, stormwater detention areas, access points, and landscaping. Each concept plan is discussed in the text, with major advantages and problems identified.

Area 1 — Gunnery Road at Douglas Lane

One of the original commercial strips in Lehigh Acres lies along the west side of Gunnery Road beginning about ¼ mile south of Lee Boulevard at Douglas Lane. This strip is relatively shallow, typically 175 feet deep with lot widths of 50 feet. This strip is typical of much of the remaining commercial zoning in Lehigh Acres, with its lots already sold off to individual owners and today supporting only widely scattered small businesses.

A typical portion at the northern edge of this commercial strip was selected as "Area 1" (see Figure 10.2). The site extends from Douglas Lane on the north to 3rd Street on the south and Gordon Avenue on the west, with about 1080 feet of frontage on Gunnery Road.

Two different plans were developed for this site. Plan A would deepen the commercial strip two full blocks, back to Gordon Avenue (see Figure 10.3). This configuration would allow the placement of a full-size neighborhood shopping center (98,800 square feet, about the size of today's Homestead Plaza with its Publix Supermarket and Eckerd Drugs). The original commercial strip would be reconfigured into four one-acre "outparcels" for convenience shopping such as fast food, service station, or convenience store.

The outparcels would have access from Gretchen Avenue, whose continuity would be maintained while serving as a "reverse frontage" road. Instead of ten or more driveways from individual businesses onto Gunnery Road, a single entrance road would be provided directly across from 1st Street, served by turn lanes on Gunnery.

A large pond would be placed to the rear, which along with heavy vegetation would provide separation from the residential neighborhood behind. Most of the rear block facing the neighborhood would be used only for the stormwater pond and landscaping.

Plan B would deepen the commercial strip one full block instead of two (see Figure 10.4). A smaller neighborhood shopping center (69,600 square feet, like today's Homestead Shopping Center) could be placed on the site, along with two convenience locations, all sharing a single parking lot. Three driveways would be provided onto Gunnery. A smaller dry detention area would be provided in the rear, along with the same vegetative buffer as in Plan A. In this configuration, Gretchen Avenue could not be maintained (which is only a minor problem at this location since Gretchen ends at Douglas anyway).

Each plan extends commercial development into areas now planned only for homesites. Intense landscaped buffering can soften this impact but will never eliminate it. Plan A provides substantially more commercial space, more buffering, and much better traffic circulation. Plan B would protrude less into the surrounding neighborhood, but would break the continuity of Gretchen Avenue, one of the few assets of Lehigh's commercial strips. Its buildings would be slightly closer to residential lots than in Plan A.

Extending commercial back only one-half block would be the most intrusive to abutting landowners and the least desirable for commercial users, and therefore has not been considered further. A one-block extension, as in Plan B, is feasible but less desirable from almost every viewpoint than a two-block extension as shown in Plan A.

Figure 10.2

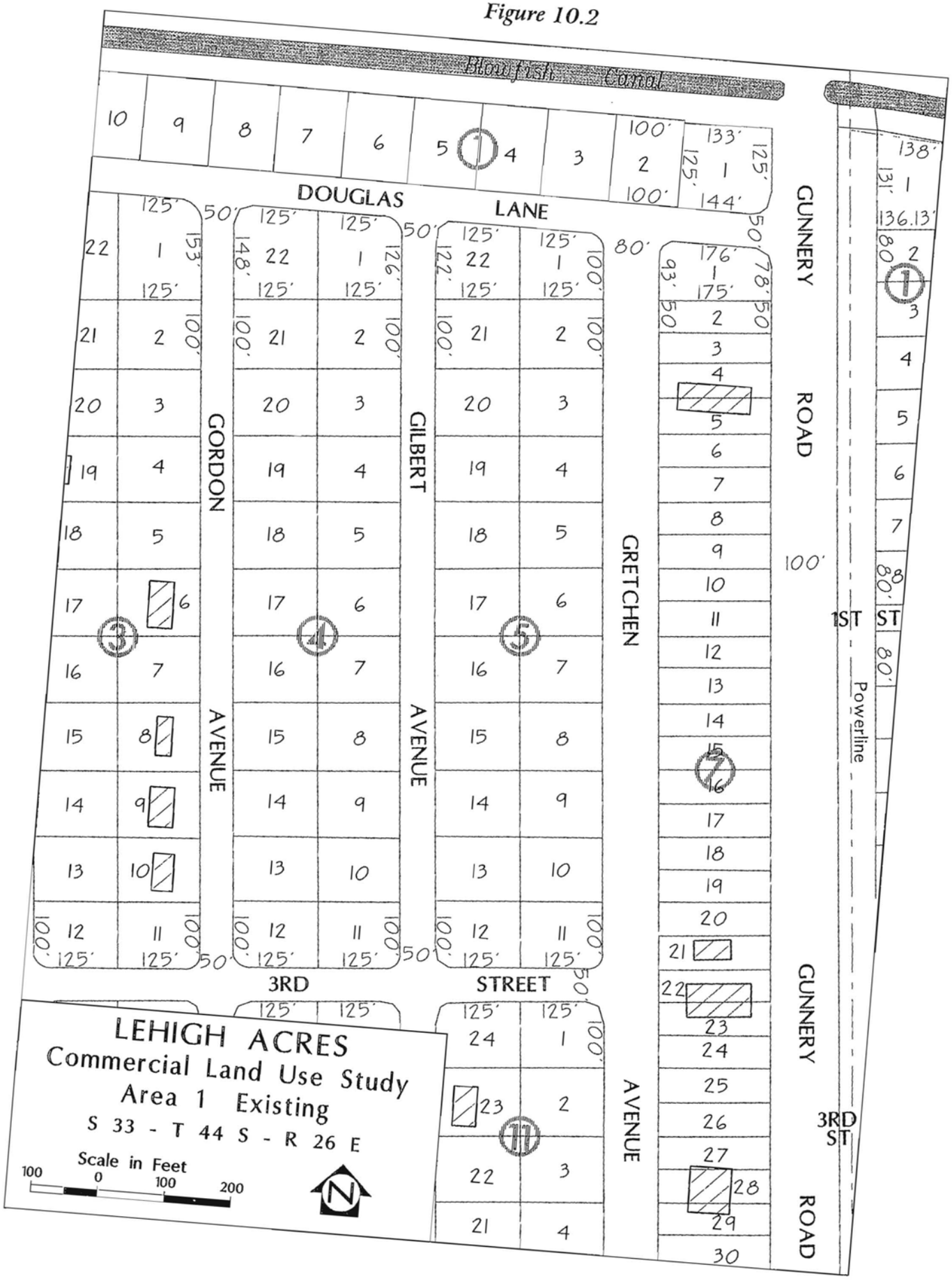

Bluefish Canal
DOUGLAS LANE
GUNNERY ROAD
GORDON AVENUE
GILBERT AVENUE
GRETCHEN AVENUE
1ST ST
3RD STREET
3RD ST
Powerline
LEHIGH ACRES
Commercial Land Use Study
Area 1 Existing
S 33 - T 44 S - R 26 E
Scale in Feet
100 0 100 200
N

Figure 10.3

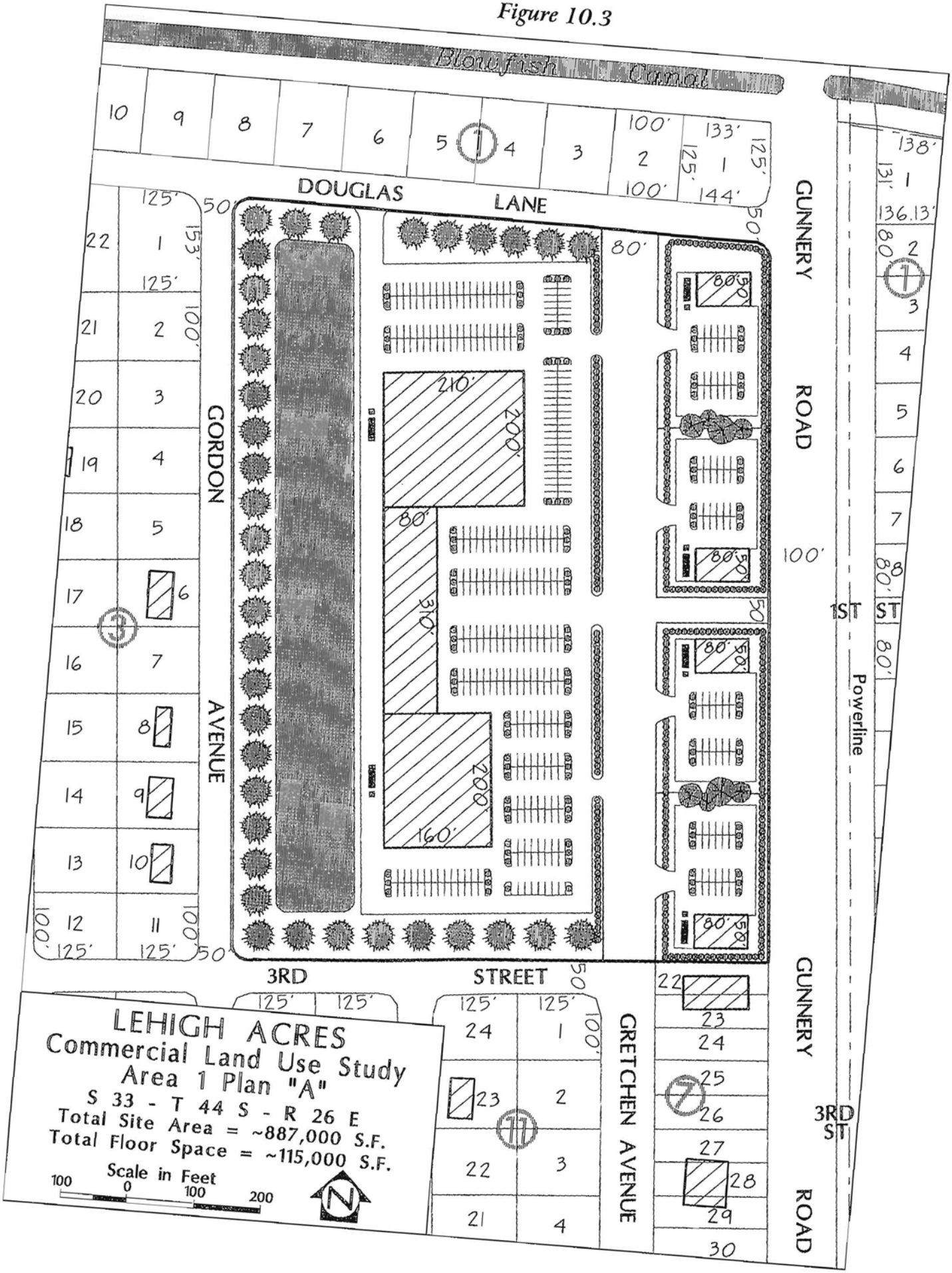
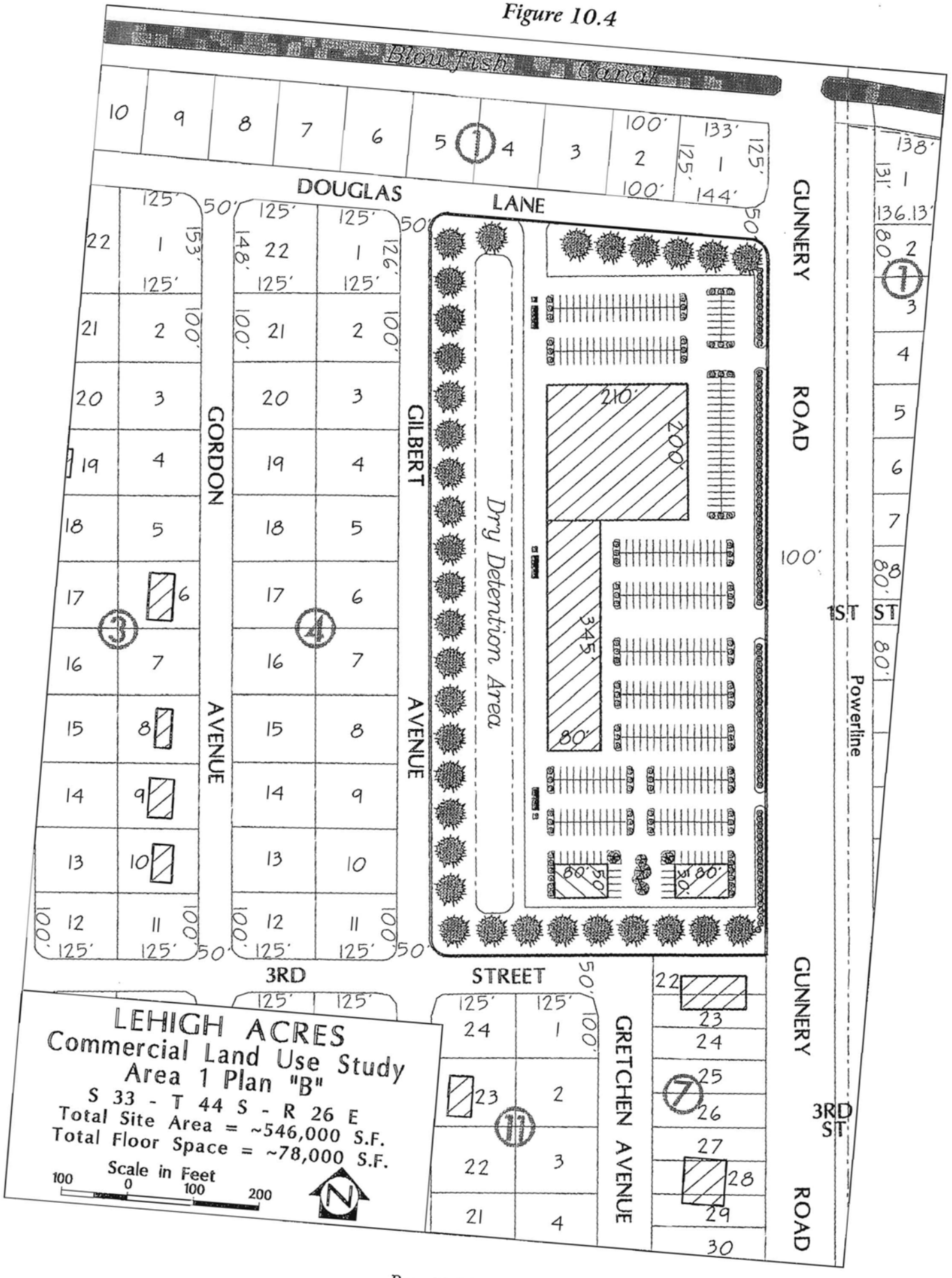

Blonfish Canal
DOUGLAS LANE
GUNNERY ROAD
GORDON AVENUE
3RD STREET
GRETCHEN AVENUE
1ST ST
3RD ST
Powerline
LEHIGH ACRES
Commercial Land Use Study
Area 1 Plan "A"
S 33 - T 44 S - R 26 E
Total Site Area = ~887,000 S.F.
Total Floor Space = ~115,000 S.F.
Scale in Feet
100 0 100 200
N

Figure 10.4


Bonita Fish Canal
DOUGLAS LANE
GORDON AVENUE
GILBERT AVENUE
Dry Detention Area
GUNNERY ROAD
1ST ST
Powerline
3RD STREET
GRETCHEN AVENUE
3RD ST
LEHIGH ACRES
Commercial Land Use Study
Area 1 Plan "B"
S 33 - T 44 S - R 26 E
Total Site Area = ~546,000 S.F.
Total Floor Space = ~78,000 S.F.
Scale in Feet
100 0 100 200
N

Area 2 — Sunshine Boulevard at S.R. 82

Sunshine Boulevard is the only single road that travels from S.R. 82 all the way to the northern edge of Lehigh Acres. Although it is little travelled today, it will serve as a major artery in the future, especially if extended northward to S.R. 80. No part of its intersection with S.R. 82 is designated by the most recent amendments to the Lee Plan as an acceptable location for a shopping center.

A curved portion of S.R. 82 in the northwest quadrant of that intersection was straightened several decades ago. That realignment moved the right-of-way away from the typical strip of commercial lots on the north side of S.R. 82. Perhaps for that reason those lots were never sold off to individual owners. That unitary ownership, if combined with the old right-of-way and the odd-shaped remainder parcel left by the realignment, would provide a very large site in the northwest quadrant with excellent commercial potential.

Existing conditions in the northwest quadrant are shown in Figure 10.5. A potential 66-acre commercial development plan is shown in Figure 10.6. This plan would provide a community shopping center with about 187,000 square feet and four 5-acre commercial sites that could be developed independently or combined into another community shopping center site. This plan also provides five outparcels near the intersection of Sunshine and S.R. 82.

Meadow Road would be maintained through the site, but its intersection with Sunshine would be realigned further from S.R. 82. A row of existing residential lots south of a canal would be used solely for stormwater and buffering purposes. Three other small blocks of residential lots are shown in this plan as being converted into the commercial outparcels.

The assembly and redevelopment of all or part of this site has many advantages and relatively few drawbacks. The old commercial strip remains in single ownership yet is "landlocked." The other large parcel is also in single ownership but is too shallow by itself for practical use. Combined they would provide a very large commercial site suitable for the proposed plan or many other variations. A substantial number of residential lots could be converted to commercial outparcels as shown here to improve the feasibility further, although two homes have already been built there and would have to be purchased. But these residential lots would be located very close to and almost unbuffered from commercial development if they were deleted from the proposed commercial plan.

Figure 10.5

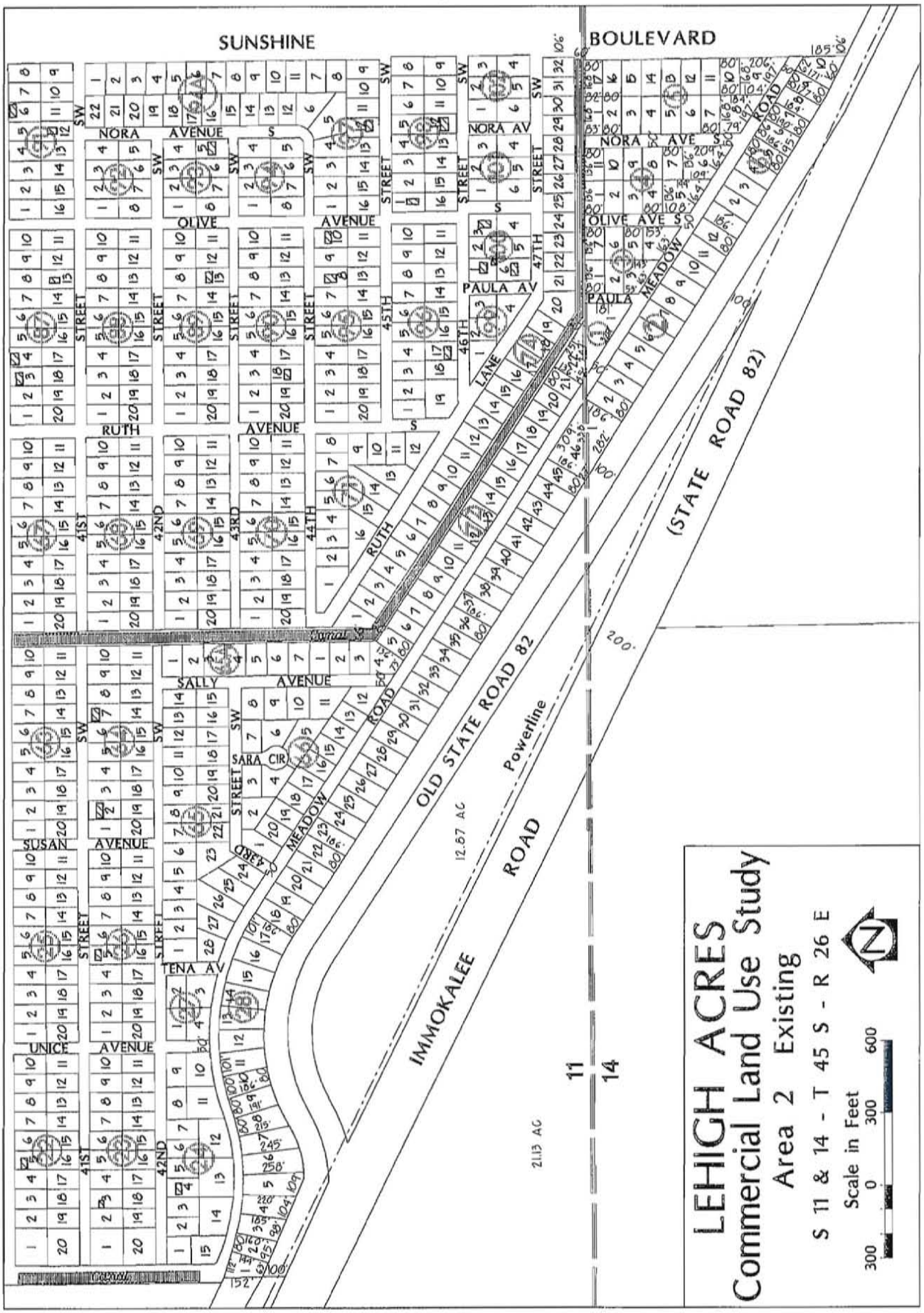
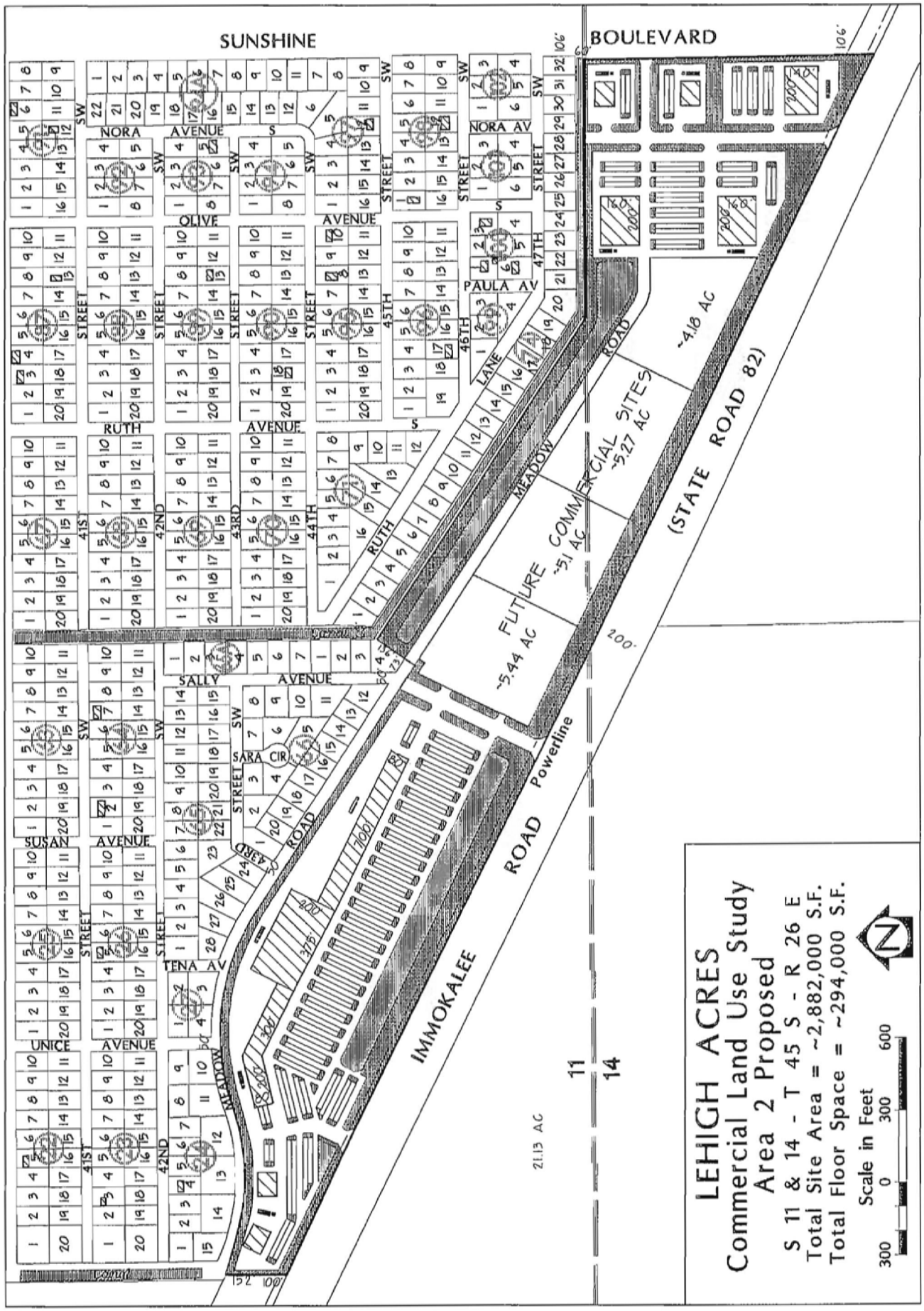

SUNSHINE
BOULEVARD
NORA AVENUE
OLIVE AVENUE
RUTH AVENUE
SALLY AVENUE
SUSAN AVENUE
UNICE AVENUE
TENA AV
SARA CIR
PAULA AV
NORA AV
OLIVE AVE S
PAULA
41ST STREET SW
42ND STREET SW
43RD STREET SW
44TH STREET SW
45TH STREET SW
46TH LANE
47TH STREET S
MEADOW ROAD
MEADOW
OLD STATE ROAD 82
IMMOKALEE ROAD
(STATE ROAD 82)
Powerline
12.67 AC
21.13 AG
11
14
LEHIGH ACRES
Commercial Land Use Study
Area 2 Existing
S 11 & 14 - T 45 S - R 26 E
Scale in Feet
300 0 300 600

Figure 10.6


SUNSHINE
BOULEVARD
NORA AVENUE
OLIVE AVENUE
RUTH AVENUE
SALLY AVENUE
SUSAN AVENUE
UNICE AVENUE
TENA AV
NORA AV
PAULA AV
41ST STREET
42ND STREET
43RD STREET
44TH STREET
45TH STREET
46TH LANE
47TH STREET
SARA CIR
MEADOW ROAD
IMMOKALEE ROAD
Powerline
(STATE ROAD 82)
FUTURE COMMERCIAL SITES
~5.44 AC
~5.1 AC
~5.27 AC
~4.18 AC
21.13 AC
11
14
LEHIGH ACRES
Commercial Land Use Study
Area 2 Proposed
S 11 & 14 - T 45 S - R 26 E
Total Site Area = ~2,882,000 S.F.
Total Floor Space = ~294,000 S.F.
Scale in Feet
300 0 300 600
N

Area 3 — Sunshine Boulevard to Wal-Mart (south of Lee Blvd.)

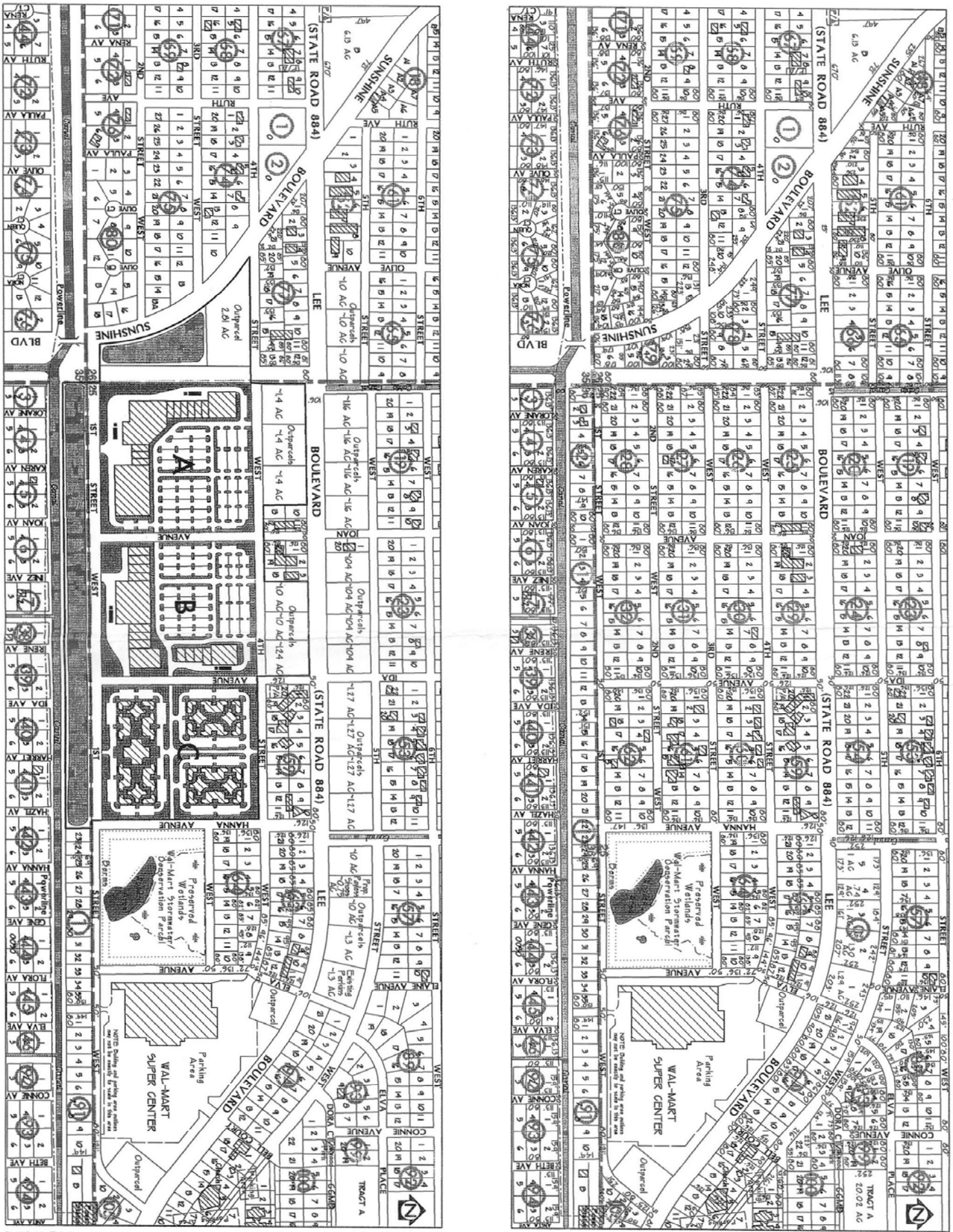
Lee Boulevard has emerged as a prime commercial location; its widening to six lanes is imminent due to high traffic volumes and the absence of other continuous east-west routes. Land near the intersection of Lee with Sunshine Boulevard is some of the most centrally located and accessible property in Lehigh Acres. Only a small amount of land was set aside for commercial purposes at this prime location, although a commercial strip was laid out on both sides of Lee Boulevard about 250 feet deep.

Under current Lee County planning standards, major community shopping centers must be located in such a manner as to provide direct access to two arterial roads. The new Wal-Mart store, about one mile east of the intersection of Sunshine and Lee, was able to meet this requirement by improving 1st Street and extending it westward to meet Sunshine. This extension will allow shoppers coming up Sunshine to use 1st Street for access without going through the difficult intersection with Lee Boulevard. This arrangement would also provide similar benefits to other land located west of Wal-Mart. See the top half of Figure 10.7 for a map of existing conditions.

The bottom half of this figure illustrates additional commercial development that could be accommodated if nine blocks of residential lots were consolidated. Under this plan, the north-south streets (Joan, Ida, and Hanna) would be retained to provide access to Lee Boulevard. Two east-west streets (2nd and 3rd) would be eliminated. The result would be three large commercial blocks averaging 17 acres each. The existing commercial strip along the south side of Lee would be configured as outparcels of about an acre each. The result would be a development pattern like a typical new community shopping center built behind outparcels along a major road, although visibility from Lee Boulevard would be somewhat blocked if every outparcel were intensely developed. Distinctive signage on Lee at Joan or Ida would be important.

Each large commercial block could be developed independently or as a unified business park. The arrangement shown includes typical community shopping centers on Blocks A and B and an office park on Block C. Many other configurations would be possible, including the creation of a regional mall or a new downtown area.

Block C on this plan already contains a number of homes and could be eliminated from this plan, perhaps by moving the office park onto Block B. This would avoid potentially high acquisition costs, but would leave the homeowners in the midst of commercial development with no way to profit from their favorable commercial location.



LEHIGH ACRES Commercial Land Use Study Area 3

S 25,26,35,36 - T 44 S - R 26 E

Total Site Area A = 17.94 AC B = 16.38 AC C = 16.62 AC

Total Floor Space A = 175,000 S.F. (Retail) B = 149,000 S.F. (Retail) C = 165,000 S.F. (Office)

Figure 10.7

This plan would produce a large and well-located commercial complex. Due to the many landowners involved, it would almost certainly require the use of eminent domain powers to acquire at least some of the lots. Acquisition costs could be high, especially if the existing homes were included. But the location would be superb and the market may be ready for initial development in the not-too-distant future, unlike some of the other alternatives which are located in outlying areas. Because of its location near relatively high levels of residential development in recent years, however, a decision would have to made to proceed fairly soon; otherwise more homes may be built on these lots in coming years, decreasing or eliminating this concept's feasibility.

Area 4 — Grant Boulevard at Sunrise Boulevard

The southeastern portion of Lehigh Acres has a better network of potential arterial roads than the rest of the community, although development levels are currently very slow. The intersection of these arterials typically includes standard single-family lots in every quadrant. The intersection of Grant Boulevard at Sunrise Boulevard is typical (see the top half of Figure 10.8) and has been used to illustrate the potential for providing very small-scale commercial opportunities within neighborhoods. There are many similar intersections, and since only a small number of lots that would be required to implement this concept, the specific locations would not need to be chosen in advance.

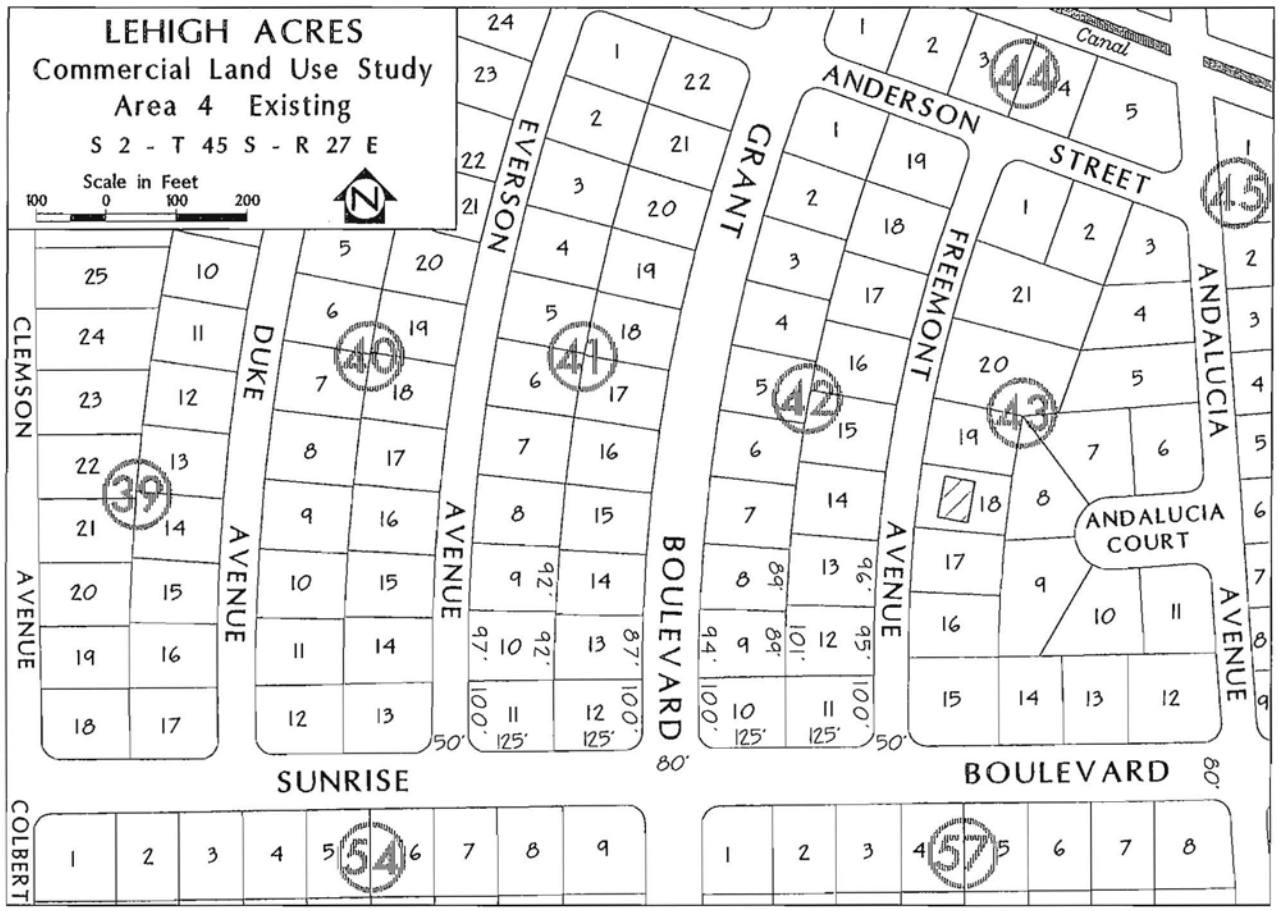
The bottom half of Figure 10.8 illustrates low-intensity commercial development on the northeast and northwest quadrants of the intersection of Grant and Sunrise. Six lots in each quadrant were combined in this plan. The commercial buildings would be larger than private homes but would be less intrusive if built with sloped roofs as shown. Total floor space in each quadrant would be a little smaller than the new Lee Boulevard Center (located next to RE/MAX Classic Properties), with about 14,750 square feet shown in Figure 10.8 in the combined quadrants.

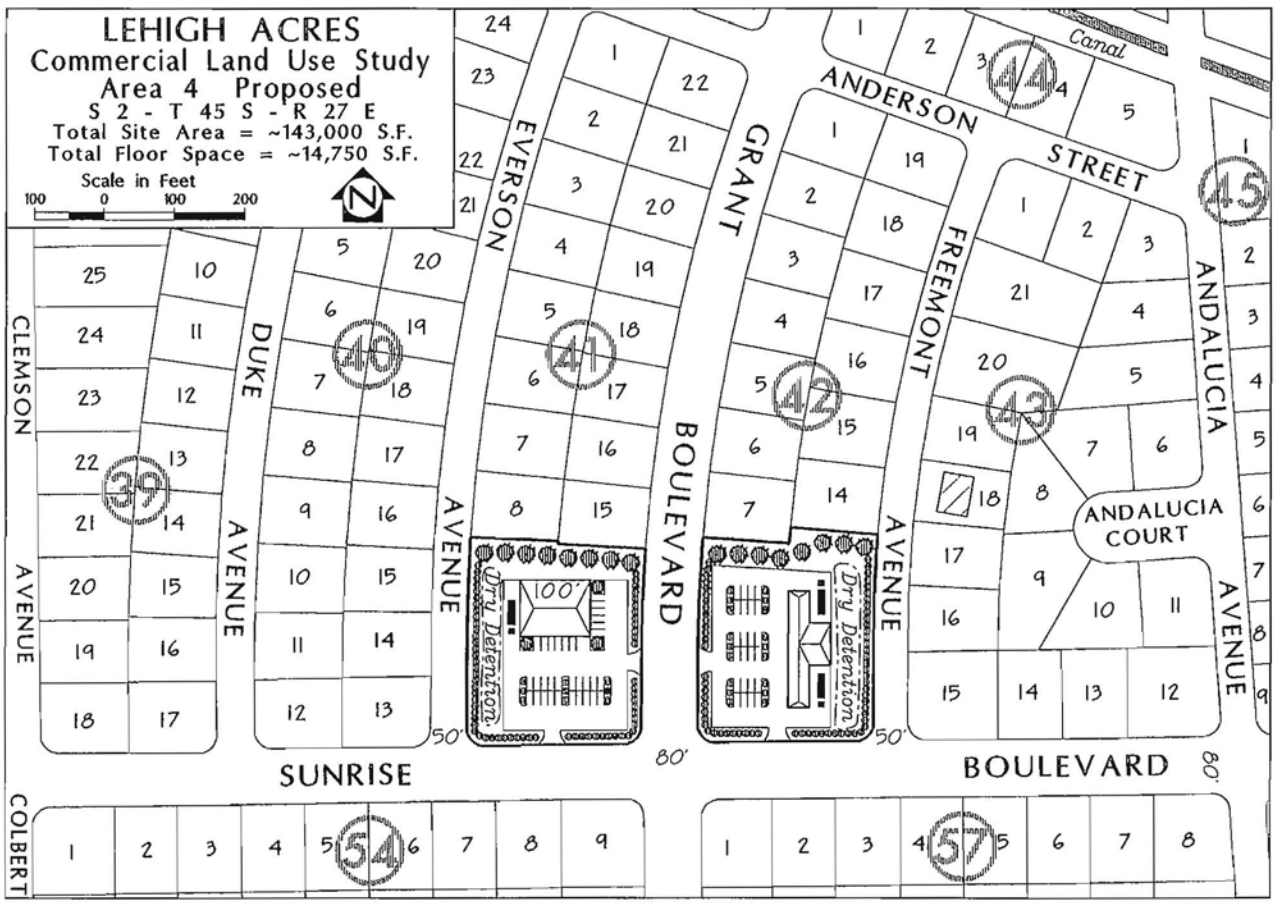
The keys to making this kind of development more welcome in neighborhoods might include limitations on building size and construction style; restrictions on the kinds of uses that could be placed there; and perhaps some limitations on the hours of operation. For instance, offices in a pleasant home-like building could easily be accommodated, while a typical 24-hour convenience store would not.

Area 5 — Myers Court (in Greenbriar)

The Greenbriar portion of Lehigh Acres lies at its northern edge. It was developed more recently than the rest of Lehigh and was designed to comply with many of today's environmental and planning standards. Relatively few homes have been built there, except along its westerly edge.

Figure 10.8


LEHIGH ACRES
Commercial Land Use Study
Area 4 Existing
S 2 - T 45 S - R 27 E
Scale in Feet
100 0 100 200
N
Canal
ANDERSON
STREET
EVERSON
GRANT
FREEMONT
ANDALUCIA
AVENUE
CLEMSON
DUKE
BOULEVARD
ANDALUCIA COURT
SUNRISE
BOULEVARD
COLBERT
39
40
41
42
43
44
45
54
57


LEHIGH ACRES
Commercial Land Use Study
Area 4 Proposed
S 2 - T 45 S - R 27 E
Total Site Area = ~143,000 S.F.
Total Floor Space = ~14,750 S.F.
Scale in Feet
100 0 100 200
N
Canal
ANDERSON
STREET
EVERSON
GRANT
FREEMONT
ANDALUCIA
AVENUE
CLEMSON
DUKE
BOULEVARD
ANDALUCIA COURT
Dry Detention
Dry Detention
100'
SUNRISE
BOULEVARD
COLBERT
39
40
41
42
43
44
45
54
57

One entire block of lots around Myers Court off Redmont Avenue (see the top half of Figure 10.9) was selected for another illustration of small-scale commercial development within a neighborhood. This block is partially surrounded by wide but shallow drainage swales (quite unlike Lehigh's typical deep canals). These swales support attractive marsh vegetation, suggesting the possibility of a restaurant with a pleasant view. The bottom half of Figure 10.9 illustrates the conversion of Myers Court in this way.

Area 6 — Daniels Extension at S.R. 82

Daniels Parkway is a six-lane major arterial road from U.S. 41 leading to the Southwest Florida International Airport. Lee County plans to extend Daniels from its current terminus at Gateway through to S.R. 82, tieing into a realignment of the southerly end of Gunnery Road.

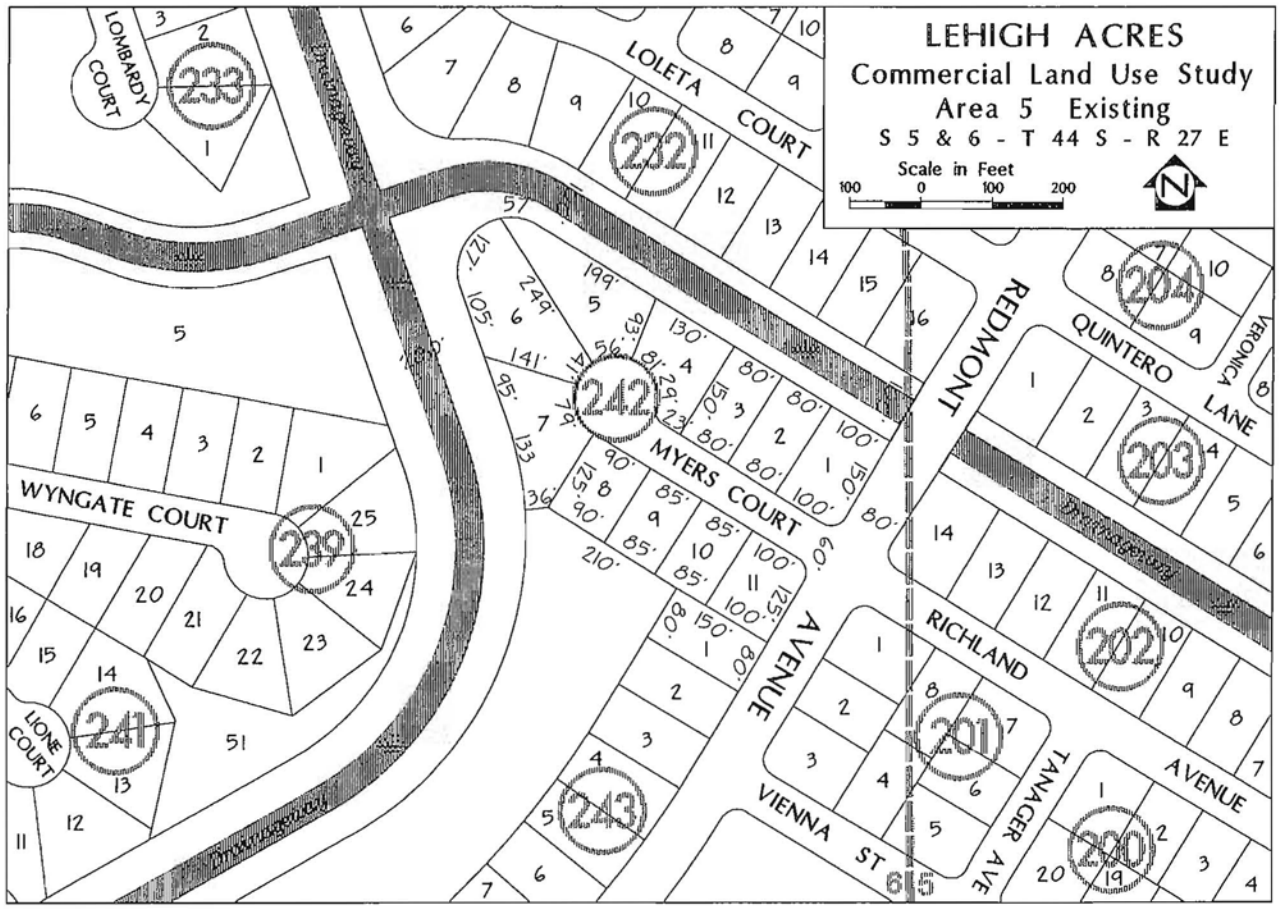
The completion of the Daniels Parkway Extension will provide excellent access between Lehigh Acres and south Lee County by about the year 2000. Right-of-way has already been acquired. Its opening will change the travel patterns of many Lehigh Acres residents in the same manner as did the opening of the Colonial Boulevard Extension. It will also make a home in Lehigh Acres more convenient to those working in south Lee County but now living elsewhere.

Much of the land along the alignment for this extension has severe development limitations. These include prohibitions on residential development because of aircraft noise, and severe restrictions on other urban uses because of its location with the Groundwater Resource/Density Reduction category in the Lee Plan. These restrictions currently apply even to the land directly across from Lehigh Acres where Daniels will meet Gunnery Road. If the current regulations were modified slightly, this intersection could become a significant commercial center. Figure 10.10 illustrates current conditions.

Figure 10.11 shows the same location with the addition of large commercial developments in the southwest and southeast quadrants. The southwest quadrant is shown with an office park of about 165,000 square feet of space, plus eleven sizable outparcels. The southeast quadrant is shown as a large community or small regional shopping center of about 370,000 square feet, plus seven outparcels, three of which are very large. Both southerly quadrants have been farmed for many years. Some wetlands soil types are present, especially in the southwesterly quadrant, and would affect a final development plan for these sites.

This location is remote today and will not even be a major intersection for about four more years. But traffic on the Daniels Parkway Extension will increase continuously as Lehigh Acres develops. At some point this intersection will serve a

Figure 10.9


LEHIGH ACRES
Commercial Land Use Study
Area 5 Existing
S 5 & 6 - T 44 S - R 27 E
Scale in Feet
100 0 100 200
N
LOMBARDY COURT
LOLETA COURT
REDMONT
QUINTERO
VERONICA LANE
WYNGATE COURT
MYERS COURT
RICHLAND
AVENUE
TANAGER AVE
VIENNA ST
LIONE COURT
233
232
242
204
203
239
241
202
201
243
200

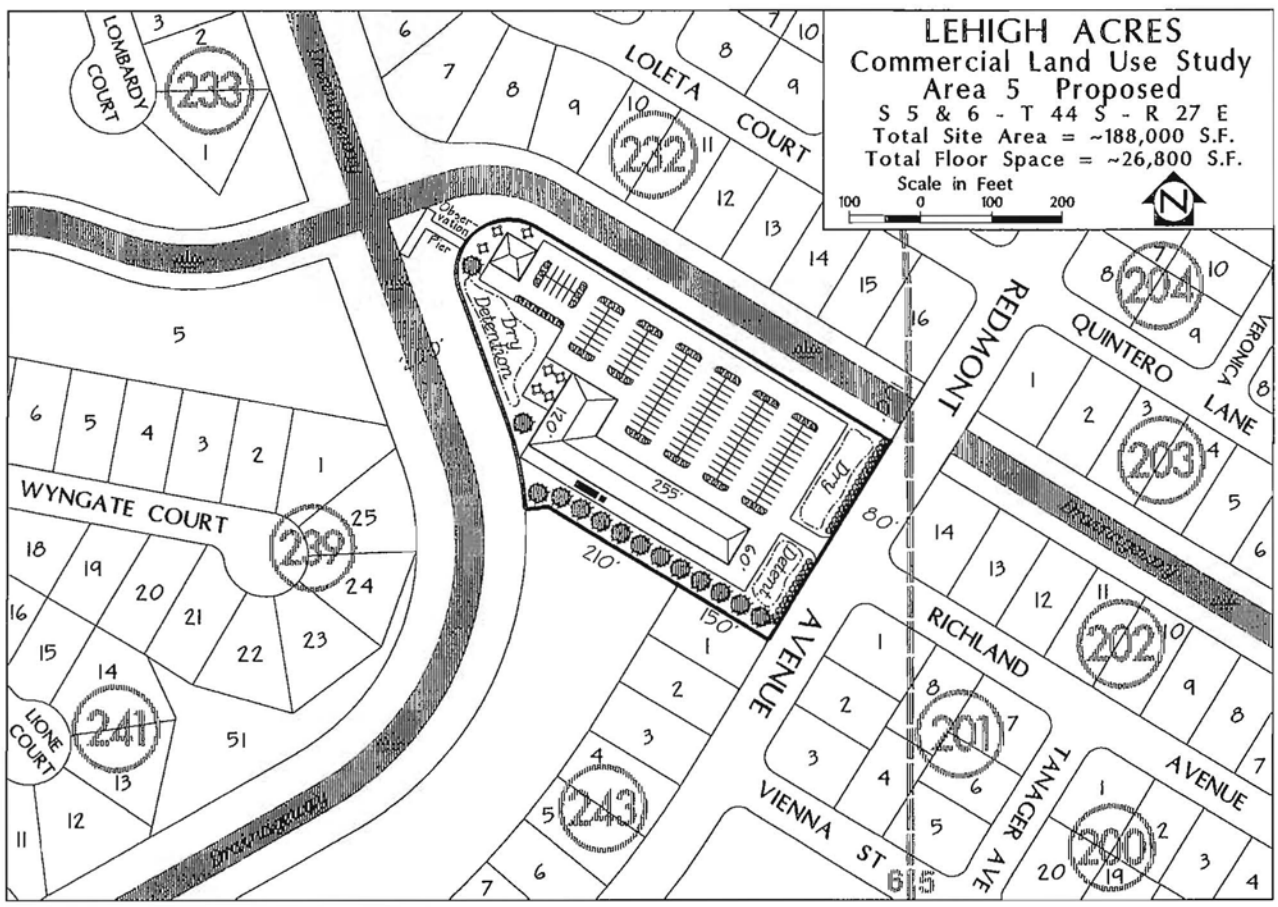

LEHIGH ACRES
Commercial Land Use Study
Area 5 Proposed
S 5 & 6 - T 44 S - R 27 E
Total Site Area = ~188,000 S.F.
Total Floor Space = ~26,800 S.F.
Scale in Feet
100 0 100 200
N
Observation Pier
Dry Detention
Dry
Detention
120'
255'
60'
210'
LOMBARDY COURT
LOLETA COURT
REDMONT
QUINTERO
VERONICA LANE
WYNGATE COURT
RICHLAND
AVENUE
TANAGER AVE
VIENNA ST
LIONE COURT
233
232
204
203
239
241
202
201
243
200

Figure 10.10

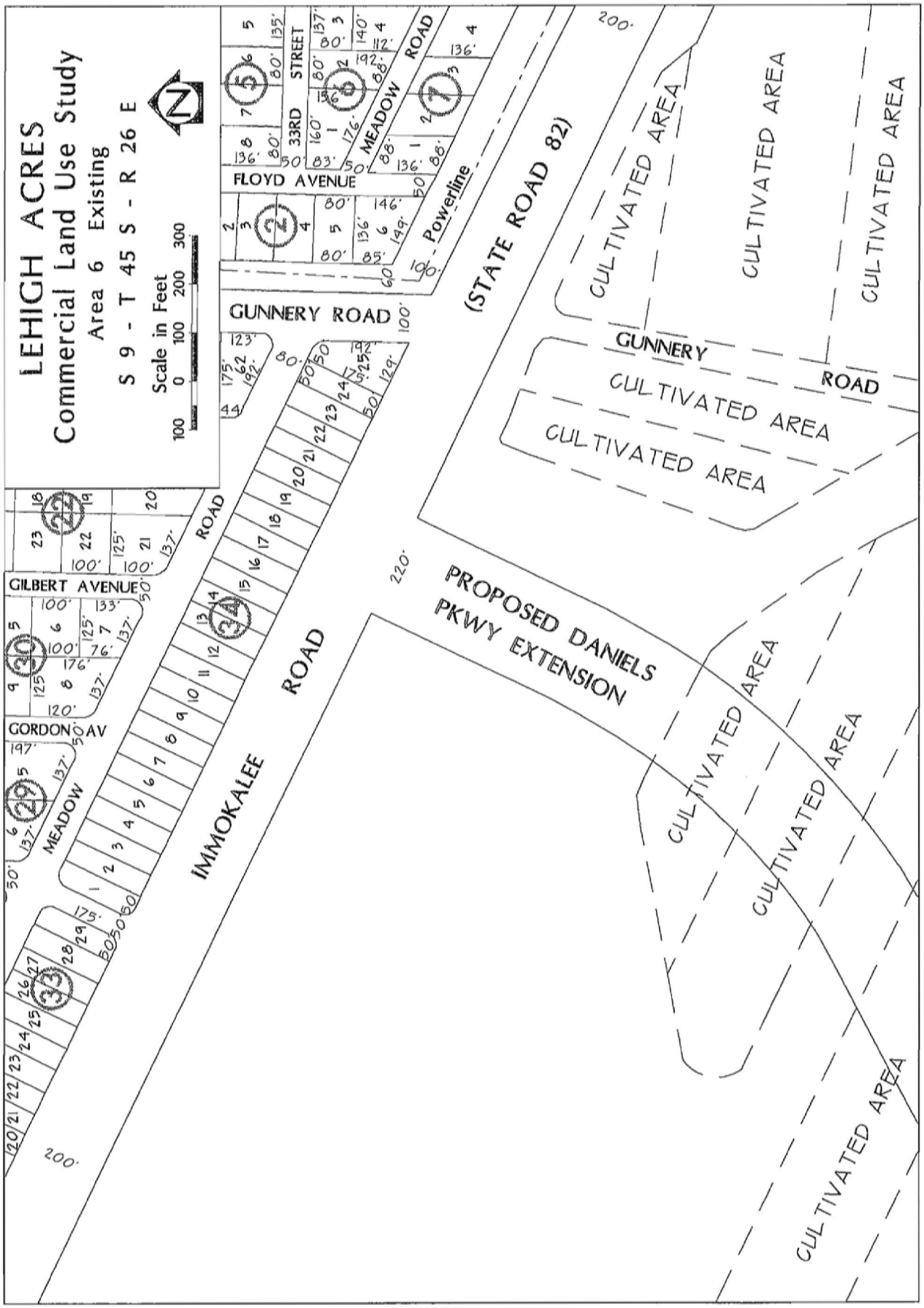
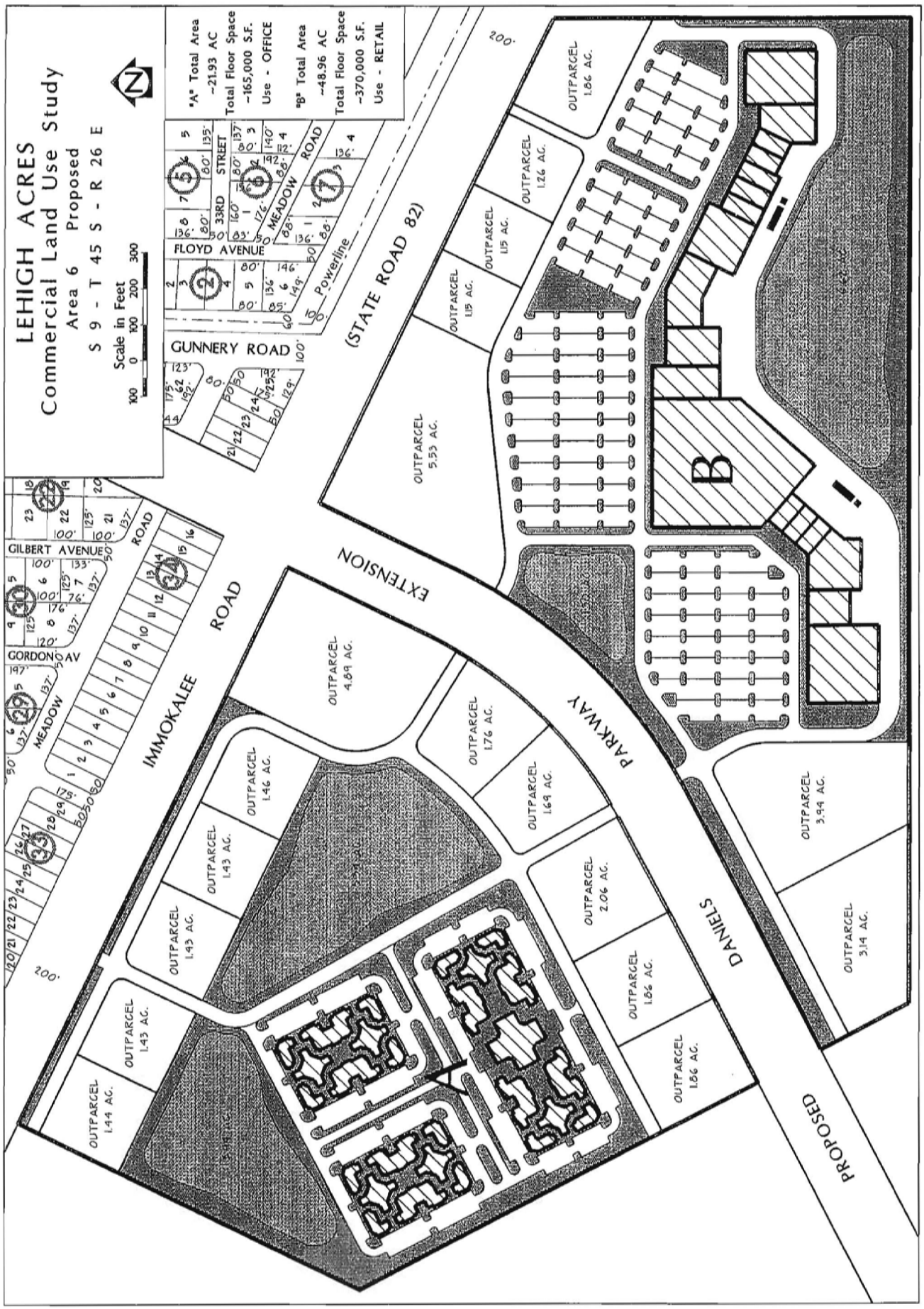

LEHIGH ACRES
Commercial Land Use Study
Area 6 Existing
S 9 - T 45 S - R 26 E
Scale in Feet
0 100 200 300
100
N
33RD STREET
MEADOW ROAD
FLOYD AVENUE
Powerline
GUNNERY ROAD
(STATE ROAD 82)
CULTIVATED AREA
GUNNERY ROAD
GILBERT AVENUE
GORDON AV
MEADOW ROAD
IMMOKALEE ROAD
PROPOSED DANIELS PKWY EXTENSION

Figure 10.11


LEHIGH ACRES
Commercial Land Use Study
Area 6 Proposed
S 9 - T 45 S - R 26 E
Scale in Feet
"A" Total Area
-21.93 AC
Total Floor Space
-165,000 S.F.
Use - OFFICE
"B" Total Area
-48.96 AC
Total Floor Space
-370,000 S.F.
Use - RETAIL
FLOYD AVENUE
GUNNERY ROAD
GILBERT AVENUE
GORDON AV
MEADOW ROAD
33RD STREET
Powerline
(STATE ROAD 82)
IMMOKALEE ROAD
EXTENSION
PARKWAY
DANIELS
PROPOSED
OUTPARCEL 5.53 AC.
OUTPARCEL 1.15 AC.
OUTPARCEL 1.15 AC.
OUTPARCEL 1.26 AC.
OUTPARCEL 1.86 AC.
OUTPARCEL 4.89 AC.
OUTPARCEL 1.76 AC.
OUTPARCEL 1.69 AC.
OUTPARCEL 1.46 AC.
OUTPARCEL 1.43 AC.
OUTPARCEL 1.43 AC.
OUTPARCEL 1.43 AC.
OUTPARCEL 1.44 AC.
OUTPARCEL 2.06 AC.
OUTPARCEL 1.86 AC.
OUTPARCEL 1.86 AC.
OUTPARCEL 3.94 AC.
OUTPARCEL 3.14 AC.
B

great deal of traffic, especially Lehigh Acres commuters. Its location is marginal for regional shopping but could serve as an important neighborhood/community commercial site or business park. Development would not require any lot assembly or have direct impacts on existing residential neighborhoods. It is located over the westerly edge of a confluence of valuable aquifers, which may or may not serve as a development constraint depending on where shallow wellfields may be placed in the future.

Area 7 — Commerce Lakes Drive at S.R. 82

The most direct access from Daniels Parkway to Lehigh Acres at present is through Gateway and out to S.R. 82 on Commerce Lakes Drive. The intersection of Commerce Lakes and S.R. 82 is unremarkable at present (see Figure 10.12). On the north side lies the typical Lehigh Acres strip pattern of vacant commercially zoned lots. On the south side the developer of Gateway has approval for a large neighborhood convenience shopping area on land that is currently vacant. The approval of the original Gateway master plan predated the 1984 Lee Plan and is therefore not constrained by the Lee Plan's commercial site location standards.

Figure 10.13 illustrates 80 acres of commercial development in both southerly quadrants of this intersection. This drawing shows about 500,000 square feet of total building space and is one of several concepts that have been considered by the original developers of Gateway. Future residential areas will adjoin this site, but they will be developed by the same owners, who will have every incentive to provide appropriate separation between any incompatible uses.

Commercial development as shown in this figure is not contingent on any changes to Lee County regulations. It is included here as another example of how Lehigh Acres might be served by commercial development immediately outside. Similar commercial opportunities exist with the new boundaries of the city of Fort Myers where the Colonial Extension meets Lee Boulevard.

Area 8 — Gunnery at S.R. 82

This intersection contains the greatest concentration of strip commercial zoning in Lehigh Acres and was selected to experiment with Concept F, the rehabilitation of the commercial strip by reversing the access to fragmented commercial lots.

This opportunity is available because every lot in the commercial strips along S.R. 82 and Gunnery Road has the advantage of two frontages, the second being a local street parallel to S.R. 82 and Gunnery. What was apparently intended only as secondary access could be converted into the primary access to the entire commercial strip, eliminating some of the more negative aspects of the strip:

Figure 10.12

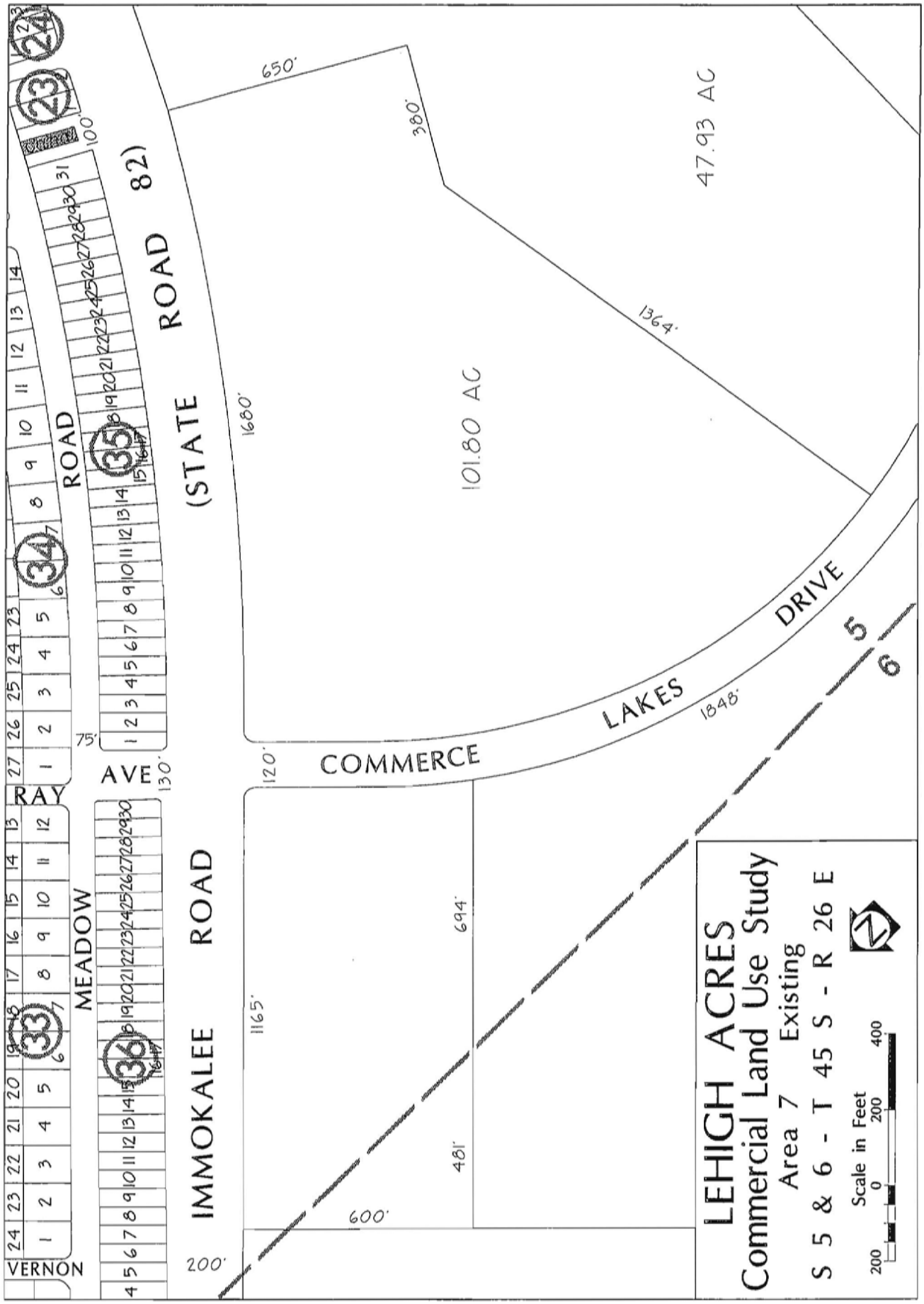
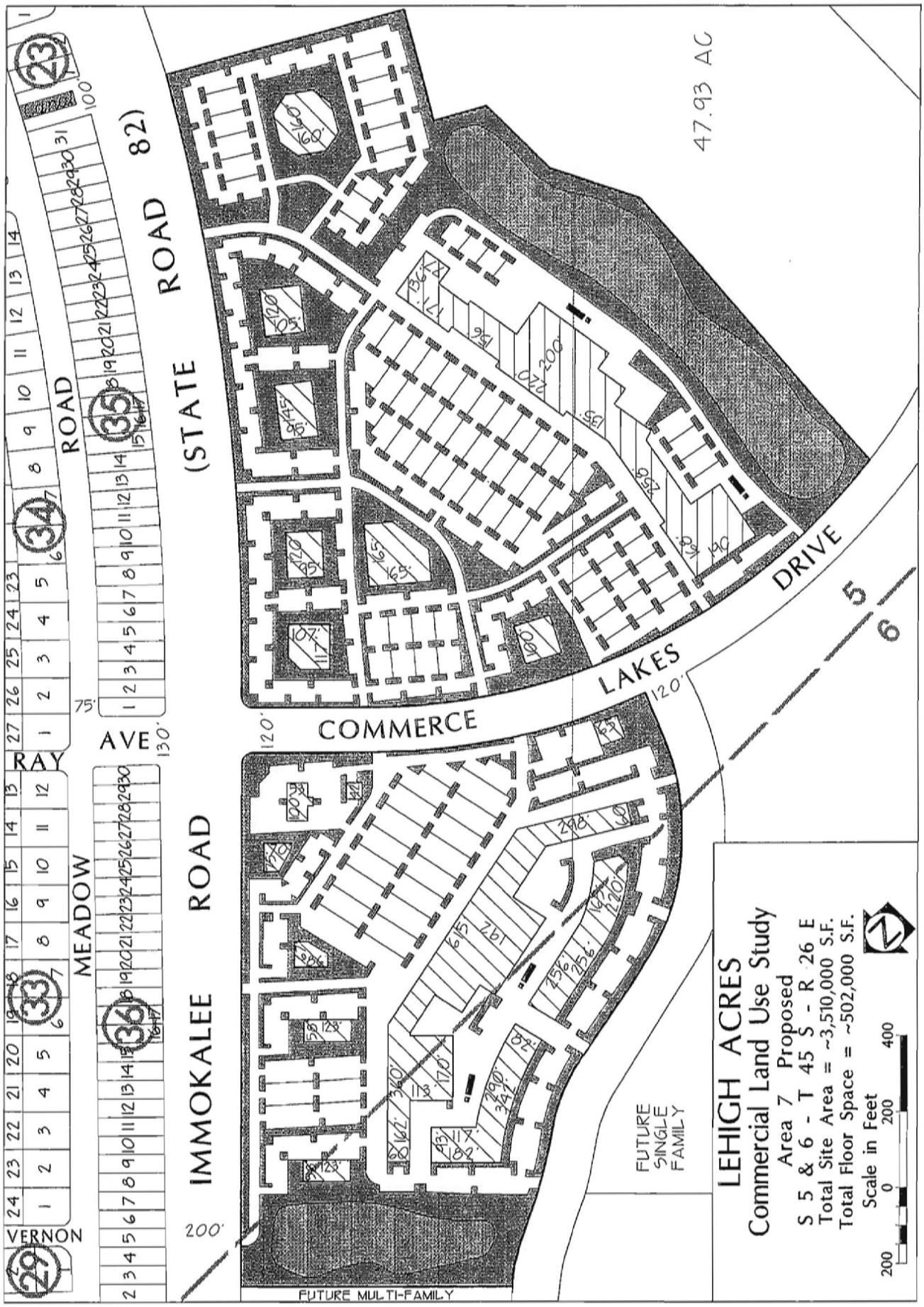

LEHIGH ACRES
Commercial Land Use Study
Area 7 Existing
S 5 & 6 - T 45 S - R 26 E
Scale in Feet
200 0 200 400
IMMOKALEE ROAD
(STATE ROAD 82)
COMMERCE LAKES DRIVE
VERNON RAY
MEADOW AVE
101.80 AC
47.93 AC
650'
380'
1364'
1680'
1848'
1165'
694'
481'
600'
200'
120'
75'
130'
100'

Figure 10.13

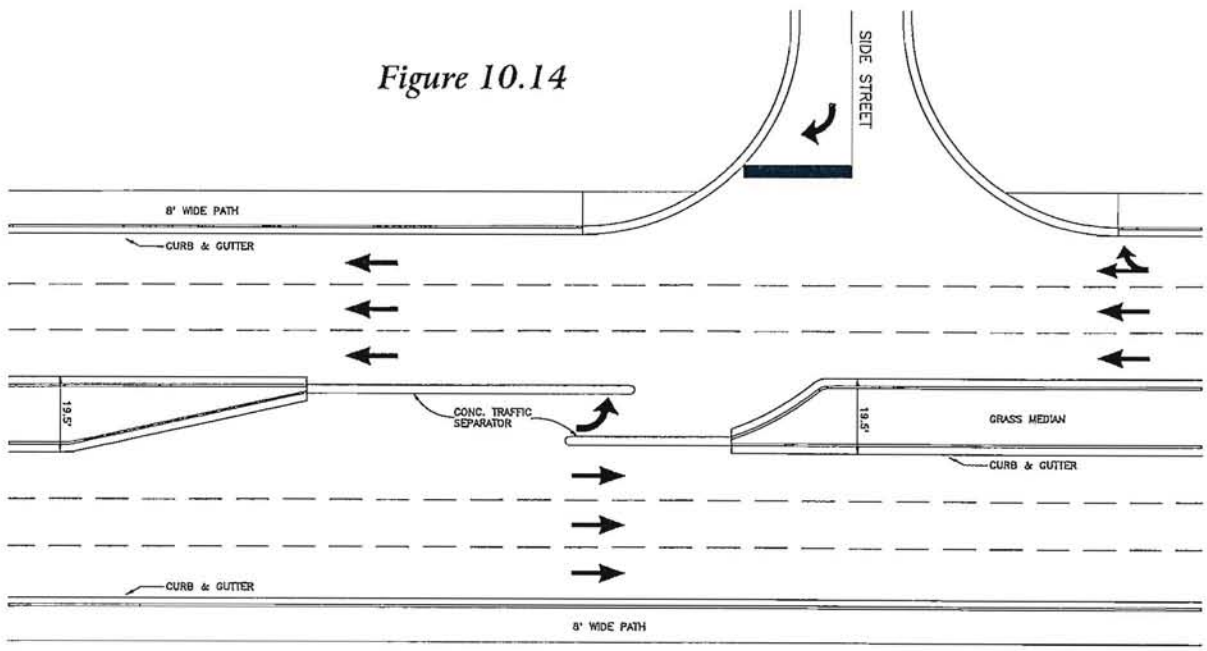

LEHIGH ACRES
Commercial Land Use Study
Area 7 Proposed
S 5 & 6 - T 45 S - R 26 E
Total Site Area = ~3,510,000 S.F.
Total Floor Space = ~502,000 S.F.
Scale in Feet
200 0 200 400
IMMOKALEE ROAD (STATE ROAD 82)
COMMERCE LAKES DRIVE
VERNON RAY AVE
MEADOW ROAD
FUTURE SINGLE FAMILY
FUTURE MULTI-FAMILY
47.93 AC
5
6

- The inconvenience of shopping at only one store before having to travel back out onto a busy arterial road;
- The severe restrictions on traffic flow (and unsafe driving conditions) caused by many drivers entering and exiting from businesses on frequent driveways; and
- The ultimate elimination of access to most businesses for half of the passing vehicles that will occur when a restrictive median is installed during future road widenings.

The latter problem is best illustrated with a drawing prepared to illustrate the effects of the upcoming widening of Lee Boulevard. Figure 10.14 shows a restrictive median placed between the eastbound and westbound travel lanes, and a directional left median opening. This type of opening allows a left turn into a single side street at about 660-foot intervals, but it does not allow a left turn from that side street back onto the main road. All other lots along the main road will lose access for their left-turning customers. This is a serious burden for most commercial uses, and especially so if the public cannot conveniently reach the business in some other convenient way.

Under Concept F, all lots in the commercial strip would have their access from the rear. New public side streets would be built to allow motorists to reach the rear access road through full intersection openings (spaced about every ¼ mile) or a directional opening between each full intersection. Each opening would allow traffic on the main road to reach the rear access road.

Figure 10.14



In order to convert the parallel street into a useful primary access, several steps would be required:

- County and state regulations would have to be modified to identify the desired circulation pattern. The Florida Department of Transportation would have to adopt a "corridor access management plan" for S.R. 82 which would identify the specific long-term access points between S.R. 82 and Meadow Road and prohibit additional accesses from S.R. 82 to individual lots.[22] Lee County would have to do the same along Gunnery Road (although the Gunnery commercial strip may ultimately be acquired for future four-laning of Gunnery Road).
- The Lee County Department of Transportation and Engineering would have to inspect the construction and condition of Meadow and Gretchen to determine if they could withstand the additional traffic they would ultimately carry. Roadbed reconstruction might be required.
- Lee County would have to develop a specific plan to create the additional connections that would be required between the arterial road and Meadow/Gretchen.

This concept has been explored with engineers and planners of Lee County and the Florida Department of Transportation. This concept is a feasible and desirable approach for making the best use of some of the more desirable commercial strips along S.R. 82 and Gunnery Road, and is illustrated in Figures 10.15 and 10.16.

Figure 10.15 shows the existing conditions north and west of the intersection of S.R. 82 and Gunnery Road (and the approximate alignment of the extension of Daniels Parkway). Both S.R. 82 and Gunnery are two-lane undivided arterial roads at this time, as are Meadow Road and Gretchen Avenue. Roads that actually exist today are shown with heavy black lines. It is apparent from this figure how few connections currently exist between the two arterial roads and Meadow/Gretchen.

Figure 10.16 shows the same area but without the lot lines between the individual strip commercial lots. Instead, lots that are within about 330 feet of one of the existing or planned connections are shown with cross-hatching. These are the lots that may meet today's Lee Plan standards for "minor commercial" development. All of the other lots are beyond the 330-foot limit and are shown with single hatching. It is these other lots that could be reclaimed for commercial uses if additional connecting roads were constructed, for instance along the alignments suggested with heavy dashed lines in Figure 10.16.

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[22]Pursuant to Section 14-97.004(5), Florida Administrative Code

Figure 10.15

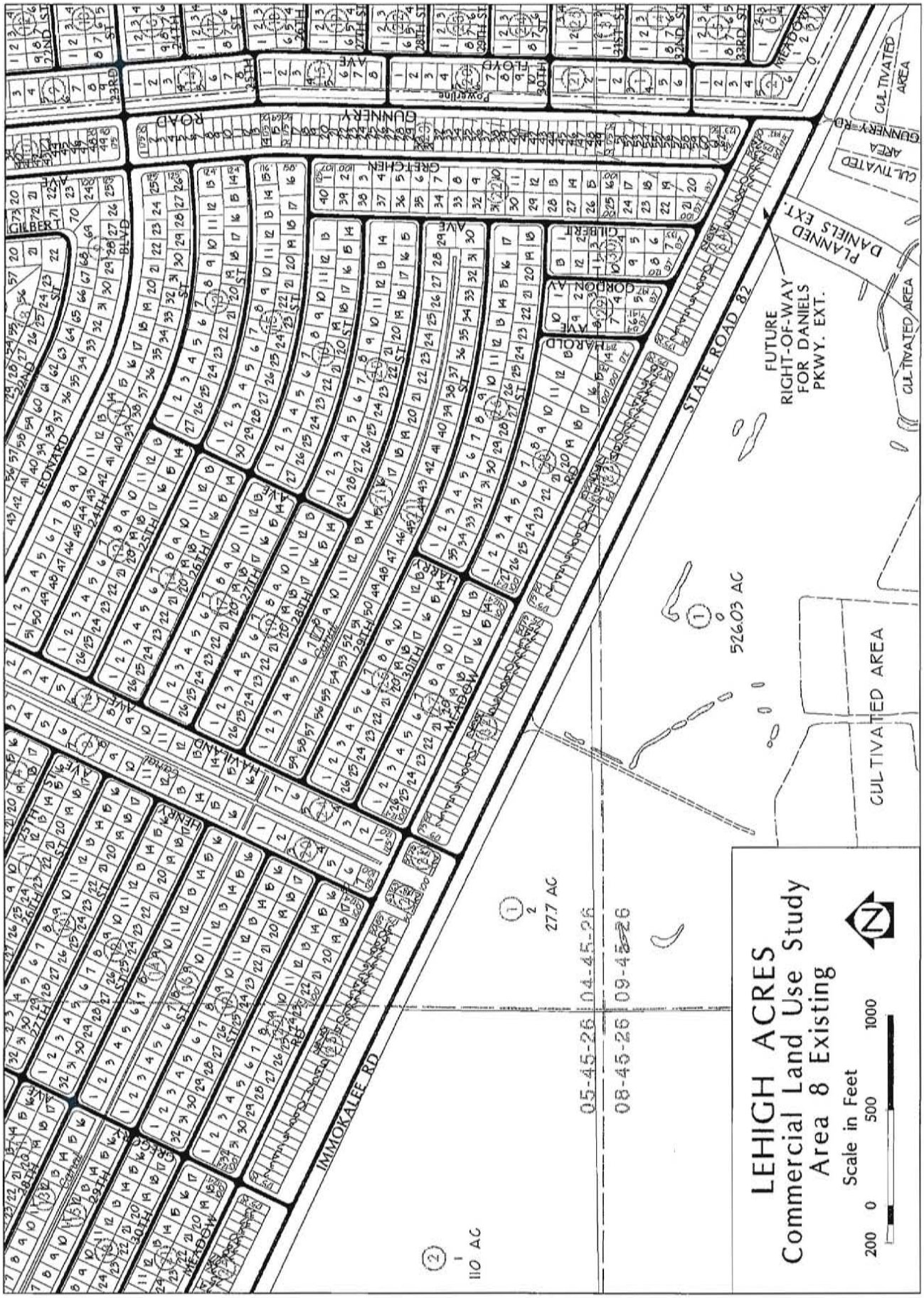
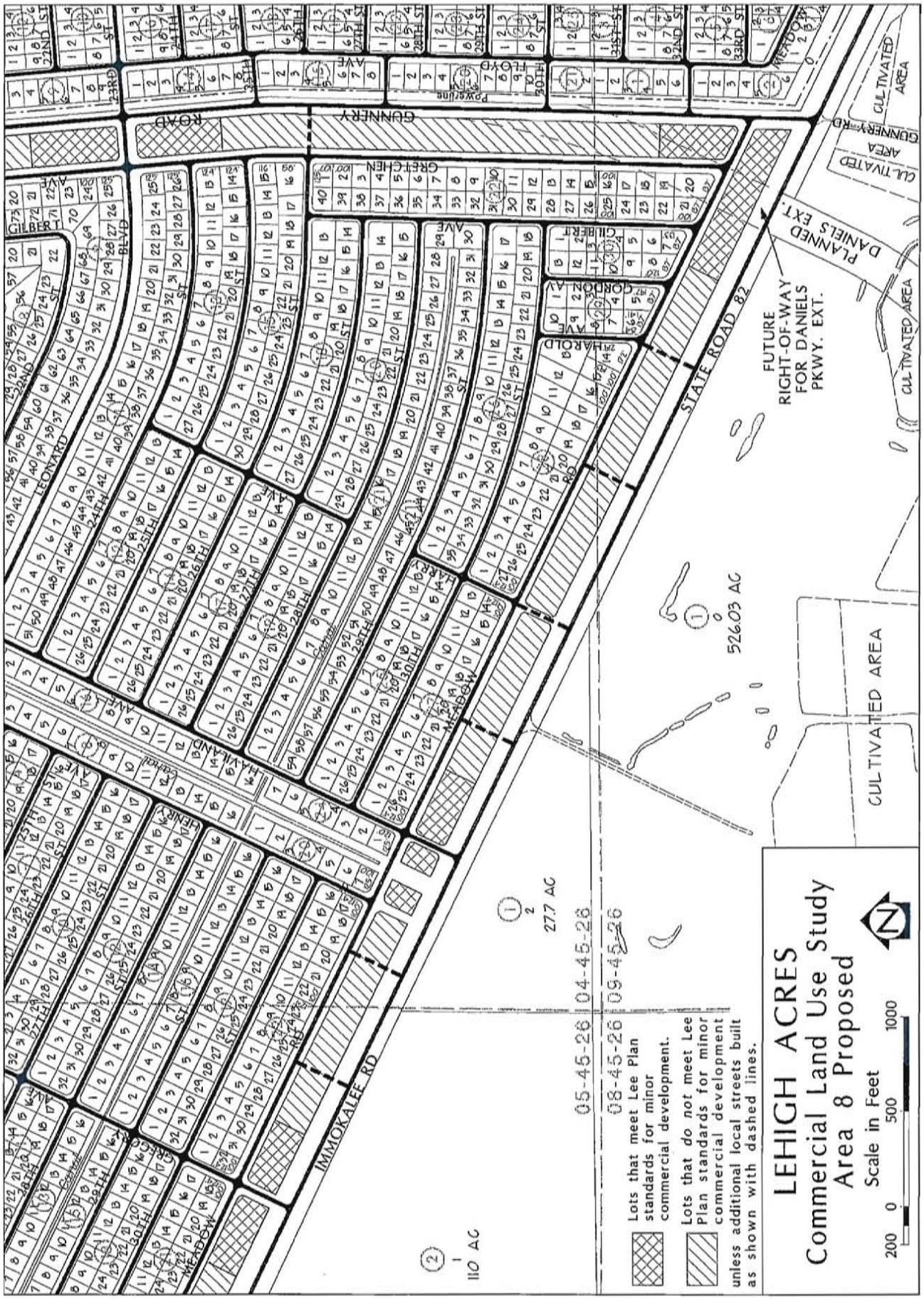

LEHIGH ACRES
Commercial Land Use Study
Area 8 Existing
Scale in Feet
200 0 500 1000
STATE ROAD 82
IMMOKALEE RD
GUNNERY ROAD
FUTURE RIGHT-OF-WAY FOR DANIELS PKWY. EXT.
PLANNED DANIELS EXT.
CULTIVATED AREA
1 2 277 AC
1 526.03 AC
2 1 110 AC
05-45-26
04-45-26
08-45-26
09-45-26

Figure 10.16


LEHIGH ACRES
Commercial Land Use Study
Area 8 Proposed
Scale in Feet
200 0 500 1000
Lots that meet Lee Plan standards for minor commercial development.
Lots that do not meet Lee Plan standards for minor commercial development unless additional local streets built as shown with dashed lines.
STATE ROAD 82
FUTURE RIGHT-OF-WAY FOR DANIELS PKWY. EXT.
PLANNED DANIELS EXT.
CULTIVATED AREA
526.03 AC
27.7 AC
110 AC
IMMOKALEE RD
GUNNERY ROAD
LEONARD BLVD
GILBERT BLVD
HAVILAND AVE
HAROLD AVE
GORDON AVE
MEADOW
05-45-26
04-45-26
08-45-26
05-45-26

An implementing plan would be required, to accomplish at least the following tasks:

- to identify exactly what land would be needed for these new connecting links;
- to acquire that land (either by donations, purchases, or eminent domain);
- to prepare the engineering design for the additional links;
- to plan for the construction of these links, either directly using tax-increment funds or indirectly through county regulations; and
- to develop the necessary changes to county and state regulations.

11. Selection Priorities

The six concepts for providing additional commercial land were based on a preliminary examination of the specific constraints within Lehigh Acres. During the selection and analysis of the eight actual site configurations, further opportunities and constraints were identified. Additional ideas were suggested following an initial public presentation of these ideas in Lehigh Acres on July 12, 1995, and a second presentation on February 21, 1996.

This section presents the synthesis and ranking of the most promising ideas for resolving the shortage of commercial land in Lehigh Acres. It articulates specific priorities for the next stage of analysis, which was to comprehensively identify a commercial land-use pattern to match future residential growth. These priorities are ranked so as to take advantage of the simplest solutions first (such as modifying regulations) and then progressing to the more complex solutions as far as may be needed to provide a reasonable balance of commercial land in the future.

— Priority #1: Modify Unneeded Regulatory Constraints

Today's Lee Plan standards for commercial growth are the same in Lehigh Acres as throughout Lee County, but the contexts are quite different. In Lehigh Acres, the current standards are needlessly restrictive. An example is a suitable commercial location that is now precluded only because current regulations have not been sufficiently refined for Lehigh Acres. Regulations are easier to change than fragmented ownership, unsuitable soils, or an inadequate road network.

— Priority #2: Give Priority to Parcels Under Unified Ownership

Any remaining unplatted tracts, or platted tracts whose lots have never been sold off, must be recognized as valuable resources. These tracts can provide a relatively simple means of retrofitting Lehigh Acres for its shortage of commercial land (as well as for future schools, parks, and multifamily housing). Some of these tracts may not have been selected for commercial development if today's lot ownership patterns didn't already exist. But under 1996 conditions, some can provide large and perfectly acceptable commercial locations.

— Priority #3: Reconfigure Existing Commercial Strips

Some of the existing commercial strips are of little real value, but others are in prime locations for actual commercial uses. Many have lots that are deep enough for at least some commercial uses. Positive attributes for commercial strips include: near an existing or future major intersection; lot depths of 175 feet or more; ownership that is not fragmented; or in a location where no other commercial option is viable. At the best locations, the strips could be deepened further to provide neighborhood or community shopping center sites. At somewhat less favorable locations, the

existing strip might be retained in its present form but without today's prohibitions on retail uses.

Some parts of these strips are not at all favorable for most commercial uses: the lots are very shallow; ownership is fragmented; or better commercial opportunities are available nearby. An alternative plan should be developed for these unfavorable locations. This plan might include office or multifamily uses with access limited to Meadow Road (along S.R. 82) or Gretchen Lane (along Gunnery Road).

— Priority #4: Enable Neighborhood-Scale Commercial Uses

The small-scale commercial alternative would be more likely to succeed if it were officially sanctioned in county regulations. This could be done through a Lee Plan policy and either a special zoning district or a redevelopment overlay district. In either case, general policy guidance could be provided without identifying precise locations.

Even if successful, this alternative is likely to provide a relatively small amount of additional commercial space. It would be a useful supplement but probably not a serious alternative to the other approaches evaluated in this study.

— Priority #5: Fill Remaining Gaps Through Lot Assembly

After experimenting with the higher priorities above, and after taking into account the usefulness of the off-site options (e.g., Daniels, Commerce Lakes, Colonial intersections with S.R. 82), some gaps may still remain where there are insufficient commercial alternatives. To fill these gaps, the difficult task of lot assembly may be required. Private land assembly should be encouraged, and the very best remaining locations should be considered for governmental assembly. The use of the CRA's powers of eminent domain would be required in most cases, and acquisition costs may be high. Alternative cooperative arrangements should be considered prior to the use of eminent domain, such as voluntary purchases, lot swaps, or development agreements with existing owners or participating developers.

12. Potentially Suitable Commercial Land

Based on the five preliminary criteria described in the previous section, an initial identification was made of specific parcels of land that are potentially suitable for future commercial uses. This search focused on larger parcels of land in and around Lehigh Acres; small parcels (less than about five acres) were not considered unless they were part of a larger commercial strip.

12(a) Wetlands Limitations

The earliest stage of this identification required a broad screening of potential sites for potential wetland limitations. The usual method for screening such a large area would be through reference to pre-existing wetlands mapping, such as the National Wetlands Inventory or the Soil Survey of Lee County prepared by the Soil Conservation Service. However, due to the extensive drainage system that was created by the original developers of Lehigh Acres (and now maintained by the East County Water Control District), a majority of the original wetlands no longer exist at all. Others have been altered so as to have few if any wetland functions remaining. The Lee Plan's future land use map also contains good broad-scale mapping of wetlands, but in Lehigh Acres it shows only a limited portion of the remaining wetlands and was inadequate for use in this process.

A specific screening methodology was therefore developed for this study. It uses the very detailed mapping in the Soil Survey of Lee County, but modifies it to reflect the observed effects of the Lehigh Acres drainage system since that survey was published in 1984. The soil survey identified 13 soil types as likely to support wetlands in their natural state, as shown in Table 12-1. Of these soil types, only seven were identified as often supporting wetlands today (or likely to contain deep muck soils that would physically preclude the construction of buildings or roads). These seven types were identified by comparing the soils maps to wetlands that have been positively identified in recent years through Lee County's development review process.

The outlines of these seven soil types were then used to identify potential wetlands at other locations throughout Lehigh Acres. There are limitations to any methodology that does not include detailed site inspections of all potential sites, but given the amount of land under consideration, this methodology was successful in ruling out soil limitations on most of the sites while identifying several sites where soil limitations *may* exist. Those sites should be inspected by qualified county personnel prior to formal adoption of the land-use changes recommended in this study.

Table 12-1

Types of Wet Soils Found in Lehigh Acres			
SOIL NUMBER AND TYPE	*GENERAL DESCRIPTION*	*PONDING*	*LIKELY STILL WET?*
27, Pompano fine sand, depressional	poorly drained soil in depressions	3 months	YES (some but not all areas)
39, Isles find sand, depressional	very poorly drained soil in depressions	3 to 6 months	YES
40, Anclote sand, depressional	very poorly drained soil in isolated depressions	more than 6 months	YES
41, Valkaria fine sand, depressional	poorly drained soil in depressions	3 months	
44, Malabar fine sand, depressional	poorly drained soil in depressions	4 to 6 months or more	
45, Copeland sandy loam, depressional	very poorly drained soil in depressions	3 to 6 months	YES
49, Felda fine sand, depressional	poorly drained soil in depressions	3 to 6 months or more	
51, Floridana sand, depressional	very poorly drained soil in depressions	3 to 6 months	YES
53, Myakka fine sand, depressional	poorly drained soil in depressions	3 to 6 months	
62, Winder sand, depressional	poorly drained soil in depressions	3 to 6 months	
73, Pineda fine sand, depressional	very poorly drained soil in depressions	3 to 6 months or more	
19, Gator muck	very poorly drained organic soil	3 to 6 months	YES
20, Terra Ceia muck	very poorly drained organic soil	3 to 6 months	YES

12(b) Identification of Potentially Suitable Commercial Land

A preliminary map of potential commercial sites was then created. For this initial stage of analysis, a reasonable goal for aggregate commercial acreage was 125% of the forecasted demand for commercial land.[23] Table 12-2 summarizes the expected demand for commercial acreage in 2020 as 452 acres, and at build-out as 1,665 acres;[24] 125% of 1665 acres equals 2081 acres.

---

[23]*Commercial Land Use Needs in Lee County*, Thomas H. Roberts & Associates, January 10, 1987, pages 23-24

[24]See Table 5-4

Table 12-2

Summary of Commercial Land-Use Forecasts								
	1990 (actual)		*1996 (actual)*		*2020*		*Build-out*	
Permanent Population	22,409		27,763		91,733		342,063	
	#	*Acres*	*#*	*Acres*	*#*	*Acres*	*#*	*Acres*
Neighbor-hood Centers	4	34	4	34	13	130	50	500
Community Centers	1	7	3	48	5	125	17	425
Regional Centers	0	0	0	0	1	100	2	200
All other office, retail, and services			107		97		540	
TOTALS:			189		452		1,665	

In accordance with priority #1, potential commercial land was identified without regard to the current Lee Plan standards. In accordance with priority #2, land in unified ownership (single owners, or only a few major owners) was given priority. Land that was in a central location with good access but which had already been platted and sold off to individual lot owners was in many cases difficult to handle. When such land was already zoned commercially, in most cases it was included even though the fragmentation may keep it from ever being used efficiently.

In later revisions, the shallow commercial strips along S.R. 82 and Gunnery Road were divided into three categories:

- Those lots that were within 330 feet of an intersection of an existing street and a collector or arterial road (the Lee Plan's standard for acceptable locations for "minor commercial development").
- Those lots that were further than 330 feet from an intersection, but were otherwise acceptable. These lots, totally about 142 acres, could be

rehabilitated in conjunction with a corridor access management plan and the construction of additional streets, as discussed in Section 10.

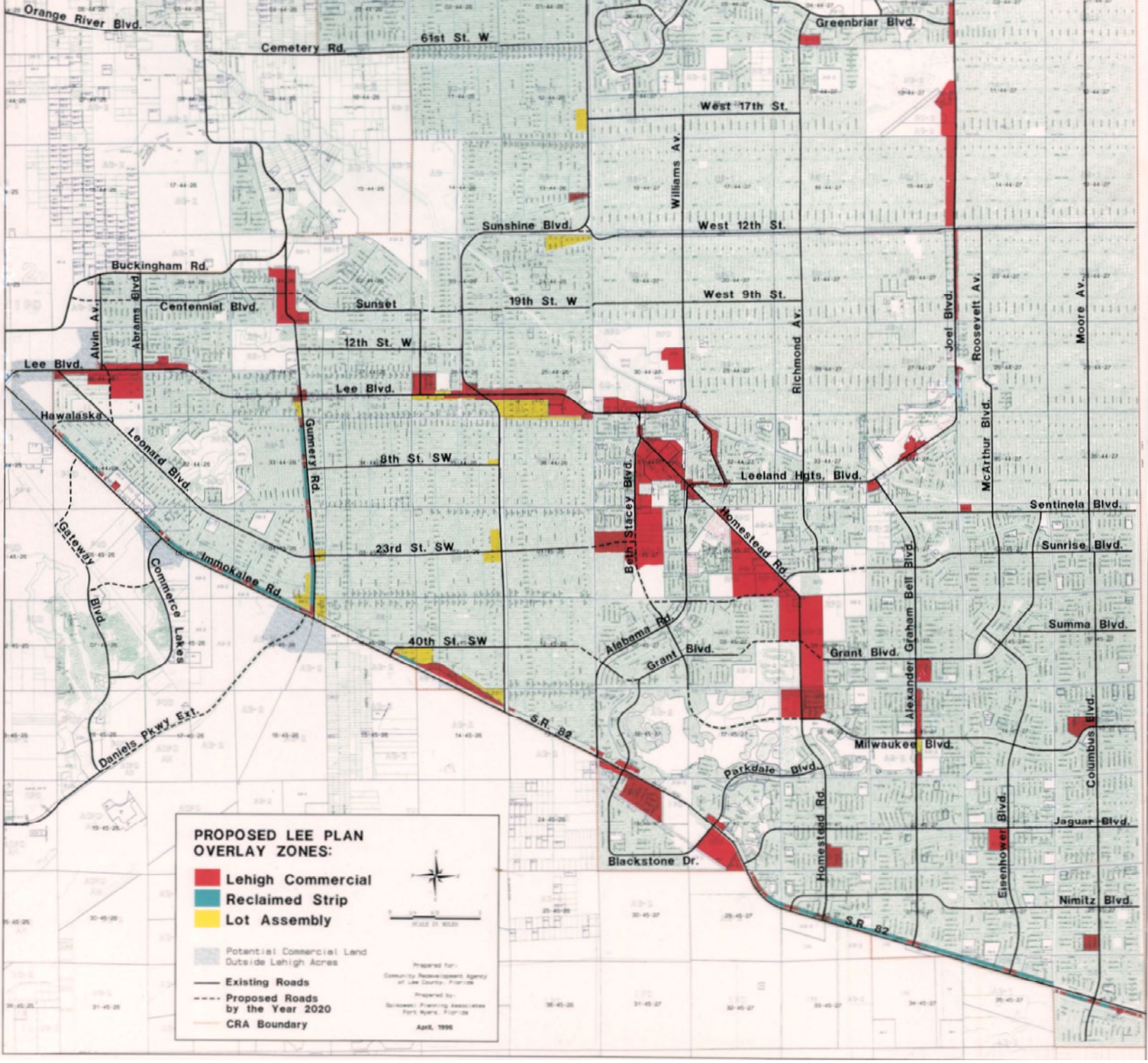
- Those lots that too are shallow for most commercial uses. These lots were primarily along the north side of S.R. 82 the first mile east of Gunnery and first mile east of Sunshine, and would be better used for multifamily residential purposes (with access to Meadow Road).

Another needed distinction arose during the preparation and analysis of commercial land use alternatives. When considering the potential for conflict between commercial uses and adjoining residential areas, it seemed obvious that fully developed residential neighborhoods should be treated with greater sensitivity than blocks of vacant platted lots. An owner of a vacant lot adjoining proposed commercial uses can trade that lot for another in a more secluded area if the prospect of increased noise or traffic is offensive. An owners of an existing home cannot easily make such an adjustment.

Another factor that arose while preparing the initial screening of potential commercial sites was the number of significant intersections where commercial development would be desirable but where no vacant unplatted land was available. Many of these areas have no nearby land available for commercial use. In many such areas, entire blocks of vacant land were identified that would be suitable for commercial purposes if the individual lots could be assembled (provided deed restrictions would not prohibit commercial development). In all, 293 acres of such land has been mapped. However, in the absence of any successful private sector assembly efforts or CRA plans to assemble these lots through eminent domain, they should not be considered as "available" at this time.

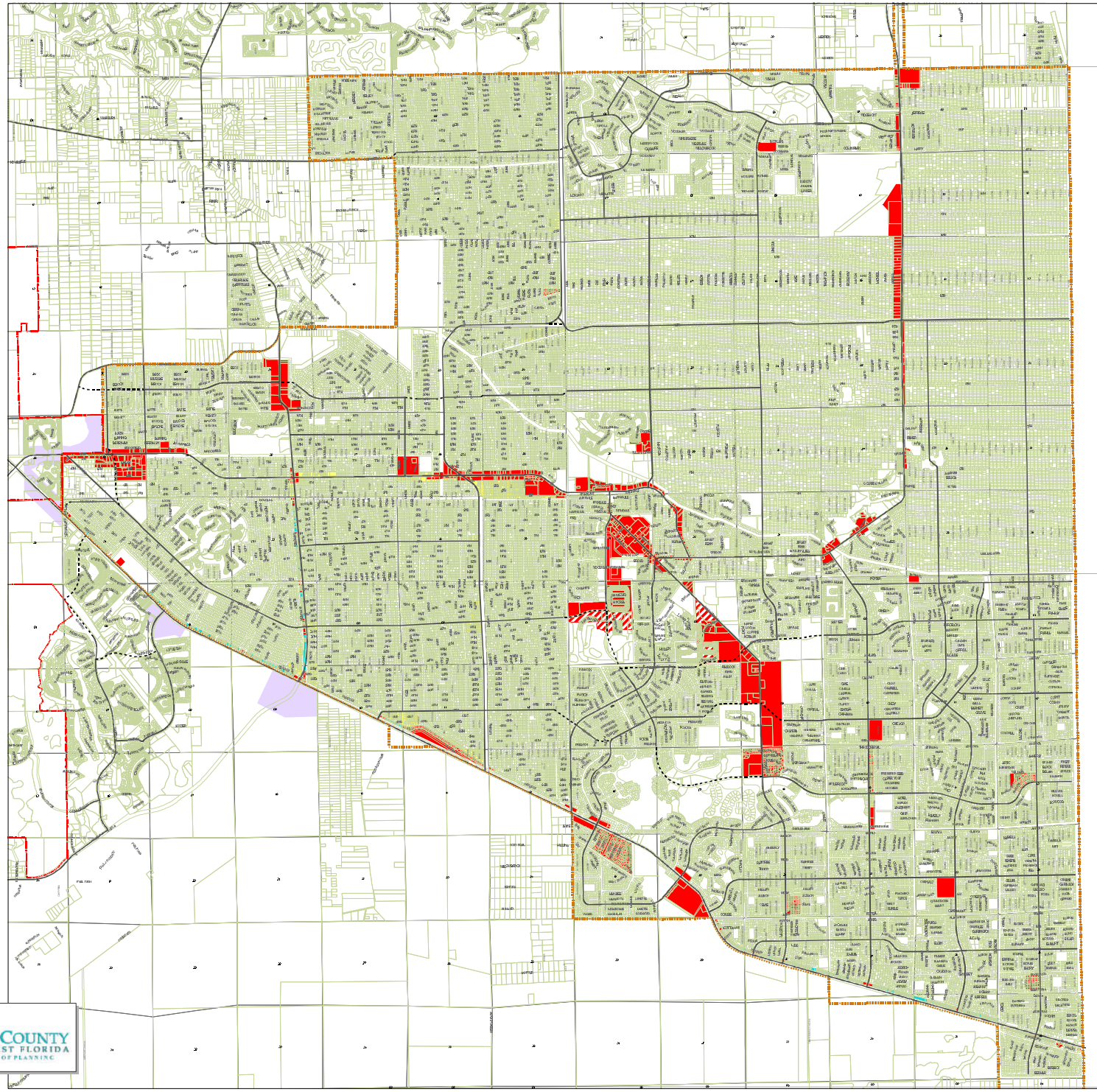
During this search process, another 448 acres of land was identified outside Lehigh Acres that would provide significant benefits to Lehigh residents if developed for commercial purposes. Most of this land is in the city of Fort Myers and is designated for intensive development. Some of the remaining land under the jurisdiction of the Board of County Commissioners is already approved for commercial development (e.g., the south side of S.R. 82 at Commerce Lakes Drive); the rest would require changes to the Lee Plan and/or rezoning to be available for commercial uses.

A refined version of this map was presented for review and comment at a public meeting hosted by the Lehigh Acres Local Redevelopment Planning Committee on February 21, 1996. After further evaluation and modifications, the final recommended map is reproduced here as Figure 12.1 (and available full-sized from the Property Appraiser's Map Room at 2480 Thompson Street in Fort Myers). A chart that was developed while evaluating potential sites is included as Table 12-3.


Lakeridge Blvd.
Orange River Blvd.
Greenbriar Blvd.
Cemetery Rd.
61st St. W
West 17th St.
Williams Av.
Sunshine Blvd.
West 12th St.
Buckingham Rd.
Abrams Blvd.
Alvin Av.
Centennial Blvd.
Sunset
19th St. W
West 9th St.
Richmond Av.
Joel Blvd.
Roosevelt Av.
Moore Av.
12th St. W
Lee Blvd.
Lee Blvd.
Hawalaska
Leonard Blvd.
Gunnery Rd.
8th St. SW
Leeland Hts. Blvd.
McArthur Blvd.
Sentinela Blvd.
Beth Stacey Blvd.
Homestead Rd.
Sunrise Blvd.
Gateway Blvd.
Commerce Lakes
Immokalee Rd.
23rd St. SW
Summa Blvd.
Alabama Rd.
Grant Blvd.
Grant Blvd.
Alexander Graham Bell Blvd.
40th St. SW
S.R. 82
Milwaukee Blvd.
Parkdale Blvd.
Columbus Blvd.
Daniels Pkwy Ext.
Jaguar Blvd.
Blackstone Dr.
Homestead Rd.
Eisenhower Blvd.
Nimitz Blvd.
S.R. 82
PROPOSED LEE PLAN
OVERLAY ZONES:
Lehigh Commercial
Reclaimed Strip
Lot Assembly
Potential Commercial Land
Outside Lehigh Acres
Existing Roads
Proposed Roads
by the Year 2020
CRA Boundary
Prepared for:
Community Redevelopment Agency
of Lee County, Florida
Prepared by:
Spikowski Planning Associates
Fort Myers, Florida
April, 1996

LEHIGH ACRES

Commercial Overlay Zones



Lehigh Acres

Commercial Overlay Zones

- Lehigh Commercial
- Lehigh Commercial*
  *No Restriction on Residential Lots (see Policy 1.8.1)
- Reclaimed Strip
- Lot Assembly
- Potential Commercial
  Land Outside Lehigh Acres
- Existing Roads
- Proposed Roads*
  *As depicted in 1996 Commercial Study
- CRA Boundary
- City Limits

N
W E
S

0.6 0.3 0 0.6 1.2 1.8
Miles

Prepared for
Community Redevelopment Agency
of Lee County, Florida

Prepared by
Spikowski Planning Associates
Fort Myers, Florida

As Adopted by the
Board of County Commissioners
May 27, 1998

Map Generated February 2005

LEE COUNTY
SOUTHWEST FLORIDA
DIVISION OF PLANNING

Table 12-3
Inventory of Potential Commercial Lands

Sec.	Twp. Rge.	Site Description	Main Access	Which Side?	Vacant Ownership	Current Zoning	Future Land Use Map	Lehigh Comm.	Reclaimed Strip	Lot Assembly	Outside Lehigh
25	44-25	DeWolfe & Johnson	Lee Blvd.	north	single	*[Fort Myers]*	*[Fort Myers]*	0			17
25	"	DiPlacido & Richards	Lee Blvd.	north	single	"	"	0			20
25	"	Goldberg	S.R. 82	north	single	"	"	0			71
25	"	Southeast quarter	S.R. 82	south	large	"	"	0			24
36	"	Waste Management	S.R. 82	south	large	IG	Wholesale/Ind.	-			24
31	44-26	Existing strip	S.R. 82	north	fragmented	C-2	Vested Community	6	11		
31	"	Lee Memorial Park	S.R. 82	north	single	CS-1	"	4			
30	"	Old city landfill	Lee Blvd.	north	single	*[Fort Myers]*	*[Fort Myers]*	-			79
30	"	Existing strip	Lee Blvd.	north	large	C-2	Vested Community	16			
30	"	Strip & industrial park	Lee Blvd.	south	single	C-2, IL, CC	Vested, Wholesale	106			
29	"	Existing strip	Lee Blvd.	north	large	C-2, CPD	Vested Community	22			
23	"	Gunnery/Lee intersection	Gunnery & Lee	all	fragmented	mixed	"	8		5	
33	"	Existing strip	Gunnery Rd.	west	fragmented	C-2	"	4	15		
21	"	Gunnery north	Gunnery Rd.	both	large	AG-2	"	90			
35	"	8th St. at Sunshine	8th St.	north	fragmented	RS-1	"	-		4	
26	"	Sunniland at Lee	Lee Blvd.	north	single	RS-1	"	32			
25, 26	"	Existing strip	Lee Blvd.	north	large	CG, C-2, RS-1	"	41		2	
25, 26	"	Existing strip & Wal-Mart	Lee Blvd.	south	large	C-2, CPD, RS-1	"	79		7	
25	"	1st St. West at Joan	1st St. West	both	fragmented	RS-1	"	-		83	
13	"	Catron at Sunshine	Sunshine Blvd.	west	fragmented	C-2	"	10			
24	"	West 12th at Sunshine	Sunshine Blvd.	south	fragmented	RS-1	"	-		28	
12	"	West 17th at Sunshine	Sunshine Blvd.	west	fragmented	RS-1	"	-		20	
29, 30	44-27	Existing strip	Lee Blvd.	north	fragmented	mixed	"	57			
30	"	Village at Lehigh	Williams Ave.	west	single	CPD	"	31			
31	"	Existing downtown	Homestead Rd.	both	large	mostly C-2	"	110			
31	"	Downtown addition - SW	Beth Stacey Blvd.	east	large	RM-2	"	29			
31	"	Downtown addition - NW	Homestead Rd.	both	fragmented	CPD, RS-1	"	2			
32	"	Existing strip	Lee Blvd.	NE	fragmented	mostly C-2	"	14			
32	"	Original downtown	Homestead Rd.	both	fragmented	C-2	"	16			
32	"	Transition area	Leeland Hgts Blvd.	north	fragmented	C-2 CPD RS-1	"	2			
32	"	Transition area	Leeland Hgts Blvd.	south	fragmented	CS-1 CPD RS-1	"	3			
34	"	Joel/Bell Properties	Joel Blvd.	south	single	CPD	"	8			
34	"	Lehigh Corp. offices	Joel Blvd.	south	single	CPD	"	8			
34	"	Admiral Lehigh/auditorium	Joel Blvd.	north	large	C-1A, CC	"	14			
26	"		Joel Blvd.	east	fragmented	C-1, CC	"	5			
23	"	Fire station/Elks	Joel Blvd.	east	large	C-2	"	15			
15	"		Joel Blvd.	west	single	RS-1	"	58			
10	"	Lucky Lee Ranch	Joel Blvd.	west	single	mixed	"	62			
4	"	Greenbriar at Richmond	Richmond Ave.	east	single	C-1A	"	24			
3	"	Greenbriar at Joel	Joel Blvd.	west	single	C-1A	"	10			
3	"		Joel Blvd.	west	fragmented	C-1A, CT	Vested & Rural	10			
2	"		Joel Blvd.	east	large	AG-2, CG	Rural	35			
5, 6	45-26	Gateway	S.R. 82	south	single	P.U.D.	New Community	-			80
4, 5, 9	"	Existing strip	S.R. 82	north	fragmented	C-2	Vested Community	5	34		
4, 9	"	Existing strip	Gunnery Rd.	west	fragmented	C-2	"	5	14		
4, 9	"	S.R. 82 at Gunnery	Meadow & Gretchen	n. and w.	fragmented	RS-1	"	-		23	
4, 9	"	S.R. 82 at Gunnery	S.R. 82	north	fragmented	C-2, RS-1	"	-		18	
9	"	Daniels Extension	S.R. 82	south	single	AG-2	Groundwater	-			133
4	"	23rd St. at Gunnery	23rd. St.	both	fragmented	RS-1	"	-		8	
2	"	23rd St. at Sunshine	23rd. St.	north	fragmented	RS-1	"	-		16	
2	"	23rd St. at Sunshine	23rd. St.	south	fragmented	RS-1	"	-		16	
10, 11	"	S.R. 82 at 40th St.	40th St.	south	fragmented	C-2, RS-1	Vested Community	1	2	38	
11,13,14	"	S.R. 82 at Sunshine	S.R. 82	north	large/frag.	C-2,AG-2,RS-1	"	63		20	
13	"	Existing strip	S.R. 82	north	large	C-2	"	3			
6	45-27		Beth Stacey Blvd.	both	large	AG-2,RS-1,RM-2	"	205			
5	"	Fire station/fraternal	Homestead Rd.	north	fragmented	C-2	"	8			
5	"	Village-on-the-Park	Homestead Rd.	south	single	CPD	"	22			
5	"	Homestead at Sunrise	Homestead Rd.	west	large	AG-2, RPD	"	172			
9	"		Homestead Rd.	west	large	AG-2	"	72			
9	"		Homestead Rd.	east	single	AG-2	"	160			
16	"	Milwaukee at Homestead	Homestead Rd.	east	single	RM-2	"	55			
16	"	Milwaukee at Homestead	Homestead Rd.	west	single	RS-1	"	40			
10	"		Bell Blvd.	east	single	C-2	"	23			
15	"	Strip N. of Milwaukee	Bell Blvd.	east	single	RM-2	"	17			
15	"	S. of Milwaukee	Bell Blvd.	east	fragmented	RM-2	"	-		5	
15	"	S. of Milwaukee	Bell Blvd.	east	single	RM-2	"	8			
2	"	Multifamily parcel	Sentinela Blvd.	north	single	RM-2	"	7			
13	"	Milwaukee at Columbus	Milwaukee Blvd.	north	fragmented	C-2	"	35			
25	"	Columbus at Edgewood	Columbus Blvd.	west	fragmented	C-2	"	17			
23	"	Eisenhower at Jaguar	Eisenhower Blvd.	west	single	C-2	"	31			
21	"	Homestead at Ames	Homestead Rd.	east	fragmented	C-2	"	24			
18	"	Existing strip	S.R. 82	north	large	C-1A	"	13			
18, 19	"	Strip & potential replat	S.R. 82	south	large	C-1A, RS-1	"	104			
20	"	S.R. 82 at Parkdale	S.R. 82	north	single	C-1A	"	9			
20	"	Little West Lake	S.R. 82	south	large	mostly CPD	"	70			
27-29	"	Existing strip	S.R. 82	north	fragmented	C-2	"	15	40		
34, 35	"	Existing strip	S.R. 82	north	fragmented	C-2	"	3	20		
36	"	Existing strip	S.R. 82	south	fragmented	C-1A, CC	"	14	6		
							ACREAGE TOTALS:	***2132***	***142***	***293***	***448***

12(c) Commercial Demand Through the Year 2020

An important question to be addressed is whether to try to implement this plan for commercial needs only through the Lee Plan's primary planning horizon of the year 2020, or to explicitly address these needs in the Lee Plan through the ultimate build-out of Lehigh Acres.

Most of Lee County's comprehensive plan looks forward to the year 2020. Because of the pre-platted nature of Lehigh Acres, however, its future land use plan extends to an undefined point known as "build-out" when substantially all lots have been built upon. Planning for periods beyond 2020 becomes increasingly difficult. However, in pre-platted communities, many desirable planning alternatives become infeasible as lot owners make their individual decisions through the years on where and when to build. These decisions can foreclose the option of assembling large tracts from vacant surplus lots. Such large tracts could then be re-used for a variety of purposes such as future shopping centers or schools. In those parts of Lehigh Acres where actual development levels will be more than minimal in the coming years, as a practical matter planning for build-out cannot be delayed for long. This commercial land-use study therefore recommends implementation to the build-out of Lehigh Acres, along with full coordination with other parts of the Lee Plan that are based on the year 2020.

The map presented in Figure 12.1 reflects commercial needs through build-out. In order to integrate this type of map with other portions of the Lee Plan, it was necessary to identify the likely commercial pattern for the year 2020. This study does not suggest adopting this commercial pattern into the Lee Plan (and in fact recommends against such an action). But the delineation of a 2020 pattern is needed for other planning purposes such as integrating the plan for Lehigh Acres with proposed road and utility networks.

Two maps have been prepared that illustrate the relationship between population and commercial acreage for interim years during the development of Lehigh Acres. The first is shown in Figure 12.2. Each small dot represents the approximate geographic location of the homes of 10 permanent residents in 1990, based on 1990 census data. Also shown are the locations of actual shopping centers in Lehigh Acres that same year. The second map is shown in Figure 12.3. It uses the identical symbols to illustrate the expected population of Lehigh Acres in the year 2020, and a reasonable commercial configuration for that same year (based on the location of new homes projected in this study; the projected number of shopping centers from Table 12-2; and the better available commercial sites from Figure 12.1).

Figure 12.2

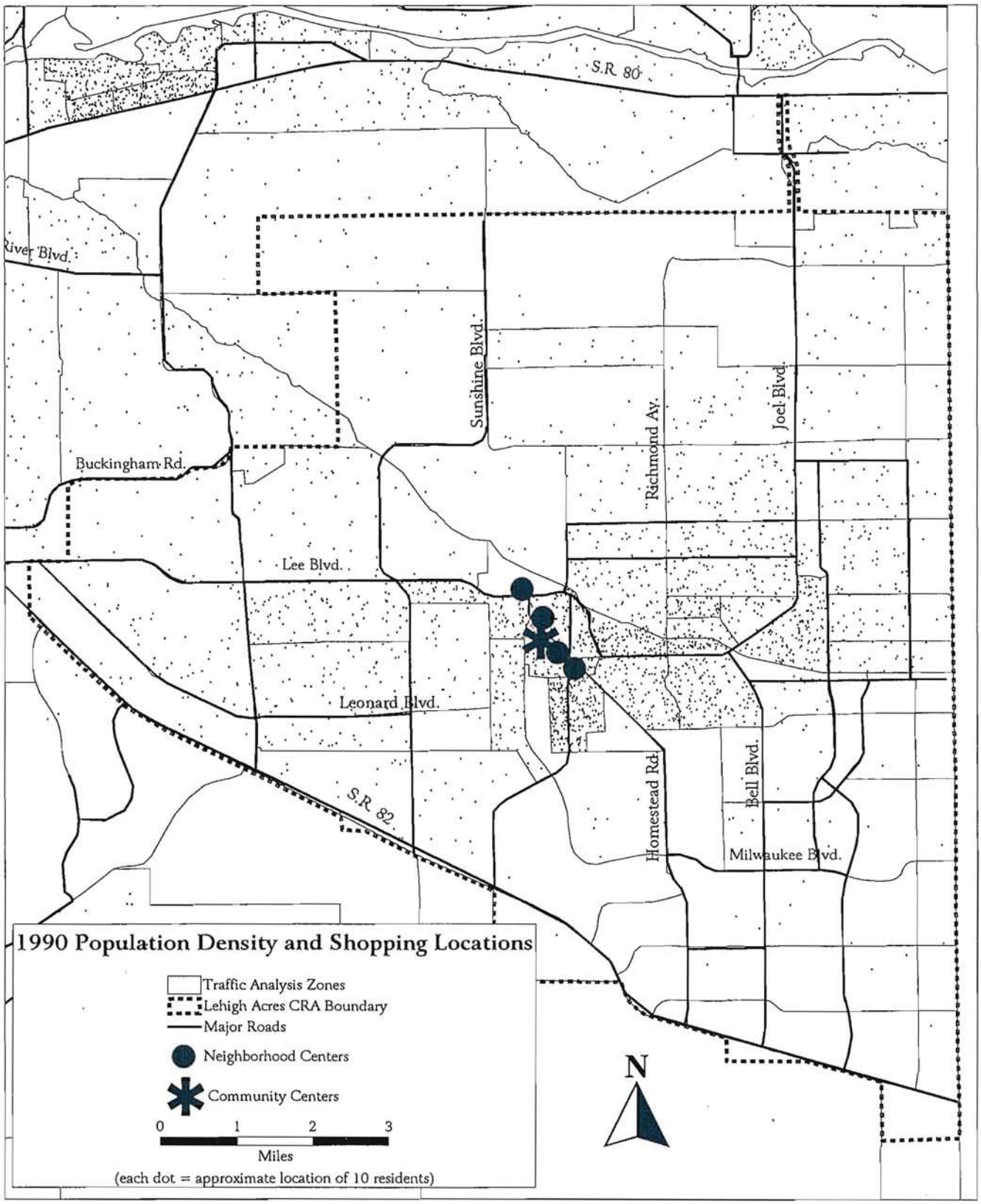
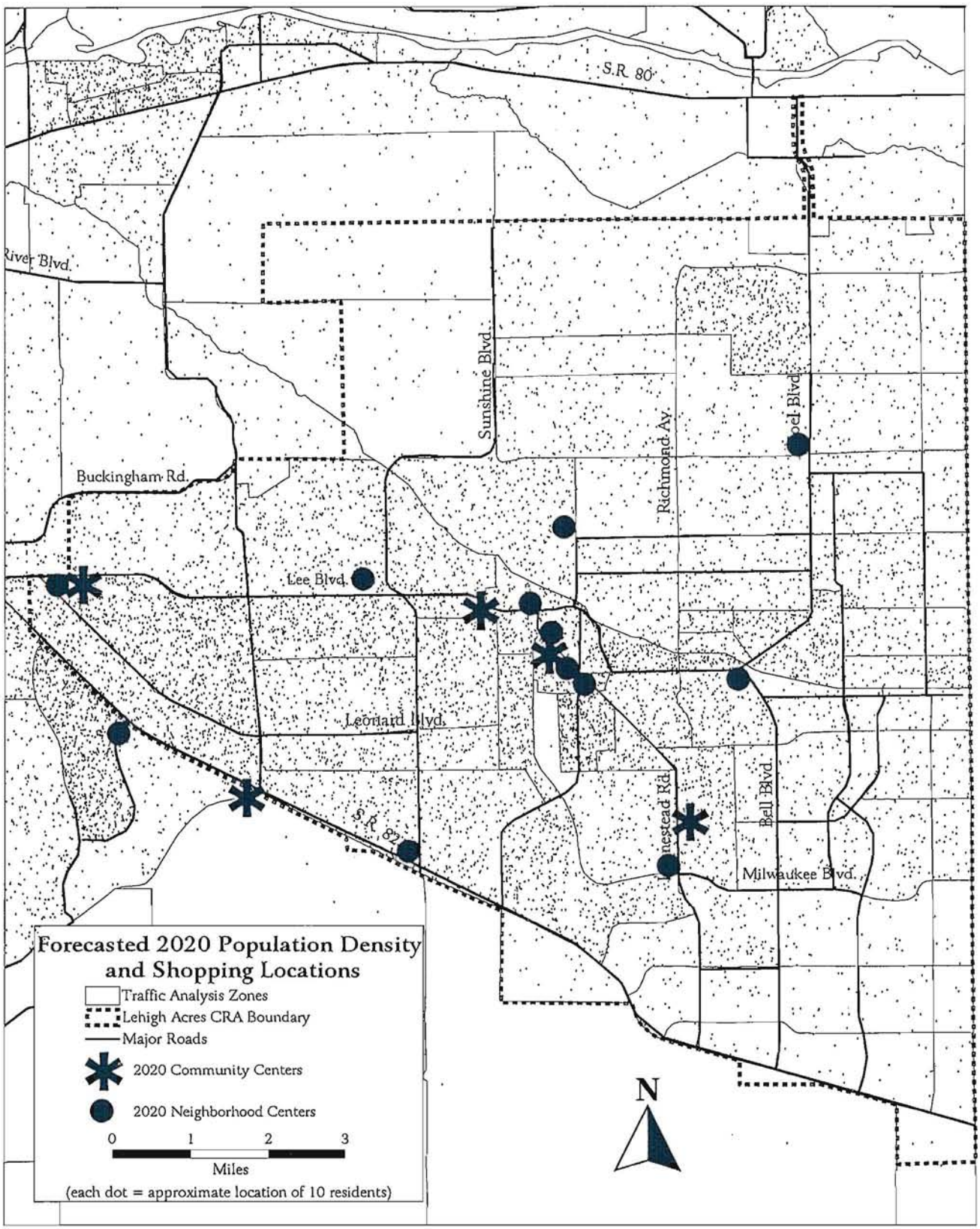

S.R. 80
River Blvd.
Sunshine Blvd.
Richmond Av.
Joel Blvd.
Buckingham Rd.
Lee Blvd.
Leonard Blvd.
S.R. 82
Homestead Rd.
Bell Blvd.
Milwaukee Blvd.
1990 Population Density and Shopping Locations
Traffic Analysis Zones
Lehigh Acres CRA Boundary
Major Roads
Neighborhood Centers
Community Centers
0 1 2 3
Miles
(each dot = approximate location of 10 residents)
N

Figure 12.3


S.R. 80
River Blvd.
Sunshine Blvd.
Richmond Ay.
Buckingham Rd.
Lee Blvd.
Leonard Blvd.
S.R. 82
Bell Blvd.
Milwaukee Blvd.
Forecasted 2020 Population Density and Shopping Locations
Traffic Analysis Zones
Lehigh Acres CRA Boundary
Major Roads
2020 Community Centers
2020 Neighborhood Centers
0 1 2 3
Miles
(each dot = approximate location of 10 residents)
N

This second map does not represent the only or ideal location of commercial development in 2020. Some of the sites may be developed for other purposes; or similar sites may be found to be equally suitable. But this approximate configuration is functional and consistent with expected growth patterns and land availability. This is the configuration of population and commercial development whose traffic impacts are evaluated in Section 14 of this report.

12(d) Future Losses and Gains in Commercial Acreage

There are 2,132 acres of potential commercial land shown in red on Figure 12.1. Although many of these sites cannot be used for commercial development under today's regulations, this total is the amount that could be made available if all the necessary regulatory changes were made and none of this land were used for any other purpose.

However, neither assumption is adequate for long-range planning. For instance, this acreage includes some land already used inefficiently by existing uses; some wet areas and canal right-of-ways; and some existing churches. In addition, some portion of this land will ultimately be needed for future schools, parks, churches, other public uses, multifamily buildings, and quasi-commercial uses such as hospitals and fraternal lodges (see Table 2-2 for other examples). Some portions may be deleted by Lee County following the public hearings that must precede amendments to the Lee Plan.

Compensating factors for these losses would be the potential reclamation of commercial strips (maximum of 142 acres, shown in blue); potential lot assembly (293 acres, shown in yellow), and use of commercial land outside Lehigh Acres (448 acres, shown in stippled purple).

In order to determine whether future losses of commercial land will be offset by potential gains, the next section of this report will evaluate the conflicting demands for potential commercial sites.

13. Other Demands for Potential Commercial Land

A discussion is warranted at this point as to *how much flexibility* should remain with the owners of the potential commercial sites. Maximum flexibility is always desired by landowners, and is often desirable as public planning policy; but maximum flexibility in the past has resulted in the current commitment of Lehigh land almost exclusively to residential purposes. Minimum flexibility could guarantee the reservation of sufficient commercial land; but that approach could solve the commercial problem only to create a number of others, including constitutional challenges from landowners. The following section provides a look at several potential competing uses for large vacant parcels in Lehigh Acres. The need for those uses strongly influences the choice of a method to implement the proposed commercial plan.

The most likely competitive use is further subdivision into single-family lots. This may seem an unlikely proposition given the vast competition with existing lots on the resale market. But there is a market today for new single-family lots if they are provided with amenities well beyond those that come with older Lehigh Acres lots. These amenities include public water and sewer systems; roads in good condition; sidewalks; and perhaps most important, a commitment for all lots in the neighborhood to have comparable houses constructed in the near future. Recent developments such as Oakwood, Bethany Trace, and Varsity Lakes have demonstrated this concept.

Another competitor is residential sites of different sizes and styles than the typical Lehigh Acres lots. Examples are large estate-sized lots; golf-course lots; or multifamily sites. Again, despite competition from low-priced resale lots, some of these uses can be developed profitably even with today's high development costs.

Both of these types of residential development increase the desirability of Lehigh Acres by increasing the choices available to homebuyers. Yet both exacerbate Lehigh Acres' long-term problems if they consume the small amount of remaining undeveloped acreage that is available for commercial or public uses. If further residential development could take place profitably on tracts *without* commercial potential, or on tracts assembled by the CRA from previously platted residential lots, they would benefit the community tremendously without causing any long-term problems. Although this study does not attempt to provide a workable program to assemble residential tracts, it is apparent that such a program would assist in the study's goals in reserving enough future commercial land.

The following subsections provide a preliminary look at the acreage that may be required for other important purposes in Lehigh Acres. In each case, the premature commitment of so much land for residential lots has created a shortage of potential sites in a manner similar to the commercial shortage. Some of these

purposes have locational criteria very similar to commercial uses (such as good access, sufficient size and shape, and central to population concentrations). The preliminary estimates of future demand for these other purposes uses is based on the same population forecasts found in the first report in this series: 342,063 permanent residents at build-out.

13(a) Conflicts with Future School Sites

There are two separate standards for determining the size of future school sites. The Lee County School District has created local standards for acquiring "ideal" sites.[25] These standards have been empirically developed to accommodate single-story schools, on-site surface water management, substantial outdoor recreational facilities, and space for expansion of most schools to accommodate continuing growth. The standards for *total* acreage are as follows:

- *Elementary school:* 20 acres (to accommodate 925 students)
- *Middle school:* 32 acres (to accommodate 1050 students)
- *High school:* 70 acres (to accommodate 1800 students)

Based on these standards and recent ratios of population to public school students,[26] these standards would yield build-out requirements in Lehigh Acres of about 500 acres for elementary schools; 310 acres for middle schools; and 450 acres for high schools, equalling 1,260 *total* acres.

Because of substantial state funding for school construction, the state of Florida has adopted statewide minimum standards for new school sites.[27] The following are the statewide minimums for *usable* acreage:

- *Elementary school:* 4 acres for the first 200 students, + 1 acre per 100 more
- *Middle school:* 6 acres for the first 300 students, + 1 acre per 100 more
- *High school:* 7 acres for the first 300 students, + 1 acre per 50 more up to 1000 students, + 1 acre more per 100 beyond

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[25]Interview with Mr. Rick Gutknecht, interim facilities director for the School District of Lee County, January 30, 1996

[26]1994-95 enrollment in Lee County schools: 25,512 in elementary school; 11,197 in middle school; 12,704 in high school (from *Profiles of Florida School Districts, 1994-95*, Florida Department of Education, January 1996); April 1995 permanent population: 367,702 (*Florida Estimates of Population 1995*, Bureau of Economic and Business Research, University of Florida, February 1996)

[27]*State Requirements for Educational Facilities, 1994*, adopted into the Florida Administrative Code through Rule 6A-2.0111.

Based on Lee County's typical new school sizes and recent ratios of population to public school students, these standards would yield build-out acreage requirements in Lehigh Acres of about 285 for elementary schools; 130 for middle schools; and 185 for high schools, for a total of 600 *usable* acres.

The state standards yield less than half the acreage computed using the Lee County standards (in part because the Lee County standards are for *total* rather than *usable* acreage). The results of both sets of standards are illustrated in Table 13-1.

Table 13-1

Summary of School Acreage Projections for Lehigh Acres at Build-Out

	Using County Standard	Using State Standard	Using 1996 County Averages
Acres for Elementary Schools	500	285	475
Acres for Middle Schools	310	130	290
Acres for High Schools	450	185	375
Total Acres	1,260	600	1,140

For comparison to both sets of official standards, the sites of all *existing* public school sites in Lee County were inventoried (see Table 13-2). Sites for vocational schools, adult schools, and administrative/maintenance buildings were tabulated separately; sites for *proposed* schools were disregarded. The bottom rows in Table 13-2 indicate the average Lee County school site for each type of school, and the average size of those schools that have been built in recent years. The average site is considerably smaller than those for newer schools, primarily because of several old schools that were built on very small sites. Based on the *average* school sizes, future school acreage requirements in Lehigh Acres would be 475 for elementary schools; 290 for middle schools; and 375 for high schools, for a total of 1,140 acres. These totals were included in Table 13-1 for comparison to the official state and county standards.

Table 13-2
Inventory of Lee County School Sites

SCHOOL NAME	STREET ADDRESS	ZIP				ACRES			
			S	T	R	Elem.	Middle	High	Other
Allen Park Elementary	3345 Canelo Dr	33901	26	44	24	17.00			
Alva Elementary	21290 Park St	33920	22	43	27	5.00			
Alva Middle	21219 N River Rd	33920	22	43	27		13.63		
Bayshore Elementary	17050 Williams Rd	33917	20	43	25	20.00			
Bonita Springs Elementary	10701 Dean St	33923	35	47	25	5.00			
Bonita Springs Middle	10141 W Terry St	33923	26	47	25		16.00		
Caloosa Elementary	620 Del Prado Bl	33990	18	44	24	19.15			
Caloosa Middle	610 Del Prado Bl	33990	18	44	24		19.15		
Cape Coral High	2300 Santa Barbara Bl	33991	26	44	23			40.06	
Cape Elementary	4519 Vincennes Bl	33904	5	45	24	14.00			
Colonial Elementary	3800 Schoolhouse Rd	33916	31	44	25	18.97			
Cypress Lake Middle	8901 Cypress Lake Dr	33919	22	45	24		30.44		
Cypress Lake High	6750 Panther Ln	33919	22	45	24			30.44	
Diplomat Elementary	1115 NE 16thTer	33909	31	43	24	32.00			
Dunbar Middle	3800 Edison Av	33916	20	44	25		55.00		
Edgewood Elementary	3464 Edgewood Av	33916	7	44	25	15.18			
Edison Park Elementary	2401 Euclid Av	33901	23	44	24	7.00			
Estero High	21900 River Ranch Rd	33928	34	46	25			81.80	
Fort Myers Beach Elementary	2751 Oak St	33931	19	46	24	11.00			
Fort Myers Middle	3050 Central Av	33901	25	44	24		18.86		
Fort Myers High	2635 Cortez Bl	33901	23	44	24			39.00	
Franklin Park Elementary	2323 Ford St	33916	19	44	25	20.00			
Gateway Elementary	13280 Commerce Lakes Dr	33913	8	45	26	16.57			
Gulf Elementary	3400 SW 17th Pl	33914	4	45	23	30.38			
Gulf Middle	1809 SW 36th Ter	33914	4	45	23		30.38		
Hancock Creek Elementary	1601 Skyline Dr	33903	15	44	24	19.97			
Heights Elementary	15200 Alexandria Ct	33908	32	45	24	24.58			
J Colin English Elementary	120 Pine Island Rd	33903	35	43	24	14.10			
Lee Middle	4203 Ballard	33905	17	44	25		19.75		
Lehigh Elementary	200 Schoolside Dr	33936	33	44	27	14.00			
Lehigh Middle	104 Arthur Av	33936	5	45	27		34.08		
Lehigh Senior High	801 Gunnery Rd	33971	28	44	26			95.73	
Littleton Academy Elementary	700 Hutto Rd	33903	33	43	24	20.00			
Mariner High	701 Chiquita Bl	33909	10	44	23			104.00	
Michigan Elementary	4312 E Michigan Av	33905	17	44	25	18.00			
North Fort Myers High	1000 Orange Grove Bl	33903	9	44	24			35.80	
Orange River Elementary	4501 Underwood Dr	33905	3	44	25	14.22			
Orangewood Elementary	4001 DeLeon St	33901	35	44	24	13.00			
Pelican Elementary	3525 SW 3rd Av	33914	2	45	23	21.55			
Pine Island Elementary	5360 Ridgewood Dr	33922	28	44	22	15.00			
Pinewoods Elementary	11800 Corkscrew Rd	33928	25	46	25	37.56			
Riverdale High	2815 Buckingham Rd	33905	28	43	26			42.05	
San Carlos Park Elementary	17604 Lee Rd	33912	9	46	25	23.00			
Sanibel Elementary	3840 Sanibel-Captiva Rd	33957	21	46	22	25.00			
Skyline Elementary	620 SW 19th St	33991	26	44	23	19.90			
Spring Creek Elementary	25571 Tamiami Trail	33923	21	47	25	21.76			
Suncoast Elementary	1858 Suncoast Ln	33917	26	43	24	23.00			
Suncoast Middle	1856 Suncoast Ln	33917	26	43	24		30.00		
Sunshine Elementary	601 Sara Av	33971	26	44	26	21.57			
Tanglewood Elementary	1620 Manchester Bl	33919	11	45	24	8.89			
Three Oaks Elementary	19600 Cypress View Dr	33912	22	46	25	19.72			
Three Oaks Middle	18500 Three Oaks Pkwy	33912	15	46	25		25.13		
Tice Elementary	4524 Tice St	33905	9	44	25	21.00			
Trafalgar Middle	2120 Trafalgar Pkwy	33991	28	44	23		68.00		
Tropic Isles Elementary	5145 Orange Grove Bl	33903	9	44	24	19.24			
Villas Elementary	8595 Beacon Bl	33907	12	45	24	22.00			
Vocational/Central	3800 Michigan Av	33916	17	44	25				30.00
Vocational/North	360 Juanita Pl	33909	11	44	23				14.16
Buckingham Exceptional	3200 Buckingham Rd	33905	33	43	26				25.00
Dunbar Community School	1857 High St	33916	18	44	25				13.00
Riverside Exceptional	1634 Manchester Bl	33919	25	44	24				10.00
Alternative Learning Center	3452 Seminole Av	33901	7	44	25				3.00
Edison Center	2645 Cortez	33901	23	44	24				4.00
New Directions	3750 Michigan Av	33916	17	44	25				15.00
James Adams Center	2055 Central Av	33901	24	44	24				5.27
Hipps Building	2160 Alicia	33901	24	44	24				2.75
Gwynne Institute	2266 Second St	33901	13	44	24				2.00
Transportation Services	1500 Tropicana Pkwy	33909	10	44	23				20.70
Maintenance	3308 Canal St	33905	30	44	25				10.00
		acreage totals:				***668.31***	***360.42***	***468.88***	***154.88***
		average, all schools:				*19*	*30*	*59*	
		average, new schools only:				*24*	*41*	*94*	

Regardless of which projection method is used, forecasting of this nature has a number of uncertainties:

- The ratio of public to private school students, and school-aged children to adults, both change over time.
- Schools might be designed quite differently in the future, for instance with classrooms in two or more stories instead of the current single-story schools.
- There is some overlap between schools and parks because some Lee County park facilities are built on surplus land adjoining existing schools (for example, the soccer fields at Lehigh Middle School).
- Busing for desegregation or enrichment purposes may result in some Lehigh Acres students attending school in other communities (or vice versa).
- An unresolved shortage of suitable sites could result in many schools being placed *outside* Lehigh Acres.

For comparison purposes, note that Lehigh Acres had 165 acres at existing school sites in 1996, with two additional sites totalling about 59 acres purchased last year. Despite these recent purchases, it is apparent that the shortage of future schools sites is itself a great problem in Lehigh Acres. A significantly greater planning effort should be made by the School District to acquire additional school sites in the near future while land costs are low and the relocation of future residents can be avoided. The School District can use its power of eminent domain to assemble entire blocks of vacant lots for new schools, as it did for the Sunshine Elementary School site.

13(b) Conflicts with Future Park Sites

Future needs for community parks were also forecasted. Regional parks are assumed to be located outside Lehigh Acres; neighborhood parks are no longer being provided by Lee County.

A summary of community park acreage is compiled each year in Lee County's concurrency inventory.[28] These totals include community recreation centers and public swimming pools, and also recreational facilities located on school sites when they are open to the general public. Current totals for the unincorporated area are summarized in Table 13-3, with a comparison to the community park standards contained in the Lee Plan. The last row in this table yields a mid-range forecast that will be used further in this report.

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[28] *Concurrency Management Inventory and Projections, 1994/95—1995/96*, Lee County Department of Community Development, December 29, 1995

Table 13-3

Summary of Community Park Acreage		
	Unincorporated Lee County (actual) 1995	Lehigh Acres (computed at same ratios) Build-out
Permanent Population	240,356	342,063
Acres In Use for Community Parks	581	827
Community Park Acreage if Provided at the Lee Plan's Minimum Standard (0.8 acres per 1000 unincorporated population)	192	274
Community Park Acreage if Provided at the Lee Plan's Desired Standard (1.75 acres per 1000 unincorporated population)	421	599

Source: Unincorporated totals from Veterans Park Expansion and Other Recreational Needs in Lehigh Acres, Table 4-3, Spikowski Planning Associates, March 1996

13(c) Conflicts with Future Church Sites

The locational criteria for churches are far more flexible than for commercial development. Churches are built in all sizes, and they need not have as great visibility from passing traffic as most retail uses require. Also, churches can be built on parcels far smaller than many of them use today. Despite these differences, excellent commercial sites are often occupied by churches; and recent sales data indicates that churches are purchasing many parcels in Lehigh Acres for future use even though those sites may be quite suitable for commercial development.

A survey was made of all land used for churches and synagogues in Lee County at present. *Vacant* church-owned sites were excluded. The ratio of existing developed sites to 1995 Lee County population was used to roughly project future church land in Lehigh Acres (see Table 13-4). Many of this methodology's limitations noted above for school sites also apply here; the build-out total of 737 acres should be

considered a high value. (For comparison purposes, Lehigh Acres had 68 acres occupied by churches in 1995.)

Table 13-4

Summary of Church/Synagogue Acreage		
	Lee County (actual) (actual) 1995	Lehigh Acres (computed at same ratio) Build-out
Permanent Population, Unincorporated Area	375,000	342,063
Acres for Sites Occupied by Churches and Synagogues	808	737

13(d) Conflicts with Future Utility Sites

Water and sewer plants are not typically considered as competitors for commercial sites. They are often placed on less visible (and less expensive) land whose location is dictated mainly by engineering considerations. Accessibility is rarely a primary concern. But the shortage of unplatted land in Lehigh Acres is creating competition for sites between utility providers and potential commercial development. This is not a short-term problem for the utility provider, because the potential commercial sites are often fairly inexpensive due to the long period before some of them would be desirable for commercial purposes. But it has the long-term potential to consume important vacant parcels. During the course of this study, two potential commercial sites had to be dropped from further consideration because they were selected by Southern States Utilities for new water and/or sewer plants.

Although the future land requirements for utility sites have not been projected, these sites must be recognized as another important part of Lehigh Acres' future, as well as a competitor for large tracts of land.

13(e) Total Commercial Acreage to be Designated

A summary of the forecasts in the previous subsections are provided in Table 13-5. Future utility sites, other public uses, quasi-commercial uses, and a wider variety of residential uses all may also compete for vacant tracts, but have not been quantified at this time. Even without those uses considered, the future demands total 2596 acres, about half again the amount of needed commercial land (1665 acres). With the *maximum* available commercial land totalling only 3015 acres, it is clear that these other important uses have the potential to crowd out needed commercial uses in the future. Fortunately, some of these other uses can be placed on vacant tracts that lack the accessibility required by commercial uses.

Table 13-5

Summary of Competing Land Uses	
	Lehigh Acres (computed) Build-out
Public school acreage	1260
Community park acreage	599
Church and synagogue acreage	737
Multifamily & other public uses	????
TOTAL	> 2596
compare to forecasted need for commercial acreage:	1665
compare to prime acreage for Lehigh commercial land:	2132
compare to maximum available commercial acreage:	3015

Returning to the question of whether to designate future commercial sites only through the year 2020 rather than through build-out, it becomes apparent that limiting our present concern only to the year 2020 would be very short-sighted. In fact, even a heroic commitment by Lee County to protect these sites for build-out

demands may be insufficient to avoid either long-term land shortages or forced reliance on expensive land assembly programs.

The best resolution to this dilemma seems to be to designate the entire 2,132 acres of land identified in red as "Lehigh Commercial" in Figure 12.1 into a category that strongly encourages commercial uses but that also allows at least schools, parks, churches, and all other public uses. Then efforts should commence to reclaim much of the commercial strip, and consider the feasibility of assembling key commercial sites from platted lots as described previously in this report.

In any case, Lee County needs to designate the prime "Lehigh Commercial" acreage in a manner that eliminates its conversion to conventional single-family lots and ensures that any other future residential uses will not consume more than a small portion of this land. Yet it must do this in a manner that encourages rather than punishes the landowners, many of whom will have to hold these parcels for an extended period of time before commercial market demand reaches them. This requires a delicate balance between potentially competing interests and between private property rights and long-term public needs. If the ultimate resolution of this balancing act does not protect enough commercial land, then a lot assembly technique would be required (rather than being a desirable but optional program).

14. Transportation Impacts of Revised Land Uses

It was critically important to evaluate the potential traffic impacts of the proposed commercial plan for the year 2020. For this evaluation, revised population and commercial forecasts were prepared to simulate traffic patterns and to compare them to the results of traffic modelling recently conducted by the Lee County Metropolitan Planning Organization (MPO). Appendix A reproduces the spreadsheet that was used to develop and describe the revised forecasts for Lehigh Acres that were used in this study; it also shows corrections to the MPO's Gateway data which had inadvertently overstated maximum development potential there.

The goals of the transportation analyses were to identify unmet needs in the adopted MPO 2020 Transportation Plan, present a modified 2020 roadway network to serve the proposed development pattern, and recommend additional corridors for incorporation in the Lee County Official Trafficways Map. The transportation study area was determined by "traffic analysis zones," as shown in Figure 14.1. This section evaluates the traffic impacts of the revised land use projections for the year 2020 on the road network in and around Lehigh Acres.

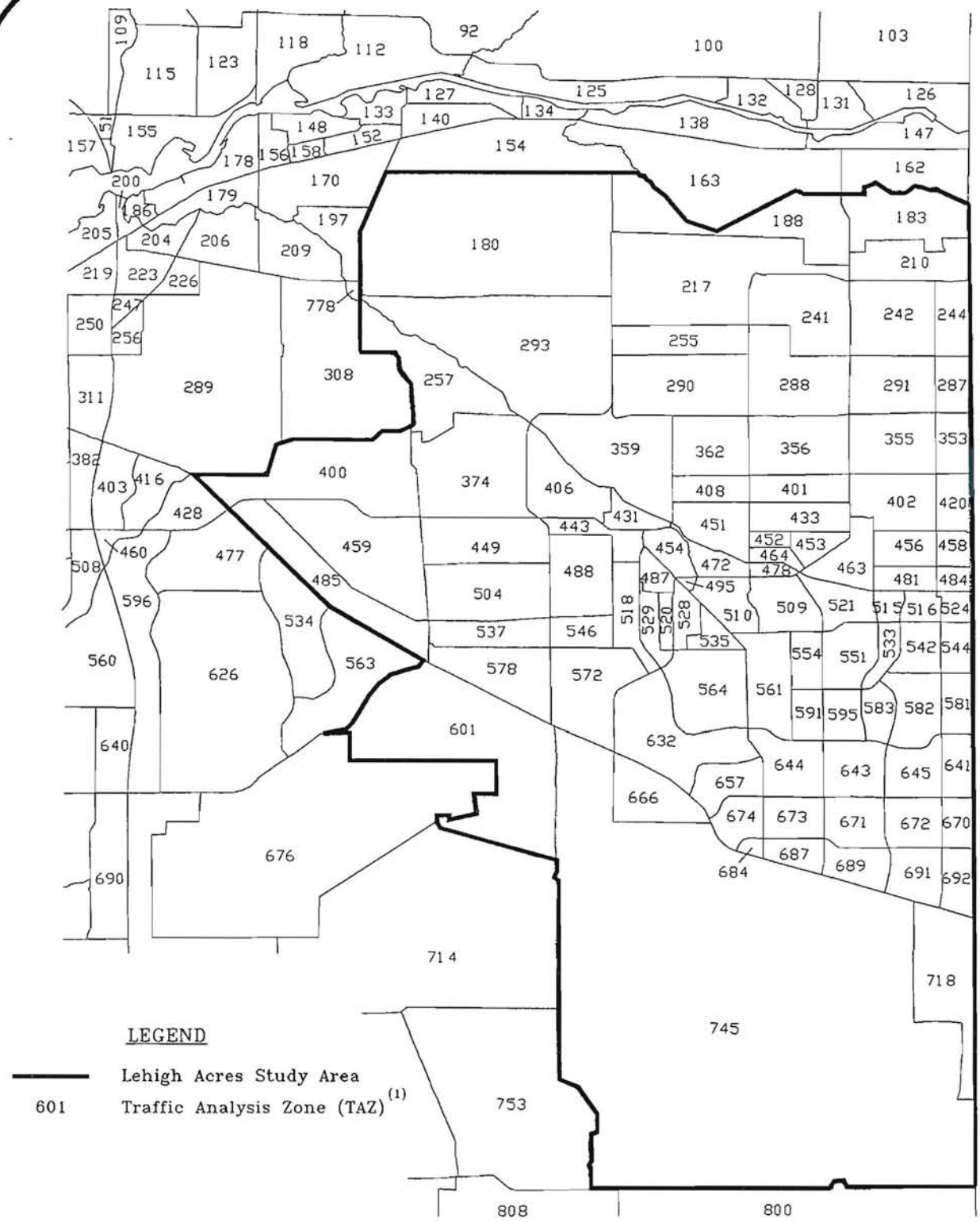
The principal tool used in the evaluation of the traffic impacts of the revised land uses in Lehigh Acres and in the development of a proposed 2020 transportation plan for Lehigh Acres was a year 2020 travel simulation model provided by the Lee County MPO. This computer model was designed to develop the MPO's 2020 Transportation Plan roadway network (Figure 14.2) and forecast the resulting traffic volumes.

To evaluate the traffic impacts of the revised land uses in Lehigh Acres, two initial tests were performed using the MPO's model. The first test projected future volumes using the MPO's socio-economic data for the year 2020 (e.g., counts of single-family, multifamily and hotel units; industrial, commercial and service employment, and school enrollments). The next test projected traffic volumes using the revised Lehigh Acres socio-economic data for the year 2020, developed during the course of this study. The traffic volumes projected under both scenarios were compared and evaluated.

14(a) Trip Productions and Attractions

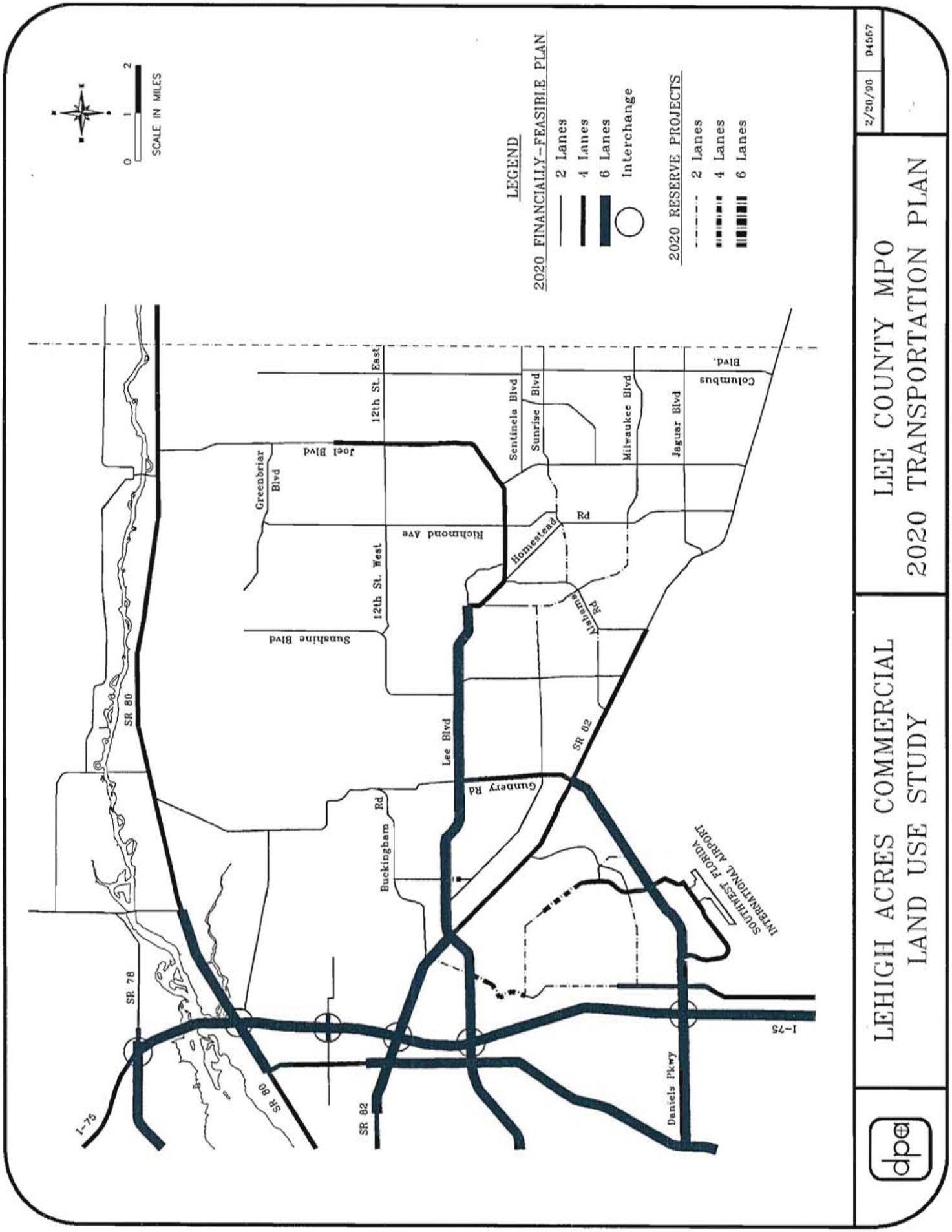
The first comparison was of trips produced and attracted by land uses under the two scenarios (the original Lee County MPO land uses and the revised land uses developed for this study). "Trip productions" represent the person-trips produced by residential development, including single-family and multifamily dwelling units and hotel rooms. "Trip attractions" represent the person-trips attracted by commercial

Figure 14.1



dpa	LEHIGH ACRES COMMERCIAL LAND USE STUDY	LEHIGH ACRES STUDY AREA	2/19/96 | 94557

Figure 14.2


LEGEND
2020 FINANCIALLY-FEASIBLE PLAN
2 Lanes
4 Lanes
6 Lanes
Interchange
2020 RESERVE PROJECTS
2 Lanes
4 Lanes
6 Lanes
SCALE IN MILES
0
1
2
I-75
SR 80
SR 78
SR 82
SR 80
Buckingham Rd
Gunnery Rd
Lee Blvd
SR 82
Daniels Pkwy
I-75
SOUTHWEST FLORIDA INTERNATIONAL AIRPORT
Alabama Rd
Homestead Rd
Richmond Ave
Sunshine Blvd
12th St. West
12th St. East
Joel Blvd
Greenbriar Blvd
Sentinela Blvd
Sunrise Blvd
Milwaukee Blvd
Jaguar Blvd
Columbus Blvd.
LEHIGH ACRES COMMERCIAL
LAND USE STUDY
LEE COUNTY MPO
2020 TRANSPORTATION PLAN
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development and public uses, as indicated by industrial, commercial and service employment, and school enrollments.

Trip productions and attractions in Lehigh Acres under the two scenarios are compared in Figure 14.3. While the trip attractions are similar under both scenarios, the trip productions are significantly lower under the revised land uses. This is due to a reduction in the projected number of dwelling units in Lehigh Acres in the year 2020 (as shown in Table 4-3) and an increase in the ratio of commercial to residential development, as described earlier in this report.

The overall effects of this change are generally positive. First, the total number of trips expected to be generated in Lehigh Acres is lower. Second, the balance between trip productions and attractions is improved. With a better balance between trip productions and attractions, travel demand between Lehigh Acres and the rest of Lee County should be reduced, as more trips between residential and commercial areas can be satisfied locally within Lehigh Acres.

14(b) Distribution of Trip Productions and Attractions

The distributions of trip productions and attractions in Lehigh Acres under both scenarios are shown in Figures 14.4 through 14.7. In general, the 2020 trip productions and attractions based on the MPO's land use projections (Figures 14.4 and 14.5) show a concentration of both productions and attractions west of Alabama Road. Trip attractions were assumed by the MPO to be concentrated north of Lee Boulevard from S.R. 82 to Gunnery Road and south of Lee Boulevard from Sunshine Boulevard to Alabama Road. Trip productions were assumed to be concentrated in an area bordered by Lee Boulevard on the north, S.R. 82 on the south and Alabama Road on the east, with this area reaching almost full "build-out" by the year 2020.

The 2020 trip productions and attractions based on the revised land use projections (Figures 14.6 and 14.7), on the other hand, reflect a more even distribution throughout Lehigh Acres, with an easterly shift from the concentrations found with the MPO's data. For example, trip attractions would be concentrated along both sides of Lee Boulevard, in the original business district on Homestead Road, and at many of the new commercial sites identified in this study (as shown in Figure 12.3).

14(c) Traffic Volumes

In order to gauge the effects of the revised land use patterns on travel within Lehigh Acres, a number of key roadway segments within the study area were analyzed. Travel model assignments were performed for the year 2020 under both land use scenarios using the roadway network for the MPO's 2020 Transportation Plan (Figure 14.2). Only those improvements that were included in the 2020 plan as

Figure 14.3

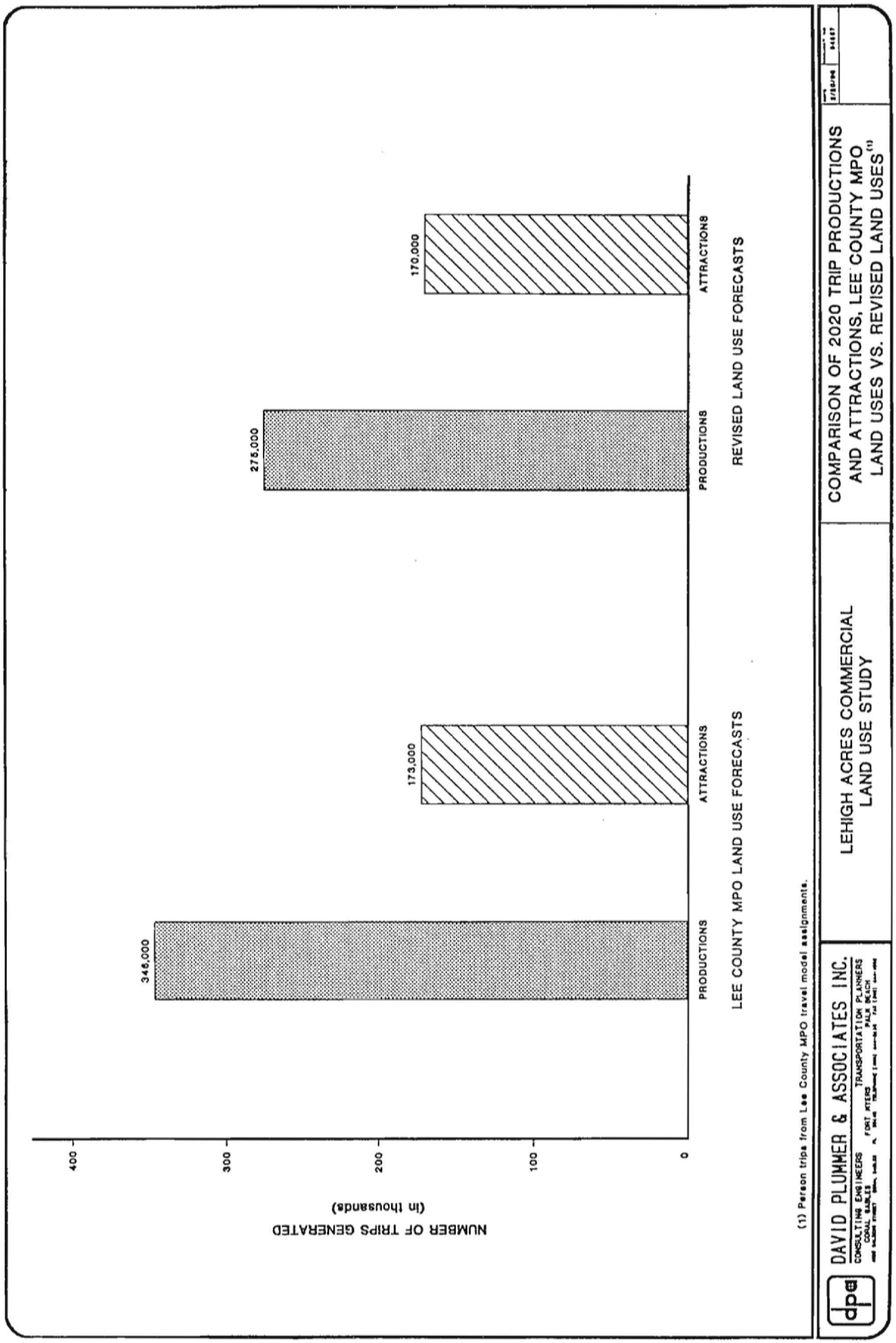
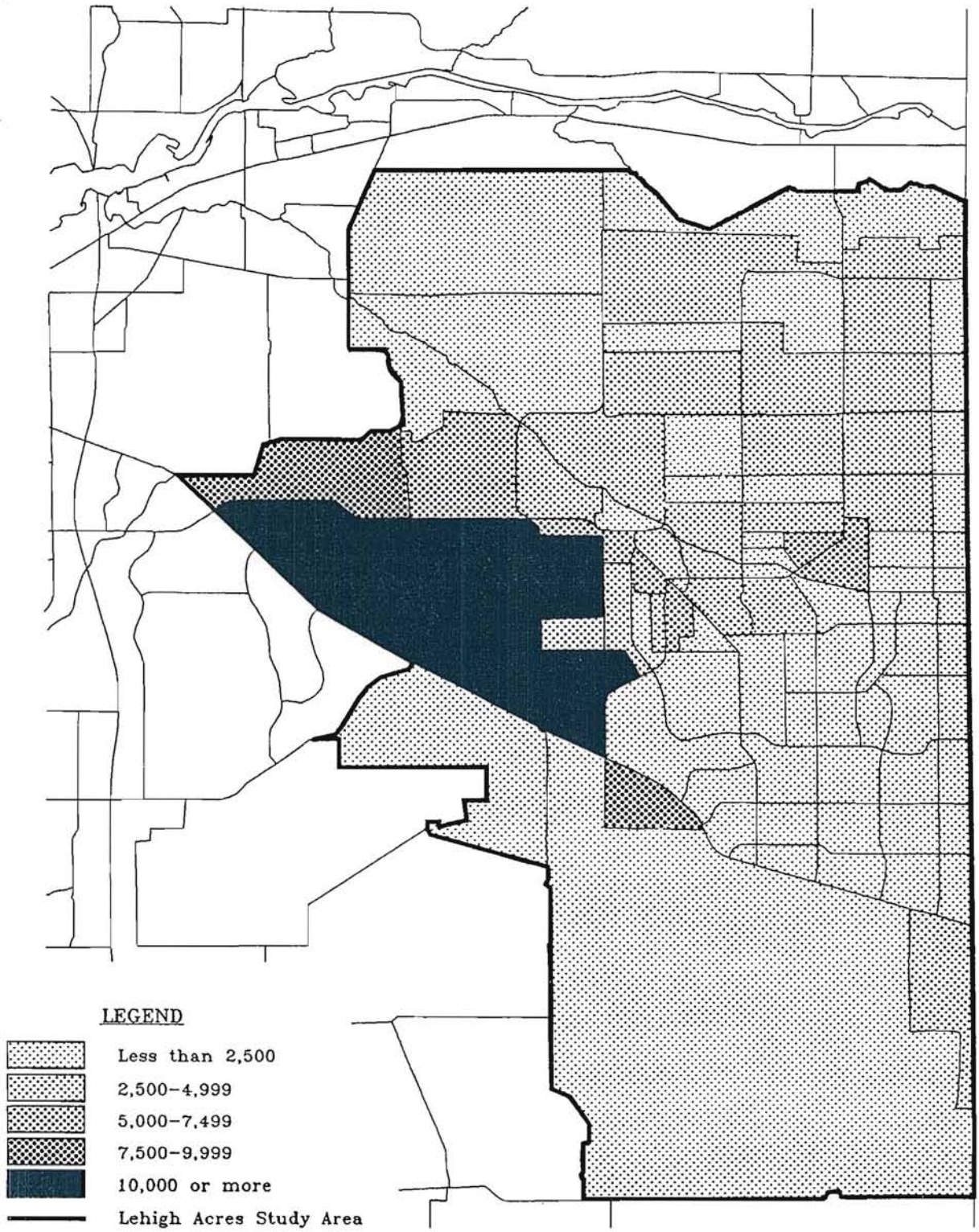

NUMBER OF TRIPS GENERATED
(In thousands)
400
300
200
100
0
346,000
PRODUCTIONS
173,000
ATTRACTIONS
LEE COUNTY MPO LAND USE FORECASTS
275,000
PRODUCTIONS
170,000
ATTRACTIONS
REVISED LAND USE FORECASTS
(1) Person trips from Lee County MPO travel model assignments.
DAVID PLUMMER & ASSOCIATES INC.
CONSULTING ENGINEERS
TRANSPORTATION PLANNERS
CORAL GABLES
FORT MYERS
PALM BEACH
LEHIGH ACRES COMMERCIAL
LAND USE STUDY
COMPARISON OF 2020 TRIP PRODUCTIONS
AND ATTRACTIONS, LEE COUNTY MPO
LAND USES VS. REVISED LAND USES(1)

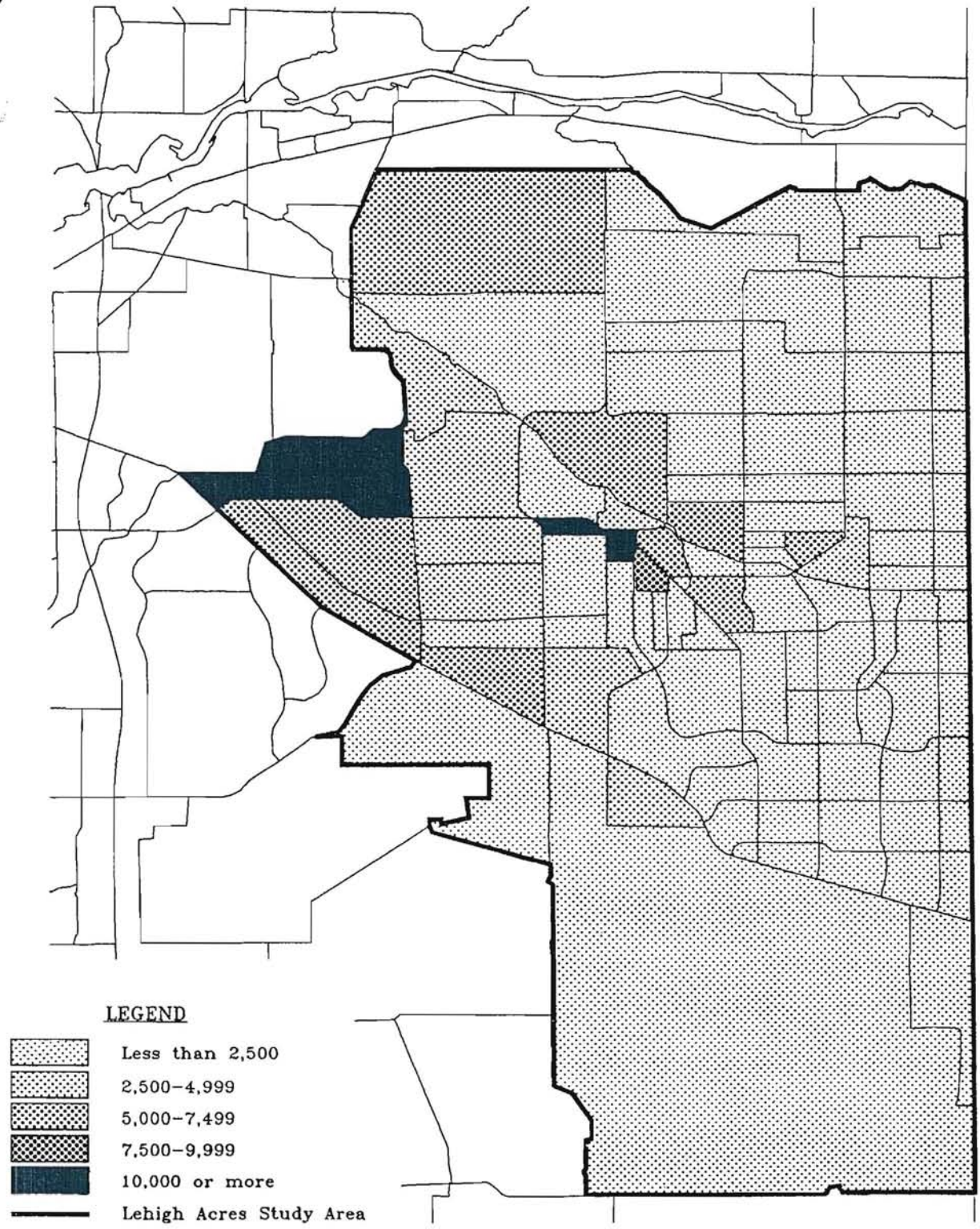
Figure 14.4



(1) Person trips from Lee County MPO travel model assignments for year 2020.

dpa	LEHIGH ACRES COMMERCIAL LAND USE STUDY	TRIP PRODUCTIONS BASED ON LEE COUNTY MPO LAND USES (1)	2/19/96 | 94557

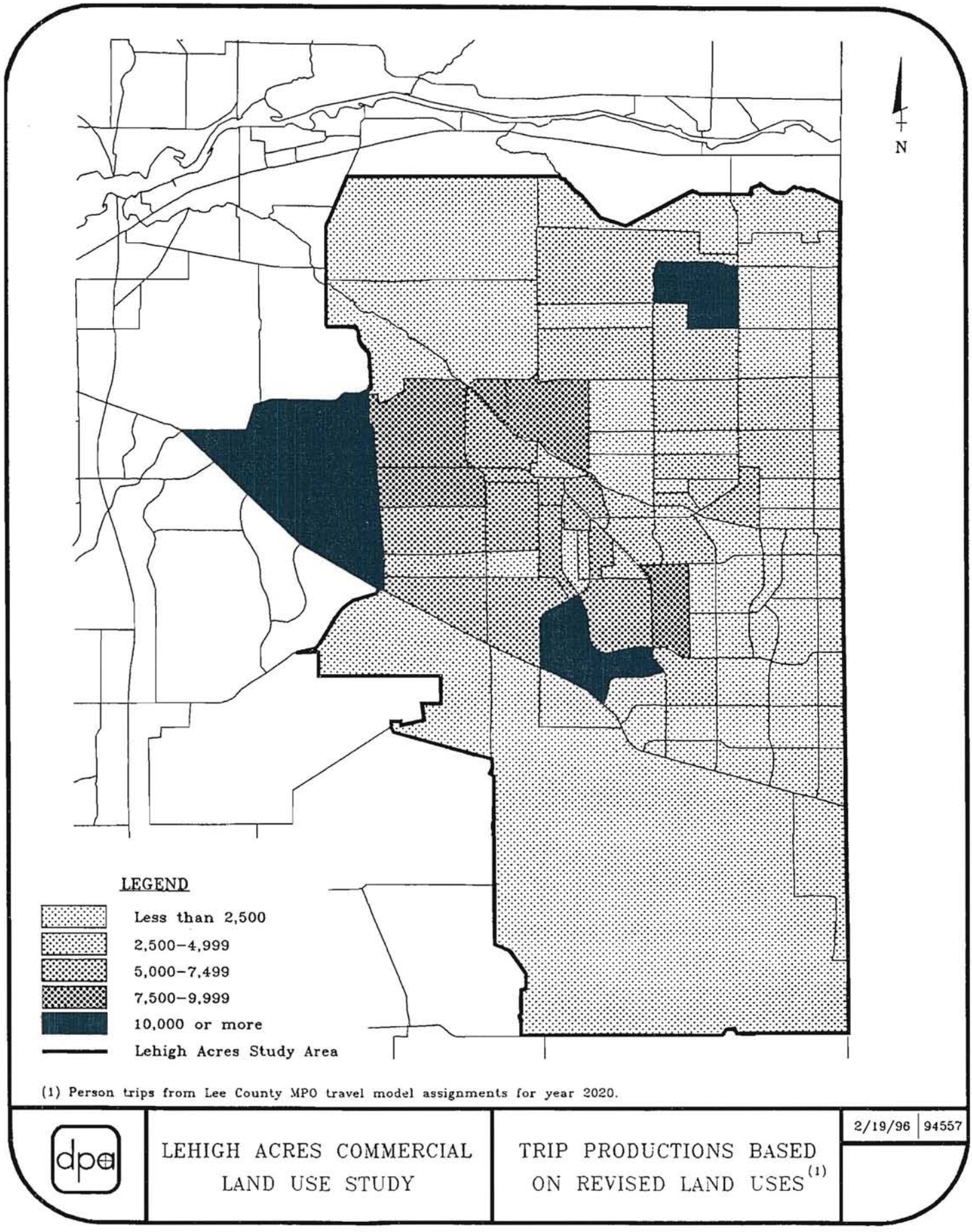
Figure 14.5



(1) Person trips from Lee County MPO travel model assignments for year 2020.

dpa	LEHIGH ACRES COMMERCIAL LAND USE STUDY	TRIP ATTRACTIONS BASED ON LEE COUNTY MPO LAND USES (1)	2/19/96 | 94557

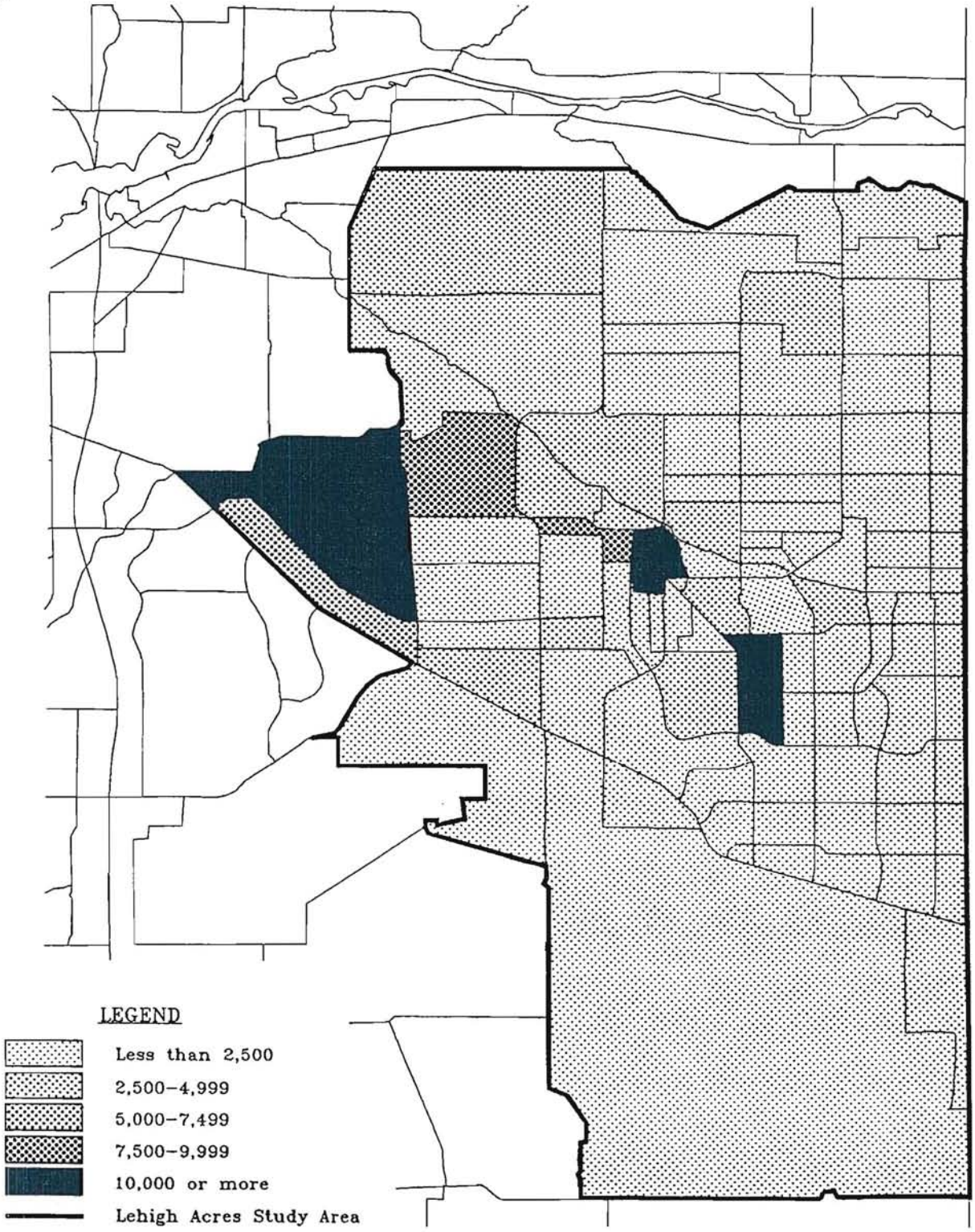
Figure 14.6



(1) Person trips from Lee County MPO travel model assignments for year 2020.

dpa	LEHIGH ACRES COMMERCIAL LAND USE STUDY	TRIP PRODUCTIONS BASED ON REVISED LAND USES(1)	2/19/96 | 94557

Figure 14.7



(1) Person trips from Lee County MPO travel model assignments for year 2020.

dpa	LEHIGH ACRES COMMERCIAL LAND USE STUDY	TRIP ATTRACTIONS BASED ON REVISED LAND USES(1)	2/19/96 | 94557

"financially feasible" were used for these assignments. The so-called "reserve projects" were *not* included in the assignments. Reserve projects are identified in the MPO's 2020 Transportation Plan as projects that have the potential for alternative or innovative financing, and therefore will only be transferred into the financially feasible plan once these alternative financing solutions are identified.

Roadway levels of service (LOS) reflect the relative level of driving comfort experienced by motorists, as measured through travel speed and delay, and range from LOS A to LOS F, with LOS F being very congested (i.e., the road is over its capacity). Typically, future roadway levels of service are estimated using projected traffic volumes.

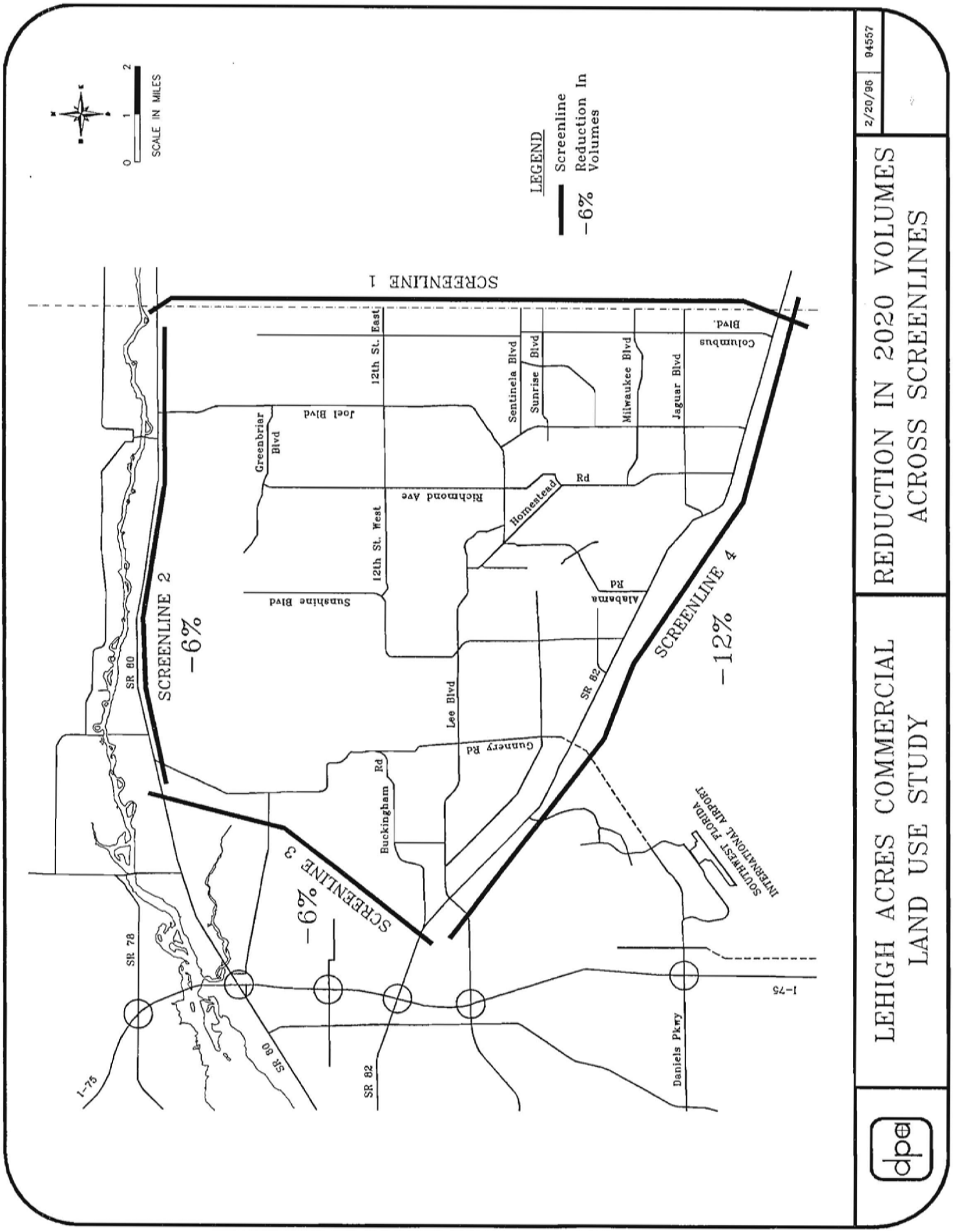
Roadway levels of service were estimated for the year 2020 under both scenarios to provide an indication of deficiencies in the roadway system. Further, they served as an indication of whether the land use revisions were improving traffic conditions on roadways entering and leaving Lehigh Acres, a sign that the area would become more self-contained and less dependent on travel to Fort Myers and the rest of Lee County with the revised land uses. Roadway levels of service with the original Lee County MPO land uses are reported in Appendix B, and levels of service with the revised land uses are reported in Appendix C.

The land use revisions had marginally positive effects in relieving roadways with high volume-to-capacity ratios and/or LOS problems in the year 2020. This was particularly true of roadways such as S.R. 82 and Daniels Parkway, east of I-75, which serve as approaches to Lehigh Acres. However, even with the land use revisions, Lee Boulevard continued to operate at LOS F from S.R. 82 to Sunshine Boulevard, as it had using the MPO's 2020 land use data. In addition, Lee Boulevard operated with a high volume-to-capacity ratio from Sunshine Boulevard to Leeland Heights Boulevard under both land use scenarios.

Four screenlines were established to determine whether or not the revised land uses would actually reduce volumes entering and leaving Lehigh Acres, as would be anticipated from the more balanced land-use pattern. As shown in Figure 14.8, these screenlines were established at the Hendry County line (#1), south of S.R. 80 (#2), west of Buckingham Road (#3) and south of S.R. 82 (#4).

With the exception of Screenline 1 at the Hendry County line, where the volumes did not change significantly, the screenlines showed a drop in volumes with the land use revisions. Volumes declined from approximately 6 percent to 12 percent. Overall, the volume of traffic entering and leaving Lehigh Ares dropped by over 8 percent with the land use revisions. Appendix D provides more detailed information on the screenline volumes under both scenarios.

Figure 14.8


LEHIGH ACRES COMMERCIAL
LAND USE STUDY
REDUCTION IN 2020 VOLUMES
ACROSS SCREENLINES
2/20/96
94557
dpel
LEGEND
Screenline
Reduction In Volumes
-6%
SCALE IN MILES
0
1
2
SCREENLINE 1
SCREENLINE 2
-6%
SCREENLINE 3
-9%
SCREENLINE 4
-12%
I-75
SR 80
SR 78
SR 82
Daniels Pkwy
Buckingham Rd
Gunnery Rd
Lee Blvd
Alabama Rd
Homestead Rd
Richmond Ave
Sunshine Blvd
12th St. West
12th St. East
Joel Blvd
Greenbriar Blvd
Sentinela Blvd
Sunrise Blvd
Milwaukee Blvd
Jaguar Blvd
Columbus Blvd.
SOUTHWEST FLORIDA INTERNATIONAL AIRPORT

15. Development of a Proposed 2020 Transportation Plan

Although it appears that the land use revisions will improve traffic conditions in Lehigh Acres in the year 2020 by reducing overall traffic volumes within Lehigh Acres and reducing travel between Lehigh Acres and the rest of Lee County, a number of problems will remain even with all of the improvements identified in the MPO's 2020 financially feasible plan (see Figure 14.2). These improvements include the widening of Lee Boulevard to six lanes between S.R. 82 and Homestead Road, the widening of Lee Boulevard/Leeland Heights Boulevard/Joel Boulevard to four lanes between Homestead Road and East 16th Street, and the widening of Gunnery Road to four lanes.

First, there are many gaps in the internal roadway network within Lehigh Acres, resulting in circuitous travel, increased traffic congestion, and greater trip lengths than would exist with a well-connected roadway network. Second, Lee Boulevard is expected to operate below the level of service standard, even at six lanes, because of the lack of additional east-west corridors to relieve traffic congestion of this critical roadway.

For these reasons, several additional roadway improvements for the year 2020 were evaluated to supplement the land use revisions. Among the improvements considered were the following: the list of reserve projects in the MPO's 2020 Transportation Plan; new roadways proposed by the Lehigh Acres Local Redevelopment Planning Committee; and proposed improvements suggested by the Concerned Citizens of Lehigh Acres.

Specific improvements were selected for incorporation into the proposed 2020 transportation plan based on travel demand, system continuity, and the relief they could provide to roads that are expected to be over capacity within the study area.

Travel demand was measured through the traffic projections obtained from travel model assignments for the year 2020. The effects of alternative improvements on levels of service and volume-to-capacity ratios were estimated based on these model assignments.

System continuity was emphasized to eliminate circuitous travel from point to point. Particular emphasis was placed on providing direct connections between residential and commercial areas. Projects that would improve system continuity were advanced. Improved east-west connections were particularly sought because of the inadequacy of the current road network and the concentration of jobs and shopping/cultural opportunities in and around Fort Myers.

The reserve projects identified in the MPO's 2020 Transportation Plan improved system continuity. Therefore, they were all eventually incorporated into the Proposed 2020 Transportation Plan for Lehigh Acres.

Improvements that provided relief to congested roads within Lehigh Acres were of primary concern. Given the LOS problems on Lee Boulevard noted earlier in this report, a number of improvements were considered and tested to see what relief they might provide to this corridor. As a result, five additional east-west corridors were identified that can provide relief to Lee Boulevard and S.R. 82.

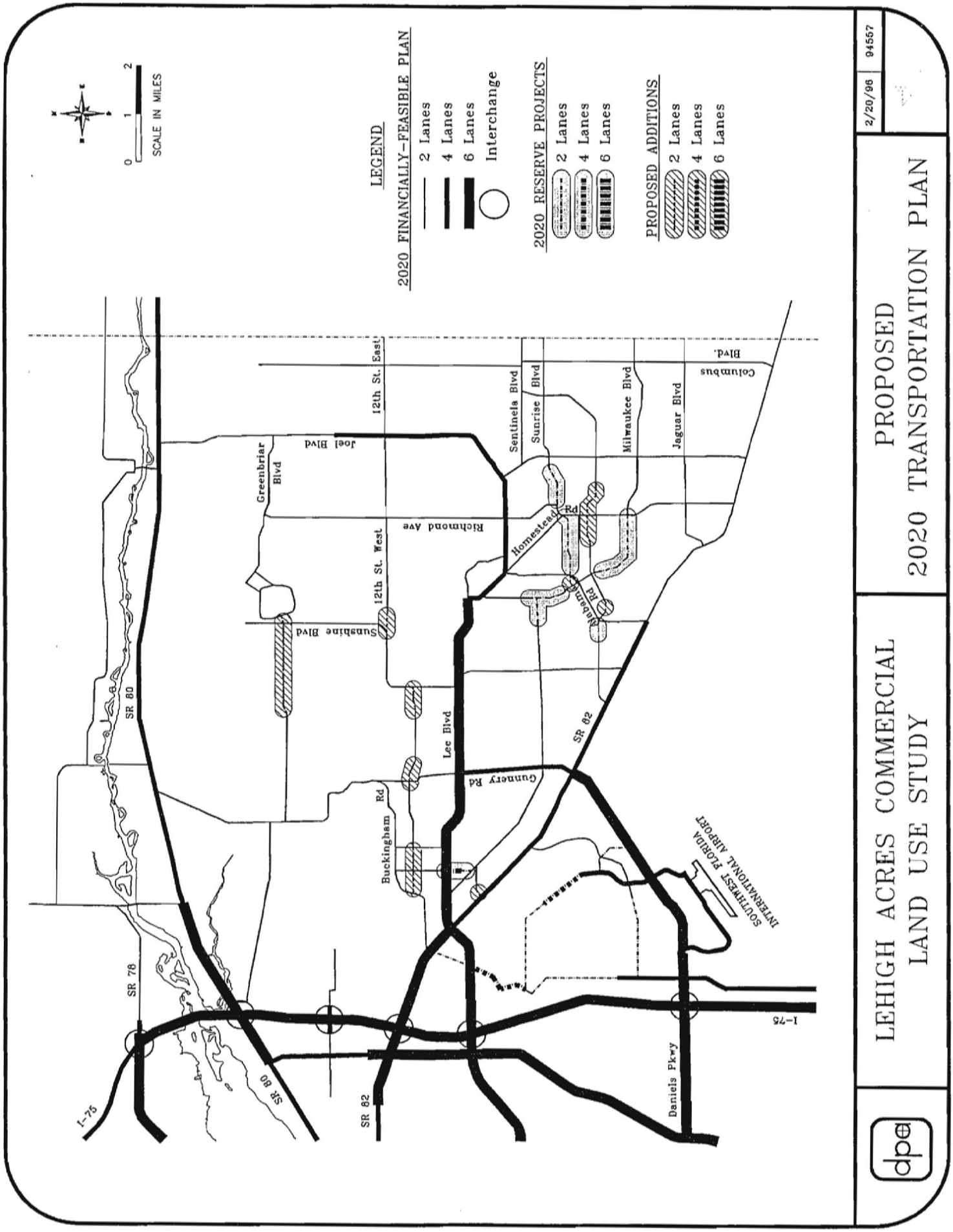
Figure 15.1 shows the Proposed 2020 Transportation Plan for Lehigh Acres. (This plan was also mapped on Figure 12.1.) Highlights of this plan include the following two-lane improvements:

- A continuous east-west corridor north of Lee Boulevard that utilizes several existing roadways (Burr Street, Centennial Boulevard, Sunset Road and 20th Street NW) to connect Sunshine Boulevard to Buckingham Road. (The engineering feasibility of the westerly 1/3 mile of this corridor, where it crosses a former landfill, has not been fully evaluated.)
- A continuous east-west corridor south of Lee Boulevard that utilizes three existing roadways (Hawalaska Street, Leonard Boulevard and 23rd Street SW) to connect Beth Stacey Boulevard to S.R. 82.
- Another continuous east-west corridor south of Lee Boulevard that utilizes three existing roadways (Grant Boulevard, Pelham Road and 40th Street SW) to connect Alexander Graham Bell Boulevard to S.R. 82.
- Sunrise Boulevard Extension from Richmond Avenue to A. G. Bell Boulevard and from Homestead Road to Alabama Road; then extending Paddock Street to connect to Beth Stacey Boulevard.
- 61st Street W. improvements from Cemetery Road to Sunshine Boulevard.
- Beth Stacey Boulevard Extension south to Alabama Road to tie into Milwaukee Boulevard.
- Milwaukee Boulevard Extension from Grant Boulevard to Homestead Road.
- A realignment of the West 12th Street intersection with Sunshine Boulevard to provide better east-west continuity.

The first five improvements are either new recommendations from this study or extensions of MPO reserve projects. The last three are MPO reserve projects.

This 2020 roadway network appears to alleviate anticipated LOS problems that were found when testing only the road improvements in the MPO's adopted 2020 financially feasible plan around Lehigh Acres. However, some LOS problems remain with the Proposed 2020 Transportation Plan at the periphery of the study area, in the vicinity of I-75 and Daniels Parkway, I-75 and Colonial Boulevard, and

Figure 15.1


LEGEND
2020 FINANCIALLY-FEASIBLE PLAN
2 Lanes
4 Lanes
6 Lanes
Interchange
2020 RESERVE PROJECTS
2 Lanes
4 Lanes
6 Lanes
PROPOSED ADDITIONS
2 Lanes
4 Lanes
6 Lanes
SCALE IN MILES
0
1
2
I-75
SR 78
SR 80
SR 82
Joel Blvd
Greenbriar Blvd
12th St. East
12th St. West
Richmond Ave
Sunshine Blvd
Lee Blvd
Buckingham Rd
Gunnery Rd
Homestead Rd
Sentinela Blvd
Sunrise Blvd
Milwaukee Blvd
Jaguar Blvd
Columbus Blvd.
Daniels Pkwy
SOUTHWEST FLORIDA INTERNATIONAL AIRPORT
LEHIGH ACRES COMMERCIAL LAND USE STUDY
PROPOSED 2020 TRANSPORTATION PLAN
2/20/96
94557

the Florida Gulf Coast University. Appendix E includes a spreadsheet with LOS calculations for the year 2020 with the Proposed 2020 Transportation Plan for Lehigh Acres.[29]

The Proposed 2020 Transportation Plan for Lehigh Acres was presented at a public meeting hosted by the Lehigh Acres Local Redevelopment Planning Committee on February 21, 1996, for review and comment. The comments received at this meeting were generally favorable.

At the time the Plan was presented to the Committee, the Sunrise Boulevard Extension from Homestead Road to Alabama Road was not included in the preliminary plan because this improvement seemed infeasible due to a fully developed neighborhood lying in its path. Upon further review, however, this improvement and an extension using Paddock Street from Alabama Road to Beth Stacey Boulevard were added to the plan, because this roadway could cross over to the south side of a canal and avoid the displacement of homes. This roadway would become an important supplement to the Leonard Boulevard/23rd Street SW corridor.

All of the reserve projects identified by the MPO in Lehigh Acres are, therefore, included in the Proposed 2020 Transportation Plan for Lehigh Acres. The MPO has estimated the cost of these reserve projects to be approximately $13 million.

Using the average cost per mile for these reserve projects in Lehigh Acres, the costs of the additional improvements in Lehigh Acres recommended in this study are approximately $15 million. These cost estimates are provided in Appendix F.

Lee County should add these additional improvements to the MPO's list of reserve projects for a total of approximately $28 million in reserve projects in Lehigh Acres. As noted previously, reserve projects are to be funded through alternative or innovative financing solutions, since current funding sources will not provide sufficient revenue for all of these projects.

Two potential roads *outside* Lehigh Acres were evaluated: a northern extension of Sunshine Boulevard to S.R. 80 and a southerly link between Alabama Road (or Sunshine Boulevard) and Alico Road. Although either or both may be needed at some future time, neither showed sufficient travel demand by the year 2020 for inclusion in the Proposed 2020 Transportation Plan for Lehigh Acres. Roads needed only beyond 2020 are included on the Official Trafficways Map, which is discussed in the following section.

---

[29]Excluding the Sunrise Boulevard Extension from Homestead Road to Alabama Road and Paddock Street between Alabama Road and Beth Stacey Boulevard

16. Lehigh Acres and the Official Trafficways Map

Lee County adopted its first Official Trafficways Map about a decade ago to reserve future right-of-way needs at the unspecified time when Lee County would be "built-out" with no further development anticipated. While the Trafficways Map is no longer used by Lee County to force the reservation of right-of-way, it still serves a useful long-range planning function.

The Planning and Zoning Subcommittee of the Lehigh Acres Local Redevelopment Planning Committee made several recommendations regarding the Trafficways Map in their report dated September 14, 1994 (see Appendix G). That report was very useful in the development of the Proposed 2020 Transportation Plan for Lehigh Acres, with many of the subcommittee's recommendations ultimately incorporated into that plan.

In addition, the subcommittee's recommendations for the Trafficways Map were also reviewed in detail to identify proposed revisions to the Trafficways Map. The primary focus of this review was the identification of additional corridors that would improve system continuity, reduce circuitous travel, and provide better arterial spacing in Lehigh Acres. Travel model assignments were not performed as part of this review because a travel model has not been created to simulate conditions beyond the year 2020.

The changes in the Trafficways Map recommended by the subcommittee were categorized as follows:

- *Proposed Arterial Streets Not Shown on the Trafficways Map*
- *Proposed Collector Streets Not Shown on the Trafficways Map*
- *Streets Shown as Collectors on the Trafficways Map to Proposed Arterials*
- *Streets Shown on the Trafficways Map as Arterials to be Removed*

For ease of comparison, the recommendations of this study will be presented in the same order.

Following evaluation by the consulting team, most of the recommendations of the subcommittee were incorporated into the recommendations of this study. Additional recommendations have been added to further improve system continuity, reduce circuitous travel, and provide better arterial spacing in Lehigh Acres. The resulting recommended changes to the Lee County Official Trafficways Map are shown in Tables 16-1 through 16-4. (These changes also reflect all of the improvements shown in the Proposed 2020 Transportation Plan for Lehigh Acres.)

Table 16-1

Existing and Proposed Arterial Streets to be Added to Trafficways Map		
Street	***From***	***To***
Cemetery Rd.	Buckingham Rd.	Stratton Rd./61st St. W
61st. St. W.	Stratton/Cemetery Rd.	Sunshine Blvd.
Sunshine Blvd.	61st St. W.	S.R. 80
N. Line of Sec. 6-44-27	Sunshine Blvd.	Greenbriar Blvd.
Greenbriar Blvd.	Wingford Dr.	N. Line of Sec. 6-44-27
E. 21st St.	Grant Ave.	Moore Ave.
E. 16th St.	Grant Ave.	Moore Ave.
E. 12th St.	Grant Ave.	Moore Ave.
19th St. W.	Sunshine Blvd.	Ann Ave.
Ann Ave.	19th St. W.	W. 9th St.
West/East 9th St.	Ann Ave.	Moore Ave.
Columbus Blvd.	Sunrise Blvd.	Sentinela Blvd.
Moore Ave.	Sentinela Blvd.	E. 21st St.
Jaguar Blvd.	S.R. 82	Homestead Rd.
Homestead Rd.	Jaguar Blvd.	S.R. 82
Nimitz Blvd.	Bell Blvd.	S.R. 82
40th St. SW	S.R. 82	Alabama Rd./Pelham Rd.
Pelham Rd.	Alabama Rd.	Grant Blvd./Pyramid Ave.
Grant Blvd.	Pyramid Ave./Pelham Rd.	Carrillon Ave./Grant Blvd.
Richmond Ave.	Sunrise Blvd.	Grant Blvd.
Paddock St.	Alabama Rd./Sunrise Bl.	Beth Stacey Blvd.
Burr St.	Buckingham Rd.	Abrams /Centennial Blvds.
Centennial Blvd.	Abrams Blvd.	Sunset/Yale Ave.
Sunset	Yale Ave.	Sunniland Blvd.
20th St. W.	Sunniland Blvd.	Sunshine Blvd./19th St. W
Hawalaska St.	Leonard Blvd.	S.R. 82
E. 5th St.	Grant Ave.	Moore Ave.
W. 12th St. Ext.	Lee St.	Connie Ave./Sunshine Blvd.

Table 16-2

Existing and Proposed Collector Streets to be Added to Trafficways Map		
Street	***From***	***To***
Abrams Blvd.	Lee Blvd.	Buckingham Rd.
Sunniland Blvd.	Lee Blvd.	25th St. W.
25th St. W.	Sunniland Blvd.	Sunshine Blvd.
12th St. W.	Gunnery Rd.	Sunshine Blvd.
Lee St.	W. 12th St.	W. 16th St.
W. 16th St.	Lee St.	Connie Ave.
Connie Ave.	W. 16th St.	Lee Blvd.
Anita Ave.	Lee Blvd.	40th St. SW.
8th St. SW.	Sunshine Blvd.	Anita Ave.
Windermere Dr.	Wingford Dr.	Richmond Ave.
Woodburn Dr.	Richmond Ave.	Greenbriar Blvd.
Grant Blvd.	S.R. 82	Milwaukee Blvd.
Parkdale Blvd.	S.R. 82	Homestead Rd.
Delaware Rd.	Lee Blvd.	Homestead Rd.
North Ave.	Leeland Heights Blvd.	E. 16th St.
Blackstone Dr.	S.R. 82	S.R. 82
Wanda Ave./Villa Ave.	Lee Blvd.	40th St. SW
Lee St.	Lee Blvd.	Lee Circle. S.
Lee Circle. S.	Lee St.	Kenneth Ave.
Kenneth Ave.	Lee Circle. S.	Golfview Blvd.
Golfview Blvd.	Putter Ln.	Par Rd.
Putter La.	Golfview Blvd.	Leonard Blvd.
Par Rd.	Golfview Blvd.	Leonard Blvd.
7th St. S.W.	Golfview Blvd.	Gunnery Rd.

Table 16-3

Streets Shown as Collectors on Trafficways Map to be Designated as Arterials		
Street	***From***	***To***
West/East 5th St.	Williams Ave.	Grant Blvd.

Table 16-4

Streets Shown as Arterials on Trafficways Map to be Removed		
Street	***From***	***To***
32nd St. S.W.	Gunnery Rd.	Alabama Rd.
Beauty St.	Buckingham Rd.	Gunnery Rd.
16th St. W./W. 8th St.	Gunnery Rd.	Grant Ave.
W. 16th St.	Sunshine Blvd.	Buckingham Rd.
Unnamed Street	61st St. W.	Sunshine Blvd.

The next section of this report analyzes existing Lee County regulations and recommends specific amendments in order to accomplish this balance between private and public needs.

17. Integrating the Commercial Plan into County Regulations

17(a) Analysis of Major Alternatives

The proposed plan for future commercial development in Lehigh Acres needs to be thoroughly integrated into Lee County planning and development regulations to be truly effective. Those regulations are complex and could be modified in a number of different ways. The major alternatives are discussed below.

Since 1984, the Lee County Comprehensive Plan (Lee Plan) has contained one or more maps that establish legally binding maximum levels of future development. The most well-known map is the "Future Land Use Map" that classifies the entire county into a variety of land-use categories. It originally depicted Lehigh Acres in two similar categories, "Urban Community" and "Central Urban," with the main difference being the maximum residential density level. In 1994, those categories were combined into a new "Vested Community" category (although this change has not taken effect due to pending legal challenges).

The Lee Plan also contains other controls on the future use of land. The same 1994 amendments added a new "Commercial Site Location Standards Map" (Map 16) to supplement the site locations standards found in the Future Land Use element, and deleted a "Year 2010 Overlay." These amendments are also not yet in effect. For the purposes of this study it is assumed that the 1994 amendments will take effect shortly, at least as they apply to Lehigh Acres. (Should this not be the case, this study's implementation approach would not change, but the exact wording would need to be modified.)

The most obvious means to implement this study's designation of future commercial lands would be to change the "Future Land Use Map" designation for the potential commercial lands identified above. This re-designation would be easily visible even to casual users of the Lee Plan, many of whom refer to this map more than often than other parts of the plan. At present, land in Lehigh Acres has an almost uniform designation, hiding even the most obvious distinction of pre-platted versus unplatted land.

However, the Lee Plan does not use this kind of specific commercial designation on the Future Land Use Map anywhere else in the county. Although a commercial designation is a commonly used planning approach in established cities, the detailed development pattern in most of unincorporated Lee County has yet to be fully determined, with only broad parameters established in the Lee Plan.

The alternative of using a modification to Map 16 to implement this study was given careful consideration. But when a modified Map 16 was actually prepared, it

was clear that it would be inefficient in protecting commercial land and would require so many narrative annotations that it would be very difficult to understand.

Other alternatives were also considered. One was to use the standard rezoning process to implement this plan. Some or all of the potential commercial land would be rezoned at the county's initiative and expense. This approach would memorialize the proposed commercial pattern, but it has several drawbacks:

- The rezoning process is very expensive and time-consuming, involving extensive public hearings and the individual notification of many thousands of adjoining property owners, few of whom live in the area and would be able to participate in the process in any knowledgeable way.
- Some owners of land whose commercial potential is quite far into the future may strenuously object to the rezoning, since it affects their use of land during the interim period and may preclude any other economically viable uses (such as agricultural).
- Rezonings can only be approved if they are consistent with the Lee Plan, so the rezoning approach would have to be a supplement to Lee Plan amendments of some type.

Another alternative that was considered is a new feature of Lee County's Land Development Code, a "redevelopment overlay district." This district is similar to a zoning district in that it applies to carefully defined lands and contains specific regulations, but it is used *in addition* to a zoning category to solve problems that cross zoning lines. This type of district is very flexible and could play a part in the ultimate implementation of this study, but it also has certain drawbacks:

- These districts are relatively new and therefore quite obscure to most people; consequently, the proposed commercial pattern would not be easily apparent either to future residents of Lehigh Acres or to potential investors in future commercial land.
- Like rezonings, a redevelopment overlay district can only be approved if it is consistent with the Lee Plan, so this approach would also have to supplement to Lee Plan amendments of some type.

The drawbacks of the alternative approaches are so significant that the original concept, a specific Future Land Use Map classification for future commercial development, was selected for more detailed analysis. A number of important considerations would affect the final form of this new classification. Two have been discussed previously:

- Should the new category designate just enough land with commercial potential to satisfy needs through the year 2020, or should it extend to "build-out"?

- Should the new category restrict future development to commercial purposes only, or merely *allow* commercial uses?

Other important considerations include:

- Should the new category replace the current "Vested Community" designation, or should it be an "overlay": in other words, a supplement rather than a replacement?
- Should *more than one* new category be created to implement this study?
- How much extra land should be included in the commercial categories to account for land that will be used for other legal purposes?

Many of these considerations are inter-related. For instance, an entirely new category for the "Future Land Use Map" would provide a sharper distinction and therefore be more suitable to a "commercial only" approach. An overlay approach would generally be more suitable to a "commercial optional" approach because the standard Lehigh Acres regulations would still be in place. An overlay approach would also be more suitable if enough commercial land is designated for build-out, because all other land uses would not be foreclosed in the intervening years.

An overlay approach could ultimately be inadequate, however, if it fails in the goal of preserving enough suitable land to meet the future commercial demands of Lehigh Acres residents. If the overlay were so weakly worded that it did not change the expectations of the owners of the land (and adjoining owners as well), then it will have failed.

The approach that ultimately emerged from this analysis was to use overlay categories on the Future Land Use Map that are somewhere between "commercial only" and "commercial optional." Lands in a new "Lehigh Commercial" overlay could not be subdivided into conventional single-family lots because of the tremendous surplus in Lehigh Acres. But they could be developed with residential uses that provide housing alternatives to the typical Lehigh Acres plats, such as estate lots or multifamily housing, or for churches, schools, parks, other public facilities, or quasi-commercial uses. A second overlay would indicate those portions of the existing commercial strips that could be reclaimed through the techniques discussed in Section 10. A third overlay would be created for "potential lot assembly," where private land assembly would be encouraged (and public-sector assembly might be considered). To protect existing lot owners who do not wish to participate, the lot assembly option would only be available when significant amounts of land were assembled (e.g., full blocks). Small assemblies would not provide enough commercial land to justify their intrusion into residential blocks. These three overlay categories would replace the use of the Lee Plan's commercial locational standards (and Map 16) for Lehigh Acres only.

No new prohibitions on agricultural are proposed; it is currently permitted on land in agricultural zoning districts. Agricultural is one of the few interim uses that does not require the construction of buildings; and the property tax consequences are favorable enough to make it more likely that the more remote sites can actually be held long enough for commercial demand to reach them.

Table 17-1 presents a summary of the acreage shown on Figure 12.1 in each of the three overlays and also the land outside Lehigh Acres that is suitable for commercial development.

Table 17-1

Summary of Proposed Commercial Acreage		
NAME	**COLOR**	**ACREAGE**
Lehigh Commercial	red	2,132
Reclaimed Strip	blue	142
Lot Assembly	yellow	293
Outside Lehigh Acres	stippled purple	448
TOTAL		3,015

Proposed wording to adopt this approach is contained in the following section, followed by a discussion of other implementing actions that are also recommended.

17(b) Proposed Lee Plan Text Amendments

AMEND LEE PLAN POLICY 1.1.5 AS FOLLOWS: The Vested Community area consists of Lehigh Acres. ~~those areas previously classified Urban Community and Central Urban in: Township 43 South, Range 27 East (except Sections 22, 27, and 28); Township 44 South, Range 27 East; Township 44 South, Range 26 East; Township 45 South, Range 26 East; and Township 45 South, Range 27 East.~~ Most ~~of~~ land in this category ~~property~~ has vested development rights pursuant to the Administrative Interpretation of Vested Rights dated August 19, 1985, the Stipulation and Settlement Agreement dated August 27, 1988, between Lehigh Corporation and Lee County, and the Stipulation and Settlement Agreement dated June 9, 1992 between Lehigh Corporation and Lee County. Development in the Vested Community category shall be permitted as follows:

1. Residential Uses
   a. All lots of no less than 7,500 square feet created (as defined in Chapter XIII) prior to November 1, 1994 upon which residential uses are permitted by the zoning regulations are entitled to one (1) dwelling unit.
   b. Parcels or tracts in excess of one (1) acre may be subdivided so long as the density of the subdivision does not exceed four (4) units per acre and the subdivision is consistent with the natural resource protection standards in the Conservation and Coastal Management element.
   c. Certain parcels are entitled to higher densities as a result of the 1988 settlement agreement and prevailing development patterns. These parcels, and their corresponding densities, are shown on Table 1(a).
   d. No lot, tract, or parcel of less than one (1) acre may be subdivided; provided, however, that such subdivisions are permitted if the subdivision does not result in a density of more than four (4) units per acre; all resulting lots are served by central water and sewer systems; and all resulting lots are not less than 80% of the lot size of the smallest adjacent lot. Parcels of less than one (1) acre may be replatted so long as the density is not thereby increased.
   e. Two-family and multiple-family dwelling units may be permitted on parcels or tracts in excess of one (1) acre at a density that does not exceed four (4) units per acre where such uses are permitted by the zoning regulations.

2. Commercial Uses
   a. ~~Commercial uses are permitted in accordance with the 1988 and 1992 settlement agreements, the compatibility and locational criteria following Goal 6, and the natural resource protection standards in the Conservation and Coastal Management element. Commercial locations will be shown more specifically in a sector plan that is to be adopted as a plan amendment pursuant to F.S. 163.3189 no later than 1996.~~ Commercial uses are permitted on lands in the Lehigh Commercial overlay in accordance with existing or future zoning and

the natural resource protection standards in the Conservation and Coastal Management element. Land in the Lehigh Commercial overlay may also be used for schools, parks, and other public facilities; churches and synagogues; and residential uses that provide housing alternatives to the typical ¼ to ½ acre subdivision lots. Creation of new single-family lots smaller than one acre is not permitted due to the over-supply of standard subdivision lots. If cumulative new residential development takes place on more than 1% of this land per year, Lee County shall take steps to provide additional commercial land in Lehigh Acres to offset the loss.

b. Commercial uses will also be permitted on lots in the Reclaimed Strip overlay facing S.R. 82 once a corridor access management plan is adopted by FDOT governing that portion of S.R. 82. This plan would provide for additional road connections between S.R. 82 and Meadow Road at about 1/8-mile spacing with full access median crossings at about 1/4-mile spacing. All lots would ultimately have access to S.R. 82 via Meadow Road, which would serve as a reverse frontage street. Commercial uses would also be permitted on Reclaimed Strip lots facing Gunnery Road if Lee County adopts a similar plan, with access to all lots being provided via Gretchen Avenue which would serve as the reverse frontage street. Until such plans are in place, lots in the Reclaimed Strip overlay may be used for any of the residential uses permitted in the C-2 zoning district.

c. Because of the shortage of suitable undivided tracts in Lehigh Acres, commercial uses may also be appropriate on certain other lands that might otherwise be used for residential lots.

   i. Many such lands are designated with the Lot Assembly overlay. These lands are platted for single-family lots and are under multiple ownerships. Commercial uses on individual lots or partial-block assemblies would generally be intrusive to existing or emerging neighborhoods. However, assemblies of entire blocks would provide suitable commercial parcels. Such assemblies could qualify for commercial zoning whether assembled by government action, private sector purchases, cooperative arrangements between individual lot-owners, or similar arrangements.

   ii. Other tracts or combinations of platted lots in Lehigh Acres but outside of the three overlays may also be considered for commercial rezoning through the normal zoning processes or by requesting a new conventional commercial zoning district that may be created to address Lehigh Acres conditions. Lands suitable for such rezoning would include:

      (1) Tracts that are assembled from vacant lots at the intersection of future collector or arterial roads in sparsely developed areas where there are very limited or no suitable commercial locations in any of the commercial overlays; or

(2) Tracts that separate existing commercial and residential land uses where some commercial uses may be appropriate while providing a substantial buffer and reasonably protecting the privacy of existing dwellings. Landowners seeking commercial zoning under this subsection should expect a minimal level of commercial uses and/or to provide extra levels of buffering.

Decisions on the suitability of any proposal shall be made by Lee County on a case-by-case basis in order to implement the intent of these regulations.

d. Commercially zoned land not placed within one of these overlays can be developed in accordance with previous regulations, but may be subject to county-initiated rezonings to further restrict or eliminate future commercial uses.

3. Industrial uses are not permitted in the Vested Community (except on property with existing C-2 zoning) pending a plan amendment designating specific locations for such uses.

4. Public and Quasi-Public uses are also permitted in accordance with Policy 2.1.3.

Infrastructure in the Vested Community will be provided in a manner consistent with Goal 3 and the above-described settlement agreements. Infrastructure issues will be addressed in a subsequent phase of the Lehigh Acres sector plan that was begun in 1995 ~~described in subsection 2 above~~.

ADD LEE PLAN POLICY 1.7.8 AS FOLLOWS: Several additional overlays regulate future commercial uses in Lehigh Acres, as described in Policy 1.1.5.

AMEND LEE PLAN POLICY 6.1.2 AS FOLLOWS: All commercial development shall be consistent with the location criteria in this policy, except where specifically excepted by this policy, ~~or~~ by Policy 6.1.7, or in Lehigh Acres by Policy 1.1.5(2).

1. Minor Commercial *[no change]*
2. Neighborhood Commercial *[no change]*
3. Community Commercial *[no change]*
4. Regional Commercial *[no change]*
5. *[no change]*
6. *[no change]*
7. The location standards specified in Subsections 1-4 shall apply to the following commercial developments: shopping centers; free-standing retail or service establishments; restaurants; convenience food stores; automobile dealerships; post

offices; gas stations; car washes; and other commercial development generating large volumes of traffic. These location standards shall not apply to the following: banks and savings and loan establishments without drive-in facilities; hotels or motels; marinas; general, medical, or professional offices; industrial, warehouse, or wholesale development; clubs, as defined in Chapter 34 of the Land Development Code (commercial clubs excepted); and other similar development. The distinction in this subsection between the two major types of commercial uses does not apply in Lehigh Acres, where commercial uses are permitted in accordance with Policy 1.1.5(2).

8. *[no change]*

9. The location standards in this policy are not applicable in the Interchange land use category, or in Lehigh Acres where commercial uses are permitted in accordance with Policy 1.1.5(2).

10. *[no change]*

11. *[no change]*

12. Map 16 illustrates the existing Lee County intersections that are deemed to be consistent with the standards in subsections 2 and 3. Neighborhood and community commercial centers must be located at one of the designated intersections, at another intersection determined to be consistent with the definition of "arterial" and "collector" road in Rule 9J-5.003, or in accordance with one of the exceptions under Goal 6, or in Lehigh Acres in accordance with Policy 1.1.5(2).

The map shows some intersections with half-circles and others with full circles. Half circles indicate that only the two intersection quadrants shown on the map are deemed to be consistent with the standards. All of the quadrants of intersections designated with full circles are deemed to be consistent with the standards. Proposed neighborhood and community commercial centers that are located at the designated intersections are subject to all of the other Goals, Objectives and Policies of this Plan.

Functional classifications of new or improved streets shall be established in accordance with the definitions of "arterial" and "collector" roads in Rule 9-J-5.003. The map shall be revised annually during the county's regular plan amendment cycle.

AMEND LEE PLAN MAP 3, the 2020 Traffic Circulation Map, to incorporate the specific recommendations shown on Figure 15.1.

17(c) Proposed Lee Plan Future Land Use Map Amendments

1. Revise Map 1, the Lee Plan's Future Land Use Map, to incorporate the three new overlay designations as shown on Figure 12.1.
2. Revise Map 16, the Commercial Site Location Standards Map, to shade the Lehigh Acres CRA area and delete all previously identified commercial designations (except the one at S.R. 80 and Joel Boulevard).
3. Revise Map 1 to expand the northerly boundary of the "Vested Community" category near Joel Boulevard to include the land in the "Lehigh Commercial" category.
4. Revise Map 16 to add a half-circle to the southerly half of the S.R. 82/Daniels Extension, and revise Map 1 to reclassify the land shown on Figure 12.1 at this intersection from "Density Reduction/Groundwater Resource" to "Urban Community" and "Wetlands."
5. Revise Map 1 to reclassify land in Section 30/44/26 being given the "Lehigh Commercial" overlay from "Industrial Development" to "Vested Community"; and reclassify land northwest of Leonard Boulevard in Section 31/44/26 from "Vested Community" to "Industrial Development" to compensate for this loss of industrial land.
6. Revise Map 1 to adjust the perimeter of the "Vested Community" category to reflect the Lehigh Acres CRA boundary along Buckingham Road.
7. Revise Map 1 to reclassify those portions of the Lee County Mosquito Control airport that are currently "Vested Community" to "Public Facilities."
8. Revise Map 1 to update the Future Land Use Map to reflect current conditions in and around Lehigh Acres as follows:
   a. Reclassify Lehigh Senior High School, Sunshine Elementary School, Veterans Park (including new 51-acre expansion parcel), the new elementary school site on Charwood Avenue, and the new school site adjoining Harns Marsh to "Public Facilities."
   b. Reclassify the Hickey Creek Mitigation Park from "Vested Community" to "Rural" or a new category for publicly owned conservation lands.
   c. Expand the boundaries of the Gulf Coast Center in Buckingham, currently designated in the "Public Facilities" category, so that it matches the current ownership lines of the state of Florida.
   d. Reclassify Lee County's incinerator to "Public Facilities," and consider a similar change for the completed portions of the old city-county landfill on Buckingham Road.
9. Consider replacing the current boundaries of the "Wetlands" category in Lehigh Acres with boundaries developed according to the methodology in Section 12(a) of this report, subject to site checks by county environmental staff.

17(d) Proposed Zoning Amendments

Zoning amendments take two forms. One is "rezoning" a parcel of land to a different zoning district than the one that currently applies. The other is a change to the district regulations themselves, which may affect the entire county, specific areas, or a specific zoning district wherever it has been applied.

— Rezoning of Specific Parcels

Most zoning changes in Lee County are requested by owners of a particular piece of property. The County Commission, however, has the authority to rezone property at its own initiative, following proper notice to the property and fulfillment of all other legal requirements.[30] This power can be used to implement special projects or studies, or to implement the Lee Plan.

As discussed previously in Section 17(a), there are serious problems and only limited benefits with using the rezoning process to implement most of the Lehigh Acres Commercial Land Use Study. One problem is simply the tremendous expense involved in rezoning hundreds of properties without knowing exactly what use the landowner might ultimately choose to put on the property.

A second and greater problem with the rezoning option is the long time period before the market is ready for some of the designated parcels, since most commercial zoning categories allow very few other uses during the interim. Such a restriction might seem ideal to accomplish the goal of preserving commercial sites, but would likely fall to constitutional challenges as well as being burdensome to the very landowners whose cooperation is essential to preserve these lands for their best ultimate uses. For example, commercial zoning does not permit new agricultural uses, one of the few interim uses that doesn't complicate future conversion to commercial development. The agricultural tax exemption, a major aid to holding land for long periods, is also not available when agriculture is not allowed by a parcel's current zoning category.

The major benefit to implementation through rezoning would be to those citizens who refer just to the zoning maps when acquiring property. The zoning maps would not give them a full indication of future commercial uses on nearby land unless all commercial zoning changes were made promptly. This is a fairly serious drawback, one that is faced by citizens everywhere ever since the mandatory adoption of comprehensive plans that control future rezoning but usually do not immediately replace today's zoning map. The major compensating factor is that citizens who wish to locate well away from (or near) future commercial centers will be able to under-

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[30]Lee County Land Development Code, §34-201

stand the entire commercial plan for Lehigh Acres by looking at a single map, the Lee Plan's future land use map, rather than having to review over a hundred individual zoning maps (which cover only a square mile each).

The proposed implementation of the Commercial Land Use Study through the Lee Plan amendments described above seems to provide most of the benefits of site-specific commercial designations without the problems created by mass rezoning. Individual owners of potential commercial land would be free to pursue rezoning for their property in conformance with the Lee Plan whenever they wish. They would bear the expense of this process but would control its timing.

There are some circumstances where county-initiated rezoning of land would be appropriate to remove inappropriate existing commercial zoning. Some examples include:

- A major wetland on Martin Avenue near Leonard Boulevard is currently zoned C-2.
- Two portions of the S.R. 82 commercial strip are too shallow for commercial uses and also are subject to flooding as a result of storm-water being unable to flow south across the S.R. 82 embankment (along the first mile east of Gunnery and the first mile east of Sunshine). Because of their single ownership, they could be redeveloped as multifamily sites with access to Meadow Road.
- There is a small block of lots zoned C-2 on Nancy Circle between a pair of sharp bends in Sunshine Boulevard. There doesn't appear to be any way to provide safe ingress and egress to commercial traffic there.

In cases such as these, the current commercial zoning should be replaced with a more suitable district.

— Changes to Zoning Regulations

There are two kind of changes to the zoning regulations that may prove beneficial in implementing this study. The first is the creation of a new zoning category specifically to enable small-scale commercial development to serve individual neighborhoods. This concept would be particularly useful in the northern and eastern portions of Lehigh Acres where almost all land has been platted and sold off as house lots. Small assemblies of these lots near key intersections could be redeveloped for local commercial purposes. Under today's regulations, landowners would apply for the Commercial Planned Development (CPD) zoning district, which provides a negotiated development solution in an attempt to minimize neighborhood impacts. The CPD option should remain available, but it is a fairly expensive and complex process that provides no certainty to a potential developer. Two alternatives are presented here:

- A new zoning district could be created with this specific purpose in mind. For instance, a maximum building size could be specified; night-time hours could be prohibited; and landscaping and design standards could ensure visual compatibility with the surrounding neighborhood. By eliminating the need for the negotiated "planned development" process, a landowner would know exactly what would be permitted if he obtains this rezoning, and would be able to pursue this option at minimal expense.
- A "redevelopment overlay district" could be applied to some of the key intersections where there are few or no commercial alternatives. This kind of overlay could provide some certainty to entrepreneurs who might undertake the assembly of lots for local commercial uses. Again, standards would have to be developed to protect the surrounding neighborhoods.

17(e) Other Proposed Development Regulation Amendments

Several modifications to Lee County's Land Development Code will be required to fully implement this study. These include changes to two maps contained in that code and various text changes.

— Official Trafficways Map

The Official Trafficways Map is a planning tool that identifies a network of existing and future roads to served the anticipated needs at build-out.[31] It therefore includes many roads not shown on the Lee Plan's Traffic Circulation Map, which addresses road needs through the year 2020. An important function of this map is to identify adequate rights-of-way and the ultimate continuity of the road network even beyond the normal planning period. It is particularly important in pre-platted communities such as Lehigh Acres where development timing cannot be easily controlled and could result in the loss of important long-term road corridors.

Section 16 of this report examined the existing trafficways map for Lehigh Acres and recommended a list of specific changes to it. These changes should be made by Lee County at the first available opportunity.

— Required Access Road Map

The land development code also contains a Required Access Road Map.[32] This map identifies those portions of the arterial and collector road network where

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[31]Lee County Land Development Code, §10-8(4)

[32]Lee County Land Development Code, §10-8(6)

developers must provide a parallel access road to reduce the need for individual driveways, improve safety, and decrease traffic on the arterial network. These access roads must be built on private land and then be made available for public use through an easement or dedication of the land. Provisions are made for impact fee credits to developers to offset these costs.[33]

In Lehigh Acres, the Required Access Road Map identifies the following roads as requiring developers to construct an access road:

- West 16th Street, from Joel Boulevard to Sunshine Boulevard and then continuing along a new road to Buckingham Road
- Lee Boulevard, from S.R. 82 to Abrams Boulevard
- Daniels Parkway Extension south of S.R. 82
- S.R. 82, across the entire length of Lehigh Acres

This map's designation of West 16th Street should be eliminated because that alignment for a future major road has been discarded by all parties. Engineering plans for Lee Boulevard and Daniels Parkway have been developed in recent years by consultants to Lee County, allowing the county transportation department to reevaluate its need for access roads along those roads.

Access roads along the north side of S.R. 82 have the potential to resolve some of the deficiencies of the existing commercial strip. However, there are three major problems with the current approach:

- The strip is already too shallow for most commercial uses. An access road would require the loss of another 40 to 50 feet from all lots, most of which are already only 175 feet deep.
- The current fragmented pattern of lot ownership makes the construction of a truly continuous access road very unlikely. Without continuity, the system becomes much less useful.
- Because road impact fee credits are given to developers for building segments of an access road, the county is essentially paying to duplicate the function already provided by Meadow Road. This duplication is almost impossible to justify, especially since the county usually prefers access roads to be built in the rear (where Meadow Road already exists), to avoid the traffic conflicts that will inevitably occur where the access road intersects other streets approaching S.R. 82.

The apparent solution is to eliminate at least the north side of S.R. 82 from the Required Access Road Map, provided that Lee County and the Florida Department of Transportation first agree upon a corridor access management plan as

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[33]Lee County Land Development Code, §10-283

suggested in Section 10 of this report.

— Road Design Standards

The Land Development Code includes several narrative sections that implement the Required Access Road Map. These sections set the minimum widths and design standards for access roads, and provide minimum spacings for streets and driveways providing access to arterial and collector roads. These portions of the Land Development Code would require minor amendments to incorporate revisions to the Required Access Road Map and references to a corridor access management plan for S.R. 82 and/or Gunnery Road.

17(f) Implementation of Capital Projects

Under state law, Community Redevelopment Agencies are permitted to use tax-increment funds (TIF) for a variety of public purposes.[34] These funds can be used as they are collected or saved for particular projects. Future revenues can also be pledged to repay bonds, to increase the amount of funds available immediately.

Lee County limits its expenditures of tax-increment revenues to narrower purposes than those authorized by state law. Proposed TIF-funded projects in Lee County are measured against a set of formal guidelines, which are summarized in Table 17-2.[35] The net effect of these guidelines is to use tax-increment revenues almost exclusively to encourage economic development.

The classic type of economic development is the attraction of a manufacturing plant that will employ community residents. The community wins twice, through the private investment in the plant (which enhances the tax base) and through the continuing payroll to workers.

This Commercial Land Use Study contemplates another kind of economic development. By retrofitting the defective land-use pattern bequeathed to Lehigh Acres by the original developers, the community can become better balanced between residential and commercial uses. The countywide tax-base benefits are limited at one level, because the most of the commercial uses would still be located in Lee County if they could not locate in Lehigh Acres. But an unbalanced community has major economic drawbacks in addition to the obvious social drawbacks. These act to discourage continued growth and greatly increase infrastructure costs because of the extra travel distance to jobs and shopping.

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[34]Chapter 163, Part III, *Florida Statutes*

[35]Adopted on February 22, 1995, by the Board of County Commissioners

Table 17-2

CRA Project Guidelines		
Rank	*Guidelines*	*Max. Score*
1	Does the project enhance the tax base?	25
2	Concentrated improvements which complement existing projects and/or are contiguous to existing projects?	20
3	Do the benefits created by the project have community-wide impact?	15
4	Retention of economically viable businesses and/or new business starts?	15
5	Does the project leverage private or other non ad valorem funds? (The higher the leverage ratio, the higher the number of points.)	10
6	Reduce or eliminate undesirable and incompatible land uses or measurably reduce code enforcement violations?	10
7	Does the project provide needed infrastructure	5
	TOTAL	100
	BONUS POINTS may be awarded for various additional positive aspects of a proposed project, such O&M plans showing non-ad valorem funding sources, job creation, xeriscape landscaping, innovative and creative approaches, and others	10

Tax-increment revenues can be used to further this kind of economic development. They must not be used just to relocate businesses from one acceptable location within Lehigh Acres to another. Where the private sector cannot accomplish needed improvements on its own, Lee County through its CRA can use tax-increment revenues for several kinds of capital projects, such as:

- assembly of needed shopping center parcels that require the use (or threat) of eminent domain powers;
- salvaging portions of a defective commercial strip, as suggested previously in this report; or
- other means to coordinate public and private sector initiatives, such as the enhancement of the Homestead Road commercial core or the creation of a new "downtown" for Lehigh Acres.

Future commercial sites assembled by the CRA could be leased to private developers, but would most likely be sold outright to recover the assembly costs, allowing those funds to be used again for CRA purposes. The extent to which costs can be recovered will depend on the desirability of the assembled sites; planning and legal costs; and the amount of compensation paid to landowners. A careful marketing and financial analysis must precede all such projects.

Without eminent domain and the tax-increment financing powers granted to a Community Redevelopment Agency, it is unlikely that the land-use imbalances of Lehigh Acres can ever be fully corrected. It is up to Lee County and the citizens of Lehigh Acres to prudently use these powers to that end.

APPENDIX A
ZONAL DATA REVISIONS BY SPIKOWSKI PLANNING ASSOCIATES
(TRAFFIC ANALYSIS ZONES INCLUDING ANY PART OF LEHIGH ACRES OR GATEWAY)

	1990 DATA FROM MPO MODEL:						2020 FORECASTS FROM MPO MODEL:									NEW 2020 FORECASTS FOR LEHIGH MODEL RUNS:								
TAZ #	SF DUs	MF DUs	Employees: ind.	retail	service	total	SF DUs	POP in HHs	MF DUs	POP in HHs	Employees: ind.	retail	service	total	SCHOOL ENROLL	SF DUs	MF DUs	SF POP	MF POP	SCHOOL ENROLL	Employees: ind.	retail	service	total	TAZ #
180	127	3	1	2	123	126	311	782	8	8	1	61	154	216	2332	252	6	632	6	1263	1		126	127	180
183	30	9					137	343	6	7	10	77	15	102	29	111	5	277	6	29	10		3	13	183
188	33	7	20			20	202	508	27	29	13	131	17	161		163	22	411	23		13	19	21	53	188
210	50	5					426	1070				77	15	92		200		502							210
217	5						594	1493				17	3	20		480		1208							217
241							260	653	15	16	64	64	13	141		1443	83	3624	89		64	58	64	186	241
242	39	2					525	1318								342		860							242
244	13	1					184	461								90		226							244
255	37	3					233	584								154		385							255
257	122	17	118	9	177	304	209	578	22	33	107	105	191	403		169	18	467	27		107			107	257
287	5						145	363								73		183							287
288	116	3	14			14	398	1001	7	8	9			9		322	6	810	6		9	97	107	213	288
290	48	2					398	999	38	41						553	53	1389	57						290
291	40	3					396	994		1						262		658							291
293	99	9					306	769	7	7		48	10	58		247	6	622	6			39	43	82	293
353	16						158	397								105		264							353
355	89	5			71	71	474	1190			5	46	77	128		424		1065			5	49	54	108	355
356	220	36	1		8	9	360	903	261	279	1		8	9		291	211	730	226		1			1	356
359	23	2		36	4	40	498	1251	32	34		33	622	655	1020	1122	72	2818	77	1020		97	107	204	359
362	74	7					218	548	62	66						176	50	443	53						362
374	130	1	4	12	111	127	934	2589	12	18	3	28	190	221	1263	1226	16	3400	24	1980	3	146	161	310	374
400	92	1			13	13	617	1122	641	935	194	233	768	1195	1450	879	914	1599	1333	1450	194	515	570	1,279	400
401	140	97					212	533	145	155			1	1		171	117	431	125						401
402	252	52	1	10		11	545	1369	59	63	1	32		33		531	57	1333	61		1	49	54	104	402
406	42		17		9	26	504	1397			14	95	24	133		617		1709			14	194	215	423	406
408	56	7					125	314								169		425							408
420	8						144	363								116		294							420
431	4		80	31	214	325	155	429	4	5	340	118	332	790		242	6	670	8		140	192	322	654	431
433	241	127					293	735	287	306	8			8		237	232	594	247		8			8	433
443	424	66		38	8	46	465	1094	62	68	10	181	62	253		497	66	1169	73		10	389	430	829	443
449	350	2	5		8	13	2732	6428	1	1	3		17	20		1503	1	3536	1		3	19	21	43	449
451	236	28	5		124	129	312	783	59	63	3		211	214	2199	294	56	739	59	949	3		100	103	451
452	160	24					162	407	79	84						131	64	329	68						452
453	100	183	14	288	175	477	118	297	681	727	13	274	267	554		95	551	240	588		13	58	214	285	453
454	474	8	16	227	98	341	509	1197	114	125	15	335	179	529		412	92	968	101		15	515	570	1,100	454
456	88	4	1	5		6	223	559			1	5		6		211		530			1			1	456

APPENDIX A
ZONAL DATA REVISIONS BY SPIKOWSKI PLANNING ASSOCIATES
(TRAFFIC ANALYSIS ZONES INCLUDING ANY PART OF LEHIGH ACRES OR GATEWAY)

	1990 DATA FROM MPO MODEL:						2020 FORECASTS FROM MPO MODEL:									NEW 2020 FORECASTS FOR LEHIGH MODEL RUNS:								
TAZ #	SF DUs	MF DUs	Employees: ind.	retail	service	total	SF DUs	POP in HHs	MF DUs	POP in HHs	Employees: ind.	retail	service	total	SCHOOL ENROLL	SF DUs	MF DUs	SF POP	MF POP	SCHOOL ENROLL	Employees: ind.	retail	service	total	TAZ #
458	11						83	209								67		169							458
459	129	76	27			27	1851	6597	1087	1879	316	1	176	493	940	1668	979	5944	1693	940	521	292	322	1,135	459
463	648	77	4	1		5	830	2085	146	156	3	1	14	18		671	118	1686	126		3	78	86	167	463
464	136	18	2			2	137	344	210	224	1			1		111	170	278	181		1			1	464
472	570	9	17	18	52	87	598	1407			23	18	80	121		598		1407			23	78	86	187	472
478	228	1					237	559								237		559							478
481	66	3					188	472								152		382							481
484	13	2					215	539								174		436							484
485	32	18	72			72	753	2684	1269	2193	279	83	320	682		609	1026	2171	1774		479	204	226	909	485
487	170	408	7	415	147	569	67	159	752	828	52	473	205	730		63	706	149	777		52	543	591	1,186	487
488	84	2		1		1	2274	5349				1		1		1028		2418							488
495	49	12		13	52	65	63	147				12	52	64		63		147				29	32	61	495
504	210	2	2			2	3514	8267			1			1		1193		2806			1			1	504
509	544	117	3		2	5	719	1692	75	83	2		2	4		582	61	1368	67		2	78	86	166	509
510	427	92	16	5	99	120	541	1273	6	7	205	259	219	683	717	541	6	1273	7	717		78	86	164	510
515	1						76	178								61		144							515
516	1						86	203	3	4						70	2	164	3						516
518	262	68	4			4	371	872	301	331	3			3		560	454	1316	499		3			3	518
520	423	62					490	1152								490		1152							520
521	65	1	1			1	231	544	2	2	1		10	11	940	187	2	440	2	940	1		94	95	521
524							68	161								55		130							524
528	649	285		32	87	119	443	1041	509	559		29	204	233		478	549	1123	603			68	75	143	528
529					33	33	69	162	109	120		87	75	162		3	4	6	4			49	54	103	529
533	1						109	256								88		207							533
535	2						35	83	61	67			76	76		172	300	408	329			49	54	103	535
537	84	2					1672	3934								552		1299							537
542	4						192	453								155		366							542
544	3						122	288								99		233							544
546	10						807	1899								293		689		1263			126	126	546
551	23	2					306	721	4	4			12	12	1060	247	3	583	3						551
554	3	2					76	178	20	22						118	31	276	34						554
561	3			4	1	5	119	279	179	197		164	59	223		515	775	1209	853	2510		292	373	665	561
564	32	17			43	43	198	465	178	196	6	167	43	216		405	364	952	401		6	194	215	415	564
572	51	1					2543	5984	87	95		26	30	56		923	32	2171	34						572
578	67	2					2942	6922	30	33		203	37	240		972	10	2286	11			97	107	204	578
581	3						144	338	1	1						116	1	273	1						581

APPENDIX A
ZONAL DATA REVISIONS BY SPIKOWSKI PLANNING ASSOCIATES
(TRAFFIC ANALYSIS ZONES INCLUDING ANY PART OF LEHIGH ACRES OR GATEWAY)

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TAZ #	SF DUs	MF DUs	Employees: ind.	retail	service	total	SF DUs	POP in HHs	MF DUs	POP in HHs	Employees: ind.	retail	service	total	SCHOOL ENROLL.	SF DUs	MF DUs	SF POP	MF POP	SCHOOL ENROLL.	Employees: ind.	retail	service	total	TAZ #
582	4						316	742				83	17	100		256		600							582
583	5						165	388	1	1						133	1	314	1						583
591	15	3					67	157	14	16		34	9	43		90	19	212	22						591
595	5						154	363	2	3		68	14	82		125	2	294	2			98	108	206	595
601			1			1	33	66	3	5	29	79		108		27	2	53	4		29	49	54	132	601
632	5						257	605	64	71		17	20	37		1532	381	3606	423						632
641	1						32	76	5	6						26	4	61	5						641
643	13	17					63	147	85	93						51	69	119	75						643
644	12	2		9		9	165	387	50	55		139		139		329	100	771	110				50	50	644
645	4						57	133	50	55						46	40	108	44						645
657	1						104	245	8	9		15	3	18		112	9	265	10						657
666		6					1365	2687	19	40	164	145	32	341		113	2	222	3		164	49	54	267	666
670							25	59	13	14						20	11	48	11						670
671	3						52	122	62	69		98	20	118		42	50	99	56						671
672	6						52	122	98	108						42	79	99	87						672
673	2						94	220	13	14		37	22	59		76	11	178	11			49	54	103	673
674							73	171	11	12		38	8	46		59	9	138	10			19	21	40	674
684							4	8	13	15		23	5	28		3	11	6	12			19	21	40	684
687							41	98	14	15		65	14	79		33	11	79	12			19	21	40	687
689							34	81	57	63		72	15	87		27	46	66	51			49	54	103	689
691	2						48	112	30	33		81	16	97		39	24	91	27			29	32	61	691
692	3						34	80	6	7						27	5	65	6						692
718	1						689	1357	72	152		35	8	43		30	3	59	7			49	54	103	718
745	15	21					27	53	30	63						22	24	43	51						745
	9,084	2,042	453	1,156	1,659	3,268	41,602	102,196	8,378	10,999	1,897	4,513	4,991	11,406	11,950	31,889	9,208	79,756	11,707	13,061	1,900	4,994	6,318	13,212	
	GATEWAY TAZs:																								
477							19	37	1514	3188		182	131	313		1136	639	2212	1346			182	131	313	477
534							2517	4956	208	439		140	231	371	978	2028	1140	3993	2406	978		140	231	371	534
560							78	154	1734	1864	214	371	1876	2461		269	151	531	162		214	371	1876	2461	560
563							1883	3708	169	355	16	41	201	258		288	162	567	340		16	41	201	258	563
596							328	646	1074	2263	920	189	524	1633	901	1280	720	2521	1517	901	920	189	524	1633	596
626							3485	6863	3277	6902	1702	720	476	2898	1000	1842	1036	3627	2182	1000	1702	720	476	2898	626
							8,310	16,364	7,976	15,011	2,852	1,643	3,439	7,934	2,879	6,842	3,849	13,451	7,953	2,879	2,852	1,643	3,439	7,935	

APPENDIX B
LEE COUNTY 2020 FINANCIALLY-FEASIBLE PLAN (WITHOUT RESERVE PROJECTS)
2020 PEAK HOUR, PEAK SEASON TRAFFIC CONDITIONS
BASED ON LEE COUNTY MPO LAND USE FORECASTS

LINK INDEX	ROADWAY	FROM	TO	(1) # OF LANES	(2) SIGNALS PER MILE	(2) URBAN (U) TRANS.(T) RURAL (R)	(3) FDOT CODE	(4) LOS STD	FSUTMS VOLUMES	PERMANENT COUNT STATION	(2) PLANNING HOUR MULTIPLIER	PLANNING HOUR VOLUME	(3) SERVICE VOLUME @ LOS STD	(3) SERVICE VOLUME @ LOS E	LOS	PLANNING HOUR V/C RATIO
AB - 1	ALABAMA RD.	S.R. 82	Milwaukee Blvd.	2LU	0	U	3200	E	15800	21	0.0876	1380	2510	2510	A	0.55
AB - 2		Milwaukee Blvd.	Homestead Rd.	2LU	0	U	3200	E	18300	6	0.0765	1400	2510	2510	A	0.56
AG - 1	ALEXANDER G. BELL BLVD.	S.R. 82	Milwaukee Blvd.	2LU	0	U	3200	E	10300	21	0.0876	900	2510	2510	A	0.36
AG - 2		Milwaukee Blvd.	Grant Blvd.	2LU	0	U	3200	E	5800	21	0.0876	510	2510	2510	A	0.20
AG - 3		Grant Blvd.	Leeland Heights Blvd.	2LU	0	U	3200	E	7300	6	0.0765	560	2510	2510	A	0.22
AL - 1	ALICO RD.	Three Oaks Blvd.	I-75	4LD	2	U	3421	E	37400	10	0.1030	3850	4130	4130	C	0.93
AL - 2		I-75	Treeline Ave.	4LD	2	U	3421	E	35100	10	0.1030	3620	4130	4130	C	0.88
AL - 3		Treeline Ave.	Alico Rd. S.	2LN	1	R	1210	E	600	10	0.1030	60	2220	2220	B	0.03
AL - 4		Alico Rd. S.	Corkscrew Rd.	2LN	1	R	1210	E	400	15	0.0966	40	2220	2220	B	0.02
BA - 1	BAYSHORE RD.	Bus 41	Hart Rd.	6LD	2	U	3621	E	68700	4	0.0818	5620	6190	6190	C	0.91
BA - 2		Hart Rd.	Slater Rd.	6LD	1	U	3611	E	59700	4	0.0818	4880	6190	6190	A	0.79
BA - 3		Slater Rd.	I-75	6LD	2	U	3621	E	54800	4	0.0818	4480	6190	6190	B	0.72
BA - 4		I-75	Nalle Rd.	4LD	5	U	3451	E	28600	4	0.0818	2340	3810	3810	D	0.61
BA - 5		Nalle Rd.	S.R. 31	2LU	0	T	2200	E	17400	4	0.0818	1420	2480	2480	A	0.57
BE - 1	BETH STACEY BLVD.	Homestead Rd.	Alabama Rd.	2LU	0	U	3200	E	5100	6	0.0765	390	2510	2510	A	0.16
BK - 1	BUCKINGHAM RD.	S.R. 82	Gunnery Rd.	2LU	0	U	3200	E	4100	11	0.0903	370	2510	2510	A	0.15
BK - 2		Gunnery Rd.	Orange River Blvd.	2LU	0	R	1200	E	9300	11	0.0903	840	2440	2440	B	0.34
BK - 3		Orange River Blvd.	S.R. 80	2LU	0	U	3200	E	9700	22	0.0891	860	2510	2510	A	0.34
CL - 1	COLONIAL BLVD.	S.R. 82	Omni Rd.	6LD	1	U	3611	E	63500	22	0.0891	5660	6190	6190	B	0.91
CL - 2		Omni Rd.	I-75	6LD	1	U	3611	E	84300	22	0.0891	7510	6190	6190	F	1.21
CL - 3		I-75	Six Mile Pkwy.	6LD	1	U	3611	E	103600	22	0.0891	9230	6190	6190	F	1.49
CB - 1	COLUMBUS BLVD.	S.R. 82	Jaguar Blvd.	2LU	0	T	2200	E	8700	6	0.0765	670	2480	2480	A	0.27
CB - 2		Jaguar Blvd.	Milwaukee Blvd.	2LU	0	T	2200	E	1700	6	0.0765	130	2480	2480	A	0.05
CB - 3		Milwaukee Blvd.	Sunrise Blvd.	2LU	0	T	2200	E	1700	6	0.0765	130	2480	2480	A	0.05
CB - 4		Sunrise Blvd.	Sentinela Blvd.	2LU	0	T	2200	E	1200	6	0.0765	90	2480	2480	A	0.04
DA - 1	DANIELS PKWY.	Three Oaks Pkwy.	I-75	6LD	1	U	3611	E	83100	31	0.0726	6030	6190	6190	B	0.97
DA - 2		I-75	Treeline Ave.	6LD	1	U	3611	E	85600	32	0.0803	6870	6190	6190	F	1.11
DA - 3		Treeline Ave.	Chamberlin Pkwy.	6LD	2	U	3621	E	67700	32	0.0803	5440	6190	6190	C	0.88
DA - 4		Chamberlin Pkwy.	Gateway Blvd.	6LD	2	U	3621	E	67700	32	0.0803	5440	6190	6190	C	0.88
DA - 5		Gateway Blvd.	S.R. 82	6LD	1	U	3611	E	61600	32	0.0803	4950	6190	6190	A	0.80
EA - 1	EAST 12TH ST.	Sunshine Blvd.	Richmond Ave.	2LU	0	U	3200	E	6800	11	0.0903	610	2510	2510	A	0.24
EA - 2		Richmond Ave.	Joel Blvd.	2LU	0	U	3200	E	9600	11	0.0903	870	2510	2510	A	0.35
GR - 1	GRANT BLVD.	Alexander G. Bell Blvd.	Sunrise Blvd.	2LU	0	U	3200	E	200	6	0.0765	20	2510	2510	A	0.01
GR - 2		Sunrise Blvd.	Sentinela Blvd.	2LU	0	U	3200	E	300	6	0.0765	20	2510	2510	A	0.01
GN - 1	GREENBRIAR BLVD.	Richmond Ave.	Joel Blvd.	2LU	0	T	2200	E	800	11	0.0903	70	2480	2480	A	0.03
GU - 1	GUNNERY RD.	S.R. 82	Leonard Blvd.	4LD	0	U	3401	E	45300	21	0.0876	3970	4540	4540	B	0.87
GU - 2		Leonard Blvd.	Lee Blvd.	4LD	0	U	3401	E	33400	21	0.0876	2930	4540	4540	A	0.65
GU - 3		Lee Blvd.	Buckingham Rd.	2LU	0	U	3200	E	12700	22	0.0891	1130	2510	2510	A	0.45
HO - 1	HOMESTEAD RD.	Lee Blvd.	Alabama Rd.	4LD	3	U	3431	E	38600	6	0.0765	2950	4130	4130	C	0.71
HO - 2		Alabama Rd.	Milwaukee Blvd.	2LU	1	U	3210	E	15200	6	0.0765	1160	2280	2280	A	0.51
HO - 3		Milwaukee Blvd.	S.R. 82	2LU	1	U	3210	E	1900	6	0.0765	150	2280	2280	A	0.07
IM - 1	IMMOKALEE RD.	Ortiz Ave.	I-75	6LD	2	U	3621	E	52800	20	0.0882	4660	6190	6190	B	0.75
IM - 2	(M. L. KING BLVD.)	I-75	Buckingham Rd.	6LD	2	U	3621	E	61700	20	0.0882	5440	6190	6190	C	0.88
IM - 3	(S.R. 82)	Buckingham Rd.	Lee Blvd.	6LD	0	U	3601	E	59100	20	0.0882	5210	6810	6810	A	0.77
IM - 4		Lee Blvd.	Commerce Lakes Dr.	4LD	0	U	3401	E	46400	21	0.0876	4060	4540	4540	B	0.89
IM - 5		Commerce Lakes Dr.	Daniels Pkwy.	4LD	0	U	3401	E	29000	21	0.0876	2540	4540	4540	A	0.56
IM - 6		Daniels Pkwy.	Sunshine Blvd.	4LD	1	U	3411	E	48300	21	0.0876	4230	4130	4130	F	1.02
IM - 7		Sunshine Blvd.	Alabama Rd.	4LD	0	U	3401	E	35400	21	0.0876	3100	4540	4540	A	0.68
IM - 8		Alabama Rd.	A.G. Bell Blvd.	2LU	0	U	3200	E	18100	21	0.0876	1590	2510	2510	A	0.63
IM - 9		A.G. Bell Blvd.	County Line	2LU	0	U	3200	E	18900	21	0.0876	1660	2510	2510	A	0.66
I - 1	I-75	Corkscrew Rd.	Alico Rd.	8F	0	U	3804	D	58700	54	0.0880	5170	12440	13380	B	0.42
I - 2		Alico Rd.	Daniels Pkwy.	6F	0	U	3604	D	61700	55	0.0880	5430	9330	10040	C	0.58
I - 3		Daniels Pkwy.	Colonial Blvd.	6F	0	U	3604	D	61200	56	0.0880	5390	9330	10040	B	0.58
I - 4		Colonial Blvd.	S.R. 82	6F	0	U	3604	D	55400	57	0.0880	4880	9330	10040	B	0.52
I - 5		S.R. 82	Luckett Rd.	6F	0	U	3604	D	76600	58	0.0880	6740	9330	10040	C	0.72
I - 6		Luckett Rd.	S.R. 80	6F	0	U	3604	D	65900	59	0.0880	5800	9330	10040	C	0.62
I - 7		S.R. 80	S.R. 78	6F	0	U	3604	D	81400	60	0.0880	7160	9330	10040	C	0.77
JA - 1	JAGUAR BLVD.	S.R. 82	Homestead Rd.	2LU	0	T	2200	E	1100	6	0.0765	80	2480	2480	A	0.03
JA - 2		Homestead Rd.	Alexander G. Bell Blvd.	2LU	0	T	2200	E	1300	6	0.0765	100	2480	2480	A	0.04
JA - 3		Alexander G. Bell Blvd.	Columbus Blvd.	2LU	0	T	2200	E	500	6	0.0765	40	2480	2480	A	0.02

APPENDIX C
LEE COUNTY 2020 FINANCIALLY-FEASIBLE PLAN (WITHOUT RESERVE PROJECTS)
2020 PEAK HOUR, PEAK SEASON TRAFFIC CONDITIONS
BASED ON REVISED LAND USE FORECASTS

LINK INDEX	ROADWAY	FROM	TO	(1) # OF LANES	(2) SIGNALS PER MILE	(2) URBAN (U) TRANS.(T) RURAL (R)	(3) FDOT CODE	(4) LOS STD	FSUTMS VOLUMES	PERMANENT COUNT STATION	(2) PLANNING HOUR MULTIPLIER	PLANNING HOUR VOLUME	(3) SERVICE VOLUME @ LOS STD	(3) SERVICE VOLUME @ LOS E	LOS	PLANNING HOUR V/C RATIO
AB - 1	ALABAMA RD.	S.R. 82	Milwaukee Blvd.	2LU	0	U	3200	E	15600	21	0.0876	1370	2510	2510	A	0.55
AB - 2		Milwaukee Blvd.	Homestead Rd.	2LU	0	U	3200	E	17600	6	0.0765	1350	2510	2510	A	0.54
AG - 1	ALEXANDER G. BELL BLVD.	S.R. 82	Milwaukee Blvd.	2LU	0	U	3200	E	8600	21	0.0876	750	2510	2510	A	0.30
AG - 2		Milwaukee Blvd.	Grant Blvd.	2LU	0	U	3200	E	6700	21	0.0876	590	2510	2510	A	0.24
AG - 3		Grant Blvd.	Leeland Heights Blvd.	2LU	0	U	3200	E	7200	6	0.0765	550	2510	2510	A	0.22
AL - 1	ALICO RD.	Three Oaks Blvd.	I-75	4LD	2	U	3421	E	36500	10	0.1030	3760	4130	4130	C	0.91
AL - 2		I-75	Treeline Ave.	4LD	2	U	3421	E	34700	10	0.1030	3570	4130	4130	C	0.86
AL - 3		Treeline Ave.	Alico Rd. S.	2LN	1	R	1210	E	600	10	0.1030	60	2220	2220	B	0.03
AL - 4		Alico Rd. S.	Corkscrew Rd.	2LN	1	R	1210	E	400	15	0.0966	40	2220	2220	B	0.02
BA - 1	BAYSHORE RD.	Bus 41	Hart Rd.	6LD	2	U	3621	E	68500	4	0.0818	5600	6190	6190	C	0.90
BA - 2		Hart Rd.	Slater Rd.	6LD	1	U	3611	E	59600	4	0.0818	4880	6190	6190	A	0.79
BA - 3		Slater Rd.	I-75	6LD	2	U	3621	E	54700	4	0.0818	4470	6190	6190	B	0.72
BA - 4		I-75	Nalle Rd.	4LD	5	U	3451	E	28400	4	0.0818	2320	3810	3810	D	0.61
BA - 5		Nalle Rd.	S.R. 31	2LU	0	T	2200	E	17300	4	0.0818	1420	2480	2480	A	0.57
BE - 1	BETH STACEY BLVD.	Homestead Rd.	Milwaukee Rd.	2LU	0	U	3200	E	5900	6	0.0765	450	2510	2510	A	0.18
BK - 1	BUCKINGHAM RD.	S.R. 82	Gunnery Rd.	2LU	0	U	3200	E	3100	11	0.0903	280	2510	2510	A	0.11
BK - 2		Gunnery Rd.	Orange River Blvd.	2LU	0	R	1200	E	8200	11	0.0903	740	2440	2440	B	0.30
BK - 3		Orange River Blvd.	S.R. 80	2LU	0	U	3200	E	8700	22	0.0891	780	2510	2510	A	0.31
CL - 1	COLONIAL BLVD.	S.R. 82	Omni Rd.	6LD	1	U	3611	E	52600	22	0.0891	4690	6190	6190	A	0.76
CL - 2		Omni Rd.	I-75	6LD	1	U	3611	E	77400	22	0.0891	6900	6190	6190	F	1.11
CL - 3		I-75	Six Mile Pkwy.	6LD	1	U	3611	E	98900	22	0.0891	8810	6190	6190	F	1.42
CB - 1	COLUMBUS BLVD.	S.R. 82	Jaguar Blvd.	2LU	0	T	2200	E	6600	6	0.0765	500	2480	2480	A	0.20
CB - 2		Jaguar Blvd.	Milwaukee Blvd.	2LU	0	T	2200	E	1300	6	0.0765	100	2480	2480	A	0.04
CB - 3		Milwaukee Blvd.	Sunrise Blvd.	2LU	0	T	2200	E	1400	6	0.0765	110	2480	2480	A	0.04
CB - 4		Sunrise Blvd.	Sentinela Blvd.	2LU	0	T	2200	E	1000	6	0.0765	80	2480	2480	A	0.03
DA - 1	DANIELS PKWY.	Three Oaks Pkwy.	I-75	6LD	1	U	3611	E	77500	31	0.0726	5630	6190	6190	B	0.91
DA - 2		I-75	Treeline Ave.	6LD	1	U	3611	E	77900	32	0.0803	6260	6190	6190	F	1.01
DA - 3		Treeline Ave.	Chamberlin Pkwy.	6LD	2	U	3621	E	61400	32	0.0803	4930	6190	6190	B	0.80
DA - 4		Chamberlin Pkwy.	Gateway Blvd.	6LD	2	U	3621	E	61500	32	0.0803	4940	6190	6190	B	0.80
DA - 5		Gateway Blvd.	S.R. 82	6LD	1	U	3611	E	50800	32	0.0803	4080	6190	6190	A	0.66
EA - 1	EAST 12TH ST.	Sunshine Blvd.	Richmond Ave.	2LU	0	U	3200	E	8500	11	0.0903	770	2510	2510	A	0.31
EA - 2		Richmond Ave.	Joel Blvd.	2LU	0	U	3200	E	11400	11	0.0903	1030	2510	2510	A	0.41
GR - 1	GRANT BLVD.	Alexander G. Bell Blvd.	Sunrise Blvd.	2LU	0	U	3200	E	200	6	0.0765	20	2510	2510	A	0.01
GR - 2		Sunrise Blvd.	Sentinela Blvd.	2LU	0	U	3200	E	200	6	0.0765	20	2510	2510	A	0.01
GN - 1	GREENBRIAR BLVD.	Richmond Ave.	Joel Blvd.	2LU	0	T	2200	E	1800	11	0.0903	160	2480	2480	A	0.06
GU - 1	GUNNERY RD.	S.R. 82	Leonard Blvd.	4LD	0	U	3401	E	35800	21	0.0876	3140	4540	4540	A	0.69
GU - 2		Leonard Blvd.	Lee Blvd.	4LD	0	U	3401	E	20100	21	0.0876	1760	4540	4540	A	0.39
GU - 3		Lee Blvd.	Buckingham Rd.	2LU	0	U	3200	E	10700	22	0.0891	950	2510	2510	A	0.38
HO - 1	HOMESTEAD RD.	Lee Blvd.	Alabama Rd.	4LD	3	U	3431	E	36000	6	0.0765	2750	4130	4130	C	0.67
HO - 2		Alabama Rd.	Milwaukee Blvd.	2LU	1	U	3210	E	15900	6	0.0765	1220	2280	2280	A	0.54
HO - 3		Milwaukee Blvd.	S.R. 82	2LU	1	U	3210	E	2100	6	0.0765	160	2280	2280	A	0.07
IM - 1	IMMOKALEE RD.	Ortiz Ave.	I-75	6LD	2	U	3621	E	48600	20	0.0882	4290	6190	6190	B	0.69
IM - 2	(M. L. KING BLVD.)	I-75	Buckingham Rd.	6LD	2	U	3621	E	58800	20	0.0882	5190	6190	6190	C	0.84
IM - 3	(S.R. 82)	Buckingham Rd.	Lee Blvd.	6LD	0	U	3601	E	56800	20	0.0882	5010	6810	6810	A	0.74
IM - 4		Lee Blvd.	Commerce Lakes Dr.	4LD	0	U	3401	E	45500	21	0.0876	3990	4540	4540	B	0.88
IM - 5		Commerce Lakes Dr.	Daniels Pkwy.	4LD	0	U	3401	E	32800	21	0.0876	2870	4540	4540	A	0.63
IM - 6		Daniels Pkwy.	Sunshine Blvd.	4LD	1	U	3411	E	43300	21	0.0876	3790	4130	4130	B	0.92
IM - 7		Sunshine Blvd.	Alabama Rd.	4LD	0	U	3401	E	39400	21	0.0876	3450	4540	4540	A	0.76
IM - 8		Alabama Rd.	A.G. Bell Blvd.	2LU	0	U	3200	E	19800	21	0.0876	1730	2510	2510	A	0.69
IM - 9		A.G. Bell Blvd.	County Line	2LU	0	U	3200	E	16800	21	0.0876	1470	2510	2510	A	0.59
I - 1	I-75	Corkscrew Rd.	Alico Rd.	8F	0	U	3804	D	58400	54	0.0880	5140	12440	13380	B	0.41
I - 2		Alico Rd.	Daniels Pkwy.	6F	0	U	3604	D	61900	55	0.0880	5450	9330	10040	C	0.58
I - 3		Daniels Pkwy.	Colonial Blvd.	6F	0	U	3604	D	60200	56	0.0880	5300	9330	10040	B	0.57
I - 4		Colonial Blvd.	S.R. 82	6F	0	U	3604	D	54400	57	0.0880	4790	9330	10040	B	0.51
I - 5		S.R. 82	Luckett Rd.	6F	0	U	3604	D	67500	58	0.0880	5940	9330	10040	C	0.64
I - 6		Luckett Rd.	S.R. 80	6F	0	U	3604	D	66800	59	0.0880	5880	9330	10040	C	0.63
I - 7		S.R. 80	S.R. 78	6F	0	U	3604	D	81200	60	0.0880	7150	9330	10040	C	0.77
JA - 1	JAGUAR BLVD.	S.R. 82	Homestead Rd.	2LU	0	T	2200	E	1000	6	0.0765	80	2480	2480	A	0.03
JA - 2		Homestead Rd.	Alexander G. Bell Blvd.	2LU	0	T	2200	E	1400	6	0.0765	110	2480	2480	A	0.04
JA - 3		Alexander G. Bell Blvd.	Columbus Blvd.	2LU	0	T	2200	E	400	6	0.0765	30	2480	2480	A	0.01
JO - 1	JOEL BLVD.	Alexander G. Bell Blvd.	East 12th St.	2LU	0	U	3200	E	11500	6	0.0765	880	2510	2510	A	0.35

APPENDIX C
LEE COUNTY 2020 FINANCIALLY-FEASIBLE PLAN (WITHOUT RESERVE PROJECTS)
2020 PEAK HOUR, PEAK SEASON TRAFFIC CONDITIONS
BASED ON REVISED LAND USE FORECASTS

LINK INDEX	ROADWAY	FROM	TO	(1) # OF LANES	(2) SIGNALS PER MILE	(2) URBAN (U) TRANS.(T) RURAL (R)	(3) FDOT CODE	(4) LOS STD	FSUTMS VOLUMES	PERMANENT COUNT STATION	(2) PLANNING HOUR MULTIPLIER	PLANNING HOUR VOLUME	SERVICE VOLUME (3) @ LOS STD	SERVICE VOLUME (3) @ LOS E	LOS	PLANNING HOUR V/C RATIO
JO - 2		East 12th St.	Greenbriar Blvd.	2LU	0	U	3200	E	10300	6	0.0765	790	2510	2510	A	0.31
JO - 3		Greenbriar Blvd.	S.R. 80	2LU	0	T	2200	E	9400	6	0.0765	720	2480	2480	A	0.29
LE - 1	LEE BLVD.	S.R. 82	Leonard Blvd.	6LD	1	U	3611	E	75000	22	0.0891	6680	6190	6190	F	1.08
LE - 2		Leonard Blvd.	Gunnery Rd.	6LD	1	U	3611	E	73900	22	0.0891	6580	6190	6190	F	1.06
LE - 3		Gunnery Rd.	Sunshine Blvd.	6LD	1	U	3611	E	74400	22	0.0891	6630	6190	6190	F	1.07
LE - 4		Sunshine Blvd.	Homestead Rd.	6LD	1	U	3611	E	64300	22	0.0891	5730	6190	6190	B	0.93
LE - 5		Homestead Rd.	Leeland Heights Blvd.	2LU	2	U	3220	E	25900	22	0.0891	2310	2280	2280	F	1.01
LH - 1	LEELAND HEIGHTS BLVD.	Lee Blvd.	Joel Blvd.	4LD	2	U	3421	E	29600	6	0.0765	2260	4130	4130	B	0.55
LN - 1	LEONARD BLVD.	Lee Blvd.	Gunnery Rd.	2LU	0	U	3200	E	8600	21	0.0876	750	2510	2510	A	0.30
LU - 1	LUCKETT RD.	Ortiz Ave.	I-75	2LU	1	U	3210	E	9000	20	0.0882	790	2280	2280	A	0.35
LU - 2		I-75	East	2LU	0	U	3200	E	9700	20	0.0882	860	2510	2510	A	0.34
MI - 1	MILWAUKEE BLVD.	Homestead Rd.	Alexander G. Bell Blvd.	2LU	0	U	3200	E	7300	6	0.0765	560	2510	2510	A	0.22
MI - 2		Alexander G. Bell Blvd.	Columbus Blvd.	2LU	0	U	3200	E	1800	6	0.0765	140	2510	2510	A	0.06
OR - 1	ORANGE RIVER BLVD.	S.R. 80	Buckingham Rd.	2LU	0	U	3200	E	8400	11	0.0903	760	2510	2510	A	0.30
PB - 1	PALM BEACH BLVD.	Ortiz Ave.	I-75	6LD	1	U	3611	D	55700	5	0.0817	4550	6190	6190	A	0.74
PB - 2	(S.R. 80)	I-75	S.R. 31	6LD	1	U	3611	D	45500	5	0.0817	3720	6190	6190	A	0.60
PB - 3		S.R. 31	Buckingham Rd.	4LD	1	U	3411	D	34500	5	0.0817	2820	4130	4130	A	0.68
PB - 4		Buckingham Rd.	Hickey Creek	4LD	0	U	3401	D	21100	5	0.0817	1720	4540	4540	A	0.38
PB - 5		Hickey Creek	Joel Blvd.	4LD	0	R	1401	D	19300	5	0.0817	1580	3520	3530	B	0.45
PB - 6		Joel Blvd.	County Line	4LD	0	R	1401	D	15300	5	0.0817	1250	3520	3530	B	0.36
RI - 1	RICHMOND RD.	Leeland Heights Blvd.	East 12th St.	2LU	0	U	3200	E	5000	6	0.0765	380	2510	2510	A	0.15
RI - 2		East 12th St.	Greenbriar Blvd.	2LU	0	U	3200	E	5900	6	0.0765	450	2510	2510	A	0.18
SE - 1	SENTINELA BLVD.	Alexander G. Bell Blvd.	Grant Blvd.	2LU	0	U	3200	E	4200	6	0.0765	320	2510	2510	A	0.13
SE - 2		Grant Blvd.	Columbus Blvd.	2LU	0	U	3200	E	1000	6	0.0765	80	2510	2510	A	0.03
SR - 1	S.R. 31	North	Bayshore Rd.	2LU	1	R	1210	E	14700	4	0.0818	1200	2220	2220	B	0.54
SR - 2		Bayshore Rd.	S.R. 80	2LU	1	U	3210	E	27600	4	0.0818	2260	2280	2280	C	0.99
SU - 1	SUNRISE BLVD.	Alexander G. Bell Blvd.	Grant Blvd.	2LU	0	U	3200	E	1400	6	0.0765	110	2510	2510	A	0.04
SU - 2		Grant Blvd.	Columbus Blvd.	2LU	0	U	3200	E	1400	6	0.0765	110	2510	2510	A	0.04
SN - 1	SUNSHINE BLVD.	S.R. 82	SW 23rd St.	2LU	0	U	3200	E	1800	6	0.0765	140	2510	2510	A	0.06
SN - 2		SW 23rd St.	Lee Blvd.	2LU	0	U	3200	E	13600	6	0.0765	1040	2510	2510	A	0.41
SN - 3		Lee Blvd.	East 12th St.	2LU	0	U	3200	E	8300	6	0.0765	630	2510	2510	A	0.25
SW - 1	SW 23RD ST.	Gunnery Rd.	Sunshine Blvd.	2LU	0	U	3200	E	7500	6	0.0765	570	2510	2510	A	0.23
TL - 1	TREELINE AVE.	Daniels Pkwy.	Alico Rd.	4LD	2	U	3421	E	35300	10	0.1030	3640	4130	4130	C	0.88
TL - 2		Alico Rd.	Koreshan Blvd.	4LD	2	U	3421	E	41400	10	0.1030	4260	4130	4130	F	1.03

FOOTNOTES:

(1) Source: Lee County 2020 Financially-Feasible Plan (Adopted December 15, 1995).
(2) Source: Lee County MPO 1995 Plan Update.
(3) Source: FDOT District One Planning Department, 1994 LOS Annual Report and Traffic Trend Data, August, 1995, Table 3.
(4) Source: 1990 Amendments To The Lee Plan, Volume 1 of 3, September 1990, Traffic Circulation Issues, Table 5, page V-25.

APPENDIX D

COMPARISON OF VOLUMES ACROSS LEHIGH ACRES SCREENLINES
2020 PEAK HOUR, PEAK SEASON TRAFFIC

Roadway	Traffic Volumes With Original Land Uses[1]	Traffic Volumes With Revised Land Uses[2]	% Change
Screenline 1 West of Hendry County Line:			
SR 80	13,879	13,886	0.05%
SR 82	21,788	21,947	0.73%
Screenline Total	35,667	35,833	0.47%
Screenline 2 South of SR 80:			
Joel Blvd.	9,195	9,009	- 2.02%
Buckingham Rd.	6,162	5,471	-11.21%
Screenline Total	15,257	14,480	- 5.71%
Screenline 3 West of Buckingham Rd.:			
SR 80	26,695	25,510	- 4.44%
Orange River Blvd.	9,799	8,130	-17.03%
SR 82	61,831	58,918	- 4.71%
Screenline Total	98,325	92,558	- 5.87%
Screenline 4 South of SR 82:			
Colonial Blvd.	69,804	63,779	- 8.63%
Commerce Lakes Dr.	15,808	14,078	-10.94%
Daniels Pkwy. Ext.	61,644	50,805	-17.58%
Wildcat Dr.	9,057	8,913	- 1.59%
Screenline Total	156,313	137,575	-11.99%
Total of All Screenlines:	305,662	280,446	- 8.25%

Footnotes:

(1) Original land uses refer to the MPO's forecasted 2020 land use data for Lehigh Acres.

(2) Revised land uses reflect the changes made to the Lehigh Acres 2020 land use data as part of the Lehigh Acres Commercial Land Use Study.

APPENDIX E
PROPOSED 2020 TRANSPORTATION PLAN (1)
2020 PEAK HOUR, PEAK SEASON TRAFFIC CONDITIONS
BASED ON REVISED LAND USE FORECASTS

LINK INDEX	ROADWAY	FROM	TO	(2) # OF LANES	(3) SIGNALS PER MILE	(3) URBAN (U) TRANS.(T) RURAL (R)	(4) FDOT CODE	(5) LOS STD	FSUTMS VOLUMES	PERMANENT COUNT STATION	(3) PLANNING HOUR MULTIPLIER	PLANNING HOUR VOLUME	(4) SERVICE VOLUME @ LOS STD	(4) SERVICE VOLUME @ LOS E	LOS	PLANNING HOUR V/C RATIO
AB - 1	ALABAMA RD.	S.R. 82	Grant Blvd.	2LU	0	U	3200	E	11700	21	0.0876	1020	2510	2510	A	0.41
AB - 2		Grant Blvd.	Milwaukee Blvd.	2LU	0	U	3200	E	4700	21	0.0876	410	2510	2510	A	0.16
AB - 3		Milwaukee Blvd.	Homestead Rd.	2LU	0	U	3200	E	12800	6	0.0765	980	2510	2510	A	0.39
AG - 1	ALEXANDER G. BELL BLVD.	S.R. 82	Milwaukee Blvd.	2LU	0	U	3200	E	14900	21	0.0876	1310	2510	2510	A	0.52
AG - 2		Milwaukee Blvd.	Grant Blvd.	2LU	0	U	3200	E	6300	21	0.0876	550	2510	2510	A	0.22
AG - 3		Grant Blvd.	Leeland Heights Blvd.	2LU	0	U	3200	E	2300	6	0.0765	180	2510	2510	A	0.07
AL - 1	ALICO RD.	Three Oaks Blvd.	I-75	4LD	2	U	3421	E	36400	10	0.1030	3750	4130	4130	C	0.91
AL - 2		I-75	Treeline Ave.	4LD	2	U	3421	E	34700	10	0.1030	3570	4130	4130	C	0.86
AL - 3		Treeline Ave.	Alico Rd. S.	2LN	1	R	1210	E	500	10	0.1030	50	2220	2220	B	0.02
AL - 4		Alico Rd. S.	Corkscrew Rd.	2LN	1	R	1210	E	400	15	0.0966	40	2220	2220	B	0.02
BA - 1	BAYSHORE RD.	Bus 41	Hart Rd.	6LD	2	U	3621	E	68400	4	0.0818	5600	6190	6190	C	0.90
BA - 2		Hart Rd.	Slater Rd.	6LD	1	U	3611	E	59600	4	0.0818	4880	6190	6190	A	0.79
BA - 3		Slater Rd.	I-75	6LD	2	U	3621	E	54700	4	0.0818	4470	6190	6190	B	0.72
BA - 4		I-75	Nalle Rd.	4LD	5	U	3451	E	28500	4	0.0818	2330	3810	3810	D	0.61
BA - 5		Nalle Rd.	S.R. 31	2LU	0	T	2200	E	17300	4	0.0818	1420	2480	2480	A	0.57
BE - 1	BETH STACEY BLVD.	Homestead Rd.	SW 23 St.	2LU	0	U	3200	E	8200	6	0.0765	630	2510	2510	A	0.25
BE - 2		SW 23 St.	Alabama Rd.	2LU	0	U	3200	E	11500	6	0.0765	880	2510	2510	A	0.35
BK - 1	BUCKINGHAM RD.	S.R. 82	Gunnery Rd.	2LU	0	U	3200	E	10600	11	0.0903	960	2510	2510	A	0.38
BK - 2		Gunnery Rd.	Orange River Blvd.	2LU	0	R	1200	E	8600	11	0.0903	780	2440	2440	B	0.32
BK - 3		Orange River Blvd.	S.R. 80	2LU	0	U	3200	E	8900	22	0.0891	790	2510	2510	A	0.31
CE - 1	CEMETARY RD./61ST ST. W.	Buckingham Rd.	Sunshine Blvd.	2LU	0	T	2200	E	1900	11	0.0903	170	2480	2480	A	0.07
CN - 1	CENTENNIAL BLVD.	Abrahms Blvd.	Gunnery Rd.	2LU	0	U	3200	E	14700	22	0.0891	1310	2510	2510	A	0.52
CL - 1	COLONIAL BLVD.	S.R. 82	Omni Rd.	6LD	1	U	3611	E	54000	22	0.0891	4810	6190	6190	A	0.78
CL - 2		Omni Rd.	I-75	6LD	1	U	3611	E	78200	22	0.0891	6970	6190	6190	F	1.13
CL - 3		I-75	Six Mile Pkwy.	6LD	1	U	3611	E	98900	22	0.0891	8810	6190	6190	F	1.42
CB - 1	COLUMBUS BLVD.	S.R. 82	Jaguar Blvd.	2LU	0	T	2200	E	6600	6	0.0765	500	2480	2480	A	0.20
CB - 2		Jaguar Blvd.	Milwaukee Blvd.	2LU	0	T	2200	E	1300	6	0.0765	100	2480	2480	A	0.04
CB - 3		Milwaukee Blvd.	Sunrise Blvd.	2LU	0	T	2200	E	1200	6	0.0765	90	2480	2480	A	0.04
CB - 4		Sunrise Blvd.	Sentinela Blvd.	2LU	0	T	2200	E	900	6	0.0765	70	2480	2480	A	0.03
DA - 1	DANIELS PKWY.	Three Oaks Pkwy.	I-75	6LD	1	U	3611	E	78100	31	0.0726	5670	6190	6190	B	0.92
DA - 2		I-75	Treeline Ave.	6LD	1	U	3611	E	78800	32	0.0803	6330	6190	6190	F	1.02
DA - 3		Treeline Ave.	Chamberlin Pkwy.	6LD	2	U	3621	E	58900	32	0.0803	4730	6190	6190	B	0.76
DA - 4		Chamberlin Pkwy.	Gateway Blvd.	6LD	2	U	3621	E	58900	32	0.0803	4730	6190	6190	B	0.76
DA - 5		Gateway Blvd.	S.R. 82	6LD	1	U	3611	E	52200	32	0.0803	4190	6190	6190	A	0.68
EA - 1	EAST 12TH ST.	Sunshine Blvd.	Richmond Ave.	2LU	0	U	3200	E	1100	11	0.0903	100	2510	2510	A	0.04
EA - 2		Richmond Ave.	Joel Blvd.	2LU	0	U	3200	E	12000	11	0.0903	1080	2510	2510	A	0.43
FO - 1	40TH ST. SW.	S.R. 82	Alabama Rd.	2LU	0	U	3200	E	27000	21	0.0876	2370	2510	2510	B	0.94
GR - 1	GRANT BLVD.	Alabama Rd.	Beth Stacey Blvd.	2LU	0	U	3200	E	11100	6	0.0765	850	2510	2510	A	0.34
GR - 2		Beth Stacey Blvd.	Homestead Rd.	2LU	0	U	3200	E	12500	6	0.0765	960	2510	2510	A	0.38
GR - 3		Homestead Rd.	Alexander G. Bell Blvd.	2LU	0	U	3200	E	5300	6	0.0765	410	2510	2510	A	0.16
GR - 4		Alexander G. Bell Blvd.	Sunrise Blvd.	2LU	0	U	3200	E	1300	6	0.0765	100	2510	2510	A	0.04
GR - 5		Sunrise Blvd.	Sentinela Blvd.	2LU	0	U	3200	E	200	6	0.0765	20	2510	2510	A	0.01
GN - 1	GREENBRIAR BLVD.	Richmond Ave.	Joel Blvd.	2LU	0	T	2200	E	1700	11	0.0903	150	2480	2480	A	0.06
GU - 1	GUNNERY RD.	S.R. 82	Leonard Blvd.	4LD	0	U	3401	E	31600	21	0.0876	2770	4540	4540	A	0.61
GU - 2		Leonard Blvd.	Lee Blvd.	4LD	0	U	3401	E	12400	21	0.0876	1090	4540	4540	A	0.24
GU - 3		Lee Blvd.	Buckingham Rd.	2LU	0	U	3200	E	4100	22	0.0891	370	2510	2510	A	0.15
HA - 1	HAWALASKA ST.	S.R. 82	Leonard Blvd.	2LU	0	U	3200	E	18400	22	0.0891	1640	2510	2510	A	0.65
HO - 1	HOMESTEAD RD.	Lee Blvd.	Alabama Rd.	4LD	3	U	3431	E	30200	6	0.0765	2310	4130	4130	C	0.56
HO - 2		Alabama Rd.	Milwaukee Blvd.	2LU	1	U	3210	E	11100	6	0.0765	850	2280	2280	A	0.37
HO - 3		Milwaukee Blvd.	S.R. 82	2LU	1	U	3210	E	2400	6	0.0765	180	2280	2280	A	0.08
IM - 1	IMMOKALEE RD.	Ortiz Ave.	I-75	6LD	2	U	3621	E	50700	20	0.0882	4470	6190	6190	B	0.72
IM - 2	(M. L. KING BLVD.)	I-75	Buckingham Rd.	6LD	2	U	3621	E	60100	20	0.0882	5300	6190	6190	C	0.86
IM - 3	(S.R. 82)	Buckingham Rd.	Lee Blvd.	6LD	0	U	3601	E	50100	20	0.0882	4420	6810	6810	A	0.65
IM - 4		Lee Blvd.	Hawalaska St.	4LD	0	U	3401	E	38800	21	0.0876	3400	4540	4540	A	0.75
IM - 5		Hawalaska St.	Commerce Lakes Dr.	4LD	0	U	3401	E	50200	21	0.0876	4400	4540	4540	B	0.97
IM - 6		Commerce Lakes Dr.	Daniels Pkwy.	4LD	0	U	3401	E	22100	21	0.0876	1940	4540	4540	A	0.43
IM - 7		Daniels Pkwy.	Sunshine Blvd.	4LD	1	U	3411	E	44700	21	0.0876	3920	4130	4130	B	0.95
IM - 8		Sunshine Blvd.	Alabama Rd.	4LD	0	U	3401	E	16700	21	0.0876	1460	4540	4540	A	0.32
IM - 9		Alabama Rd.	A.G. Bell Blvd.	2LU	0	U	3200	E	13100	21	0.0876	1150	2510	2510	A	0.46
IM - 10		A.G. Bell Blvd.	County Line	2LU	0	U	3200	E	16600	21	0.0876	1450	2510	2510	A	0.58
I - 1	I-75	Corkscrew Rd.	Alico Rd.	8F	0	U	3804	D	58100	54	0.0880	5110	12440	13380	B	0.41

APPENDIX E
PROPOSED 2020 TRANSPORTATION PLAN (1)
2020 PEAK HOUR, PEAK SEASON TRAFFIC CONDITIONS
BASED ON REVISED LAND USE FORECASTS

LINK INDEX	ROADWAY	FROM	TO	(2) # OF LANES	(3) SIGNALS PER MILE	(3) URBAN (U) TRANS.(T) RURAL (R)	(4) FDOT CODE	(5) LOS STD	FSUTMS VOLUMES	PERMANENT COUNT STATION	(3) PLANNING HOUR MULTIPLIER	PLANNING HOUR VOLUME	(4) SERVICE VOLUME @ LOS STD	(4) SERVICE VOLUME @ LOS E	LOS	PLANNING HOUR V/C RATIO
I - 2		Alico Rd.	Daniels Pkwy.	6F	0	U	3604	D	61500	55	0.0880	5410	9330	10040	B	0.58
I - 3		Daniels Pkwy.	Colonial Blvd.	6F	0	U	3604	D	60300	56	0.0880	5310	9330	10040	B	0.57
I - 4		Colonial Blvd.	S.R. 82	6F	0	U	3604	D	55000	57	0.0880	4840	9330	10040	B	0.52
I - 5		S.R. 82	Luckett Rd.	6F	0	U	3604	D	67300	58	0.0880	5920	9330	10040	C	0.63
I - 6		Luckett Rd.	S.R. 80	6F	0	U	3604	D	66700	59	0.0880	5870	9330	10040	C	0.63
I - 7		S.R. 80	S.R. 78	6F	0	U	3604	D	81000	60	0.0880	7130	9330	10040	C	0.76
JA - 1	JAGUAR BLVD.	S.R. 82	Homestead Rd.	2LU	0	T	2200	E	400	6	0.0765	30	2480	2480	A	0.01
JA - 2		Homestead Rd.	Alexander G. Bell Blvd.	2LU	0	T	2200	E	900	6	0.0765	70	2480	2480	A	0.03
JA - 3		Alexander G. Bell Blvd.	Columbus Blvd.	2LU	0	T	2200	E	300	6	0.0765	20	2480	2480	A	0.01
JO - 1	JOEL BLVD.	Alexander G. Bell Blvd.	East 12th St.	2LU	0	U	3200	E	11600	6	0.0765	890	2510	2510	A	0.35
JO - 2		East 12th St.	Greenbriar Blvd.	2LU	0	U	3200	E	10600	6	0.0765	810	2510	2510	A	0.32
JO - 3		Greenbriar Blvd.	S.R. 80	2LU	0	T	2200	E	9400	6	0.0765	720	2480	2480	A	0.29
LE - 1	LEE BLVD.	S.R. 82	Leonard Blvd.	6LD	1	U	3611	E	62300	22	0.0891	5550	6190	6190	B	0.90
LE - 2		Leonard Blvd.	Gunnery Rd.	6LD	1	U	3611	E	56800	22	0.0891	5060	6190	6190	A	0.82
LE - 3		Gunnery Rd.	Sunshine Blvd.	6LD	1	U	3611	E	51600	22	0.0891	4600	6190	6190	A	0.74
LE - 4		Sunshine Blvd.	Homestead Rd.	6LD	1	U	3611	E	43700	22	0.0891	3890	6190	6190	A	0.63
LE - 5		Homestead Rd.	Leeland Heights Blvd.	2LU	2	U	3220	E	19200	22	0.0891	1710	2280	2280	B	0.75
LH - 1	LEELAND HEIGHTS BLVD.	Lee Blvd.	Joel Blvd.	4LD	2	U	3421	E	20500	6	0.0765	1570	4130	4130	B	0.38
LN - 1	LEONARD BLVD.	Lee Blvd.	Gunnery Rd.	2LU	0	U	3200	E	12100	21	0.0876	1060	2510	2510	A	0.42
LN - 2		Gunnery Rd.	Sunshine Blvd.	2LU	0	U	3200	E	23500	6	0.0765	1800	2510	2510	A	0.72
LN - 3		Sunshine Blvd.	Beth Stacey Blvd.	2LU	0	U	3200	E	19500	6	0.0765	1490	2510	2510	A	0.59
LU - 1	LUCKETT RD.	Ortiz Ave.	I-75	2LU	1	U	3210	E	9000	20	0.0882	790	2280	2280	A	0.35
LU - 2		I-75	East	2LU	0	U	3200	E	9800	20	0.0882	860	2510	2510	A	0.34
MI - 1	MILWAUKEE BLVD.	Alabama Rd.	Homestead Rd.	2LU	0	U	3200	E	11400	6	0.0765	870	2510	2510	A	0.35
MI - 2		Homestead Rd.	Alexander G. Bell Blvd.	2LU	0	U	3200	E	12800	6	0.0765	980	2510	2510	A	0.39
MI - 3		Alexander G. Bell Blvd.	Columbus Blvd.	2LU	0	U	3200	E	1700	6	0.0765	130	2510	2510	A	0.05
OR - 1	ORANGE RIVER BLVD.	S.R. 80	Buckingham Rd.	2LU	0	U	3200	E	8200	11	0.0903	740	2510	2510	A	0.29
PB - 1	PALM BEACH BLVD.	Ortiz Ave.	I-75	6LD	1	U	3611	D	55200	5	0.0817	4510	6190	6190	A	0.73
PB - 2	(S.R. 80)	I-75	S.R. 31	6LD	1	U	3611	D	44700	5	0.0817	3650	6190	6190	A	0.59
PB - 3		S.R. 31	Buckingham Rd.	4LD	1	U	3411	D	33900	5	0.0817	2770	4130	4130	A	0.67
PB - 4		Buckingham Rd.	Hickey Creek	4LD	0	U	3401	D	20200	5	0.0817	1650	4540	4540	A	0.36
PB - 5		Hickey Creek	Joel Blvd.	4LD	0	R	1401	D	18400	5	0.0817	1500	3520	3530	B	0.43
PB - 6		Joel Blvd.	County Line	4LD	0	R	1401	D	15200	5	0.0817	1240	3520	3530	B	0.35
RI - 1	RICHMOND RD.	Leeland Heights Blvd.	East 12th St.	2LU	0	U	3200	E	5000	6	0.0765	380	2510	2510	A	0.15
RI - 2		East 12th St.	Greenbriar Blvd.	2LU	0	U	3200	E	6100	6	0.0765	470	2510	2510	A	0.19
SE - 1	SENTINELA BLVD.	Alexander G. Bell Blvd.	Grant Blvd.	2LU	0	U	3200	E	2500	6	0.0765	190	2510	2510	A	0.08
SE - 2		Grant Blvd.	Columbus Blvd.	2LU	0	U	3200	E	900	6	0.0765	70	2510	2510	A	0.03
SR - 1	S.R. 31	North	Bayshore Rd.	2LU	1	R	1210	E	14700	4	0.0818	1200	2220	2220	B	0.54
SR - 2		Bayshore Rd.	S.R. 80	2LU	1	U	3210	E	27700	4	0.0818	2270	2280	2280	C	1.00
SU - 1	SUNRISE BLVD.	Homestead Rd.	Alexander G. Bell Blvd.	2LU	0	U	3200	E	6400	6	0.0765	490	2510	2510	A	0.20
SU - 2		Alexander G. Bell Blvd.	Grant Blvd.	2LU	0	U	3200	E	1200	6	0.0765	90	2510	2510	A	0.04
SU - 3		Grant Blvd.	Columbus Blvd.	2LU	0	U	3200	E	1200	6	0.0765	90	2510	2510	A	0.04
SS - 1	SUNSET RD.	Gunnery Rd.	Sunniland Blvd.	2LU	0	U	3200	E	18700	22	0.0891	1670	2510	2510	A	0.67
SN - 1	SUNSHINE BLVD.	S.R. 82	SW 23rd St.	2LU	0	U	3200	E	3900	6	0.0765	300	2510	2510	A	0.12
SN - 2		SW 23rd St.	Lee Blvd.	2LU	0	U	3200	E	6300	6	0.0765	480	2510	2510	A	0.19
SN - 3		Lee Blvd.	East 12th St.	2LU	0	U	3200	E	6400	6	0.0765	490	2510	2510	A	0.20
SW - 1	SW 23RD ST.	Gunnery Rd.	Sunshine Blvd.	2LU	0	U	3200	E	23500	6	0.0765	1800	2510	2510	A	0.72
SW - 2		Sunshine Blvd.	Beth Stacey Rd.	2LU	0	U	3200	E	19500	6	0.0765	1490	2510	2510	A	0.59
TL - 1	TREELINE AVE.	Daniels Pkwy.	Alico Rd.	4LD	2	U	3421	E	36300	10	0.1030	3740	4130	4130	C	0.91
TL - 2		Alico Rd.	Koreshan Blvd.	4LD	2	U	3421	E	41400	10	0.1030	4260	4130	4130	F	1.03

FOOTNOTES:

(1) Excludes two improvements added to the Proposed 2020 Transportation Plan following the presentation of the Proposed Plan to the Lehigh Acres Local Redevelopment Planning Committee on February 21, 1996: Sunrise Blvd. Extension from Homestead Road to Alabama Rd.; and Paddock St. between Alabama Rd. and Beth Stacey Blvd.
(2) Source: Lee County 2020 Financially-Feasible Plan (Adopted December 15, 1995).
(3) Source: Lee County MPO 1995 Plan Update.
(4) Source: FDOT District One Planning Department, 1994 LOS Annual Report and Traffic Trend Data, August, 1995, Table 3.
(5) Source: 1990 Amendments To The Lee Plan, Volume 1 of 3, September 1990, Traffic Circulation Issues, Table 5, page 1

APPENDIX F
ESTIMATED COSTS FOR PROGRAMMED AND PLANNED IMPROVEMENTS
LEHIGH ACRES AND APPROACHES TO LEHIGH

#94557
19-Mar-96

LEE COUNTY CAPITAL IMPROVEMENT PROGRAM (CIP), FY 1996-2000

Roadway	From:	To:	Improvement	Cost Estimate
Lee Blvd.	Immokalee Rd.	Lee St.	Widen to 4-6 lanes	$5,445,000
Lee Blvd.	Lee St.	Sunniland Blvd.	Widen to 4-6 lanes	$4,486,000
Lee Blvd.	Sunniland Blvd.	Homestead Rd.	Widen to 4-6 lanes	$5,758,000
Leeland Heights Blvd.	Lee Blvd.	East 16th St.	Restripe for 4 lanes	N/A
Daniels Pkwy. Ext.	Gateway Blvd.	Immokalee Rd.	Construct new 4 lanes	$6,300,000
Total Estimated Cost for Programmed Improvements				$21,989,000

2020 FINANCIALLY-FEASIBLE PLAN

Roadway	From:	To:	Improvement	Cost Estimate
Immokalee Rd. (SR 82)	I-75	Lee Blvd.	Widen to 6 lanes	$5,565,000
Immokalee Rd. (SR 82)	Lee Blvd.	Alabama Rd.	Widen to 4 lanes	$9,090,000
Gunnery Rd.	Immokalee Rd.	Lee Blvd.	Widen to 4 lanes	$3,610,000
Daniels Pkwy. Ext.	Gateway Blvd.	Immokalee Rd.	Widen to 6 lanes	$7,690,000
Total Estimated Cost for Planned Improvments				$25,955,000

APPENDIX F
ESTIMATED COSTS FOR PROGRAMMED AND PLANNED IMPROVEMENTS
LEHIGH ACRES AND APPROACHES TO LEHIGH

#94557
19-Mar-96

2020 RESERVE HIGHWAY NETWORK

Roadway	From:	To:	Improvement	Cost Estimate
40th St. Ext.	Connie Ave.	Alabama Rd.	Construct new 2 lanes	$289,000
Beth Stacey Blvd.	Parson St.	Camelot Gardens Blvd.	Construct new 2 lanes	$794,000
Milwaukee Blvd. Ext.	Preston St.	Homestead Rd.	Construct new 2 lanes	$3,449,000
Sunrise Blvd. Ext.	Alabama Rd.	Homestead Rd.	Construct new 2 lanes	$2,693,000
Sunrise Blvd. Ext.	Richmond Ave.	Victoria Ave. South	Construct new 2 lanes	$2,199,000
SW 23rd St. Ext.	Current Terminus	Beth Stacey Blvd.	Construct new 2 lanes	$973,000
Seth Avenue Ext.	Leonard Blvd.	Current Terminus	Construct new 2 lanes	$1,655,000
Seth Avenue	Current Terminus	Lee Blvd.	Widen to 4 lanes	$456,000
Total Estimated Cost for Reserve Projects				$12,508,000

APPENDIX F
ESTIMATED COSTS FOR PROGRAMMED AND PLANNED IMPROVEMENTS
LEHIGH ACRES AND APPROACHES TO LEHIGH

#94557
19-Mar-96

PROPOSED ADDITIONS TO 2020 HIGHWAY NETWORK

Roadway	From:	To:	Improvement	Cost Estimate
Paddock St. Ext.	Petite Ave.	Beth Stacey Blvd.	Construct new 2 lanes	$740,000
Grant Blvd. Ext.	Carrillon Ave.	Homestead Rd.	Construct new 2 lanes	$1,200,000
Grant Blvd. Ext.	Homestead Rd.	Radford Ave.	Construct new 2 lanes	$1,800,000
Grant Blvd. Ext.	Pyramid Ave.	Pelham Rd.	Construct new 2 lanes	$600,000
Hawalaska St.	Immokalee Rd.	Wallace Ave.	Construct new 2 lanes	$300,000
Burr St. Ext.	Buckingham Rd.	Alvin Ave.	Construct new 2 lanes	$1,920,000 (1)
Burr St. Ext.	Alaska Ave.	Abrams Blvd.	Construct new 2 lanes	$980,000 (2)
Sunset Rd. Ext.	Gunnery Rd.	Sunset Rd. near Yale	Construct new 2 lanes	$600,000
Sunset Rd. Ext.	Sunniland Blvd.	Sunshine Blvd.	Construct new 2 lanes	$2,200,000 (2)
West 12th St. Ext.	Beth Ave.	Pine Ave.	Construct new 2 lanes	$799,000
61st St. West Ext.	Stratton Rd.	Vera Ave.	Construct new 2 lanes	$800,000 (2)
61st St. West Ext.	Nora Ave.	Laura Ave.	Construct new 2 lanes	$800,000 (2)
61st St. West Ext.	Hanna Ave.	Gene Ave.	Construct new 2 lanes	$800,000 (2)
61st St. West Ext.	Sunshine Blvd.	Jacinto Ave.	Construct new 2 lanes	$980,000 (2)
Total Estimated Cost for Proposed Projects				$14,519,000

TOTAL ESTIMATED COST $74,971,000

FOOTNOTES:

(1) Cost per mile doubled due to added cost of crossing former landfill.
(2) Cost of $500,000 added for each canal crossing.

LEHIGH ACRES LOCAL REDEVELOPMENT PLANNING COMMITTEE
PLANNING AND ZONING SUBCOMMITTEE REPORT
SEPTEMBER 14, 1994

THE PLANNING AND ZONING SUBCOMMITTEE (PZS) HAS RESEARCHED ISSUES RELATING TO THE PLANNING AND ZONING OF THE LEHIGH ACRES AREA. THIS RESEARCH HAS INCLUDED A STUDY OF COMMERCIAL ZONING THE ROADWAY NETWORKS WITHIN THE BOUNDARIES OF THE LEHIGH ACRES REDEVELOPMENT AREA. THE PZS HAS RESEARCHED THE ROADWAY NETWORKS IN THE FIRST PHASE OF THEIR WORK SINCE TRAFFIC CIRCULATION AND COMMERCIAL ZONING ARE SO CLOSELY INTERCONNECTED.

THE PZS HAS DETERMINED THAT THERE IS A NEED TO AMEND THE LEE COUNTY OFFICIAL TRAFFICWAYS MAP ALONG WITH THE INTERIM TRAFFIC CIRCULATION PLAN MAP (2020 FINANCIALLY FEASIBLE PLAN) AND THE 2010 NEEDS PLAN (2020 NEEDS PLAN) THAT ARE IN THE LEE PLAN TO MEET THE NEEDS OF THE FUTURE GROWTH OF LEHIGH ACRES.

THE PZS HAS PREPARED A PROPOSED TRAFFIC CIRCULATION PLAN FOR LEHIGH ACRES. THIS PLAN IS INCLUDED WITH THIS REPORT ALONG WITH THE CURRENT ARTERIAL AND COLLECTOR STREETS AS SHOWN ON THE OFFICIAL TRAFFICWAYS MAP PREPARED BY LEE COUNTY.

IN ORDER TO ACCOMMODATE THE GROWTH OF LEHIGH ACRES, THE PZS RECOMMENDS THAT A CONSULTANT BE OBTAINED THROUGH THE LEHIGH ACRES LOCAL REDEVELOPMENT PLANNING COMMITTEE (LALRPC) TO PREPARE A SUBMITTAL TO LEE COUNTY TO MAKE ALL NECESSARY CHANGES TO THE CURRENT TRAFFICWAYS MAPS AND THE LEE PLAN. THE CONSULTANT WILL NEED TO REVIEW THE PROPOSED PLAN PREPARED BY THE PZS. THE PZS's PROPOSED ARTERIAL AND COLLECTOR ROADWAYS MUST BE VERIFIED USING THE CRITERIA SPECIFIED BY LEE COUNTY FOR THE CORRECT CLASSIFICATIONS AND DESIGNATIONS.

THE FOLLOWING IS A LIST OF EXISTING AND/OR PROPOSED ARTERIAL AND COLLECTOR STREETS WITH THE PZS RECOMMENDATIONS:

ARTERIAL STREETS AS SHOWN ON THE TRAFFICWAYS MAP:

STREET	FROM	TO
LEE BLVD.	SR 82	LEELAND HEIGHTS BLVD.
LEELAND HEIGHTS BLVD./ JOEL BLVD.	HOMESTEAD RD.	SR 80
LEONARD BLVD.	LEE BLVD.	GUNNERY RD.
23RD ST. S.W.	GUNNERY RD.	ANITA AVE.
GUNNERY RD.	SR 82	BUCKINGHAM RD.
SUNSHINE BLVD.	SR 82	61ST ST. W.
GREENBRIAR BLVD.	WINGFORD	JOEL BLVD.
MENCOA CT.	SUNSHINE BLVD.	JACINTO AVE.
JACINTO AVE.	MENCOA CT.	LATHAM DR.
WINDERMERE DR.	LATHAM DR.	WINGFORD DR.
WINGFORD DR.	WINDERMERE DR.	GREENBRIAR BLVD.
E. 21ST ST.	JOEL BLVD.	GRANT AVE.
WEST/EAST 16TH ST.	SUNSHINE BLVD.	GRANT AVE.
WEST/EAST 12TH ST.	SUNSHINE BLVD.	GRANT BLVD.
WILLIAMS AVE.	LEE BLVD.	WEST 16TH ST.
RICHMOND AVE.	SUNRISE BLVD.	GREENBRIAR BLVD.

ARTERIAL STREETS AS SHOWN ON THE TRAFFICWAYS MAP (Con't):

STREET	FROM	TO
BETH STACEY BLVD.	HOMESTEAD RD.	ALABAMA RD.
HOMESTEAD RD.	LEE BLVD.	JAGUAR BLVD.
ALABAMA RD.	HOMESTEAD RD.	SR 82
MILWAUKEE BLVD.	ALABAMA RD.	COLUMBUS BLVD.
SUNRISE BLVD.	ALABAMA RD.	COLUMBUS BLVD.
BELL BLVD.	JOEL BLVD.	SR 82
GRANT BLVD.	HOMESTEAD RD.	LEELAND HEIGHTS BLVD.
GRANT AVE.	LEELAND HEIGHTS BLVD.	EAST 21 ST.
EISENHOWER BLVD.	GRANT BLVD.	SR 82
JAGUAR BLVD.	HOMESTEAD RD.	COLUMBUS BLVD.
NIMITZ BLVD.	BELL BLVD.	COLUMBUS BLVD.
COLUMBUS BLVD.	SR 82	SUNRISE BLVD.
ALABAMA RD.	SR 82	HOMESTEAD RD.
61ST ST. W.	SUNSHINE BLVD.	W LINE OF SEC 1-44-26

PROPOSED ARTERIAL STREETS NOT SHOWN ON THE TRAFFICWAYS MAP:

STREET	FROM	TO
CEMETERY RD.	BUCKINGHAM RD.	STRATON RD.
STRATON RD.	CEMETERY RD.	61ST ST. W.
61ST ST. W.	W LINE OF SEC. 1-44-26	STRATON RD.
SUNSHINE BLVD.	61ST ST. W.	N. LINE OF SEC. 1-44-26
N. LINE OF SEC. 6-44-27	SUNSHINE BLVD.	GREENBRIAR BLVD.
GREENBRIAR BLVD.	WINGFORD DR.	N. LINE OF SEC. 6-44-27
E. 21ST ST.	GRANT AVE.	MOORE AVE.
E. 16TH ST.	GRANT AVE.	MOORE AVE.
E. 12TH ST.	GRANT AVE.	MOORE AVE.
19TH ST. W.	SUNSHINE BLVD.	ANN AVE.
ANN AVE.	19TH ST. W.	W. 9TH ST.
WEST/EAST 9TH ST.	ANN AVE.	MOORE AVE.
COLUMBUS BLVD.	SUNRISE BLVD.	SENTINELA BLVD.
MOORE AVE.	SENTINELA BLVD.	E. 21ST ST.
JAGUAR BLVD.	SR 82	HOMESTEAD RD.
HOMESTEAD RD.	JAGUAR BLVD.	SR 82
NIMITZ BLVD.	BELL BLVD.	SR 82
ANITA AVE.	23RD ST. S.W.	20TH ST. S.W.
20TH ST. S.W.	ANITA AVE.	BETH STACEY BLVD.

COLLECTOR STREETS AS SHOWN ON THE TRAFFICWAYS MAP:

STREET	FROM	TO
8TH ST. S.W.	GUNNERY RD.	SUNSHINE BLVD.
SENTINELA BLVD.	BELL BLVD.	NAPLES AVE.
McARTHUR BLVD.	MILWAUKEE BLVD.	EAST 5TH ST.
SUMMA BLVD E.	GRANT BLVD	NAPLES AVE.
NAPLES AVE.	SR 82	SENTINELA BLVD.

COLLECTOR STREETS AS SHOWN ON THE TRAFFICWAYS MAP (Con't):

STREET	FROM	TO
JACINTO AVE.	MENCOA CT.	MAYBROOK CT.
WOODCREST DR.	MAYBROOK CT.	WINDERMERE DR.
REDMONT AVE.	WINDERMERE DR.	GREENBRIAR BLVD.
EAST/WEST 5TH ST.	WILLIAMS AVE.	GRANT AVE.
ALVIN AVE.	LEE BLVD.	BUCKINGHAM RD.

PROPOSED COLLECTOR STREETS NOT SHOWN ON THE TRAFFICWAYS MAP:

STREET	FROM	TO
ABRAMS BLVD.	LEE BLVD.	BUCKINGHAM RD.
CENTENNIAL BLVD.	ABRAMS BLVD.	GUNNERY RD.
SUNSET RD.	GUNNERY BLVD.	SUNNILAND BLVD.
SUNNILAND BLVD.	LEE BLVD.	25TH ST. W.
25TH ST. W.	SUNNILAND BLVD.	SUNSHINE BLVD.
12TH ST. S.W.	GUNNERY RD.	SUNSHINE BLVD.
WINDERMERE DR.	WINGFORD DR.	RICHMOND AVE.
WOODBURN DR.	RICHMOND AVE.	GREENBRIAR BLVD.
GRANT BLVD.	SR 82	MILWAUKEE BLVD.
PARKDALE BLVD.	SR 82	HOMESTEAD RD.
DELAWARE RD.	LEE BLVD.	HOMESTEAD RD.
E. 5TH ST.	GRANT AVE.	MOORE AVE.
NORTH AVE.	LEELAND HEIGHTS BLVD.	E. 16TH ST.
BLACKSTONE DR.	SR 82	SR 82

STREETS SHOWN AS COLLECTORS ON THE TRAFFICWAYS MAP TO PROPOSED ARTERIALS:

STREET	FROM	TO
SUNRISE BLVD.	COLUMBUS BLVD.	NAPLES AVE.
MILWAUKEE BLVD.	COLUMBUS BLVD.	NAPLES AVE.
JAGUAR BLVD.	COLUMBUS BLVD.	NAPLES AVE.
NIMITZ BLVD.	COLUMBUS BLVD.	NAPLES AVE.

STREETS SHOWN ON TRAFFICWAYS MAP AS ARTERIALS TO BE REMOVED:

STREET	FROM	TO
32ND ST. S.W.	GUNNERY RD.	ALABAMA RD.
16TH ST. W./W 8TH ST.	BUCKINGHAM RD.	GRANT AVE.
W. 16TH ST.	SUNSHINE BLVD.	BUCKINGHAM RD.
UNNAMED STREET	61ST ST. W.	SUNSHINE BLVD.
23RD ST. S.W.	ANITA AVE.	BETH STACEY BLVD.

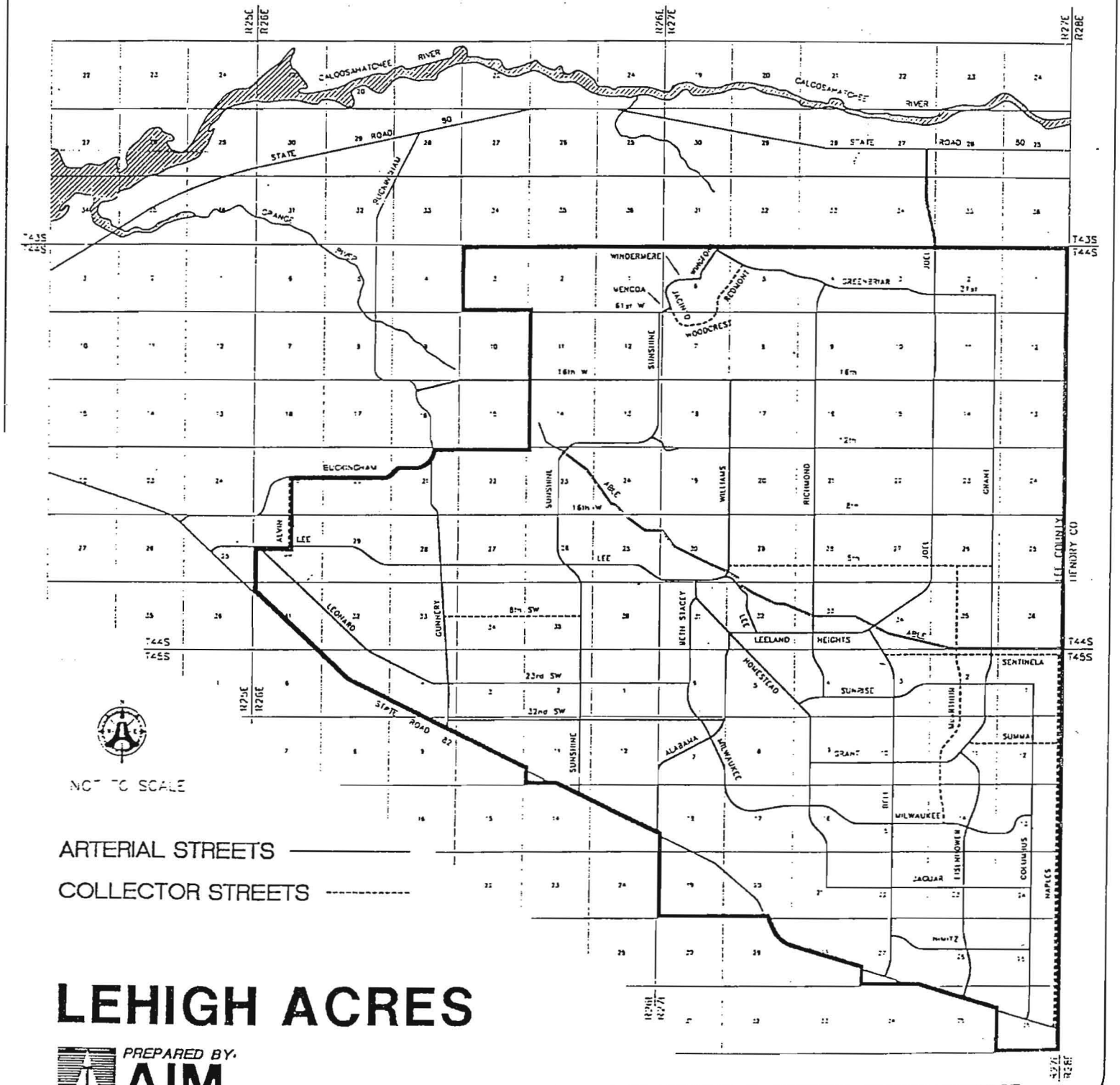
THE PZS RECOMMENDS THAT THE ABOVE STREETS BE REMOVED FROM THE TRAFFICWAYS MAP DUE TO DESIGN CONSTRAINTS.

THE PZS RECOMMENDS THAT THE ABOVE INFORMATION BE VERIFIED BY A CONSULTANT IN THE PROFESSION. AMENDMENTS TO CURRENT COUNTY REGULATIONS AND THE LEE PLAN ARE NECESSARY IN ORDER TO ACCOMMODATE THE CURRENT AND FUTURE GROWTH OF LEHIGH ACRES.

ONCE THE ROADWAY NETWORKS ARE MODIFIED AND APPROPRIATE AMENDMENT ARE MADE TO THE LEE PLAN, COMMERCIAL GROWTH WILL BE ALLOWED TO TAKE PLACE IN CONFORMANCE WITH LEE COUNTY REGULATIONS.

Lehigh Acres Local Redevelopment Planning Committee

CURRENT TRAFFICWAYS



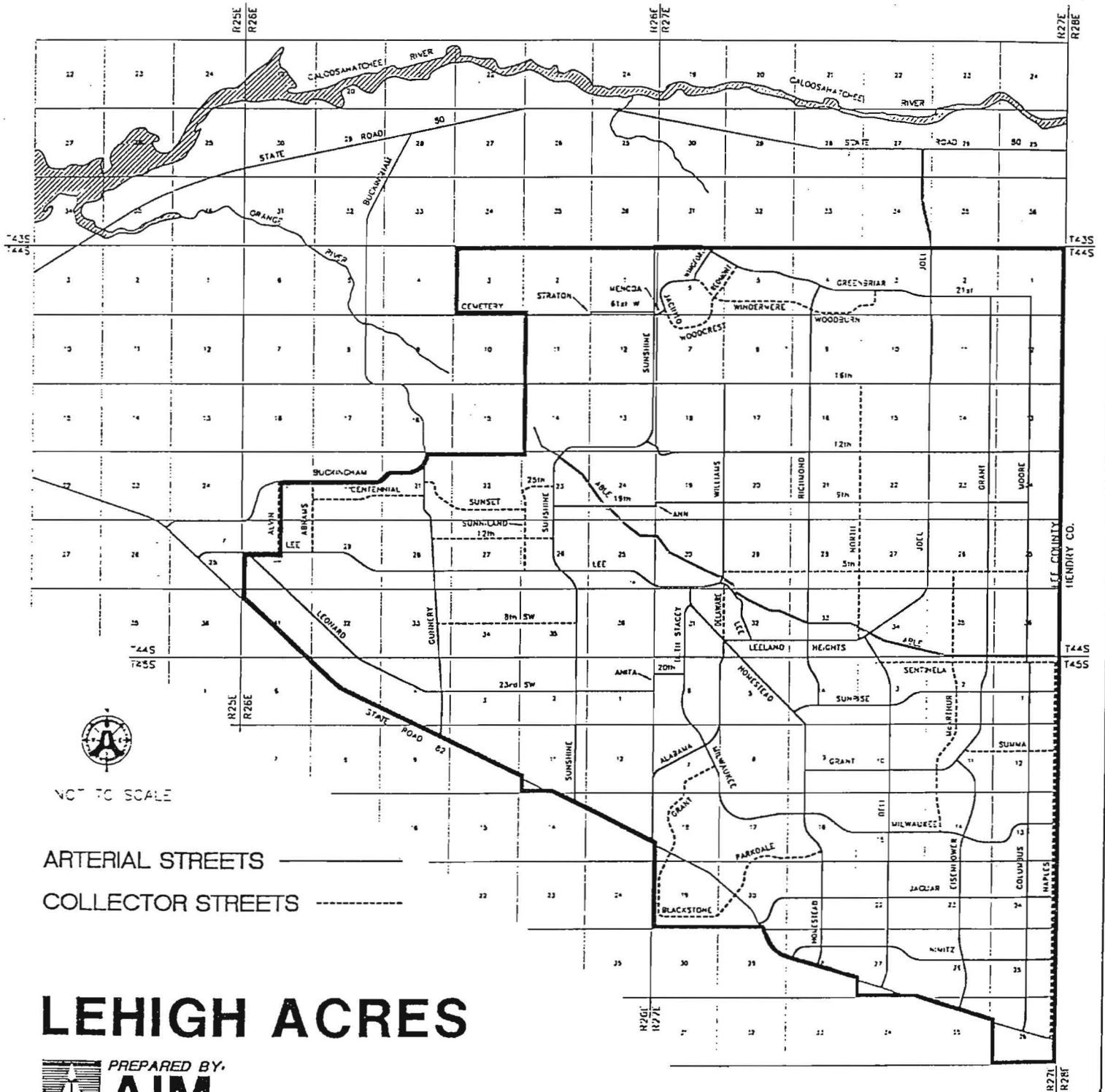
LEHIGH ACRES

PREPARED BY:
AIM
ENGINEERING & SURVEYING, INC.

PLAN BY: PLANNING & ZONING SUBCOMMITTEE
CHAIR: KATHY MORGAN

Lehigh Acres Local Redevelopment Planning Committee

PROPOSED TRAFFICWAYS



LEHIGH ACRES

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