

UNION COUNTY PUBLIC SCHOOLS
MONROE, NORTH CAROLINA

INTEGRATED PLANNING FOR SCHOOL AND COMMUNITY
(IPSAC)

LAND USE STUDY FINAL REPORT – 2005-06

PREPARED AND SUBMITTED BY
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OR/Ed. Lab

OVERVIEW

School systems nationwide are facing difficult planning challenges arising from an increasing student population, an aging school infrastructure, and increasing complexity in pupil assignments. These challenges are shared by the communities that must fund building and renovation projects. The Operations Research / Education Laboratory (OR/Ed. Lab) has developed a system of Integrated Planning for School and Community (IPSAC) which fully integrates community and regional data, economic and demographic forecasts, demographic and land use studies, digitized pupil and school location files, and mathematical optimization algorithms.

The integrated planning system is comprised of multiple data-driven processes including:

- Enrollment Forecasting
- Land Use Study
- Out-Of-Capacity Analysis
- School Location Optimization Scenarios
- Attendance Boundary Optimization and Redistricting

This report documents findings from the **Land Use Study** of the geographic area encompassing the school district. The objective of the Land Use Study is to quantify future growth by school attendance area. The Land Use Study includes two components: community interviews and Geographic Information Systems (GIS) analysis.

Community Interviews: The community interviews allow the Lab to compose an impression of future growth of the study area by interviewing planners, town managers, mayors, utility works, chambers of commerce, economic development officials, etc. By involving the community in the study, these critical interviews cultivate an understanding of infrastructure development plans (transportation, water, sewer), recent subdivision permits, residential zonings, available land for development, and comprehensive plans developed by the local government agencies.

GIS Analysis: The Lab also performs spatial analyses based on GIS parcel data using state-of-the-art ArcGIS software. The GIS analysis provides quantitative data concerning available parcels and subdivision lots that then can be used to identify areas of future growth. Student demographic analysis can also be conducted at this stage to better understand socio-economic compositions that could be used to influence school assignment decisions.

Through the combination of the community interviews and the data-intensive GIS analysis, the Lab is able to articulate school population growth by school attendance areas.

PART ONE: COMMUNITY INTERVIEWS

INTRODUCTION

Union County lies in south central North Carolina, southeast of Charlotte, and is part of the Charlotte metropolitan region. The rapid growth of the Charlotte area continues as the primary growth driver in Union County. Union County has maintained favor among families who desire rural character but also proximity and access to activities associated with the urban area. The attitude of many local elected officials in Union County is to favor growth.

This Land Use Study not only describes the relative level and location of growth that has occurred since the previous IPSAC study was conducted in 2004, but also the growth that is anticipated in Union County. The findings of this report were derived from a series of in-person interviews conducted with stakeholders during August 15-17, 2005, as well as subsequent telephone interviews to gather information as necessary. Additional information was obtained from the websites for the North Carolina State Data Center, the North Carolina Department of Commerce, the North Carolina Department of Transportation, the Charlotte-Mecklenburg Chamber of Commerce, the Charlotte Regional Partnership, the Lancaster County, South Carolina Economic Development Corporation and various other organizations.

This report consisted of sections that include discussion of:

- Key trend and status indicators: population, employment, and economic development.
- Growth in Union County: causes, factors constraining growth, and economic development activities.
- Transportation: planned highway improvements, and other transportation modes.
- Water/sewer: current and planned infrastructure.
- Anticipated residential development: areas with current and anticipated high residential growth, summary of interviews, and information on subdivisions approved/under construction.
- Anticipated non-residential development: current and anticipated commercial and industrial development, major manufacturers, and a summary of interviews.

KEY TREND AND STATUS INDICATORS

The Union County population projections for the period 2000-2010 are characterized by North Carolina State Data Center (SDC) as “high growth, high in-migration” similar to the period from 1990-2000. According to North Carolina SDC data, the estimated Union County population increased by 34,230 from April 2000 (123,772) to July 2005 (158,002). This equals a rate of increase for that four-year period of 22.7 percent as contrasted with the estimated statewide average population growth rate of 7.7 percent. For the April 2000 through July 2005 period, Union County is estimated to have experienced the third greatest numerical growth in population in North Carolina, trailing only Mecklenburg and Wake Counties.

SDC projections for the period 2005-2010 show an overall 14.1 percent population increase for Union County (22,322 persons) versus a 6.3 percent average increase for North Carolina.

North Carolina Department of Commerce data reveal that Union County experienced an overall increase in the number of jobs (2,944) between July 2004 and July 2005. The unemployment rate in the county has generally been lower than the statewide average, ranging between 3.9 and 4.7 percent for the July 2004-July 2005 period. While the median household income (\$50,638 in 2000, ranked second in the state¹) has been higher than the average for North Carolina, per capita personal income was reported to be lower than the North Carolina average. Table 1 summarizes this information.

Table 1: Key Trend and Status Indicators

Indicator	Union County	North Carolina
Population Increase 2000-2004	22.7%	7.7%
Unemployment Rate (July 2005)	4.7%	5.7%
Unemployment Rate (July 2004)	4.7%	5.4%
Per Capita Personal Income (2003)	\$26,778	\$28,071

Data source: North Carolina Department of Commerce

The Union County population is projected to continue its growth at a rate approximately 2 times the North Carolina statewide rate through 2010, as shown in Table 2.

Table 2: Projected Annual County Population Totals 2005-2009:

Location	July 2005	July 2006	July 2007	July 2008	July 2009
Union County	158,002	163,763	169,218	174,723	180,324
% Change	N.A.	3.6%	3.3%	3.3%	3.2%
North Carolina	8,663,674	8,792,017	8,927,757	9,065,983	9,207,295
% Change	N.A.	1.5%	1.5%	1.5%	1.6%

Data source: North Carolina State Demographics Unit.

Of the 541 North Carolina municipalities, Monroe is estimated to have had the 22nd largest municipal population (31,234), Indian Trail the 47th largest (16,764) population, Stallings the 77th largest (9,163), Weddington the 86th largest (8,006), Unionville the 101st largest (6,258), Wesley Chapel the 146th largest (3,923), Fairview the 147th largest (3,917), Waxhaw the 168th largest (3,298), and Wingate the 186th largest (2,779) in July 2004.

¹ North Carolina Department of Commerce,
http://cmedis.commerce.state.nc.us/countyprofiles/files/pdf/Union_2004Q2.pdf

In the fourth quarter of 2004, approximately 23 percent of Union County employment was in the manufacturing sector. Other sectors with a significant share of county employment included construction (16%), government (17%), retail trade (10%), educational services (10%), and healthcare and social assistance (7%).

GROWTH IN UNION COUNTY

Union County residents were characterized by those interviewed as possessing the full range of opinions towards growth, from favoring continued growth to favoring sharp limits to growth. Many residents were said to favor relatively low-density residential development, typically at one unit per acre, and evenly distributed throughout a parcel, as opposed to being clustered in one portion of a parcel with the remainder maintained as open space. Several interviewees expressed their concern that teenagers may hold beer parties in open space areas of cluster developments, and that such open space raised public safety issues. Land prices remain relatively high in the western part of the county, and are typically \$100,000 per acre, but can reach \$600,000 per acre.

Residential development was characterized as continuing to take place with approximately equal shares of residential units constructed in unincorporated areas of the County and in the various municipalities. Union County was said to be the location of the highest average cost residential construction in the region, with 60 percent of all newly permitted single-family houses being greater than 3,100 square feet in size, and less than three percent of those houses having less than 2,100 square feet.

During the 2004 land use study interviews, overall residential development density in unincorporated Union County was characterized as taking place at the level of density allowed by zoning plus 15 percent. The County Commissioners have since eliminated the 15 percent “Smart Growth” bonus, and development is expected to occur at an average density of approximately one unit per acre throughout the county.

County planners mentioned the following locations as experiencing high rates of residential growth:

- The “wedge” between NC 74 and NC 75 to the west of Monroe, extending to the Mecklenburg County border
- Areas in towns in the northwestern part of the county, such as in Indian Trail and Stallings to the north of US 74

Union County, as well as Lancaster County, South Carolina, and the municipalities of Mineral Springs, Stallings, and Indian Trail, had subdivision moratoria in effect as of August 15, 2005. These moratoria are not expected to have a great impact on current subdivision activity, as permits for approximately 14,000 residential units are in the development process (of which approximately 5,000 are in the unincorporated area of the county). Approximately 3,000 housing units have been added to the Union County supply in a typical year. That number of permits should allow construction to proceed at the current level during the periods of the various moratoria.

However, Union County has also stopped issuing letters of water availability and sewer availability in June 2005 pending construction of infrastructure improvements. These water and sewer moratoria have had some impact on development. All of these moratoria are described in greater detail in subsequent sections of this report.

Growth in the Charlotte Region

While the Charlotte region has grown overall, the focus of growth has shifted within the region over time. One interviewee's opinion was that the first wave of growth focused on York County, South Carolina; the second wave focused on Iredell County; the third on Union County, and that the fourth will focus on Gaston County.

Growth in the Charlotte region is anticipated to continue into the foreseeable future, absent the loss of a major employer, such as one of the two large banks headquartered in the city, or the US Airways hub at Charlotte-Douglas International Airport.

As part of the study, OR/Ed staff gathered information from the Chambers of Commerce and Economic Development Commissions in Charlotte/Mecklenburg County, and York and Lancaster Counties in South Carolina on industrial or commercial development in those surrounding areas that could impact the growth of Union County. While no information was available on potential large-scale industrial or commercial developments, the consensus was that development trends in the area are expected to follow current patterns.

According to information from the Charlotte Regional Partnership, September 2005 unemployment was 5.1 percent. The regional economy continues to create new jobs, with most of the jobs occurring in Mecklenburg County.

Growth in Union County Municipalities

Indian Trail enacted an 18-month subdivision moratorium on January 11, 2005. The purpose of the moratorium is to allow local officials to complete and adopt a Comprehensive Land Use Plan and to revise and adopt associated ordinances and policies. Planners said that the town is being more selective in properties to be annexed into the town. The town intends for all annexation to be conducted on a voluntary basis, and is planning for the town's acreage to almost double as a result of anticipated annexations.

No change is anticipated in the relatively low residential growth rate of **Marshville**. Those interviewed stated that situation may change once the US 74 Bypass is constructed, but no change in growth is deemed likely in the near term.

Marvin and **Weddington** are both experiencing residential development at an average density of one unit per acre. Planners anticipate continued rapid residential development in those towns, as well as in **Wesley Chapel**.

On May 12, 2005, **Mineral Springs** enacted a moratorium on major subdivisions (those with greater than five lots) to extend through October 31, 2006. The purpose is to allow creation of a land use plan and a development ordinance. The town is receiving assistance from planning and

architecture students at the University of North Carolina-Charlotte. Anticipated outcomes include a reduction in population projections for the town than those based on current zoning, and a higher quality to development. The Farmington subdivision and another unnamed potential subdivision were delayed in their approval process as a result of the moratorium.

Monroe continues to grow to its north and west; however, there were no subdivisions approved in 2004, but commercial and industrial developments have been approved. City planners did not envision any additional annexation at the time of the interview.

Stallings enacted a nine-month subdivision moratorium in April 2005. Planners stated that the town is nearly at its limits of expansion, due to its being surrounded by other municipalities. Planners see future residential growth primarily in three areas—around the southern “satellite” of the town; at the intersection of Stevens Mill Road and Stallings Road; and in the area between the Fair Haven subdivision and the County border to the west.

Annexation is anticipated to add only 350-400 acres to the town’s present jurisdiction. Planners anticipate the town’s potential population may be 13,000-15,000, and that figure may be reached in the next 5-10 years. The town was characterized as not having any interest (as of August 2005) to expand north of Lawyers Road and the Emerald Lakes subdivision.

The **Unionville/Fairview** area was said to be experiencing an increase in residential development, although at a relatively slow pace compared to areas in the western part of Union County. Construction of the US 74 Bypass was seen as the major factor that will be likely to spur increased development in this area. The Unionville Planning Board has designated four sites for commercial development.

Waxhaw continues to experience growth of commercial as well as residential development; however, the lack of new sewer permits was said to have limited subdivision and commercial development applications. Development continues to progress, as there were approximately 1,100-1,200 housing units permitted prior to the imposition of the sewer moratorium. The most recent annexation was conducted in July 2005, and it involved one 259 acre parcel south of town (the Vojet property), which is zoned for one-acre lots. However, up to 387 lots could be developed on that property if a developer were to use the available density bonus.

Weddington continues to grow at a rapid pace, with local officials anticipating its population to reach 10,000 in 2006. If currently undeveloped land in the town is built out at planned densities, the town will attain a population of 20,000. Most Town Council members were said to desire minimizing or slowing growth due to heavy traffic on local roads and the desire to minimize student assignment changes in schools. An additional 1,000 housing units are anticipated to be completed in the next two years. Approximately 650 lots are approved for development, and there are an additional 900-1,000 housing units in subdivisions now in the approval process.

Wingate officials anticipate growth will remain flat until the US 74 Bypass has been constructed in its entirety to I-485. There is little undeveloped land available in the city limits, and water/sewer moratoria have limited the amount of residential development that could be approved.

Factors of Growth

The leading factor of growth in Union County remains its location within the Charlotte-Mecklenburg metropolitan region. The western area of Union County continues to experience a substantial population increase as a result of its desirable location. Marvin, Waxhaw, Weddington, Wesley Chapel, and other western Union County suburbs continue to experience high demand for single-family homes.

The three factors attributed to attracting new residents to Union County were said to be relatively low taxes, good quality schools, and comparatively reasonable land prices (in some areas).

A major factor of growth during the next five years will be the availability and cost of undeveloped land in the western area of the county. The price of land in western Union County has continued to increase, reaching as high as \$400,000 to \$600,000 per acre, as compared to only \$10,000-\$15,000 per acre to the east of Monroe. While residential development is anticipated to continue at a relatively rapid pace in the west, a reduction in the amount of available raw land may lead development further east. However, eastward expansion towards Monroe is constrained by a lack of easy highway access to Charlotte and Mecklenburg County.

Constraints on Growth

Primary constraints to growth in Union County include highway congestion, lack of water and sewer capacity, and the presence of the Carolina Heelsplitter in the Goose Creek basin, in the northwestern part of the County. The lack of water and sewer capacity is being addressed through improvements to the infrastructure; however, the Heelsplitter is not only constraining development directly through its existence, but has also delayed selection of a route for the US 74 Bypass, a major planned highway improvement. This delay has resulted in traffic congestion not only on the existing US 74 highway, but also on other parallel routes between Union and Mecklenburg Counties.

On August 15, 2005, the Union County Board of Commissioners voted to impose a 12-month moratorium on major residential development, effective on that date. This moratorium will affect subdivisions of more than five houses or multi-family housing development with more than five units, but will not affect the approximately 14,000 housing units that are in various stages of the development approval process throughout the county. Conditions precipitating the moratorium included:

- A greater than 75 percent increase in the county's population between 1980 and 2000
- Public school overcrowding, resulting in over 70 percent of public schools exceeding capacity levels
- Rapidly increasing construction costs for new schools, with more than \$500 million in estimated expenditures between 2005 and 2010
- County expenditures outstripping revenues from new residential growth
- County responsibility for funding public school facilities but no control over zoning and land use in 12 of the county's 14 municipalities

During this moratorium, county officials and planners will investigate the feasibility of implementing an Adequate Public Facilities Ordinance (APFO). The purpose of such an

ordinance is to ensure that supporting infrastructure and facilities (such as schools) are in place to meet the needs of new development. Union County has requested legislation to allow for a referendum for citizens to decide if an APFO should be implemented. Impact fees could be included as part of the APFO. Cabarrus and Stanly Counties were said to have implemented APFOs; Mecklenburg County was said to be investigating the feasibility of adopting such an ordinance, as was Lancaster County, South Carolina. However, APFOs are not easily enacted, and there are few instances, particularly in North Carolina, of such an ordinance being successfully applied.

Union County municipalities that have imposed development moratoria in the past include Marvin, Monroe, Waxhaw, and Weddington. Mineral Springs has a subdivision moratorium that will be in effect until November 2006; Stallings imposed a nine-month moratorium in April 2005, and Indian Trail imposed an 18-month moratorium in January 2005.

In addition, Union County has imposed water and sewer moratoria. The sewer moratorium, which started in June 2005, will remain in effect until construction has started on the expansion of the Twelve Mile Creek wastewater treatment plant, which is anticipated to occur in February 2006. Also, the Public Works Department will not issue letters of water availability, which are required to obtain development approval, until completion of a 42-inch water supply line, scheduled for June/July 2006.

A continuing constraint on growth is the presence of an endangered species, the Carolina Heelsplitter, in the Goose Creek basin in the northwestern area of the County, and in the Waxhaw Creek basin south of Waxhaw and Mineral Springs. The presence of this species has not only directly constrained development in the northwestern area of Union County, it has indirectly constrained development in Monroe and Wingate as a result of delaying construction of the US 74 Bypass. Planners stated that the uncertainty as to the final alignment for the Bypass has resulted in hesitancy to develop in areas that could be selected for the construction of the highway.

Zoning

The Town of Fairview, which will be the largest town by area in Union County, received approval to conduct its own zoning as of July 1, 2005. Lake Park and Hemby Bridge do not conduct their own zoning at this time; rather, Union County performs that function.

TRANSPORTATION

There were no significant changes to planned improvements to Union County highways; however, the schedule for making several improvements has been shifted further into the future, as noted below. NCDOT staff noted that the Division 10 budget will be substantially less than in previous years, which will constrain both the number and scheduling of local highway improvements.

Principal highways through Union County include US Highways 74, between Anson County and Mecklenburg County; and US 601, between Cabarrus County and Lancaster County, South Carolina. Major highway projects in progress or planned in Union County include:

1. US 74 Monroe Bypass—contracts for construction of the eastern portion, between Marshville and US 601 are now scheduled to be let in Fall 2006 and Spring 2007 (previously scheduled to be let in Fall 2004). The alignment for the western portion, from US 601 to the I-485 area has not yet been determined.
2. US 601 widening south from US 74 to the South Carolina state line—planning is in progress and contracts for construction are scheduled to be let in June 2006 (previously October 2005).
3. Providence Road (NC 16) widening from Rae Road Extension to south of I-485 interchange in Mecklenburg County—right-of-way acquisition in progress, with construction to start in 2007 (previously 2006).
4. US 601 widening between the proposed US 74 Monroe Bypass and the current US 74 highway—this project has been added to the Transportation Improvement Plan (TIP) with construction projected to start in 2008 (previously 2006).
5. Martin Luther King Jr. Parkway (Dickerson Road Extension) in Monroe—portions have been constructed with city and county funds, design of section between Lancaster Avenue and Charlotte Avenue in Monroe is now in progress with construction scheduled for 2009.
6. Charles Street (SR 2188) widening in Monroe—planning in progress for construction to start in 2010 between Sunset Drive and Franklin Street.
7. Stallings Road widening to five lanes from US 74 to Old Charlotte Highway—planning is in progress, with construction scheduled to start in 2011 (previously 2008).
8. Indian Trail Road widening to four lanes from US 74 to Monroe Road—project is on schedule, with planning in progress and right-of-way acquisition scheduled for 2011 (previously 2010). NCDOT planners expressed the hope that the planned Williams Rescue Road will take sufficient traffic from Stallings Road and Indian Trail Road so that the improvements to those roads can be limited to construction of three-lane rather than five-lane cross sections.

Highway projects planned for construction at some point after 2010 include:

- US 74 Monroe Bypass—selection of an alignment for the portion between US 601 westward to a connection with the existing highway, likely in the vicinity of I-485. However, an alternative would be to connect the Bypass to the existing US 74 in the vicinity of Rocky River Road, and widen the current highway to six lanes from that point west to I-485.
- US 74 East—the existing highway is to be upgraded to freeway standards eastward from the planned junction with the Bypass, to include a bypass of Wadesboro.
- Weddington-McKee Road connection to I-485—planned for 2008 or 2009.
- NC 16 (Providence Road)—widening to four lanes from Rea Road to NC 75 in Waxhaw.
- John Street/Old Monroe Road (SR 1009)—widening from Trade Street in Charlotte to Wesley Chapel-Stouts Road in Stallings.
- Idlewild Road—widening from I-485 to Stevens Mill Road.
- Charlotte Avenue—widening from the CSX railroad overpass to Concord Avenue.

- Secrest Avenue Extension—multi-lanes on new alignment from Walkup Avenue to Olive Branch Road with interchange at proposed Monroe Bypass.
- Rea Road Extension—multi-lanes on new location NC 16 to NC 84.

There has been continued discussion about seeking approval to construct the US 74 Bypass as a toll facility, as that method of funding would likely expedite construction of that highway segment.

Other highway improvements that are not currently programmed into the Transportation Improvement Plan (TIP) in which local planners in Union County expressed interest include:

- Upgrading and realignment of several highways in Indian Trail—an extension of Williams Rescue Road from US 74 to Old Monroe Road, which would extend Chestnut to US 74 across from Smith Road with a subsequent downgrading of Stallings Road and Indian Trail Road to local streets. The purpose of this realignment as proposed by Indian Trail, would be to take through traffic off Stallings and Indian Trail Roads. The extension of Williams Rescue Road is planned for construction in increments, with funding from a public-private partnership using some Powell Bill funds. The first phase is considered likely to occur in the next couple of years, with the construction of an overpass of the CSX railroad, the most expensive component, to be the final phase of construction.
- In addition to the Weddington-McKee Road extension, planners in Stallings would like to see construction of a connecting road from Idlewild Road to Stallings Road.

Other highway improvements that are not currently programmed into the Transportation Improvement Plan (TIP) in which NCDOT staff expressed interest include widening parts of Idlewild Road, Secrest Short Cut, and Lawyers Road to additional lanes.

Neither commercial passenger air service nor passenger rail service is currently provided in Union County. Greyhound Bus Lines operates service through the county, with a scheduled stop in Monroe. Commercial passenger air service is available at Charlotte-Douglas International Airport west of Charlotte.

Plans remain in place for the Monroe Airport expansion to serve as a reliever airport for Charlotte-Douglas International Airport. The expansion will require realignment of Goldmine Road to accommodate a runway extension.

Commuting Patterns

There is no new data available on commuting patterns since the 2004 land use study was conducted.

WATER/SEWER

As a result of the rapid residential development in Union County, and the need to construct additional facilities to increase water supply and sewer treatment capacity, the Union County Public Works Department was not issuing any additional sewer letters at the time of the

interviews in August 2005. This condition, which started with a directive from the County Commissioners in June 2005, will remain in effect until construction has started on the expansion of the Twelve Mile Creek wastewater treatment plant, anticipated to occur in February 2006. This treatment plant is projected for a capacity of 15 million gallons per day (MGD). This number was based on the likely development capacity of the plant's service area in the 1980s. However, the State of South Carolina may impose limits to the discharge flow from the treatment plant that will limit its capacity to less than the projected 15 MGD.

Also, the Public Works Department will not issue letters of water availability, which are required to obtain development approval, until completion of a 42-inch water supply line, scheduled for June/July 2006. The purpose of this main is to increase water pressure, not water supply. There were no plans to extend water supply mains at the time of the interviews.

Local government staff stated that the water/sewer moratoria do not appear to have had a significant impact on either the scale or pace of development, as many subdivisions had been approved prior to enactment of the moratoria. Public Works staff said that there are no near-term water supply issues, that there is adequate water supply to meet the needs of development for many years. However, planners in Waxhaw believe that the lack of sewer availability has affected commercial as well as residential development in that town. There may have been some additional development applications processed in advance of the sewer moratorium, as evidenced by planners' figures showing over 350 building permits issued through July of 2005 versus only 300 total permits issued during all of 2004. Some permits may be zero flow permits, which allow construction of a housing unit, but require waiting to tie in to the sewer system until after the moratorium has ended and a Certificate of Occupancy has been issued.

Water

The capacity of the water treatment plant that Union County shares with Lancaster County, South Carolina remains 36 MGD, and Union County's share of the total output is 18 MGD. A new storage tank is planned for construction in the northeastern area of the county in one to two years.

There has not been any action taken to increase the size of the water main that supplies the eastern portion of the county with water from a source in Anson County. Instead, study continues of implementing an additional water supply from the Rocky River for the northern part of the county. This water supply will not come on-line for 5-7 years, and if constructed, will minimize interbasin transfer of water by taking water from, and returning treated wastewater to the same basin.

Monroe still plans to make improvements in one year to its water system to increase water pressure in the western area of the city. Monroe still possesses excess water and sewer capacity and is willing to use those capacities to serve new development.

Sewer

Union County plans to expand the Twelve Mile Creek wastewater treatment plant from 2 ½ MGD to 6 MGD, and hopes to start construction in 2006. The design is nearly completed, and an application has been submitted for the increased discharge permit. The county also plans to

construct a new wastewater treatment plant on Grassy Creek, with a projected capacity of 5 MGD. A consultant has been hired to design the facility, and permitting is in progress. This plant will serve the area of Union County north of Monroe, Wingate, and Marshville, and northeast of Stallings and Indian Trail. The outflow from Grassy Creek is upstream from the intake location for the county's planned water treatment plant on the Rocky River.

Union County has approved a contract to take a County-owned package wastewater treatment plants off-line. Arrangements have not yet been made to take a second package treatment plant owned by private developer off-line.

Union County Public Works, with assistance from engineering consultants, is developing water and sewer master plans that are anticipated to be complete by January 2006.

ANTICIPATED RESIDENTIAL DEVELOPMENT

This section summarizes current and potential residential subdivision development activity that was mentioned in interviews. Information is presented first for the unincorporated county, and then for each municipality that conducts its own development approval process. Note that the comprehensive table listing residential development was compiled from tabular information provided by the various municipalities, and includes some subdivisions that are not described in the text. The text describes only subdivisions that were discussed by local planning staff and/or local elected officials.

Unincorporated Union County

Changes to residential development mentioned by **Union County** planning staff that have occurred since the May 2004 land use study interviews were conducted include:

- Crane Valley Phase 2: located on Crane Road. In August 2005, the developer was seeking final approval for Phase II, with 38 lots.
- Demere: 113-lot subdivision on the Callum property at Billy Howey Road and New Town Road; 59 houses had received final approval.
- Hollister (described in the 2004 report as "Shea Homes has received approval for a 205-lot subdivision in the Lester Davis Road/NC 16/Deal Road area.") No lots had been recorded as of August 2005; however, the developer was ready to start construction.
- Hunter Oaks: located on Rae Road, has been completely platted.
- Longview: in the Marvin area, will contain approximately 430 total lots. Phases 3 and 5 have not been platted, and approximately ½ of the total lots in this subdivision have not yet been recorded. Houses are priced at approximately \$1 million, with lots at \$400,000.
- McNeely Ridge: in the Mineral Springs area, 28 lots approved, development proceeding quickly, with annexation by Mineral Springs as sections are completed. (Listed in the summary table under Mineral Springs.)
- Providence Downs South: including Fincher Valley and Maggie Valley, with 91 lots, on Waxhaw-Marvin Road was ready to record the last half of the lots.
- Providence Glen: by Centex Homes, on NC 16, with 71 lots was completely recorded.
- Rose Hill: 47 lots, on Tilley Morris Road, was completely recorded.

- St. John's Forest: The driving tour revealed the following—approximately 15 houses under construction in The Glen (priced from \$130,000s-\$170,000s), and 25 houses under construction in The Woods (priced from \$160,000s -\$210,000s).
- Shannon Vista (described in the 2004 report as “An unnamed 183-lot subdivision by Centex Homes”): County data shows 181 lots; development is proceeding slowly as a result of the property having difficult, sloping terrain.
- Villages of Wesley Chapel: by Landcraft Properties, on Airport Road; 256 lots total. The driving tour revealed 8 houses under construction and five houses under contract/sold but not yet occupied (priced from \$130,000s).
- Wensley Park: by Cindy Hahn, on Airport Road; 44 lots. The driving tour revealed three houses under construction (priced from the low \$100,000s).
- Willow Creek: by Don Galloway Homes, with 83 lots, located on Bonds Grove Church Road, priced from the \$250,000s, was completely recorded. Marvin is annexing this subdivision as it is completed.
- Weddington Trace (described in the 2004 report as “An unnamed 239-lot subdivision by Steve Schreiner): on New Town Road at Broome's Old Mill Road. The first four lots have been approved.

The following subdivisions had been proposed but had not received final approval as of May 2004:

- Wesley Oaks: by Centex Homes, in the Wesley Chapel area. Recording was complete for this subdivision in 2004. A total of 441 lots on Billy Howey Road, with 330 lots in the main parcel, 65 lots in a parcel across Billy Howey Road (Estates at Wesley Oaks), and 46 lots in a parcel across a creek (The Glen at Wesley Oaks). The driving tour revealed 13 houses under construction in the Spring Creek and Ridgewood sections (priced \$310,000s-\$400,000s), and 30 houses under construction in the Essex section (\$170,000s-\$220,000s).
- An unnamed development pieced together with approximately 700 acres south of Weddington Road across Willoughby Road and Arbor Road toward New Town Road west of Clarence Secrest Road. This proposed development did not materialize as a result of the elimination of the smart growth bonus option that the developer planned to use. Planners believe that this property could be developed if Monroe could annex it; however, that annexation is not possible due to the property lying on the border of another municipality (Wesley Chapel).

The following subdivisions have been approved since the 2004 interviews:

- Belshire: 57 lots, on Waxhaw-Indian Trail Road. The driving tour revealed no sign of any construction having started.
- Bickett Ridge: on Lawyers Road east of Unionville, with 95 lots. Ron Rushing is the developer. Approximately ten homes have been constructed to date, with a sales price of \$225,000-\$275,000. Development is planned to proceed at a pace of approximately 20 lots per year.
- Briarcrest: located on Billy Howey Road; 225 lots. The driving tour revealed that the first three houses were under construction (houses to be priced from the \$200,000s).

- Cascades: by Mercedes Homes. Information from the driving tour showed 25-30 occupied, approximately 15 houses complete and for sale, approximately 15 houses under construction.
- Chimneys at Marvin: 283 lots; not yet platted; road and utility infrastructure was under construction.
- Crooked Creek Estates: located on Sardis Church Road; 140 lots, part of which had been platted.
- Ezzell Hill: by William Nolan; 55 lots, located at New Town Road and Marvin School Road.
- Oak Crest: 225 lots.
- Potter Road (unnamed on Robert S. Carter property): 206 lots, was to be submitted for approval at the August 2005 Planning Board meeting; no construction had started.
- Prescot (East Side and West Side): 216 total lots; East side—66 lots; West Side—95 lots. (Listed under Waxhaw in the summary table.)
- Prestwick: by Homelife Communities, located on Fincher Road; 101 lots (houses to be priced from the \$190,000s); roads were constructed and utilities were in place.
- Starnes Crossing: 318 lots, located on NC 75 west of Monroe. Construction had not yet started.
- Stonebridge: 587 lots, none yet recorded. 65 lots were ready for home construction in August 2005, with grading started for another approximately 80 lots off Doster Road. The driving tour revealed that this development was at the site grading stage, with installation of utilities in progress.
- Tuscany: by the Mathisen Co., on Billy Howey Road; 377 lots priced from the low \$200,000s. The driving tour revealed that this subdivision was at the site clearing and grading stage.

Figure 3 provides summary information on annual totals of residential permits issued for the 2002-2005 period for the unincorporated area of the county and the various municipalities that have building permit approval authority. Note that the completeness of information varies, as there was a lack of uniformity to the information provided by the various jurisdictions. Information is as complete as possible; however, due to differences in information systems among local jurisdictions, not all information is available for each listing.

Figure 3: Updated Summary of Residential Subdivisions in Union County, August 2005

Notes: 1) Subdivision names in *italics* denote subdivisions described for the first time in the August 2005 interviews.
 2) N.A. means not applicable, i.e., new subdivision.
 3) "from drive" is information gathered on windshield survey drives.
 4) U. C. means under construction.

Unincorporated Union County

Subdivision Name	Developer	Location	No. Lots	% Complete May 2004	% Complete August 2005	Sales Price
2002						
Blackstone, Ph. 3 Note: initially developed in County, and then annexed by Wesley Chapel	Shea Homes	NC 84	16 (2003) 5 (2004)		All plats recorded (5 U.C.; many undeveloped lots available, from drive)	\$300,000+
Brandon Oaks, Phases 6 & 7 Phases 8 & 9 Note: Initially developed in County and then annexed by Indian Trail	Pace/Dowd	Brandon Oaks Pkwy.	Phases 6 & 7: 150 Phases 8 & 9: ~300		Built out. Approved by County	
Callonwood South (see also Indian Trail)	Tom Scott	Chestnut Lane	67 (11/2/04)			
Chatelaine	RR Development	Twelve Mile Creek Road	80	0%	All plats recorded (0 occupied, 2 for sale, 9 U.C. from drive)	
Crane Valley, Ph. 1	Bill Nolan/Mel Graham	Newtown / Crane Roads	38 (2003) 3 (2004)		Completed	
Crane Valley, Ph. 2 Phase 3	Graham Enterprises Bill Nolan	Newtown / Crane Roads	38 23 (1/4/05)	0%	Seeking final approval for Phase II with 38 lots	

Subdivision Name	Developer	Location	No. Lots	% Complete May 2004	% Complete August 2005	Sales Price
Demere	Lennar	Billy Howey Road/New Town Road	113 total 58 (11/8/04)	N.A.	59 lots have final approval; remainder not yet platted. (5 occupied, 2 for sale, 25 U.C. from drive)	\$260,000+
Heathwood	Doug Frick	NC 75	61 total 19 (5/23/05)	70%		\$250,000-\$400,000
Hidden Meadows	Vann Love	Lathan Road	39		All plats recorded	
<i>Hollister</i> (formerly Unnamed)	Shea Homes	Lester Davis Drive/NC 16/Deal Road	205	0%	No plats yet recorded; getting ready to start.	
Hunter Oaks, Ph. 10	Pace/Dowd	Rea Road	122 total 44 (12/2/04)		All plats recorded (check construction status)	\$190,000-\$300,000+
Lathan's Pond	Vann Love	Lathan Road	15		All plats recorded	
Longview, Ph. 4A & 4B	Mel Graham	Tom Short Road	~430 total 52 (2003) 35 (2004) 48 (7/6/04)		Phase I 60-70% built; Phases 3 and 5 not yet platted; ~1/2 of total lots not yet recorded	\$1 million + for houses \$400,000 lots
Marsh Field	Cody Helms	Helms Short Cut Road	10		All plats recorded	
New Towne Village, Ph. 2	Centex Homes	New Town Road	75		Built out	\$170,000+
Oldstone Forest, Ph. 2	Arrowhead Development	Waxhaw Parkway	41		All plats recorded	
Providence Downs	Hampshire Homes/ Bill Nolan	Crane Road / Marvin-Weddington Road	181	50%	Building out quickly	

Subdivision Name	Developer	Location	No. Lots	% Complete May 2004	% Complete August 2005	Sales Price
Providence Downs South Fincher Valley Fincher Valley 2 McGee Valley	Marvin Waxhaw Assoc.	Waxhaw-Marvin Road	91 66 (5/27/04) 7 (12/20/04)		Ready to record plats for last half of this development (Fincher Valley-- ~25-30 occupied, ~25 U.C.; McGee Valley---~4 occupied, ~4 for sale, ~25 U.C. from drive)	
Providence Glen, Ph. 1	Centex Homes	NC 16	71		All plats recorded	\$290,000- \$370,000s
Shiloh Trace, Ph. 1	Robert Wright / Shiloh Development	Wesley Chapel-Stouts Road	46 (2003) 35 (2004) 67 (8/9/04) 32 (5/12/05)		All plats recorded (~27 U.C. from drive)	\$160,000+
St. Johns Forest, Ph. 1 Phase 2; 51 lots Phase 3; 105 lots	Terry Knotts Knotts Development Knotts Development	NC 84	619 total: 110 (2003) 12 (2004) 73 (10/11/04)		~50% of total completed—Phase I (195 lots) platted; ~1/2 of Phase 3 (105 lots) recorded; preliminary approval Phase II. (~40 U.C. from drive)	\$130,000-\$220,000
Stone Crest	Cody Helms	Pine Oak Road	30		All plats recorded	
The Reserve, Ph. 1, 2, & 4	Centex Homes	Newtown / Crane Roads	161 (2003) 87 (2004) 74 (5/25/04)		All plats recorded (3 for sale, 15+ U.C. from drive)	\$260,000- \$400,000+
Therrell Farms	Therrell Farms, LLC	NC 16	36	10%	All plats recorded	
Victoria Lake	Performance Development	NC 16	33			

Subdivision Name	Developer	Location	No. Lots	% Complete May 2004	% Complete August 2005	Sales Price
Villages of Wesley Chapel	Landcraft Properties	Airport Road	256 total (Listed at 102 in 2004) 38 (11/23/04) 31 (5/20/05)	Construction starting	171 lots have received final plat approval. (8 U. C.; 5 sold from drive)	\$130,000+
Waxhaw Ridge (Listed in Waxhaw in 2004)	Isaac Grossman	Helms Road	85	0%		\$120,000-\$200,000
Weddington Chase, Ph. 2	John Wieland	NC 16 / Newtown Rd.	207 total: 77 (2003) 24 (2004) 54 (8/24/04)		All plats recorded	\$400,000-\$800,000s
Wensley Park	Cindy Hahn	Airport Road	44		All plats recorded (3 U.C. from drive)	\$100,000+
Willow Creek	Willow Group	NC 16	83		All plats recorded— <i>check Waxhaw</i>	\$220,000s +
Woodhall	Keith Bell	Waxhaw-Marvin / Crane Roads	67		All plats recorded	
2004						
Cane Pointe, Ph. 3	Primestar Properties	Nesbit Road	7		All plats recorded	
Grayson	D & D Properties	Rogers Road	105		All plats recorded (0 occupied, 5 for sale, 2 U.C.; Phase II to open Dec. 2006—roads in and stubbed out, from drive)	\$150,000+
Lake Park Garden District, Ph. 2	Mathisen Company	Sages Avenue	39		All plats recorded	
Locklyn			15	90%		\$250,000-\$300,000
Rose Hill	Mathisen Company	Tilley Morris Road	47		All plats recorded	

Subdivision Name	Developer	Location	No. Lots	% Complete May 2004	% Complete August 2005	Sales Price
Shannon Vista	Centex Homes	Shannon Road	181	0	No one was said to be interested in completing this subdivision, as it has difficult, sloping terrain.	
Skycroft	Graham Investments	Twelve Mile Creek Road	207 (8/26/04)	N.A.		
Total Lots 2003-04			2,023			
2005						
<i>Belshire</i>	McInnis Construction	Waxhaw-Indian Trail Road	57		Ground not yet broken, from drive	
<i>Bickett Ridge</i>	Ron R. Rushing	Lawyers Road	95 total 65 (6/3/05) by Union County	N.A.	10 constructed; anticipate 20 per year	\$225,000-\$275,000
<i>Briarcrest</i>	McCar Homes	Billy Howey Road	225 total 37 (6/15/05)	N.A.	First houses (3) under construction	\$200,000+
<i>Cascades</i>	Mercedes Homes	Rogers Road	71 (7/20/2004)		(25-30 occupied, ~15 for sale, ~15 U. C. from drive)	\$160,000+
<i>Chimneys at Marvin</i>	Waxhaw Development Group	Waxhaw-Marvin Road	283	N.A.	Putting in infrastructure; lots not yet platted	
<i>Crooked Creek Estates</i>	Sardis Properties/ Yates Mill, LLC	Sardis Church Road	140 total 89 (6/22/05)			
<i>Ezzell Hill</i>	William Nolan	New Town Road / Marvin School Road	55		No sign of development	
<i>Oak Crest</i>			225	N.A.		
<i>Potter Road (Robert S. Carter)</i>		Potter Road	206	N.A.	At August 2005 Planning Board (no visible sign from drive)	
<i>Prestwick</i>	Homelife Communities / Dan Moser	Fincher Road, off Waxhaw-Indian Trail Rd.	101	N.A.	Roads in, utilities stubbed out (from drive)	\$190,000+

Subdivision Name	Developer	Location	No. Lots	% Complete May 2004	% Complete August 2005	Sales Price
<i>Starnes Crossing</i>	Meadows at Union County	NC 75	318	N.A.	No grading or construction yet started	
<i>Stonebridge</i>	U.S. Land, Steven Rosenberg		587	N.A.	No lots yet recorded.	
<i>Tuscany</i>	The Mathisen Co.	Billy Howey Road	377	N.A.	Clearing site	\$200,000+
<i>Weddington Trace</i>	R. D. Harrell Co.	New Town Road at Broom's Old Mill Road	239	0	First 4 lots approved	
<i>Wesley Oaks—includes The Glen at Wesley Oaks Estates at Wesley Oaks</i>	Centex Homes	Billy Howey Road / Chambwood Road	441 Approvals May 2004- July 2005: Wesley Oaks—324; The Glen—46; Estates—65	In process of final approval	All plats recorded. Wesley Oaks—13 U.C. in Spring Creek & Ridgewood 40 U.C. in Essex; Estates—3 occupied; 14 U.C. from drive	Essex—\$170,000-\$225,000 Spring Creek + Ridgewood—\$310,000-\$400,000+
Total Lots Approved in New Subdivisions in 2005 According to County Planners			3,746+			

Indian Trail

Subdivision Name	Developer	Location	No. Lots	% Complete May 2004	% Complete August 2005	Sales Price
<i>Annandale</i>			183	0	0% Site grading/ infrastructure construction	N.A.
Arbor Glenn	Provident Dev. Corp.	Secrest Short Cut	282	80%	91% (257 units)	\$150,000
<i>Bent Creek</i>			265		94% (248 units)	\$150,000
Bon Terra	R. D. Harrell Company	Poplin Road	1,395	25%	11% (154 units)	\$232,000
Brandon Oaks Note: See also County	Pace/Dowd Properties	Brandon Oaks Parkway	1,000	80%	42% (422 units)	\$160,000
<i>Broadway Farms (Broadway CUD)</i>	Centex Homes		504	N.A.	0% Received letter of sewer availability	
Brookhaven			565	25%	36% (202 units)	\$485,000
Brook Valley	Westport Homes	Wesley Chapel-Stouts Rd.	229	25%	47% (108 units)	\$195,000
Callonwood South (partial— see also County)	Parker & Orleans		80	0%	26% (21 units)	N. A.
Chandler Forest			54	0%	20% (11 units)	\$240,000
Chestnut Oaks II (See also Stallings)		Potters Road	31	0%	~30% built out	N. A.
Colton Ridge	Dean Harrell	Pioneer Lane / Waxhaw-Indian Trail Road	251	75%	86% (215 units)	\$190,000
Cornerstone	Mercedes Homes	Rogers Road	296	80-95%	73% (216 units)	\$191,000
Crismark	Ty-Par Realty	Stevens Mill Road / Mill Grove Road	950	25%	20% (186)	\$130,000-\$300,000
<i>Downtown Village</i>		Downtown Indian Trail	608 units	0%	Will break ground in 2 yrs	

Subdivision Name	Developer	Location	No. Lots	% Complete May 2004	% Complete August 2005	Sales Price
Green Meadows			157	90%	47% (74 units)	\$100,000
Hemby Commons	Love Construction	Indian Trail-Fairview Road	110	90%	91% (100 units)	\$150,000
Holly Park	Ryan Homes	Rogers / Wesley Chapel Roads	340 (2002) 380 (2005)	50%	79% (268 units)	\$160,000
Laurel Creek			85	0%	9% (8 units)	\$125,000
Meridian Apartments			252 units	90%	90%	N. A.
Meriwether	Mulvaney Homes	Rogers Road	400	80%	84% (337 units)	\$110,000-\$140,000
Oakstone	Brookwood Homes	Haywood Road	126 total 78 single family; 48 townhome	25%	28% (35 units)	\$125,000
<i>Pond Side</i> Formerly referred to as Schreiner (unnamed)		New Town Road	101 (Listed as 239 in 2004)	0%	0% Site grading	N. A.
Smith (unnamed)			13	0%		N. A.
Stoney Creek	AJM Development	Old Charlotte Highway	37	75%	84% (31 units)	\$235,000
Summer Creste			16	0%	0% 2 houses completed; 2 under construction (from drive)	N.A.
Taylor Glen (includes Sheridan)	R. D. Harrell	Wesley Chapel-Stouts Rd.	796 total 453 approved; 237 lots now in Sheridan	50%	43% (196 units) Phase 3 & 4=grading	\$185,000
The Summit at Taylor Glen			58	0%	0% Site grading	

Subdivision Name	Developer	Location	No. Lots	% Complete May 2004	% Complete August 2005	Sales Price
<i>Wadsworth</i>			41		0% Houses under construction	
<i>Williams Property</i>			608 condo / apartment	N.A.	Approved 2/2005	
Wincrest	Love Homes	Rogers Road	115	60%	67% (77 units)	\$140,000

Marshville

Subdivision Name	Developer	Location	No. Lots	% Complete May 2004	% Complete August 2005	Sales Price
Unnamed			17	75%		
Typical year for town			9			

Marvin

Subdivision Name	Developer	Location	No. Lots	% Complete May 2004	% Complete August 2005	Sales Price
Ezzell Valley		Marvin School Road / New Town Road	~90 likely	0%	0%	
Marvin Creek	Toll Brothers	Rae Road/Joe Kerr Road/Marvin School Road	308 (2004) 318 (2005)	0%	(2 occupied, 34 U. C. from drive)	
Wyndham Hall Plantation	John Poore Builders	Marvin-Weddington Road	40 (2002) 38 (2004)	100% 0%		\$500,000+

Mineral Springs

Subdivision Name	Developer	Location	No. Lots	% Complete May 2004	% Complete August 2005	Sales Price
Brantley Oaks, Ph. 2	Sunbelt Financial	Pleasant Grove Road	29	0%	50% (15)	\$350,000+
<i>Charlton Oaks</i>			~40	Nearly built out	Nearly built out	
<i>Farmington</i>	First Colony Land Development	Near Brantley Oaks	137	N.A.	Stalled until at least June 2006 due to moratorium	\$400,000+
<i>Harrington Hall (2005)</i> (formerly named Victoria Ridge)	Dan Moser (orig.) Unnamed new developer (2005)	McNeely Road	38 orig. 28 in new design	0%	Estimated 2-yr. buildout	\$350,000+
<i>McNeeley Ridge</i> (Also listed in Union County 2004)	Grace Properties		28		28 completed	
Western Union Park	Coffey and Sons		~110		+ 2	
2003 total permits			15			
2004 (to May)			12			

Monroe

Subdivision Name	Developer	Location	No. Lots	% Complete May 2004	% Complete August 2005	Sales Price
Breckonridge	Craft Builders	Breckonridge Center Road	~250	Built out	Built out	\$100,000
Bridgewater			44		18 lots	\$300,000-\$1M
<i>East Village</i>			65		6 lots	~\$80,000
Fox Hunt	Noah Williams	Fowler Secrest Road	48	Starting (0%)	0%	\$250,000-\$300,000
<i>Fowler Glen</i> (retirement complex)					0	
Hamilton Place	Dan Moser Company		430 total: 300 +130 Ph. IV (2004)	50 of 300 open + 130 open	Phases I-III built out; Phase IV—20 of 49 lots developed; Phase V—56 lots—starting. 2-3 yrs est. to buildout.	\$150,000-\$180,000
Hilton Meadows	Anne Edwards	Secrest Short Cut	100	0% (roads only)	Phase I—12 lots developed; Phase II—29 lots not yet recorded; Phase III—18 lots not yet recorded.	\$180,000-\$250,000
<i>Lexington Commons</i>	Craft Development		236	N.A.	Phase I—53 of 79 lots developed; Phases II (47), III (53), & IV (57)—not yet started. (~20 U.C., ~6 for sale, large area graded w/ utilities in, from drive)	\$120,000-\$150,000

Subdivision Name	Developer	Location	No. Lots	% Complete May 2004	% Complete August 2005	Sales Price
Myers Meadows	Nash Group	Myers Road	~150	1-2 lots open	Built out	\$150,000-\$250,000
<i>Northwood Estates</i>			61		29 houses	
The Palms <i>Did not develop (2005)</i>		Goldmine Road	18	0%		\$180,000-\$220,000
Savannah Way	Williams Group	Fowler-Secrest Road	113	25 of 100 open 2-3 yr. build-out	Phase I—60 of 68 lots developed; Phase II—11 of 45 lots developed. 2-3 yr. est. to buildout.	\$250,000-\$300,000
Southwinds		Next to Walter Bickett School	165 patio + 237 single- family	0%	Patio Phase I—9 of 48 developed; townhomes not yet started. (~8 occupied, with major site grading in progress, from drive)	\$100,000-\$120,000
The Oaks <i>Did not develop (2005)</i>			42			
Windy Ridge	Isaacs Group	South of Goldmine Road	67	Starting (0%)	Phase I—16 of 38 developed; Phase II—13 of 29 developed. ~2 yrs. est. to buildout.	\$180,000-\$210,000
2003 Subdivisions			0 approved			
2004 Subdivisions			8 approved			
2005 Subdivisions			0 approved to August			

Stallings

Subdivision Name	Developer	Location	No. Lots	% Complete May 2004	% Complete August 2005	Sales Price
Arlington Downs	Portrait Homes	Pleasant Plains Road	110	100%	--	
Callonwood	Starwood Carolina	Pleasant Plains Road	473 (2004) 465 (2005)	25%	50%	\$100,000s- \$300,000s
Chestnut	Mathisen Co.	Chestnut Lane at Weddington-Matthews Road	63	95%	Phase I built out.	\$220,000+
Chestnut Oaks (See also Indian Trail)	Reece Gibson	Potters Road	198 220 (2005)	70%	~65% of ~220 1 yr. min. to buildout.	\$180,000+
Curry Place	Rick Duncan	Potters Road	181	40% of 85 units in Ph. 1	Phase I (85 units): 60%	\$140,000+
<i>Curry Place, Phase II</i>	Portrait Homes	Potters Road	99 town home	N.A.	Grading	
Emerald Lakes/ Buckingham	L. C. Tyson	Lawyers Road	~520 total; 175 (2004)		Mostly built. Stallings has annexed 50% and will annex the rest.	
<i>Fair Haven</i>	Crosland Homes		550	N.A.	Approved 1/3/05; buildout in < 5 yrs. (100+ units/yr)	
Madison Ridge	L&M Dev. for Dan Moser	Stallings Road	124		Built out	
Morningside	Knotts Development	Morningside Lane	81	100%	--	
Shannamara	Greg Williams	Stevens Mill Road	700	45%	Developed in Union Co.; Stallings will annex another ~300 lots.	
Woodbridge (Listed in Co. in 2004)	Mathisen Company	Stallings Road	88 (2003) 28 (2004)		All plats recorded	

Unionville

Subdivision Name	Developer	Location	No. Lots	% Complete May 2004	% Complete August 2005	Sales Price
Loxdale Farms	R.L. Rushing	Tom Helms Road	48	50%	Not much change; 17 permits in 2005 to date.	
Old Gate	Ted Baucom First homes ready for occupancy in Spring 2005	C J Thomas Road	56	0%	15% 8-9 homes ready for occupancy; 10 permits since Nov. 2004	\$350,000+
<i>Rollins Point</i>		US 601 between Unionville-Indian Trail Road and Lawyers Road	12	N.A.	In final plat approval; construction to start in 2006	
<i>Smithfield</i>	John Tarleton & R.J. Hasty	Unionville Road	68	N.A.	Approved August 2005; construction to start in Spring 2006; children likely	\$350,000+
CO's issued since 10/03			2	24 total structures permitted in 2004	38 total structures permitted in 2005 (to August 15)	

Waxhaw

Subdivision Name	Developer	Location	No. Lots	% Complete May 2004	% Complete August 2005	Sales Price
Alma Village	The Mathisen Co.	NC 16	195 (2002) 203 (2005)	95%	100% Built out	\$170,000-\$220,000
Anklin Forest	Fairview Developers	Waxhaw-Marvin Road	150 <i>145 (2005)</i>	New	0%	\$400,000 <i>\$180-\$325</i>
<i>Barrington Ridge (renamed 2005)</i> Formerly Bonds Grove	Shea Homes	Bonds Grove Church Road	153	0% Site plan approved	0% Ready to start construction. (Roads under construction, from drive)	\$250,000-\$350,000
Camberly	Brookwood Builders	NC 16	185	42 homes	65% Expect build out by December 2005. (~10 for sale, 9 U.C. from drive)	\$170,000-\$220,000
Cureton	G. S. Carolina	NC 16 at Gray Byrum Road	658	0% 3-5 year build-out	0%	\$250,000- \$2,000,000
Deerfield Plantation		Mill Pond Drive	80	55%	55% Only a few developed lots are in Waxhaw; most are in Co.	\$280,000-\$400,000
Harrison Park	Legacy Builders	Waxhaw Parkway	225 (2002) 207 (2005)	50%	80% Expect build out by December 2005.	\$80,000-\$120,000
Hermitage Place	R. D. Harrell Co.	NC 75	94	95%	95%	\$170,000-\$220,000
Kingston on Providence	GFS Development George Steele	NC 16	85	90%	100% Built out	\$140,000-\$190,000
Lawson	Steven Pace	NC 16 / Gray Byrum Rd.	997 total 448 Phase 1	Starting June 2004	0% Have sewer flow approved for 300+ lots. Some units will be oriented to retirees.	\$450,000-\$1.2 million

Subdivision Name	Developer	Location	No. Lots	% Complete May 2004	% Complete August 2005	Sales Price
Magnolia Ridge	Sunbelt Group	Rehobeth Road	48 <i>94 (2005)</i>	90%	100% Built out but another phase possible.	\$160,000-\$225,000
Mill Bridge (2004) (Formerly Kensington)		Waxhaw-Marvin Road	1,785 Phase I = 280	0%	0% Clearing and grading. 10-15 year buildout planned.	\$280,000-\$1 million
Park Providence	Pulte Homes	NC 16 / Gray Byrum Rd.	85	~20%	? In Phase II; est. 1- yr. buildout (28 occupied, 12 U. C. from drive)	\$200,000-\$300,000
<i>Prescot</i>	Diamond Oak Dev. Evergreen Homes	Waxhaw-Marvin Road	216	N.A.	0%	\$150,000-\$225,000
Providence Farms		Ski Lane	21	70%	100% Built out	\$300,000-\$400,000
Providence Grove	Ryland Homes	NC 16 / Bonds Grove Church Rd.	225 <i>145 (2005) rest said to be sold</i>	0%	Phase 1 (145 lots)=40% (8 occupied, 2 for sale, 12 U.C. from drive)	\$270,000-\$450,000
Quellin Estates	G.S. Carolina		267	50%	90% Est. buildout of 5 yrs, but nearly complete after 2 years. (~50 U. C. from drive)	\$300,000-\$600,000
Southbrook	Ridgeline Developers	Blythe Mill Road	84	85%	100% Built out	\$140,000-\$200,000
Southern Estates			25	75%	95%	\$150,000-\$300,000
Waxhaw Farms		Waxhaw-Monroe Road	32	40%	95%	\$300,000-\$400,000

Subdivision Name	Developer	Location	No. Lots	% Complete May 2004	% Complete August 2005	Sales Price
Waxhaw Meadows		Waxhaw-Indian Trail Road	15	70%	100% Built out	\$250,000-\$350,000
Woodleaf	Realty Network	Rehobeth Road	68 (2002) 140 (2005)	50%	60% of 68 units 8 under construction.	\$120,000-\$200,000
<i>Total Permits Issued</i>				300 total permits in 2004	350+ permits to date in 2005	

Weddington

Subdivision Name	Developer	Location	No. Lots	% Complete May 2004	% Complete August 2005	Sales Price
Preserve at Brookhampton	John Wieland	Antioch Church Road	33	N.A.	Approved	
Gardens on Providence		NC 16	~40	0% Site grading in progress	50% 1-1 ½ yr buildout	
<i>Hadley Park (Listed as Hadley Meadows in 2004)</i>		Beulah Church Road	~80 <i>62 listed for Hadley Meadows</i>	0% Preliminary plat approval 5/10/04	35% ~ 1 yr. to buildout	
Highgate	Harrington/Dowd	NC 16	212 (2004) 219 (2005)	50% Phase 1=90% Phase 2=0%	Phase I (128)=100% Phase II (91)=80% Phase III (?)=est. 2-yr. buildout Phase IV (36)=est. 1-yr. sell out (~100 lots ready for/ under development; 8 occupied, 9 for sale, 7 U. C. from drive)	\$680,000-\$3 million
Innisbrook at Firethorne		Marvin Road	40	0% 2-3 year build-out		\$500,000 +
<i>Lake Forest Preserve</i>	Parker & Orleans	Cox Road/NC 84	187 (2004) 216 (2005)	N.A. Approved 6/14/04	Site grading; estimated 4-yr. buildout	\$500,000+
<i>Meadows at Weddington, Phase I & II</i>		NC 16 / Ennis Road	30	N.A.	Constructing infrastructure; est. 2-yr. buildout	
<i>Mundy's Run (Planned)</i>	Grace Group Toll Brothers	NC 84 across from Shaver Farms	128	N.A.	Planned—likely In 2006	

Subdivision Name	Developer	Location	No. Lots	% Complete May 2004	% Complete August 2005	Sales Price
Providence Forest Estates	Parker & Orleans	NC 16 / Hemby Road	38	0% TC preliminary plat approval 5/10/04	5% (1 occupied, 4 U. C. from drive)	
<i>The Retreat</i>		Weddington Church Road	9	N.A.	Approved	
Stratford Hall		Weddington-Matthews Road / Tilley Morris Road	34	Preliminary approval PB 6/28/04; TC 7/12/04	Houses under construction; est. 2- yr. buildout	
<i>Stratford on Providence, Phase IV</i>		NC 16 (Providence Road)	12	N.A.	Approved	
<i>Twelve Mile Creek Road</i>		Twelve Mile Creek Road	38	N.A.	Planned	
<i>Waybridge</i>		Beulah Church Road	45	N.A.	Road grading in progress.	\$580,000+
<i>Williamsburg (from drive)</i>		Beulah Church Road	~20		(13 occupied, 2 U. C. from drive)	
2002 Foundation Permits			31			
2003 Foundation Permits			17			
2004 Foundation Permits (through May)			7			
Total (2002-May 2004)			55			

Wesley Chapel

Subdivision Name	Developer	Location	No. Lots	% Complete May 2004	% Complete August 2005	Sales Price
Blackstone, Ph. 2 Phase IV Note: See also Unincorporated Union County	Shea Homes	Weddington Road	? total; Phase 2=17		Phase IV ~½ under construction; Phases II & III in County	
Kings Grant	Dan Moser	Tanyard Road	19		Home construction to start in Fall 2005	
<i>Lindenwood (from drive, no other info)</i>		Waxhaw-Indian Trail Road	~75	N.A.	(~10 U. C. from drive)	\$240,000+
Quintessa	R.D. Harrell Co.	Weddington Road	90		Few complete; 15- 20 U.C.; 2 nd phase w/80 lots likely (7 U.C.; 2 occupied, from drive)	\$500,000- \$800,000+
<i>Silver Oaks</i>		Waxhaw-Indian Trail Road	26	N.A.	Still in permitting; road construction to start Fall 2005	
2002 Certificates of Occupancy (COs)			143		167 homes completed	
2003 C Os			142		141 homes completed	
2004 C Os			48		116 homes completed	
2005 (through June)					64 homes completed	

Wingate

Subdivision Name	Developer	Location	No. Lots	% Complete May 2004	% Complete August 2005	Sales Price
Glencroft	Craft Builders		201 total Phase 1=101	Phase 1=60%; Phase 2 not yet permitted	Phase 1=65 of 101 permitted; buildout in 12-18 months	\$100,000-\$150,000
The Trellis	Ron Mac Mahan <i>New developer 2005</i>		177 total Phase 1=36; Phase 2=36	Phase 1=100%; Phase 2 may construct in 2 years	Construction resumed in Spring 2005; 2 completed, 1 under construction; ~25 built of 72 total permitted	\$100,000-\$130,000 <i>\$135,000 (2005)</i>

Fairview

No subdivisions had been approved in **Fairview**, and only five permits were issued in July 2005 for new housing in that town. Fairview's land use ordinance became effective July 1, 2005; with most land zoned RA-40 (one acre lots). Most development in Fairview uses well and septic facilities, as water service is available only along US 601 and in a limited area along NC 218. Fairview is subject to a moratorium on additional water/sewer connections. Approximately 75 percent of Fairview lies within the Goose Creek basin, which is subject to development constraints resulting from the presence of the Carolina Heelsplitter mussel in that basin.

Indian Trail

The **Town of Indian Trail** approved an 18-month moratorium to manage growth in February 2005. Applications for rezonings, Planned Residential Districts, Planned Neighborhood Districts, Planned Unit Developments, Parallel Conditional Use Districts with a residential component, Major Subdivisions, Mobile Home Parks, and Multi-Family Residences will not be accepted during the time of the moratorium. The town was nearing completion of a draft comprehensive development plan at the time of the August 2005 interview. The following progress had occurred with subdivisions that were under development in Indian Trail in 2004 (note that 2005 information is as of July 31, 2005):

- Arbor Glenn: by Provident Development Group. 282 total lots; over 75 percent built out in 2004, 91% built out in 2005.
- Bon Terra: by the R. D. Harrell Company. 1,395 residential lots and some commercial/mixed use development. Said to be approximately 25 percent built out in 2004, with amenities and common facilities in place; however, 2005 information shows only 154 housing units completed (11% of 1,395 total).
- Brandon Oaks: by Pace Development. 1,000 lots approved and said to be 80-85 percent constructed in 2004. Information from Indian Trail shows that only 422 houses had been completed (42% of 1,000 total lots) by July 31, 2005.
- Brookhaven: by Wieland Homes. Approved by Union County, and subsequently annexed into Indian Trail. Town data show 202 of the total 565 lots with homes constructed (36%) as of July 31, 2005.
- Callonwood: by Starwood Carolina LLC. Approximately 300 lots approved; 80 in Indian Trail and the remainder in Stallings. Roads were in place but no houses had been constructed in 2004; 21 houses (26% of the 80 in Indian Trail) had been constructed by the end of July 2005.
- Colton Ridge: by R. D. Harrell Company. 251 lots approved, 75-80 percent built out in 2004. 216 houses (86%) constructed according to the 2005 information.
- Cornerstone: by Mike Helms. 296 lots approved and said to be approximately 95 percent built in 2004; however, 2005 data list 211 houses (71% of the 296 total) completed.
- Crismark: by Carlton Tyson. 950 lots approved. This subdivision was said to be approximately 25 percent built out in 2004; however, 2005 data list only 186 houses (20% of the 950 total) completed.
- Holly Park: by the Mathisen Company. 380 lots approved; said to be approximately 80-90 percent built out in 2004; but 2005 data show only 268 houses (79%) of a total of 340 completed.

- Meriwether: by the Mulvaney Company. Said to have approximately 800 lots approved in 2002, and said to be 90-95 percent built out in 2004. 2005 data show a total of only 400 lots, of which 337 (84%) have completed houses.
- Oakstone: by the R. D. Harrell Company. 78 single-family and 48 townhouses, said to be in the process of completing build out in 2004, but 2005 data show only 35 housing units (28% of the 78 total) completed.
- Taylor Glen: by the R. D. Harrell Company. 453 lots approved, said to be at least 50 percent built out in 2004. Phases 3 and 4, with a total of 237 lots had not been built and were sold to another developer and this new subdivision was named Sheridan. Planners said that Sheridan might be at the site grading stage, but that no houses have yet been constructed. 2005 data show 196 houses (43% of the 453 total) completed in Taylor Glen.
- Wincrest: by Vann Love. 115 lots with 50-75 percent built out in 2004; 2005 data list 77 houses (67%) completed.

Subdivisions that were approved since the May 2004 interview, or in which construction has started since that time include:

- Annandale: 183 lots; has gone through all approvals and is under development, at the site grading and infrastructure stage.
- Broadway Farms (Broadway CUD): by Centex Homes; 504 lots. The developer has received a letter of sewer availability after a protracted period, so development of this subdivision may start in Fall of 2005.
- Downtown Village: approved in February 2005; 608 housing units to be developed on the Williams property. Planners anticipate breaking ground for this development in the center of Indian Trail in two years.
- MHL: 60 housing units; had not yet started construction.
- Pond Side: 101 lots; targeted to “empty nesters”; at the site grading stage.
- Summer Creste: 16 houses; two houses were under construction, and two houses were completed ready for occupancy in August 2005, but no Certificates of Occupancy had been issued.
- Summit at Taylor Glenn: 58 lots; at the site grading stage.
- Wadsworth: 41 lots; home construction in progress, but none had been completed or occupied.

The Meridian Trail Apartments were the only multi-family housing under construction in the town at the time of the 2005 interview. Data show that 252-unit development at 90 percent completion. Planners anticipate multi-family housing in the Downtown Project, 60 units of which will be age-restricted and targeted to senior citizens. Planners cautioned that a developer may state that a proposed development is to be targeted to residents without children as a means to secure development approval and to provide lower cost housing; however, this scenario may not play out. Multi-family housing targeted to empty nesters may instead become home to families with children. Brookstone was cited as an example of this phenomenon.

Indian Trail planners anticipate density in traditional neighborhood developments is likely to increase from that allowed by current zoning. This type of development is envisioned to occur in the area of Unionville-Indian Trail Road/Secrest Short Cut/US 74 Bypass. Planners anticipate

little change from density allowed by current zoning in the area of town southwest of the railroad tracks.

Marshville

Planners reported no significant new residential development in **Marshville** since the 2004 interviews. Residential growth is anticipated to remain at a relatively low level (less than ten new houses per year) until additional sewer capacity becomes available.

Marvin

The moratorium on further subdivision approvals that was in place in **Marvin** at the time of the 2004 interviews ended in late October 2004. Residential development in Marvin remains typically at a density of one acre per unit. Changes to residential developments that were under construction at the time of the 2004 interview include:

- Firethorne: all development phases have been approved, and all plats recorded. Only individual undeveloped lots are now available. Build-out is essentially complete.
- Wyndham Hall Plantation: construction is virtually complete on Phase I, which had 40 lots. Phase II, with 38 lots, is in the process of final plat approval, with construction anticipated to start in early 2006. Construction and sales of homes in this subdivision are anticipated to occur quickly.

Subdivisions developed in Union County that have been / are likely to be annexed into Marvin include:

- Providence Downs Phase 4: 40 lots that were approximately 50 percent built in 2004. Union County has approved additional sections of this subdivision for construction.
- Walden Pond: has been recorded for several years, and is mostly built out. Litigation is still pending from Marvin's attempt to annex this subdivision in 2003.
- Weddington Chase: an additional section is under construction behind the existing development. While this subdivision is being developed under Union County's jurisdiction; homeowners in some completed sections have sought and been granted voluntary annexation into Marvin.
- Willow Creek: on Bonds Grove Church Road. This subdivision has been annexed into Marvin as it has been developed. Refer to the Union County section of this report for additional information.

Current residential subdivision developments in Marvin include:

- Marvin Creek: 318 units by Toll Brothers, located next to Marvin Elementary School. Nearly all lots in this subdivision have been recorded, except for the final phase of the development, which is likely to be recorded soon. The driving tour revealed two houses completed and occupied, and 34 houses under construction. The developer has proposed a third phase for this development, to include an additional 61 lots. This phase is at the preliminary plat stage, and house construction is not likely to start before late summer or fall of 2006.
- Ezzell Valley: at Marvin School Road and New Town Road, which would develop 106 acres of the Ezzell property, with a maximum of approximately 90 lots. This property is part of an estate that was in litigation.

- A 90-acre parcel behind the current commercial area that could include some mixed-uses (commercial and/or office).

Potential development in Marvin includes:

- A 14-acre parcel with 12 lots (sewer would flow to Mecklenburg County).
- A mixed-use development with 38 townhouses to be located in the vicinity of the intersection of New Town Road and NC 16. Construction is not likely to start before the summer of 2006.
- A mixed-use development with a significant amount of residential units was said to be in the very preliminary stage of discussions.
- The Howard property, which would be subject to constraints of the water moratorium, may be developed with no more than 60 houses. If this parcel is developed, construction of dwelling units is likely to be 1-2 years in the future.

Impacts from the sewer moratorium were said to be less severe on development in Marvin than elsewhere in Union County due to the topography of the land in the town. Land, and sewer mains, in the northern part of Marvin drain into Mecklenburg County. Consequently, Marvin has an agreement with Mecklenburg County for treatment of wastewater from that part of the town, and there is no sewer moratorium in Mecklenburg County. Development in Marvin is still subject to the water moratorium, and local planners stated that if a developer did not acquire a letter of water availability prior to August 2005, it is likely that development approval must wait until the end of that moratorium, likely in summer of 2006.

Mineral Springs

Mineral Springs has imposed a moratorium on major subdivisions (those with more than 3 lots) from May 12, 2005 through October 31, 2006. The purpose of the moratorium is to allow for the creation of a land use plan and development ordinance. UNC-Charlotte planning and design classes will provide assistance in developing those planning documents. Anticipated outcomes from this effort include:

- Lower population projections for Mineral Springs than those based on current zoning
- Higher quality development.

At approximately the same time as the moratorium took effect, plans were submitted for the 137-lot Farmington subdivision near Brantley Oaks. This subdivision was planned to include single-family homes priced from \$400,000 that would likely be purchased by families with school-age children. That subdivision is on hold pending the outcome of the moratorium.

Current residential development includes the following:

- Brantley Oaks Phase II: approved with 29 lots in 2004; approximately 20 of those lots now have homes constructed. This subdivision is comprised of custom-built homes, and the typical sales price is \$350,000+. Homebuyers were characterized as tending to have children. Development activity in this subdivision was characterized as progressing, but slowly. Six building permits were issued for construction in this subdivision between January 1 and August 15, 2005.
- Charlton Oaks: characterized as developing slowly, and was nearly built out in 2004.

- Harrington Hall (formerly Victoria Ridge): located on 65 acres on McNeely Road, was approved for 38 lots in August 2004. The property was sold to another developer (Dan Moser) who has submitted a new design for 28 lots on 60 acres. Lots will vary from one to five acres in size, and buildout is anticipated within two years. A local official believes households purchasing homes in this subdivision will have two to three children.
- McNeely Ridge: approved by Union County but annexed by Mineral Springs in March 2004; 28 homes constructed. Twelve permits were issued for new construction from January 1-August 15, 2005.
- Western Union Park: this older subdivision consistently sees 5-10 homes constructed each year. Four building permits were issued between January 1 and August 15, 2005 for construction in this subdivision. Development was characterized as continuing to progress as a relatively slow but consistent pace.

Subdivisions approved by Union County in the vicinity of Mineral Springs include:

- Stonebridge: located on Doster Road, approved by Union County for 589 homes; no knowledge of plans by Mineral Springs to annex this subdivision.
- Briarcrest: 225 lots, on Billy Howey Road.
- Tuscany: 377 lots, on Billy Howey Road.
- Shannon Vista: by Centex Homes; 181 lots on Shannon Road.

Monroe

Residential subdivisions with more than 20 undeveloped lots that are currently active in **Monroe** include:

- Bridgewater, 26 lots undeveloped of 44 total; home sales price \$300,000-\$1,000,000.
- East Village, recorded in December 2004; 59 lots undeveloped of 65 total; sales price approximately \$80,000; estimated three-year buildout.
- Fowler Glen, no lots developed; planned to be a retirement complex.
- Fox Hunt Phase 5, located on Fowler Secrest Road, by Noah Williams; 39 lots undeveloped of 45 total; sales price of homes \$280,000-\$350,000, and estimated buildout in 2-3 years.
- Hamilton Place, located off Rocky River Road, by Dan Moser Company. Phases 1-3, with a total of 202 lots were virtually built out. Phase 4: 27 lots undeveloped of 49 lots; Phase 5: 56 lots undeveloped of 56 total. Estimated sale price \$140,000-\$180,000.
- Hilton Meadows, located on Secrest Short Cut, by Anne Edwards. Phase 1: 9 lots undeveloped of 22 total. Phase 2 (not yet recorded): all 29 lots undeveloped. Phase 3: (not yet recorded) all 18 lots undeveloped. Estimated sale price \$180,000-\$250,000. Development of this subdivision was said to be proceeding slowly.
- Lexington Commons, Phase 1: 24 lots undeveloped of 79 total. Phase 2: all 47 lots undeveloped. Phase 3: all 53 lots undeveloped. Phase 4: all 57 lots undeveloped. Sales price \$130,000-\$150,000; estimated three-year buildout. The driving tour revealed approximately 20 houses under construction, and six houses completed and for sale. A large area was visible that had been graded with the utilities stubbed out ready for construction to start.
- Northwood Estates, 32 lots undeveloped of 61 total.

- Savannah Way, located on Fowler Secrest Road, by the Williams Group. Original development—8 lots undeveloped of 68 total. Phase II: 34 lots undeveloped of 45 total. Estimated sales price \$250,000-\$300,000 with a 2-3 year buildout.
- Southwinds Patio, Phase 1: 39 lots undeveloped of 48 total, with a sales price of \$100,000-\$120,000 and an estimated three-year buildout. Townhomes—all 60 units undeveloped, with an estimated sales price of \$100,000 and an estimated two-year buildout. The driving tour showed approximately ten houses completed and occupied, with site grading in progress for additional construction.
- Windy Ridge, located south of Goldmine Road, by the Isaacs Group. Phase 1: 20 lots undeveloped of 38 total. Phase 2: 16 lots undeveloped of 29 total. Estimated sales price \$180,000-\$210,000 with an approximate two-year buildout.

City records showed the following subdivisions had less than 20 undeveloped lots as of August 2005. The numbers show (undeveloped lots / total lots).

- Arbor Creek (1/12)
- Bass Creek (7/30)
- Bearskin Place (4/59)
- Brekonridge Phase 2 (7/84); Phase 4 (4/34)
- Cameron Woods (2/42)
- Clubview Acres (4/40)
- Colonial Village Phase 2 (4/62)
- Gleneagles (1/133)
- Green Valley (1/24)
- Inlet Harbor (9/10)
- Karrington Place (4/25)
- Lakeview Estates (11/97)
- Longbrooke (2/44)
- Myers Meadows (7/117)
- Olde Towne Estates (10/33)
- Saint James (formerly Hamilton Villas) (10/18)
- Trull Place (5/33)
- Vintage Hill (2/23)
- Walnut Place (1/7)
- Westeria Woods (3/25)
- Windmere (5/26)
- Yorkshire Phase 1 (2/41); Phase 2 (1/41)

City planning records show a total of 795 undeveloped lots remaining in approved subdivisions as of August 2005. Monroe adopted a new development code in December 2003. No new subdivisions were approved in Monroe in 2004. City planners stated that the City's current development priorities give industrial development the highest priority, followed by low traffic commercial and office development, with residential development having the City's lowest priority.

Chris Matheson will develop a subdivision at the intersection of Unionville-Indian Trail Road and Poplin Road. Monroe will provide utility service, with the extension of water and sewer

lines paid for by the developer. Development is planned to occur at a density of 1.92 units per acre with neighborhood commercial development adjacent to the intersection. A total of approximately 400 residential units are anticipated.

Monroe plans to upgrade water and sewer service in the New Town Road/NC 84 area, including construction of a new water storage tank. That area is planned for, and is anticipated to experience residential development following completion of those infrastructure improvements. Developers have expressed interest in the area of the Rocky River Road/NC 84 intersection; however, there is no water or sewer service there.

Stallings

The current status of subdivisions that had been approved or were under construction in **Stallings** in 2004 is as follows:

- Callonwood: (located in Indian Trail, Stallings, and Union County), by Starwood Carolina. A total of 465 units have been approved. Construction on townhouses and single-family homes started in August 2003; these units were said to be at least 50 percent built out and occupied as of August 2005. This represents a 20-25 percent increase in the buildout from the 2004 interview.
- Chestnut Oaks: a townhouse development with approximately 220 total units located off Potter Road was approximately 70 percent built in August 2005, with anticipated build-out in a minimum of one year. The development pace of this subdivision was said to have slowed, perhaps as a result of the popularity of the nearby Callonwood subdivision. The percentage of this development estimated as complete did not change significantly from the 2004 interview.
- Curry Place, Phase I: 85 units approved, with approximately 60 percent permitted, an increase of 20 percent from the 2004 interview. Phase II, with 99 townhouse units, which is being developed by Portrait Homes, Inc. was at the site grading stage.
- Emerald Lakes: L. C. Tyson, developer. The town will annex the subdivision as it is developed. As of August 2005, Stallings had annexed approximately one-half of this subdivision (approximately 260 units). Planners said that most lots were developed at the time of the 2005 interview.
- Madison Ridge: Dan Moser, developer; 124 units. Built out.
- Shannamara: approved by Union County, and then annexed by Stallings in stages, with plans to annex the entire 700+ lot subdivision. Approximately one-half of the lots had been annexed as of August 2005, and Stallings will annex at least 300 additional lots, most of which had been developed.

A multi-family development that was mentioned in 2004, with Crosland as the developer, and located on a parcel of approximately 23 acres off Stevens Mill Road on Stallings Road was not approved. No additional multi-family developments have been proposed for construction in Stallings, as the town is seeking commercial development.

The Fair Haven subdivision was approved on January 3, 2005 for construction of 550 single-family homes. The Crosland Company is the developer, and buildout is planned over a five-year period, with approximately 100 homes to be constructed each year. Town planners were unsure

if the developer had secured a sewer permit. If not, the town may allow construction to proceed up to the point of final inspection without a sewer permit.

Unionville

Residential development is increasing in **Unionville**. While there were only 24 structure permits issued in all of 2004, 38 permits had been issued between January 1 and August 15, 2005.

Current residential development in Unionville includes the Loxdale Farms subdivision (48 lots) on Tom Helms Road. This development has progressed slowly during the past year, and was estimated to be approximately 50 percent built out. In 2005, 17 permits had been issued for homes in that subdivision. Ten building permits were issued between November 2004 and August 2005 for the 56-home Old Gate subdivision located on C.J. Thomas Road. Approximately 8-9 homes had been constructed and were ready for occupancy. The sales price is \$350,000 and up.

The Smithfield subdivision with 68 lots was approved in August 2005. John Tarleton and R.J. Hasty are the developers, and the subdivision will have municipal water and sewer service. The estimated house sales price is approximately \$350,000, and local officials believe that residents are likely to be young families with children. Construction on houses is planned to start in the spring of 2006.

A potential subdivision with 21 single-family homes that would have been served by the sewer main that serves Loxdale has been changed to commercial development due to sewer capacity constraints. A 205-acre parcel on Baucom Road that was under consideration in 2004 for development with 176 lots had not been developed due to lack of sewer service and poor suitability of soils for septic systems.

Rollins Point, a 12-lot subdivision off US 601 was in the final platting process, and was expected to go before the Planning Board for final approval in October 2005.

Local officials believe that the large number of unknown factors affecting the area—location and construction schedule of the US 74 Bypass, the sewer moratorium, and the county development moratorium—are restraining development in the Unionville area. Construction of the US 74 Monroe Bypass is seen as generating the largest impact on development in Unionville.

Waxhaw

Waxhaw planners stated that only one new subdivision had been approved since the previous land use study interview in May 2004. Prescot, on Waxhaw-Marvin Road (south of the Quellan subdivision) was approved in June 2004 with 216 lots. Evergreen Homes is the developer. A lack of sewer capacity was said to be the reason for the lack of other subdivision approvals during that period, as the high cost of land in the area makes septic systems unprofitable, and in addition, some soils are unsuitable for septic systems. However, town planners stated that construction on approximately 1,100-1,200 housing units that were permitted prior to the sewer moratorium could proceed during the moratorium.

Planners said that only one developer had looked at building an on-site treatment plant at a proposed subdivision, and having the town take over operations of that treatment plant. Developers may also have had discussions with Lancaster County, South Carolina as to the possibility of their treating wastewater from new subdivisions in the Waxhaw area. As of the time of the interviews, this had not occurred.

The current status of residential developments that were included in the 2004 land use study report is as follows:

- Alma Village, on NC 16. 203 single-family units selling for an average price of \$170,000, now built out.
- Camberly, on NC 16. 185 single-family units with a sales price of \$170,000+; 42 houses built on 149 approved lots as of May 2004. The pace of construction has accelerated, and planners expect this subdivision to be built out by the end of 2005. The driving tour revealed nine houses under construction and approximately ten houses completed and ready for sale.
- Harrison Park, a mixed-use development with 207 cluster homes and single-family homes with an average sales price of \$160,000. Approximately 50 percent of each type of home built as of May 2004. All lots were sold; the pace of construction had accelerated with over 60 houses were under construction, and buildout was expected by the end of 2005. Planners stated that less than the approved total of 207 lots might be buildable.
- Lawson, by Steven Pace on Cuthbertson Road and NC 16. 997 units approved, of which 448 are in Phase I, priced from \$350,000-\$1,200,000, with ground broken in June 2004. The developer has a sewer flow permit for 300+ lots in Phase I, but no sewer flow for lots in Phase II. This subdivision will include some units oriented to retirees.
- Mill Bridge, on Waxhaw-Marvin Road at Kensington Drive. 458 of a total of 1,785 planned units have been permitted, and the sales price ranges from \$180,000-\$1,000,000. Clearing and site grading was in progress for Phase 1, with 200+ houses. Buildout is planned in 10-15 years. Mill Bridge had not secured any sewer permits, but the developer might be able to acquire some of the approximately 340 permits granted to the developer of the Cureton subdivision.
- Quellin Estates, 267 single-family units selling for \$300,000-\$600,000. Approximately 100 units were to have been occupied by July 1, 2004. This subdivision, which initially was planned for a five-year buildout period, was nearly completed after only two years of construction. The driving tour verified the rapid construction pace of this subdivision, with approximately 50 houses under construction.
- Woodleaf, by Cobblestone Builders, on NC 16, 140 units approved with sales prices of \$120,000-\$180,000. Approximately 50 percent occupied in May 2004. Eight houses were under construction at the time of the August 2005 interviews, and planners were unable to estimate a buildout date.

There has been no further construction of Waxhaw Parkway, and planners believe developers are hesitant to purchase property along the proposed alignment until after the highway has been constructed. Information on other, more recently approved developments in progress includes:

- Barrington Ridge: by Shea Homes, 153 lots with homes priced from the mid \$200,000s. The driving tour revealed roads under construction, but no house construction had yet started.
- Park Providence, by Pulte Homes, was selling quickly. 85 lots, with an estimated one-year buildout.
- Providence Farms, on Ski Lane, with 21 lots 4-5 acres in size. Planners said that the portion in the Town of Waxhaw was developed.
- Providence Grove, by Ryland Homes, with 225 total lots. About 40 percent of the 145 lots in the initial phase had been developed, and the remainder of the property was said to have been sold, reducing the total number of lots in that subdivision from 225 to 145. The driving tour revealed 12 houses under construction, and two completed and ready for sale.

The following potential residential development that had not been approved was mentioned in the 2004 interview:

- An unnamed subdivision planned by Toll Brothers on the Mecklenburg County border. This is the Marvin Creek subdivision, located in unincorporated Union County but Marvin is likely to annex the 309-home subdivision. More information is available in the section of this report on development in Unincorporated Union County.

Local planners stated that growth in Waxhaw is likely to continue to take place to the north of the historic town center, as the area south of NC 75 continues to be perceived as a less desirable residential location.

Weddington

Weddington changed its zoning ordinance from allowing conservation subdivisions back to R-40 zoning. This change is density-neutral, and is anticipated to have no impact on development. Weddington continues to be an active residential market; with approximately five to six zoning permits approved per week. Those interviewed said that there were a total of 900-1,100 homes now at some point in the approval process. Approximately 1,000 additional housing units are anticipated to come on line in the next two years. The town's population was approximately 7,500 as of July 2005, and local officials expect the town will contain 9,000 residents by December 31, 2005 as a result of annexations. The area including and surrounding Weddington High School will be annexed as of December 31, 2005. There are only two or three undeveloped parcels of land greater than 200 acres in size remaining in the town.

The current status of subdivisions in Weddington is as follows:

- Preserve at Brookhampton: located on Antioch Church Road, with 33 lots.
- Gardens of Providence: located on NC 16, with approximately 40 lots; about 50 percent complete in August 2005, with buildout anticipated in one to 1 ½ years.
- Hadley Park: located on Beulah Church Road, with approximately 80 lots; 30-35 percent built out, with buildout anticipated by summer or fall of 2006.
- Highgate, by Harrington Dowd. Phase I with 128 lots is built out; Phase II (91 lots) is approximately 80 percent constructed, and buildout is anticipated within one year. Phase III is in the permitting stage, and may be built out within two years. Phase IV (36 lots) is anticipated to be sold out within one year. Homes are priced from \$680,000-\$3,000,000.

A driving tour on August 17, 2005 revealed approximately 97 lots undeveloped, seven houses under construction, nine houses completed and ready for occupancy, and 8 houses occupied in Phases III and IV.

- Lake Forest Preserve, by Parker Orleans; 216 lots on two parcels to the west of Weddington High School at Cox Road and NC 84, was at the site grading stage. A four-year buildout is anticipated, with homes in two of the four phases to be priced at \$500,000 and up.
- Meadows at Weddington Phases 1 and 2, at Ennis Road and Providence Road; 30 lots (listed in 2004 report as planned for 24 lots). No houses were yet constructed; however, buildout is anticipated to occur within two years.
- Providence Forest Estates: by Parker Orleans; located on Providence Road and Hemby Road, with 38 lots, had been approved. Notes from a driving tour on August 17, 2005 showed one house occupied and four houses under construction.
- Stratford Hall: located on Tilley Morris Road at Weddington Matthews Road, with 34 lots; pouring footings in August 2005, with buildout anticipated within two years.
- Waybridge: with 45 lots, and located on Beulah Church Road; had received preliminary approval. Site grading was in progress in August 2005, with housing units to be priced from the high \$500,000s.

Potential residential development in Weddington includes the following:

- Mundy's Run: the Grace Group is the developer, and Toll Brothers are the likely builder for this planned 128-lot subdivision on NC 84 across from Shaver Farms. A sketch plan was submitted, but was later removed from the development approval process. Those interviewed believe that a development application will be re-submitted in 2006.
- The Retreat: planned with 9 lots on Weddington Church Road.
- Twelve Mile Creek Road: 38 lots planned on Twelve Mile Creek Road.

Wesley Chapel

Residential development has slowed during the past several years in **Wesley Chapel**. In 2002, 167 homes were completed; the number decreased to 141 completed in 2003, and 116 completed in 2004. That pace of development has continued during the first half of 2005, with 64 homes completed through June of this year. Wesley Chapel officials were said to be committed to maintaining residential zoning at the current density of one unit per acre (R-40).

Changes in subdivisions that were under development at the time of the 2004 interviews include:

- Blackstone: by Shea Homes, on NC 84. Construction had started in Phase IV, with about ½ of the lots in various stages of construction. This subdivision is located in both Union County and Wesley Chapel.
- Kings Grant: by Dan Moser, with 19 lots on Tanyard Road. Home construction was planned to start in the fall of 2005.
- Quintessa: by R.D. Harrell Co., on Underwood Road, with 90 lots. The driving tour revealed approximately ten houses under construction and two houses completed and occupied. The developer was considering adding a second phase with a minimum of 80 lots. That potential development was described in the 2004 land use study as follows: "A developer has an option to purchase a parcel with approximately 100 acres to the north of Quintessa, which could be developed with approximately 150 single-family houses."

- Wesley Oaks: by Centex Homes, located on Billy Howey Road. Only four lots of the 441 total lots are located in Wesley Chapel; the remainder lies in Union County. (Listed in summary table under Union County.)
- The Glen at Wesley Oaks: located on Indian Trail Road, extending to Billy Howey Road. Preliminary approval was conducted under Union County Planning, although Wesley Chapel has annexed the subdivision. Home construction is likely to start in fall 2005 or spring 2006. (Listed in summary table under Union County.)

Anticipated residential subdivisions in Wesley Chapel include:

- Silver Oaks: located on Waxhaw-Indian Trail Road; 26 lots. This subdivision was in the permitting stage at the time of the interviews, with construction of roads anticipated to start in the fall of 2005.

Wingate

Residential growth in **Wingate** was seen as remaining relatively flat until completion of construction of the US 74 Bypass for its entire length to I-485 in Mecklenburg County. The lack of additional sewer capacity has limited development during the past three years to sites that are adjacent to existing sewer lines, as no line extensions can be constructed. No additional subdivisions have been approved since the two subdivisions that were approved in 2001 and 2002. The status of those subdivisions was as follows:

- Glencroft, by Craft Builders, with 201 houses. Phase 1, with 101 lots was being constructed in 2004. Permits have been issued for 65 homes with an average sales price of \$125,000, and buildout of the first phase is anticipated in 12-18 months. Phase II will not be permitted until Wingate secures additional wastewater treatment capacity.
- The Trellis subdivision was to have contained 177 single-family homes selling for \$110,000-\$135,000. Prior to the 2004 interview, the original developer had declared bankruptcy. Only the first phase, consisting of 36 homes, had been constructed by the 2004 interviews, and the bank that repossessed the property was completing some of those homes. Phase 2, with an additional 36 lots had been permitted, but no construction had taken place. Since the 2004 interview, a new developer purchased the remaining undeveloped lots in the first phase and expressed interest in purchasing the development rights to the second phase. New construction started in the spring of 2005, and two houses had been completed with another house under construction in August 2005. A total of approximately 25 houses have been constructed in the first phase of this subdivision. The remaining phases have not been approved or permitted at this time.

A subdivision that had been proposed for a 25-acre parcel on Elm Street was defunct as a result of a lack of activity by the developer.

Wingate officials are receptive to development, but want to maintain a density of ½ acre minimum lot size. Wingate has annexed approximately 18 acres located on US 74 west of town. This property is zoned B-2 (business), but the sewer moratorium has precluded development.

Wingate University started a graduate program in pharmacy in 2003, and will reach full enrollment in the fall of 2005. The primary impact from this program was said to be an increase in traffic, as many of the pharmacy students live off-campus and commute to school.

Anticipated Non-Residential Development:

No large-scale economic development prospects were cited as being likely at the current time in Union County. The percentage gain in commercial development was said to be less than the growth rate of residential development in the county, and County officials would like to increase the rate of commercial and industrial growth.

Monroe remains the industrial hub of Union County, a result of its having hosted a military base, Camp Sutton that the city acquired after its closure. The heavy industrial area to the east of Monroe was built where Sutton Park was located. The airport area is home to business activity that is more of a corporate nature. As a result of these developments, Monroe serves as an employment center not only for residents of Union County, but also for residents of Anson and Stanly Counties, as well as Chesterfield County, South Carolina.

The Monroe Corporate Center area was cited as having experienced a net gain in industrial and commercial development, and the eastern Monroe industrial area was characterized as retaining the level of activity present in 2004. There is commercial development on US 74 west of the city in the vicinity of the new Target store at Poplin Place. Also, one building has been constructed in the Metro Medical Center at the US 74/US 601 South intersection east of Monroe. Planners believe that the US 74 Bypass is needed to recruit new industrial development in the city.

The area in the vicinity of the US 74 Bypass is seen as the next growth area for industrial and commercial uses. Monroe has annexed land in the areas of anticipated interchanges on the Bypass.

There is a question as to which of two competing commercial sites in the northwestern area of the county is more likely to be developed as a regional mall. One of these proposed sites is an 83-acre parcel at the interchange of I-485 and Idlewild Road. Development at this site has not moved forward since the 2002 land use interviews were conducted. The second site is at the interchange of I-485 and Lawyers Road. While several tenants were said to have indicated interest in locating at this site, that site has environmental problems, as parts of it lie in the Goose Creek basin habitat for the Carolina Heelsplitter, an endangered species.

There is no industrial or commercial development occurring in Weddington at this time. While commercial development is likely in the future, it is not anticipated to occur during the next several years.

Two shopping centers have been approved in Wesley Chapel, in addition to the shopping center with 75,000 square feet that was completed in the summer of 2004. That existing center can expand by an additional 11,000 square feet. All three shopping centers are located at the intersection of Weddington and Waxhaw-Indian Trail Roads. The Village Commons Phase II is permitted for construction of 365,000 square feet with a planned eight-year construction schedule. A third shopping center has been approved for 125,000 square feet on another corner of the intersection. The buildout for this center is planned for a five-year period, and that

developer has committed to donating some land for government use. The town plans to build a new town hall in that complex or in one of the other shopping centers.

A lack of easy transportation access due to delays in approving and constructing the US 74 Bypass was cited as the biggest disadvantage Union County must overcome in recruiting additional business/industrial development. The US 74 corridor was cited as the area favored for development of employment centers, i.e., office, warehouse, or industrial developments.

Current Commercial/Industrial Development

Changes in business/industrial development in the period since the May 2004 interviews include:

- At the time of the May 2004 interviews, Waxhaw had approved approximately 1,000,000 square feet of commercial development including 500,000 square feet in Cureton. Approximately 150,000 square feet will be constructed in 2006, including a Harris Teeter grocery store scheduled to open by July 2006. The developer has also acquired two adjoining parcels located on the opposite side of NC 16 that are targeted for commercial development.
- All four quadrants of the Potters Road/Chestnut Lane intersection are zoned for commercial uses. Three of the quadrants are in Indian Trail, and are zoned for neighborhood commercial center uses; the fourth quadrant has been rezoned B-4 by Stallings. Construction was complete on a day care center and another commercial use in one of the Indian Trail quadrants. Indian Trail planners anticipate construction to occur in the other two quadrants within the next few years. Stallings has approved two buildings for restaurant and retail uses in the quadrant under its jurisdiction.

Anticipated Non-Residential Development

Locations in Union County cited as being future sites for new commercial/industrial activity include:

- Indian Trail approved the Downtown Project in February 2005, which includes plans for a neo-traditional town square with commercial (140,000 square feet) and office space (100,000 square feet), townhouses and apartments on a 45-acre tract on the east side of Indian Trail Road across from the current town hall.
- Indian Trail anticipates commercial development similar in size to the Harris Teeter development in the northwest quadrant of the intersection of Wesley Chapel-Stouts Road and Old Monroe Road.
- Marvin may approve commercial uses as part of a potential mixed-use town center development on New Town Road.
- The Pittenger property of approximately 120 acres on the north side of NC 75 across from Western Union School Road near Mineral Springs is seen as a potential industrial site. Also, the former Shannon Farm is zoned for light industrial use, but is in the estate execution process following the death of the owner in 2004. This property could have sewer access if the Blythe Creek sewer main were to be extended to the Western Union Park subdivision.
- A major grocery store company continues to seek a store site in Unionville. The location under investigation had shifted from when the 2004 land use study was conducted. The Unionville Planning Board has designated four sites for commercial uses—Lawyers

Road/US 601, Unionville-Indian Trail Road/US 601, Ridge Road/US 601, and Lawyers Road/Sikes Mill Road.

- A possible downtown corridor with retail and specialty commercial uses is under discussion in Weddington.

Major Employers

Major Union County employers include those described in Table 4. While manufacturing remains a strong source of employment, service industry employment has been growing. The poultry processing industry remains a major employer in the Marshville area, while most of the major employers are located in the Monroe area.

Table 4: Major Employers in Union County (based on December 2004 employment)

Name	Location	Product/Service	December 2004 Employees
Union County Schools	Various	Education services	1,000+
Tyson Foods, Inc.	Monroe	Poultry processing	1,000+
Union Memorial Medical Center	Monroe	Health services	1,000+
TDY Industries, Inc.	Monroe	Manufacturing	500-999
County of Union	Various	Public administration	500-999
McGee Brothers Co., Inc.	Monroe	Construction	500-999
Pilgrim's Pride, Inc.	Marshville	Poultry processing	500-999
Wal-Mart, Inc.	Monroe	Retail	500-999
Charlotte Pipe & Foundry	Monroe	Plastic pipe and fittings	500-999
City of Monroe	Monroe	Public administration	500-999
Scott Technologies Inc.	Monroe	Aviation safety equipment	500-999
Consolidated Metco Inc.	Monroe	Manufacturing	500-999
Harris Teeter Inc.	Various	Retail	500-999
Food Lion LLC	Various	Retail	250-499
Yale Security, Inc.	Monroe	Hardware	250-499
Perfect Fit Industries, Inc.	Monroe	Home furnishings	250-499
Wingate College	Wingate	Education services	250-499
Decore-ative Specialties	Monroe	Manufacturing	250-499
Boggs Group	Monroe	Road construction	250-499
Windsor Window Co.	Monroe	Manufacturing	250-499

Source: <http://jobs.esc.state.nc.us/lmi/largest/largest.pdf>

PART TWO: GEOGRAPHIC INFORMATION SYSTEMS DATA ANALYSIS

The Operations Research and Education (OR/Ed.) Lab has conducted an analysis of Union County GIS parcels and Union County Public Schools (UCPS) student populations for the school years 2002-03, 2003-04, 2004-05, and 2005-06. The results presented are a summary of that analysis.

GIS DATA QUALITY AND STUDENT GEOCODING ACCURACY

The Lab received an updated parcel shp file from Union County GIS in September 2005. The data was considered to be the most accurate and up-to-date parcel information at the time of this analysis. In addition to the parcels database, the Lab also received shp files for centerlines, municipality boundaries, water features, and various other features.

The following table lists the geocode address matching percentage for the student datasets.

	2002-03	2003-04	2004-05	2005-06
Matched	94%	95%	94%	93%

Note: The address matched student population is a key ingredient in the Lab's parcel analysis and the accuracy of the geocoding may have an impact on the accuracy of the study, particularly in the Allocation of Gain. The inconsistencies within and among student databases and the street address databases will almost certainly compromise this accuracy. To achieve a level of accuracy necessary for the Land Use Study GIS analysis, the Lab recommends the following:

- Communicate directly with the county GIS department and resolve discrepancies among student, street, and parcel datasets. The outcome of such communication should be a glossary of standard addressing terminology and ultimately a standard street nomenclature.
- Review the street addresses in student datasets for errors in spelling, non-standard abbreviations, nicknames, etc., in relation to the standard street addressing scheme.

In preparation for this Land Use Study, UCPS examined individual planning segment student counts and revised them as necessary.

SUBDIVISION PARCEL ANALYSIS

The Lab chose to concentrate this analysis on subdivision parcels for several reasons, including the inconsistencies within and between databases containing street addresses. The primary reason for using subdivision parcels is based on the Lab's experience forecasting growth in Union and other North Carolina counties: subdivision development is a major contributor to student population gains. The Lab used the subdivision files generated for the 2002-03 IPSAC

Land Use Study and updated in the 2004-05 IPSAC Land Use Study as a foundation for this analysis.

DYNAMIC ALLOCATION OF GAIN

New to this year's UCPS Land Use Study is the use of a "dynamic" Allocation of Gain (AOG). The subdivision parcel data and geocoded student data is aggregated to planning segment resolution. The current state of development is calculated and a build-out timeline is fixed for each segment. From this information an Allocation of Gain *per year per planning segment* can be determined.

The advantages of such a system include:

- Specific subdivision build-out data can be localized to appropriate planning segment/school areas.
- As subdivisions become built out, the impact of incoming students can be regulated.
- As proposed subdivisions come on-line, their impact on enrollment projections can be more accurately measured.
- The AOG can be aggregated to any suitable geometry - elementary or high school districts, for instance.

The dynamic AOG will require a significant amount of planning segment level analysis, such as estimating projected subdivision build-outs, counting developed parcels, analyzing new residential growth patterns, and verifying student populations on (at least) an annual basis.

Table 5 shows the 2005-06 Allocation of Gain by High School area. ***It is important to note that the AOG will change each year as existing residential developments become saturated and new developments come on-line.***

TABLE 5: AOG BY 2005-06 HIGH SCHOOL AREA

High School Area (2005-06)	2003-04 AOG	2004-05 AOG	2005-06 AOG
Forest Hills	0.0200	0.0490	0.0226
Monroe	0.0450	0.0370	0.0741
Parkwood	0.0600	0.1085	0.1115
Piedmont	0.1400	0.0535	0.0392
Porter Ridge	N/A	0.1560	0.1083
Sun Valley	0.3000	0.1817	0.1383
Weddington	0.4350	0.4143	0.5060

OUT-OF-CAPACITY WORKSHEET

Table 6 shows the Out-of-Capacity (OOC) worksheet based on the 2005-06 system-wide population projections and dynamic Allocation of Gain as well as the following assumptions:

- 1) Planning Segment 2005-06 student counts provided by UCPS.
- 2) Initial estimates at residential build-outs are 4 years for the Weddington area and 8 years elsewhere.
- 3) Percentage of developed parcels was derived from Union County GIS parcel data.

The Out-of-Capacity table represents the current state of the dynamic AOG model. In order to fully realize the potential of this model, the following items must be addressed on an annual basis:

- 1) Student counts per planning segment must be verified or corrected.
- 2) Current build-out percentage must be verified or corrected for each planning segment.
- 3) Planning segment (i.e., subdivision) build-out life must be entered.
- 4) Data about future developments must be entered in the appropriate planning segments and years.

MAINTENANCE OF THE DYNAMIC AOG

The OR/Ed. Lab believes the advantages gained by a dynamic Allocation of Gain will ultimately allow for more accurate localization of projected mid- to long-term enrollment growth. This methodology also allows for a comprehensive residential growth database that will enable UCPS planners to track individual developments and more accurately forecast their impact on new and existing schools.

The dynamic AOG is dependent on the accuracy of the data populating the planning segments, such as student counts and developed parcel counts. Although the initial 2005-06 AOG relies heavily on Union County parcel data, it is probable that the planning segment database could eventually become a stand-alone tool, using GIS data only for annual planning segment updates and planning segment splits.

Table 6: Out-of-Capacity worksheet based on 2005-06 system-wide population projections and dynamic Allocation of Gain.

Union County Public Schools Out-of-Capacity Worksheet														
OOC based on dynamic Planning Segment AOG. Assumptions: Segment student population verified by UCPS, Porter Ridge HS 2006-07 estimated by 2005-06 8th grade population.														
	Capacities			Current	Projected Enrollment									
	2005-06	2006-07	2007-08	2006-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Elementary														
Marshall Elem	619	619	619	538	539	540	541	542	543	544	545	545	546	547
Union Elem	496	496	496	396	397	398	399	399	391	392	393	393	394	395
Vingate Elem	619	619	619	749	782	818	851	876	891	899	905	910	913	916
Benton Heights Elem	670	670	670	654	654	654	654	654	655	655	655	655	655	655
East Elem	450	450	450	753	774	790	801	808	813	816	818	820	822	823
Walter Bickett Elem	450	450	450	660	714	759	795	823	841	851	861	870	878	884
New Elem F (2006)		670	670											
Prospect Elem	496	496	496	544	565	582	597	607	613	617	620	624	626	628
Waxhaw Elem	670	670	670	631	684	724	754	775	788	796	803	810	816	820
Western Union Elem	578	578	578	589	639	694	760	837	913	977	1054	1142	1230	1305
Kensington Elem	670	670	670	342	407	497	620	772	932	1082	1286	1585	1892	2213
Fairview Elem	670	670	670	595	623	645	661	672	678	682	685	688	691	693
New Salem Elem	289	289	289	341	342	342	343	343	343	343	343	343	343	343
Unionville Elem	670	670	670	734	753	769	782	794	805	813	824	838	851	862
Hemby Bridge Elem	670	670	670	832	890	958	1038	1123	1198	1257	1325	1403	1481	1552
Porter Ridge Elem	670	670	670	671	739	810	886	969	1054	1135	1248	1401	1577	1746
Sardis Elem	670	670	670	784	817	850	883	911	931	943	955	966	976	983
Antioch Elem	670	670	670	891	758	815	865	906	937	958	980	1003	1027	1047
Indian Trail Elem	670	670	670	768	787	802	814	822	827	830	833	835	838	839
Shiloh Elem	670	670	670	977	1100	1226	1346	1436	1493	1524	1549	1571	1588	1600
Marvin Elem	670	670	670	881	928	978	1037	1106	1170	1217	1260	1297	1325	1342
Weddington Elem	670	670	670	659	760	847	935	1029	1123	1202	1297	1405	1510	1598
Wesley Chapel Elem	578	578	578	891	1025	1151	1274	1389	1480	1542	1603	1663	1716	1757
Sandy Ridge Elem	670	670	670	721	815	887	947	985	1029	1052	1075	1100	1123	1143
Totals	13935	14605	14605	15391	16482	17525	18573	19579	20447	21126	21919	22848	23817	24692
Middle														
East Union Mid	1000	1000	1000	801	818	839	858	876	891	903	909	911	912	914
Monroe Mid	1000	1000	1000	793	832	868	895	920	942	963	975	981	984	988
Parkwood Mid	1000	1000	1000	990	1066	1148	1227	1324	1447	1611	1748	1848	1903	2018
Piedmont Mid	1000	1000	1000	740	761	780	795	810	826	845	859	868	872	879
Porter Ridge Mid	1000	1200	1200	1155	1242	1348	1456	1595	1773	2011	2206	2340	2408	2544
Sun Valley Mid	1150	1150	1150	954	1055	1168	1285	1362	1451	1536	1586	1612	1623	1642
Weddington Mid	1000	1000	1000	1671	1896	2139	2379	2696	3105	3621	4005	4240	4348	4547
New Mid B (2007)			1200											
Totals	7150	7350	8550	7104	7670	8291	8875	9582	10435	11488	12289	12801	13050	13532
High														
Forest Hills High	910	910	910	1096	1111	1126	1147	1166	1181	1191	1199	1205	1211	1214
Monroe High	840	840	840	929	963	988	1018	1045	1067	1085	1101	1116	1130	1140
Parkwood High	1235	1235	1235	1295	1360	1418	1506	1611	1736	1878	2055	2286	2599	2889
Piedmont High	1200	1200	1200	1059	907	920	937	953	970	986	1005	1025	1048	1066
Porter Ridge High	1400	1400	1400	1093	1562	1637	1758	1908	2089	2295	2546	2855	3244	3589
Sun Valley High	1225	1225	1225	1358	1220	1299	1408	1513	1603	1676	1741	1802	1865	1912
Weddington High	1400	1400	1400	1898	2081	2251	2522	2864	3279	3727	4220	4762	5380	5982
New High B (2007)			1600											
Totals	8210	8210	9810	8718	9204	9638	10297	11060	11925	12839	13867	15052	16477	17693
Special														
Wolfe School				80	80	80	80	80	80	80	80	80	80	80
South Providence				80	80	80	80	80	80	80	80	80	80	80
CATA		425	640	3	3	3	3	3	3	3	3	3	3	3
System Totals	29295	30165	32965	31376	33519	35617	37908	40384	42970	45616	48238	50865	53507	56080

Adequate Capacity
 Two-year Warning
 Out of Capacity

OR/Ed. Laboratory
 Institute for Transportation Research and Education
 North Carolina State University

December 13, 2005

Note: The OOC is intended for planning purposes. The Lab is currently constructing forecasting tools that will better predict short-term needs such mobile unit and teacher allocation.

The dynamic AOG is currently being updated as new residential development data becomes available. The long-term forecasts may change as a result.

Appendix A

2005-2006 Enrollment Forecast Off-Target Analysis

According to the month-one 2005-2006 school year ADM data, Union County Public School (UCPS) grew by 2,686 students or 9.4% from 2004-2005. This one-year growth is a large departure from the average 5.7% annual growth rate in the previous four years (Figure 1 and 2). During the 04-05 school year, the OR/Ed. Lab (Lab) forecasted 30,406 for 05-06 school year; this was off target by 970 students or at a 3.19% error rate.

The Lab adopts the cohort survival ratio derived from previous years to produce the system level forecast. The cohort survival ratio method is the most commonly used approach for population forecast and has worked well for all school districts that the Lab has worked with. The forecasted 30,406 students for UCPS generated by the Lab during the 2004-2005 study, even though off target by 970 students, was the result of the **most aggressive** possible growth using the cohort survival ratio method without artificially injecting students into the system.

In order to make necessary adjustments for the future year forecasts, the Lab strives to understand the reasons behind the burst of growth this school year. Most importantly, the Lab needs to understand whether the large increase in student population this school year is the beginning of a new growth curve that will sustain for a long period of time, or if it represents a short-lived phenomenon. Following are discussions which outline the Lab's findings. Please refer to the attached tables and figures for detailed data.

Q: Are there greater numbers of students entering the Union County Public Schools this school year due to the exodus from private/home schools?

A: No. The Lab has observed this phenomenon in other school districts due to economic downturn. Based on the available data, the rates of increase and decrease in private school and home-school populations in Union County do not reflect the growth experienced by Union County Public Schools this year. See Table 1.

Q: Are counties adjoining Union County experiencing similar student population growth this school year?

A: The Lab does not have access to officially adopted month-one ADMs from all adjoining school systems, but we do have projects with Iredell and Gaston school systems. Iredell County (excluding Mooresville Graded School District) is experiencing greater growth rate this year at 4.0% compared with the previous four year average of 3.2%. This one-year rate of increase is roughly one-third experienced in Union County. Gaston County Schools have been experiencing an increase in population after years of decline; their one-year growth this year is less than 2%. See Table 1 for more detailed information.

A: Are counties adjoining Union County experiencing student population decline which may be contributing to Union County's unusual high growth this school year?

Q: Some trends suggest that families with students may be moving from Charlotte-Mecklenburg Schools (CMS) to Union County Schools. CMS's annual growth is consistent with the growth of the previous years. There is no indication from the available data that CMS students are moving into Union county.

Q: What would be the additional growth factor that needs to be injected into the already aggressive cohort survival ratios forecast in order to account for this school year's growth?

A: In addition to the cohort survival ratios already applied to the forecast (exponential increasing), the Lab would have to inject 3.23% additional growth into the system in order to match to the 31,376 students reported by the month one ADM. The Lab conducted similar experiments for the last four years in which additional growth was injected in order to match the actual month-one ADM. The previous four years' additional growth required were 0.68%, 1%, 0.13%, and 1.77% respectively. These relatively small values reflect that the cohort survival ratio method has performed well for Union County Schools with the exception of this school year. On very rare occasions, the Lab injects additional growth to the forecast (such as known additional growth due to an increase in military troop population). This is however not recommended for Union County Schools. The Lab believes that utilizing the cohort survival ratios continues to be the most appropriate method.

Based on the information provided, the Lab concluded that the 2,686 one-year student growth in Union County Schools was a short-lived phenomenon. There is no evidence that there is a shift of student population migrating from private/home-school into Union County Schools. There is also no evidence that students are moving away from adjoining school systems to enter Union County Schools. The 9.4% growth is not being experienced by adjoining school systems; the county experiencing growth closest to that of Union County is Iredell County at 4.0%.

The Lab contacted the Market Opportunity Research Enterprises in Rocky Mount, NC, who supplies residential home sale data to developers and builders. It is in their opinion that the building moratorium may have capped the number of new homes for a short time, however the builders applied for building permits at much higher rate right before the moratorium took place. The result was a higher number of available homes in Union County in the last couple of years. Consequently, there was an influx of new residents. Once this surge of new residents has passed, Union County will most likely not experience one-year growth at this magnitude.

The Out-of-Capacity Worksheet produced during the Integrated Planning for School and Community project is primarily used to assist school districts in identifying **long-range** school facility needs. The forecasting principle does not place emphasis on producing an accurate next-year student enrollment number. This is why only the first month ADM was used instead of tracking ADM for every month during the academic year. However, learning from this year's experience, the Lab is working toward refining its methodologies. The Lab has determined that it will have to capture ADM monthly, to monitor subdivisions activities in high growth areas, and to calibrate next-year forecasting often during the course of a school year. The Lab will keep Union County Schools up-to-date on this effort.

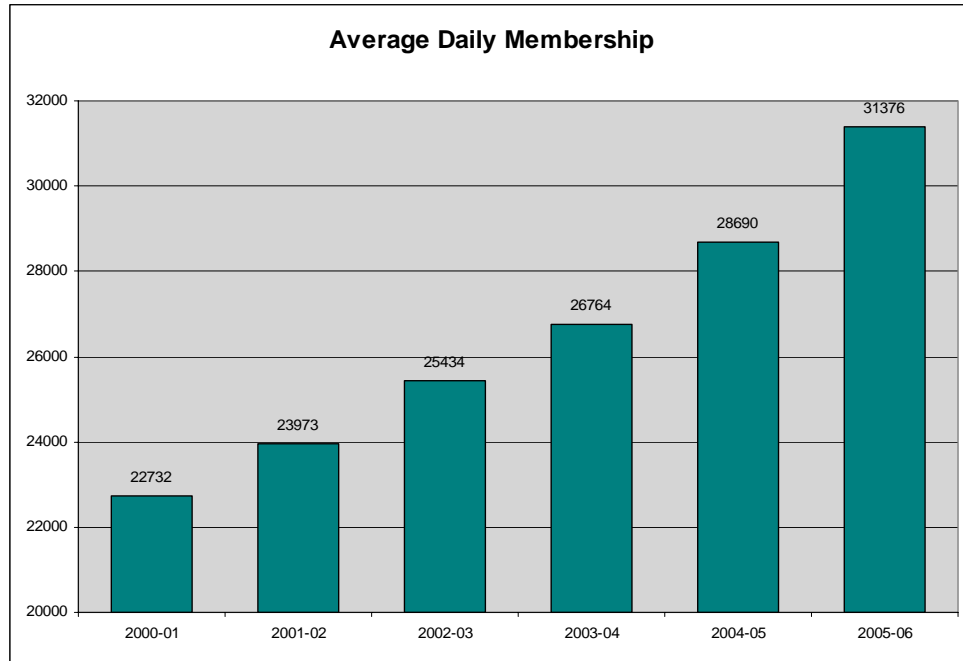


Figure 1. Union County Public Schools Month-One Average Daily Membership history

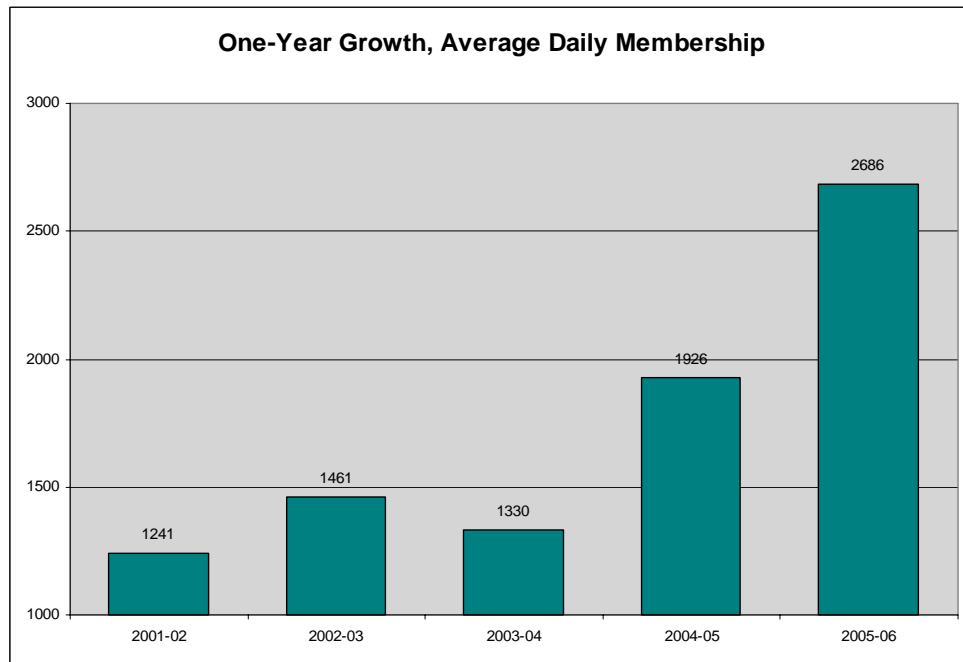


Figure 2. Union County Public Schools one-year growth history

UNION									
	Public (OR/Ed. Lab #)			Private			Home School		
1999-2000	21,787			1,009			854		
2000-2001	22,732	945	4.3%	1,192	183	18.1%	1,025	171	20.0%
2001-2002	23,973	1,241	5.5%	1,303	111	9.3%	1,499	474	46.2%
2002-2003	25,434	1,461	6.1%	1,322	19	1.5%	1,633	134	8.9%
2003-2004	26,764	1,330	5.2%	1,247	(75)	-5.7%	1,820	187	11.5%
2004-2005	28,690	1,926	7.2%	1,285	38	3.0%	2,052	232	12.7%
2005-2006	31,376	2,686	9.4%						

MECKLENBURG									
	Public			Private			Home School		
1999-2000	99,172			16,212			2,224		
2000-2001	101,999	2,827	2.9%	16,740	528	3.3%	2,622	398	17.9%
2001-2002	104,934	2,935	2.9%	17,246	506	3.0%	3,618	996	38.0%
2002-2003	108,139	3,205	3.1%	17,284	38	0.2%	3,942	324	9.0%
2003-2004	112,457	4,318	4.0%	17,399	115	0.7%	4,241	299	7.6%
2004-2005	117,010	4,553	4.0%	17,598	199	1.1%	4,648	407	9.6%
2005-2006	122,424	5,414	4.6%						

LINCOLN									
	Public			Private			Home School		
1999-2000	10,401			199			298		
2000-2001	10,684	283	2.7%	189	(10)	-5.0%	355	57	19.1%
2001-2002	10,839	155	1.5%	221	32	16.9%	454	99	27.9%
2002-2003	10,979	140	1.3%	176	(45)	-20.4%	527	73	16.1%
2003-2004	11,222	243	2.2%	191	15	8.5%	538	11	2.1%
2004-2005	11,411	189	1.7%	164	(27)	-14.1%	599	61	11.3%
2005-2006									

IREDELL									
	Public (OR/Ed. Lab #)			Private			Home School		
1999-2000	16,623			828			508		
2000-2001	17,205	582	3.5%	830	2	0.2%	596	88	17.3%
2001-2002	17,764	559	3.2%	785	(45)	-5.4%	832	236	39.6%
2002-2003	18,464	700	3.9%	834	49	6.2%	911	79	9.5%
2003-2004	19,050	586	3.2%	924	90	10.8%	968	57	6.3%
2004-2005	19,430	380	2.0%	1,070	146	15.8%	1,100	132	13.6%
2005-2006	20,213	783	4.0%						

GASTON									
	Public (OR/Ed. Lab #)			Private			Home School		
1999-2000	30,383			3,299			605		
2000-2001	30,255	(128)	-0.4%	3,299	0	0.0%	719	114	18.8%
2001-2002	30,610	355	1.2%	3,243	(56)	-1.7%	1,063	344	47.8%
2002-2003	30,822	212	0.7%	3,006	(237)	-7.3%	1,171	108	10.2%
2003-2004	30,865	43	0.1%	2,793	(213)	-7.1%	1,181	10	0.9%
2004-2005	31,662	797	2.6%	2,517	(276)	-9.9%	1,234	53	4.5%
2005-2006	32,244	582	1.8%						

CATAWBA									
	Public			Private			Home School		
1999-2000	15,768			1,103			459		
2000-2001	16,145	377	2.4%	1,191	88	8.0%	552	93	20.3%
2001-2002	16,271	126	0.8%	1,163	(28)	-2.4%	794	242	43.8%
2002-2003	16,521	250	1.5%	1,260	97	8.3%	902	108	13.6%
2003-2004	16,554	33	0.2%	1,245	(15)	-1.2%	964	62	6.9%
2004-2005	16,904	350	2.1%	1,312	67	5.4%	1,001	37	3.8%
2005-2006									

CABARRUS									
	Public			Private			Home School		
1999-2000	18,369			1,730			581		
2000-2001	18,973	604	3.3%	1,926	196	11.3%	659	78	13.4%
2001-2002	20,010	1,037	5.5%	1,920	(6)	-0.3%	932	273	41.4%
2002-2003	20,750	740	3.7%	1,862	(58)	-3.0%	1,060	128	13.7%
2003-2004	21,651	901	4.3%	1,766	(96)	-5.2%	1,156	96	9.1%
2004-2005	22,329	678	3.1%	1,759	(7)	-0.4%	1,268	112	9.7%
2005-2006									

Table 1. Union County month-one ADM and adjoining counties. Unless denoted by "OR/Ed. Lab #" all Month-one ADM data were collected from NC Department of Instruction except the 2005-2006 Mecklenburg data which was provided by Charlotte-Mecklenburg Schools.

Appendix B

List of Interviews and Data Sources for Land Use Interviews

Interviews:

Personal interviews were conducted with the following:

- Union County: Mike Shalati, County Manager
- Union County Planning Department: Richard Black, Planning Director
- Union County Utilities: Christie Putnam, Public Works Interim Director; Charlie O’Cain, Deputy Director
- City of Monroe: Wayne Herron, A.I.C.P., Director of Planning and Development; R. Christopher Plate, Director of Economic Development
- Town of Fairview: Jason Wager, A.I.C.P., Community and Regional Planner (with Centralina COG)
- Town of Indian Trail: Shelley DeHart, A.I.C.P., Director of Planning
- Town of Marshville: Nadine Bennett, Planner (with Centralina COG)
- Town of Mineral Springs: Rick Becker, Mayor; Nadine Bennett, Planner (with Centralina COG)
- Town of Stallings: Tammy Heck, Town Planner; Jason Mayo, Town Planner
- Town of Unionville: Ken Austin
- Town of Waxhaw: Brad Robinson, Town Planner
- Town of Weddington: Nadine Bennett, Planner (with Centralina COG); Dorine Sharp, Planning Board Chair
- Town of Wesley Chapel: Bill Pugh, Community and Regional Planner (with Centralina COG)
- Town of Wingate: Dryw Blanchard, Town Administrator
- NCDOT: Tom Thrower, P.E., Division Traffic Engineer; Scott Cole, P.E., District Engineer

Telephone interviews were conducted with the following:

- Town of Marvin: Karen Dunn, Zoning/Subdivision Administrator

Data Sources:

Data were compiled from the following sources, in addition to those cited above:

- North Carolina Department of Commerce
- North Carolina State Planning Center
- US Bureau of the Census

Internet Sites:

- U.S. Census Bureau: www.census.gov
- U.S. Fish and Wildlife Service: <http://endangered.fws.gov>
- North Carolina State Demographics Unit: <http://demog.state.nc.us>
- North Carolina Department of Commerce: <http://cmedis.commerce.state.nc.us>
- North Carolina Department of Transportation: www.dot.state.nc.us
- Union County: <http://www.co.Union.nc.us/>
- Union County Planning Department: <http://www.co.Union.nc.us/>
- City of Monroe: www.monroenc.org/
- Town of Indian Trail: www.indiantrail.org
- Village of Lake Park: www.lakeparknc.com
- Town of Marshville: www.co.union.nc.us/2nd_pages/municipalities/marshville.com
- Town of Marvin: www.co.union.nc.us/2nd_pages/municipalities/marvin.htm
- Town of Stallings: www.co.union.nc.us/2nd_pages/municipalities/stallings.htm
- Town of Waxhaw: www.waxhaw.com
- Town of Weddington: www.co.union.nc.us/2nd_pages/municipalities/weddington.htm
- Village of Wesley Chapel: www.wesleychapelnc.com/
- Charlotte Chamber of Commerce: www.charlottechamber.com
- Charlotte Regional Partnership: www.charlotteregion.com
- Lancaster County Economic Development Corporation: www.lancastersc-edc.com
- Lancaster County Chamber of Commerce: www.lancasterchambersc.org
- York County Economic Development Board: www.ycedb.com
- South Carolina Department of Commerce: www.callsouthcarolina.com