

# Durham-Chapel Hill-Carrboro Metropolitan Planning Organization (DCHC MPO)

## Socioeconomic Data (SE Data)

TAC Meeting  
September 12, 2007

# Purpose

- Provide Background on SE Data
- Review SE Data
- Receive Comments
- Present Next Steps

# SE Data -- Background

- What is Data?
  - Where people live and work
  - By Traffic Analysis Zone (TAZ)
  - Years: 2005 Base Year, plus 2015, 2025 and 2035 forecasts
- Why Collect Data – Input into the Triangle Regional Model; which is major tool for:
  - 2035 Long Range Transportation Plan
  - Air Quality Conformity
  - Projects and Studies (e.g., Triangle Parkway, Chapel Hill Master Transit Plan; Transit Blueprint)

# SE Data – Background (cont.)

- How Collected Data

- Local planning staff responsible
- Started effort in mid-2006
- Population
  - Baseline: 2000 Census data, then added new dwelling units (e.g., Certificates of Occupancy)
  - Forecast: Adopted land use plans and policies combined with undeveloped parcels
- Employment:
  - Baseline: InfoUSA database modified by field checks and institutional information (e.g., Duke, UNC-CH, RTF)
  - Forecast: Adopted land use plans and policies combined with undeveloped parcels
- Guidance Totals

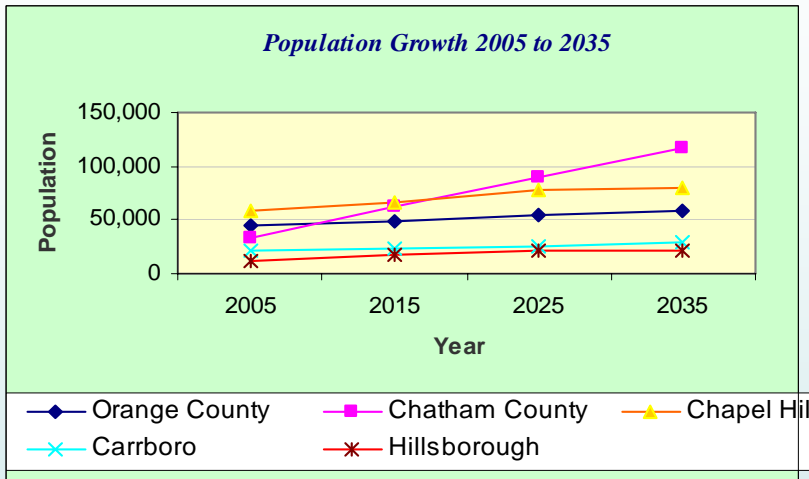
# SE Data – Population Totals

	Total Population				Total Population % Growth			Population
	2005	2015	2025	2035	2005-2015	2015-2025	2025-2035	2005-2035 Annual Growth Rate
Durham	244,022	286,733	323,311	354,164	18%	13%	10%	1.2%
Orange (non-incorp.)	44,904	48,708	54,288	57,649	8%	11%	6%	0.8%
Chatham (eastern)	34,067	62,400	89,779	117,130	83%	44%	30%	4.2%
Chapel Hill - Orange County	53,963	60,764	72,351	74,222	13%	19%	3%	1.1%
Chapel Hill - Durham County	4,376	4,984	5,416	6,261	14%	9%	16%	1.2%
Carrboro	20,858	22,793	25,345	28,269	9%	11%	12%	1.0%
Hillsborough	12,438	17,640	21,806	22,380	42%	24%	3%	2.0%
<b>Total</b>	<b>414,628</b>	<b>504,022</b>	<b>592,296</b>	<b>660,075</b>	<b>22%</b>	<b>18%</b>	<b>11%</b>	<b>1.6%</b>

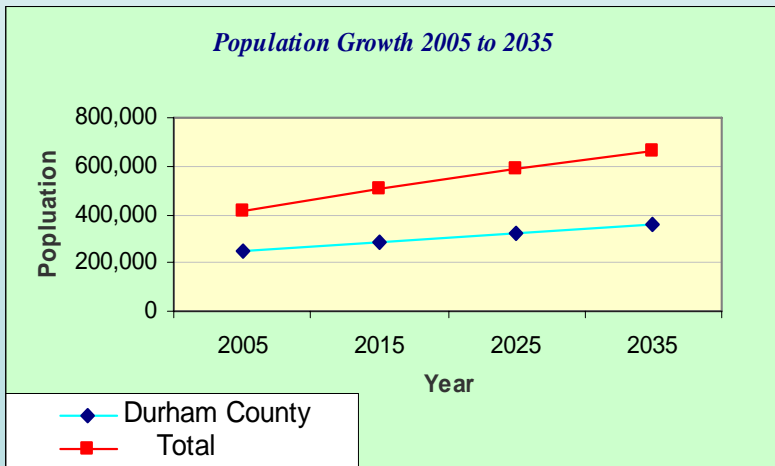
- Total population will increase 245,447 during the 30-year period.
- Durham County population increase (112,027) is largest among jurisdictions.
- Chatham County population increase (83,063) will easily outpace Orange County (50,357).
- Overall population growth rate will decrease over time.

# SE Data – Population

## Growth Rate



	Population	
	2005-2035 Growth	2005-2035 Growth Percent
Durham	112,027	45%
Orange	12,745	28%
Chatham (eastern)	83,063	244%
Chapel Hill	22,144	38%
Carrboro	7,411	36%
Hillsborough	9,942	80%
<b>Total</b>	<b>245,447</b>	<b>59%</b>



- Overall population will increase 59% over the 30-year period.
- Durham County and Orange County population will increase 45 percent and 38 percent, respectively.
- Chatham County population will increase 244 percent.

# SE Data – Population

## Guidance Totals

<b>2005 Population</b>			
	<i>SE Data</i>	<i>State Demographer Estimate</i>	<i>Difference</i>
Durham County	248,398	242,207	3%
Orange County	132,163	121,992	8%

<b>2035 Population</b>			
	<i>SE Data</i>	<i>State Demographer Estimate</i>	<i>Difference</i>
Durham County	360,425	355,639	1%
Orange County	182,520	171,453	6%

- Compared SE Data to State Demographer estimates and forecasts.
- Baseline 2005 and 2035 Forecasts are all within at least 8 percent of the State Demographer data.
- The SE Data value is always higher than the State Demographer estimate.

### Notes:

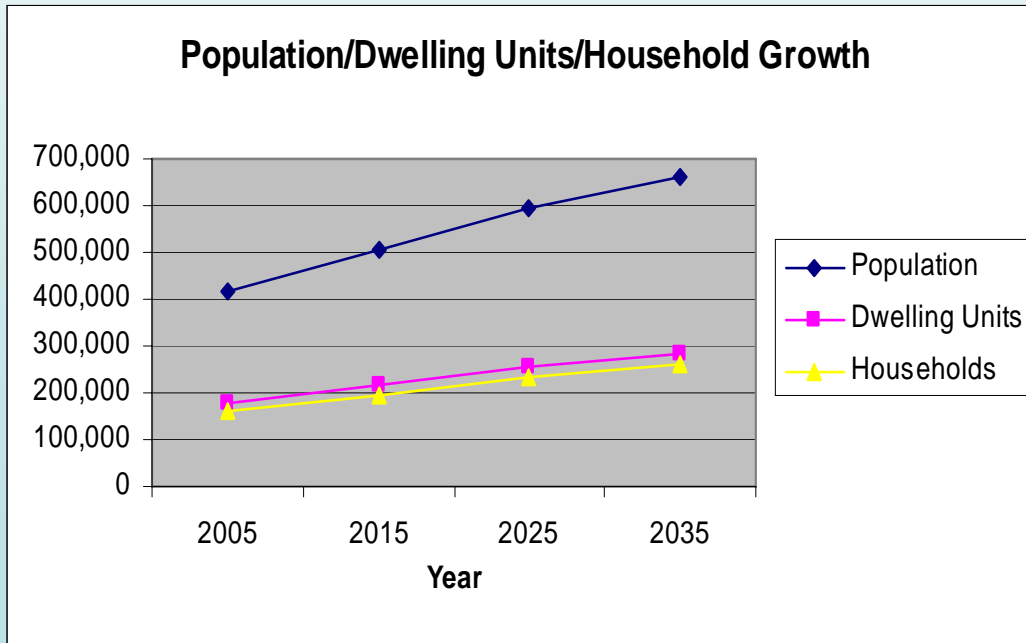
**2005** population estimate is from N.C. State Demographer.

**2035** population estimate uses N.C. State Demographer estimate for 2030 then assumes steady growth through 2035.

# SE Data – Population

## Population/Dwelling Units/Households

	2005	2015	2025	2035	2005-2035 Growth	Annual Rate
<b>Population</b>	414,628	504,022	592,296	660,075	245,447	1.6%
<b>Dwelling Units</b>	176,946	215,357	255,672	285,724	108,778	1.6%
<b>Households</b>	159,763	195,155	231,323	258,974	99,211	1.6%



- Dwelling Units and Households are the building blocks of population, and therefore they have the same growth trend.
- A Dwelling Unit means a single physical unit that provides an independent living facility for one or more persons.
- A Household includes all the persons who occupy a housing unit.



# SE Data – Population

## Student Households

	Total Student Households				Total Student Household % Growth			Student Households
	2005	2015	2025	2035	2005-2015	2015-2025	2025-2035	2005-2035 Annual Growth Rate
Durham	8,511	9,218	9,892	10,285	8%	7%	4%	0.6%
Orange	513	533	562	588	4%	5%	5%	0.5%
Chatham (eastern)	417	435	458	480	4%	5%	5%	0.5%
Chapel Hill - Orange County	6,982	7,418	8,495	8,875	6%	15%	4%	0.8%
Chapel Hill - Durham County	711	715	788	823	1%	10%	4%	0.5%
Carrboro	2,620	2,749	2,884	3,014	5%	5%	5%	0.5%
Hillsborough	94	98	104	107	4%	6%	3%	0.4%
Total	19,848	21,166	23,183	24,172	7%	10%	4%	0.7%

- Student Households are the number of full-time students attending post secondary education programs, and each student is considered a household.
- The overall annual growth rate for Student Households is 0.7 percent, which is less than one-half the annual rate for population, i.e., 1.6 percent.
- Most jurisdictions forecast an annual growth rate between 0.4 to 0.6 percent, except Chapel Hill which has an annual rate of 0.8 percent.
- These figures include Duke and UNC-Chapel Hill; staff is working on NCCU figures.

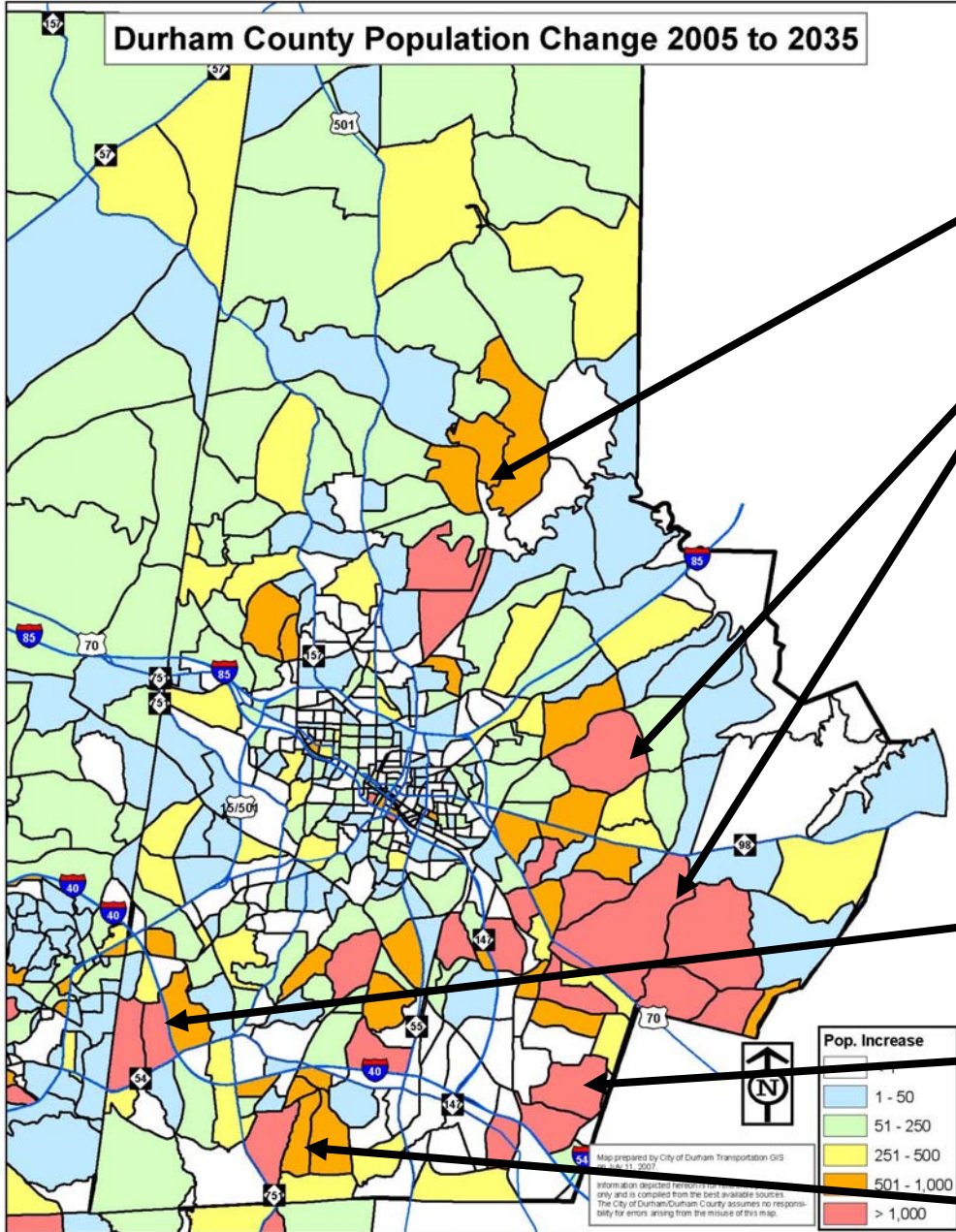
# SE Data – Population

## University Beds

	Total University Beds				University Beds % Growth			University Beds
	2005	2015	2025	2035	2005-2015	2015-2025	2025-2035	2005-2035 Annual Rate
Durham	7,746	8,376	8,947	9,527	8%	7%	6%	0.7%
Orange	0	0	0	0	0%	0%	0%	0.0%
Chatham (eastern)	0	0	0	0	0%	0%	0%	0.0%
Chapel Hill - Orange County	9,734	12,543	12,543	12,543	29%	0%	0%	0.8%
Chapel Hill - Durham County	0	0	0	0	0%	0%	0%	0.0%
Carrboro	0	0	0	0	0%	0%	0%	0.0%
Hillsborough	0	0	0	0	0%	0%	0%	0.0%
<b>Total</b>	<b>17,480</b>	<b>20,919</b>	<b>21,490</b>	<b>22,070</b>	<b>20%</b>	<b>3%</b>	<b>3%</b>	<b>0.8%</b>

- University Beds are the number of post secondary students that reside in dormitory-style housing
- The overall annual growth rate for University Beds is 0.8 percent, which is one-half the annual rate for population, i.e., 1.6 percent.
- Overall annual growth rates for Student Households and University Beds are very similar, 0.7 and 0.8 percent, respectively.

Durham County Population Change 2005 to 2035



# High Growth Areas

Treyburn and south of Treyburn.

East Durham, especially between NC 98 and US 70, and along future Northern Durham Parkway.

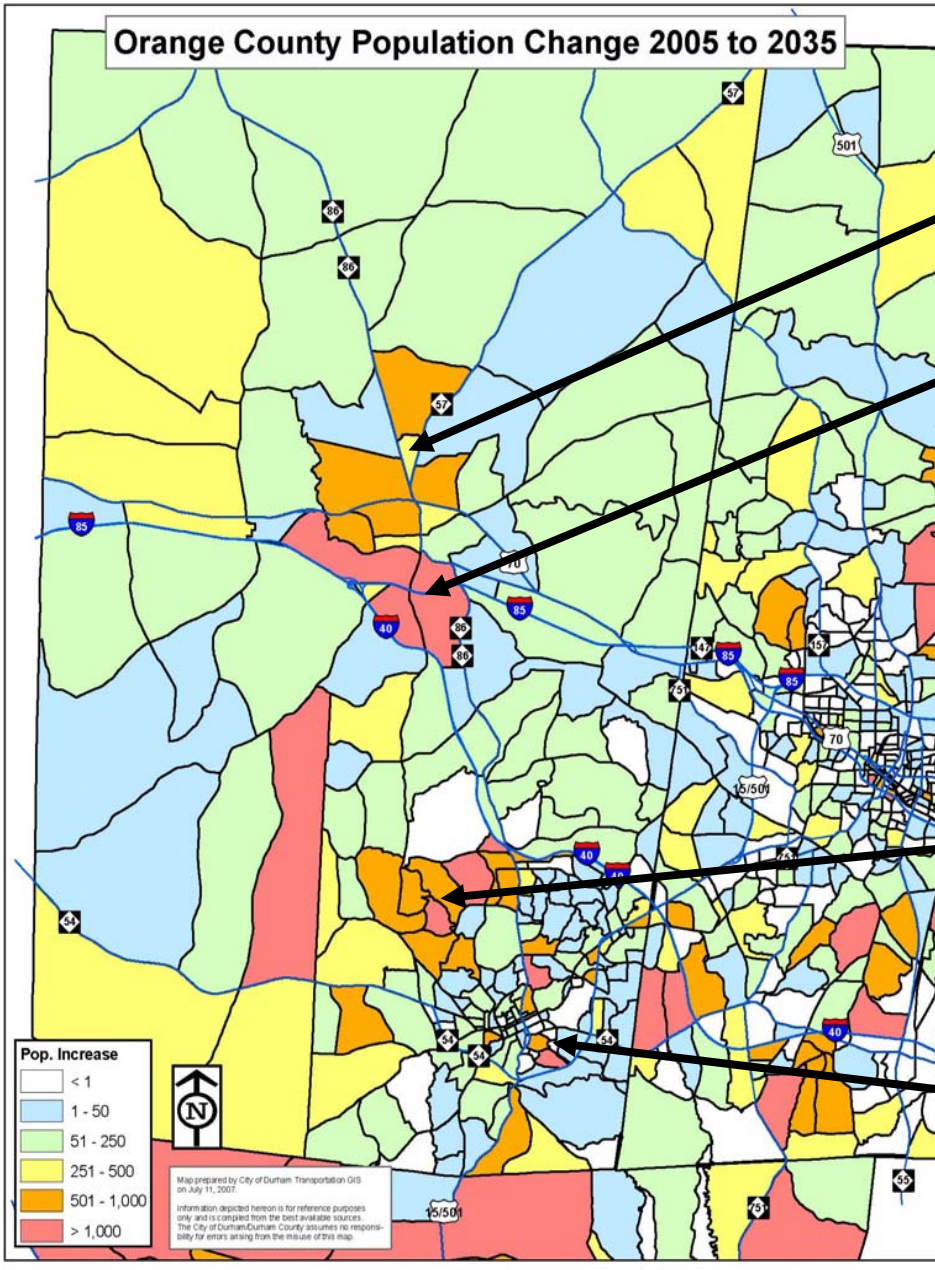
North of I-40/NC 54 interchange

Between RTP and Airport.

South of SouthPoint Mall

## Orange County Population Change 2005 to 2035

# High Growth Areas

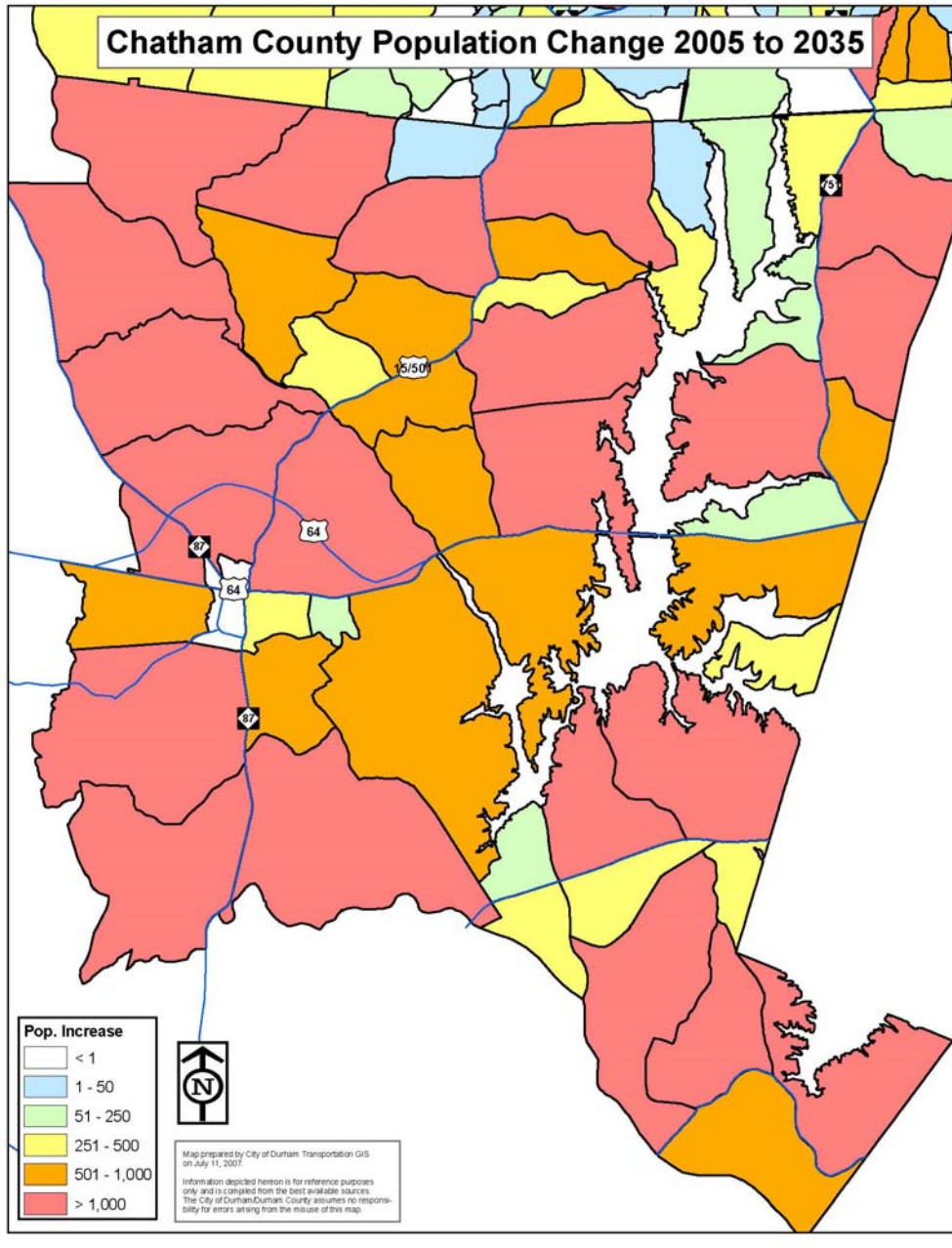


North of Hillsborough

Adjacent and between the I-40 and I-85 interchange

Northern Chapel Hill and Carrboro

UNC-Chapel Hill



## High Growth Areas

**High Growth everywhere except:**

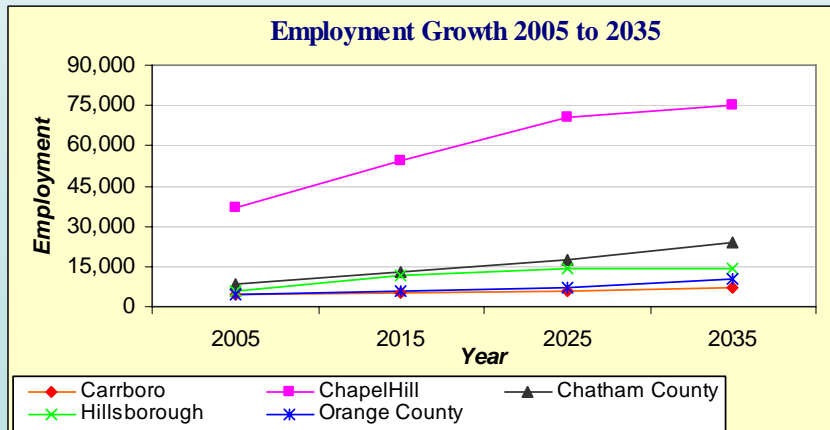
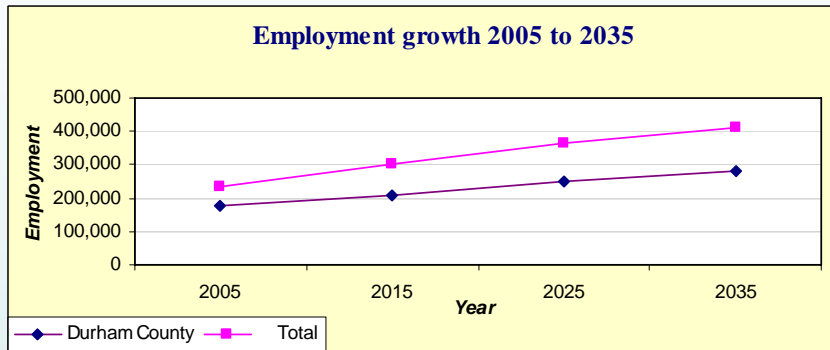
- Along parts of Jordon Lake
- Few built areas on US 15-501
- Central Pittsboro

# SE Data – Employment Totals

	Total Employment				Total Employment Percent Growth			Employment
	2005	2015	2025	2035	2005-2015	2015-2025	2025-2035	2005-2035 Rate
Durham	175,487	210,895	247,835	282,571	20%	18%	14%	1.6%
Orange (non-incorporated)	4,290	5,797	7,311	10,087	35%	26%	38%	2.9%
Chatham (eastern)	8,199	12,883	17,580	23,863	57%	36%	36%	3.6%
Chapel Hill - Orange County	36,190	52,428	66,609	70,727	45%	27%	6%	2.3%
Chapel Hill - Durham County	512	1,758	4,103	4,148	243%	133%	1%	7.2%
Carrboro	4,390	5,244	6,122	6,857	19%	17%	12%	1.5%
Hillsborough	5,679	11,484	13,954	14,453	102%	22%	4%	3.2%
<b>Total</b>	<b>234,747</b>	<b>300,489</b>	<b>363,514</b>	<b>412,706</b>	<b>28%</b>	<b>21%</b>	<b>14%</b>	<b>1.9%</b>

- Total employment will increase 177,959 during the 30-year period.
- Durham County employment increase (110,720) is largest among jurisdictions.
- Overall employment growth rate will decrease over time, and will decrease for all jurisdictions except for Orange County.

# SE Data – Employment Growth Rate



	Employment	
	2005-2035 Growth	2005-2035 Growth Percent
Durham	110,720	63%
Orange	5,797	135%
Chatham	15,664	191%
Chapel Hill	38,173	104%
Carrboro	2,467	56%
Hillsborough	8,774	154%
<b>Total</b>	<b>177,959</b>	<b>76%</b>

- Overall employment will increase 76 percent over the 30-year period.
- All jurisdictions except Durham and Carrboro will at least double their employment.

# SE Data – Employment

## Employment Categories

	Total			Percent Change	
	2005	2035	2005 to 2035 Difference	2005 to 2035 % Change	2005 to 2035 Annual Rate
Industrial	34,480	54,595	20,115	58%	1.5%
Highway Retail	12,800	22,477	9,677	76%	1.9%
Services	77,636	127,440	49,804	64%	1.7%
Retail	20,488	37,119	16,631	81%	2.0%
Office	36,733	90,637	53,904	147%	3.1%
Special Generators	52,610	80,438	27,828	53%	1.4%
<b>Total</b>	<b>234,747</b>	<b>412,706</b>	<b>177,959</b>	<b>76%</b>	<b>1.9%</b>

- Employment is broken into five categories and special generators (which are large retail centers, airports, hospitals and universities).
- The rate of Office and Retail growth will exceed the overall rate.
- The jobs added by Office or Services is more than double that of any other category.



# SE Data – Employment

## Guidance Totals

<b>2005 Employment</b>			
	<b>SE Data</b>	<b>ESC Estimate</b>	<b>Difference</b>
Durham County	175,999	184,130	-4%
Orange County	50,549	68,680	-26%

<b>2035 Employment</b>			
	<b>SE Data</b>	<b>ESC Estimate</b>	<b>Difference</b>
Durham County	286,719	285,761	0%
Orange County	102,124	116,669	-12%

### Notes:

**2005** employment is based on N.C. Employment Security Commission (ESC) estimate and related studies.

**2035** employment is based on relationship between ESC and Woods and Poole forecasts.

- Compared SE Data to Employment Security Commission (ESC) and private forecasts.
- Durham County Baseline 2005 and 2035 Forecasts are all within at least 4 percent of the ESC estimate.
- Orange County difference may be caused by missing student employment in Chapel Hill (6,500 to 7,500 employees).
- Assuming this student employment, reduces 2005 and 2035 Orange County Difference to 17 percent and 6 percent, respectively.
- The SE Data value is always lower than the ESC estimate.

# SE Data

## Population v. Employment

	Growth 2005 - 2035		Pop./Emp.
	Pop.	Emp.	Ratio
Durham	112,027	110,720	1.0
Orange	12,745	5,797	2.2
Chatham	83,063	15,664	5.3
Chapel Hill	22,144	38,173	0.6
Carrboro	7,411	2,467	3.0
Hillsborough	9,942	8,774	1.1
<b>Total</b>	<b>245,447</b>	<b>177,959</b>	<b>1.4</b>

	Annual Growth Rate 2005 - 2035	
	Population	Employment
Durham	1.2%	1.6%
Orange	0.8%	2.9%
Chatham	4.2%	3.6%
Chapel Hill	1.1%	2.3%
Carrboro	1.0%	1.5%
Hillsborough	2.0%	3.2%
<b>Total</b>	<b>1.6%</b>	<b>1.9%</b>

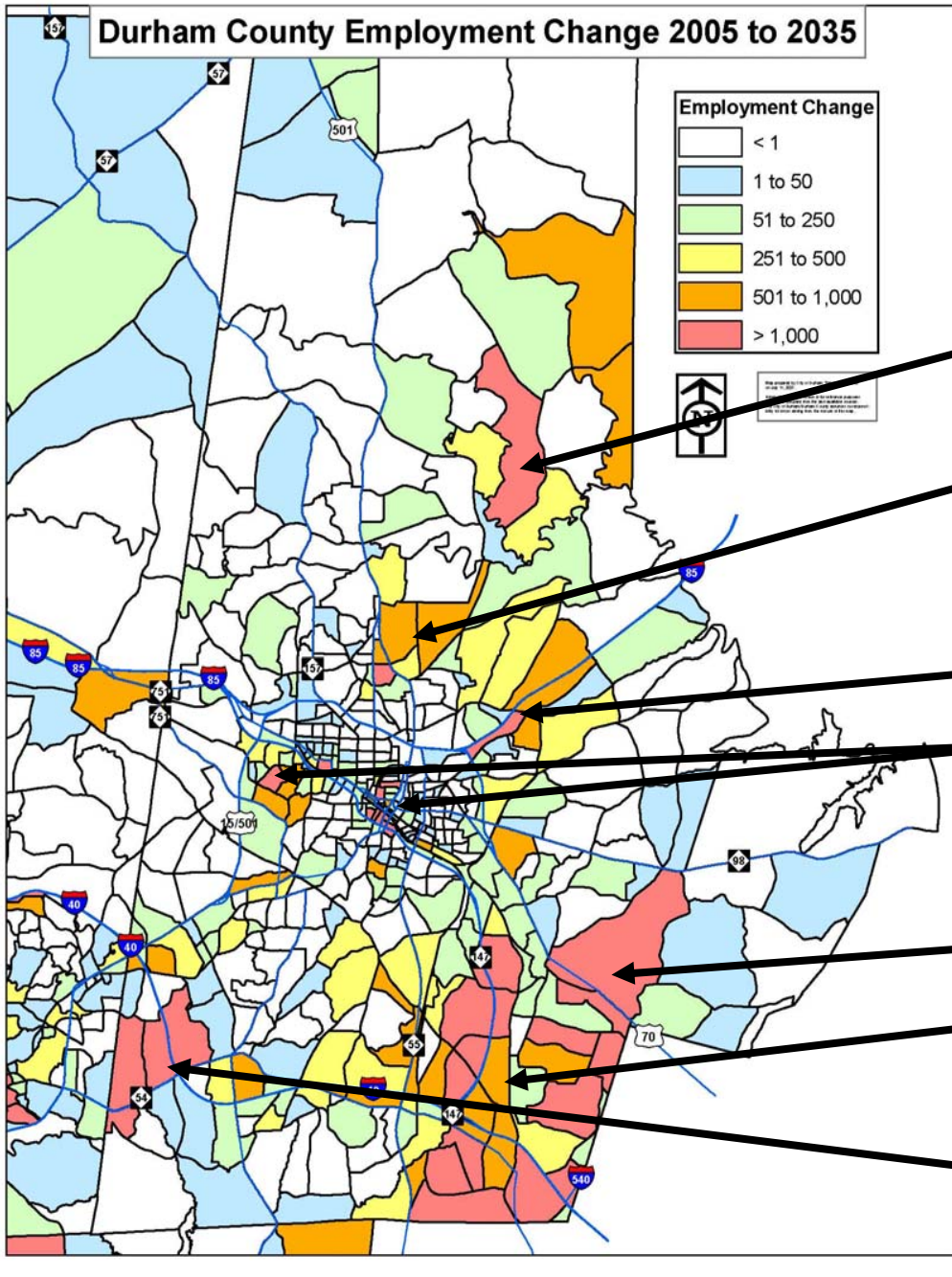
- In terms of numbers, population growth will exceed employment growth in all jurisdictions except Chapel Hill.
- In terms of growth rate, the employment annual growth rate will exceed the population growth rate, 1.9 percent versus 1.6 percent.
- The employment annual growth rate will exceed the population growth rate in all jurisdictions except Chatham County.
- Chatham County and Hillsborough population growth rates, 4.2 percent and 2.0 percent, will exceed the 1.6 percent overall rate.
- The Chapel Hill and Orange County employment annual growth rates exceeds the population growth rates by more than 2 to 1.

# SE Data

## Trip Generation

	Total Daily Trips			Population			Employment		
	2005	2035	% diff	2005	2035	% diff	2005	2035	% diff
Chatham	135,573	430,154	217%	34,067	117,130	244%	8,199	23,863	191%
Durham	1,358,073	2,192,503	61%	248,398	360,425	45%	175,999	286,719	63%
Orange	598,737	961,822	61%	132,163	182,520	38%	50,549	102,124	102%

- Using the current Triangle Regional Model (TRM), the table above compares the growth in population, employment and total trips.
- The County trip totals include trips that either originate or end in that county, thus both population (residential location) and employment (work location) impact the County trip totals.
- The percent increase in trips is a value that lies between the percent increase for the population and employment of the county.
- However, the percent increase in trips for Durham County is a value that lies much closer to the percent increase for employment (rather than that for population).



# High Growth Areas

Treyburn area.

Regional Hospital and medical parks.

I-85 corridor.

Downtown Durham and Duke University and Medical Center.

US 70 corridor.

RTP and Airport area.

North of I-40 and NC 54 interchange.

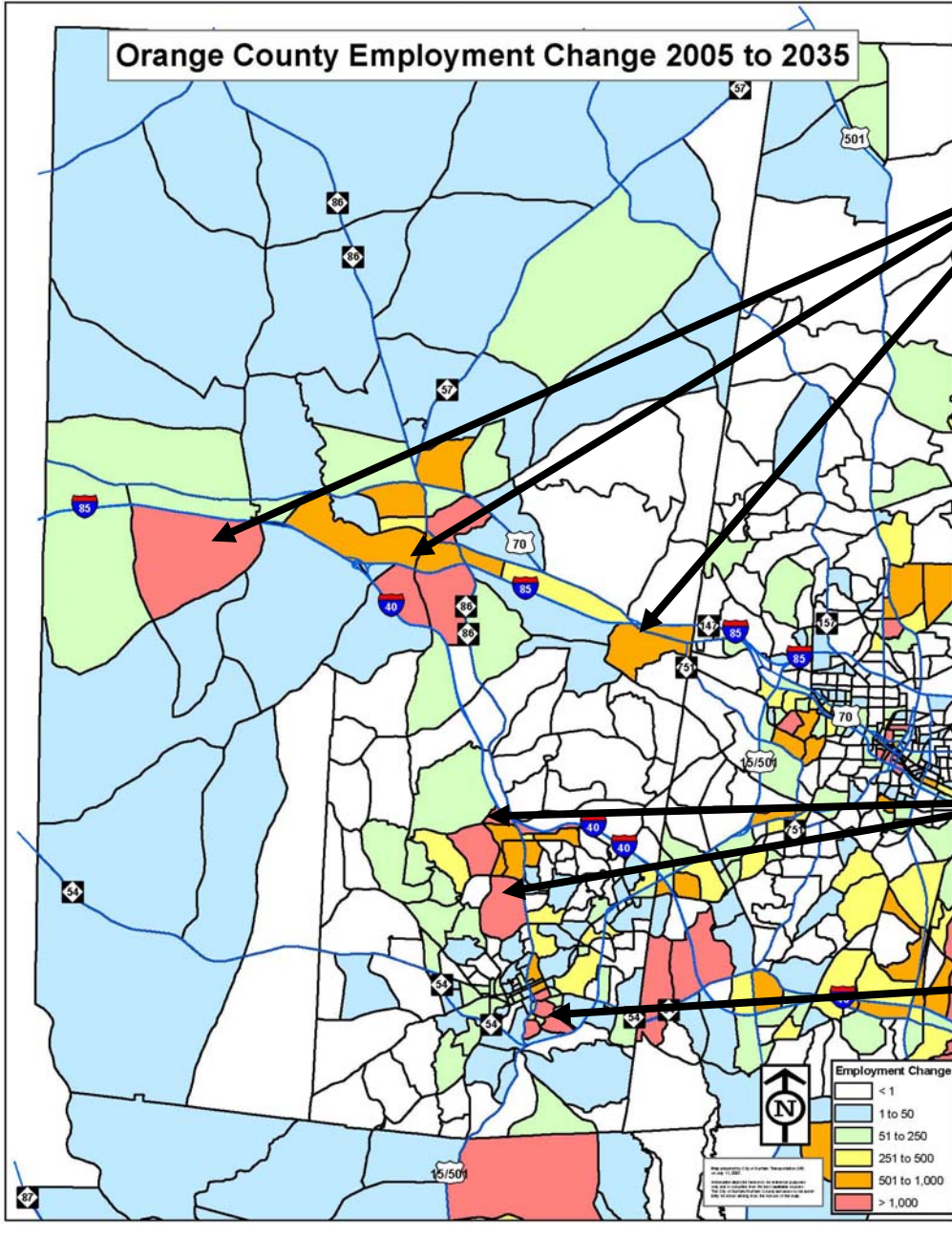
Orange County Employment Change 2005 to 2035

## High Growth Areas

Orange County development zones along I-85 and I-40.

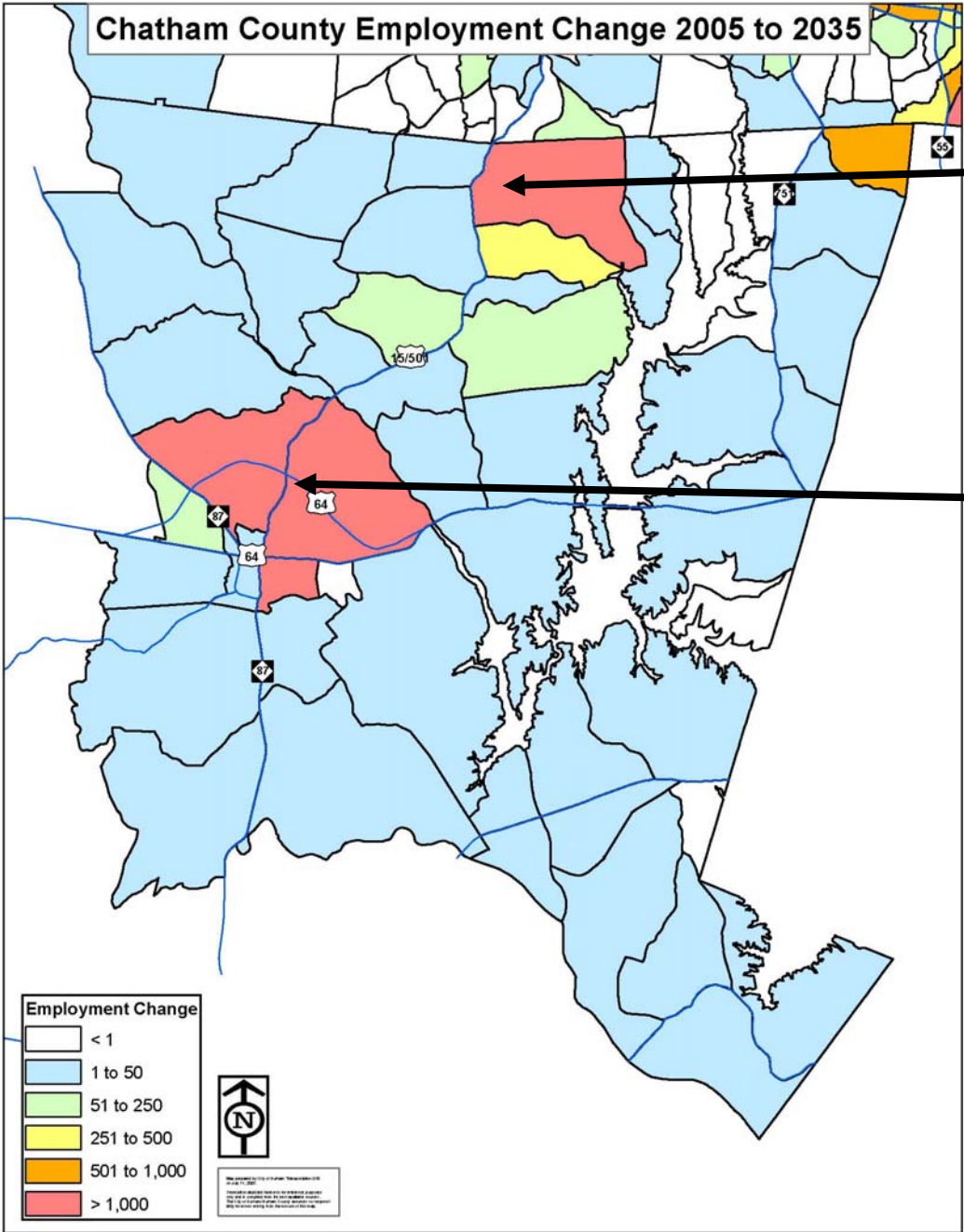
Carolina North and Eubanks Road area.

UNC-CH: university and health system.



# Chatham County Employment Change 2005 to 2035

## High Growth Areas



US 15-501 near Orange County-Chatham County border.

Northern Pittsboro, near US 64 By-pass and US 15-501

# Durham-Chapel Hill-Carrboro Metropolitan Planning Organization (DCHC MPO)

## Socioeconomic Data (SE Data)

TAC Meeting  
September 12, 2007

# Purpose

- Address issues from August 8<sup>th</sup> TAC meeting
- Comments and discussion
- Approve SE Data for use in Deficiency Analysis



# SE Data

## Population v. Employment (duplicate slide)

	Growth 2005 - 2035		Pop./Emp.
	Pop.	Emp.	Ratio
Durham	112,027	110,720	1.0
Orange	12,745	5,797	2.2
Chatham	83,063	15,664	5.3
Chapel Hill	22,144	38,173	0.6
Carrboro	7,411	2,467	3.0
Hillsborough	9,942	8,774	1.1
<b>Total</b>	<b>245,447</b>	<b>177,959</b>	<b>1.4</b>

	Annual Growth Rate 2005 - 2035	
	Population	Employment
Durham	1.2%	1.6%
Orange	0.8%	2.9%
Chatham	4.2%	3.6%
Chapel Hill	1.1%	2.3%
Carrboro	1.0%	1.5%
Hillsborough	2.0%	3.2%
<b>Total</b>	<b>1.6%</b>	<b>1.9%</b>

- In terms of numbers, population growth will exceed employment growth in all jurisdictions except Chapel Hill.
- In terms of growth rate, the employment annual growth rate will exceed the population growth rate, 1.9 percent versus 1.6 percent.
- The employment annual growth rate will exceed the population growth rate in all jurisdictions except Chatham County.
- Chatham County and Hillsborough population growth rates, 4.2 percent and 2.0 percent, will exceed the 1.6 percent overall rate.
- The Chapel Hill and Orange County employment annual growth rates exceeds the population growth rates by more than 2 to 1.

# SE Data

## Trip Generation (duplicate slide)

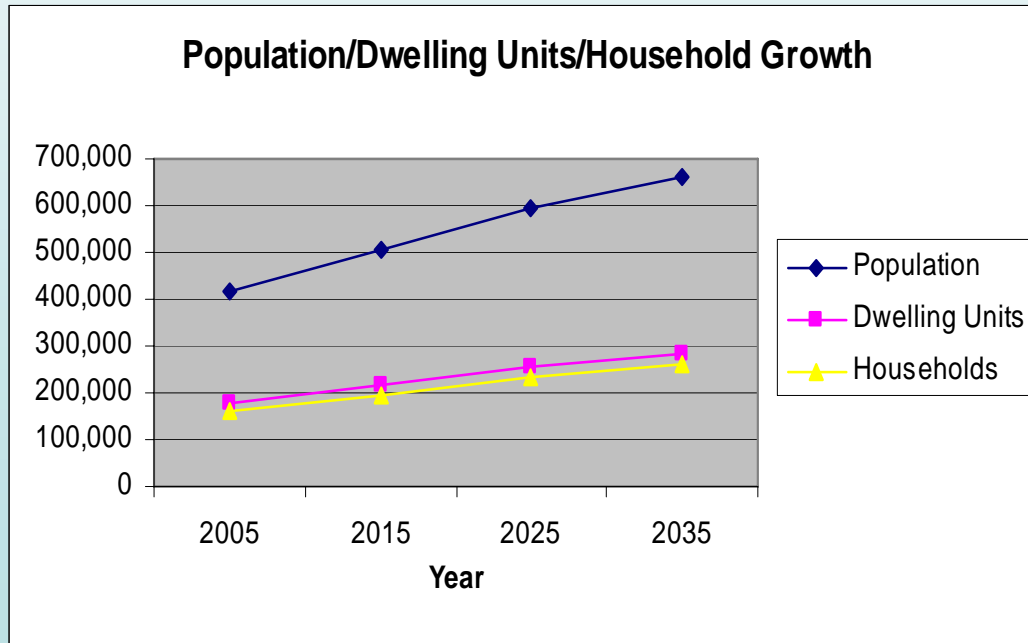
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Orange	598,737	961,822	61%	132,163	182,520	38%	50,549	102,124	102%

- Using the current Triangle Regional Model (TRM), the table above compares the growth in population, employment and total trips.
- The County trip totals include trips that either originate or end in that county, thus both population (residential location) and employment (work location) impact the County trip totals.
- The percent increase in trips is a value that lies between the percent increase for the population and employment of the county.
- However, the percent increase in trips for Durham County is a value that lies much closer to the percent increase for employment (rather than that for population).

# SE Data – Population

## Population/Dwelling Units/Households (duplicate slide)

	2005	2015	2025	2035	2005-2035 Growth	Annual Rate
<b>Population</b>	414,628	504,022	592,296	660,075	245,447	1.6%
<b>Dwelling Units</b>	176,946	215,357	255,672	285,724	108,778	1.6%
<b>Households</b>	159,763	195,155	231,323	258,974	99,211	1.6%



- Dwelling Units and Households are the building blocks of population, and therefore they have the same growth trend.
- A Dwelling Unit means a single physical unit that provides an independent living facility for one or more persons.
- A Household includes all the persons who occupy a housing unit.

# SE Data – Population

## Household Size Trends (*U.S. Census*)

County	Census: Household Size		Change
	1990	2000	
Wake	2.46	2.51	0.05
Johnston	2.55	2.58	0.03
Lee	2.59	2.61	0.02
Orange	2.34	2.36	0.02
Cabarrus	2.59	2.60	0.01
Harnett	2.60	2.61	0.01
Durham	2.40	2.40	0.00
Rowan	2.52	2.52	0.00

- Of eight counties in North Carolina that experienced household size increases or steadiness between the 1990 and 2000 Census, six are in the Triangle area.
- The household size in Orange County grew by 0.02 people, and Durham County remained the same.
- The immigration of Hispanic and young families are likely causing these increases. This immigration trend is likely to continue for the foreseeable future.

# SE Data – Population

## Household Size Trends (*SE Data*)

	SE Data: Household Size			
	2005	2015	2025	2035
Durham	2.38	2.40	2.42	2.42
Orange	2.52	2.52	2.52	2.52
Chatham	2.34	2.35	2.35	2.35
Chapel Hill	2.20	2.12	2.10	2.07
Carrboro	2.23	2.23	2.23	2.24
Hillsborough	2.37	2.37	2.37	2.37
<b>Total</b>	<b>2.36</b>	<b>2.37</b>	<b>2.37</b>	<b>2.37</b>

- Household size remains steady for most municipalities.
- Household size decreases in Chapel Hill and increases slightly in Durham County.
- Household size increases in Durham County because the Traffic Analysis Zones (TAZs) that are to experience the largest population increases tend to have higher than average household sizes.

**Note: Household size does not include group quarter and student household populations.**

# Comments?

- Comments on data?
- Clarify points or definitions?
- Want additional summary item?
- Question on process?

# Next Steps

- TAC Receive at August 8, 2007 Meeting.
- Make changes based on comments.
- TAC Adopt at September 12, 2007 meeting.
- Implement administrative changes as Travel Demand Model process identifies minor errors.