

# Comparison of Alternate Conceptual Plan Drafts

## Chatham-Cary Joint Issues Committee

Aug 14, 2009 Meeting

### Joint Plan Concepts 1, 2a, 2b, 2c, and 3

Staff has prepared five alternate concept plans for the Joint Plan study area, based on input and direction from meetings of the Chatham/Cary Joint Issues Committee. The five alternate plans are identified as Joint Plans 1, 2a, 2b, 2c, and 3.

- Plan 1 was presented at the June 16 meeting of the Joint Issues Committee, based on feedback provided by Committee members.
- Plans 2a-2c were presented at the July 14 meeting, based on committee direction from the June 16 meeting.
- Plan 3 was prepared for the August 14 meeting, based on input from the July 14 meeting.

The following table presents a comparative matrix of the land use characteristics of each of the plan drafts. The matrix also includes comparisons of the long-term buildout potential for each of the plan options, including estimates of housing, population, student population, and employment. The matrix includes data for the original February 2007 Joint Staff Team draft plan and the May 2007 Board of Commissioners draft plan.

Unless noted otherwise, the matrix reports the *maximum* possible number of housing units and population for each of the plan options. The ultimate actual number of housing units and population will likely be lower than these hypothetical maximums.

### Characteristics and Buildout Potential of Alternate Plan Drafts

	Feb. 2007 Joint Plan	May 2007 BoC Plan	Joint Plan 1	Joint Plan 2a	Joint Plan 2b	Joint Plan 2c	Joint Plan 3
<b>Plan Characteristics</b>							
Min. avg. lot size 1/4 –mile buffer of all US ACOE land, in acres	n/a	n/a	10	5	5	5	5
Min. avg. lot size within 1/2 mile of mean pool elevation of Jordan Lake, in ac.	10	5	10	5	5	5	5
Min. avg. lot size within 1 mile of mean pool elevation of Jordan Lake, in ac.	5	5	5	5	5	5	5
Total acres at 1 dwelling per 10 acres	2,357	0	6,374	0	0	0	0
Total acres at 1 dwelling per 5 acres	3,958	10,428	1,095	7,469	7,469	7,472	7,533
Total acres at 1 dwelling per 3 acres	0	0	213	213	213	213	213
Total acres at 1 dwelling per acre	2,308	0	667	667	667	667	667
Total acres at 2 dwellings per acre	1,746	0	1,182	1,182	2,079	1,609	1,555
Total acres for Old Chatham Golf	408	408	408	408	408	408	408
Total acres for office/employment “park” along Lewter Shop Road	0	0	840	840	0	427	n/a <sup>1</sup>
Total acres for commercial/retail portion of [Mixed Use] node at NC 751 & Lewter Shop Rd. <sup>2</sup>	15	n/a	20	20	n/a	20	24
Total acres for office portion of [Mixed Use] node at NC 751 & Lewter Shop Rd.	15	n/a	37	37	n/a	20	218
Total acres for residential portion of [Mixed Use] node at NC 751 & Lewter Shop Rd.	30	n/a	0	0	n/a	0	218
Number of joint public school/park sites	3 (parks only)	3 (parks only)	2	2	2	2	2
<b>Buildout Potential</b>							
Maximum number of dwellings <sup>3</sup>	7,067	2,086	3,958	4,596	6,390	5,450	8,734
Maximum estimated population <sup>4</sup>	19,807	5,846	11,095	12,881	17,909	15,276	22,585
Maximum estimated K-12 student pop. <sup>5</sup>	2,050	605	1,149	1,333	1,853	1,580	2,208
Total estimated nonresidential floor space <sup>6</sup>	231,957	0	6,842,187	6,842,187	0	3,564,297	1,849,993
Total estimated employment <sup>7</sup>	729	0	25,796	25,796	0	13,340	6,785

## Other Plan Characteristics:

- Proceeding eastward from the 1-mile lake buffer and ¼-mile COE buffer, residential densities generally transition upwards, first to 1 dwelling per acre, and then to 2 dwellings per acre.
- For Plans 1, 2a, 2b, 2c, and 3, in some cases, where a limited amount of land or a subdivision is “surrounded” by lower residential densities based on the buffers described above, the residential density has been dropped to reflect the surrounding densities. Also, in some cases the recommended residential density for an existing subdivision was reduced in order to reflect the actual average lot sizes in that subdivision.
- The above figures are exclusive of any sites that Chatham County has already zoned for nonresidential purposes.
- The above figures do not account for land that might be used for public schools or parks. Land for schools and parks would need to be subtracted from the table’s land use category acreages, which would in turn result in lower figures for housing, population, floor space, and/or employment. The average size for a Chatham County elementary/middle school is 26 acres. The NC Department of Public Instruction recommended size is 65 acres for high schools.

## Table Footnotes:

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<sup>1</sup> The office park from Plan 2c was combined into the mixed use node of Plan 3. See acreage for office component of mixed use node for this Plan Draft.

<sup>2</sup> In Plan Drafts 1, 2a, and 2c, it was assumed that no medium- or higher-density residential component was desired for the node. For Plan Drafts 1, 2a, 2c, and 3, the total acreage for the [mixed use] node was dictated by the plan drafts as per the direction of the Joint Issues Committee. For Plan Drafts 1, 2a, and 2c, 20 acres were assigned from the node for commercial/retail uses, and the remaining node acreage was assigned to office uses. For Plan Draft 3, 24 acres were assigned for commercial/retail uses, 218 acres for office uses, and 218 acres for residential uses. (Note: For Drafts 1, 2a, and 2c, the nonresidential floorspace figures have been updated since the July 14, 2009, meeting of the joint committee, in order to use separate FAR figures for commercial and office.)

<sup>3</sup> Figure given is the maximum number possible, if all plan areas were to be built to the maximum allowed densities.

<sup>4</sup> Figure given is based on the maximum possible number of dwellings. For single family dwellings, the figures assume 2.86 persons per dwelling, with an average occupancy rate of 98%. For multifamily dwellings, the figures assume 2.23 persons per dwelling, with an average occupancy rate of 92%. Based on U.S. Census figures for the area.

<sup>5</sup> Based on 0.29 students per single family house and 0.16 students per multifamily dwelling, per the Chatham County Education Impact Fee Study. Figure includes public school and charter school students only.

<sup>6</sup> Figure given is based on an average floor-to-area ratio (FAR) of 0.18 for commercial/retail, and 0.175 for office, which are the typical suburban FAR’s found in Cary. The floorspace contribution from the commercial/mixed-use node varies by plan draft: In order to generate a “worst-case” forecast, for Plan Drafts 1, 2a, 2b, and 2c the table assumes that all the acreage in this category will be used for commercial/retail. The 2007 Joint Staff Plan, however, splits the node up into commercial/retail, office, and medium-density housing.

<sup>7</sup> Figure is based on 3.80 employees per 1,000 sq. ft. of office space, and 2.50 employees per 1,000 sq. ft. of retail space. (Source: *ITE Trip Generation Manual*, and ULI’s *Dollars and Cents of Shopping Centers*.)

## Buildout Statistics Details

### Acreage Statistics and Projected Buildout for Concept Plan 1

(Created for the June 16, 2009, Committee Meeting)

Land Use Category	Gross Acres	Max. Dwelling Units	Nonresidential Floor Space (in Sq. Ft.)	Pop. Estimate	K-12 Student Est.	Employment Estimate (persons)
Residential, 1 unit per 10 ac.	6,374	637		1,787	185	0
Residential, 1 unit per 5 ac.	1,095	219		614	64	0
Residential, 1 unit per 3 ac.	213	71		199	21	0
Residential, 1 unit per 1 ac.	667	667		1,869	193	0
Residential, 2 unit per 1 ac.	1,182	2,364		6,626	686	0
Node – Commercial/Retail	20	0	156,816	0	0	392
Node – Office	37	0	282,051	0	0	1,072
Office Park	840	0	6,403,320	0	0	24,333
Park/OS/Golf	408	0		0	0	0
<b>Totals:</b>	<b>10,836</b>	<b>3,958</b>	<b>6,842,187</b>	<b>11,095</b>	<b>1,149</b>	<b>25,796</b>

### Acreage Statistics and Projected Buildout for Concept Plan 2a

(created for the July 14, 2009, committee meeting)

Land Use Category	Gross Acres	Max. Dwelling Units	Nonresidential Floorspace (Sq. Ft.)	Population Est.	K-12 Student Est.	Employment Est.
1 du per 10 ac.	0	0		0	0	0
1 du per 5 ac.	7,469	1,494		4,187	433	0
1 du per 3 ac.	213	71		199	21	0
1 du per 1 ac.	667	667		1,869	193	0
2 du per 1 ac.	1,182	2,364		6,626	686	0
Node – Commercial	20	0	156,816	0	0	392
Node – Office	37	0	282,051	0	0	1,072
Office Park	840	0	6,403,320	0		24,333
Park/OS/Golf <sup>8</sup>	408	0		0		0
<b>Totals:</b>	<b>10,836</b>	<b>4,596</b>	<b>6,842,187</b>	<b>12,881</b>	<b>1,333</b>	<b>25,796</b>

### Acreage Statistics and Projected Buildout for Concept Plan 2b

(created for the July 14, 2009, committee meeting)

Land Use Category	Gross Acres	Max. Dwelling Units	Nonresidential Floorspace (Sq. Ft.)	Population Est.	K-12 Student Est.	Employment Est.
1 du per 10 ac.	0	0		0	0	0
1 du per 5 ac.	<b>7,469</b>	1,494		4,187	433	0
1 du per 3 ac.	<b>213</b>	71		199	21	0
1 du per 1 ac.	<b>667</b>	667		1,869	193	0
2 du per 1 ac.	<b>2,079</b>	4,158		11,654	1,206	0
Commercial	0	0	0	0		0
Office Park	0	0	0	0		0
Park/OS/Golf	<b>408</b>	0		0		0
<b>Totals:</b>	<b>10,836</b>	<b>6,390</b>	<b>0</b>	<b>17,909</b>	<b>1,853</b>	<b>0</b>

**Acres Statistics and Projected Buildout for Concept Plan 2c**  
(created for the July 14, 2009, committee meeting)

Land Use Category	Gross Acres	Max. Dwelling Units	Nonresidential Floorspace (Sq. Ft.)	Population Est.	K-12 Student Est.	Employment Est.
1 du per 10 ac.	0	0		0	0	0
1 du per 5 ac.	7,472	1,494		4,189	433	0
1 du per 3 ac.	213	71		199	21	0
1 du per 1 ac.	667	667		1,869	193	0
2 du per 1 ac.	1,609	3,218		9,019	933	0
Node – Commercial	20	0	156,816	0	0	392
Node - Office	20	0	152,460	0	0	579
Office Park	427	0	3,255,021	0	0	12,369
Park/OS/Golf	408	0		0	0	0
<b>Totals:</b>	<b>10,836</b>	<b>5,450</b>	<b>3,564,297</b>	<b>15,276</b>	<b>1,580</b>	<b>13,340</b>

**Acres Statistics and Projected Buildout for Concept Plan 3**  
(created for the Aug. 14, 2009, committee meeting)

Land Use Category	Gross Acres	Max. Dwelling Units	Nonresidential Floorspace (Sq. Ft.)	Population Est.	K-12 Student Est.	Employment Est.
1 du per 10 ac.	0	0		0	0	
1 du per 5 ac.	7,533	1,507		4,223	437	
1 du per 3 ac.	213	71		199	21	
1 du per 1 ac.	667	667		1,869	193	
2 du per 1 ac.	1,555	3,110		8,717	902	
Mixed-Use Commercial	24		188,179			470
Mixed-Use Office	218		1,661,814			6,315
Mixed Use - Residential <sup>9</sup>	218	3,379		7,577	655	
Park/OS/Golf	408					
<b>Totals:</b>	<b>10,836</b>	<b>8,734</b>	<b>1,849,993</b>	<b>22,585</b>	<b>2,208</b>	<b>6,785</b>

**Acreage Statistics and Projected Buildout for May 2007  
Board of Commissioners' Conceptual Draft**

Land Use Category	Gross Acres	Max. Dwelling Units	Population Estimate	K-12 Student Est.
Residential, 1 unit per 5 ac.	10,428	2,086	5,846	605
Residential, 1 unit per 1 ac.	0	0	0	0
Residential, 2 unit per 1 ac.	0	0	0	0
Golf	408	0	0	0
<b>Totals:</b>	<b>10,428</b>	<b>2,086</b>	<b>5,846</b>	<b>605</b>

**Acreage Statistics and Projected Buildout for Feb. 2007 Joint Staff Plan Draft**

Land Use Category	Gross Acres	Max. Dwelling Units	Nonresidential Floorspace (in Sq. Ft.)	Pop. Estimate	K-12 Student Est.	Employment Estimate (persons)
Residential, 1 unit per 10 ac.	2,357	236		661	68	
Residential, 1 unit per 5 ac.	3,958	792		2,218	230	
Residential, 1 unit per 1 ac.	2,308	2,308		6,647	669	
Residential, 2 unit per 1 ac.	1,746	3,492		9,788	1,013	
Mixed Use - Retail	15	0	117,612		0	294
Mixed Use - Office	15	0	114,345		0	435
Mixed Use – Med. Density Resid. <sup>10</sup>	30	240		673	70	
Golf	408	0			0	
<b>Totals:</b>	<b>10,836</b>	<b>7,067</b>	<b>231,957</b>	<b>19,807</b>	<b>2,050</b>	<b>729</b>

<sup>8</sup> Although the Chatham Golf Club may in fact have some on-site employment for grounds keeping, it is likely negligible and is therefore not included in the employment estimates.

<sup>9</sup> The residential acreage in the mixed-use area was distributed as: 54.5 acres of patio homes at 6 units/acre; 54.5 acres of townhomes at 10 units/acre; 54.5 acres of garden-style multifamily at 16 units/acre; 54.5 acres of mid-rise multifamily at 30 units/acre.

<sup>10</sup> Assumes a maximum density of 8 dwellings per acre.