

ORANGE COUNTY, NC
SCHOOLS ADEQUATE PUBLIC
FACILITIES ORDINANCE

**PREPARED BY A STAFF COMMITTEE: PLANNING DIRECTORS,
SCHOOL REPRESENTATIVES, TECHNICAL ADVISORY COMMITTEE
(SAPFOTAC)**

**(PURSUANT TO PROVISIONS OF A MEMORANDUM OF
UNDERSTANDING ADOPTED IN 2002 & 2003)
(ORDINANCES ADOPTED IN JULY 2003)**

Annual Report
2017

(BASED ON NOVEMBER 2016 DATA)

CERTIFIED BY THE BOCC ON MAY X, 2017

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2017 SAPFOTAC Executive Summary

I. Base Memorandum of Understanding

A. Level of Service(No Change)Pg. 1

	<i>Chapel Hill/Carrboro School District</i>	<i>Orange County School District</i>
<i>Elementary</i>	105%	105%
<i>Middle</i>	107%	107%
<i>High</i>	110%	110%

B. Building Capacity and Membership(Change)Pg. 2

	<i>Chapel Hill/Carrboro School District</i>			<i>Orange County School District</i>		
	Capacity	Membership	Increase from Prior Year	Capacity	Membership	Increase from Prior Year
<i>Elementary</i>	5829	5567	66	3694	3293	(25)
<i>Middle</i>	2944	2829	(15)	2166	1724	(15)
<i>High</i>	3875	3762	61	2439	2446	(23)

C. Membership Date – November 15.....(No Change)Pg.17

II. Annual Update to SAPFO System

A. Capital Investment Plan (CIP)(No Change)Pg. 18

B. Student Membership Projection Methodology(No Change)Pg. 19 The average of 3, 5, and 10 year history/cohort survival, linear and arithmetic projection models.

C. Student Membership Projections(Change)Pg. 29

Analysis of 5 Years of Projections for 2016-17 School Year – Chapel Hill/Carrboro City Schools

(The first column for each year includes the student membership projection made for 2016-2017 in that given year. The second column for each year includes the number of students the projection was off compared to actual membership. An “L” indicates the projection was low compared to the actual, whereas an “H” indicates the projection was high compared to the actual.)

		Year Projection Made for 2016-17 Membership									
	Actual 2016 Membership	2011-2012		2012-2013		2013-2014		2014-2015		2015-2016	
Elementary	5567	6026	H459	5837	H270	5845	H278	5662	H95	5552	L15
Middle	2829	2987	H158	3004	H175	2962	H133	2928	H99	2830	H1
High	3762	4018	H256	4016	H254	3893	H131	3798	H36	3757	L5

Analysis of 5 Years of Projections for 2016-17 School Year – Orange County Schools

(The first column for each year includes the student membership projection made for 2016-2017 in that given year. The second column for each year includes the number of students the projection was off compared to actual membership. An “L” indicates the projection was low compared to the actual, whereas an “H” indicates the projection was high compared to the actual.)

		Year Projection Made for 2016-17 Membership									
	Actual 2016 Membership	2011-2012		2012-2013		2013-2014		2014-2015		2015-2016	
Elementary	3293	3699	H406	3622	H329	3567	H274	3274	L19	3325	H32
Middle	1724	1853	H129	1785	H61	1824	H100	1746	H22	1743	H19
High	2446	2449	H3	2429	L17	2468	H22	2540	H94	2504	H58

D. Student Membership Growth Rate(Change)Pg. 39

Projected Average Annual Growth Rate over Next 10 Years										
Year Projection Made:	Chapel Hill/Carrboro School District					Orange County School District				
	2012-13	2013-14	2014-15	2015-16	2016-17	2012-13	2013-14	2014-15	2015-16	2016-17
Elementary	1.18%	1.44%	1.11%	0.92%	0.91%	1.31%	1.30%	0.55%	0.80%	0.51%
Middle	1.59%	1.58%	1.15%	0.82%	0.95%	1.64%	1.42%	0.09%	0.67%	0.36%
High	1.60%	1.27%	1.22%	0.93%	0.72%	1.43%	1.35%	0.39%	0.56%	0.22%

E. Student / Housing Generation Rate(No Change)Pg. 42

SCHOOL ADEQUATE PUBLIC FACILITIES ORDINANCE STATUS

(based on future year Student Membership Projections)

CHAPEL HILL/CARRBORO SCHOOL DISTRICT

Elementary School Level

- A. Does not currently exceed 105% LOS standard (current LOS is 95.5%).
- B. The projected growth rate at this level is expected to decrease over the next 10 years, but remain positive (average ~0.91% per year compared to 1.24% over the past 10 years).
- C. Similar to last year, projections are not showing a need for an additional Elementary School in the 10-year projection period.

Middle School Level

- A. Does not currently exceed 107% LOS standard (current LOS is 96.1%).
- B. The projected growth rate at this level is expected to decrease over the next 10 years, but remain positive (average ~0.95% compared to an average of 1.28% over the past 10 years).
- C. Similar to last year, projections are not showing a need for an additional Middle School in the 10-year projection period.

High School Level

- A. Does not currently exceed the 110% LOS standard (current LOS is 97.1%).
- B. The projected growth rate at this level is expected to increase over the next 10 years (average ~0.72% compared to 0.45% over the past 10 years).
- C. Similar to last year, projections are not showing a need to expand Carrboro High School from the initial capacity of 800 students to the ultimate capacity of 1,200 students in the 10-year projection period.

ORANGE COUNTY SCHOOL DISTRICT**Elementary School Level**

- A. Does not currently exceed 105% LOS standard (current LOS is 89.1%).
- B. The projected growth rate at this level is expected to decrease, but remain positive over the next 10 years (average ~0.51% compared to 1.02% over the past 10 years).
- C. Similar to last year, projections are not showing a need for an additional Elementary School in the 10-year projection period.

Middle School Level

- A. Does not currently exceed 107% LOS standard (current LOS is 79.6%).
- B. The projected growth rate at this level is expected to decrease, but remain positive over the next 10 years (average ~0.36% compared to 0.92% over the past 10 years).
- C. Similar to last year, projections are not showing a need for an additional Middle School in the 10-year projection period.

High School Level

- A. Does not currently exceed 110% LOS standard (current LOS is 100.3%).
- B. The projected growth rate at this level is expected to decrease, but remain positive over the next 10 years (average ~0.22% compared to 1.53% over the past 10 years).
- C. Similar to last year, projections are not showing a need to expand Cedar Ridge High School from the initial capacity of 1,000 students to 1,500 students in the 10-year projection period.

ADDITIONAL INFORMATION

The Schools Adequate Public Facilities Ordinance (SAPFO) student projections illustrate when the adopted level of service capacities are forecasted to be met and/or exceeded in anticipation of CIP planning and the construction of a new school. However, as is being identified by both school districts, a new trend is emerging to renovate and expand existing facilities to address school capacity needs in a more feasible way. As this trend continues, additional capacity resulting from school renovations and expansions will be added to the projection models in stages, once funding is approved, versus the addition of greater capacity when a new school is constructed and completed. The renovation and expansion to existing facilities may delay construction of new schools further into the future. This process will pose some challenges to SAPFO compared to the existing process which indicates in advance when a completely new school is needed. Decisions on the timing of reconstruction funding would be indirectly linked to the SAPFO model.

SAPFO student projections for this year are not showing a need for new school construction or expansion in the 10-year projection period for both school districts due to slowing student growth rates. However, planned residential development in the near future may increase student membership and accelerate school construction and expansion needs into the 10-year projection period. Although capacity and construction needs are not identified this year, both school districts face a large backlog of school capital projects that need to be addressed. Given that student projections are not showing an immediate need for school construction in the 10-year period, this may provide the time for both school districts to commence and/or complete these projects in order to address ongoing needs.

The State of North Carolina passed legislation in 2015 resulting in a decrease in class size averages for kindergarten to third grade for the 2017-18 school year. Based on legislation, the class size averages may be reduced from 1:21 to 1:17. Due to significant statewide ramifications as a result of the reduced class size averages, the North Carolina General Assembly is reviewing a second bill to modify and increase the 1:17 class size averages in time for the 2017-18 school year. If legislative action is not taken, the 1:17 class size averages will remain and result in a decrease in capacity of approximately 444 students for OCS and 660 students for CHCCS. This will have significant impacts for both school districts, resulting in over capacity situations and requiring additional mobile units at the elementary school level. The SAPFO Technical Advisory Committee will continue monitoring this issue.

Orange County, NC School Adequate Public Facilities Ordinance

Introduction

The Schools Adequate Public Facilities Ordinance (SAPFO) and its Memorandum of Understanding are ordinances and agreements, respectively. Supporting documents are anticipated to be dynamic to incorporate the annual changing conditions of membership, capacity and student projections that may affect School Capital Investment Plan (CIP) timing. This formal annual report will be forthcoming to all of the Schools Adequate Public Facilities Ordinance partners each year as new information is available.

This updated information is used in the schools capital needs process of the Capital Investment Plan (Process 1) and within elements of the Schools Adequate Public Facilities Ordinance Certificate of Adequate Public Schools (CAPS) spreadsheet system (Process 2).

This report and any comments from the Schools Adequate Public Facilities Ordinance partners will be considered in the first half of each year by the Board of County Commissioners at a regular or special meeting. The various elements of the report are then “certified” and formally considered in the process of the upcoming Capital Investment Plan. The Certificate of Adequate Public Schools system is updated after November 15 when data is received from the school districts with actual membership and pre-certified capacity (i.e. CIP capacity or prior “joint action” capacity changes).

The Schools Adequate Public Facilities Ordinance and Memorandum of Understanding have dynamic aspects. The derivation of the baseline and update to the variables will continue in the future as a variety of school related issues are fine-tuned by technical and policy groups.

The primary facet of this report includes the creation of mathematical projections for student memberships by school levels (Elementary, Middle and High) and by School Districts (Chapel Hill/Carrboro and Orange County). This information is found in Section II, Subsections B, C, D, and E.

In summary, this report serves as an update to the dynamic conditions of student membership and school capacity which affect future projected needs considered in Capital Investment Planning.

Interested parties may make their comments known to the Board of County Commissioners prior to their review of the report and school CIP completion or ask questions of the SAPFOTAC members.

Schools Adequate Public Facilities Ordinance Partners

**ANNUAL REPORT AS OUTLINED IN
Schools Adequate Public Facilities Ordinance Memorandum
of Understanding (SAPFO MOU)
SECTION 1d**

**RESPECTFULLY SUBMITTED
TO SCHOOLS ADEQUATE PUBLIC FACILITIES
ORDINANCE PARTNERS**

Chapel Hill/Carrboro School District SAPFO	Orange County School District SAPFO
Board of County Commissioners	Board of County Commissioners
Carrboro Board of Aldermen	Hillsborough Town Council
Chapel Hill Town Council	
Chapel Hill/Carrboro School Board	Orange County School Board

Planning Directors/School Representatives
Technical Advisory Committee
(aka SAPFOTAC)

Town of Carrboro
Trish McGuire, Planning Director
301 West Main Street
Carrboro, NC 27510

Town of Chapel Hill
Ben Hitchings, Planning and Development Services Director
405 Martin Luther King, Jr. Blvd.
Chapel Hill, North Carolina 27514

Town of Hillsborough
Margaret Hauth, Planning Director
P.O. Box 429
Hillsborough, NC 27278

Orange County Planning Department
Craig Benedict, Planning Director
Ashley Moncado, Special Projects Planner
Gary Donaldson, Director of Finance and Administrative Services
131 W. Margaret Lane
P.O. Box 8181
Hillsborough, NC 27278

Orange County School District
Todd Wirt, Superintendent
Patrick Abele, Chief Operations Officer
200 E. King Street
Hillsborough, NC 27278

Chapel Hill-Carrboro School District
Todd LoFrese, Assistant Superintendent for Support Services
Catherine Mau, Coordinator of Student Enrollment
750 Merritt Mill Road
Chapel Hill, NC 2751

I. Base Memorandum of Understanding

A. Level of Service

1. **Responsible Entity for Suggesting Change** – Change can only be effectuated by amendment to Memorandum of Understanding (MOU) by all SAPFO partners.
2. **Definition** – Level of Service (LOS) means the amount (level) of students that can be accommodated (serviced) at a certain school system grade group [i.e., Elementary level (K-5), Middle Level (6-8), High School Level (9-12)].

3. **Standard for:**

Chapel Hill/Carrboro School District

Elementary	Middle	High School
105%	107%	110%

Standard for:

Orange County School District

Elementary	Middle	High School
105%	107%	110%

4. **Analysis of Existing Conditions:**

Chapel Hill/Carrboro School District

These standards are acceptable at this time.

Analysis of Existing Conditions:

Orange County School District

These standards are acceptable at this time.

5. **Recommendation:**

Chapel Hill/Carrboro School District

No change from above standard.

Recommendation:

Orange County School District

No change from above standard.

B. Building Capacity and Membership

1. **Responsible Entity for Suggesting Change** – The Planning Directors, School Representatives, and Technical Advisory Committee (SAPFOTAC) will receive requested changes that are CIP related and adopted in the prior year. CIP capacity changes will be updated along with actual membership received in November of each year. Other changes will be sent to a ‘Joint Action Committee’ of the BOCC and Board of Education, as noted in the MOU, who will make recommendations and forward changes (on the specific forms with justification) to the full Board of County Commissioners for review and action. These non-CIP changes would be updated in the upcoming November CAPS system recalibration and included in the SAPFOTAC report.
2. **Definition** – “For purposes of this Memorandum, "building capacity" will be determined by reference to State guidelines and the School District guidelines (consistent with CIP School Construction Guidelines/policies developed by the School District and the Board of County Commissioners) and will be determined by a joint action of the School Board and the Orange County Board of Commissioners. As used herein the term "building capacity" refers to permanent buildings. Mobile classrooms and other temporary student accommodating classroom spaces are not permanent buildings and may not be counted in determining the school districts building capacity.”

3. **Standard for:**

Chapel Hill/Carrboro School District

The original certified capacity for each of the schools was certified by the respective superintendent and incorporated in the initialization of the CAPS system (Chapel Hill Carrboro School District April 29, 2002 - Base) Capacity changes were made each year as follows:

2003: Increase of 619 at Rashkis Elementary.

2004: No changes at Elementary, Middle, or High School levels.

2005: No changes at Elementary, Middle, or High

Standard for:

Orange County School District

The original certified capacity for each of the schools was certified by the respective superintendent and incorporated in the initialization of the CAPS system (Orange County School District April 30, 2002 - Base) Capacity changes were made each year as follows:

2003: No net increase in capacity at Elementary level. No changes at Middle School level. Increase of 1,000 at Cedar Ridge High School.

2004: No net increase in capacity at Elementary

Section I

School levels.

2006: No changes at Elementary, Middle, or High School levels.

2007: An increase of 800 at the High School level with the opening of Carrboro High School.

2008: An increase of 323 at the Elementary School level due to the opening of Morris Grove Elementary School and the implementation of the 1:21 class size ratio in grades K-3

2009: No changes at Elementary, Middle, or High School levels.

2010: An increase in capacity of 40 students at the High School level with Phoenix Academy High School becoming official high school within the district

2011: No changes at Elementary, Middle, or High School levels.

2012: No changes at Elementary, Middle, or High School levels.

2013: An increase in capacity of 585 students due to the opening of Northside Elementary School.

2014: An increase in capacity of 104 students due to the opening of the Culbreth Middle School addition.

2015: No changes at Elementary, Middle, or High School levels.

2016: No changes at Elementary, Middle, or High School levels.

level. No changes at Middle or High School levels.

2005: An increase in capacity of 100 at Hillsborough Elementary with the completion of renovations.

2006: An increase in capacity of 700 at the Middle School level with the completion of Gravelly Hill Middle School and an increase of 15 at the High School level with the temporary location of Partnership Academy Alternative School. An increase of 2 at the Elementary level due to a change in the capacity calculation for each grade at each school.

2007: No changes at Elementary, Middle, or High School levels.

2008: A decrease of 228 at the Elementary School level due to the implementation of the 1:21 class size ratio in grades K-3 and an increase of 25 at the High School level with the completion of the new Partnership Academy Alternative School.

2009: No changes at Elementary, Middle, or High School levels.

2010: No changes at Elementary, Middle, or High School levels.

2011: No changes at Elementary, Middle, or High School levels.

2012: No changes at Elementary or Middle School levels. A decrease of 119 at High School level as a result of a N.C. Department of Public Instruction (DPI) study.

2013: No changes at Elementary, Middle, or High

4. Analysis of Existing Conditions:

Chapel Hill/Carrboro School District

The Schools Facilities Task Force developed a system to calculate capacity. Any changes year to year will be monitored, reviewed, and recorded by the SAPFOTAC on approved forms distributed to SAPFO partners and certified upon approval by the Board of County Commissioners each year. The requested 2016-17 capacity is noted on Attachment I.B.4

5. Recommendation:

Chapel Hill/Carrboro School District

Accept school capacities at all levels, as reported by CHCCS and shown in Attachment I.B.4.

School levels.

2014: No changes at Elementary, Middle, or High School levels.

2015: No changes at Elementary, Middle, or High School levels.

2016: No changes at Elementary, Middle, or High School levels.

Analysis of Existing Conditions:

Orange County School District

The Schools Facilities Task Force developed a system to calculate capacity. Any changes year to year will be monitored, reviewed, and recorded by the SAPFOTAC on approved forms distributed to SAPFO partners and certified upon approval by the Board of County Commissioners each year. The requested 2016-17 capacity is noted on Attachment I.B.3

Recommendation:

Orange County School District

Accept school capacities at all levels, as reported by OCS and shown in Attachment I.B.3.

School APFO Capacity, Membership and Change Request Form

School District: Orange County Schools

SAPFO CAPS Year: November 13, 2015 - November 14, 2016

Capacity and Membership Submittal Date: November 13, 2015

Elementary School	Square Feet	2011-2012 Requested Capacity	2012-2013 Requested Capacity	2013-2014 Requested Capacity	2014-2015 Requested Capacity	2015-2016 Requested Capacity	Justification Footnote #	Membership
Cameron Park	70,812	565	565	565	565	565		609
Central	52,492	455	455	455	455	455		319
Efland Cheeks	64,316	497	497	497	497	497		428
Grady Brown	74,016	544	544	544	544	544		486
Hillsborough	51,106	471	471	471	471	471		466
New Hope	100,164	586	586	586	586	586		621
Pathways	85,282	576	576	576	576	576		389
Total	498,188	3,694	3,694	3,694	3,694	3,694		3,318

Special Note(s): 1. For the November 15, 2002 base year the board accepted the superintendent-certified capacities as part of the School Facilities Task Force review and 2003 Planners and School Representative Technical Advisory Committee Report. These capacities will remain effective until changed by (1) the School CIP or (2) an amended version of this form that is certified by the BOCC. 2. Due to November 15th falling on a Sunday this year, membership and capacity numbers shall be provided for Friday, November 13, 2015.

Justification:

Capacity Certification:



Superintendent 11/19/15
Date

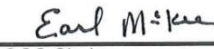


BOCC Chair 12/15/15
Date

Membership Certification:



Superintendent 11/19/15
Date



BOCC Chair 12/15/15
Date

School APFO Capacity, Membership and Change Request Form

School District: Orange County Schools

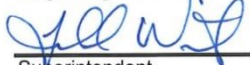
SAPFO CAPS Year: November 13, 2015 - November 14, 2016

Capacity and Membership Submittal Date: November 13, 2015

Middle School	Square Feet	2011-2012 Requested Capacity	2012-2013 Requested Capacity	2013-2014 Requested Capacity	2014-2015 Requested Capacity	2015-2016 Requested Capacity	Justification Footnote #	Membership
A.L. Stanback	136,000	740	740	740	740	740		635
C.W. Stanford	107,620	726	726	726	726	726		654
Gravelly Hill	123,000	700	700	700	700	700		450
Total	366,620	2,166	2,166	2,166	2,166	2,166		1,739

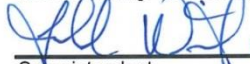
Special Note(s): 1. For the November 15, 2002 base year the board accepted the superintendent-certified capacities as part of the School Facilities Task Force review and 2003 Planners and School Representative Technical Advisory Committee Report. These capacities will remain effective until changed by (1) the School CIP or (2) an amended version of this form that is certified by the BOCC. 2. Due to November 15th falling on a Sunday this year, membership and capacity numbers shall be provided for Friday, November 13, 2015.

Justification:
Capacity Certification:

 11/19/15
Superintendent Date

 12/15/15
BOCC Chair Date

Membership Certification:

 11/19/15
Superintendent Date

 12/15/15
BOCC Chair Date

School APFO Capacity, Membership and Change Request Form

School District: Orange County Schools

SAPFO CAPS Year: November 13, 2015 - November 14, 2016

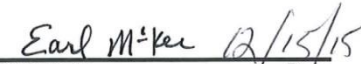
Capacity and Membership Submittal Date: November 13, 2015

High School	Square Feet	2011-2012 Requested Capacity	2012-2013 Requested Capacity	2013-2014 Requested Capacity	2014-2015 Requested Capacity	2015-2016 Requested Capacity	Justification Footnote #	Membership
Orange	213,509	1,518	1,399	1,399	1,399	1,399		1,298
Cedar Ridge	206,900	1,000	1,000	1,000	1,000	1,000		1,140
Partnership	6,600	40	40	40	40	40		31
Total	427,009	2,558	2,439	2,439	2,439	2,439		2,469

Special Note(s): 1. For the November 15, 2002 base year the board accepted the superintendent-certified capacities as part of the School Facilities Task Force review and 2003 Planners and School Representative Technical Advisory Committee Report. These capacities will remain effective until changed by (1) the School CIP or (2) an amended version of this form that is certified by the BOCC. 2. The 2012-2013 capacity numbers for Orange High School (1,399) is based on a capacity analysis and facilities study completed by the Department of Public Instruction in August 2012. 3. Due to November 15th falling on a Sunday this year, membership and capacity numbers shall be provided for Friday, November 13, 2015.

Justification:
Capacity Certification:

 11/19/15
Superintendent Date

 12/15/15
BOCC Chair Date

Membership Certification:

 11/19/15
Superintendent Date

 12/15/15
BOCC Chair Date

School APFO Capacity, Membership and Change Request Form

School District: Chapel Hill-Carrboro City Schools

SAPFO CAPS Year: November 13, 2015 - November 14, 2016

Capacity and Membership Submittal Date: November 13, 2015

Elementary School	Square Feet	2011-2012 Requested Capacity	2012-2013 Requested Capacity	2013-2014 Requested Capacity	2014-2015 Requested Capacity	2015-2016 Requested Capacity	Justification Footnote #	Membership (referenced school year)
Carrboro	60,832	533	533	533	533	533		502
Ephesus	66,952	448	448	448	448	448		440
Estes Hills	56,299	527	527	527	527	527		485
Glenwood	50,764	423	423	423	423	423		454
FP Graham	66,689	538	538	538	538	538		531
McDougle	98,000	564	564	564	564	564		499
Rashkis	95,729	585	585	585	585	585		517
Scroggs	90,980	575	575	575	575	575		505
Seawell	52,896	466	466	466	466	466		525
Morris Grove	90,221	585	585	585	585	585		558
Northside	99,500	0	0	585	585	585		485
Total	828,862	5,244	5,244	5,829	5,829	5,829		5,501

Special Note(s): 1. For the November 15, 2002 base year the board accepted the superintendent-certified capacities as part of the School Facilities Task Force review and 2003 Planners and School Representative Technical Advisory Committee Report. These capacities will remain effective until changed by (1) the School CIP or (2) an amended version of this form that is certified by the BOCC. 2. Due to November 15th falling on a Sunday this year, membership and capacity numbers shall be provided for Friday, November 13, 2015.

Justification:
Capacity Certification:

Superintendent

Date

BOCC Chair

Date

Membership Certification:

Superintendent

Date

BOCC Chair

Date

School APFO Capacity, Membership and Change Request Form

School District: Chapel Hill-Carrboro City Schools
SAPFO CAPS Year: November 13, 2015 - November 14, 2016
Capacity and Membership Submittal Date: November 13, 2015

Middle School	Square Feet	2011-2012 Requested Capacity	2012-2013 Requested Capacity	2013-2014 Requested Capacity	2014-2015 Requested Capacity	2015-2016 Requested Capacity	Justification Footnote #	Membership (referenced school year)
Culbreth	108,058	670	670	670	774	774		716
McDougle	136,221	732	732	732	732	732		689
Phillips	109,498	706	706	706	706	706		642
Smith	128,764	732	732	732	732	732		797
Total	482,541	2,840	2,840	2,840	2,944	2,944		2,844

Special Note(s): 1. For the November 15, 2002 base year the board accepted the superintendent-certified capacities as part of the School Facilities Task Force review and 2003 Planners and School Representative Technical Advisory Committee Report. These capacities will remain effective until changed by (1) the School CIP or (2) an amended version of this form that is certified by the BOCC. 2. Due to November 15th falling on a Sunday this year, membership and capacity numbers shall be provided for Friday, November 13, 2015.

Justification:

Capacity Certification:

Thos A. Smith 12/15/15
Superintendent Date

Earl M. Lee 12/15/15
BOCC Chair Date

Membership Certification:

Thos A. Smith 12/15/15
Superintendent Date

Earl M. Lee 12/15/15
BOCC Chair Date

School APFO Capacity, Membership and Change Request Form

School District: Chapel Hill-Carrboro City Schools

SAPFO CAPS Year: November 13, 2015 - November 14, 2016

Capacity and Membership Submittal Date: November 13, 2015

High School	Square Feet	2011-2012 Requested Capacity	2012-2013 Requested Capacity	2013-2014 Requested Capacity	2014-2015 Requested Capacity	2015-2016 Requested Capacity	Justification Footnote #	Membership (referenced school year)
Chapel Hill	241,111	1,520	1,520	1,520	1,520	1,520		1,471
East Chapel Hill	259,869	1,515	1,515	1,515	1,515	1,515		1,373
Carrboro	148,023	800	800	800	800	800		824
Phoenix Acad.	5,207	40	40	40	40	40		33
Total	654,210	3,875	3,875	3,875	3,875	3,875		3,701

Special Note(s): 1. For the November 15, 2002 base year the board accepted the superintendent-certified capacities as part of the School Facilities Task Force review and 2003 Planners and School Representative Technical Advisory Committee Report. These capacities will remain effective until changed by (1) the School CIP or (2) an amended version of this form that is certified by the BOCC. 2. Due to November 15th falling on a Sunday this year, membership and capacity numbers shall be provided for Friday, November 13, 2015.

Justification:
Capacity Certification:

Mike Hall 12/15/15
Superintendent Date

Earl Mike 12/15/15
BOCC Chair Date

Membership Certification:

Mike Hall 12/15/15
Superintendent Date

Earl Mike 12/15/15
BOCC Chair Date

School APFO Capacity, Membership and Change Request Form

School District: Orange County Schools

SAPFO CAPS Year: November 15, 2016 - November 14, 2017

Capacity and Membership Submittal Date: November 15, 2016

Elementary School	Square Feet	2012-2013 Requested Capacity	2013-2014 Requested Capacity	2014-2015 Requested Capacity	2015-2016 Requested Capacity	2016-2017 Requested Capacity	Justification Footnote #	Membership
Cameron Park	70,812	565	565	565	565	565		650
Central	52,492	455	455	455	455	455		277
Efland Cheeks	64,316	497	497	497	497	497		409
Grady Brown	74,016	544	544	544	544	544		503
Hillsborough	51,106	471	471	471	471	471		470
New Hope	100,164	586	586	586	586	586		597
Pathways	85,282	576	576	576	576	576		387
Total	498,188	3,694	3,694	3,694	3,694	3,694		3,293

Special Note(s): 1. For the November 15, 2002 base year the board accepted the superintendent-certified capacities as part of the School Facilities Task Force review and 2003 Planners and School Representative Technical Advisory Committee Report. These capacities will remain effective until changed by (1) the School CIP or (2) an amended version of this form that is certified by the BOCC.

Justification:
Capacity Certification:

 11/21/16
 Superintendent Date

 12/6/2016
 BOCC Chair Date

Membership Certification:

 11/21/16
 Superintendent Date

 12/6/2016
 BOCC Chair Date

School APFO Capacity, Membership and Change Request Form

School District: Orange County Schools

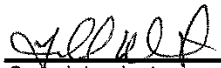
SAPFO CAPS Year: November 15, 2016 - November 14, 2017

Capacity and Membership Submittal Date: November 15, 2016

Middle School	Square Feet	2012-2013 Requested Capacity	2013-2014 Requested Capacity	2014-2015 Requested Capacity	2015-2016 Requested Capacity	2016-2017 Requested Capacity	Justification Footnote #	Membership
A.L. Stanback	136,000	740	740	740	740	740		628
C.W. Stanford	107,620	726	726	726	726	726		614
Gravelly Hill	123,000	700	700	700	700	700		482
Total	366,620	2,166	2,166	2,166	2,166	2,166		1,724

Special Note(s): 1. For the November 15, 2002 base year the board accepted the superintendent-certified capacities as part of the School Facilities Task Force review and 2003 Planners and School Representative Technical Advisory Committee Report. These capacities will remain effective until changed by (1) the School CIP or (2) an amended version of this form that is certified by the BOCC.

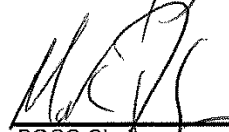
Justification:
Capacity Certification:

 11/21/16
 Superintendent Date

 12/6/2016
 BOCC Chair Date

Membership Certification:

 11/21/16
 Superintendent Date

 12/6/2016
 BOCC Chair Date

School APFO Capacity, Membership and Change Request Form

School District: Orange County Schools

SAPFO CAPS Year: November 15, 2016 - November 14, 2017

Capacity and Membership Submittal Date: November 15, 2016

High School	Square Feet	2012-2013 Requested Capacity	2013-2014 Requested Capacity	2014-2015 Requested Capacity	2015-2016 Requested Capacity	2016-2017 Requested Capacity	Justification Footnote #	Membership
Orange	213,509	1,399	1,399	1,399	1,399	1,399		1,257
Cedar Ridge	206,900	1,000	1,000	1,000	1,000	1,000		1,155
Partnership	6,600	40	40	40	40	40		34
Total	427,009	2,439	2,439	2,439	2,439	2,439		2,446

Special Note(s): 1. For the November 15, 2002 base year the board accepted the superintendent-certified capacities as part of the School Facilities Task Force review and 2003 Planners and School Representative Technical Advisory Committee Report. These capacities will remain effective until changed by (1) the School CIP or (2) an amended version of this form that is certified by the BOCC. 2. The 2012-2013 capacity numbers for Orange High School (1,399) is based on a capacity analysis and facilities study completed by the Department of Public Instruction in August 2012.

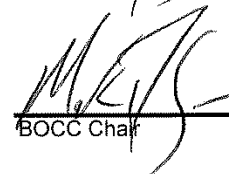
Justification:
Capacity Certification:

 12/5/16
Superintendent Date

 12/6/2016
BOCC Chair Date

Membership Certification:

 12/5/16
Superintendent Date

 12/6/2016
BOCC Chair Date

School APFO Capacity, Membership and Change Request Form**School District: Chapel Hill-Carrboro City Schools****SAPFO CAPS Year: November 15, 2016 - November 14, 2017****Capacity and Membership Submittal Date: November 15, 2016**

Elementary School	Square Feet	2012-2013 Requested Capacity	2013-2014 Requested Capacity	2014-2015 Requested Capacity	2015-2016 Requested Capacity	2016-2017 Requested Capacity	Justification Footnote #	Membership (referenced school year)
Carrboro	60,832	533	533	533	533	533		496
Ephesus	66,952	448	448	448	448	448		408
Estes Hills	56,299	527	527	527	527	527		499
Glenwood	50,764	423	423	538	423	423		483
FP Graham	66,689	538	538	423	538	538		582
McDougle	98,000	564	564	564	564	564		516
Rashkis	95,729	585	585	585	585	585		502
Scroggs	90,980	575	575	585	575	575		505
Seawell	52,896	466	466	585	466	466		549
Morris Grove	90,221	585	585	575	585	585		544
Northside	99,500	0	585	466	585	585		483
Total	828,862	5,244	5,829	5,829	5,829	5,829		5,567

Special Note(s): 1. For the November 15, 2002 base year the Board accepted the superintendent-certified capacities as part of the School Facilities Task Force review and 2003 Planners and School Representative Technical Advisory Committee Report. These capacities will remain effective until changed by (1) the School CIP or (2) an amended version of this form that is certified by the BOCC.

Justification:**Capacity Certification:**

[Signature] 11-18-16
Superintendent Date

Membership Certification:

[Signature] 11-18-16
Superintendent Date

[Signature] 12/4/2016
BOCC Chair Date

[Signature] 12/4/2016
BOCC Chair Date

School APFO Capacity, Membership and Change Request Form

School District: Chapel Hill-Carrboro City Schools

SAPFO CAPS Year: November 15, 2016 - November 14, 2017

Capacity and Membership Submittal Date: November 15, 2016

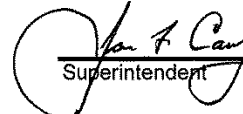
Middle School	Square Feet	2012-2013 Requested Capacity	2013-2014 Requested Capacity	2014-2015 Requested Capacity	2015-2016 Requested Capacity	2016-2017 Requested Capacity	Justification Footnote #	Membership (referenced school year)
Culbreth	122,467	670	670	774	774	774		712
McDougle	136,221	732	732	732	732	732		671
Phillips	109,498	706	706	706	706	706		651
Smith	128,764	732	732	732	732	732		795
Total	496,950	2,840	2,840	2,944	2,944	2,944		2,829

Special Note(s): 1. For the November 15, 2002 base year the Board accepted the superintendent-certified capacities as part of the School Facilities Task Force review and 2003 Planners and School Representative Technical Advisory Committee Report. These capacities will remain effective until changed by (1) the School CIP or (2) an amended version of this form that is certified by the BOCC.

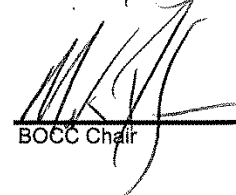
Justification:
Capacity Certification:

 11-18-16
Superintendent Date

Membership Certification:

 11-18-16
Superintendent Date

 12/6/2016
BOCC Chair Date

 12/4/2016
BOCC Chair Date

School APFO Capacity, Membership and Change Request Form

School District: Chapel Hill-Carrboro City Schools
SAPFO CAPS Year: November 15, 2016 - November 14, 2017
Capacity and Membership Submittal Date: November 15, 2016

High School	Square Feet	2012-2013 Requested Capacity	2013-2014 Requested Capacity	2014-2015 Requested Capacity	2015-2016 Requested Capacity	2016-2017 Requested Capacity	Justification Footnote #	Membership (referenced school year)
Chapel Hill	241,111	1,520	1,520	1,520	1,520	1,520		1,521
East Chapel Hill	259,869	1,515	1,515	1,515	1,515	1,515		1,381
Carrboro	148,023	800	800	800	800	800		828
Phoenix Acad.	5,207	40	40	40	40	40		32
Total	654,210	3,875	3,875	3,875	3,875	3,875		3,762

Special Note(s): 1. For the November 15, 2002 base year the Board accepted the superintendent-certified capacities as part of the School Facilities Task Force review and 2003 Planners and School Representative Technical Advisory Committee Report. These capacities will remain effective until changed by (1) the School CIP or (2) an amended version of this form that is certified by the BOCC.

Justification:

Capacity Certification:

Jan F. Cay 11-18-16
Superintendent Date

Membership Certification:

Jan F. Cay 11-18-16
Superintendent Date

[Signature] 12/6/2016
BOCC Chair Date

[Signature] 12/6/2016
BOCC Chair Date

C. Membership Date

1. ***Responsible Entity for Suggesting Change*** – Change can be effectuated only by amendment to Memorandum of Understanding (MOU) by all SAPFO partners. The Planning Directors, School Representatives, and Technical Advisory Committee (SAPFOTAC) may advise if a change in date would improve the reporting or timeliness of the report.
2. ***Definition*** – The date at which student membership is calculated. This date is updated each year and also serves as the basis for projections along with the history from previous years. “For purposes of this Memorandum, the term "school membership" means the actual number of students attending school as of November 15 of each year. The figure is determined by considering the number of students enrolled (i.e. registered, regardless of whether a student is no longer attending school) and making adjustments for withdrawals, dropouts, deaths, retentions and promotions. Students who are merely absent from class on the date membership is determined as a result of sickness or some other temporary reason are included in school membership figures. Each year the School District shall transmit its school membership to the parties to this agreement no later than five (5) school days after November 15.
3. ***Standard for:***

Chapel Hill/Carrboro School District November 15 of each year	Standard for: Orange County School District November 15 of each year
---	--
4. ***Analysis of Existing Conditions:***

This will be analyzed in the future years to determine if it is an exemplary date.
5. ***Recommendation:***

Chapel Hill/Carrboro School District No change at this time.	Recommendation: Orange County School District No change at this time.
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II. Annual Update to Schools Adequate Public Facilities Ordinance System

A. Capital Investment Plan (CIP)

1. ***Responsible Entity for Suggesting Change*** – The updating of this section will be conducted by the Board of County Commissioners (BOCC) after review of the CIP requests from the School Districts. Action regarding CIP programs usually occurs during the BOCC budget Public Hearing process in the winter and spring of each year. The development of the CIP considers the conditions noted in the SAPFOTAC report released in the same CIP development year including LOS (level of service), capacity, and membership projections.
2. ***Definition*** – The process and resultant program to determine school needs and provide funding for new school facilities through a variety of funding mechanisms.
3. ***Standard for:***

Chapel Hill/Carrboro School District	Orange County School District
Not Applicable	Not Applicable
4. ***Analysis of Existing Conditions:***

The MOU outlines a system of implementing the SAPFO, including issuing Certificates of Adequate Public Schools (CAPS) to new development if capacity is available. The Requests for CAPS will be evaluated using the most recently adopted Capital Investment Plan. A new Capital Investment Plan is currently under development for approval prior to June 30, 2017.
5. ***Recommendation:***

Not subject to staff review.

B. Student Membership Projection Methodology

1. ***Responsible Entity for Suggesting Change*** – This section is reviewed and recommended by the Planning Directors, School Representatives, and Technical Advisory Committee (SAPFOTAC) to the BOCC for change, if necessary.
2. ***Definition*** – The method(s) by which student memberships are calculated for future years to determine total membership at each combined school level (Elementary, Middle, and High School) which take into consideration historical membership totals at a specific time (November 15) in the school year. These methods are also known as ‘models’.
3. ***Standard for:***

Chapel Hill/Carrboro School District Presently, the <u>average of five models</u> is being used: namely 3, 5, and 10 year history/cohort survival methods, Orange County Planning Department Linear Wave, and Tischler Linear methods. Attachment II.B.1 includes a description of each model.	Standard for: Orange County School District
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4. ***Analysis of Existing Conditions:***

Performance of the models is monitored each year. The value of a projection model is in its prediction of school level capacities at least three years in advance of capacity shortfalls so the annual Capital Investment Plan (CIP) updates can respond proactively with siting, design, and construction. Attachment II.B.1 includes a description of each model. Attachment II.B.3 shows the performance of the models for the 2015-16 school year from the prior year projection.
5. ***Recommendation:***

More than ten years of projection results are now available. Analysis on the accuracy of the results is showing that some models have better results in one district while others have better results in the other district. The historic growth rate is recorded by the models, but projected future growth is more difficult to accurately quantify. In all areas of the county, proposed growth is not included in the SAPFO projection system until actual students begin enrollment. The system is updated in November of each year, becoming part of the historical projection base.

STUDENT MEMBERSHIP PROJECTIONS

PROJECTION TYPE	DESCRIPTION / CHARACTERISTICS	FORMULA	ASSUMPTIONS
Tischler Linear (OCS & CHCCS)	Mathematical formula; straight line projection	$y = ((c^*b)^x) + b$ y=projected population; c=historical annual change; b=base year; x= projection years	Historical growth is reflected in projected growth
OCP Linear Wave (OCS)	Mathematical linear with percent variation among school levels; reflects progressing waves of membership	$BYM + (BYI + 5(n)) = EYM$ $EYM * SL = EYM/SL$ BYM= base year 2nd month membership; BYI=year student membership increment base; EYM=ensuing year membership; n=projection year; %SL=% of total membership per school level (i.e. elementary, middle, high); EYM/SL=ensuing year member by school level	Base year growth reflects 10-year average; increase in BYI of 5 every other year reflects increases in housing growth; reflects buildout constraints
OCP Linear Wave (CHCCS)	Mathematical linear with percent variation among school levels; reflects progressing waves of membership	$BYM + (BYI - 15(n)) = EYM$ $EYM * SL = EYM/SL$ BYM= base year 2nd month membership; BYI=year student membership increment base; EYM=ensuing year membership; n=projection year; %SL=% of total membership per school level (i.e. elementary, middle, high); EYM/SL=ensuing year member by school level	Base year growth reflects 10-year average; decrease in BYI of 15 until school year 2010-2011 reflects decreases in housing growth; reflects buildout constraints
3-Year Cohort (OCS & CHCCS)	Mathematical formula that computes the average advancement rate over the previous 3 years for each grade level and then uses each rate to calculate projected membership by school level; an assumed kindergarten membership is based on birth records and/or historical growth rates	$K_n = K_{n-1} + (K_{n-1} * 0.01)$ $n=1$ $a = (\sum G_n / g_{n-1}) / 3$ $n=3$ $b = g_{n-1} (a)$ K=kindergarten membership; n=given school year; G=given grade's membership (other than kindergarten); g= previous grade's membership; a=average advancement rate; b=projected membership	Assumes a 1% annual growth rate for the kindergarten grade level; assumes the same percentage of students in each grade level graduate to the next level each year
5 year Cohort (OCS & CHCCS)	Mathematical formula that computes the average advancement rate over the previous 5 years for each grade level and then uses each rate to calculate projected membership by school level; an assumed kindergarten membership is based on birth records and/or historical growth rates	$K_n = K_{n-1} + (K_{n-1} * 0.01)$ $n=1$ $a = (\sum G_n / g_{n-1}) / 5$ $n=5$ $b = g_{n-1} (a)$ K=kindergarten membership; n=given school year; G=given grade's membership (other than kindergarten); g= previous grade's membership; a=average advancement rate; b=projected membership	Assumes a 1% annual growth rate for the kindergarten grade level; assumes the same percentage of students in each grade level graduate to the next level each year
10 year Cohort (OCS & CHCCS)	Mathematical formula that computes the average advancement rate over the previous 10 years for each grade level and then uses each rate to calculate projected membership by school level; an assumed kindergarten membership is based on birth records and/or historical growth rates	$K_n = K_{n-1} + (K_{n-1} * 0.01)$ $n=1$ $a = (\sum G_n / g_{n-1}) / 10$ $n=10$ $b = g_{n-1} (a)$ K=kindergarten membership; n=given school year; G=given grade's membership (other than kindergarten); g= previous grade's membership; a=average advancement rate; b=projected membership	Assumes a 1% annual growth rate for the kindergarten grade level; assumes the same percentage of students in each grade level graduate to the next level each year

Orange County School District
School Membership 2015-16 School Year (November 13, 2015)

	11/14/14 Actual 2014-15	2015 Report Projection for 2015-16	11/13/15 Actual 2015-16	Change between actual Nov 2014 - Nov 2015
Elementary	3259		3318	+59
<u>Model</u>			<u>Projection is</u>	
T		3309	L9	
OCP		3318	Equal	
10C		3279	L39	
5C		3268	L50	
3C		3251	L67	
AVG		3285	L33	
	11/14/14		11/13/15	
Middle	1762		1739	-23
<u>Model</u>			<u>Projection is</u>	
T		1789	H50	
OCP		1791	H52	
10C		1730	L9	
5C		1722	L17	
3C		1721	L18	
AVG		1751	H12	
	11/14/14		11/13/15	
High	2502		2469	-33
<u>Model</u>			<u>Projection is</u>	
T		2541	H72	
OCP		2545	H76	
10C		2456	L13	
5C		2488	H19	
3C		2520	H51	
AVG		2510	H41	
Totals	11/14/14		11/13/15	
Elementary	3259		3318	
Middle	1762		1739	
High	2502		2469	
	7523		7526	+3
<u>Model</u>			<u>Projection is</u>	
T		7639	H113	
OCP		7654	H128	
10C		7465	L61	
5C		7478	L48	
3C		7492	L34	
AVG		7546	H20	

H means High
L means Low

**Orange County School District
School Membership 2015-2016 School Year (November 13, 2015)**

Statistical Findings

<i>PROJECTION TYPE ABBREVIATIONS</i>	
'TISCHLER' LINEAR (T) ORANGE COUNTY PLANNING (OCP)	10-YEAR COHORT (10C) 5-YEAR COHORT (5C) 3-YEAR COHORT (3C)

Elementary School Level

- The majority of projections were all low ranging from 9 students to 67 students below actual membership. One projection equaled actual membership. On average, the projections were 33 students lower than actual membership.
- The membership actually increased by 59 students between November 14, 2014 and November 13, 2015.

Middle School Level

- Projections were mixed low and high, ranging from 18 students below to 52 students above actual membership. On average, the projections were 12 students higher than the actual membership.
- The membership actually decreased by 23 students between November 14, 2014 and November 13, 2015.

High School Level

- The majority of projections were high, ranging from 19 to 76 students above actual membership. One projection was low with 13 students below actual membership. On average, the projections were 41 students higher than the actual membership.
- The membership actually decreased by 33 students between November 14, 2014 and November 13, 2015.

TOTAL

- The totals of all school level projections were mixed low to high, ranging from 61 students below to 128 students above actual membership. On average, the projections were 20 students higher than the actual membership.
- The membership increased in total by 3 students, which is the sum of +59 at Elementary, -23 at Middle, and -33 at High.

Chapel Hill/Carrboro School District
School Membership 2015-2016 School Year (November 13, 2015)

	11/14/14 Actual 2014-15	2015 Report Projection for 2015-16	11/13/15 Actual 2015-16	Change between actual Nov 2014 - Nov 2015
Elementary	5541		5501	-40
<u>Model</u>			<u>Projection is</u>	
T		5625	H124	
OCP		5641	H140	
10C		5606	H105	
5C		5586	H85	
3C		5573	H72	
AVG		5606	H105	
	11/14/14		11/13/15	
Middle	2861		2844	-17
<u>Model</u>			<u>Projection is</u>	
T		2905	H61	
OCP		2898	H54	
10C		2910	H66	
5C		2888	H44	
3C		2874	H30	
AVG		2895	H51	
	11/14/14		11/13/15	
High	3730		3701	-29
<u>Model</u>			<u>Projection is</u>	
T		3787	H86	
OCP		3818	H117	
10C		3701	Equal	
5C		3707	H6	
3C		3696	L5	
AVG		3742	H41	
Totals	11/14/14		11/13/15	
Elementary	5541		5501	
Middle	2861		2844	
High	3730		3701	
	12,132		12,046	-86
<u>Model</u>			<u>Projection is</u>	
T		12,317	H271	
OCP		12,357	H311	
10C		12,217	H171	
5C		12,181	H135	
3C		12,143	H97	
AVG		12,243	H197	

H means High

L means Low

**Chapel Hill/Carrboro School District
School Membership 2015-2016 School Year (November 13, 2015)**

Statistical Findings

<i>PROJECTION TYPE ABBREVIATIONS</i>	
'TISCHLER' LINEAR (T)	10-YEAR COHORT (10C)
ORANGE COUNTY PLANNING (OCP)	5-YEAR COHORT (5C)
	3-YEAR COHORT (3C)

Elementary School Level

- Projections were all high, ranging from 72 students to 140 students above actual membership. On average, the projections were 105 students higher than the actual membership.
- The actual membership decreased by 40 students between November 14, 2014 and November 13, 2015.

Middle School Level

- Projections were all high, ranging from 30 students to 66 students above actual membership. On average, the projections were 51 students higher than the actual membership.
- The actual membership decreased by 17 students between November 14, 2014 and November 13, 2015.

High School Level

- Projections were mixed, ranging from 5 students below to 117 students above actual membership. One projection equaled actual membership. On average, the projections were 41 students higher than the actual membership.
- The actual membership decreased by 29 students between November 14, 2014 and November 13, 2015.

TOTAL

- The total of all school level projections were all high, ranging from 97 students to 311 students above actual membership. On average, the projections were high by 197 students.
- The membership decreased in total by 86 students, which is the sum of -40 at Elementary, -17 at Middle, and -29 at High.

Orange County School District
School Membership 2016-17 School Year (November 15, 2016)

	11/13/15 Actual 2015-16	2016 Report Projection for 2016-17	11/15/16 Actual 2016-17	Change between actual Nov 2015 - Nov 2016
Elementary	3318		3293	-25
<u>Model</u>			<u>Projection is</u>	
T		3366	H73	
OCP		3376	H83	
10C		3306	H13	
5C		3289	L4	
3C		3288	L5	
AVG		3325	H32	
	<u>11/13/15</u>		<u>11/15/16</u>	
Middle	1739		1724	-15
<u>Model</u>			<u>Projection is</u>	
T		1764	H40	
OCP		1769	H45	
10C		1733	H9	
5C		1726	H2	
3C		1724	Equal	
AVG		1743	H19	
	<u>11/13/15</u>		<u>11/15/16</u>	
High	2469		2446	-23
<u>Model</u>			<u>Projection is</u>	
T		2504	H58	
OCP		2511	H65	
10C		2478	H32	
5C		2506	H60	
3C		2519	H73	
AVG		2504	H58	
Totals	<u>11/13/15</u>		<u>11/15/16</u>	
Elementary	3318		3293	
Middle	1739		1724	
High	<u>2469</u>		<u>2446</u>	
	7526		7463	-63
<u>Model</u>			<u>Projection is</u>	
T		7634	H171	
OCP		7656	H193	
10C		7517	H54	
5C		7521	H58	
3C		7531	H68	
AVG		7572	H109	

H means High

L means Low

**Orange County School District
School Membership 2016-2017 School Year (November 15, 2016)**

Statistical Findings

<i>PROJECTION TYPE ABBREVIATIONS</i>	
'TISCHLER' LINEAR (T) ORANGE COUNTY PLANNING (OCP)	10-YEAR COHORT (10C) 5-YEAR COHORT (5C) 3-YEAR COHORT (3C)

Elementary School Level

- The projections were mixed low to high, ranging from 5 students below to 83 students above actual membership. On average, the projections were 32 students higher than the actual membership.
- The membership actually decreased by 25 students between November 13, 2015 and November 15, 2016.

Middle School Level

- The majority of projections were all high, ranging from 2 students to 45 students above actual membership. One projection equaled actual membership. On average, the projections were 19 students higher than the actual membership.
- The membership actually decreased by 15 students between November 13, 2015 and November 15, 2016.

High School Level

- Projections were all high, ranging from 32 to 73 students above actual membership. On average, the projections were 58 students higher than the actual membership.
- The membership actually decreased by 23 students between November 13, 2015 and November 15, 2016.

TOTAL

- The totals of all school level projections were all high, ranging from 54 to 193 students above actual membership. On average, the projections were 109 students higher than the actual membership.
- The membership decreased in total by 63 students, which is the sum of -25 at Elementary, -15 at Middle, and -23 at High.

Chapel Hill/Carrboro School District
School Membership 2016-17 School Year (November 15, 2016)

	11/13/15 Actual 2015-16	2016 Report Projection for 2016-17	11/15/16 Actual 2016-17	Change between actual Nov 2015 - Nov 2016
Elementary	5501		5567	+66
<u>Model</u>			<u>Projection is</u>	
T		5576	H9	
OCP		5602	H35	
10C		5547	L20	
5C		5534	L33	
3C		5502	L65	
AVG		5552	L15	
	<u>11/13/15</u>		<u>11/15/16</u>	
Middle	2844		2829	-15
<u>Model</u>			<u>Projection is</u>	
T		2883	H54	
OCP		2878	H49	
10C		2815	L14	
5C		2798	L31	
3C		2775	L54	
AVG		2830	H1	
	<u>11/13/15</u>		<u>11/15/16</u>	
High	3701		3762	+61
<u>Model</u>			<u>Projection is</u>	
T		3752	L10	
OCP		3792	H30	
10C		3753	L9	
5C		3757	L5	
3C		3732	L30	
AVG		3757	L5	
Totals	<u>11/13/15</u>		<u>11/15/16</u>	
Elementary	5501		5567	
Middle	2844		2829	
High	<u>3701</u>		<u>3762</u>	
	12,046		12,158	+112
<u>Model</u>			<u>Projection is</u>	
T		12,211	H53	
OCP		12,272	H114	
10C		12,115	L43	
5C		12,089	L69	
3C		12,009	L149	
AVG		12,139	L19	

H means High

L means Low

**Chapel Hill/Carrboro School District
School Membership 2016-2017 School Year (November 15, 2016)**

Statistical Findings

<i>PROJECTION TYPE ABBREVIATIONS</i>	
'TISCHLER' LINEAR (T)	10-YEAR COHORT (10C)
ORANGE COUNTY PLANNING (OCP)	5-YEAR COHORT (5C)
	3-YEAR COHORT (3C)

Elementary School Level

- Projections were mixed, ranging from 65 students below to 35 students above actual membership. On average, the projections were 15 students lower than the actual membership.
- The actual membership increased by 66 students between November 13, 2015 and November 15, 2016.

Middle School Level

- Projections were mixed, ranging from 54 students below to 54 students above actual membership. On average, the projections were 1 student higher than the actual membership.
- The actual membership decreased by 15 students between November 13, 2015 and November 15, 2016.

High School Level

- The majority of projections were low, ranging from 30 to 5 students below actual membership. One projection was 30 students above actual membership. On average, the projections were 5 students lower than the actual membership.
- The actual membership increased by 61 students between November 13, 2015 and November 15, 2016.

TOTAL

- The total of all school level projections were mixed, ranging from 149 students below to 114 students above actual membership. On average, the projections were 19 students lower than the actual membership.
- The membership increased in total by 112 students, which is the sum of +66 at Elementary, -15 at Middle, and +61 at High.

C. Student Membership Projections

1. **Responsible Entity for Suggesting Change** – The updating of this section will be conducted by the Planning Directors, School Representatives, and Technical Advisory Committee (SAPFOTAC) and referred to the BOCC for annual report certifications. Projections will be distributed to SAPFO partners for review and comments to the BOCC prior to certification.
2. **Definition** – The result of the average of the five student projection models represented by 10 year numerical membership projections by school level (Elementary, Middle, and High) for each school district (Chapel Hill/Carrboro School District and Orange County School District).

3. **Standard for:**

Standard for:

Chapel Hill Carrboro School District

Orange County School District

The 5 model average discussed in Section II.B (Student Projection Methodology)

The 5 model average discussed in Section II.B (Student Projection Methodology)

See Attachment II.C.4

See Attachment II.C.3

4. **Analysis of Existing Conditions**

The membership figures and percentage growth on the attachments show a decrease at the Chapel Hill/Carrboro City Schools' middle school level and at the Orange County Schools' elementary, middle and high school levels. The attachments show an increase at the Chapel Hill/Carrboro City Schools' elementary and high school levels. Chapel Hill/Carrboro Schools projected average annual growth rates for elementary and middle school levels have decreased slightly, but remain positive. The projected average annual growth rate at the high school level has increased. Future growth rates show positive growth at the elementary school level during the entire 10-year projection period. Middle and high school levels see mostly positive growth rates with only one year of negative growth for both levels in the 10-year projection period. Projected average annual growth rates for Orange County Schools have all decreased since the previous year. Orange County Schools' future growth rates show varying positive and negative growth in the 10 year projection period for the elementary, middle, and high school levels. Attachment II.C.3 and Attachment II.C.4 show year by year percent growth and projected level of service (LOS). The projection models

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were updated using current (November 15, 2016) memberships. Ten years of student membership were projected thereafter.

Chapel Hill/Carrboro School District

Elementary

The previous year (2015-16) projections for November 2016 at this level were underestimated by 15 students. The actual membership increased by 66 students. Over the previous ten years, this level has shown varying increases in growth rates including a decrease in actual membership in 2009-10 which was most likely due to the shorter enrollment period caused by the institution of the new date requiring kindergarteners to be five years old. Following that dip, membership numbers experienced an increase each year with a significant jump (168 students) in 2011-12 before experiencing a decrease in 2014-15 and 2015-16. Growth rates during the past ten years have ranged from -1.57% to +3.88%. The district's eleventh elementary school, Northside Elementary School, opened in 2013. The need for an additional elementary school is not anticipated in the 10 year projection period. This is similar to last year's projections.

Although not included in SAPFO school capacity or membership numbers, Pre-K programs continue to impact operations at District elementary schools where Pre-K programs exist. Specific impacts of Pre-K programs at the elementary school level will continue to be reviewed and discussed in the coming year.

Middle

The previous year (2015-16) projections for November 2016 for this level were overestimated by 1 student. The actual membership decreased by 15 students. Over the previous ten years, this level has shown varying increases before experiencing a decrease in 2015-16 and this year. Growth rates during this time period have ranged from -0.59% to +2.86%. Capacity was increased in 2014 with the opening of the Culbreth Middle School science wing. The need for an additional middle school is not anticipated in the 10-year projection period. This is similar to last year's projections.

High School

The previous year (2015-16) projections for November 2016 for this level were underestimated by 5 students. The actual membership increased by 61 students. Over the previous ten years, change has been variable with decreases in membership in five of the ten years. Growth rates

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during this time period have ranged from -1.74 to +3.27%. The need for additional high school capacity at Carrboro High School is not anticipated in the 10-year projection period. This is similar to last year's projections.

Additional Information for Chapel Hill/Carrboro School District

Following the economic downturn, there has been an increase in residential projects, specifically multifamily development, in the Town of Chapel Hill. Currently, there are over four thousand proposed single family and multifamily housing units approved, but undeveloped in the CHCCS district. As previously stated, proposed growth is not included in the SAPFO projection system until actual students begin enrollment. The CAPS test is conducted during the approval process at a certain stage. Once students are enrolled in a school year, through annual reporting of student membership numbers, 10-year student projections can be updated to display future capacity needs in time to efficiently plan for future school construction requests. Staff and the SAPFO Technical Advisory Committee will need to continue monitoring and evaluating the demand and growth of residential development in Chapel Hill and Carrboro as well as its effect on student membership rates.

PACE Academy High School, located within the Chapel Hill/Carrboro School District, closed prior to the beginning of the 2015 school year. Some students from Pace Academy were absorbed into the OCS and CHCCS systems, while other students may have enrolled in public schools or charter schools located outside of Orange County. Due to the closing of Kestrel Heights Charter in Durham County, CHCCS reported an increase in membership at the high school level. The Expedition School, located in the Town of Hillsborough, serves approximately 277 students and continues to have an effect on CHCCS membership numbers at the elementary and middle school levels. Charter schools are not included as part of the SAPFO Annual Report and, as a result, their membership and capacity numbers are not monitored or included in future projections. However, the SAPFO Technical Advisory Committee does monitor charter schools and their effect on student enrollment at both school districts. If a charter school does close and a spike is realized in school enrollment, the student projections will likely accelerate the need in future years, still within an appropriate time for CIP planning. Charter Schools are additionally monitored by the Department of Public Instruction (DPI) which provides pupil information, based on data received from Charter Schools located in Orange County, to the County for funding purposes.

Orange County School District

Elementary

The previous year (2015-16) projections for November 2016 at this level were overestimated by 32 students. Actual membership decreased by 25 students. Over the previous ten years, this level experienced positive growth before experiencing a decrease in 2014-15 and this year. Growth rates during this period have ranged from -5.07% to +2.80%. In the Orange County school system, historic growth is more closely related to new residential development than in the Chapel Hill/Carrboro School District, which has a sizeable number of new families in older, existing housing stock. The need for an additional Elementary School is not anticipated in the 10 year projection period. This is similar to last year's projections.

Although not included in SAPFO school capacity or membership numbers, Pre-K programs continue to impact operations at District elementary schools where Pre-K programs exist. Specific impacts of Pre-K programs at the elementary school level will continue to be reviewed and discussed in the coming year.

Middle

The previous year (2015-16) projections for November 2016 for this level were overestimated by 19 students. The actual membership decreased by 15. Over the previous ten years, growth has varied widely and includes decreases in student membership in four of the ten years. Growth rates during this period have ranged from -2.20% to +4.00%. The district's third Middle School, Gravelly Hill Middle School, opened in October 2006. The need for an additional Middle School is not anticipated in the 10 year projection period. This is similar to last year's projections.

High School

The previous year (2015-16) projections for November 2016 for this level were overestimated by 58 students. The actual membership decreased by 23. Over the previous ten years, growth was positive before experiencing a decrease in membership in 2009-10. Following this decrease, membership and growth rates increased every school year before experiencing additional decreases in 2015-16 and this year. Growth rates during this period ranged from -1.32% to 4.58%. In 2011-12 student membership increased by 32 while capacity decreased by 199 at Orange County High School as a result of a N.C. Department of Public Instruction (DPI) study.

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Similar to last year's projections, the need for additional capacity at Cedar Ridge High School is not anticipated in the 10 year projection period. However, to address public safety concerns with the current high school capacity exceeding the 100% threshold, Orange County Schools is in preliminary planning stages to expand Cedar Ridge High School from initial capacity of 1,000 students to 1,500 students for the 2020-21 school year.

Additional Information for Orange County School District

The City of Mebane lies partially within Orange County and students within the Orange County portion of Mebane attend Orange County schools. However, the City of Mebane is not a party to the SAPFO agreement and therefore does not require that CAPS (Certificate of Adequate Public Schools) be issued prior to development approvals. Following the economic downturn, there has been a slight increase in approved and undeveloped residential development in the City of Mebane and the Town of Hillsborough. Currently, there are over two thousand proposed single family and multifamily housing units approved, but undeveloped in the City of Mebane and the Town of Hillsborough. The residential growth that has occurred in the recent past within Mebane's and Hillsborough's jurisdiction has yet to be seen with OCS student membership numbers and fully realized into the historically based projection methods due to the recession, charter schools, and possibly new family dynamics effecting family size. Staff and the SAPFO Technical Advisory Committee will need to continue monitoring and evaluating the demand and growth of residential development in Mebane and Hillsborough as well as its effect on student membership rates.

Eno River Academy, formerly known as Orange Charter School, currently serves approximately 238 student from kindergarten to 11th grade. A future expansion is planned for Eno River Academy to include a new high school and additional elementary and middle school classrooms for the 2017-18 school year. The Expedition School, in the Town of Hillsborough, currently serves approximately 277 elementary and middle school students. Both of these charter schools continue to have an effect on OCS membership numbers at the elementary and middle school levels. Charter schools are not included as part of the SAPFO Annual Report and, as a result, their membership and capacity are not monitored or included in future projections. However, the SAPFO Technical Advisory Committee does monitor charter schools and their effect on student enrollment at both school districts. If a charter school does close and a spike is realized in school enrollment, the student projections will likely accelerate the need in future years, still within an

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appropriate time for CIP planning. Charter Schools are additionally monitored by the Department of Public Institution (DPI) which provides pupil information, based on data received from Charter Schools located in Orange County, to the County for funding purposes.

5. *Recommendation:*

Use statistics as noted in 3 above.

Attachment II.C.1 – Orange County Student Projections (Elementary, Middle, & High) (2015-16)

REVENUE BY SCHOOL

OCS Student Projections (1) (4)

Elementary	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
Actual	2,103	2,001	2,045	3,108	3,108	3,108	3,108	3,108	3,108	3,108	3,108	3,108	3,108	3,108	3,108	3,108	3,108	3,108	3,108	3,108	3,108	3,108	3,108	3,108	3,108
Capacity	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050
Level of Service	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Annual Change - Increase (Decrease) in Actual & Projected Membership	1,053	951	995	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058
Capacity - 100% Level of Service	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050
Number of Students Actual and Projected, Over (Under) 100% LOS	1,053	951	995	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058
100% LOS	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050
Number of Students Actual and Projected, Over (Under) 100% LOS	1,053	951	995	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058
Actual % Level of Service	75.7%	75.0%	77.1%	77.0%	77.0%	77.0%	77.0%	77.0%	77.0%	77.0%	77.0%	77.0%	77.0%	77.0%	77.0%	77.0%	77.0%	77.0%	77.0%	77.0%	77.0%	77.0%	77.0%	77.0%	77.0%
Annual Student Growth Rate (%)	4.61%	0.29%	1.52%	2.41%	0.23%	0.23%	0.23%	0.23%	0.23%	0.23%	0.23%	0.23%	0.23%	0.23%	0.23%	0.23%	0.23%	0.23%	0.23%	0.23%	0.23%	0.23%	0.23%	0.23%	0.23%

(1) If recommended level is indicated by November 15, 2015 date of membership is indicated by the Student Information System (SIS) data.

(2) The Student Information System (SIS) data is used to calculate the 2015-16 level of service. Original projections used prior year projected membership for 2015-16.

(3) Annual growth rate calculated using actual membership for years 2002-03 through 2010-11 and average membership for years 2011-12 through 2025-26.

(4) Over time for growth is 1.1% per year from 2010-11 through 2015-16. The membership for 2015-16 is used as the base for the 2016-17 through 2025-26.

OCS Student Projections(1)

Middle	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
Actual	1,527	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531
Capacity	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531
Level of Service	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Annual Change - Increase (Decrease) in Actual & Projected Membership	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531
Capacity - 100% Level of Service	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531
Number of Students Actual and Projected, Over (Under) 100% LOS	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531
100% LOS	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531
Number of Students Actual and Projected, Over (Under) 100% LOS	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531
Actual % Level of Service	104.7%	111.7%	114.0%	109.7%	109.5%	109.5%	109.5%	109.5%	109.5%	109.5%	109.5%	109.5%	109.5%	109.5%	109.5%	109.5%	109.5%	109.5%	109.5%	109.5%	109.5%	109.5%	109.5%	109.5%	109.5%
Annual Student Growth Rate (%)	1.52%	6.59%	2.65%	-4.57%	-0.19%	-0.19%	-0.19%	-0.19%	-0.19%	-0.19%	-0.19%	-0.19%	-0.19%	-0.19%	-0.19%	-0.19%	-0.19%	-0.19%	-0.19%	-0.19%	-0.19%	-0.19%	-0.19%	-0.19%	-0.19%

(1) If recommended level is indicated by November 15, 2015 date of membership is indicated by the Student Information System (SIS) data.

(2) The Student Information System (SIS) data is used to calculate the 2015-16 level of service. Original projections used prior year projected membership for 2015-16.

(3) Annual growth rate calculated using actual membership for years 2002-03 through 2010-11 and average membership for years 2011-12 through 2025-26.

(4) Over time for growth is 1.1% per year from 2010-11 through 2015-16. The membership for 2015-16 is used as the base for the 2016-17 through 2025-26.

OCS Student Projections (1)

High	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
Actual	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575
Capacity	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575
Level of Service	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Annual Change - Increase (Decrease) in Actual & Projected Membership	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575
Capacity - 100% Level of Service	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575
Number of Students Actual and Projected, Over (Under) 100% LOS	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575
100% LOS	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575
Number of Students Actual and Projected, Over (Under) 100% LOS	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575
Actual % Level of Service	115.0%	115.0%	115.0%	115.0%	115.0%	115.0%	115.0%	115.0%	115.0%	115.0%	115.0%	115.0%	115.0%	115.0%	115.0%	115.0%	115.0%	115.0%	115.0%	115.0%	115.0%	115.0%	115.0%	115.0%	115.0%
Annual Student Growth Rate (%)	4.64%	4.64%	4.64%	4.64%	4.64%	4.64%	4.64%	4.64%	4.64%	4.64%	4.64%	4.64%	4.64%	4.64%	4.64%	4.64%	4.64%	4.64%	4.64%	4.64%	4.64%	4.64%	4.64%	4.64%	4.64%

(1) If recommended level is indicated by November 15, 2015 date of membership is indicated by the Student Information System (SIS) data.

(2) The Student Information System (SIS) data is used to calculate the 2015-16 level of service. Original projections used prior year projected membership for 2015-16.

(3) Annual growth rate calculated using actual membership for years 2002-03 through 2010-11 and average membership for years 2011-12 through 2025-26.

(4) Over time for growth is 1.1% per year from 2010-11 through 2015-16. The membership for 2015-16 is used as the base for the 2016-17 through 2025-26.

DCS Student Projections (1) (4)

[illegible]

It is important to note that the effects by November 15, 2009 date of membership are outlined in by the School Adequacy Public Facilities Collection.

(d) The Traffic Model profile for the "Urban Matrix" of projections for both CMC S and CMC E. Original projections used in prior years projection models are shown in grey.

* Class size for studies 1-3 = 22 for school years 2000 through 2007-08; 20 students with 2008 School C students in Web-based division, effective 2008-09.

by which a state can be judged "good" – and not a criteria that is subject to interpretation or that varies according to the values of individuals, communities, or nations.

ACS Student Projections(1)

OCS Student Projections(1)

[illegible]

It is important to note that this reflects the November 15, 2009 date of membership as indicated by the School Adequacy Public Facilities Coalition.

(1) The Tiedline Model procedure for the ^{13}C Linear Methods² of polyaddition for both CMC CS and CCS. Original procedure used in prior years (4) and on model

Panel D: Annual growth rate calculated using actual membership for years 2001-02 through 2005-06 and average membership for years 2006-07 through 2020-21.

OCS Student Projections (1)

High

OCS Student Projections (1)

[illegible]

It is important to note that this reflects the November 15, 2009 date of membership as notified to by the School Adequate Public Facilities Ordinance.

Q The Tukey-Miller procedure for the "Linear Model" of both CMC 10 and CMC 11. Original projections used in prior years. It is often noted that

3) Annual growth rate calculated using actual membership for years 2004-02 through 2005-09 and average membership for years 2005-07 for 2005-02

2) Annual growth rate calculated using actual membership for years 2010-17 through 2015-16

D. Student Membership Growth Rate

1. **Responsible Entity for Suggesting Change** – The updating of this section will be conducted by the Planning Directors, School Representatives, and Technical Advisory Committee (SAPFOTAC) each year and referred to the BOCC for annual report certification. Projections will be distributed to SAPFO partners for review and comments to the BOCC prior to certification.
2. **Definition** – The annual percentage growth rate calculated from the projections resulting from the average of the five models represented by 10 year numerical membership projections by school level for each school district. This does not represent the year-by- year growth rate that may be positive or negative, but rather the average of the annual anticipated growth rates over the next 10 years.

3. **Standard for:**

Chapel Hill/Carrboro School District

See Attachment II.D.2

4. **Analysis of Existing Conditions:**

Chapel Hill/Carrboro School District

The membership figures and percentage growth on the attachments show continued growth at each school level within the system.

Projected Average Annual Growth Rate over next ten years:

Year Projection Made:	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
Elementary	1.18%	1.44%	1.11%	0.92%	0.91%
Middle	1.59%	1.58%	1.15%	0.82%	0.95%
High	1.60%	1.27%	1.22%	0.93%	0.72%

Standard for:

Orange County School District

See Attachment II.D.2

Analysis of Existing Conditions:

Orange County School District

The membership figures and percentage growth on the attachments show continued growth at each school level within the system.

Projected Average Annual Growth Rate over next ten years:

Year Projection Made:	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
Elementary	1.31%	1.30%	0.55%	0.80%	0.51%
Middle	1.64%	1.42%	0.09%	0.67%	0.36%
High	1.43%	1.35%	0.39%	0.56%	0.22%

5. **Recommendation:**

Chapel Hill/Carrboro School District

Use statistics as noted.

Recommendation:

Orange County School District

Use statistics as noted.

Attachment II.D.1 – Orange County and Chapel Hill/Carrboro Student Growth Rates
(Chart dates from 2016-2026 based on 11/13/15 membership numbers) (2015-16)

2015-2016

Orange County Student Projections

Elementary		2015-2016 (actual)	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026
School Year												
Membership		3,318	3,325	3,308	3,319	3,332	3,390	3,430	3,470	3,511	3,551	3,594
Average % Increase			0.21%	-0.52%	0.34%	0.39%	1.73%	1.18%	1.18%	1.17%	1.16%	1.20%

Middle		2015-2016 (actual)	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026
School Year												
Membership		1,739	1,743	1,776	1,830	1,846	1,790	1,784	1,778	1,817	1,837	1,857
Average % Increase			0.24%	1.91%	3.00%	0.90%	-3.02%	-0.36%	-0.33%	2.18%	1.09%	1.08%

High School		2015-2016 (actual)	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026
School Year												
Membership		2,469	2,504	2,539	2,517	2,559	2,604	2,616	2,669	2,635	2,608	2,609
Average % Increase			1.40%	1.42%	-0.86%	1.67%	1.73%	0.47%	2.05%	-1.30%	-1.01%	0.03%

Chapel Hill/Carrboro Student Projections

Elementary		2015-2016 (actual)	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026
School Year												
Membership		5,501	5,552	5,584	5,622	5,634	5,699	5,768	5,835	5,902	5,966	6,030
Average % Increase			0.93%	0.57%	0.69%	0.21%	1.16%	1.21%	1.15%	1.14%	1.09%	1.08%

Middle		2015-2016 (actual)	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026
School Year												
Membership		2,844	2,830	2,854	2,915	2,995	2,996	2,997	2,974	3,006	3,045	3,084
Average % Increase			-0.50%	0.86%	2.15%	2.74%	0.03%	0.00%	-0.75%	1.09%	1.28%	1.27%

High School		2015-2016 (actual)	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026
School Year												
Membership		3,701	3,757	3,820	3,842	3,857	3,883	3,917	4,013	4,041	4,045	4,058
Average % Increase			1.52%	1.68%	0.57%	0.37%	0.67%	0.89%	2.44%	0.71%	0.08%	0.32%

Attachment II.D.2 – Orange County and Chapel Hill/Carrboro Student Growth Rates
(Chart dates from 2017-2027 based on 11/15/16 membership numbers) (2016-17)

2016-2017

Orange County Student Projections

Elementary		2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026	2026-2027
School Year	(actual)											
Membership		3,293	3,253	3,235	3,230	3,267	3,283	3,318	3,354	3,389	3,425	3,464
Average % Increase			-1.20%	-0.56%	-0.15%	1.14%	0.50%	1.06%	1.07%	1.06%	1.07%	1.11%

Middle		2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026	2026-2027
School Year	(actual)											
Membership		1,724	1,751	1,811	1,824	1,765	1,748	1,727	1,751	1,748	1,766	1,784
Average % Increase			1.57%	3.44%	0.72%	-3.24%	-0.96%	-1.21%	1.38%	-0.14%	1.00%	1.00%

High School		2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026	2026-2027
School Year	(actual)											
Membership		2,446	2,480	2,439	2,474	2,539	2,559	2,603	2,565	2,537	2,508	2,498
Average % Increase			1.39%	-1.65%	1.43%	2.64%	0.76%	1.74%	-1.48%	-1.06%	-1.18%	-0.40%

Chapel Hill/Carrboro Student Projections

Elementary		2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026	2026-2027
School Year	(actual)											
Membership		5,567	5,605	5,655	5,658	5,728	5,795	5,859	5,919	5,980	6,037	6,095
Average % Increase			0.69%	0.89%	0.05%	1.24%	1.16%	1.10%	1.03%	1.03%	0.96%	0.95%

Middle		2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026	2026-2027
School Year	(actual)											
Membership		2,829	2,847	2,898	2,977	2,984	2,999	2,964	3,003	3,038	3,073	3,108
Average % Increase			0.62%	1.82%	2.70%	0.26%	0.50%	-1.17%	1.31%	1.19%	1.14%	1.14%

High School		2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026	2026-2027
School Year	(actual)											
Membership		3,762	3,832	3,846	3,864	3,879	3,897	4,010	4,019	4,034	4,057	4,040
Average % Increase			1.87%	0.37%	0.47%	0.40%	0.44%	2.90%	0.25%	0.36%	0.57%	-0.41%

E. Student / Housing Generation Rate

1. ***Responsible Entity for Suggesting Change*** – The updating of this section will be conducted by Planning Directors, School Representatives, and Technical Advisory Committee (SAPFOTAC) and referred to the BOCC for certification.
Projections will be distributed to SAPFO partners for review and comments to the BOCC prior to certification.
2. ***Definition*** – Student generation rate refers to the number of public school students per housing unit constructed in each school district, as defined in the Student Generation Rate Study completed by TisherBise on October 28, 2014. Housing units include single family detached, single family attached/duplex, multifamily, and manufactured homes.
3. ***Standard for:***

Chapel Hill/Carrboro School District See Attachment II.E.1	Standard for: Orange County School District See Attachment II.E.1
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4. ***Analysis of Existing Conditions:***

At the January 2014 SAPFOTAC meeting, members discussed the increased number of students generated in both school districts from new development, particularly multifamily housing. The SAPFOTAC recommended further evaluation of the adopted Student Generation Rates and the impacts the number of bedrooms a particular housing type may have on student generation rates. As a result, Orange County entered into a contract with TischlerBise to update the student generation rate analysis. The new student generation rates were approved on May 19, 2015 and are shown in Attachment II.E.1. New rates from the 2014 Student Generation Rates for Orange County Schools and Chapel Hill-Carrboro School District Report are based on an inventory of recently built units from January 1, 2004 to December 31, 2013.

It should be noted that students are generated from new housing as well as from existing housing where new families have moved in. The CAPS system estimates new development impacts and associated student generation, but it is important to understand that student increases are a composite of both of these factors. This effect can be dramatic and can vary greatly between areas and districts where either new

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housing is dominant or new families move into a large inventory of existing housing stock.

5. *Recommendation:*

No change at this time.

Attachment II.E.1 – Current Student Generation Rates (2015)

TischlerBise Student Generation Rates – 2014

Chapel Hill/Carrboro Schools				
	0-3 Bedrooms	4 Bedrooms	5+ Bedrooms	Weighted Average
Single-Family Detached	0.61	0.84	1.13	0.84
	0-2 Bedrooms	3+ Bedrooms		Weighted Average
Single-Family Attached	0.27	0.42		0.38
Multifamily/Other	0.11	0.47		0.18
Manufactured Home	0.268	0.86		0.78
Weight Average for Chapel Hill/Carrboro School District				0.49

Orange County Schools				
	0-3 Bedrooms	4 Bedrooms	5+ Bedrooms	Weighted Average
Single-Family Detached	0.35	0.57	0.57	0.44
	0-2 Bedrooms	3+ Bedrooms		Weighted Average
Single-Family Attached	0.07	0.17		0.15
Multifamily/Other	0.08	0.67		0.17
Manufactured Home	0.67	0.47		0.52
Weight Average for Orange County School District				0.37

Source: Student Generation Rates for Orange County School District and Chapel Hill-Carrboro School District, TischlerBise, October 28, 2014
Revised May 7, 2015

III. Flowchart of Schools Adequate Public Facilities Ordinance Process

Abstract: The Schools Adequate Public Facilities Ordinance process has two distinct components:

A. Capital Investment Plan (CIP) (Process 1)

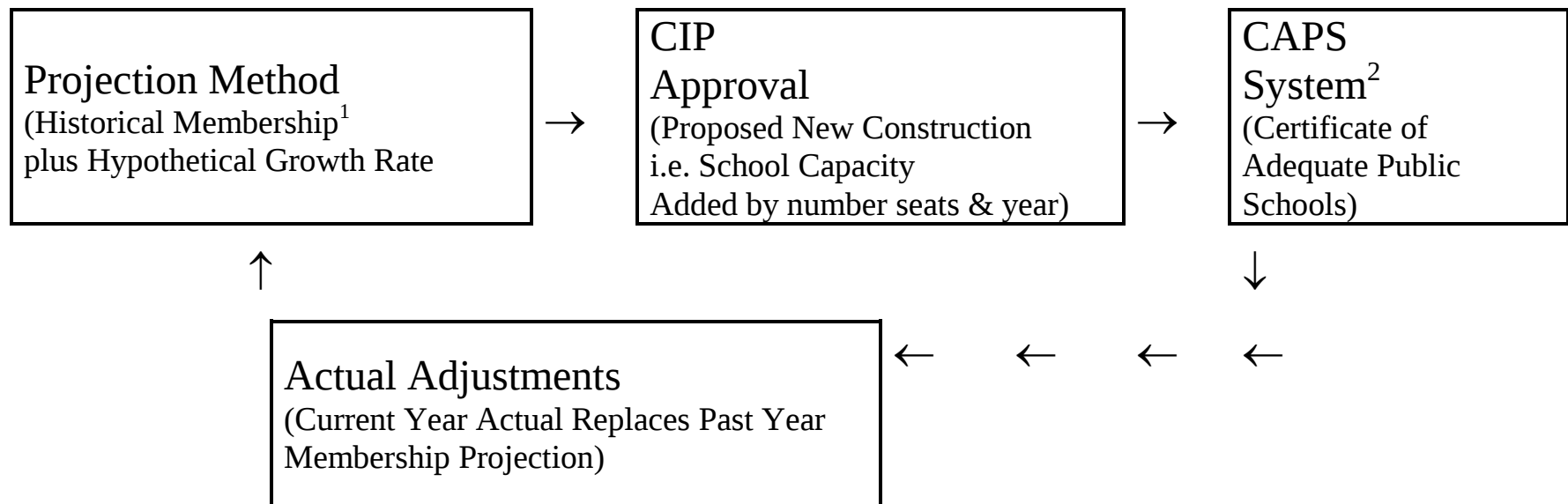
Timeframe: In November of each year, Student Membership and Building Capacity is transmitted from the school districts to the Orange County Board of Commissioners for consideration and approval and used in the following years CIP (e.g. November 15, 2016 membership numbers used to develop a CIP to be considered for adoption in June 2017).

Process Framework

1. SAPFOTAC projects future student membership from historical data, current membership and hypothetical growth rates from established methodologies.
2. School Districts and BOCC compare projections to existing capacity and proposed Capital Investment Plan.
3. SAPFOTAC forwards data and projections to all SAPFO partners.
4. School Districts develop Capital Investment Plan Needs Assessment during this process
5. The Capital Investment Plan work sessions and Public Hearings are conducted by the BOCC in the spring of each year.
6. The adoption of CIP that sets forth monies and timeframe for school construction (future capacity) by BOCC.

School Adequate Public Facilities Ordinance

Process 1 - Capital Investment Planning (CIP)



¹Historical Membership is a product of students generated from: (1) pre-existing/approved undeveloped lots where new housing is built, (2) existing housing stock with new families/children, and (3) newly approved housing development (in the future this component will be known as CAPS approved development)

²The only part of the CAPS System (i.e., computer spreadsheet subdivision tracking) that receives data from the Process 1 CIP includes the actual membership (November 15 of preceding CIP year) and new school capacity amount (seats) in a specific year pursuant to the CIP.

B. Schools Adequate Public Facilities Ordinance Certificate of Adequate Public Schools (CAPS) Update (Process 2)

Timeframe: The CAPS system is updated approximately November 15 of each year when the school districts report actual membership and ‘pre-certified’ capacity, whether it is CIP associated or prior ‘joint action’ agreement. ‘Joint action’ determinations of changes in capacity due to State rules or other non-construction related items are anticipated to be done prior to the November 15 capacity and membership reporting date. This update may reflect the Board of County Commissioners action on the earlier year Capital Investment Plan (CIP) as it affects capacity and addition of new actual fall membership. The Schools Adequate Public Facilities Ordinance Certificate of Adequate Public Schools (CAPS) stays in effect until the following year – (e.g.: November 15, 2005 to November 14, 2006).

New development is originally logged for a certain year. As the CAPS system is updated, each CAPS projection year is ‘absorbed’ by the actual estimate of a given year. Later year CAPS projections of the same development remain in the future year CAPS system accordingly. For example, if a 50-lot subdivision is issued a CAPS, 15 lots may be assigned to “Year 1,” 10 lots to “Year 2,” 10 lots to “Year 3,” 10 lots to “Year 4,” and 5 lots to “Year 5.” When “Year 1” is updated, the students generated from the 15 lots are absorbed by the actual estimate. The students generated in “Years 2, 3, 4, and 5” are held in the CAPS system and added to the appropriate year when the CAPS system is updated.

As was discussed in Section II.C, The City of Mebane is not a party to the SAPFO and does not require that CAPS be issued prior to approving development activities. Increasing development within this area of the county has the potential to encumber a significant portion of the available capacity within the Orange County School District. Although the SAPFO system is not formally regulated in Mebane, staff monitors development activity and when students enter the school system their enrollment is calculated and used in future school projection needs.

Please note that the two processes (CIP and CAPS) are on separate, but parallel tracks. However, the CIP does create a crossover of capacity information between the two processes.

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For example, the SAPFO system for both school districts that will be established / initiated / certified each year in November and is based on prior year created and/or planned CIP capacity and current school year membership. The SAPFOTAC report including new current year membership and projections are to be used for upcoming CIP development as noted in Process 1.

CIP Process 1 (for CIP 2017 - 2027)

November 2016 – June 2017 (using 2017 SAPFOTAC Report)

SAPFO CAPS Process 2 (for SAPFO System 2017 – 2018)

November 2016 - November 2017

School Adequate Public Facilities Ordinance

Process 2 - Certificate of Adequate Public Schools (CAPS) Allocation

2017 CAPS system is effective November 15, 2016 through November 14, 2017.

The system is updated with new membership, CIP capacity changes, and any other BOCC/School District joint action approved capacity prior to November 15, 2016. This information is received within 5 days of November 15 and posted within the next 15 days. This CAPS system recalibration is retroactive to November 15, 2016.

CAPS Allocation System

1. Certified Capacity
2. LOS Capacity
3. Actual Membership
4. Year Start Available Capacity
5. Ongoing Current Available Capacity (includes available capacity decreases from approved CAPS development by year)
6. CAPS approved development
 - a. Total units
 - b. Single Family¹
 - c. Other Housing¹

CAPS System

$$AC^2 = SC^2 - (ADM^2 + ND1^2 + ND2^2 + \dots)$$

$AC \geq 0$ - Issue CAPS

$AC < 0$ - Defer CAPS to later date

¹Student Generation Rates from CAPS housing type create future membership estimate. Please note that this CAPS membership future estimate is different than the projection based on historical data and projection models used in the CIP process 1. This estimate only captures new development impact, which is the component that the SAPFO can regulate.

²AC - Available Capacity - Starts at Annual Update Capacity and reduces as CAPS approved development is entered into the system.

SC - Certified School Level Capacity

ADM - Average Daily Membership

ND - New Development; ND1 means first approved CAPS approved development