

**ORANGE COUNTY BOARD OF COMMISSIONERS
CHAPEL HILL-CARRBORO BOARD OF EDUCATION
ORANGE COUNTY BOARD OF EDUCATION
AGENDA**

BOCC / Board of Education Joint Meeting

February 25, 2020

Meeting – 7:00 p.m.

Richard Whitted Meeting Facility

300 West Tryon Street

Hillsborough, NC

Welcome and Opening Remarks –
Chair Rich, Chair Wolf , and Chair Atherton

1. Update on State Budget
2. Budget Process/Timeline
3. School Capital Needs
 - Maintenance
 - SAPFO and Capacity
4. School Districts’ Climate Action Plans
5. Walkable Schools
6. Other Business
 - Potential Budget Topics for Future Discussion
7. Information Items
 - Tradecraft Center Status
 - Universal Pre-K Study Status
 - CHCCS Pre-Kindergarten Programming

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**ORANGE COUNTY
BOARD OF COMMISSIONERS**

ACTION AGENDA ITEM ABSTRACT

Meeting Date: February 25, 2020

**Action Agenda
Item No. 1-7**

SUBJECT: Joint Meeting – Board of County Commissioners, Chapel Hill-Carrboro City Schools Board of Education (CHCCS) and Orange County Schools (OCS) Board of Education

DEPARTMENT: County Manager/Finance and Administrative Services

ATTACHMENT(S):

Attachment 1 – Annual CIP and Operating Budget Calendar for FY20-21
Attachment 2A – CHCCS Executive Summary on Facilities Capital, Maintenance and Operations
Attachment 2B – OCS Executive Summary on Facilities Capital, Maintenance and Operations
Attachment 2C – School Joint Action Committee Update PowerPoint
Attachment 3A –CHCCS Walkable School Zones
Attachment 3B – OCS Walkable School Zones
Attachment 4A – CHCCS-BOE Employee Benefit Options
Attachment 4B – OCS Budget Update
Attachment 5 – Tradecraft Center Update
Attachment 6 – Universal Pre-K Study
Attachment 7 – CHCCS Executive Summary Pre-Kindergarten Programming

INFORMATION CONTACT:

Bonnie Hammersley, 919-245-2300
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PURPOSE: To discuss the various School related issues that are of interest to the Board of County Commissioners, Chapel Hill-Carrboro City Schools (CHCCS) Board of Education and Orange County Schools (OCS) Board of Education.

BACKGROUND: The County/Schools Collaboration Work Group, the Board of County Commissioners, and both Boards of Education have established the agenda items for this Joint meeting. Both School systems and the County have provided summaries for each agenda item, as well as supplemental information and attachments. The appropriate page numbers and/or attachment numbers are referenced in each agenda item.

Welcome and Opening Remarks – Chair Rich, Chair Wolf, and Chair Atherton

1. Update on State Budget

To be discussed at the meeting.

2. Budget Process/Timeline

See Attachment 1 (page 4) for the Annual Capital Investment Plan and Operating Budget Calendar for FY 2020-21.

3. School Capital Needs

- Maintenance
- SAPFO and Capacity

See Attachments: 2A - CHCCS Executive Summary (pages 5-9 and 12-14)
 2B – OCS Executive Summary (pages 15-17 and 19)
 2C –School Joint Action Committee Update PowerPoint (pages 20-36)

4. School Districts' Climate Action Plans

See Attachment 2A and 2B (CHCCS pages 10-11 and OCS page 18)

5. Walkable Schools

See Attachment 3A and 3B (CHCCS pages 37-38 and OCS page 39)

6. Other Business

- Potential Budget Topics for Future Discussion
 See Attachment 4A and 4B (CHCCS page 40 and OCS page 41)

7. Information Items

- Tradecraft Center Status
- Universal Pre-Kindergarten Study Status
- CHCCS Executive Summary Pre-Kindergarten Programming

See Attachment 5 (pages 42-54) for information related to the status of Tradecraft Center and Attachment 6 (page 55) for information related to the status of the Universal Pre-K Study.

CHCCS provided information related to Pre-Kindergarten Programming as follow-up from the February 11, 2020 Work Session. See Attachment 7 (pages 57-59)

FINANCIAL IMPACT: There is no financial impact tied directly to the discussion at this work session.

SOCIAL JUSTICE IMPACT: The following Orange County Social Justice Goals are applicable to this agenda item:

GOAL: ENABLE FULL CIVIC PARTICIPATION

Ensure that Orange County residents are able to engage government through voting and volunteering by eliminating disparities in participation and barriers to participation.

GOAL: FOSTER A COMMUNITY CULTURE THAT REJECTS OPPRESSION AND INEQUITY

The fair treatment and meaningful involvement of all people regardless of race or color; religious or philosophical beliefs; sex, gender or sexual orientation; national origin or ethnic background; age; military service; disability; and familial, residential or economic status.

GOAL: ENSURE ECONOMIC SELF-SUFFICIENCY

The creation and preservation of infrastructure, policies, programs and funding necessary for residents to provide shelter, food, clothing and medical care for themselves and their dependents.

GOAL: CREATE A SAFE COMMUNITY

The reduction of risks from vehicle/traffic accidents, childhood and senior injuries, gang activity, substance abuse and domestic violence.

ENVIRONMENTAL IMPACT: The following Orange County Environmental Responsibility Goal impacts are applicable to this item:

ENERGY EFFICIENCY AND WASTE REDUCTION

Initiate policies and programs that: 1.) conserve energy; 2) reduce resource consumption; 3.) increase the use of recycled and renewable resources; and 4.) minimize waste stream impacts on the environment.

RESULTANT IMPACT ON NATURAL RESOURCES AND AIR QUALITY

Assess and where possible mitigate adverse impacts created to the natural resources of the site and adjoining area. Minimize production of greenhouse gases.

RECOMMENDATION(S): The Manager recommends that the Boards discuss the issues noted and provide direction to staff, as appropriate.

Annual Capital Investment Plan and Operating Budget Calendar
Fiscal Year 2020-21

	Due Dates
Joint Meeting with Board of County Commissioners/Boards of Education	February 25, 2020 (<i>Whitted Building</i>)
Manager Presents FY 2020-21 thru 2024-25 Capital Investment Plan to Board of County Commissioners – Regular Meeting	April 7, 2020 (<i>Whitted Building</i>)
CIP Discussion with Board of County Commissioners – <i>Budget Work Session</i>	April 14, 2020 (<i>Southern Human Services Center</i>)
Joint Meeting with Board of County Commissioners/Boards of Education	April 28, 2020 (<i>Whitted Building</i>)
Manager Presents Fiscal Year 2020-21 Annual Operating Budget to Board of County Commissioners – Regular Meeting	May 5, 2020 (<i>Whitted Building</i>)
Budget and Capital Investment Plan Public Hearings	May 12, 2020 (<i>Whitted Building</i>) June 4, 2020 (<i>Southern Human Services Center</i>)
Budget Work Sessions	May 14, 2020 – <i>Schools and Outside Agencies (Southern Human Services Center)</i> May 21, 2020 – <i>Fire Districts, Public Safety, Support Services, General Government (Whitted Building)</i> May 28, 2020 – <i>Human Services and Community Services (Southern Human Services Center)</i> June 9, 2020 – <i>Review of Budget Amendments and Resolution of Intent to Adopt Budget (Whitted Building)</i>
FY 2020-21 Operating and CIP Budget Adoption	June 16, 2020 (<i>Southern Human Services Center</i>)



Facilities Capital, Maintenance & Operation Summary

The Chapel Hill-Carrboro City Schools strives to provide the best maintained, sustainable, and welcoming facilities for our community, students and employees. We attempt to meet this goal through short and long-range facility planning, completion of sustainability, deferred and preventive maintenance programs and through regular upkeep, repair and renovation projects.

The district monitors current facility conditions and utilizes industry standards for reviewing facility needs. A comprehensive facility assessment was completed in 2014. A facility feasibility study in 2016, roof assessment studies, indoor air quality assessments and end-of-life project schedules have also been completed. A 10-year Capital Investment Plan is utilized to identify funding of projects for the one-year allocated annual county capital appropriations.

The district receives annual capital funding for all facility needs, operations, maintenance repairs including technology upgrades, activity buses and facility services from the following county funding sources:

Debt Financing:	\$2,461,154
Pay Go (NC Lottery):	\$851,650
Article 46 Sales Tax (technology)	\$1,272,252
Older Facility Improvements	\$601,400*
Recurring Capital	\$1,804,200
Deferred Maintenance	\$1,804,200*

2020 Total Annual Capital Allotment: \$8,794,856

**Note: The scheduled funding of these allotments ends in FY 21. This amounts to a loss of capital funding of \$2,405,600.*

The district researched industry standards for facility capital funding for K-12 institutions and believes the annual allocation for capital funding currently received is below recommended levels to properly maintain facilities. Findings include the following annual capital allocations:

- Recommended amount to "regularly upgrade existing facilities' systems, components, fixtures, equipment, and finishes as they reach the end of their anticipated life expectancy; systematically reduce the backlog of deferred maintenance that has accumulated; and alter existing facilities to respond to changing educational requirements." = **\$16,379,112** (1)
- Recommended amount to make sure buildings are "clean and in good working order." = **\$12,284,334** (2)
- *The above are based on 3 & 4% of replacement costs. Utilizing a rate of combined 5% = \$20,473,891 which is \$12 million below current expenses.*
- The states with the lowest shares of M&O spending as a percentage of total budget were Georgia (7.6 percent), Minnesota (7.7 percent), and North Carolina (8.1 percent). Those with the highest shares were Oklahoma (11.1 percent), Arizona (12.1 percent), and Alaska (12.9 percent). CHCCS is at 9.6% (3)
- The states that spent the least per student on M&O were Utah (\$614), Idaho (\$639), and North Carolina (\$733). At the other end of the range were Alaska (\$2,096), New Jersey (\$1,923), and New York (\$1,759). (4)

Footnotes

1. Calculated using Current Replacement Value (CRV) x Gross Sq Ft. x 4% = \$192 x 2,132,697 x 192 x .04 = **\$16,379,112**. Source: [State of Our Schools](#)
2. 3% of CRV Source: [State of Our Schools](#)
3. CHCSS Budget line of "Operational support services" / Total operating expense = 13,831,080 / 144,247,500. 9.56% was average share of M&O for schools nationwide in 2008-2009- includes payroll for M&O. Source: [American Schools and Universities M&O Cost Study](#)
4. See page 15 of [State of Our Schools](#)

Priorities for Capital Projects

Utilizing facility assessment information and feedback from building occupants the following priorities are used for setting priorities for capital projects:

- Fire, Life, Health & Safety related projects
- Building projects that increase Student Capacity
- End of Life Systems (roofs, mechanical systems, carpets, plumbing, etc.)
- Building Envelope Systems (brick veneer, drainage/gutters, windows, doors, etc.)
- Sustainability projects (lighting, cost savings, environmental controls, etc.)
- General maintenance & repair projects (painting, parking lots, athletic areas, etc.)

Building Operation Costs

Utility Cost for 2018-2019		
Site	Elec., Gas + Water	Cost per sf
Culbreth Middle School	\$ 119,904	\$ 0.89
McDougle Campus	\$ 247,047	\$ 0.91
East Chapel Hill High School	\$ 301,972	\$ 0.95
Scroggs Elementary School	\$ 96,418	\$ 0.95
Phillips Middle School	\$ 134,103	\$ 1.12
Chapel Hill High School	\$ 326,129	\$ 1.15
Smith Middle School	\$ 166,761	\$ 1.16
Ephesus Elementary School	\$ 92,643	\$ 1.20
Lincoln Center/Phoenix	\$ 94,707	\$ 1.23
Morris Grove Elementary School	\$ 114,197	\$ 1.24
Estes Hill Elementary School	\$ 78,950	\$ 1.28
Glenwood Elementary School	\$ 76,037	\$ 1.29
Northside Elementary School	\$ 135,233	\$ 1.29
FP Graham Elementary School	\$ 92,269	\$ 1.31
Rashkis Elementary School	\$ 135,508	\$ 1.34
Carrboro High School	\$ 270,523	\$ 1.51
Carrboro Elementary School	\$ 104,138	\$ 1.60
Seawell Elementary School	\$ 120,749	\$ 1.70
District Total	\$ 2,712,885	\$ 1.23

Facility Maintenance Work Order Summary

Work Orders by Location 2018-2019	
Site	# Work Orders
Carrboro Elementary	257
Carrboro High School	315
Chapel Hill High School	385
Culbreth Middle	353
East Chapel Hill High School	397
Ephesus Elementary	327
Estes Hill Elementary	356
Frank Porter Graham Elementary	166
Glenwood Elementary	202
Lincoln Center	218
McDougle Elementary	272
McDougle Middle	189
Morris Grove Elementary	180
Northside Elementary	153
Phillips Middle	217
Phoenix Academy	27
Rashkis Elementary	193
Scroggs Elementary	218
Seawell Elementary	445
Smith Middle School	197
Transportation Department	32
DISTRICT TOTAL	5099

Facility Preventative Maintenance

The district facilities team completes on-going facility maintenance with regular schedules in order to sustain and maintain the buildings. Additionally, contractors that specialize in facility systems assist the district in meeting monthly, quarterly or yearly maintenance programs.

Examples of Maintenance Schedules (Approximate cost = \$656,000)

- HVAC
 - filters and replaced quarterly (minimum)
 - belts replaced annually, checked each quarter
 - pumps and motor bearings
 - coil cleaning
 - boilers have a yearly service contract
 - chillers are serviced and inspected annually
 - cooling towers receive chemical treatments
 - AHU are checked when filters are changed
 - Indoor Air Quality inspections semi-annually
- Electrical
 - thermal imaging of panels (ongoing)
 - fire systems checked and serviced yearly, inspected and tested monthly
 - sprinkler systems serviced annually
 - emergency generators serviced yearly
 - fire hood systems inspected annually and cleaned semi-annually
- Plumbing
 - backflows inspected and repaired annually
 - hot water boilers yearly service contract for inspections
 - grease traps as needed (monthly, quarterly or annual)
 - rainwater collections included in water treatment contracts
 - winterization on all irrigation and outside water stations before first freeze through spring
- Grounds
 - bio-retention ponds annual inspection and service
 - playgrounds inspected annually by district grounds staff/monthly by school staff
 - athletic fields have regular ongoing maintenance
 - ongoing maintenance for cleaning drains, mowing, trimming as needed

Climate & Sustainability Summary

The district is proud of our sustainability efforts and is one of only several districts in NC to have a dedicated Sustainability Director on staff. Our sustainability efforts go beyond routine facility work such as mechanical, lighting, or other building improvements to include comprehensive programs such as seminars on being stewards of the environment, education programs and outreach efforts within schools and the community.

Composting: Our cafeteria-composting program is part of our normal habit now in all elementary and middle schools. We have surpassed 1.4 million pounds diverted from the landfill. This process has reduced our carbon footprint by over 200 Metric Tons of CO₂e. We now have classrooms asking for small compost bins and have organized dozens of worm composting classes. Schools and our compost hauler have reported that the process appears to be habit now as contamination levels are very low. We have given tours of our composting program to multiple local districts and have consulted with districts across the country.

In early November, our Sustainability Director led an EPA webinar on cafeteria composting to over 300 participants from across the country.

Projects and Academics Youth Water Academy: In partnership with Orange Water and Sewer (OWASA) seven high school Students participated by visiting OWASA once a week for 5 consecutive weeks. They saw first-hand and learned about the water treatment process, lab work, land management, infrastructure, engineering, sustainability and water governance. OWASA professionals led the sections. Year 2 is currently underway with 19 participants.

Explorer Backpacks: As a result of funding a teacher's professional development, we rolled out the Explorer Backpack program at Seawell. The high quality backpacks packs are loaded with trail maps, nature ID guides, binoculars, magnifying glasses, colored pencils, journals and other observation and documentation tools.

School Gardens: We used our Chartwells Grant funding for a part time School Garden Coordinator. This was a highly successful project that enabled us to provide support to the 13 school gardens in the district. Each garden is truly unique in its set up, who runs it, what they grow, etc. This position enabled the garden leaders and educators to take advantage of scale (seedlings and materials,) get expert advice and

have someone specific for their needs. We hope to find full time funding in the future to advance the garden program.

LED Lighting Upgrades: Through a program with Duke Energy and Lime Energy, we upgraded old and inefficient lighting at Frank Porter Graham Bilingue, Seawell, Glenwood, Ephesus and Lincoln Center. The program paid for 48% of the cost or \$172,000. The lighting is brighter, energy efficient, motion activated and will significantly reduce outage times and electrical maintenance time.

School Building Profiles & Prioritized Major Capital Plans

In May of 2019, the Chapel Hill-Carrboro City Schools Board of Education completed a Board facilities retreat work session in order to review the facility building needs within the district. The projected facility needs from the comprehensive facilities assessment and from the list of identified projects for older schools range from \$200-\$300 million dollars and were categorized among three long-term options.

Capital Needs Prioritized Options

<p>OPTION 1</p>	<p>Repair, replacement or renovation of items, components or systems that are important to the health and safety of the students and staff and to sustain the overall operation of the facility. General maintenance and system service life upgrades. (state building code violations, health department violations, handicapped accessibility issues, removal of hazardous material, security issues not being met by current systems)</p>
<p>OPTION 2</p>	<p>Repair and renovation of long-range items that also bring the class size square footage of elementary classrooms to 1,200 sf and/or meet future capacity needs and the Orange County School Building Standards of 585 students for elementary schools.</p>
<p>OPTION 3</p>	<p>Repair and renovation of long-range items that also bring the class size square footage of elementary classrooms to 1,200 sf and/or meet future capacity needs and the Orange County School Building Standards of 637 students for elementary schools. Utilize sustainable approaches to extend building life while reducing overall maintenance and operation costs.</p>

The district’s list for older schools prioritized for building improvements is consistent with the 9 older schools identified in the facility assessment and prioritized projects listed in the 2016 Bond funding request. Chapel Hill High School has been removed from the list of future projects as it is currently under renovation with funding from the 2016 Bond.

Option 8 *Total Cost: \$100.52M--\$120.59M ; Pre-K/Phoenix/Admin at LC; Reno of older schools per study; total capacity +221*

Pre-K/Phoenix/Admin @ LC	\$39.07M
Carrboro Elementary	\$13.17M
Ephesus Elementary	\$6.10M
Estes Hills Elementary	\$5.76M
Frank Porter Graham Elementary	\$5.13M
Glenwood Elementary	\$5.32M
Seawell Elementary	\$6.28M
Culbreth Middle	\$10.71M
Phillips Middle	\$8.97M
2019 CONSTRUCTION COST	\$100.52M
CONSTRUCTION COST TOTAL IN 2024	\$120.59M

-deconstruct current
 -create centralized Pre-K (adds back 13 classrooms to schools. At 1:17 increases capacity at schools by 221.)
 -expand Phoenix
 -create Admin offices on 2nd level
 -relocate Maintenance
 -expand parking

All older schools renovation only.

Projects identified for the older school improvements listed above would increase capacity at the elementary level by 221 students. A second phase improvement would be to complete Option 3 renovations at Ephesus Elementary School at \$37.18 million dollars which completes necessary repairs and increases the school’s capacity by 237 students.

The annual projected inflation rate for construction costs is calculated at 6% per year for each year renovation projects are not completed. Delays in funding critical capital projects further exacerbates the funding gap on amount of capital funding received and the actual funding needed to complete necessary repairs to school buildings.

The following is a summary of the costs for renovations to the nine oldest facilities based on the above options.

Facility Name	Option 1 Costs	Option 2 Costs	Option 3 Costs
Carrboro Elementary	\$10.36M-\$13.2M	\$14.43M-\$18.28M	\$26.48M-\$33.34M
Ephesus Elementary	\$4.69M-\$6.10M	\$11.82M-\$14.49M	\$29.76M-\$37.18M
Estes Hills Elementary	\$4.36M-\$5.76M	\$10.75M-\$13.70M	\$29.45M-\$36.79M
Frank Porter Graham Elementary	\$4.27M-\$5.13M	\$10.38M-\$12.77M	\$20.38M-\$25.22M
Glenwood Elementary	\$4.18M-\$5.32M	\$13.45M-\$16.90M	\$25.67M-\$32.02M
Seawell Elementary	\$5.08M-\$6.28M	\$11.10M-\$13.81M	\$26.48M-\$33.34M
Culbreth Middle	\$8.37M-\$10.7M	\$17.45M-\$25.45M	Same as Option 2
Phillips Middle	\$7.12M-\$8.97M	\$11.83M-\$14.86M	Same as Option 2
Lincoln Center	\$3.06M-\$3.95M	\$37.47M-\$39.07M	Same as Option 2
CONSTRUCTION COST TOTAL	\$51.50M-\$65.39M	\$138.64M-\$169.33M	\$224.96M-\$277.28M
JAN 2024 PROJECTION (+6% Annual)	\$64.53M-\$81.94M	\$173.71M-\$212.16M	\$281.87M-\$347.44M

Facility Name	SAPFO CAPACITY 1:17	OPTION 2 INCREASED CAPACITY (517)	OPTION 3 INCREASED CAPACITY (637)
Carrboro Elementary	473	44	164
Ephesus Elementary	400	117	237
Estes Hills Elementary	483	34	154
Frank Porter Graham Elementary	474	43	43
Glenwood Elementary	379	138	138
Seawell Elementary	402	115	235
TOTAL CAPACITY INCREASES		491	971

The district is in the process of completing individual school capital profiles to further highlight the critical needs, repairs, and upgrades required to properly sustain and maintain older school facilities. These nine facilities were designated as the highest priority for capital renovations during the 2016 bond campaign based on the previous comprehensive facilities assessment along with community and stakeholder input.



Facilities Capital, Maintenance & Operation Summary

Orange County Schools strives to provide well maintained, safe, sustainable, and welcoming facilities for our community, students and employees. We attempt to meet this goal through short and long-range facility planning, completion of sustainability, deferred and preventive maintenance programs and through regular upkeep, repair and renovation projects.

The district monitors current facility conditions and utilizes industry standards for reviewing facility needs. A comprehensive facility assessment was completed in 2014. A safety, security and emergency management assessment was conducted in 2013. Roof assessment studies, parking lot assessment studies, indoor air quality assessments and end-of-life project schedules have also been completed. A 10-year Capital Investment Plan is utilized to identify funding of projects for the one-year allocated annual county capital appropriations.

The district receives annual capital funding for all facility needs, operations, maintenance repairs including technology upgrades, activity buses and facility services from the following county funding sources:

Debt Financing:	\$1,599,236
Pay Go (NC Lottery):	\$558,978
Article 46 Sales Tax (technology)	\$810,801
Older Facility Improvements	\$398,600*
Recurring Capital	\$1,195,800
Deferred Maintenance	\$1,195,800*

2020 Total Annual Capital Allotment: \$5,759,215

**Note: The scheduled funding of these allotments ends in FY 21. This amounts to a loss of capital funding of \$1,594,400.*

Priorities for Capital Projects

Utilizing facility assessment information and feedback from building occupants, the following priorities are used for setting priorities for capital projects:

- Fire, Life, Health & Safety related projects
- Building projects that increase Student Capacity
- End of Life Systems (roofs, mechanical systems, carpets, plumbing, etc.)
- Building Envelope Systems (brick veneer, drainage/gutters, windows, doors, etc.)
- Sustainability projects (lighting, cost savings, environmental controls, etc.)
- General maintenance & repair projects (painting, parking lots, athletic areas, etc.)

Building Operation Costs

UTILITY COST FOR 2018-19		
SITE	Electric + Gas + Water	Cost per Sq Ft
A.L. Stanback Middle School	\$ 182,238.65	\$ 1.34
Cameron Park Elementary School	\$ 111,783.34	\$ 1.58
Cedar Ridge High School*	\$ 372,807.65	\$ 1.72
Central Elementary School	\$ 92,611.85	\$ 1.51
C.W. Stanford Middle School	\$ 190,507.00	\$ 1.60
Efland Cheeks Global Elementary School	\$ 108,272.47	\$ 1.66
Gravelly Hill Middle School	\$ 142,392.30	\$ 1.16
Grady A. Brown Elementary School	\$ 112,723.16	\$ 1.50
Hillsborough Elementary School	\$ 95,589.30	\$ 1.31
New Hope Elementary School	\$ 151,165.87	\$ 1.51
Orange High School	\$ 378,564.40	\$ 1.74
Partnership Academy School	\$ 12,480.12	\$ 1.89
Pathways Elementary School	\$ 117,136.19	\$ 1.37
District Total	\$ 2,068,272.30	\$ 1.54

Facility Maintenance Work Order Summary

Work Orders by Location 2018-2019	
Site	# Work Orders
Administrative Annex	121
A.L. Stanback Middle School	328
Cameron Park Elementary School	423
Cedar Ridge High School*	474
Central Elementary School	241
Central Office	112
C.W. Stanford Middle School	352
Efland Cheeks Global Elementary	261
Grady A. Brown Elementary	299
Gravelly Hill Middle School	364
Hillsborough Elementary	370
Maintenance	59
New Hope Elementary	329
Orange High School	756
Partnership Academy	27
Pathways Elementary	356
School Community Relations*	66
Transportation	49
Welcome Center *	0
DISTRICT TOTAL	4,987

Footnotes

1. Welcome Center is a 26,000 sq ft building which opened in January of 2020. Building A is currently serving as an Administration Building, Building B is currently not occupied.
2. School Community Relations had an occupancy status change January 2020.
3. Cedar Ridge addition is currently under construction which will add an additional 50,000 sq ft to the campus.

Climate & Sustainability Summary

Orange County schools does not have a sustainability program but has a policy in place to make energy management conservation part of the district's daily practice. Our sustainability efforts go beyond routine facility work such as mechanical, lighting, or other building improvements to include programs and hands-on projects in our curriculum that include environmental education, teaching students to be stewards of the environment, and outreach efforts within schools and the community.

Composting: Two of our elementary schools are currently piloting a cafeteria-composting program in cooperation with Orange County Solid Waste and Brooks Contractor. The pilot program will study the amount of food waste, generated from the cafeteria and kitchen, that will be diverted from the landfill and determine the program benefit in assisting the district in reducing our carbon footprint.

Geothermal Project at Orange High School: In meeting long term planning goals of energy efficiency and cost savings, geothermal HVAC is currently being installed at Orange High School. 250 wells have been completed and work is currently underway to install and new air handlers and upfit the building with required water lines. Project scheduled to be completed the summer of 2021.

School Gardens: Several schools have school gardens onsite. Each garden is truly unique in its set up, which class is responsible for it, and what they grow, etc. We hope to find full time funding in the future to advance the garden program.

LED Lighting Upgrades: Through a program with Duke Energy, we upgraded old and inefficient lighting in all gymnasiums, and completed projects in Central Elementary, Efland Cheeks Global Elementary, Grady A. Brown Elementary, New Hope Elementary, C.W. Stanford Middle School, and Orange High School. Additional projects are scheduled to occur this spring at Cameron Park Elementary and C.W. Stanford Middle School. The lighting is brighter, energy efficient, motion activated and will significantly reduce outage times and electrical maintenance time.

School Building Profiles & Prioritized Major Capital Plans

Orange County Schools Board of Education has previously completed a Board facility retreat work session in order to review the facility building needs within the district. The projected facility needs from the comprehensive facilities assessment and from the list of identified projects for older schools range from \$160-\$220 million dollars and were categorized among three long-term options.

Capital Needs Prioritized Options

OPTION 1	Repair, replacement or renovation of items, components or systems that are important to the health and safety of the students and staff and to sustain the overall operation of the facility. General maintenance and system service life upgrades. (state building code violations, health department violations, handicapped accessibility issues, removal of hazardous material, security issues not being met by current systems)
OPTION 2	Repair and renovation of long-range items that also bring the class size square footage of elementary classrooms to 1,200 sf and/or meet future capacity needs and the Orange County School Building Standards of 585 students for elementary schools.
OPTION 3	Repair and renovation of long-range items that also bring the class size square footage of elementary classrooms to 1,200 sf and/or meet future capacity needs and the Orange County School Building Standards of 637 students for elementary schools. Utilize sustainable approaches to extend building life while reducing overall maintenance and operation costs.

The district's prioritized list for building improvements is consistent with the information listed in the facility assessment.



Item 1
School Joint Action Committee (SJAC) Update
– Changes in Class Size and Pre-K Impacts

Orange County Board of Commissioners Work Session
February 11, 2020



Background

- ▶ **Schools Adequate Public Facilities Ordinance (SAPFO)**
 - ▶ **Outlines criteria for maintaining a two part system including:**
 - ▶ Capital Improvement Plan (CIP) linked to the needs identified by student projections and available capacity
 - ▶ Issuing Certificate of Adequate Public Schools (CAPS) for new residential developments
 - ▶ **Purpose is to ensure that new residential growth within the county occurs at a pace that allows the County and school districts to provide adequate school facilities to serve students from the new developments.**
 - ▶ **Building capacity shall be determined by a joint action of the School Boards and Orange County Board of Commissioners.**
 - ▶ Includes changes in class size ratios
-



Purpose

- ▶ The SJAC is a short-term committee comprised of elected officials from the Chapel Hill-Carrboro City Schools Board of Education, Orange County Board of Education, and Orange County Board of Commissioners. Appointed members include:
 - ▶ Rani Dasi, Chapel Hill-Carrboro City Schools Board of Education
 - ▶ Dr. Stephen Halkiotis, Orange County Board of Education
 - ▶ Penny Rich, Orange County Board of Commissioners

 - ▶ SJAC also includes staff support from Orange County Managers Office, Orange County Planning Department, Orange County Schools, and Chapel Hill – Carrboro City Schools

 - ▶ To discuss legislative implications (i.e. class size impacts to school capacity) for inclusion into the Schools Adequate Public Facilities Ordinance (SAPFO) projections and provide recommendations on how/when to implement.
-



Background

- ▶ SJAC have conducted three meetings to review impacts and options before determining how to implement elementary school class size reductions for SAPFO purposes.

- ▶ January 31 – Reviewed changes in class size ratios outlined in House Bills 13 and 90

2019 – 2020	1:19
2020 – 2021	1:18
2021 – 2022	1:17

- ▶ March 8 – Reviewed student projections and potential impacts resulting from changes in class size ratios
- ▶ April 10 – Reviewed implementation options
 - ▶ Identified concerns with Pre-K classroom capacities being included in total elementary school capacity numbers. If coupled with the actual Pre-K use of school space (which is not part of the SAPFO capacity standard) the problem is worsened.



Student Capacity and Projections

CHCCS Elementary Student Projections	Class Size Averages						2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29
	1:21	1:20	1:20	1:19	1:18	1:17							
School Year	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22							
Actual	5,567	5,522	5,471										
Average				5,448	5,444	5,474	5,498	5,557	5,606	5,653	5,700	5,745	5,787
Annual Change - Increase (Decrease) in Actual & Projected Membership	66	(45)	(51)	(74)	(4)	30	24	59	49	47	47	45	42
Capacity - 100% Level of Service (LOS)	5,829	5,664	5,924	5,746	5,568	5,390	5,390	5,390	5,390	5,390	5,390	5,390	5,390
Number of Students, Actual and Projected, Over (Under) 100% LOS	(262)	(142)	(453)	(298)	(124)	84	108	167	216	263	310	355	397
Capacity - 105% Level of Service (LOS)	6,120	5,947	6,220	6,033	5,846	5,660	5,660	5,660	5,660	5,660	5,660	5,660	5,660
Number of Students, Actual and Projected, Over (Under) 105% LOS	(553)	(425)	(749)	(585)	(402)	(185)	(162)	(103)	(53)	(6)	41	85	128
Actual - % Level of Service	95.5%	97.5%	92.4%										
Average - % Level of Service				94.8%	97.8%	101.6%	102.0%	103.1%	104.0%	104.9%	105.8%	106.6%	107.4%
Annual Student Growth Rate	1.20%	-0.81%	-0.92%	-0.41%	-0.08%	0.55%	0.43%	1.07%	0.89%	0.84%	0.83%	0.78%	0.74%

- Capacity based on School Classrooms and Capacity Calculations submitted by school staff in April 2019 and class size ratios contained in **House Bill 13** and **House Bill 90**

Student Capacity and Projections

OCS Elementary Student Projections	Class Size Averages						2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29
	1:21	1:20	1:20	1:19	1:18	1:17							
School Year	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22							
Actual	3,293	3,183	3,205										
Average				3,213	3,262	3,278	3,321	3,367	3,395	3,424	3,452	3,480	3,508
Annual Change - Increase (Decrease) in Actual & Projected Membership	(25)	(110)	22	8	49	16	43	47	28	28	29	28	27
Capacity - 100% Level of Service	3,694	3,361	3,740	3,615	3,490	3,365	3,365	3,365	3,365	3,365	3,365	3,365	3,365
Number of Students, Actual and Projected, Over (Under) 100% LOS	(401)	(178)	(535)	(402)	(228)	(87)	(44)	2	30	59	87	115	143
105% Level of Service	3,879	3,529	3,927	3,796	3,665	3,533	3,533	3,533	3,533	3,533	3,533	3,533	3,533
Number of Students, Actual and Projected, Over (Under) 105% LOS	(586)	(346)	(722)	(583)	(403)	(255)	(212)	(166)	(138)	(109)	(81)	(53)	(26)
Actual - % Level of Service	89.1%	94.7%	85.7%										
Average - % Level of Service				88.9%	93.5%	97.4%	98.7%	100.1%	100.9%	101.7%	102.6%	103.4%	104.2%
Annual Student Growth Rate	-0.75%	-3.34%	0.69%	0.23%	1.53%	0.50%	1.31%	1.40%	0.83%	0.83%	0.83%	0.81%	0.79%

- Capacity based on School Classrooms and Capacity Calculations submitted by school staff in April 2019 and class size ratios contained in **House Bill 13** and **House Bill 90**

Impacts from Class Size Changes

Chapel Hill – Carrboro City Schools

2018 – 2019 School Year
Class Size Ratio – 1:20



Elementary School Capacity – 585 students
Total Elementary Capacity – 5,924* students

** At 100% Level of Service*

2021 – 2022 School Year
Class Size Ratio – 1:17



Elementary School Capacity – 534 students
Total Elementary Capacity – 5,390 * students

Loss of 534 seats

Class size reductions reduce school capacity and may show a need for new school capacity sooner than later (2026-27 school year).

Impacts from Class Size Changes

Orange County Schools

2018 – 2019 School Year
Class Size Ratio – 1:20



Elementary School Capacity – 585 students
Total Elementary Capacity – 3,740* students

** At 100% Level of Service*

2021 – 2022 School Year
Class Size Ratio – 1:17



Elementary School Capacity – 534 students
Total Elementary Capacity – 3,365* students

Loss of 375 seats

Class size reductions reduce school capacity and may show a need for new school capacity sooner than later

Options to Implement Class Size Ratios

A. Options which have been eliminated by SJAC:

1. Allow SAPFO to implement cessation of CAPS issuance (would stop issuance of building permits)
 - Present enrollment/capacity conditions would not create this condition in the short term
 2. Increase the adopted 105% Level of Service (LOS) for the elementary school level permanently or for a specific period of time
 - Example: 3,365 students at 100%, 3,533 students at 105%, and 3,601 students at 107%
 3. Allow modular, mobile, and/or temporary classrooms to be included in elementary school building capacity numbers permanently or for a specific period of time
-



Options to Implement Class Size Ratios

A. Options which have been eliminated by SJAC:

4. Coordinate all “special” classrooms or non-capacity spaces (i.e. art, music, computer) to be located in modular, mobile, and/or temporary classrooms
 5. Fund renovations and improvements to unused or underutilized spaces (i.e. staff offices, teacher workrooms) identified as potential classroom space by school staff in order to increase building capacity within permanent school buildings
 6. Fund school renovation and/or expansion projects which increase elementary school capacity within permanent school buildings
 7. Fund the construction of a new elementary school
-



Options to Implement Class Size Ratios

B. Options still being explored:

1. Suspend the Certificate of Adequate Public Schools (CAPS) test for the elementary school level for a specified period of time (short-term solution)
 - i. Coincide with Pre-K capacity discussions and decisions (Pre-K use of space within schools further decrease capacity for K-5, so effective capacity vs. SAPFO regulated capacity is lower than actual).
 - ii. Continue to issue CAPS for tracking purposes, but building permits will not be denied when capacity is met
 - iii. Recommended at the October 18 School Collaboration meeting
 - iv. This is not an emergency situation even with class size reductions, lower capacity does not create a CAPS deferral until 2026-27.
 2. Discontinue the Certificate of Adequate Public Schools (CAPS) test for both districts. (short-term solution)
 3. Fund the construction of a “school swing space” (mid-term solution)
-



Next Steps

▶ **November 2019**

- ▶ Orange County Planning staff will commence the 2020 SAPFOTAC Report process on November 4.
 - ▶ Due to timing, capacity numbers collected from the schools for the 2020 SAPFOTAC Report may not incorporate the SJAC's final recommendation. However, the report will include an update on the SJAC and changes in class size in the executive summary.

▶ **December 2019**

- ▶ Presentation to the Orange County Board of Education and the Chapel Hill – Carrboro Board of Education.

▶ **January 2020**

- ▶ Annual SAPFO Technical Advisory Committee meeting to review capacity, student membership, and 10-year projections.

▶ **February 2020**

- ▶ Presentation to the joint schools meeting for final recommendation
 - ▶ Orange County Planning staff will transmit final recommendation to the Towns. Based on the final recommendation, this may include additional steps for the local governments.

▶ **March 2020**

- ▶ Formal transmittal of draft 2020 SAPFOTAC Report
-





Questions and Comments





Impacts from Class Size Changes

(Excluding Pre-K Classroom Capacities)

Chapel Hill – Carrboro City Schools

2018 – 2019 School Year
Class Size Ratio – 1:20



Elementary School Capacity – 585 students
Total Elementary Capacity – 5,664* students

2021 – 2022 School Year
Class Size Ratio – 1:17



Elementary School Capacity – 495 students
Total Elementary Capacity – 5,169 * students

** At 100% Level of Service*

Loss of 495 seats

Class size reductions reduce school capacity and may show a need for new school capacity sooner than later (2021-22 school year).

Impacts from Class Size Changes

(Excluding Pre-K Classroom Capacities)

Orange County Schools

2018 – 2019 School Year
Class Size Ratio – 1:20



Elementary School Capacity – 585 students
Total Elementary Capacity – 3,560* students

2021 – 2022 School Year
Class Size Ratio – 1:17



Elementary School Capacity – 534 students
Total Elementary Capacity – 3,212* students

** At 100% Level of Service*

Loss of 348 seats

Class size reductions reduce school capacity and may show a need for new school capacity sooner than later (2024-25 school year)

Student Capacity and Projections

CHCCS Student Projections (Excluding Pre-K Classroom Capacity)	Class Size Averages						2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29
	1:21	1:20	1:20	1:19	1:18	1:17							
School Year	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22							
Actual	5,567	5,522	5,471										
Average				5,448	5,444	5,474	5,498	5,557	5,606	5,653	5,700	5,745	5,787
Annual Change - Increase (Decrease) in Actual & Projected Membership	66	(45)	(51)	(74)	(4)	30	24	59	49	47	47	45	42
Capacity - 100% Level of Service (LOS)	5,829	5,664	5,664	5,499	5,334	5,169	5,169	5,169	5,169	5,169	5,169	5,169	5,169
Number of Students, Actual and Projected, Over (Under) 100% LOS	(262)	(142)	(193)	(51)	110	305	329	388	437	484	531	576	618
Capacity - 105% Level of Service (LOS)	6,120	5,947	5,947	5,774	5,601	5,427	5,427	5,427	5,427	5,427	5,427	5,427	5,427
Number of Students, Actual and Projected, Over (Under) 105% LOS	(553)	(425)	(476)	(325)	(156)	47	70	130	179	226	273	318	360
Actual - % Level of Service	95.5%	97.5%	96.6%										
Average - % Level of Service				99.1%	102.1%	105.9%	106.4%	107.5%	108.5%	109.4%	110.3%	111.1%	112.0%
Annual Student Growth Rate	1.20%	-0.81%	-0.92%	-0.41%	-0.08%	0.55%	0.43%	1.07%	0.89%	0.84%	0.83%	0.78%	0.74%

- Capacity based on School Classrooms and Capacity Calculations submitted by school staff in April 2019 and class size ratios contained in **House Bill 13** and **House Bill 90**

Capacity – 100% LOS (2018-19 school year)	5,924
Pre-K Classroom Capacity (13 classrooms at 1:17 class size)	- 221 seats
Changes in class size ratio (2021-22 school year)	- 534 seats
Total	755 seats lost

Student Capacity and Projections

OCS Student Projections (Excluding Pre-K Classroom Capacity)	Class Size Averages						2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29
	1:21	1:20	1:20	1:19	1:18	1:17							
School Year	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22							
Actual	3,293	3,183	3,205										
Average				3,213	3,262	3,278	3,321	3,367	3,395	3,424	3,452	3,480	3,508
Annual Change - Increase (Decrease) in Actual & Projected Membership	(25)	(110)	22	8	49	16	43	47	28	28	29	28	27
Capacity - 100% Level of Service	3,694	3,361	3,560	3,444	3,328	3,212	3,212	3,212	3,212	3,212	3,212	3,212	3,212
Number of Students, Actual and Projected, Over (Under) 100% LOS	(401)	(178)	(355)	(231)	(66)	66	109	155	183	212	240	268	296
105% Level of Service	3,879	3,529	3,738	3,616	3,494	3,373	3,373	3,373	3,373	3,373	3,373	3,373	3,373
Number of Students, Actual and Projected, Over (Under) 105% LOS	(586)	(346)	(533)	(404)	(233)	(95)	(52)	(5)	23	51	80	108	135
Actual - % Level of Service	89.1%	94.7%	90.0%										
Average - % Level of Service				93.3%	98.0%	102.1%	103.4%	104.8%	105.7%	106.6%	107.5%	108.4%	109.2%
Annual Student Growth Rate	-0.75%	-3.34%	0.69%	0.23%	1.53%	0.50%	1.31%	1.40%	0.83%	0.83%	0.83%	0.81%	0.79%

- Capacity based on School Classrooms and Capacity Calculations submitted by school staff in April 2019 and class size ratios contained in **House Bill 13** and **House Bill 90**

Capacity – 100% LOS (2018-19 school year)	3,740
Pre-K Classroom Capacity (9 classrooms at 1:17 class size)	- 153 seats
Changes in class size ratio (2021-22 school year)	- 375 seats
Total	528 seats lost





Walkable School Zones

The Chapel Hill-Carrboro City Schools is committed to providing safe, connected and engaged schools within our community. As such, the Board of Education includes walkable school zones as part of the student assignment priorities within local policy and as a critical component within any redistricting plans.

Students that live within 1.5 miles of a school are considered in the “walk zone” and are not provided school bus transportation unless:

- factors are present which may endanger the safety of students walking to the school;
- a student is medically certified as temporarily incapacitated;
- a student is identified as having special needs following procedures in the North Carolina Procedures Governing Programs and Services for Children with Special Needs and will be provided with transportation services as required by law

The district further supports walk-to-school initiatives by permanent assignment of twenty school crossing guards to serve at several key intersections each morning and afternoon to assist students to safely cross roadways.

Our school crossing guards support the following schools:

- Carrboro Elementary School - 5
- Culbreth Middle School - 1
- Ephesus Elementary School - 1
- Estes Hills Elementary School/Phillips Middle School - 4
- McDougale Elementary & Middle School - 1
- Northside Elementary School - 5
- Rashkis Elementary School - 1
- Scroggs Elementary School - 1
- Smith Middle School/Chapel Hill High School – 1

Examples of Walkable Schools



Mary Scroggs Elementary School

501 Kildaire Road

Chapel Hill, NC 27516

“The school has a walk zone which extends throughout Southern Village, meaning no school buses pick up Mary Scroggs students who live in Southern Village. Out of 605 students who attend Mary Scroggs Elementary, an estimated 240 students are from Southern Village. How many walk or bike to school? About 200 on a typical day, or 83 percent of the students within the walk-zone. (About 100 students walk and 100 bike, according to the school.)” Reference: [Good Schools-Good Neighborhoods, UNC Center for Regional and Urban Studies by David Salvesen \(Principal Investigator\) and Philip Hervey, 2003.](https://curs.unc.edu/files/2013/05/goodschoolsreport.pdf)

Northside Elementary School

350 Caldwell Street

Chapel Hill, NC 27516



“Located on a previously developed site with nearby public transit, this 100,000-square-foot school is the heart of the neighborhood and serves as a place for community events. Northside Elementary School is home to 585 students and includes classrooms, a media center, a multipurpose room, support spaces, as well as dining and kitchen areas. Large windows in the classrooms provide natural light for the students and teachers. A building dashboard is located in the media center and is accessible to teachers who can integrate the facility’s water and power usage into their lesson plans. While construction details such as skylights, solar heating, and a green roof evoke the future, the design celebrates the site’s history of education by featuring a historical timeline component to the main staircase.”

Reference: Moseley Architects. <https://www.moseleyarchitects.com/portfolio-item/northside-elementary-schoolchapel-hill-carrboro-city-schools/>



Walkable School Zones

The Orange County Schools is committed to providing safe, connected and engaged schools within our community. The Orange County School Boards currently has no designated “walkable school zones” within the district. School bus transportation is provided to all students with the exception of most student attending Hillsborough Elementary as it is a school of choice. There is a small designated transportation zone surrounding Hillsborough Elementary.

Groups of parents and community members may gather and safely walk students to school from designated points; but, these paths are not identified as “walkable school zone” paths as not all are equipped with sidewalks and intersections staffed with crossing guards.

BENEFIT PACKAGE CONSIDERATIONS - for Joint Board Discussion

25-Feb-20

		LOCALLY FUNDED
Item #	Orange County Government - currently provided	Chapel Hill-Carrboro City Schools - OPTIONS UNDER CONSIDERATION
Insurance, Health & Wellness:		
A	<i>Health Insurance (pays employee and part of dependent coverage) It's an 80-20 PPO plan</i>	Health Plan pay employee premium
B	<i>Dental Insurance (pays employee only coverage)</i>	Dental Plan pay employee premium
C	<i>Vision (pay employee only coverage)</i>	Vision Plan pay employee premium
Retirement/Savings:		
D	<i>401K/457 Plan contribution and matching</i>	Employer Match option on 401k/403B
Other Employee Benefits:		
E	<i>Paid Parental Leave 6 weeks - (if qualifies for FMLA)</i>	Parental Leave - 6 weeks
F	<i>Flexible work hours/days</i>	2 Inclement weather Days Paid (tied to calendar)
G		do not charge employees out-of-district tuition

BUDGET UPDATE - Considerations for FY21 Budget

Potential items being considered for FY21 budget requests.

The FY21 Orange County Local Operating Budget Request will include those items the full Board seeks funding to support, which will include items not listed here.

		LOCALLY FUNDED
Orange County Government		Orange County Schools
Insurance, Health & Wellness:		
	Health Insurance (pays employee and part of dependent coverage)	
	Dental Insurance (pays employee coverage)	Self-Funded Dental thru Ameritas (investigating if can pay portion for employees)
Financial & Retirement:		
	401K/457 Plan contribution up to \$63 per pay period, min \$27.50 per pay period.	Employer Match option on 401k/403B (costing options)
		Paid National Conference for POY
SALARY and PROFESSIONAL SUPPORT RELATED		
		Bus Driver Attendance Bonus
		Bus Driver Retention Bonus
		Bus Driver Signing Bonus
		National Board Certified Teacher Pay (we keep 12% supplement in place if staff do not qualify for state funding)
Family & Parenting:		
	Paid Parental Leave (if qualifies for FMLA)	Parental Leave and/or FMLA leave
		2 Inclement weather Days Paid (tied to calendar)
Perks & Discounts:		
	Employee Discount Program	Employee Discounts Program
	80% Discount at Sportsplex	40% Discount at Sportsplex
	Commuter Checks & Assistance (Ride-Share)	
Other Initiatives:		
		Equity Professional Dev'l
		Equity Department Expansion

Tradecraft Center Study Status

In March 2019, a group of stakeholders was assembled to discuss the challenges and opportunities for the skilled construction trades in Orange County. Based on those initial discussions, the Board of County Commissioners adopted an amendment to the FY2019-20 County budget to, "Hire a consultant to compile an inventory of agencies participating in the workforce development pipeline available to Orange County and assess the feasibility of a Tradecraft Center."

The County subsequently contracted with The Chamber for a Greater Chapel Hill-Carrboro to conduct the Tradecraft Center study. The work plan for the Tradecraft study is attached. The stakeholder group met on January 28, and a final report is expected in May 2020.

Work Plan: Skilled Construction Trades Study Group

Updated by Katie Loovis on January 3, 2020

Charge

Compile an inventory of agencies participating in the work force development pipeline available to Orange County and assess the feasibility of a Tradecraft Center (See Appendix A).

Process

The Chamber will use action research (see Appendix B) to report on all ten deliverables (Appendix A) in collaboration with the Skilled Construction Trades Study Group (SCTSG) (see Appendix C) and other relevant parties as well as strong alignment with the Hillsborough/Orange County Chamber of Commerce; Durham Technical Community College; the Home Builders Association of Durham, Orange, and Chatham Counties; NC Works Career Center of Orange County; and the Regional Partnership Workforce Development Board.

The process will involve in-depth research, surveys, and in-person meetings. The Chamber Vice President for External Affairs, Katie Loovis, MPA (a doctoral student focusing on workforce development), will serve as the project manager. Geographically, our focus will be on the laborshed and workforce needs of Orange County employers and the training needs of Orange County residents. The findings will culminate in a final report deliverable in May 2020.

Timeline

Phase I - Identify: Map Key Stakeholders and Research Best Programs

[December 2019-January 2020]

- **What:** This phase will research the current state of play as it relates to the skilled construction trades in the Orange County laborshed, including who are the stakeholders, what services are being provided, and what is best practice for the skilled construction trades, particularly as it relates to a training center.
- **Deliverables:** Map deliverables 1, 2, and 3; research deliverable 5.
 - (1) Develop list of potential community pipelines for Tradecraft Training Center
 - (2) List of agencies who want to or are conducting training within the County.
 - (3) List of Placement Services.
 - (5) List of best practice programs in Tradecraft Training Programs.

→ **January in-person meeting with TTSG+ to review and discuss findings**

Phase II: Quantify: Survey Current and Future Needs

[January 2020-February 2020]

- Phase II will identify and quantify the pain points throughout the construction workforce pipeline to make clear the current and future challenges and opportunities.
 - Process: Interviews with key stakeholders to verify current and future needs
 - Deliverables: Research deliverable 4.
 - (4) List of potential sponsors for apprenticeship programs.
- **February in-person meeting with TTSG+ to review and discuss findings**

Phase III: Estimate Costs

[March-April 2020]

- Findings from Phase I and II will inform the challenges and opportunities in the skilled construction trades in Orange County and help inform the scope of a possible training center. Phase III will use that information to shape questions related to possible size, locations, and administration.
- Deliverables: Research deliverable 6, 7, 8.
 - (6) List of potential sites in Orange County to locate a Tradecraft Training program.
 - (7) Estimate Total Cost to develop a Tradecraft Training Center.
 - (8) Outline a potential administrative structure to manage a center and to coordinate all the elements in the pipeline flow.

→ **April in-person meeting with TTS to review and discuss findings**

Phase IV: Present Report

[May 2020]

→ **Submit report to County Administrators and possibly present to County Commissioners.**

Definitions

Tradecraft: "Skill acquired through experience in a trade." (Retrieved from <https://www.vocabulary.com/dictionary/tradecraft>)

Skilled Trades: "Skilled trades are occupations that require a special skill, knowledge, or ability which can be obtained at a college, technical school, or through specialized training. ...are generally divided into the following three categories: (Retrieved from <https://www.jcisd.org/domain/307>)

- 1) **Skilled Industrial Trades:** welders, machinists, mechanics, tool and die makers, programmers

2) Skilled Construction Trades: electricians, plumbers, gasfitters, carpenters, bricklayers, technicians, insulators

3) Skilled Service Trades: nurses, aides, orderlies, therapists, service technicians.”

Construction Trades Occupation List: There are 19 occupations within the “Construction and Extraction Trades” according to the U.S. Bureau of Labor Statistics. See Appendix D for that occupation list as well as entry-level education, and 2018 median pay.

5-Star Construction Jobs: The North Carolina Department of Commerce rates occupations from 1-5 stars based on wages, projected growth rates, and projected job openings. Two construction occupations – “First-Line Supervisors” and “Construction Managers” - earned 5 stars. For those with high school and work experience, First Line Supervisors is a 5-star job for its annual growth rate of 1.31%, 3,011 annual openings, and an annual median wage of \$58,030. For those with bachelor’s degrees, “Construction Manager” is a 5-star job with an annual growth rate of 1.24%, has 1,347 annual openings, and an annual median wage of \$95,230. See Appendix D for more information.

Appendix A: Deliverables

- 1. Develop list of potential community pipelines for Tradecraft Training Center**
 - a. Secondary School Systems.
 - b. Community agencies (Empowerment Inc., Club Nova, Refugee Partners, etc.).
 - c. Large Institutions (UNC-Chapel Hill current work force, Large contractors, etc.).
 - d. Specialized populations (Women, prison release, retired, etc.).
- 2. List of agencies who want to or are conducting training within the County.**
 - a. Secondary Schools.
 - b. Community Colleges (Durham Tech, Central Carolina Community College).
 - c. Specialized programs (Hope Renovations, El Centro).
 - d. Large Institutions (UNC-Chapel Hill, Large Contractors).
 - e. Associations.
- 3. List of Placement Services.**
 - a. Secondary Schools.
 - b. County services.
 - c. State Services.
 - d. Community Colleges.
 - e. Community agencies.
- 4. List of potential sponsors for apprenticeship programs.**
- 5. List of best practice programs in Tradecraft Training Programs.**
- 6. List of potential sites in Orange County to locate a Tradecraft Training program.**
- 7. Estimate Total Cost to develop a Tradecraft Training Center.**
- 8. Outline a potential administrative structure to manage a center and to coordinate all the elements in the pipeline flow.**
- 9. Conduct two or three meetings presenting findings to Tradecraft Training Study Group.** (Per "A2" retrieved from https://www.orangecountync.gov/DocumentCenter/View/7432/Amendment-Attachment-A-2Tradecraft_Working_Group).
- 10. Provide a written report compiling all findings.**

Source: <https://www.orangecountync.gov/DocumentCenter/View/7435/Amendments-Attachment-A-1-Feasibility-Study-for-Tradecraft-Training-Center>

Appendix B: Action Research

Summary: The Chamber will perform “Action Research” to report on the ten deliverables.

Source: Fleener, Jayne. (2019). Action Research & Institutional Logics. (NC State University 787 Fall 2019 Class Presentation).

	Action Research	Applied Research or Consulting	Conventional Research
Purpose	To understand and improve	To improve	To understand
Power	Researching “with”	Researching “for”	Researching “on”
Researcher	Embedded with the research – problem co-definer	Invited expert; knows what good outcomes should look like	External to context, problem definer, research designer, research implementer
Stakeholders	Problem co-definers, research co-designers	Clients of the research, sources of data	Subjects of research; sources of information
Time	Focus on here & now with reflection on past to influence future; cyclical	Match situation to known other situations; sequential	Either past focused or emphasizing control comparison, isolation of key variables
Evidence	Experiential, partial, emergent, dialogic, intuitive, qual & quant	Both qual & quant.	Both qual. And quant.
Learning process	Learning and dissemination integrated into the research process; question status quo; iterative	Inquiry mode defines stakeholder problem then matches problem to solutions; linear	Knowledge development; dissemination passive and after the fact.
Epistemology	Abductive; emergent	Deductive; Certainty	Inductive; Stochastic/probabilistic
Strengths	Complex contexts where what to do ‘best’ is a subject of discussion & negotiation	Expert diagnosis, aiming at contractual arrangement with defined scope of work	Understands simple and complicated contexts by weighting variables or forces into deterministic sets
	Seeks to localize unique practices	Seeks to deploy ‘best practices’	Seeks generalizability

Weaknesses	Many positive outcomes cannot be easily summarized quantitatively	Efficiency orientation may conceive of new situations as version of known, prior ones, ignoring new knowledge creation opportunities	Commitment to objectivity standards of the natural sciences render it often as armchair speculation
	By those not familiar with AR it can appear lacking in concern for objectivity	Delivering on a pre-determined contract can block emergent processes	Can be inactionable and potentially misleading
Benefits	The work belongs to those involved	Returns value to those who pay	Serves an academic community
	Builds problem-solving and learning competencies in groups, organizations, communities		May exploit the participants as objects of research
Action outcomes	Action is coordinated as seamless part of the research design	Quick wins (may be short-term only wins)	Publication or communication of new information to disciplinary colleagues through peer reviewed journals
	Workshops, experiments, new practices, new learning, new forms of knowledge/ practice, sometimes also peer reviewed	Creates stakeholder dependence, usually requires follow up for sustainable action	

Appendix C: Inaugural Meeting Attendees

Attendance at Tradecraft Training Center Discussion at The Chamber For a Greater Chapel Hill-Carrboro on Friday March 22, 2019. The list was compiled by Jim Porto and those listed in red were interested but could not make this meeting.

Name	Organization	Email
Aaron Nelson	President, The Chamber For a Greater Chapel Hill-Carrboro	anelson@carolinachamber.org
Jim Porto	Project Developer, CommunityCAPS	Jim_porto@communitycaps.org
Kathi Breweur	Director of Career Technical Education, Chapel Hill-Carrboro City School System	kbreweur@chccs.k12.nc.us
Patrick Abele	Assist Superintendent for Support Services, Chapel Hill-Carrboro City School System	pabele@chccs.k12.nc.us
Quincy Williams	Chapel Hill-Carrboro City School System	qwilliams@chccs.k12.nc.us
Brennan Bouma	Sustainability Coordinator, Orange County	bbouma@orangecountync.gov
Mark Marcoplos	Orange County Commissioner	mmarcoplos@orangecountync.gov
Beth Payne	Dean, Corporate Services, Durham Tech at the Chesterfield	paynee@durhamtech.edu
Peter Wooldridge	Vice President, Corporate, Education, Continuing Education, Public Safety Services, Durham Tech	wooldridgep@durhamtech.edu
Maryah Smith-Overman	Program Director/Instructor, Construction Trades, Durham Tech	smithovermanm@durhamtech.edu
Ryan Miller	Executive Director and Founder NC Building Performance Association	ryan@BuildingNC.org
Darius Dixon	Executive Director, Facilities Services, UNC-Chapel Hill	Darius.Dixon@fac.unc.edu
Anna Wu	Associate Vice Chancellor for Facilities Services, UNC-Chapel Hill	annaw@fac.unc.edu
Holly Fraccaro	CEO Home Builders Association of Durham, Orange & Chatham Counties	holly@hbadoc.com
Nora Spencer	CEO Hope Renovations	nora@hoperenovations.org
Cara Nance	CEO, Nance Construction Schools, LLC	cnnance@gmail.com

Nicole Goolsby	Owner, Red Ladder Residential	nicole@redladderresidential.com
Steve Griffin	President, Insurance People	steve@inspeople.com
David Fitch	President and CEO, Fitch Enterprises, LLC	davidfitch17@gmail.com
Garren Maynard	Business Manager, 84 Lumber	Garren.Maynard@84Lumber.biz
Todd Lincoln	President, R.T. Lincoln & Associates, Inc.	rtlincoln.com@gmail.com

Appendix D: Construction and Extraction Occupations

Summary: According to the U.S. Bureau of Labor and Statistics, "Employment of construction and extraction occupations is projected to grow 10 percent from 2018 to 2028, faster than the average for all occupations, a gain of about 704,000 new jobs. Overall growth in the economy and population will increase demand for new buildings, roads, and other structures, which will create new jobs in construction and extraction occupations. The median annual wage for all construction and extraction occupations was \$46,010 in May 2018, which was higher than the median annual wage for all occupations of \$38,640."

List of 19 construction and extraction occupations in order highest to lowest median pay nationally:

- 1. Elevator Installers and Repairers**
 - Elevator installers and repairers install, fix, and maintain elevators, escalators, moving walkways, and other lifts.
 - High school diploma or equivalent
 - \$79,780

- 2. Boilermakers**
 - Boilermakers assemble, install, maintain, and repair boilers, closed vats, and other large vessels or containers that hold liquids and gases.
 - High school diploma or equivalent
 - \$62,150

- 3. Construction and Building Inspectors**
 - Construction and building inspectors ensure that construction meets building codes and ordinances, zoning regulations, and contract specifications.
 - High school diploma or equivalent
 - \$59,700

- 4. Electricians**
 - Electricians install, maintain, and repair electrical power, communications, lighting, and control systems.
 - High school diploma or equivalent
 - \$55,190

- 5. Plumbers, Pipefitters, and Steamfitters**
 - Plumbers, pipefitters, and steamfitters install and repair pipes that carry liquids or gases.
 - High school diploma or equivalent
 - \$53,910

- 6. Ironworkers**
 - Ironworkers install structural and reinforcing iron and steel to form and support buildings, bridges, and roads.
 - High school diploma or equivalent

- \$52,770

7. Sheet Metal Workers

- Sheet metal workers fabricate or install products that are made from thin metal sheets.
- High school diploma or equivalent
- \$48,460

8. Construction Equipment Operators

- Construction equipment operators drive, maneuver, or control the heavy machinery used to construct roads, buildings and other structures.
- High school diploma or equivalent
- \$46,990

9. Carpenters

- Carpenters construct, repair, and install building frameworks and structures made from wood and other materials.
- High school diploma or equivalent
- \$46,590

10. Drywall and Ceiling Tile Installers, and Tapers

- Drywall and ceiling tile installers hang wallboard and install ceiling tile inside buildings. Tapers prepare the wallboard for painting, using tape and other materials.
- No formal educational credential
- \$45,180

11. Masonry Workers

- Masonry workers use bricks, concrete blocks, concrete, and natural and manmade stones to build masonry structures.
- See How to Become One
- \$44,810

12. Glaziers

- Glaziers install glass in windows, skylights, and other fixtures in storefronts and buildings.
- High school diploma or equivalent
- \$43,550

13. Solar Photovoltaic Installers

- Solar photovoltaic (PV) installers assemble, install, and maintain solar panel systems on rooftops or other structures.
- High school diploma or equivalent
- \$42,680

14. Hazardous Materials Removal Workers

- Hazardous materials removal workers identify and dispose of asbestos, lead, radioactive waste, and other hazardous materials.
- High school diploma or equivalent

- \$42,030

15. Insulation Workers

- Insulation workers install and replace the materials used to insulate buildings and their mechanical systems.
- See How to Become One
- \$41,910

16. Flooring Installers and Tile and Marble Setters

- Flooring installers and tile and marble setters lay and finish carpet, wood, vinyl, and tile.
- No formal educational credential
- \$40,830

17. Roofers

- Roofers replace, repair, and install the roofs of buildings.
- No formal educational credential
- \$39,970

18. Painters, Construction and Maintenance

- Painters apply paint, stain, and coatings to walls and ceilings, buildings, bridges, and other structures.
- No formal educational credential
- \$38,940

19. Construction Laborers and Helpers

- Construction laborers and helpers perform many tasks that require physical labor on construction sites.
- See How to Become One
- \$34,810

Source: U.S. Bureau of Labor and Statistics. "Occupational Outlook Handbook: Construction and Extraction Occupations." (2019). Retrieved from <https://www.bls.gov/ooh/construction-and-extraction/home.htm>

Appendix E: 5-Star Jobs in North Carolina

Summary: The North Carolina Department of Commerce rates occupations from 1-5 stars based on wages, projected growth rates, and projected job openings. The following are 5-star jobs as they represent an occupation with the greatest projected employment potential through 2026:

- **“First-Line Supervisors of Construction Trades & Extraction Workers”** is a 5-star job for those with High School & Work Experience as it has an annual growth rate of 1.31%, 3,011 annual openings, and an annual median wage of \$58,030.
- **“Construction Managers”** is a 5-star job for those with bachelor’s degrees as it has an annual growth rate of 1.24%, has 1,347 annual openings, and an annual median wage of \$95,230.

Source: For a complete list of Star Jobs and explanation of the rating process, visit <https://www.nccommerce.com/data-tools-reports/labor-market-data-tools/employment-projections#star-jobs> and search occupations for ratings at https://nccareers.org/starjobs/star_jobs.html.

Universal Pre-K Study Status

In response to a Board of Commissioner petition, County staff have initiated a data collection effort to analyze strategies that would expand pre-kindergarten educational opportunities and achieve universal pre-kindergarten coverage. Staff is gathering information on the universe of projected need, barriers to accessing current child care and pre-kindergarten programs, and the general magnitude of costs for expanding current services.

The ability to expand pre-kindergarten education, at least in the short term, will also rely on adequate private and public facilities to serve additional students. The County's preliminary work will also attempt to assess the current capacity available for additional pre-kindergarten education.

The initial work on student demand, capacity, and potential short term and long term costs will be presented to the Board of County Commissioners prior to budget discussions for additional feedback and direction.



Pre-Kindergarten Programming

The mission of the Chapel Hill-Carrboro City Schools (CHCCS) Pre-K/Head Start Program, in partnership with families and the community, is to provide high quality, developmentally appropriate early childhood education, which will meet the diverse needs of all children and prepare them for a positive educational experience. The district currently serves over 260 students in traditional, blended and adaptive pre-kindergarten classrooms. Younger students being served under the Exceptional Children's program are eligible to enroll in pre-kindergarten classrooms as early as age three.

The purpose of the CHCCS Pre-K/Head Start is to support students, families and the Local Education Agency (LEA) in preparing students for success in education and in life. Our program presents a heavy focus on social emotional learning along with play-based pre-literacy and math skills. Many of our students come from low socioeconomic backgrounds, have disabilities, or other factors that could impede learning. Given this demographic, we serve to identify and build strengths to support learning for the whole child.

Pre-K serves children age three to five years of age, not yet eligible for kindergarten, in the areas of Education, Family Partnerships, Mental Health, Disabilities, Health, Safety, Nutrition, and Dental Care.

Pre-K operates 180 school days from 8:00-2:30 and extended care is available (7:30-8 and 2:30-5:30). Pre-K is funded through Head Start, North Carolina state funded Pre-K Program/Smart Start (NC Pre-K) and local tuition dollars.

Applications for Pre-K/Head Start programs are accepted on a year-round basis. Children who are three or four years old by August 31st are eligible to apply. Interested families must complete an application and provide supporting documentation. Applications are reviewed and screened and eligibility for Head Start, Smart Start/NCPK, Exceptional Children's Program (EC), Subsidy or Tuition is determined based on income and risk factors. Tuition and Subsidy placements are lottery-based. Children who are not selected through the lottery process will be placed on a waiting list. Head Start and Smart Start/NC Pre-K placements are need-based. If enrollment at all sites is full, accepted applications will be placed on the waiting list. Once the

selection process is completed, families will be notified of their child's application status. In efforts to reach families in Chapel Hill and Carrboro, flyers are created and distributed in 4 different languages: Karen, Burmese, Spanish, and English. Outreach takes place through churches, shelters, apartment complexes, mobile home parks, and supermarkets in efforts to reach diverse populations in the community.

The district pre-kindergarten program currently operates on an annual budget of approximately \$4 million dollars for 267 students. Funding sources are:

\$1,300,000 from Head Start

\$700,000 from NC-PK

\$500,000 from Local Tuition Students

\$1,500,000 from Local Funds for EC Support

The district estimates that a Universal Pre-K program would cost approximately \$15 million dollars to serve approximately 750 students. This estimated cost does not include additional capital funding that would be needed for additional classrooms to serve 500 more students in a Universal Pre-K program.

The 267 students in Pre-K are from the following funding sources:

- 116 PK Federal Head Start
- 20 Smart Start/NC Pre-K
- 131 PK Paid
 - 30-paid fully by parents
 - 60-paid through Exceptional Children's Program
 - 40+ paid through DSS childcare subsidies

Of the 20 PK classrooms in the district, 14 classrooms are housed inside an elementary school building and six classrooms are housed in a mobile unit on an elementary school campus. All classrooms have 5-star (highest) quality ratings from the NC Division of Child Development. There are currently 4 students on the Head Start waiting list and 71 students on the tuition list for PK.

Kindergarten statistics:

- 2019-2020 Kindergarten enrollment 837 students
- 509 (61%) families indicated their children attended some type of Pre-K
- 129 Pre-K students exited a CHCCS Pre-K at the end of the 2018-2019 school year.

Key: BL- Blended; DL- Dual Language; SS- Separate Setting; TYP- Typically Developing

School	Class-Room Type	Class-room Capacity	# of Students Enrolled	Head Start	NCPK/ Smart Start	Tuition w/ Subsidy	Tuition	EC
CES	CB3/4 TYP	15	15	7	3	0	5	0
	CBDLA DL	15	15	6	4	2	3	0
	CBDLB DL	15	15	6	2	3	4	0
EES	EPH3/4 BL	15	15	9	0	1	1	4
	EPH4 BL	15	14	9	1	1	0	3
EHES	EHES3/4 BL	15	15	10	0	0	1	4
FPG	FPGA DL	15	15	8	2	0	5	0
	FPGB DL	15	15	10	1	2	2	0
McD	McD3/4 BL	15	15	8	0	0	3	4
	McD4 BL	15	15	8	0	3	0	4
	McDSS SS	8	8	0	0	0	0	8
NES	NESA BL	15	15	8	1	0	2	4
	NESB BL	18	15	6	2	1	2	4
	NESSS SS	8	6	0	0	0	0	6
RES	RES3/4 BL	15	15	6	2	1	2	4
	RESSS SS	8	8	0	0	0	0	8
MSES	SCR3/4 BL	15	15	2	1	3	5	4
	SCRSS SS	12	0	0	0	0	0	0
SES	SES3/4 TYP	15	14	10	3	0	1	0
	SES4 TYP	15	15	9	5	1	0	0
Totals	20	276	260	122	27	18	36	57