

# *Chatham County*



*Approved FY 2019-2025  
Capital Improvements Program*

# Chatham County 2019-2025 Capital Improvements Program Introduction

## About the Capital Improvements Program (CIP)

The CIP is a long-term plan for funding the County's major capital needs. It shows how facilities, equipment, and other projects that cost \$100,000 or more could be scheduled and funded over the next seven years, beginning in FY 2019.

It is important to state upfront that this is a PLAN, not a BUDGET, since a budget controls the actual spending of allocated funds. While staff attempts to be as accurate as possible, it is difficult to estimate project costs exactly, particularly early in the planning process. Before funds can be spent they must be budgeted through the operating budget or, in most cases, through a separately adopted project ordinance.

The same is true for operating costs. As facilities are being planned, staff attempts to identify operating costs, such as staffing and utilities. The cost of these items depends on final square footage and operational issues that may not be apparent until the facility is far along in planning.

## CIP Process

The CIP is a plan which is updated annually during the budget process and may be modified at any time to reflect changing conditions. A CIP is a systematic way of anticipating, planning, and budgeting for major projects. The adoption of a CIP can improve the credit worthiness (bond rating) of a jurisdiction.

Timeline for adoption:

- CIP requests originate at the department level. Requests were submitted by departments on or before October 2, 2017.
- The Manager's Office is responsible for reviewing new and existing requests and recommending a proposed CIP to the Board of Commissioners. The recommended CIP will be presented on November 6, 2017.
- Commissioners obtain public input on the CIP before discussing it. A public hearing is scheduled for November 20, 2017.
- Commissioners review the recommendation in detail and make changes. Commissioners have a work session scheduled on November 21, 2017.

- The final action is adoption of the CIP, tentatively scheduled for the December 18, 2017 meeting.

## Overall Approach

No new debt-funded projects are recommended in the CIP; however the projected budgets for Seaforth High School, Chatham Grove Elementary School, and Central Services Building have increased with the addition of LEED Silver. The projected budget for Chatham Grove Elementary School has also increased to make improvements needed for an emergency shelter and for the potential addition of a recreation center that would be shared with the County Parks & Recreation Department and built in lieu of a multipurpose room. As long as the bids for Chatham Grove, Seaforth High School and the Health Sciences Building are within budget, no additional contribution will be needed to the debt reserve.

However, experts in the construction industry warn that growth in the economy has resulted in rapidly rising building costs; further, the development of the commercial area of Chatham Park and NC Connect projects are projected to begin around the time the new elementary and high schools and health sciences building will be bid. Staff is monitoring the situation and will work to obtain additional architectural estimates early in 2018. An additional point to consider is that the county's authority to levy school impact fees is being studied by the NC General Assembly. If that authority is repealed, approximately three additional cents on the property tax rate would be required to make up for this loss for approved projects in the debt model.

There are significant future projects on the horizon, namely the replacement of the county's emergency radio system, the construction of additional elementary or middle schools, and the construction of a shared western intake and water plant on Jordan Lake. These projects will also require debt funding and will add significantly to the county's debt load, which is already projected to be the highest in our population group. In addition, the radio system will require a shorter amortization period than typical projects, which would have a significant impact on the debt model. To ensure capacity for these critical projects, additional debt-funded projects, which are not deemed an absolute necessity, should be avoided in the near future.

## Recommended Changes

The Recommended CIP was approved by the board on November 21, 2017. Recommended changes to the Approved 2018-2024 CIP (as amended) include:

Schools: School projects are recommended as requested by the Chatham County Board of Education, unless noted below.

- **Increase funding for mobile classrooms.** Current enrollment figures and projections based on the impact of House Bill 13 and for growth indicate that additional mobile units may be needed. Five classrooms are currently installed and an additional two are planned in FY 2018. An addition to the existing project will allow Chatham County Schools to purchase 12 more mobile units will meet these space needs. [+473,695]
- **Increase funding for repair of Northwood High School Auditorium HVAC.** The project is complete, but the cost exceeded the available budget and additional funds are needed. [+9,605]

Other projects: Other projects are recommended as requested by the agency or department, unless otherwise noted.

- **New EMS Base on US15-501:** An emergency medical services (EMS) station is needed on 15-501 north to reduce response times in an area of the county that has a high volume of EMS calls. Currently, those calls are answered from Pittsboro and from the station on Fearington Point Road. [+1,241,897];
- **CCCC Walking Trail:** The existing walking trail surrounding the CCCC Pittsboro Campus is badly in need of repair in FY 2019 [+\$183,750]. A connector trail between CCCC Pittsboro Campus and the Chatham County Agriculture & Conference Center is needed to allow foot traffic between the two sites in FY 2021 [+115,000];
- **Central Carolina Business Park Pavement Overlay:** In order to accept the roads for maintenance, NCDOT requires a pavement overlay over the entire length of Progress Boulevard and full depth repair of the intersections of Progress Boulevard with both Campus Drive and Technology Way. Additionally, the routine inspections of the bridge over Loves Creek identified required repairs FY 2019. [+500,000]; and
- **Increase the budget for Briar Chapel Park:** Additional funds are needed for design, to pave the parking lots and to repair the pond. [+237,873].

## Add Future Projects:

- **New Sheriff Office:** The Sheriff has requested additional office space and has proposed building a new office on the space available in front of the Detention Facility for future growth and to consolidate the office in a single location.
- **Annex Campus Master Plan:** Develop a long-term master plan to address long-term space needs for the campus of the Courthouse Annex, Dunlap Building, and Old Agriculture Building.

The CIP includes both summaries of major projects, revenues and operating expenses and detailed descriptions of each project, including justifications, cost detail, funding sources, and impacts on the operating budget.

## Debt-Model Assumptions

- 7.7 cents on the property tax rate is dedicated annually. As long as the bids for Chatham Grove, Seaforth High School and the Health Sciences Building are within budget, no additional contribution to the debt model will be needed.
- 2% annual growth in property tax revenues/base (growth since the last revaluation has averaged 2.46%).
- 2% annual growth in lottery proceeds. Impact fees are estimated to grow 2% until FY 2022, when Briar Chapel is expected to be built out. The development has been paying an addition \$2,000 per unit in impact fees, and that amount is subtracted from FY 2022.

## Other Assumptions

- Generally, construction costs are inflated 5% per year. Staff also recommends a 5-10 percent contingency for most projects.
- Other project costs, such as equipment, and operating costs are usually inflated by a factor of 3% per year, unless there is good reason to use another inflationary factor (which will be noted).
- Operating costs are generally inflated 3% per year, unless costs are fixed by contract.

## Bond Rating

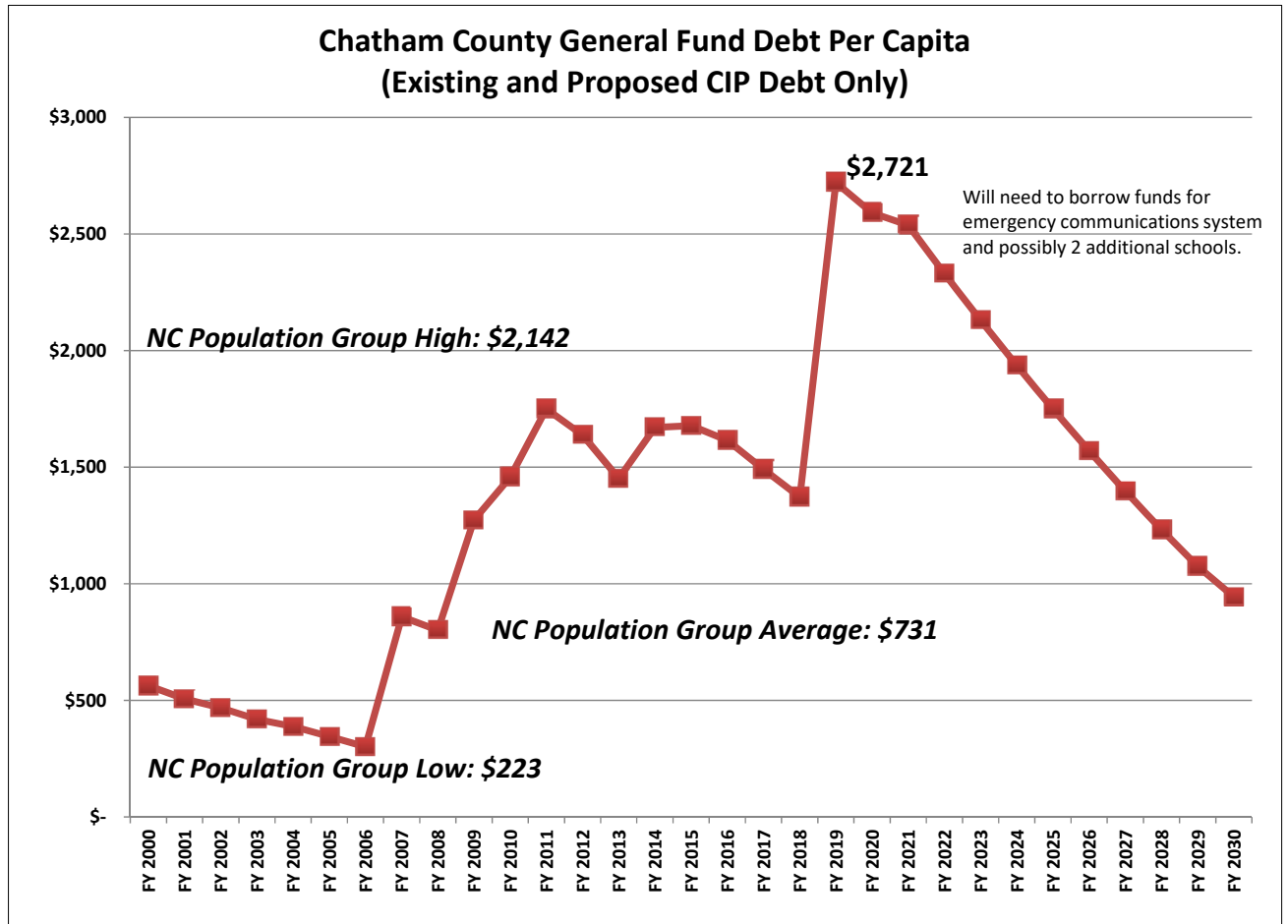
Chatham's ratings are exceptional. Chatham is one of only 9 other counties in North Carolina to hold a AAA rating from Standard and Poor's and is by far the smallest county. Both ratings were upgraded in October 2014:

- Standard and Poor's (S&P): AAA (up from AA+)
  - Moody's : Aa1 (up from Aa2/favorable outlook)
- With a population more than twice as big as Chatham's, Orange County is the next largest county to hold a AAA. Of the surrounding counties, Chatham's combined rating is higher than Alamance, Lee, Harnett, Moore, and Randolph. Chatham holds the highest combined rating in its population group (50,000 to 99,999).

**Debt Indicators**

Debt indicators are factored as if all projects are approved as recommended.

- Debt as a percent of assessed value: With a projected high of 1.97% in FY 2019, the county's indicator is projected to be slightly above the highest county (as of June 30, 2016) at 1.86% in its population group (50,000 to 99,999) and below the 8% legal maximum. (No county in NC is anywhere near the legal debt limit. The highest in the state is 2.879%.)
- Debt per capita: With a projected high of \$2,721 in FY 2019, the county per capita debt would exceed the current highest county (as of June 30, 2016) in its population group, \$2,142.
- Debt as a percent of the operating budget: Staff projects that, depending on decisions made in the operating budget, debt service may exceed the 15% maximum recommended by the Local Government Commission (LGC). The current model shows debt service exceeding 15% in FY 2022 and FY 2023. While this is an issue, the county differs from other counties in that funds for debt service have been set aside in a reserve account. Therefore, increases in debt service do not decrease Chatham County's flexibility to manage the operating budget, the primary concern of the LGC's maximum.



# Readers Guide

## County Buildings - Animal Shelter Expansion and Renovation

Approved-No Contracts

Project Status

**Project Budget:**  
The budget for the project as approved by project ordinance or as approved in the FY 2018-2024 CIP.

**Project Element:**  
Expense

**Funding Source:**  
Revenue

**Operating Effect:**  
Impact on Operating Budget.

Build a 7,931-square-foot addition to the existing Animal Control shelter and renovate the existing 2,600-square-foot building to meet the needs of animals, visiting public, and staff. Separation of adoptable animals from those who are ill or otherwise not available for adoption will facilitate adoptions of shelter animals. The new building will provide adequate space for staff, and conform to industry best practices.

Project Budget	Budget	Current Year:									Project Totals
		Prior to FY 2018	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	
<b>Project Element</b>											
Architectural Design & Construction Ad	322,056	0	313,430	0	0	0	0	0	0	0	313,430
Construction	3,930,654	0	0	3,766,876	0	0	0	0	0	0	3,766,876
Contingency	266,999	0	0	376,688	0	0	0	0	0	0	376,688
Feasibility Study	14,370	14,370	0	0	0	0	0	0	0	0	14,370
Furnishings & Equipment	110,985	0	0	108,012	0	0	0	0	0	0	108,012
Other Contracted Services	28,000	0	0	27,250	0	0	0	0	0	0	27,250
Permits & Connection Fees	22,400	0	0	21,800	0	0	0	0	0	0	21,800
<b>Total Project Element</b>	<b>4,695,464</b>	<b>14,370</b>	<b>313,430</b>	<b>4,300,626</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,628,426</b>
<b>Funding Source</b>											
Capital Reserves	4,681,094	0	313,430	4,300,626	0	0	0	0	0	0	4,614,056
General Fund Fund Balance	14,370	14,370	0	0	0	0	0	0	0	0	14,370
<b>Total Funding Source</b>	<b>4,695,464</b>	<b>14,370</b>	<b>313,430</b>	<b>4,300,626</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,628,426</b>
<b>Operating Effect</b>											
Contribution to Capital Reserve	0	2,808,656	902,700	902,700	0	0	0	0	0	0	4,614,056
Decreased Operating Costs	0	0	0	-20,237	-20,237	-20,237	-20,237	-20,237	-20,237	-20,237	-141,656
Increased Operating Costs	0	0	0	188,329	182,728	188,210	193,856	199,672	205,662	211,834	1,370,291
<b>Total Operating Effect</b>	<b>0</b>	<b>2,808,656</b>	<b>902,700</b>	<b>1,070,792</b>	<b>162,491</b>	<b>167,973</b>	<b>173,619</b>	<b>179,435</b>	<b>185,425</b>	<b>191,597</b>	<b>5,842,688</b>

**Project Totals:**  
Totals all expenditures and revenues, even those expended or received in previous years. Totals operating costs, but not those spent prior to FY 2018.

### Define Problem

The animal control shelter was built in 1993 and its space is inadequate for dogs, cats, staff and the public.

The shelter is overcrowded. The 20 dog runs and the small area for cats stay full, making overcrowding the main reason for euthanizing animals. Between FY 2011 and FY 2016, 11,176 dogs and cats were sheltered, and 3,170 of these were euthanized for lack of space despite being eligible for adoption. Public interest in the animal services field continues to increase. Encouraged by the national focus on animal welfare issues, local groups maintain interest in the way the county operates the Animal Services division. The Animal Services division operates the only county-run open admission facility in the area. To provide the best services to our community and animals, the division works to find positive outcomes for all healthy adoptable animals, to prevent pet overpopulation with spay and neuter efforts, and, when necessary, to give animals the most humane euthanasia possible.

A needs assessment conducted in 2014 by Bacon Group Inc. concluded that current animal intake numbers indicate a need for 34 dog kennels and 34 cat housing units. The needs assessment identified many problems with the existing facility including:

- A single kennel area contributes to disease transmission. Best practices for modern animal shelters call for separately contained and ventilated kennel areas for daily intake, bite quarantine, health quarantine, healthy strays, and adoptable animals. The existing shelter has one kennel room with 10 runs on either side,

# Action Summary

Below is a summary of the status of projects in the CIP. Those that are shown as "approved" have already been approved by the Board of Commissioners, either in the FY 2018-2024 or by separate action and there is no substantial change in the project.

## **New** (has not been in a previous CIP)

- Community College - Trails
- County Buildings – New Emergency Medical Services Base

**Approved-No Contracts** (approved in a previous CIP; all or part of the main contract has not been executed, but the project may be in design)

- Community College - Health Sciences Building
- Community College - Pittsboro Campus - Roof Replacement
- County Buildings - Animal Shelter Expansion and Renovation
- Parks - Lower Haw River
- Schools - Chatham Grove Elementary School
- Schools - Locker Room Renovations
- Schools - New Central Services Building
- Schools - Perry Harrison Elementary School Traffic Pattern Improvement
- Schools - Seaforth High School
- Schools - Wastewater Replacement at Silk Hope School
- Technology – Agriculture & Conference Audio/Visual Replacement
- Technology - Body Cameras
- Technology - Justice Center Audio/Visual Replacement
- Technology - Tax Software
- Voting Equipment Replacement
- Water - Haywood Water Main Replacement
- Water - Planning Western Intake and Plant

## **Approved – No Contracts Part**

- Parks – Briar Chapel Park Improvements
- Schools – Bleacher Replacements (Indoor)
- Schools – Roof Replacements
- Technology – Increase Capacity for Data Storage
- Technology – Telephone System Replacement Countywide

**Approved-Contracts Let** (approved in a previous CIP; main contract has been executed and project is underway)

- Emergency Communications - Next Generation 911
- Schools - Northwood High School Paving Overlay

- Technology - Integrated Public Sector Software
- Water - Nature Trail Water Main Replacement

## **Approved-Contracts Part**

- Schools - Mobile Classrooms

**Substantially Complete** (at least some punch list items remain; some other expenses may remain)

- Central Carolina Business Campus
- County Buildings - Chatham County Agriculture & Conference Center
- Schools – Northwood Auditorium HVAC Replacement

**Complete** (the project is wholly complete with no remaining expenses)

- Schools – Joint School Bus and County Garage
- Solid Waste & Recycling – Replace Waste & Recycling Facility Office
- Solid Waste & Recycling – Single Stream Recycling
- Technology – Social Services Software Upgrade

**Future** (the county does not have sufficient data or revenue to schedule the project; the project may be scheduled in a future CIP)

- County Buildings – Annex Campus Master Plan
- County Buildings - Emergency Operations Center Expansion
- County Buildings – New Sheriff's Office
- County Buildings - Northeast Library
- Emergency Communications - Radio System Upgrade
- Schools - HVAC/Lighting Replacement
- Schools - New Schools/Capacity Expansion
- Schools - Paving Repair
- Schools - Replace Gymnasiums at Bennett, Silk Hope and Bonlee
- Technology - Fiber Extension to Siler City
- Water District - Southwest Water District Distribution Lines Construction

## Total Cost of Each Project by Year

	Prior to FY 2018	Current Year: FY 2018	Year 1: FY 2019	Year 2: FY 2020	Year 3: FY 2021	Year 4: FY 2022	Year 5: FY 2023	Year 6: FY 2024	Year 7: FY 2025	Totals
<b>911</b>										
Emergency Communications - Next Generation 911	110,716	147,500	0	0	0	0	0	0	0	258,216
<b>Total 911</b>	110,716	147,500	0	0	0	0	0	0	0	258,216
<b>General</b>										
Central Carolina Business Campus	8,378,676	11,500	500,000	0	0	0	0	0	0	8,890,176
Community College - Health Sciences Building	354,235	1,640,115	9,471,881	2,655,956	0	0	0	0	0	14,122,187
Community College - Pittsboro Campus - Roof Replacement	0	0	0	0	0	0	478,500	0	0	478,500
Community College - Trails	0	0	183,750	0	115,000	0	0	0	0	298,750
County Buildings - Animal Shelter Expansion and Renovation	14,370	313,430	4,300,626	0	0	0	0	0	0	4,628,426
County Buildings - Chatham County Agriculture & Conference Center	14,924,052	28,244	0	0	0	0	0	0	0	14,952,296
County Buildings – New Emergency Medical Services Base	0	0	206,000	1,035,897	0	0	0	0	0	1,241,897
Parks - Briar Chapel Park Improvements	862,247	269,111	275,016	378,152	25,000	0	0	0	0	1,809,526
Parks - Lower Haw River	0	0	125,000	0	0	0	0	0	0	125,000
Schools - Bleacher Replacements (Indoor)	119,838	0	272,250	0	0	0	0	0	0	392,088
Schools - Chatham Grove Elementary School	59,514	1,952,840	16,051,247	13,212,468	64,197	0	0	0	0	31,340,266
Schools - Locker Room Renovations	0	302,500	316,250	105,600	360,000	0	0	0	0	1,084,350
Schools - Mobile Classrooms	222,095	160,000	164,800	254,400	261,600	268,800	0	0	0	1,331,695
Schools - New Central Services Building	0	0	0	255,024	3,263,233	2,428,954	0	0	0	5,947,211
Schools - Northwood High School Auditorium HVAC Replacement	9,605	225,000	0	0	0	0	0	0	0	234,605
Schools - Northwood High School Paving Overlay	0	0	189,002	0	0	0	0	0	0	189,002
Schools - Perry Harrison Elementary School Traffic Pattern Improvement	0	0	423,500	0	0	0	0	0	0	423,500
Schools - Roof Replacements	4,366,819	1,432,585	643,310	18,640	0	0	0	0	0	6,461,354
Schools - Seaforth High School	2,142,350	1,653,489	21,420,003	21,713,742	22,633,652	195,334	0	0	0	69,758,570

## Total Cost of Each Project by Year

	Prior to FY 2018	Current Year: FY 2018	Year 1: FY 2019	Year 2: FY 2020	Year 3: FY 2021	Year 4: FY 2022	Year 5: FY 2023	Year 6: FY 2024	Year 7: FY 2025	Totals
Schools - Wastewater Replacement at Silk Hope School	0	0	0	0	0	0	643,500	0	0	643,500
Technology – Agriculture & Conference Audio/Visual Replacement	0	0	0	0	0	0	0	299,475	0	299,475
Technology - Body cameras	0	100,000	91,777	31,860	0	0	0	0	0	223,637
Technology - Increase Capacity for Data Storage	315,838	0	0	723,906	0	0	0	0	0	1,039,744
Technology - Integrated Public Sector Software	860,540	175,200	0	0	0	0	0	0	0	1,035,740
Technology - Justice Center Audio/Visual Replacement	0	0	0	0	0	0	465,850	0	0	465,850
Technology - Tax Software	0	0	0	0	1,000,000	0	0	0	0	1,000,000
Technology - Telephone System Replacement - Countywide	132,199	55,000	0	0	0	0	0	0	0	187,199
Voting Equipment Replacement	0	0	676,434	0	0	0	0	0	0	676,434
<b>Total General</b>	<b>32,762,378</b>	<b>8,319,014</b>	<b>55,310,846</b>	<b>40,385,645</b>	<b>27,722,682</b>	<b>2,893,088</b>	<b>1,587,850</b>	<b>299,475</b>	<b>0</b>	<b>169,280,978</b>
<b><u>Water</u></b>										
Water - Haywood Water Main Replacement	16,852	121,458	0	0	0	0	0	0	0	138,310
Water - Nature Trail Water Main Replacement	78,920	1,745,868	0	0	0	0	0	0	0	1,824,788
Water - Planning Western Intake and Plant	34,713	2,500	500,000	500,000	0	0	0	0	0	1,037,213
<b>Total Water</b>	<b>130,485</b>	<b>1,869,826</b>	<b>500,000</b>	<b>500,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3,000,311</b>

# Funding Sources

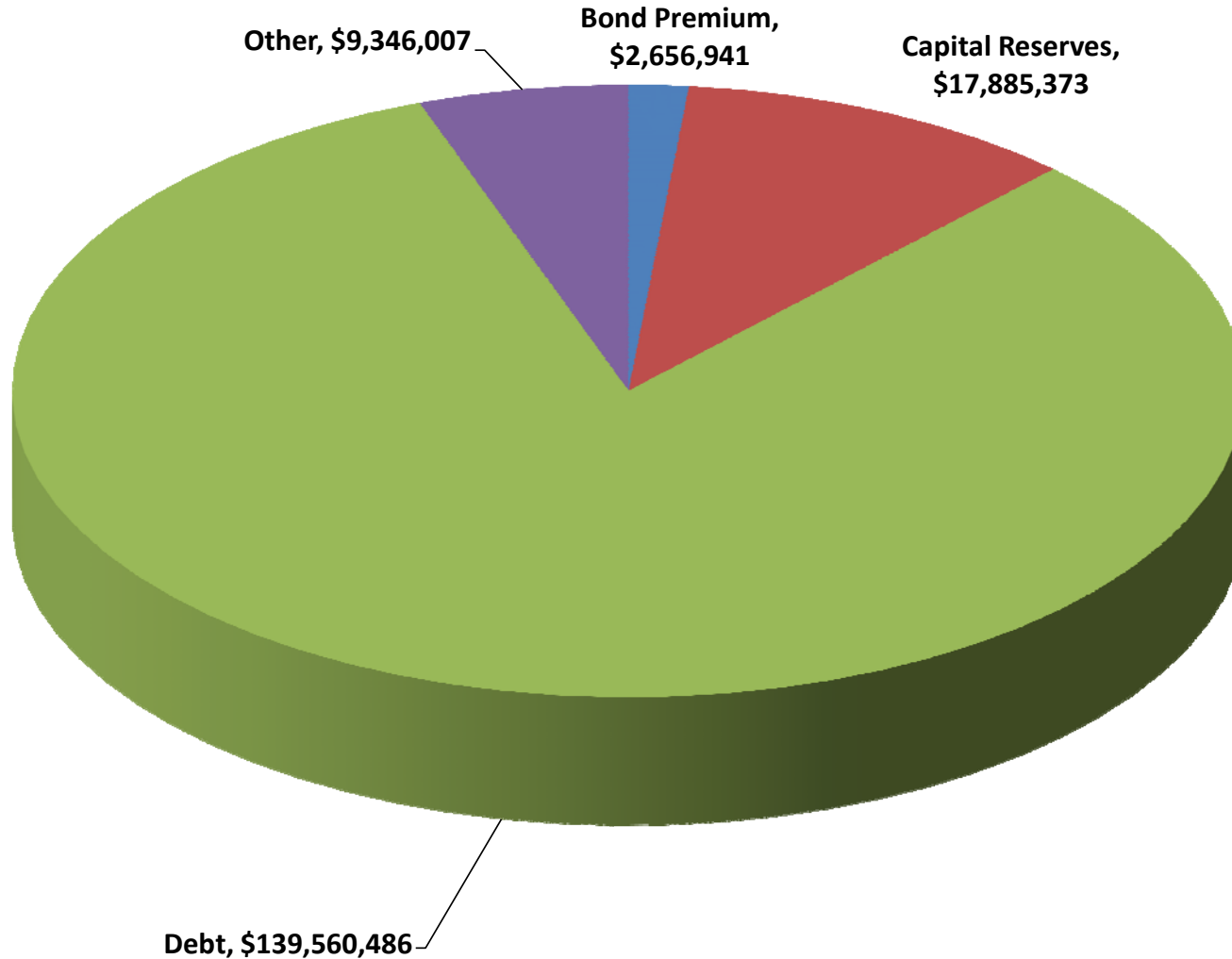
The table below shows a summary of the funding sources for CIP projects by year. The major revenue sources are installment and other debt, fund balance, and insurance.

	Prior to FY 2018	Current Year: FY 2018	Year 1: FY 2019	Year 2: FY 2020	Year 3: FY 2021	Year 4: FY 2022	Year 5: FY 2023	Year 6: FY 2024	Year 7: FY 2025	Totals
<b>911</b>										
911 Funds	110,716	147,500	0	0	0	0	0	0	0	258,216
<b>Total 911</b>	110,716	147,500	0	0	0	0	0	0	0	258,216
<b>General</b>										
Bond Premium	2,656,941	0	0	0	0	0	0	0	0	2,656,941
Capital Reserves	1,198,533	2,706,344	7,940,468	2,147,303	1,736,600	268,800	1,587,850	299,475	0	17,885,373
Debt	0	0	0	255,024	3,263,233	2,428,954	0	0	0	5,947,211
Debt--Certificates of Participation (COPs)	7,364,593	0	0	0	0	0	0	0	0	7,364,593
Debt--Installment Purchase	1,157,659	0	0	0	0	0	0	0	0	1,157,659
Debt--Limited Obligation Bonds	14,526,099	5,246,444	44,843,131	37,582,166	22,697,849	195,334	0	0	0	125,091,023
General Fund Fund Balance	406,090	0	0	0	0	0	0	0	0	406,090
General Fund Operating Revenue	269,539	25,280	25,000	0	0	0	0	0	0	319,819
Grants, Gifts, Etc.	399,882	126,485	2,379,890	23,000	0	0	0	0	0	2,929,257
Interest	55,628	2,964	0	0	0	0	0	0	0	58,592
Recreation Exaction Fee--Briar Chapel	862,247	192,626	118,126	378,152	25,000	0	0	0	0	1,576,151
Transfer from General Fund	2,028,753	11,500	4,231	0	0	0	0	0	0	2,044,484
Transfer from Water Capital Reserve	1,836,414	175,200	0	0	0	0	0	0	0	2,011,614
<b>Total General</b>	32,762,378	8,486,843	55,310,846	40,385,645	27,722,682	2,893,088	1,587,850	299,475	0	169,448,807
<b>Water</b>										
Water Capital Reserve	130,485	1,869,826	500,000	500,000	0	0	0	0	0	3,000,311
<b>Total Water</b>	130,485	1,869,826	500,000	500,000	0	0	0	0	0	3,000,311

# CIP Funding Sources

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## General Fund CIP Funding Sources



## General Fund Capital Reserve

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The recommended CIP continues the practice of funding pay-as-you-go General Fund projects through a capital reserve. The capital reserve has a balance of \$10,254,251.

## Parks & Recreation

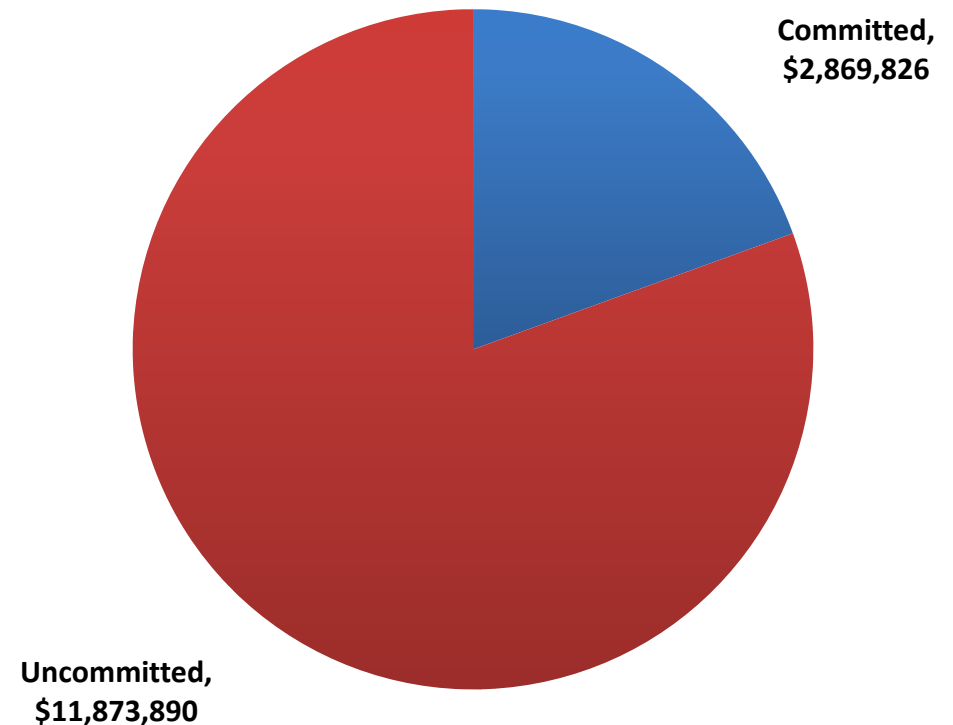
Recreation Fees: Recreation fees are established and collected in two districts. The fees must be spent in the district in which they are collected.

- Western District: Since the economic downturn the Western District, consisting of the Jordan-Matthews and Chatham Central High School districts, has generated very little revenue. Only \$4,384 was collected in FY 2017. These funds will be used to reimburse the general fund until it is made whole for the purchase of Northwest Park. At the current rate of development, this will take many years, leaving no funding for additional land in this district.
- Eastern District: The Eastern District, consisting of the Northwood High School district generated \$323,174 in FY 2017, excluding Briar Chapel fees. Note that funds generated in Briar Chapel will be used to pay for improvements in the Briar Chapel Park, as agreed to by the developer. Briar Chapel fees were \$140,752 in FY 2017. In prior years, funds generated by the Eastern District have been used to reimburse the general fund for the purchase of land for the Southeast District Park. However, the Board of Commissioners has approved using funds from the Coal Ash settlement to reimburse the General Fund, so recreation fees are available to purchase additional land for parks in the Northwood District. Since the county is working on an update to the Parks and Recreation Master Plan, it is recommended that further spending of the recreation fee be guided by recommendations from the updated plan.

## Water Capital Reserve

\$1,073,000 in availability fees were collected in FY 2017. Note that the scope of the regional western intake water plan is unknown and will require significant funding.

**Uses of Water Capital Reserve**



# Operating Budget

The table below shows the combined effect on the operating budget of the recommended projects for the next seven years. Operating effects include debt service, increased operating costs, decreased operating costs, additional revenues, and appropriation of revenue necessary to fund the project.

	Prior to FY 2018	Current Year: FY 2018	Year 1: FY 2019	Year 2: FY 2020	Year 3: FY 2021	Year 4: FY 2022	Year 5: FY 2023	Year 6: FY 2024	Year 7: FY 2025
<b>911</b>									
Decreased Operating Costs	-148,320	-152,770	-157,353	-162,073	-166,935	-171,944	-177,102	-182,415	-187,887
Increased Operating Costs	197,760	203,693	209,804	216,098	222,581	229,258	236,136	243,220	250,516
<b>Total 911</b>	49,440	50,923	52,451	54,025	55,646	57,314	59,034	60,805	62,629
<b>General</b>									
Additional Revenues	-40,450	-65,770	-66,130	-66,130	-66,290	-66,290	-66,290	-66,290	-66,290
Contribution to Capital Reserve	5,637,557	3,324,823	4,799,868	1,636,790	1,267,494	727,672	490,826	74,868	0
Debt Service	2,100,846	2,058,094	4,713,865	7,229,523	7,419,398	14,235,310	13,858,269	13,306,369	12,918,376
Decreased Operating Costs	-292,554	-169,175	-219,532	-220,685	-221,874	-223,097	-224,358	-225,656	-226,993
General Fund Fund Balance	0	0	0	0	0	0	0	0	0
Increased Operating Costs	956,400	640,209	1,128,151	1,512,670	2,911,224	5,210,249	5,273,709	5,393,172	5,554,180
Transfer from Debt Reserve	-2,100,846	-2,058,094	-4,713,865	-7,229,523	-7,419,398	-14,235,310	-13,858,269	-13,306,369	-12,918,376
Transfer from General Fund	1,256,298	0	0	0	0	0	0	0	0
<b>Total General</b>	7,517,251	3,730,087	5,642,357	2,862,645	3,890,554	5,648,535	5,473,888	5,176,094	5,260,897
<b>Water</b>									
Decreased Operating Costs	0	0	-24,480	-24,480	-24,480	-24,480	-24,480	-24,480	-24,480
Decreased Operating Costs (Utility Fund)	0	-16,263	-16,751	-17,253	-17,771	-18,304	-18,853	-19,419	-20,002
Increased Operating Costs (Utility Fund)	12,483	13,107	13,762	14,450	15,173	15,931	16,728	17,564	18,442
<b>Total Water</b>	12,483	-3,156	-27,469	-27,283	-27,078	-26,853	-26,605	-26,335	-26,040

# Completed Projects

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The following projects were completed as of June 30, 2017.

Project Name	Brief Description	Final Project Budget	Final Cost
Schools – Joint School Bus & County Garage	Build a new 33,196 square-foot garage to be shared by the county and Chatham County Schools.	\$8,000,000	\$6,850,997
Solid Waste & Recycling –Replace Waste & Recycling Facility Office	Construct an approximately 5,100 square-foot office building adjacent to the existing modular office and demolish the modular office on completion of the new structure.	\$1,498,550	\$1,465,539
Solid Waste & Recycling – Single Stream Recycling	Upgrade the Collection Center recycling program to single-stream. This means that all household recyclables would be collected in one container as opposed to the current source-separated program with nine containers.	\$755,822	\$699,897
Technology – Social Services Software Upgrade	Purchase additional software for the Department of Social Services (DSS).	\$293,865	\$283,700

# **911 Fund Projects**

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# Emergency Communications - Next Generation 911

Convert the 911 phone system and equipment to next generation technology.

Project Budget	Budget	Current									Project Totals
		Prior to FY 2018	Year: FY 2018	Year 1: FY 2019	Year 2: FY 2020	Year 3: FY 2021	Year 4: FY 2022	Year 5: FY 2023	Year 6: FY 2024	Year 7: FY 2025	
<b>Project Element</b>											
Contingency	0	0	0	0	0	0	0	0	0	0	0
Furnishings & Equipment	221,432	110,716	147,500	0	0	0	0	0	0	0	258,216
<b>Total Project Element</b>	221,432	110,716	147,500	0	0	0	0	0	0	0	258,216
<b>Funding Source</b>											
911 Funds	221,432	110,716	147,500	0	0	0	0	0	0	0	258,216
<b>Total Funding Source</b>	221,432	110,716	147,500	0	0	0	0	0	0	0	258,216
<b>Operating Effect</b>											
Decreased Operating Costs	0	-148,320	-152,770	-157,353	-162,073	-166,935	-171,944	-177,102	-182,415	-187,887	-1,506,799
Increased Operating Costs	0	197,760	203,693	209,804	216,098	222,581	229,258	236,136	243,220	250,516	2,009,066
<b>Total Operating Effect</b>	0	49,440	50,923	52,451	54,025	55,646	57,314	59,034	60,805	62,629	502,267

## Define Problem

The Chatham County Public Safety Answering Point (PSAP) is currently Phase II compliant, meaning that the system will give a caller's location, phone number, and location coordinates for both cell and land line calls. However, the PSAP is not capable of receiving text, video, or other types of smart phone applications. The exception to this is that the PSAP can use a text telephone device (TTY) to communicate with people who are deaf or hard of hearing. This is an effective communication device but does not allow the caller to be mobile. Text messaging and/or video are the primary means of communications today, and the equipment must be upgraded to receive these forms of communication.

To expand the capabilities of PSAPs, the NC State 911 Board has prioritized next generation technology. Next generation technology will enable communication centers to receive information in additional formats already used by the public, such as video and text. The National Emergency Numbering Association (NENA) defined next generation standards for communication centers but proposed no timeframe for implementation of the standard. However, the county should plan now for this significant upgrade of technology. The 911 fund will pay for this project.

## Recommended Solution

Implement next generation technology. Complete the purchase of hardware upgrades and replacements to ensure compatibility with next-generation technology and contract with a provider for service.

## Alternatives

Three alternatives exist:

- 1) Plan now for the migration of Emergency Communications to next generation technology by monitoring future projects that are eligible for 911 funds.
- 2) Do no planning now and depend on grant funding from the State 911 board.
- 3) Do nothing. Maintain the current level of operations (e.g. Phase II compliance) even when next generation technology becomes available.

## Current Stage of Project

Wireless Communications has delivered and begun installation of equipment to both the primary and back-up 911 centers. Tentative go-live date is mid-December 2017. The projected completion date for the project is early 2018.

# **General Fund Projects**

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# Central Carolina Business Campus

Substantially Complete

Construct the infrastructure for Chatham County's 458-acre Business Campus in Siler City, including construction of roadways, water lines, sewer lines, and sewer pump stations.

Project Budget	Budget	Current									Project Totals
		Prior to FY 2018	Year: FY 2018	Year 1: FY 2019	Year 2: FY 2020	Year 3: FY 2021	Year 4: FY 2022	Year 5: FY 2023	Year 6: FY 2024	Year 7: FY 2025	
<b>Project Element</b>											
Construction	7,266,414	7,259,085	0	500,000	0	0	0	0	0	0	7,759,085
Design, Engineering & Construction Ad	992,150	994,295	11,500	0	0	0	0	0	0	0	1,005,795
Land	145,296	125,296	0	0	0	0	0	0	0	0	125,296
<b>Total Project Element</b>	<b>8,403,860</b>	<b>8,378,676</b>	<b>11,500</b>	<b>500,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8,890,176</b>
<b>Funding Source</b>											
Capital Reserves	15,821	0	0	495,769	0	0	0	0	0	0	495,769
Debt--Certificates of Participation (COP)	7,364,593	7,364,593	0	0	0	0	0	0	0	0	7,364,593
Grants, Gifts, Etc.	399,882	399,882	0	0	0	0	0	0	0	0	399,882
Interest	28,055	28,056	0	0	0	0	0	0	0	0	28,056
Transfer from General Fund	257,695	248,331	11,500	4,231	0	0	0	0	0	0	264,062
Transfer from Water Capital Reserve	337,814	337,814	0	0	0	0	0	0	0	0	337,814
<b>Total Funding Source</b>	<b>8,403,860</b>	<b>8,378,676</b>	<b>11,500</b>	<b>500,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8,890,176</b>
<b>Operating Effect</b>											
Contribution to Capital Reserve	0	0	0	495,679	0	0	0	0	0	0	495,679
Debt Service	0	1,032,280	1,013,768	996,569	594,762	967,228	946,606	926,726	323,922	315,304	7,117,165
Increased Operating Costs	0	48,457	49,910	51,408	52,950	54,538	56,174	57,860	59,596	61,383	492,276
Transfer from Debt Reserve	0	-1,032,280	-1,013,768	-996,569	-594,762	-967,228	-946,606	-926,726	-323,922	-315,304	-7,117,165
<b>Total Operating Effect</b>	<b>0</b>	<b>48,457</b>	<b>49,910</b>	<b>547,087</b>	<b>52,950</b>	<b>54,538</b>	<b>56,174</b>	<b>57,860</b>	<b>59,596</b>	<b>61,383</b>	<b>987,955</b>

## Define Problem

Lack of property served by adequate infrastructure is a challenge for economic development. In 2000, Chatham County purchased property for a business campus in Siler City. At the time it was purchased, the property was located just outside the town limits of Siler City. The town has since annexed it and is providing water and sewer through infrastructure built by the county. In addition, the county has also provided roads to ensure easy access for potential development. Three entities are now located within the campus: Chatham Hospital, the Chatham Youth Development Center and Central Carolina Community College.

## Recommended Solution

The project is substantially complete.

## Current Stage of Project

The business park was substantially complete in November 2009. Many of the engineering design and construction administration problems are in the process of being resolved. All needed additional easements for the bridge and roadway and dedication of the additional right-of-way requested by NC Department of Transportation (NCDOT) have been obtained, except for two properties. Remaining issues include the DOT requirement for the county to post a ten-year bond

for future maintenance of the culverts.

Negotiations with the landowner for placement of a sign are in progress. Design and cost estimates for the sign are complete. Once negotiations for the sign easement are complete, the approval process will begin. Replacement of a temporary sign was negotiated with the landowner, and that sign is now in place.

Because of engineering design and construction administration problems, additional easements and rights-of-way must be obtained in order for NCDOT to accept and maintain roads; plats have been recorded for easements and right-of-ways obtained to date. Once the final two properties are resolved, a final plat that satisfies NCDOT needs to be executed and recorded. DOT has executed the maintenance agreement. The County has initiated a contract to clear the right of way in preparation for transferring the maintenance of the roads and ROW to DOT. DOT has completed a punch list for repairs needed before they will take ownership of the road. This punch list included overlay of the entire length of Progress Blvd and full depth repair of the intersections of Progress Blvd with both Campus Dr. and Technology Way. Additionally, the routine inspections of the bridge over Loves Creek identified required repairs. A structural engineering firm is assessing the bridge and will provide an estimate for repairs.

### **Relation to Other Projects**

The Central Carolina Community College job training center is complete.

### **Professional Services Needed**

Engineering design work and construction management were needed. Structural engineer assessment for the bridge and design and specifications for the road overlay and repairs will be needed.

### **Operating Impact**

Funds are needed for bonds, grounds maintenance and electricity. As taxpaying entities locate in the business campus, the county would see an increase in property and sales tax revenues.

# Community College - Health Sciences Building

Approved-No Contracts

Construct a 40,000 square-foot Health Sciences building. The option also exists to construct a multi-purpose space attached through a common corridor.

Project Budget	Budget	Current									Project Totals
		Prior to FY 2018	Year: FY 2018	Year 1: FY 2019	Year 2: FY 2020	Year 3: FY 2021	Year 4: FY 2022	Year 5: FY 2023	Year 6: FY 2024	Year 7: FY 2025	
<b>Project Element</b>											
Architectural Design & Construction Ad	1,240,970	324,235	496,388	322,291	50,000	0	0	0	0	0	1,192,914
Construction	10,455,588	0	0	7,817,867	2,605,956	0	0	0	0	0	10,423,823
Contingency	1,287,799	0	0	1,042,382	0	0	0	0	0	0	1,042,382
Feasibility Study	30,000	30,000	0	0	0	0	0	0	0	0	30,000
Furnishings & Equipment	191,675	0	0	203,176	0	0	0	0	0	0	203,176
Land & Easements	1,060,000	0	1,060,000	0	0	0	0	0	0	0	1,060,000
Other Contracted Services	162,575	0	83,727	86,165	0	0	0	0	0	0	169,892
<b>Total Project Element</b>	<b>14,428,607</b>	<b>354,235</b>	<b>1,640,115</b>	<b>9,471,881</b>	<b>2,655,956</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14,122,187</b>
<b>Funding Source</b>											
Debt--Limited Obligation Bonds	14,428,607	324,235	1,640,115	7,371,881	2,655,956	0	0	0	0	0	11,992,187
General Fund Operating Revenue	0	30,000	0	0	0	0	0	0	0	0	30,000
Grants, Gifts, Etc.	0	0	0	2,100,000	0	0	0	0	0	0	2,100,000
<b>Total Funding Source</b>	<b>14,428,607</b>	<b>354,235</b>	<b>1,640,115</b>	<b>9,471,881</b>	<b>2,655,956</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14,122,187</b>
<b>Operating Effect</b>											
Debt Service	0	0	0	315,970	631,940	631,940	1,353,782	1,317,690	1,281,598	1,245,505	6,778,425
Increased Operating Costs	0	0	0	294,450	279,698	287,418	295,355	305,518	311,911	320,543	2,094,893
Transfer from Debt Reserve	0	0	0	-315,970	-631,940	-631,940	-1,353,782	-1,317,690	-1,281,598	-1,245,505	-6,778,425
<b>Total Operating Effect</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>294,450</b>	<b>279,698</b>	<b>287,418</b>	<b>295,355</b>	<b>305,518</b>	<b>311,911</b>	<b>320,543</b>	<b>2,094,893</b>

## Define Problem

The population of Chatham County is expected to grow exponentially over the next 25 years. This growth is fueled by the development of Chatham Park and by the potential impact of the Chatham Advanced Manufacturing and Moncure megasites. Currently, there is a significant amount of growth taking place in northeast Chatham. This growth provides additional challenges for Central Carolina Community College (CCCC) to meet the needs of the citizens of Chatham County as well as the potential increased County workforce.

A new Health Sciences building offers many opportunities. Data suggests that graduates from associate degree programs in health sciences maintain a much higher rate of continued employment the first five years after graduation than other program offered by the community college. These graduates also typically have a higher mean wage than graduates from other programs. Employment projections for health care programs continue to be very positive.

A new Health Sciences building will expand program offerings in a growing field.

## Recommended Solution

Construct a new Health Sciences building on a site at Briar Chapel to open August 2019.

## Alternatives

1. One option is to not take any action. Central Carolina Community College will continue to offer the various programs we have at our Chatham County locations. This option could become problematic for students in the future as the population of Chatham County grows and the health sciences programs become more competitive to enter. Students may seek educational opportunities outside of the County.
2. Another option would be to construct the proposed building in the Briar Chapel area of Chatham County. This location would be close to planned health care sites and would serve a growing area of Chatham County. CCCC would be able to expand health sciences opportunities for all residents and new degree options would be available for students.
3. A third option would be to construct this building on the Pittsboro campus. CCCC would be able to expand health sciences opportunities for all residents and new degree options would be available for students.

## Current Stage of Project

An architect has been selected. The County Board of Commissioners decided not to include a geothermal system but asked that energy-efficient systems be included.

The size of the building has decreased from 46,000 SF to 40,000 SF based on a programming review conducted by the architect. While there is some cost differential associated with a smaller building, the type and quality of building will be slightly more than what was originally projected. Construction costs will be offset by \$2.1 million in NC Connect Bonds that the college will receive and allocate to the project.

The building will include an early voting/voting site for northeast Chatham, which has been very difficult to find in past elections. The site has been master planned for a 10,000-square-foot library to be added in the future.

## Description of Land Needs

Approximately 4 acres are needed.

## Professional Services Needed

Professional design, architecture, and construction will be needed.

## Operating Impact

Additional funding will be needed for utilities and building maintenance.

# Community College - Pittsboro Campus - Roof Replacement

Approved-No Contracts

Replace the roof on Building 42 on the Pittsboro Campus.

Project Budget	Budget	Current									Project Totals
		Prior to FY 2018	Year: FY 2018	Year 1: FY 2019	Year 2: FY 2020	Year 3: FY 2021	Year 4: FY 2022	Year 5: FY 2023	Year 6: FY 2024	Year 7: FY 2025	
<b>Project Element</b>											
Architectural Design & Construction Ad	12,100	0	0	0	0	0	0	12,100	0	0	12,100
Construction	418,500	0	0	0	0	0	0	418,500	0	0	418,500
Contingency	41,850	0	0	0	0	0	0	41,850	0	0	41,850
Engineering & Construction Administrat	6,050	0	0	0	0	0	0	6,050	0	0	6,050
<b>Total Project Element</b>	<b>478,500</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>478,500</b>	<b>0</b>	<b>0</b>	<b>478,500</b>
<b>Funding Source</b>											
Capital Reserves	478,500	0	0	0	0	0	0	478,500	0	0	478,500
<b>Total Funding Source</b>	<b>478,500</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>478,500</b>	<b>0</b>	<b>0</b>	<b>478,500</b>
<b>Operating Effect</b>											
Contribution to Capital Reserve	0	68,357	68,357	68,357	68,357	68,357	68,357	68,357	0	0	478,500
<b>Total Operating Effect</b>	<b>0</b>	<b>68,357</b>	<b>68,357</b>	<b>68,357</b>	<b>68,357</b>	<b>68,357</b>	<b>68,357</b>	<b>68,357</b>	<b>0</b>	<b>0</b>	<b>478,500</b>

## Define Problem

The roof on Building 42 on the Pittsboro campus is original to the building (1996). The roof is a membrane-type roof and will need replacing in approximately 7 years. The college is not currently experiencing issues with the roof; however, college officials anticipate the likelihood that it will need to be replaced sometime within the timeframe of the county's CIP. Since the roof is no longer under warranty, the repair costs will be paid for by the College and the County.

## Recommended Solution

A new roof should be planned for this building by 2022.

## Alternatives

- 1) Replace the roof with a new roof. A roofing engineer would need to be hired to determine the best roofing option available.
- 2) Make minor repairs to the roof as issues develop and work with a roofing engineer to determine whether there are short-term solutions that will alleviate the need for a roof replacement.

## Professional Services Needed

A roofing engineer would be needed.

Repair and replace the existing walking trail and create a connector trail between the campus and the Chatham County Agriculture & Conference Center.

Project Budget	Budget	Current									Project Totals
		Prior to FY 2018	Year: FY 2018	Year 1: FY 2019	Year 2: FY 2020	Year 3: FY 2021	Year 4: FY 2022	Year 5: FY 2023	Year 6: FY 2024	Year 7: FY 2025	
<b>Project Element</b>											
Construction	0	0	0	183,750	0	115,000	0	0	0	0	298,750
<b>Total Project Element</b>	0	0	0	183,750	0	115,000	0	0	0	0	298,750
<b>Funding Source</b>											
Capital Reserves	0	0	0	183,750	0	115,000	0	0	0	0	298,750
<b>Total Funding Source</b>	0	0	0	183,750	0	115,000	0	0	0	0	298,750
<b>Operating Effect</b>											
Contribution to Capital Reserve	0	0	0	183,750	57,500	57,500	0	0	0	0	298,750
<b>Total Operating Effect</b>	0	0	0	183,750	57,500	57,500	0	0	0	0	298,750

### Define Problem

Phase 1: The campus’s trail is currently in disrepair. There are numerous sections that have buckled and broken due to tree roots, and some sections have potholes. These inconsistent surfaces create safety hazards to the trail’s end-users: students, staff, Council on Aging users, and community-users at large. Several falls have been reported over the last 18 months that thankfully have not resulted in significant injury but could have. However, as the population of the County continues to grow, the increased use of the trail will increase the likelihood of a severe injury occurring.

Phase 2: The College and Chatham County Agricultural and Conference Center are partnering well to serve our communities and stakeholders; however, that partnership could be strengthened with more physical interconnectivity than currently exists. While West Street/Business 64 provides a way for vehicles to move between locations, the route is insufficient and dangerous for pedestrians. Furthermore, as growth in the County continues, the current roadway will likely become congested and dangerous for users who are just traveling between sites. The construction of a roadway between the two sites in conjunction with an extension of the walking trail to the Agricultural and Conference Center site will resolve these issues as well as bolster the combined use and synergy of the two sites.

### Recommended Solution

Phase 1: Demolish and reconstruct walking trail on the CCCC’s Chatham Main Campus located in Pittsboro.

Phase 2: Connect CCCC’s entrance driveway from West Street to the Chatham County Agricultural and Conference Center site via a trail extension.

### Alternatives

Phase 1:

A. The trail can be left in disrepair. This option will open the College and the County to increased risk as the trail’s surfaces continue to fail.

B. Section repairs could occur. Collectively and over time, these section repairs could cost more than complete-trail reconstruction. Since there are multiple sections that currently need repair and more sections will need repair in future years, this option will disrupt trail use indefinitely and be reoccurring.

Phase 2:

A. No connections could be made between the sites, and West Street/Business 64 could remain the sole route between the sites. This option would not address any of the issues discussed above.

B. Instead of a road connection and a trail extension, only a trail extension could be made so that at least pedestrian traffic could occur between the two sites. This option would only address safety and passage for pedestrians.

# County Buildings - Animal Shelter Expansion and Renovation

Approved-No Contracts

Build a 7,931-square-foot addition to the existing Animal Control shelter and renovate the existing 2,600-square-foot building to meet the needs of animals, visiting public, and staff. Separation of adoptable animals from those who are ill or otherwise not available for adoption will facilitate adoptions of shelter animals. The new building will provide adequate space for staff, and conform to industry best practices.

Project Budget	Budget	Current									Project Totals
		Prior to FY 2018	Year: FY 2018	Year 1: FY 2019	Year 2: FY 2020	Year 3: FY 2021	Year 4: FY 2022	Year 5: FY 2023	Year 6: FY 2024	Year 7: FY 2025	
<b>Project Element</b>											
Architectural Design & Construction Ad	322,056	0	313,430	0	0	0	0	0	0	0	313,430
Construction	3,930,654	0	0	3,766,876	0	0	0	0	0	0	3,766,876
Contingency	266,999	0	0	376,688	0	0	0	0	0	0	376,688
Feasibility Study	14,370	14,370	0	0	0	0	0	0	0	0	14,370
Furnishings & Equipment	110,985	0	0	108,012	0	0	0	0	0	0	108,012
Other Contracted Services	28,000	0	0	27,250	0	0	0	0	0	0	27,250
Permits & Connection Fees	22,400	0	0	21,800	0	0	0	0	0	0	21,800
<b>Total Project Element</b>	<b>4,695,464</b>	<b>14,370</b>	<b>313,430</b>	<b>4,300,626</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,628,426</b>
<b>Funding Source</b>											
Capital Reserves	4,681,094	0	313,430	4,300,626	0	0	0	0	0	0	4,614,056
General Fund Fund Balance	14,370	14,370	0	0	0	0	0	0	0	0	14,370
<b>Total Funding Source</b>	<b>4,695,464</b>	<b>14,370</b>	<b>313,430</b>	<b>4,300,626</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,628,426</b>
<b>Operating Effect</b>											
Contribution to Capital Reserve	0	2,808,656	902,700	902,700	0	0	0	0	0	0	4,614,056
Decreased Operating Costs	0	0	0	-20,237	-20,237	-20,237	-20,237	-20,237	-20,237	-20,237	-141,659
Increased Operating Costs	0	0	0	188,329	182,728	188,210	193,856	199,672	205,662	211,834	1,370,291
<b>Total Operating Effect</b>	<b>0</b>	<b>2,808,656</b>	<b>902,700</b>	<b>1,070,792</b>	<b>162,491</b>	<b>167,973</b>	<b>173,619</b>	<b>179,435</b>	<b>185,425</b>	<b>191,597</b>	<b>5,842,688</b>

## Define Problem

The animal control shelter was built in 1993 and its space is inadequate for dogs, cats, staff and the public.

The shelter is overcrowded. The 20 dog runs and the small area for cats stay full, making overcrowding the main reason for euthanizing animals. Between FY 2011 and FY 2016, 11,176 dogs and cats were sheltered, and 3,170 of these were euthanized for lack of space despite being eligible for adoption. Public interest in the animal services field continues to increase. Encouraged by the national focus on animal welfare issues, local groups maintain interest in the way the county operates the Animal Services division. The Animal Services division operates the only county-run open admission facility in the area. To provide the best services to our community and animals, the division works to find positive outcomes for all healthy adoptable animals, to prevent pet overpopulation with spay and neuter efforts, and, when necessary, to give animals the most humane euthanasia possible.

A needs assessment conducted in 2014 by Bacon Group Inc. concluded that current animal intake numbers indicate a need for 34 dog kennels and 34 cat housing units. The needs assessment identified many problems with the existing facility including:

- A single kennel area contributes to disease transmission. Best practices for modern animal shelters call for separately contained and ventilated kennel areas for daily intake, bite quarantine, health quarantine, healthy strays, and adoptable animals. The existing shelter has one kennel room with 10 runs on either side,

making it difficult to separate animals, control disease, treat sick animals, and provide appropriate care.

- Public and staff areas of the shelter are inadequate. The lobby serves as offices for the shelter manager and shelter attendants and also is where adoption services are provided to the public. As a result, newly arrived animals are in the same area as animals being considered by the public for adoption. This creates confusion and stress for the public, staff and animals.
- The building has only one restroom for staff and no public restrooms.
- There is inadequate space for treatment of animals that come into the shelter in need of testing, immunization and simple first-aid procedures. The “kitchen” serves as an animal treatment room, laundry room, utility room, storage and is also where staff washes dishes and equipment.
- There is inadequate space for staff. The facility does not allow staff to function efficiently, safely, and, when necessary, out of the view of the public. The animal control supervisor and four animal control officers are housed in a leased trailer adjacent to the shelter building.
- Additional storage space is required. A wooden storage building behind the kennel runs currently provides storage for dog and cat food. More permanent solutions should be considered that will not require employees to transport food between buildings in all kinds of weather and that will reduce pests and vermin from having access to the food sources of shelter animals.
- There are several areas of concern for the safety of the staff, public, and animals. Open kennel drain trenches pose a risk of injury as well as transmission of disease due to washing excrement past kennels of healthy animals. The chain link fencing, coated steel cable systems, and plastic guillotine doors are showing wear due to aging and represent potential hazards. Replacement of these materials with more current materials will decrease risk of injury to the staff. The current kennel wall surfaces have deteriorated and continue to do so. This allows for diseases like deadly canine parvo virus to stabilize in the setting and reinfect other incoming animals. The steel columns and interior walls are constantly being exposed to harsh chemicals and moisture, causing them to rust. The current euthanasia area is outdoors. While it is covered, it is still exposed to elements such as rain, cold, and heat, creating stress for animals and staff during the euthanasia process. According to the American Shelter Veterinarians Standards of Care report, euthanasia should be performed in a location where other animals can neither see nor hear the process.
- The current shelter does not facilitate the adoption of cats and dogs. When the public comes to the shelter for the potential purpose of adopting animals, they are not presented with a clear choice. Due to space limitations, the “adoptable” dogs are intermingled with strays not available for adoption, dogs quarantined for observation for rabies symptoms, and dogs whose temperaments are not suitable for adoption. Potential adopters know that many of the dogs they are viewing will be euthanized in the shelter, which keeps many people from visiting the shelter. The shelter has no interior “meet and greet” area for potential adopters to interact with the dogs, so they are normally directed to take the dog outside on a leash to interact for a short time.

## **Recommended Solution**

Renovate and expand the existing animal control shelter to provide a facility that is safe, healthy and functional for staff, visitors, and animals.

The Bacon Group needs assessment included recommendations for the design of a new shelter and renovations to the existing space that will provide separate intake and adoption buildings and include future space for spay/neuter surgery and education for the public. The design recommendations will address the problems identified with the existing facility, as discussed above, and make shelter operations more efficient. The separation of the buildings and updated HVAC systems will work to reduce disease transmission between animal populations and facilitate the adoption of animals. Future space for spay/neuter surgery would eliminate the need for staff to transport animals to and from veterinarian offices for surgery. Space for public education would permit outreach to the community and enhance public awareness of the roles and responsibilities of the community in reducing euthanasia due to pet overpopulation and disease control. The recommendation calls for fundraising for these two future spaces.

Continue discussions and partnerships with non-profit agencies to create more options for positive outcomes for the shelter animals.

## **Alternatives**

- 1) Do nothing. Continue to operate the existing facility despite the problems and community interest in improvements. Because the agency is required to meet certain housing standards in the Animal Welfare Act, services would have to be cut to meet requirements for inspection by the North Carolina Department of Agriculture. Disease and illness in the animal population would continue to be a costly issue and both staff morale and customer satisfaction would be compromised.
- 2) Partner with a local nonprofit agency to house an adoption center in the Pittsboro area that would draw animals from the animal control shelter as well as from

other sources. While such a partnership could increase the adoption rate, it does not meet the critical and immediate need to expand and renovate the existing facility. A new facility is needed to provide sheltering to support animal control enforcement and best practices for protecting animal health and improving outcomes.

3) Partner with a nonprofit group to oversee and manage the animal sheltering capabilities in the county. This could be a viable option if there was a local nonprofit group that could sustain the core functions and funding of the shelter. However, there is no local agency with positive past performance of operating as a shelter.

4) Renovate and expand the existing animal control facility according to design recommendations from the Bacon Group. The new facility will provide separate intake and adoption areas and house 143 animals. The building would have a life expectancy of 25 to 30 years.

Construction will address essential needs for animal shelter operations, including:

- A new building that adds an additional 40 kennels for canines and 42 cat housing units.
- Updated staff spaces that include shelter administrative offices, grooming areas, food prep areas, laundry room with commercial grade appliances, designated treatment rooms, break room and janitorial area.
- A sally port/intake area for officers to safely load and unload animals without escape. A designated euthanasia area will be in this structure.
- Private feral cat holding room in the intake area to reduce travel and stress.
- The renovation of the existing facility would increase the efficiency of the current building. This building would house field office staff, sick isolation and dangerous animal holding.

Several community members and nonprofit agencies have expressed interest in conducting fundraising campaigns to strengthen the availability of funds for a new shelter. Although not essential to shelter operations, the recommendation includes shell space that can be completed in the future with private donations. This space could serve as a community education and training room to host meetings and educational events. The design also includes design of a surgical suite that could be added later through fundraising.

## **Description of Land Needs**

Existing two acres.

## **Professional Services Needed**

Planning and architectural services will be needed. A preliminary needs assessment and cost estimates were completed in 2014.

## **Operating Impact**

Additional funds will be needed for staffing, equipment, and building maintenance.

# County Buildings - Chatham County Agriculture & Conference Center

Substantially Complete

Construct a new agricultural center for Chatham County of approximately 35,000 square feet.

Project Budget	Current										
	Budget	Prior to FY 2018	Year: FY 2018	Year 1: FY 2019	Year 2: FY 2020	Year 3: FY 2021	Year 4: FY 2022	Year 5: FY 2023	Year 6: FY 2024	Year 7: FY 2025	Project Totals
<b>Project Element</b>											
Architectural Design & Construction Ad	959,423	934,702	0	0	0	0	0	0	0	0	934,702
Construction	11,431,444	11,299,722	28,244	0	0	0	0	0	0	0	11,327,966
Contingency	0	0	0	0	0	0	0	0	0	0	0
Debt Service	1,625,943	1,625,943	0	0	0	0	0	0	0	0	1,625,943
Feasibility Study	35,000	35,000	0	0	0	0	0	0	0	0	35,000
Financing Costs	89,713	89,712	0	0	0	0	0	0	0	0	89,712
Furnishings & Equipment	797,851	797,851	0	0	0	0	0	0	0	0	797,851
Other Contracted Services	141,122	141,122	0	0	0	0	0	0	0	0	141,122
<b>Total Project Element</b>	<b>15,080,496</b>	<b>14,924,052</b>	<b>28,244</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14,952,296</b>
<b>Funding Source</b>											
Bond Premium	2,656,941	2,656,941	0	0	0	0	0	0	0	0	2,656,941
Debt--Limited Obligation Bonds	12,000,000	12,000,000	0	0	0	0	0	0	0	0	12,000,000
General Fund Operating Revenue	394,523	239,539	25,280	0	0	0	0	0	0	0	264,819
Interest	29,032	27,572	2,964	0	0	0	0	0	0	0	30,536
<b>Total Funding Source</b>	<b>15,080,496</b>	<b>14,924,052</b>	<b>28,244</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14,952,296</b>
<b>Operating Effect</b>											
Additional Revenues	0	-40,000	-65,000	-65,000	-65,000	-65,000	-65,000	-65,000	-65,000	-65,000	-560,000
Debt Service	0	1,068,566	1,044,326	1,019,399	1,238,968	956,627	929,990	902,000	1,282,075	1,231,872	9,673,823
Increased Operating Costs	0	255,325	275,414	279,027	287,234	291,199	299,906	304,253	311,133	318,259	2,621,750
Transfer from Debt Reserve	0	-1,068,566	-1,044,326	-1,019,399	-1,238,968	-956,627	-929,990	-902,000	-1,282,075	-1,231,872	-9,673,823
<b>Total Operating Effect</b>	<b>0</b>	<b>215,325</b>	<b>210,414</b>	<b>214,027</b>	<b>222,234</b>	<b>226,199</b>	<b>234,906</b>	<b>239,253</b>	<b>246,133</b>	<b>253,259</b>	<b>2,061,750</b>

## Define Problem

The current building was built in 1956 and has never had a major renovation. Storage space is inadequate. The original building was not compliant with the Americans with Disabilities Act (ADA). To get to the lower floor, wheel-chair-bound clients must use their vehicles or go around the building on the street. The building is inefficient to heat and cool, and upstairs restrooms have no air conditioning and limited ventilation. Participants in educational programs complain about the condition of the facilities and the lack of parking in close proximity to the current building. Also, the lack of reserved loading zone space makes it difficult for the staff to load and unload equipment and materials necessary for programs. Many Extension educational programs are being moved offsite and rent must be paid for a larger meeting space to meet client demands.

## Recommended Solution

Build a stand-alone Chatham County Agriculture & Conference Center to house the natural resources and agricultural agencies and to provide a meeting facility that all county departments, Central Carolina Community College and nonprofit agencies could use and the public could rent.

The new facility would allow ample meeting space/auditorium for expanded programs and corporate or educational meetings that might last for several days.

# County Buildings - Chatham County Agriculture & Conference Center

Substantially Complete

Meetings of this size would have the potential to attract new food and lodging establishments and other businesses that provide services for out-of-town visitors. The facility will also include storage space, a teaching kitchen/laboratory and a catering kitchen in proximity to the auditorium, one set of bathroom facilities for staff that includes shows and ample parking for both cars and trucks with trailers. Land should also be adequate for a Livestock Show Ban, mini arboretum and demonstration plots, which may be added in the future and funded with private donations. The advantages of building on the west side of the Central Carolina Community College (CCCC) Pittsboro Campus are that it is centrally located within the county and the sustainable agriculture program at the college would be a good partner for many programs.

The facility is currently scheduled to open mid-2016.

## Alternatives

(1) Expand and renovate the County Agricultural Building. A study conducted by Hobbs Architects in 2008 estimated that it would cost between \$7 and \$8 million to add 17,000 square feet, replace mechanical and electrical systems, improve energy efficiency, add an elevator and make the building ADA compliant, and renovate the existing building on site. This option did not include a civic center, but did include a larger meeting room (with seating at tables for approximately 250) and other meeting spaces.

(2) A meeting center could be built as a stand-alone facility and the agricultural agencies stay in the existing building. This would not address the current and future space needs for these agencies and their customers. This option would require hiring additional staff to run the facility.

(3) Relocation of the agricultural agencies to a new facility would free up the County Agricultural Building for other county departments that need to be in the county government complex. The agricultural agencies do not need to be located in the current county government complex. Grant funding is probably not an option due to the lack of grant opportunities.

## Current Stage of Project

The county purchased approximately 100 acres to the west of Central Carolina Community College's Pittsboro Campus for the Agriculture & Conference Center and future college expansion. On September 15, 2014 the Board of Commissioners awarded the base bid for the project and construction began November 17, 2014. The contractor fell behind schedule and several delays pushed back the anticipated opening date of the facility. Substantial completion of the project was achieved on January 3, 2017, at which point the building was occupied by the office staff in the west wing of the building. The Conference Center opened to internal events soon after and opened for public events beginning April 1, 2017. Punch list items are still in progress. A 1-year warranty walk-through is scheduled for November of 2017. At that time, outstanding issues will be identified and the final completion is targeted for early 2018.

## Description of Land Needs

The county purchased approximately 100 acres west of Pittsboro on US Business 64. The property would also be used for future expansion of CCCC. CCCC officials have been involved in master planning the site.

## Professional Services Needed

Architectural design and construction management were needed.

## Operating Impact

Additional funds will be needed for utilities, building maintenance, and expanded programs. Some of this cost would be offset by revenue from rental of the meeting spaces and facility.

# County Buildings – New Emergency Medical Services Base

New

Construct a new 3-bay EMS base on 15-501 near Fearington Village and Briar Chapel.

Project Budget	Budget	Prior to FY 2018	Current Year: FY 2018	Year 1: FY 2019	Year 2: FY 2020	Year 3: FY 2021	Year 4: FY 2022	Year 5: FY 2023	Year 6: FY 2024	Year 7: FY 2025	Project Totals
<b>Project Element</b>											
Architectural Design & Construction Ad	0	0	0	206,000	0	0	0	0	0	0	206,000
Construction	0	0	0	0	702,240	0	0	0	0	0	702,240
Contingency	0	0	0	0	70,224	0	0	0	0	0	70,224
Furnishings & Equipment	0	0	0	0	263,433	0	0	0	0	0	263,433
<b>Total Project Element</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>206,000</b>	<b>1,035,897</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,241,897</b>
<b>Funding Source</b>											
Capital Reserves	0	0	0	206,000	1,035,897	0	0	0	0	0	1,241,897
<b>Total Funding Source</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>206,000</b>	<b>1,035,897</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,241,897</b>
<b>Operating Effect</b>											
Contribution to Capital Reserve	0	0	0	620,948	620,948	0	0	0	0	0	1,241,897
Increased Operating Costs	0	0	0	0	382,130	393,594	405,402	417,564	430,091	442,993	2,471,774
<b>Total Operating Effect</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>620,948</b>	<b>1,003,078</b>	<b>393,594</b>	<b>405,402</b>	<b>417,564</b>	<b>430,091</b>	<b>442,993</b>	<b>3,713,671</b>

## Define Problem

There is a gap in the 12-minute response times for EMS coverage along the 15-501 corridor from just north of Bynum to the Orange County line. A new EMS base near the intersection of 15-501 and Jack Bennett Road will allow for faster response times to some of the higher density populations in the unincorporated part of the county.

## Recommended Solution

Construct a 3-bay EMS base on the property and possibly include a morgue in the construction.

## Alternatives

This location is the optimal spot for a new base to allow faster response times along the 15-501 corridor. The County owns roughly 2.5 acres of land that is occupied by an out of service elevated water tank.

## Professional Services Needed

Design, engineering, and construction services would be needed.

## Operating Impact

Additional funds will be needed for technical equipment and building maintenance.

# Parks - Briar Chapel Park Improvements

Approved-No Contracts (Part)

Accept donation of the 62-acre Briar Chapel Park with existing regulation soccer, football, baseball, and softball field; fence and light the athletic fields; and construct a restroom/concessions building, trails, and other improvements over several phases using recreation fees paid by the Briar Chapel development.

Project Budget	Budget	Current									Project Totals
		Prior to FY 2018	Year: FY 2018	Year 1: FY 2019	Year 2: FY 2020	Year 3: FY 2021	Year 4: FY 2022	Year 5: FY 2023	Year 6: FY 2024	Year 7: FY 2025	
<b>Project Element</b>											
Architectural Design & Construction Ad	18,950	23,950	26,485	26,485	0	0	0	0	0	0	76,920
Construction	0	0	147,626	0	0	0	0	0	0	0	147,626
Contingency	0	0	0	14,531	0	0	0	0	0	0	14,531
Equipment	91,077	58,228	0	5,000	0	0	0	0	0	0	63,228
Facilities	1,450,945	769,389	95,000	219,000	378,152	25,000	0	0	0	0	1,486,541
Other Contracted Services	10,680	10,680	0	10,000	0	0	0	0	0	0	20,680
Permits & Connection Fees	0	0	0	0	0	0	0	0	0	0	0
<b>Total Project Element</b>	<b>1,571,652</b>	<b>862,247</b>	<b>269,111</b>	<b>275,016</b>	<b>378,152</b>	<b>25,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,809,526</b>
<b>Funding Source</b>											
Grants, Gifts, Etc.	110,969	0	76,485	156,890	0	0	0	0	0	0	233,375
Recreation Exaction Fee--Briar Chapel	1,460,683	862,247	192,626	118,126	378,152	25,000	0	0	0	0	1,576,151
<b>Total Funding Source</b>	<b>1,571,652</b>	<b>862,247</b>	<b>269,111</b>	<b>275,016</b>	<b>378,152</b>	<b>25,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,809,526</b>
<b>Operating Effect</b>											
Additional Revenues	0	-450	-770	-1,130	-1,130	-1,290	-1,290	-1,290	-1,290	-1,290	-9,930
Increased Operating Costs	0	142,653	78,396	83,477	81,928	92,027	94,724	97,502	100,363	103,310	874,380
<b>Total Operating Effect</b>	<b>0</b>	<b>142,203</b>	<b>77,626</b>	<b>82,347</b>	<b>80,798</b>	<b>90,737</b>	<b>93,434</b>	<b>96,212</b>	<b>99,073</b>	<b>102,020</b>	<b>864,450</b>

## Define Problem

As part of its conditional use permit (CUP), Briar Chapel development was required to construct a park. However, the CUP did not specify the level to which the facilities must be developed. Briar Chapel has constructed a 62-acre facility consisting of parking, roadways and a football, regulation soccer, and two baseball fields. The athletic fields lacked fencing, lighting, bleachers, and restroom and concessions that would make the fields optimal for use. Six years ago, Briar Chapel officials approached the county about giving the park to the county. Based on the 2009 Parks and Recreation Comprehensive Master Plan, many recreation facilities are needed in the county, including nine soccer fields, four football fields and five softball fields. Accepting the park from Briar Chapel and making improvements would alleviate part of this deficit. In addition, several athletic groups, including East Chatham Baseball, Chatham Soccer League, and East Chatham Football Association, have expressed interest in using the fields.

## Recommended Solution

Using recreation fees paid by Briar Chapel, the county would make improvements to the fields as fees are collected. The facilities will be constructed in priority order as funds become available through Briar Chapel recreation fees and possibly with grant money from Parks and Recreation Trust Fund (PARTF).

1. Fencing of all fields
2. Lighting of the football field
3. Restroom/concession building and supporting utilities
4. Lighting of the parking lots
5. Storage shed

6. Entrance sign and gate
7. Bleachers and benches for all fields
8. Soccer goals
9. Lighting of two baseball/softball fields
10. Dugouts, bases and pitching mounds
11. Walking trail
12. Scoreboard
13. Playground with shade structure
14. Directional signage

## Alternatives

The county could have chosen not to accept the park and allow Briar Chapel to operate it through its Homeowners Association. The CUP does require that the park be open to the public. Since there is no requirement that Briar Chapel develop the park beyond the state the county received it, the athletic facilities would be less than optimal. Fencing was needed on the baseball fields to keep balls from hitting spectators. The soccer field needed fencing to keep balls from rolling down a steep embankment. All athletic fields need bleachers for spectators. Without lighting, the fields can only be used during daylight hours. Without restroom and concession facilities, the park would not provide the amenities most participants and spectators expect and game play would be limited. In addition, the Building Inspections Division has stated that a restroom will be required.

## Current Stage of Project

Briar Chapel completed construction of the athletic fields, two gravel parking lots, and main entrance, paved the entrance road and constructed the entrance bridge. The county took ownership of the park in June 2012. Using recreation fees from Briar Chapel, the county completed fencing, lighting of the football field and gates. The restroom/concessions stand construction was completed in August 2015. By July 2017 soccer goals, bases, pitcher mounds, benches, concession equipment, dugouts, bleachers, and directional signage were purchased, the scoreboard was installed, and irrigation spray heads were replaced. Paving of the parking lots will be completed in FY 2018. Repair work will be done to the pond to address faulty drainage and flooding. This work will begin in FY 2018 and be completed the following year.

The county applied for PARTF grant money for FY 2014 and FY 2015, but funding was not awarded. The county was awarded PARTF in September 2017 for playground, picnic shelter, trail and sidewalk connecting to school.

Depending on the availability of recreation fees, the plan for FY 2020 includes construction of a new multipurpose field with lights, dugouts, paving, parking, restroom with storage, scoreboard, bleachers, and sidewalk to tie to the school connector.

## Relation to Other Projects

Improvements to Briar Chapel Park are related to construction of other parks. These facilities will provide the basic infrastructure for the county and community organizations to offer recreational programming, such as league play, in other areas of the county.

## Professional Services Needed

Architectural services were needed to design the restroom/concessions building. Engineering and construction administration will be needed for water and sewer connections and designing the remaining facilities. Existing county staff has provided oversight to construction and installation of other improvements.

## Operating Impact

Additional funds will be needed to operate and maintain the facility. Additional revenues will be realized from renting the concession stand and fields and from program fees.

# Parks - Lower Haw River

Approved-No Contracts

Build a pedestrian bridge across Pokeberry Creek and to improve the one-mile natural surface.

Project Budget	Budget	Prior to FY 2018	Current Year: FY 2018	Year 1: FY 2019	Year 2: FY 2020	Year 3: FY 2021	Year 4: FY 2022	Year 5: FY 2023	Year 6: FY 2024	Year 7: FY 2025	Project Totals
<b>Project Element</b>											
Construction	0	0	0	125,000	0	0	0	0	0	0	125,000
<b>Total Project Element</b>	0	0	0	125,000	0	0	0	0	0	0	125,000
<b>Funding Source</b>											
General Fund Operating Revenue	0	0	0	25,000	0	0	0	0	0	0	25,000
Grants, Gifts, Etc.	0	0	0	100,000	0	0	0	0	0	0	100,000
<b>Total Funding Source</b>	0	0	0	125,000	0	0	0	0	0	0	125,000
<b>Operating Effect</b>											
Increased Operating Costs	0	0	0	2,380	2,451	2,525	2,601	2,679	2,759	2,842	18,237
<b>Total Operating Effect</b>	0	0	0	2,380	2,451	2,525	2,601	2,679	2,759	2,842	18,237

### Define Problem

Trails were identified in the Chatham County Comprehensive Plan as one of the top recreational priorities. The lower Haw River trail is located in the Jordan Lake natural area. The trail is rough and lacks a connection over the creek.

### Recommended Solution

The Chatham County Parks & Recreation applied for the Recreation Trail Program (RTP) to build a pedestrian bridge across Pokeberry Creek and to improve the one-mile natural surface. The county was awarded a \$100,000 from the Recreational Trail Program (RTP) to install a pedestrian bridge over Pokeberry Creek and improve the one-mile natural surface trail.

### Current Stage of Project

The grant has been awarded and the project is being planned.

# Schools - Bleacher Replacements (Indoor)

Approved-No Contracts (Part)

Renovate and/or install new indoor bleachers at Chatham Central, Jordan-Matthews, J.S. Waters, Moncure, and Horton Middle.

Project Budget	Budget	Prior to FY 2018	Current	Year 1: FY 2019	Year 2: FY 2020	Year 3: FY 2021	Year 4: FY 2022	Year 5: FY 2023	Year 6: FY 2024	Year 7: FY 2025	Project Totals
			Year: FY 2018								
<b>Project Element</b>											
Construction	392,088	119,838	0	272,250	0	0	0	0	0	0	392,088
<b>Total Project Element</b>	392,088	119,838	0	272,250	0	0	0	0	0	0	392,088
<b>Funding Source</b>											
Capital Reserves	272,250	0	0	272,250	0	0	0	0	0	0	272,250
General Fund Fund Balance	119,838	119,838	0	0	0	0	0	0	0	0	119,838
<b>Total Funding Source</b>	392,088	119,838	0	272,250	0	0	0	0	0	0	392,088
<b>Operating Effect</b>											
Contribution to Capital Reserve	0	136,126	68,063	68,061	0	0	0	0	0	0	272,250
<b>Total Operating Effect</b>	0	136,126	68,063	68,061	0	0	0	0	0	0	272,250

### Define Problem

The high schools are still using bleachers that were installed in the 1950s. The bleachers at J. S. Waters, Moncure, and Horton Middle are the original bleachers from when these schools were built in the 1950s. The age of the bleachers makes it difficult to obtain parts to keep them operating properly. Within the next five to 10 years parts will be very difficult, if not impossible, to obtain.

### Recommended Solution

Renovate and/or install new indoor bleachers to comply with recommendations of the bleacher inspector and reduce liability.

### Current Stage of Project

Chatham Central and Jordan-Matthews High Schools replacements are complete. J.S. Waters, Moncure and Horton Middle are scheduled for FY 2019.

### Relation to Other Projects

The project is related to the Northwood renovation project.

# Schools - Chatham Grove Elementary School

Approved-No Contracts

Construct a 96,827-square-foot elementary school in the northeastern area of Chatham County to open in August 2020.

Project Budget	Budget	Prior to FY 2018	Current	Year 1:	Year 2:	Year 3:	Year 4:	Year 5:	Year 6:	Year 7:	Project Totals
			Year: FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	
<b>Project Element</b>											
Architectural Design & Construction Ad	1,129,861	0	1,112,742	17,119	0	0	0	0	0	0	1,129,861
Construction	21,521,156	0	0	11,383,091	10,138,065	0	0	0	0	0	21,521,156
Contingency	1,076,058	0	0	569,155	506,905	0	0	0	0	0	1,076,060
Engineering & Construction Administrat	376,620	0	0	182,604	186,883	7,133	0	0	0	0	376,620
Financing Costs	166,667	0	0	166,667	0	0	0	0	0	0	166,667
Furnishings & Equipment	1,506,481	0	0	0	1,449,417	57,064	0	0	0	0	1,506,481
Land & Easements	750,000	0	750,000	0	0	0	0	0	0	0	750,000
LEED	0	0	0	800,000	800,000	0	0	0	0	0	1,600,000
Other Contracted Services	430,424	59,514	90,098	149,611	131,198	0	0	0	0	0	430,421
Rec Center	0	0	0	2,739,000	0	0	0	0	0	0	2,739,000
Shelter	0	0	0	44,000	0	0	0	0	0	0	44,000
<b>Total Project Element</b>	<b>26,957,267</b>	<b>59,514</b>	<b>1,952,840</b>	<b>16,051,247</b>	<b>13,212,468</b>	<b>64,197</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>31,340,266</b>
<b>Funding Source</b>											
Debt--Limited Obligation Bonds	26,957,267	59,514	1,952,840	16,051,247	13,212,468	64,197	0	0	0	0	31,340,266
<b>Total Funding Source</b>	<b>26,957,267</b>	<b>59,514</b>	<b>1,952,840</b>	<b>16,051,247</b>	<b>13,212,468</b>	<b>64,197</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>31,340,266</b>
<b>Operating Effect</b>											
Debt Service	0	0	0	704,856	1,409,712	1,409,712	3,019,975	2,939,462	2,858,948	2,778,435	15,121,100
Increased Operating Costs	0	0	0	0	0	1,309,980	1,349,279	1,389,757	1,431,450	1,474,394	6,954,860
Transfer from Debt Reserve	0	0	0	-704,856	-1,409,712	-1,409,712	-3,019,975	-2,939,462	-2,858,948	-2,778,435	-15,121,100
<b>Total Operating Effect</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,309,980</b>	<b>1,349,279</b>	<b>1,389,757</b>	<b>1,431,450</b>	<b>1,474,394</b>	<b>6,954,860</b>

## Define Problem

Research and Education Laboratory at North Carolina State University (OR/Ed) has projections for North Chatham Elementary that indicate the school will exceed brick and mortar capacity in the next five years. Perry Harrison's current enrollment has outpaced OR/Ed projections and will exceed serviceable capacity in the same amount of time. These same projections show an addition 250 students at these two schools in the next ten years without factoring in growth escalation and the potential impact of Chatham Park. Both schools provide space for pre-K students as well as regular elementary school students. Chatham Park is proposing to begin building homes in the area north of US 64 sometime in the next two years. Construction of a new Northeast Elementary school is needed to meet this growth in a timely fashion.

## Recommended Solution

Build a new elementary school in the northeast area of the county to be sized to meet existing growth and the anticipated onset of Chatham Park.

## Alternatives

1. Continue adding modular classrooms to North Chatham and Perry Harrison to provide needed classroom spaces. This does not address the related core (cafeteria, media center, counseling, traffic, etc.) capacity issues.
2. Build additions to North Chatham and Perry Harrison to address foreseeable classroom and core capacity needs on campuses with limited space for new construction.
3. Do nothing and negatively impact educational opportunities

## Current Stage of Project

At their September 12, 2016 meeting, the Chatham County Schools Board of Education approved siting the Northeast Elementary School on a parcel of land located on Andrews Store Road. Due diligence has been completed and has verified the suitability of the Andrews Store Road site for the construction of a new elementary school. Schematic design has been approved by the CCS Board of Education. Project is on schedule to receive bids in early May 2018 and begin construction July 2018.

## Description of Land Needs

Approximately 15 to 20 buildable acres will be needed.

## Professional Services Needed

Planning, design, engineering and architectural services will be needed.

## Operating Impact

Additional funds will be needed for utilities to operate the school.

# Schools - Locker Room Renovations

Approved-No Contracts

Renovate the locker rooms at Jordan Matthews, Chatham Central, Moncure, JS Waters, and Northwood schools.

Project Budget	Budget	Prior to FY 2018	Current	Year 1:	Year 2:	Year 3:	Year 4:	Year 5:	Year 6:	Year 7:	Project Totals
			Year: FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	
<b>Project Element</b>											
Construction	1,018,500	0	275,000	287,500	96,000	360,000	0	0	0	0	1,018,500
Contingency	65,850	0	27,500	28,750	9,600	0	0	0	0	0	65,850
<b>Total Project Element</b>	<b>1,084,350</b>	<b>0</b>	<b>302,500</b>	<b>316,250</b>	<b>105,600</b>	<b>360,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,084,350</b>
<b>Funding Source</b>											
Capital Reserves	1,084,350	0	302,500	316,250	105,600	360,000	0	0	0	0	1,084,350
<b>Total Funding Source</b>	<b>1,084,350</b>	<b>0</b>	<b>302,500</b>	<b>316,250</b>	<b>105,600</b>	<b>360,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,084,350</b>
<b>Operating Effect</b>											
Contribution to Capital Reserve	0	283,067	200,321	200,321	200,321	200,320	0	0	0	0	1,084,350
<b>Total Operating Effect</b>	<b>0</b>	<b>283,067</b>	<b>200,321</b>	<b>200,321</b>	<b>200,321</b>	<b>200,320</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,084,350</b>

## Define Problem

The dressing/locker rooms in some of our schools require renovation to meet current standards. Floors are cracked, thus causing tripping hazards; restroom facilities are inadequate; and home and visiting teams share one restroom. Some of the shower areas are in disrepair. While they are functional, they are not of the same quality as the rest of the building. Lockers in the male dressing rooms require renovation, and in one case, they are made of wood which can absorb germs and bacteria.

## Recommended Solution

The school system requests to renovate the locker rooms to bring them up to the standards of the rest of the district's gyms. In the last few years, the school system has replaced flooring, installed energy efficient lighting, replaced bleachers, repainted, renovated restrooms, added concession areas, enhanced entranceways, and installed HVAC in the high school gyms. This final project will bring all aspects of the gyms to the same quality.

## Current Stage of Project

Northwood High School had not been included in this project pending a decision about whether to expand Northwood or build a new high school. Since Northwood will not be expanded, the locker room will need to be renovated to maintain quality. The project schedule is as follows:

FY 2018: Chatham Central High School

FY 2019: Jordan-Matthews High School

FY 2020: JS Waters School and Moncure School

FY 2021: Northwood High School

## Professional Services Needed

Architectural and engineering services will be needed.

# Schools - Mobile Classrooms

Purchase modular classrooms to alleviate overcrowding at Siler City Elementary, Northwood High School, and other schools as space is needed.

Project Budget	Budget	Current									Project Totals
		Prior to FY 2018	Year: FY 2018	Year 1: FY 2019	Year 2: FY 2020	Year 3: FY 2021	Year 4: FY 2022	Year 5: FY 2023	Year 6: FY 2024	Year 7: FY 2025	
<b>Project Element</b>											
Construction	832,875	203,645	160,000	164,800	254,400	261,600	268,800	0	0	0	1,313,245
Design, Engineering & Construction Ad	25,125	18,450	0	0	0	0	0	0	0	0	18,450
Other Contracted Services	0	0	0	0	0	0	0	0	0	0	0
<b>Total Project Element</b>	<b>858,000</b>	<b>222,095</b>	<b>160,000</b>	<b>164,800</b>	<b>254,400</b>	<b>261,600</b>	<b>268,800</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,331,695</b>
<b>Funding Source</b>											
Capital Reserves	858,000	222,095	160,000	164,800	254,400	261,600	268,800	0	0	0	1,331,695
Transfer from Water Capital Reserve	0	0	0	0	0	0	0	0	0	0	0
<b>Total Funding Source</b>	<b>858,000</b>	<b>222,095</b>	<b>160,000</b>	<b>164,800</b>	<b>254,400</b>	<b>261,600</b>	<b>268,800</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,331,695</b>
<b>Operating Effect</b>											
Contribution to Capital Reserve	0	112,662	248,446	248,446	248,447	236,848	236,846	0	0	0	1,331,695
Increased Operating Costs	0	12,945	9,954	13,442	18,628	23,970	29,472	30,356	31,267	32,205	202,239
<b>Total Operating Effect</b>	<b>0</b>	<b>125,607</b>	<b>258,400</b>	<b>261,888</b>	<b>267,075</b>	<b>260,818</b>	<b>266,318</b>	<b>30,356</b>	<b>31,267</b>	<b>32,205</b>	<b>1,533,934</b>

## Define Problem

With one NC certified megasite in the western side of the county, another megasite being readied in the southeast, and the Chatham Park development coming in Pittsboro, Chatham County is on the brink of unprecedented growth.

Some schools, particularly Siler City Elementary and Northwood High School, are currently overcrowded. Siler City Elementary, with a brick and mortar capacity of 671 and a serviceable capacity of 768, currently has an average daily membership of 699. The school is floating seven English-as-a-second-language (ESL) classes, one art class, one academically or intellectually gifted (AIG) class, one-half of a music teacher and one-half of a physical education teacher.

Northwood High School has a brick and mortar capacity of 1,005 and a serviceable capacity of 1,330. The current average daily membership is 1,289. In addition to classroom space, Northwood needs more cafeteria and office space for teachers, counselors, and administrators.

House Bill 13 (which takes effect at the beginning of the 2018-2019 academic year) reduces class sizes in kindergarten through 3rd grades from 23 students to a maximum average of 20 or less. This will reduce the classroom capacity of our elementary/K-8 schools.

A short-term solution to overcrowding is needed to provide the schools with additional space and give the school system time to develop a plan that will account for the impending growth.

## Recommended Solution

Purchase twelve modular classrooms; three for Siler City Elementary, one for Northwood High School, and eight to be placed as needed over the next three years. Current projected impacts of the issues suggest a need to place modular classrooms during the next five years at Pittsboro Elementary, Siler City Elementary, Horton Middle, Margaret Pollard Middle, and Jordan-Matthews High School.

To insure that sufficient modular classroom units are available to address House Bill 13, projected growth from Chatham Park, and normal Chatham County

growth, a total of 12 additional modular classroom units should be available through FY 2022..

### **Alternatives**

One alternative to purchasing modular classrooms is to immediately redistrict student attendance zones.

### **Current Stage of Project**

Four modular classrooms were purchased and set up during the summer of 2015. Three are located at Siler City Elementary and one at Northwood High School. All are currently being used as classroom spaces. One modular classroom was purchased and set up at Chatham Middle during the summer of 2017. Two units are planned for purchase in FY 2018.

### **Professional Services Needed**

Architectural and engineering design services will be needed.

### **Operating Impact**

Additional funds will be needed for utilities to operate the modular classrooms.

# Schools - New Central Services Building

Approved-No Contracts

Construct a new two-story, 24,000 square-foot building for Central Services.

Project Budget	Budget	Current									Project Totals
		Prior to FY 2018	Year: FY 2018	Year 1: FY 2019	Year 2: FY 2020	Year 3: FY 2021	Year 4: FY 2022	Year 5: FY 2023	Year 6: FY 2024	Year 7: FY 2025	
<b>Project Element</b>											
Construction	4,250,400	0	0	0	0	2,521,260	1,729,140	0	0	0	4,250,400
Construction Administration	85,008	0	0	0	0	45,841	39,167	0	0	0	85,008
Contingency	425,040	0	0	0	0	252,126	172,914	0	0	0	425,040
Design, Engineering & Construction Ad	255,024	0	0	0	255,024	0	0	0	0	0	255,024
Equipment	297,528	0	0	0	0	0	297,528	0	0	0	297,528
Financing Costs	166,667	0	0	0	0	166,667	0	0	0	0	166,667
LEED	0	0	0	0	0	201,701	138,331	0	0	0	340,032
Other Contracted Services	127,512	0	0	0	0	75,638	51,874	0	0	0	127,512
<b>Total Project Element</b>	<b>5,607,179</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>255,024</b>	<b>3,263,233</b>	<b>2,428,954</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5,947,211</b>
<b>Funding Source</b>											
Debt	5,607,179	0	0	0	255,024	3,263,233	2,428,954	0	0	0	5,947,211
<b>Total Funding Source</b>	<b>5,607,179</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>255,024</b>	<b>3,263,233</b>	<b>2,428,954</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5,947,211</b>
<b>Operating Effect</b>											
Debt Service	0	0	0	0	0	99,750	799,500	778,500	757,500	736,500	3,171,750
Increased Operating Costs	0	0	0	0	0	0	24,598	25,336	26,096	26,880	102,910
Transfer from Debt Reserve	0	0	0	0	0	-99,750	-799,500	-778,500	-757,500	-736,500	-3,171,750
<b>Total Operating Effect</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>24,598</b>	<b>25,336</b>	<b>26,096</b>	<b>26,880</b>	<b>102,910</b>

## Define Problem

The existing Central Services Building has exceeded its capacity resulting in the creation of inefficient satellite offices around the county. In addition, a 2014 facility conditions assessment indicates the building has surpassed its intended lifespan and is in need of costly repairs. The necessary repairs do not address the space issue.

Recent student population projections for Horton Middle School indicate that school space currently occupied by Central Services personnel will be required for classroom use beginning with FY 2021.

## Recommended Solution

Construct a new central services building to accommodate all departments in one location. The county is interested in purchasing the old bus garage site. The school system has agreed that instead of a cash purchase, the funds can be used for the Central Services Building, essentially offsetting that cost.

## Alternatives

Repair existing building and continue to operate with inefficient satellite offices.

# Schools - New Central Services Building

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Approved-No Contracts

## **Professional Services Needed**

Architectural design, construction, and engineering services will be needed.

## **Operating Impact**

Additional funds will be needed for equipment, supplies, and maintenance.

# Schools - Northwood High School Auditorium HVAC Replacement

Substantially Complete

Replace heating ventilation and air-conditioning (HVAC) at Northwood High School Auditorium.

Project Budget	Budget	Prior to FY 2018	Current	Year 1: FY 2019	Year 2: FY 2020	Year 3: FY 2021	Year 4: FY 2022	Year 5: FY 2023	Year 6: FY 2024	Year 7: FY 2025	Project Totals
			Year: FY 2018								
<b>Project Element</b>											
Construction	200,000	0	225,000	0	0	0	0	0	0	0	225,000
Contingency	15,000	0	0	0	0	0	0	0	0	0	0
Design, Engineering & Construction Ad	10,000	9,605	0	0	0	0	0	0	0	0	9,605
<b>Total Project Element</b>	<b>225,000</b>	<b>9,605</b>	<b>225,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>234,605</b>
<b>Funding Source</b>											
Capital Reserves	225,000	9,605	225,000	0	0	0	0	0	0	0	234,605
<b>Total Funding Source</b>	<b>225,000</b>	<b>9,605</b>	<b>225,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>234,605</b>
<b>Operating Effect</b>											
Contribution to Capital Reserve	0	165,000	69,605	0	0	0	0	0	0	0	234,605
<b>Total Operating Effect</b>	<b>0</b>	<b>165,000</b>	<b>69,605</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>234,605</b>

## Define Problem

The HVAC system at Northwood Auditorium is over thirty years old and has exceeded its lifecycle. The system is deteriorating rapidly, failure is imminent, and parts have become unavailable. The system must be replaced to continue intended use of the auditorium.

## Recommended Solution

Replace existing obsolete, chilled water system and unit heaters.

## Current Stage of Project

Construction is complete and close out is in progress.

## Professional Services Needed

Design and/or engineering services will be needed.

# Schools - Northwood High School Paving Overlay

Repair pot holes and cracks in the pavement at Northwood High School in FY 2019.

Project Budget	Budget	Prior to FY 2018	Current	Year 1: FY 2019	Year 2: FY 2020	Year 3: FY 2021	Year 4: FY 2022	Year 5: FY 2023	Year 6: FY 2024	Year 7: FY 2025	Project Totals
			Year: FY 2018								
<b>Project Element</b>											
Construction	171,820	0	0	171,820	0	0	0	0	0	0	171,820
Contingency	17,182	0	0	17,182	0	0	0	0	0	0	17,182
<b>Total Project Element</b>	<b>189,002</b>	<b>0</b>	<b>0</b>	<b>189,002</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>189,002</b>
<b>Funding Source</b>											
Capital Reserves	189,002	0	0	189,002	0	0	0	0	0	0	189,002
<b>Total Funding Source</b>	<b>189,002</b>	<b>0</b>	<b>0</b>	<b>189,002</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>189,002</b>
<b>Operating Effect</b>											
Contribution to Capital Reserve	0	0	94,501	94,501	0	0	0	0	0	0	189,002
<b>Total Operating Effect</b>	<b>0</b>	<b>0</b>	<b>94,501</b>	<b>94,501</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>189,002</b>

## Define Problem

Current student and bus parking areas at Northwood High School are in need of immediate attention in the form of repair and a paving overlay. A review of paving at all schools determined that these two areas are the most in need of immediate attention across the district

## Recommended Solution

Overlay the student and bus parking lots at Northwood High School.

## Alternatives

If nothing is done the cracks and pot holes will grow worse and more extensive paving repair will be needed.

# Schools - Perry Harrison Elementary School Traffic Pattern

Approved-No Contracts

Improve the traffic pattern at Perry Harrison Elementary in FY 2019.

Project Budget	Budget	Prior to FY 2018	Current	Year 1: FY 2019	Year 2: FY 2020	Year 3: FY 2021	Year 4: FY 2022	Year 5: FY 2023	Year 6: FY 2024	Year 7: FY 2025	Project Totals
			Year: FY 2018								
<b>Project Element</b>											
Construction	385,000	0	0	385,000	0	0	0	0	0	0	385,000
Contingency	38,500	0	0	38,500	0	0	0	0	0	0	38,500
<b>Total Project Element</b>	<b>423,500</b>	<b>0</b>	<b>0</b>	<b>423,500</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>423,500</b>
<b>Funding Source</b>											
Capital Reserves	423,500	0	0	423,500	0	0	0	0	0	0	423,500
<b>Total Funding Source</b>	<b>423,500</b>	<b>0</b>	<b>0</b>	<b>423,500</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>423,500</b>
<b>Operating Effect</b>											
Contribution to Capital Reserve	0	0	211,750	211,750	0	0	0	0	0	0	423,500
<b>Total Operating Effect</b>	<b>0</b>	<b>0</b>	<b>211,750</b>	<b>211,750</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>423,500</b>

## Define Problem

The student population at Perry Harrison Elementary School (over 700 students) continues to surpass rated capacity and contributes to traffic backing up on Hamlet Chapel Road in both directions. Due to a perceived increase in accidents at the intersection of Hamlet Chapel, Manns Chapel, and River Road, the NC Department of Transportation instituted a four-way stop, which is also contributing to this issue. Because this is a long-standing problem at PHES, we do not believe the opening of the new Northeast Elementary School and the subsequent decrease in student population will eliminate this situation.

## Recommended Solution

Implement a DOT recommended traffic pattern which will increase the queue line, reduce backup both on and off campus, and provide a potentially safer drop-off and pick-up situation for Perry Harrison students and their parents.

## Alternatives

- 1) Do nothing and continue allowing traffic to backup both on and off campus.
- 2) Hire an off-duty police officer to direct traffic twice daily. This alternative does not address the traffic backup issue.

## Professional Services Needed

Design and engineering services will be needed.

# Schools - Roof Replacements

Approved-No Contracts (Part)

Replace the roofs at JS Waters, SAGE Academy, Moncure, Administration Building, Horton Middle, Bennett, Pittsboro (remaining), Chatham Central High, North Chatham Elementary, Maintenance Department, Perry Harrison Elementary, Siler City Elementary, Jordan-Matthews High School, and Northwood High School.

Project Budget	Budget	Current									Project Totals
		Prior to FY 2018	Year: FY 2018	Year 1: FY 2019	Year 2: FY 2020	Year 3: FY 2021	Year 4: FY 2022	Year 5: FY 2023	Year 6: FY 2024	Year 7: FY 2025	
<b>Project Element</b>											
Construction	5,736,519	3,989,976	1,283,133	546,237	16,945	0	0	0	0	0	5,836,291
Contingency	246,916	0	22,769	54,623	1,695	0	0	0	0	0	79,087
Design, Engineering & Construction Ad	475,510	376,843	126,683	42,450	0	0	0	0	0	0	545,976
Other Contracted Services	2,409	0	0	0	0	0	0	0	0	0	0
<b>Total Project Element</b>	<b>6,461,354</b>	<b>4,366,819</b>	<b>1,432,585</b>	<b>643,310</b>	<b>18,640</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6,461,354</b>
<b>Funding Source</b>											
Capital Reserves	2,885,213	790,678	1,432,585	643,310	18,640	0	0	0	0	0	2,885,213
Debt--Installment Purchase	1,157,659	1,157,659	0	0	0	0	0	0	0	0	1,157,659
Transfer from General Fund	1,780,422	1,780,422	0	0	0	0	0	0	0	0	1,780,422
Transfer from Water Capital Reserve	638,060	638,060	0	0	0	0	0	0	0	0	638,060
<b>Total Funding Source</b>	<b>6,461,354</b>	<b>4,366,819</b>	<b>1,432,585</b>	<b>643,310</b>	<b>18,640</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6,461,354</b>
<b>Operating Effect</b>											
Contribution to Capital Reserve	0	880,318	1,086,362	1,086,362	0	0	0	0	0	0	3,053,042
Transfer from General Fund	0	1,256,298	0	0	0	0	0	0	0	0	1,256,298
<b>Total Operating Effect</b>	<b>0</b>	<b>2,136,616</b>	<b>1,086,362</b>	<b>1,086,362</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,309,340</b>

## Define Problem

The school system replaced roofs in the worst condition with Qualified School Construction Bonds (QSCBs), including Bonlee (FY 2012), part of Pittsboro Elementary and Silk Hope (FY 2013). A roofing assessment conducted as part of the planning process for QSCBs found that many roofs in the system are in need of major replacement and repair in the near future.

## Recommended Solution

Repair of school roofs is prioritized ahead of other school system buildings. Based on limited funding, school and county administration have worked out a plan to phase the roofs as follows:

FY 2013: JS Waters funded with a combination of leftover Margaret Pollard funds and county fund balance.

FY 2014: SAGE Academy and Moncure School funded with a one-time windfall of motor vehicle taxes (resulting from the state collecting vehicle taxes four months earlier than counties)

FY 2015: Finished SAGE and Moncure. Administration and Horton Middle, funded with capital reserve.

FY 2016: Remainder of Horton Middle, Bennett, and Pittsboro funded with capital reserve.

FY 2017: Chatham Central and North Chatham funded with capital reserves.

FY 2018: Maintenance Department, Perry Harrison, and Siler City Elementary funded with capital reserves.

FY 2019: Jordan-Matthews and Northwood high schools funded with capital reserves.

## Alternatives

If repairs and replacements are not made, the school system will incur increasing roof maintenance costs and facility damage. When it rains hard, the school system must repair the damage caused by leaks.

## Current Stage of Project

J. S. Waters was completed April 1, 2014. Moncure and SAGE are complete. Punch list close-out is in progress for Horton and Administration. Design is complete for Bennett and Pittsboro Elementary, with an estimated construction completion of December 2016. Design is in progress for Chatham Central and North Chatham. Horton Middle, Administration, and Pittsboro Elementary are complete. Bennett's punch list is in progress with estimated final payment in November 2017. Chatham Central and North Chatham's estimated construction completion is November 2017 and expected close out is January 2018.

## Relation to Other Projects

When a roofing assessment was obtained, it showed that fewer roofs could be repaired with Qualified School Construction Bonds (QSCB) funds than originally estimated. The school system has submitted a separate request for the remaining repairs and replacements that the roofing assessment showed was needed.

# Schools - Seaforth High School

Approved-No Contracts

Construct a new 209,000 square-foot high school in the northeast quadrant of the county to open August of 2021 to address overcrowding and provide for the expected growth in the high school student population. The new high school will be built to accommodate up to 1,200 students initially, with the core capacity sized to accommodate 1,400 students.

Project Budget	Budget	Current		Year 1: FY 2019	Year 2: FY 2020	Year 3: FY 2021	Year 4: FY 2022	Year 5: FY 2023	Year 6: FY 2024	Year 7: FY 2025	Project Totals
		Prior to FY 2018	Year: FY 2018								
<b>Project Element</b>											
Architectural Design & Construction Ad	2,154,509	650,623	1,471,242	32,644	0	0	0	0	0	0	2,154,509
Construction	54,613,650	0	0	19,016,573	19,462,274	17,085,203	0	0	0	0	55,564,050
Contingency	2,662,432	0	0	911,207	932,563	818,662	0	0	0	0	2,662,432
Engineering & Construction Administrat	718,170	0	0	232,136	237,576	236,670	11,788	0	0	0	718,170
Financing Costs	166,667	0	0	166,667	0	0	0	0	0	0	166,667
Furnishings & Equipment	3,727,405	0	0	0	0	3,543,859	183,546	0	0	0	3,727,405
Land	1,263,152	1,400,364	0	0	0	0	0	0	0	0	1,400,364
LEED	0	0	0	787,166	805,615	707,219	0	0	0	0	2,300,000
Other Contracted Services	1,064,973	91,363	182,247	273,610	275,714	242,039	0	0	0	0	1,064,973
<b>Total Project Element</b>	<b>66,370,958</b>	<b>2,142,350</b>	<b>1,653,489</b>	<b>21,420,003</b>	<b>21,713,742</b>	<b>22,633,652</b>	<b>195,334</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>69,758,570</b>
<b>Funding Source</b>											
Debt--Limited Obligation Bonds	66,370,958	2,142,350	1,653,489	21,420,003	21,713,742	22,633,652	195,334	0	0	0	69,758,570
<b>Total Funding Source</b>	<b>66,370,958</b>	<b>2,142,350</b>	<b>1,653,489</b>	<b>21,420,003</b>	<b>21,713,742</b>	<b>22,633,652</b>	<b>195,334</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>69,758,570</b>
<b>Operating Effect</b>											
Debt Service	0	0	0	1,677,071	3,354,141	3,354,141	7,185,457	6,993,891	6,802,326	6,610,760	35,977,787
Increased Operating Costs	0	0	0	0	0	0	2,082,768	2,145,251	2,209,609	2,275,897	8,713,526
Transfer from Debt Reserve	0	0	0	-1,677,071	-3,354,141	-3,354,141	-7,185,457	-6,993,891	-6,802,326	-6,610,760	-35,977,787
<b>Total Operating Effect</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,082,768</b>	<b>2,145,251</b>	<b>2,209,609</b>	<b>2,275,897</b>	<b>8,713,526</b>

## Define Problem

The building of new schools is a complex process. An important step in the process is the determination of location, size, and timing (i.e., when does the projected enrollment necessitate a new school). To that end, Chatham County Schools has continued its long-standing relationship with the Operations Research/Education Laboratory of North Carolina State University (OR/Ed) to assist in making fiscally responsible, timely, and appropriate decisions. OR/Ed consultants have conducted interviews with planning and permitting personnel, verifying and updating (as necessary) growth projection and optimization scenarios.

In 2007, a study conducted by OR/Ed determined that Northwood and Jordan-Matthews had reached their brick and mortar capacities. This study recommended that a new high school be constructed in the northeast part of the county to alleviate overcrowding

Since 2007, additions have been added to both schools to meet this growth. At Jordan-Matthews, a new cafeteria was added, the existing cafeteria was renovated to create additional classroom space, and additional classroom modular units were placed on the campus. At Northwood, an eight-classroom modular building and a new Fine Arts wing were added as well.

Between 2007 and 2011, population growth in Chatham slowed, and construction of a new high school was pushed back in order to ensure that completion of the school would be accompanied by the necessary student population. One of the main goals was to make sure programming was not diminished at Northwood High School.

## **Recommended Solution**

Construct a new high school in the northeast quadrant of the county to open August of 2021 to address overcrowding and provide for the expected growth in the high school student population. The new high school will be built to accommodate up to 1,200 students initially, with the core capacity sized to accommodate an additional 200 students.

School administration staff is exploring the possibility of creating a three-year modular school on the construction site to house a 9th grade academy and provide earlier capacity relief to Northwood High School.

## **Alternatives**

1. Build an addition to Northwood to expand the brick and mortar capacity to 1,500 students to provide a temporary solution to the need for an additional high school. However, based on OR/Ed projections, even with an expansion, Northwood could exceed the expanded capacity in less than ten years.
2. Redistrict the entire district at the high school level to make use of empty seats in the western part of the county. Note that this will negatively impact transportation-related issues (length of ride, efficiency ratings, etc.).
3. Do nothing and continue adding modular units to Northwood.

## **Current Stage of Project**

An architectural contract has been awarded for construction of a new high school, and the schematic design is complete and has been endorsed by the Board of Education. Due diligence has been completed on a 75 acre site located on Seaforth Road, and has confirmed suitability for the construction of a new high school. Property closing is complete.

The project architects are working through the initial design phase. Two wastewater options were evaluated; pumping to a neighboring development or an on-site below ground spray system. After a thorough evaluation, it was determined that the school would use the on-site option with water re-use to irrigate playing fields. The project is on schedule to receive bids in early May 2018 with construction beginning in July 2018.

## **Description of Land Needs**

An appropriately located 75-acre site has been identified and approved by the Board of Education as its preferred location for the new high school. Due diligence work (i.e., traffic study, soil borings, environmental assessments, etc.) is underway and is expected to be concluded by December 2016.

## **Professional Services Needed**

Detailed architectural drawings and construction management will be needed.

## **Operating Impact**

Additional funds will be needed for utilities, maintenance, and locally funded personnel.

# Schools - Wastewater Replacement at Silk Hope School

Approved-No Contracts

Replace wastewater system at Silk Hope Elementary School.

Project Budget	Budget	Current									Project Totals
		Prior to FY 2018	Year: FY 2018	Year 1: FY 2019	Year 2: FY 2020	Year 3: FY 2021	Year 4: FY 2022	Year 5: FY 2023	Year 6: FY 2024	Year 7: FY 2025	
<b>Project Element</b>											
Construction	585,000	0	0	0	0	0	0	585,000	0	0	585,000
Contingency	58,500	0	0	0	0	0	0	58,500	0	0	58,500
<b>Total Project Element</b>	<b>643,500</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>643,500</b>	<b>0</b>	<b>0</b>	<b>643,500</b>
<b>Funding Source</b>											
Capital Reserves	643,500	0	0	0	0	0	0	643,500	0	0	643,500
<b>Total Funding Source</b>	<b>643,500</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>643,500</b>	<b>0</b>	<b>0</b>	<b>643,500</b>
<b>Operating Effect</b>											
Contribution to Capital Reserve	0	0	0	0	0	214,500	214,500	214,500	0	0	643,500
<b>Total Operating Effect</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>214,500</b>	<b>214,500</b>	<b>214,500</b>	<b>0</b>	<b>0</b>	<b>643,500</b>

## Define Problem

The two main parts of the current Silk Hope School wastewater system are located approximately .5 miles apart, and one part is on privately-owned land. This arrangement was agreed upon several years ago without any easements being put in place. Two years ago, North Carolina Department of Environmental Quality (NCDEQ) made establishing this easement a part of the licensing renewal process. Due to the private landowner's past relationship with NCDEQ, finalizing this easement has proven to be difficult to achieve.

## Recommended Solution

Change to an updated and more efficient wastewater system which will be located entirely on school property.

## Alternatives

Do nothing and continue using the current outdated and less efficient system which is located partly on school property and partly on privately owned property.

## Professional Services Needed

Engineering services will be needed.

# Technology – Agriculture & Conference Audio/Visual Replacement

Approved-No Contracts

Replace all audio/visual equipment in the Chatham County Agriculture & Conference Center.

Project Budget	Budget	Current									Project Totals
		Prior to FY 2018	Year: FY 2018	Year 1: FY 2019	Year 2: FY 2020	Year 3: FY 2021	Year 4: FY 2022	Year 5: FY 2023	Year 6: FY 2024	Year 7: FY 2025	
<b>Project Element</b>											
Contingency	27,225	0	0	0	0	0	0	0	27,225	0	27,225
Equipment	272,250	0	0	0	0	0	0	0	272,250	0	272,250
<b>Total Project Element</b>	<b>299,475</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>299,475</b>	<b>0</b>	<b>299,475</b>
<b>Funding Source</b>											
Capital Reserves	299,475	0	0	0	0	0	0	0	299,475	0	299,475
<b>Total Funding Source</b>	<b>299,475</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>299,475</b>	<b>0</b>	<b>299,475</b>
<b>Operating Effect</b>											
Contribution to Capital Reserve	0	0	0	0	0	74,869	74,869	74,869	74,868	0	299,475
<b>Total Operating Effect</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>74,869</b>	<b>74,869</b>	<b>74,869</b>	<b>74,868</b>	<b>0</b>	<b>299,475</b>

## Define Problem

The Chatham County Agriculture & Conference Center AV infrastructure is newly installed in 2016. While all equipment warranties and support are just beginning, over the next seven years degradation and problems will occur. By 2023, all functioning components will need replacing. Some items may fail before then, especially with extensive use, but those could be replaced with comparable items. Testing and monitoring of equipment, along with controlling access, will enable optimum life and functionality until the full replacement.

## Recommended Solution

Replace all audio/visual equipment in the Ag/Conference Center, including wiring that cannot be functionally verified at acceptable carrier levels. Racks are standard and are not anticipated to need replacing.

## Alternatives

1. Do nothing: Audio/Video equipment, like any hardware equipment has a limited functional life. AV equipment is commercial quality, but still susceptible to the effects of use, abuse, and age. As failures are reported, MIS evaluates and coordinates repairs. Each year, MIS reviews the infrastructure and evaluates the status in terms of existing strengths and weaknesses. Doing nothing would result in reports of malfunctions which may impact revenue generating events, which is unacceptable.
2. Replace equipment in total. The equipment is integrated, so efforts to decouple and replace components could cause more disruption than a full replace. Major failures caused by lack of proper equipment integration would be avoided with this approach and all equipment would be refreshed.
3. Replace components as they fail. This approach will be workable for the early years after initial install. This approach addresses failures as they occur. Matching parts would still remain mostly obtainable, as long as original manufacturers of the equipment are still in business. Failures would be expected to occur on a higher frequency and involve major components as time passes, especially after the five-year mark of 2021. The equipment would then be of differing ages and possibly of differing makes/models. This could cause some complexity in managing the equipment and hinder its effectiveness. These unexpected failures could impact usage during events and affect revenue.

# Technology – Agriculture & Conference Audio/Visual Replacement

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Approved-No Contracts

## **Operating Impact**

After the new equipment is installed, annual support would continue until the next upfit. This continued support is expected to be equivalent to support in existence prior to the upgrade.

# Technology - Body Cameras

Approved-No Contracts

Purchase body cameras, servers, and media storage to capture use-of-force situations in a video format for the Sheriff's Office.

Project Budget	Budget	Prior to FY 2018	Current	Year 1:	Year 2:	Year 3:	Year 4:	Year 5:	Year 6:	Year 7:	Project Totals
			Year: FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	
<b>Project Element</b>											
Equipment	223,637	0	100,000	91,777	31,860	0	0	0	0	0	223,637
<b>Total Project Element</b>	223,637	0	100,000	91,777	31,860	0	0	0	0	0	223,637
<b>Funding Source</b>											
Capital Reserves	151,519	0	50,000	68,777	8,860	0	0	0	0	0	127,637
Grants, Gifts, Etc.	72,118	0	50,000	23,000	23,000	0	0	0	0	0	96,000
<b>Total Funding Source</b>	223,637	0	100,000	91,777	31,860	0	0	0	0	0	223,637
<b>Operating Effect</b>											
Contribution to Capital Reserve	0	0	50,506	38,566	38,565	0	0	0	0	0	127,637
Increased Operating Costs	0	0	0	0	0	96,194	122,490	34,727	0	0	253,411
<b>Total Operating Effect</b>	0	0	50,506	38,566	38,565	96,194	122,490	34,727	0	0	381,048

## Define Problem

Currently the Chatham County Sheriff's Office (CCSO) is involved in use-of-force situations that are not all captured on video. Video documentation of the use-of-force allows the CCSO to review, document, and share with the public and other criminal justice partners. Patrol officers were involved in 58 documented use-of-force situations in 2015, 89 in 2014, 118 in 2013, and 102 in 2012. This gives an average over a four-year period of 92 use-of-force events. Each use-of-force event is an encounter that has the potential to escalate from simple hands on a suspect for arrest to using lethal force. The body camera will document use-of-force situations and will be instrumental in evaluating use-of-force situations. The captured video will be valuable in guiding policy updates, enforcing policy, capturing evidence, and holding staff accountable in every use-of-force situation.

## Recommended Solution

The Sheriff requests the purchase of a total of 147 cameras in FY 2018. Because the cameras must be replaced every three years, the County Manager recommends phasing in the purchase of body cameras with all patrol deputies to receive cameras in FY2018. The remainder of Sheriff sworn personnel will get cameras in FY 2019 and 20 cameras will be available in the detention center in FY 2020. The Sheriff requested a camera for all detention officers, but cameras can be rotated for shared use among shifts. Grant funds should be pursued to help offset the cost of the cameras.

## Alternatives

There are three alternatives.

1. One option is to purchase body cameras for every deputy and detention officer that will capture video as the deputy sees the situation. This option also allows the capture of sound and further helps clarify the need for the use of force.
2. Another option is to continue to utilize in-car camera systems. Currently in-car camera systems are utilized by patrol, civil, and some court personnel. These cameras are effective in capturing vehicle pursuits and prisoner transports. However, they do not always capture use of force due to the position of the cameras in the vehicle. Most use-of-force situations will be out of view from the camera. Audio will be available only if the officer is still in range of the in-car camera system. Use-of-force situations away from car cameras, such as in buildings, are not captured. In-car camera systems are very costly, must be moved from car to car when a vehicle is taken off line, and are limited to field staff.
3. A third option is that the Sheriff's Office can continue to document use of force in written reports and utilize video captured by in-car camera systems.

## **Current Stage of Project**

The body camera project is on schedule as planned, however the grant-funded revenue schedule will be accelerated. A project ordinance to purchase equipment was passed by the Board of Commissioners on September 18, 2017. A North Carolina Governor's Crime Commission grant will be applied for in November of 2017 to fund the project in FY 2018. Previously grant funding was planned to begin in FY 2019; however grants are available in the current year and availability of the grant in coming years is uncertain.

## **Operating Impact**

Cameras will have to be updated and replaced on a regular schedule and there will be annual support and maintenance costs.

# Technology - Increase Capacity for Data Storage

Approved-No Contracts (Part)

Provide a secure storage system for the county's increasing data storage needs.

Project Budget	Budget	Current									Project Totals
		Prior to FY 2018	Year: FY 2018	Year 1: FY 2019	Year 2: FY 2020	Year 3: FY 2021	Year 4: FY 2022	Year 5: FY 2023	Year 6: FY 2024	Year 7: FY 2025	
<b>Project Element</b>											
Equipment	1,039,744	315,838	0	0	723,906	0	0	0	0	0	1,039,744
<b>Total Project Element</b>	1,039,744	315,838	0	0	723,906	0	0	0	0	0	1,039,744
<b>Funding Source</b>											
Capital Reserves	767,862	43,956	0	0	723,906	0	0	0	0	0	767,862
General Fund Fund Balance	271,882	271,882	0	0	0	0	0	0	0	0	271,882
<b>Total Funding Source</b>	1,039,744	315,838	0	0	723,906	0	0	0	0	0	1,039,744
<b>Operating Effect</b>											
Contribution to Capital Reserve	0	405,909	120,651	120,651	120,651	0	0	0	0	0	767,862
Decreased Operating Costs	0	-252,000	-126,000	-126,000	-126,000	-126,000	-126,000	-126,000	-126,000	-126,000	-1,260,000
General Fund Fund Balance	0	0	0	0	0	0	0	0	0	0	0
Increased Operating Costs	0	269,730	70,776	77,026	80,423	20,918	21,546	22,192	22,858	23,544	609,013
<b>Total Operating Effect</b>	0	423,639	65,427	71,677	75,074	-105,082	-104,454	-103,808	-103,142	-102,456	116,875

## Define Problem

Chatham County's data storage needs continue to grow as more automation is introduced and existing systems continue to be used. Also increasing is the use and reliance on audio and video files for the jail, emergency operations center and recording of commissioner meetings. There is increasing interest in audio/video solutions, such as video-conferencing, which will continue to fuel storage needs. Public records retention laws require long-term storage. Data storage has grown exponentially, from 200 gigabytes in 2005 to 53,000 gigabytes in 2013, and 107,000 gigabytes (107 TB) in 2015. The MIS Department has revised policies to reduce storage needs. Storage usage is monitored closely to avoid reaching maximum capacity, and focused effort is being made to complete the domain migration project that will enable reclamation of space.

## Recommended Solution

The storage area network (SAN) in place is adequate to meet anticipated needs as long as additional space is added as needed and drives that go out of support are upgraded. Manufacturer end-of-sale for the existing core unit is expected in 2016. Five years after end of sale (FY 2021), the manufacturer will no longer support the equipment through its normal partner network. The core units should be replaced before 2021 to ensure optimum capacity and performance. The base equipment has been well maintained. New state-of-the-art drives have been added through a two-phase approach which increased the space needs and set the stage for elimination of older, slower drives.

A second SAN provides backup and duplication of the county's critical operations to ensure recovery in the event of a disaster. This structure has been serving the county well and has had complimentary upgrades to match the primary SAN; however, the secondary SAN does not have capacity to fully match the performance of the primary SAN and is not capable of running all county systems.

SAN space can be expanded as the county's data storage needs grow. A threshold of 80% usage is the point at which more space should be added. Replacements of drives need to be planned to occur near the time support expires.

A third component of the county's data management system is server virtualization, a technology that enables one large server to function as multiple servers, thereby eliminating the one-to-one dependence of software to hardware. The virtual infrastructure and data storage infrastructure do not need to follow the same replacement and maintenance cycles. Data storage systems have longer life expectancies. The virtual infrastructure will be upgraded independent of data storage.

## Alternatives

The life expectancy of the SAN may be long enough to support a drive replacement strategy through 2020 instead of a full replacement as long as adequate vendor support for the overall device can be maintained. MIS will continue to work closely with the vendor to ensure adequate functionality of this critical set of equipment.

MIS is evaluating Internet-based 'cloud' solutions for long-term storage. Offsite storage of backups and long-term data that requires very little access would reduce the overall cost of county storage. Internet-access would be imperative for disaster recovery with a cloud storage solution, so Internet access and bandwidth are a primary concern when considering a cloud solution. Improvements in this area are underway, but more work remains to be done to achieve the stability and performance needed.

## Current Stage of Project

Phase one of the project was completed in July 2009 with the installation of the SAN. By leveraging the SAN and virtualization, MIS originally eliminated 19 physical servers. This trend continues as MIS is still expanding the use of the SAN on an annual basis to meet data needs. New software applications are evaluated for their ability to run in a 'virtual' environment. As of 2016, 107+ servers run virtually.

Phase two of the project was completed in October 2009 with the installation of a backup SAN to provide redundant storage and a disaster recovery (DR) site. Continued maintenance of the system has proceeded annually.

In 2014, the core controllers were upgraded to the most current available, with a projected life expectancy into 2020.

In 2015, new drives were installed and changes staged to eliminate drives known to soon go out of support.

In 2016, additional drive upgrades due to end of support were completed, and a full assessment of the systems was performed. Alternatives, specifically 'cloud' based storage, will be assessed to determine most economical choice for the future. New technologies will be explored to determine the direction onsite storage should take at the next full replacement point.

Removal of old domain data occurring from the 'Domain Migration Project' has freed up space. As a result of making the improvements, both SAN devices have remained in good shape. MIS will continue to monitor SAN usage reliability of drives and will continue to work with support vendor to ensure no loss of support occurs in planning for the future.

Throughout the past year space utilization on the SAN has remained manageable. In summer 2017, significant and successful effort was made to reclaim space.

Several departments have installed software that has increased space usage. Current measures show the system reaching a point where a small amount of storage will need to be added. This will enable the SAN to continue working well while research and recommendations are made regarding the replacement as planned in the current CIP.

## Relation to Other Projects

This project is related to the Space Needs Study. When MIS was relocated to the former temporary superior court, the servers were powered down prior to the move. Careful planning and the purchase of the Site Recovery Manager (SRM) software resulted in a successful and trouble-free move that was transparent to county staff.

This project is also related to the new Integrated Public Sector Software project because it will increase data storage needs.

### **Operating Impact**

With the SAN and virtualization, the cost of purchasing and maintaining physical servers has, for the most part, been eliminated, and energy costs have been reduced. Dell, the manufacturer of the SAN, estimates that for every server virtualized there is a savings of 7,000kwh of electricity annually or about \$700 in energy costs, and a related reduction of carbon emissions. When the hardware is replaced MIS will pursue the most economical support strategy, which may be one of pre-purchased maintenance and support. This approach bundles maintenance and support into the purchase price of the equipment so there will be no unexpected additional charges for maintenance and support for five years.

# Technology - Integrated Public Sector Software

Purchase software specifically designed to support the public sector that integrates human resources and finance.

Project Budget	Budget	Current									Project Totals	
		Prior to FY 2018	Year: FY 2018	Year 1: FY 2019	Year 2: FY 2020	Year 3: FY 2021	Year 4: FY 2022	Year 5: FY 2023	Year 6: FY 2024	Year 7: FY 2025		
<b>Project Element</b>												
Equipment	1,500,000	860,540	175,200	0	0	0	0	0	0	0	0	1,035,740
Software	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Project Element</b>	<b>1,500,000</b>	<b>860,540</b>	<b>175,200</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,035,740</b>
<b>Funding Source</b>												
Transfer from Water Capital Reserve	1,500,000	860,540	175,200	0	0	0	0	0	0	0	0	1,035,740
<b>Total Funding Source</b>	<b>1,500,000</b>	<b>860,540</b>	<b>175,200</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,035,740</b>
<b>Operating Effect</b>												
Decreased Operating Costs	0	-34,710	-37,331	-38,451	-39,604	-40,793	-42,016	-43,277	-44,575	-45,912	-366,669	
Decreased Operating Costs (Utility Fun	0	0	-16,263	-16,751	-17,253	-17,771	-18,304	-18,853	-19,419	-20,002	-144,616	
Increased Operating Costs	0	78,437	82,359	86,477	90,801	95,341	100,108	105,114	110,369	115,888	864,895	
Increased Operating Costs (Utility Fund	0	12,483	13,107	13,762	14,450	15,173	15,931	16,728	17,564	18,442	137,639	
<b>Total Operating Effect</b>	<b>0</b>	<b>56,210</b>	<b>41,872</b>	<b>45,037</b>	<b>48,394</b>	<b>51,950</b>	<b>55,719</b>	<b>59,712</b>	<b>63,939</b>	<b>68,416</b>	<b>491,249</b>	

## Define Problem

The lack of integrated software to manage finance and human resources causes difficulty in managing accounting operations and personnel. In addition to the operational inefficiencies, the fragmented approach to software is difficult and costly to maintain and support.

While the functions of finance, accounting and human resources overlap in many areas, the software that currently supports these departments is not integrated and, in some cases, is antiquated and error-prone. For example, the lack of Human Resources (HR) software means that employee status changes must be manually entered into the accounting (payroll) software. Employee status information and job applications are maintained on Excel spreadsheets. The software used to track training was developed in-house using an outdated version of Microsoft Access. The accounting software runs on a mainframe and is backed up on tape drives.

## Recommended Solution

Purchase and install integrated Enterprise Resource Planning (ERP) software including financial, payroll, human resource management and utility billing modules that will allow the county to manage its core functions with a single application. The software is modular and can be expanded to incorporate additional county processes in the future.

## Current Stage of Project

A cross-functional team with representatives from the County Manager's Office, Finance, Human Resources, and MIS conducted a review of software offerings including visits and interviews with other counties to benchmark available software. The team selected Tyler Technologies, a vendor whose Munis software is used extensively by NC local governments. The implementation process has begun and Finance went live in March 2015. HR implementation began in April 2015 and went live in January 2016. The software was upgraded to the most current supported version in September 2017, with implementation of the utility module estimated to begin in spring of 2018.

## **Professional Services Needed**

The vendor will provide project management and guidance throughout the installation, including business process consulting, conversion of current data, training, and support.

## **Operating Impact**

There will be annual maintenance and license support fees. The new software will computerize all human resource functions and integrate them with payroll. Outside vendors will also benefit from a more efficient and easy to use payment processing module.

# Technology - Justice Center Audio/Visual Replacement

Approved-No Contracts

Replace all audio/visual equipment in the Historic Courthouse and the Justice Center.

Project Budget	Budget	Current									Project Totals
		Prior to FY 2018	Year: FY 2018	Year 1: FY 2019	Year 2: FY 2020	Year 3: FY 2021	Year 4: FY 2022	Year 5: FY 2023	Year 6: FY 2024	Year 7: FY 2025	
<b>Project Element</b>											
Contingency	42,350	0	0	0	0	0	0	42,350	0	0	42,350
Equipment	423,500	0	0	0	0	0	0	423,500	0	0	423,500
<b>Total Project Element</b>	<b>465,850</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>465,850</b>	<b>0</b>	<b>0</b>	<b>465,850</b>
<b>Funding Source</b>											
Capital Reserves	465,850	0	0	0	0	0	0	465,850	0	0	465,850
<b>Total Funding Source</b>	<b>465,850</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>465,850</b>	<b>0</b>	<b>0</b>	<b>465,850</b>
<b>Operating Effect</b>											
Contribution to Capital Reserve	0	66,550	0	0	0	133,100	133,100	133,100	0	0	465,850
<b>Total Operating Effect</b>	<b>0</b>	<b>66,550</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>133,100</b>	<b>133,100</b>	<b>133,100</b>	<b>0</b>	<b>0</b>	<b>465,850</b>

## Define Problem

The Historic Courthouse and Justice Center AV equipment was newly installed in 2012. Many of the equipment manufacture warranties are or soon will be expired and a general support contract is in development to address repairs and maintenance. Repairs are occasionally needed, but over the next three to five years the severity of failures is expected to increase. By 2023, the aging equipment will need to be fully replaced, if not sooner.

## Recommended Solution

Replace all audio/visual equipment in the Historic Courthouse and Justice Center, including wiring, that cannot be functionally verified at acceptable carrier levels. Racks are standard and are not anticipated to need replacing.

## Alternatives

1. Do nothing: Audio/Video equipment, like any hardware equipment has a limited functional life. AV equipment is commercial quality, but still susceptible to the effects of use, abuse, and age. As failures are reported, MIS evaluates and coordinates repairs. Each year, MIS reviews the infrastructure and evaluates the status in terms of existing strengths and weaknesses. Doing nothing would result in reports of malfunctions in operations in the courtrooms, which is unacceptable.
2. Replace equipment by courtroom, by floor, or some other area breakdown: Since much of the equipment is integrated, the efforts to decouple and replace smaller areas would likely cause more disruption than a full replace. If this approach were used, it is likely that the costs of some areas could be included in the annual operating budget, thereby addressing replacements somewhat sooner. Potential major failures would be avoided with this approach and ultimately all equipment would be uplifted. However, the equipment would then be of differing ages and possibly of differing makes/models. This could cause some complexity and possibly hinder integration of building-wide systems.
3. Replace components as they fail: This is the method currently used as issues arise. This approach addresses failures as they occur. This is a workable method while the installation is still relatively recent. Matching parts are still mostly obtainable. Original manufacturers of the equipment are still in business. Failures would be expected to occur on a higher frequency and involve major components as time passes, especially after the five-year mark of 2017. These unexpected failures could impact usage and court functions.

## **Operating Impact**

After the new equipment is installed, annual support would continue until the next uplift. This continued support is expected to be equivalent to support in existence prior to the upgrade.

# Technology - Tax Software

Approved-No Contracts

Replace current software with a system that will provide improved functionality for staff and the public.

Project Budget	Budget	Current									Project Totals
		Prior to FY 2018	Year: FY 2018	Year 1: FY 2019	Year 2: FY 2020	Year 3: FY 2021	Year 4: FY 2022	Year 5: FY 2023	Year 6: FY 2024	Year 7: FY 2025	
<b>Project Element</b>											
Furnishings & Equipment	436,000	0	0	0	0	1,000,000	0	0	0	0	1,000,000
<b>Total Project Element</b>	436,000	0	0	0	0	1,000,000	0	0	0	0	1,000,000
<b>Funding Source</b>											
Capital Reserves	436,000	0	0	0	0	1,000,000	0	0	0	0	1,000,000
<b>Total Funding Source</b>	436,000	0	0	0	0	1,000,000	0	0	0	0	1,000,000
<b>Operating Effect</b>											
Contribution to Capital Reserve	0	145,333	0	290,667	282,000	282,000	0	0	0	0	1,000,000
Increased Operating Costs	0	0	0	0	0	0	75,000	77,250	79,568	81,955	313,773
<b>Total Operating Effect</b>	0	145,333	0	290,667	282,000	282,000	75,000	77,250	79,568	81,955	1,313,773

## Define Problem

The current Tax Office software is based on out-of-date programming languages (COBOL, RPG) and runs on an old platform (AS 400) with limited storage space. Storage space is running out with only two slots open to add storage space. Also, because of the old technology, availability of support and maintenance programmers is very limited.

For normal appraisal usage, the software does not consider some of today's criteria (bedrooms, etc.) for appraising property.

The system is slow and it is difficult to develop the queries needed to provide information to the public and to county staff. Requests for information from the public have increased with the economic recovery, and it can take from several hours to several days to write a query that will retrieve the requested data. Queries also play a critical role in the development of the county budget by providing information on sales ratios, percent changes, value changes, high and low values, foreclosures by area, neighborhood, township, etc. They are also needed to assist in the collection of delinquent taxes by pulling areas of high delinquencies and mapping them to visit.

## Recommended Solution

Replace the existing tax software in approximately three to six years, depending on the county revaluation schedule. The replacement of tax software must be done so as not to effect revaluation.

## Alternatives

One alternative is to take no action at this time. However, given the uncertainty of continued support, and the need to replace software without affecting a revaluation, this approach could impact county operations.

Another alternative would be to develop custom software in-house, but the needed resource and skill is not available.

## Current Stage of Project

The Tax Office is reviewing software packages and talking to other counties to understand functionality, cost, customer satisfaction, and usability of tax software currently on the market. The next revaluation is scheduled to begin in 2020 and will be complete in 2021. Due to the complexity of revaluation, the schedule for implementation of new software will need to be adjusted to accommodate successful completion of the revaluation. Software will be purchased in 2021 and be implemented in 2022. The projected cost of the software has been increased to reflect the potential to include a revaluation module and for probable inflation due to a later purchase date.

**Professional Services Needed**

The vendor will provide project management and guidance throughout the installation, including business process consulting, conversion of current data, training, and support.

**Operating Impact**

There will be annual maintenance and license support fees.

# Technology - Telephone System Replacement - Countywide

Approved-No Contracts (Part)

Replace the county's existing phone systems with a centralized system that will seamlessly connect all county departments.

Project Budget	Budget	Current									Project Totals
		Prior to FY 2018	Year: FY 2018	Year 1: FY 2019	Year 2: FY 2020	Year 3: FY 2021	Year 4: FY 2022	Year 5: FY 2023	Year 6: FY 2024	Year 7: FY 2025	
<b>Project Element</b>											
Contingency	23,801	0	0	0	0	0	0	0	0	0	0
Equipment	238,013	132,199	55,000	0	0	0	0	0	0	0	187,199
<b>Total Project Element</b>	<b>261,814</b>	<b>132,199</b>	<b>55,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>187,199</b>
<b>Funding Source</b>											
Capital Reserves	261,814	132,199	55,000	0	0	0	0	0	0	0	187,199
General Fund Fund Balance	0	0	0	0	0	0	0	0	0	0	0
<b>Total Funding Source</b>	<b>261,814</b>	<b>132,199</b>	<b>55,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>187,199</b>
<b>Operating Effect</b>											
Contribution to Capital Reserve	0	227,361	34,453	0	0	0	0	0	0	0	261,814
Decreased Operating Costs	0	-5,844	-5,844	-5,844	-5,844	-5,844	-5,844	-5,844	-5,844	-5,844	-52,596
General Fund Fund Balance	0	0	0	0	0	0	0	0	0	0	0
Increased Operating Costs	0	148,853	73,400	23,690	24,401	25,133	25,887	26,663	27,464	28,288	403,779
<b>Total Operating Effect</b>	<b>0</b>	<b>370,370</b>	<b>102,009</b>	<b>17,846</b>	<b>18,557</b>	<b>19,289</b>	<b>20,043</b>	<b>20,819</b>	<b>21,620</b>	<b>22,444</b>	<b>612,997</b>

## Define Problem

The county replaced its phone system in 2008. Currently, existing phones consist of both digital and IP types with approximately 3% able to meet today's capabilities of a centralized system. The phone network consists of six separate phone systems, all NEC brand, but installed by two different vendors and made up of two different varieties of hardware. Of these, all but one has experienced major failures. Hardware failures carry the risk of prolonged outages because parts are no longer being manufactured. The various systems do not interface well, which often causes confusion for end users. With various hardware systems in multiple locations, IT staff support takes significant time and effort to address problems when they do occur.

## Recommended Solution

The objective for the telephone system is to have seamless and flexible voice communication across all departments. A software-based system provides the best option for meeting this goal. Benefits include:

- 1) Reduced risk of failures
- 2) Elimination of the need for hardware replacement
- 3) Centralized management, which is more efficient for staff
- 4) Reliable communication regardless of device or location; multiple devices can be used.
- 5) Integration with email.

In addition, the system is mature, proven and generally accepted as good direction in industry.

## Alternatives

'Cloud' or leased solutions continue to be assessed as new options are provided. So far, these solutions have not revealed benefits beyond those of the recommended solution in terms of functionality, but are considerably more expensive than hosting the software in house.

## **Current Stage of Project**

In 2015, the new software based system was installed and became operational for MIS, the new Detention Center, the Parks and Recreation Department, and the new Solid Waste & Recycling Facility Buildings. In 2016, the Emergency Operations Center, Sheriff's Office, Animal Services, Department of Social Services (DSS), Board of Elections, and a remote Sheriff's Office were brought on line. Deviations from original plans occurred due to a major failure in the old system supporting DSS. The final stage of the project is targeted for completion by the end of FY 2018 and will include the Dunlap and Performance buildings, Backup 911 Center, remaining Siler City locations and the Annex building. The unexpected unavailability of needed resources starting in early May resulted in delays to the project. As of Sept 2017, a revision to the remaining installations has been planned. The remaining plan continues to hold the completion date for the new phone replacements at all sites at end of FY 2018. Only the removal of old equipment will be delayed into FY19 and no cost is associated with that effort.

## **Relation to Other Projects**

Fiber optic cable was installed between county buildings in Pittsboro in FY 2009 with funding from building projects. Fiber to the new Detention Center and new Solid Waste & Recycling Facility Office is complete and includes the ability to serve the Animal Shelter.

Upgrades to leased lines to enable quality of service (QOS) and proper speeds are nearly completed.

Upgrades to switch infrastructure to provide capacity for connection of phones has remained a step ahead of the phone project.

## **Operating Impact**

The centralized system will require annual software assurance and support fees. The software assurance ensures continual updates and new versions of the software in perpetuity. Without the software assurance, the ability to receive updates and releases would require either a repurchase of the software or a 'catch up' on the unpaid software assurance as it stood at that time.

# Voting Equipment Replacement

Approved-No Contracts

Replace voting equipment for Chatham County elections.

Project Budget	Budget	Current									Project Totals
		Prior to FY 2018	Year: FY 2018	Year 1: FY 2019	Year 2: FY 2020	Year 3: FY 2021	Year 4: FY 2022	Year 5: FY 2023	Year 6: FY 2024	Year 7: FY 2025	
<b>Project Element</b>											
Contingency	61,494	0	0	61,494	0	0	0	0	0	0	61,494
Equipment	614,940	0	0	614,940	0	0	0	0	0	0	614,940
<b>Total Project Element</b>	<b>676,434</b>	<b>0</b>	<b>0</b>	<b>676,434</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>676,434</b>
<b>Funding Source</b>											
Capital Reserves	676,434	0	0	676,434	0	0	0	0	0	0	676,434
<b>Total Funding Source</b>	<b>676,434</b>	<b>0</b>	<b>0</b>	<b>676,434</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>676,434</b>
<b>Operating Effect</b>											
Contribution to Capital Reserve	0	338,218	169,108	169,108	0	0	0	0	0	0	676,434
Decreased Operating Costs	0	0	0	-29,000	-29,000	-29,000	-29,000	-29,000	-29,000	-29,000	-203,000
Increased Operating Costs	0	0	0	28,445	29,298	30,177	31,083	32,015	32,976	33,965	217,959
<b>Total Operating Effect</b>	<b>0</b>	<b>338,218</b>	<b>169,108</b>	<b>168,553</b>	<b>298</b>	<b>1,177</b>	<b>2,083</b>	<b>3,015</b>	<b>3,976</b>	<b>4,965</b>	<b>691,393</b>

## Define Problem

The M-100 Optical Scan voting equipment owned by Chatham County has an average expected life span of 12-14 years or slightly longer if maintained properly. The county currently owns 30 optical scanners and 21 Automark ballot marking devices. This equipment was purchased and maintained with State grant funds, which are no longer available. By 2019, the county's voting equipment will be approximately 15 years old. Maintenance has been performed each year since purchase. Potential changes in Federal and State laws will require voting systems to perform in new ways as technology changes. A change in state law this year eliminated the use of direct record electronic (DRE) voting systems beginning 2018, which some of the larger counties use. This may prompt voting systems manufacturers to develop new equipment and the state to certify new equipment.

## Recommended Solution

Purchase new equipment that is certified by the State of North Carolina and the National Testing Group with the most current software and any licenses or maintenance agreements that are required. Figures in the CIP are based on the original cost of the existing equipment inflated by 3% per year, but it is not likely that the same equipment will be purchased. Therefore, the figure in the CIP should be considered a placeholder until more is known.

There are many different types of voting equipment, but most are not certified for use in North Carolina. Only one optical scanner – the DS200 - is certified for use in North Carolina. Other vendors are awaiting certification pending appointment of the State Board of Elections. The optical scanner will not replace the Automark ballot-marking devices. Based on current law, some type of equipment will still be needed that meets access requirements for disabled voters. The replacement for the Automark is the Expressvote ballot-marking system. The Expressvote is not yet certified for use in North Carolina, but is in the certification process. The Expressvote uses touch screen technology to produce a paper ballot that can be inserted into the optical scanner.

## Alternatives

State statutes require the use of voting equipment for most elections. Hand counting of paper ballots is not permitted, except in the case of audits or recounts. The county could replace existing equipment with newer versions of the same equipment or different equipment, if it is state certified. Equipment maintenance becomes more expensive as the equipment ages, and the policies of the seller prohibit using anyone other than the seller for service. The current Automark was purchased in 2008 and may be able to be used for several more years. Another alternative is to replace the Automark units as they fail.

# Voting Equipment Replacement

Approved-No Contracts

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## **Current Stage of Project**

The project is pending approval of State Board of Elections.

## **Operating Impact**

Additional funds will be needed for equipment maintenance, but costs for the new system should be roughly the same as the old system. Generally, the licensing and software upgrade for the first year is included in the purchase, and is renewed yearly. Beginning the second year after purchase, an annual maintenance and licensing plan would likely be necessary.

# **Water Fund Projects**

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# Water - Haywood Water Main Replacement

Approved-No Contracts

Replace the existing four-inch water main under the railroad tracks on Haywood Road with a six-inch water main.

Project Budget	Budget	Current									Project Totals
		Prior to FY 2018	Year: FY 2018	Year 1: FY 2019	Year 2: FY 2020	Year 3: FY 2021	Year 4: FY 2022	Year 5: FY 2023	Year 6: FY 2024	Year 7: FY 2025	
<b>Project Element</b>											
Construction	112,100	0	112,100	0	0	0	0	0	0	0	112,100
Contingency	11,210	0	5,210	0	0	0	0	0	0	0	5,210
Design, Engineering & Construction Ad	15,000	16,852	4,148	0	0	0	0	0	0	0	21,000
<b>Total Project Element</b>	<b>138,310</b>	<b>16,852</b>	<b>121,458</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>138,310</b>
<b>Funding Source</b>											
Water Capital Reserve	138,310	16,852	121,458	0	0	0	0	0	0	0	138,310
<b>Total Funding Source</b>	<b>138,310</b>	<b>16,852</b>	<b>121,458</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>138,310</b>

## Define Problem

As part of the Southeast Water District project completed in 2010, a six-inch water main was installed along Haywood Road, Moncure Loop and River Point Road. These lines do not provide adequate fire protection because of a four-inch section that crosses the CSX railroad tracks on Haywood Road. North Carolina Department of Environmental Quality (NCDEQ) requires all fire hydrants be served by a minimum six-inch water line. This four-inch section prevents the fire department from utilizing fire hydrants in the area. Instead, fire departments must fill pumper trucks with water from the nearest water point. If the fire hydrants were usable, the fire department rating might improve and the insurance premiums might decrease.

## Recommended Solution

Replace the existing four-inch water main under the railroad tracks with a six-inch water main and connect the six-inch water main along old US 1 with the six-inch water main on Haywood Road.

## Alternatives

The only alternative is to do nothing, which would prevent the fire department from utilizing the hydrants and continue the inability to provide minimal fire flow requirements set forth by NCDEQ.

## Current Stage of Project

The design work has been completed. The CSX encroachment is pending and is the only holdup for this project to begin its initial construction phase. The project has been given approval by the state to begin construction, and a request to extend this initial Authorization to Construct (ATC) has been approved. The two needed easement acquisitions have been secured. Pending CSX approval, the project will go out for bid in January 2018, with construction beginning during the spring of 2018.

## Relation to Other Projects

The project is related to the Southeast Water District completed in 2010. Because of funding limitations, the budget did not cover replacing this section of the water line.

## Description of Land Needs

None

## Professional Services Needed

Engineering, surveying, and construction phase services are under contract. The required railroad encroachment is under review and the North Carolina Department of Transportation (NCDOT) and Moncure Fire Department approvals have been obtained.

# Water - Haywood Water Main Replacement

Approved-No Contracts

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## Operating Impact

None.

# Water - Nature Trail Water Main Replacement

Replace all the existing water mains in the Nature Trail Mobile Home Park.

Project Budget	Budget	Current		Year 1: FY 2019	Year 2: FY 2020	Year 3: FY 2021	Year 4: FY 2022	Year 5: FY 2023	Year 6: FY 2024	Year 7: FY 2025	Project Totals
		Prior to FY 2018	Year: FY 2018								
<b>Project Element</b>											
Construction	1,502,404	0	1,502,404	0	0	0	0	0	0	0	1,502,404
Contingency	150,240	0	152,064	0	0	0	0	0	0	0	152,064
Design, Engineering & Construction Ad	172,144	78,920	91,400	0	0	0	0	0	0	0	170,320
<b>Total Project Element</b>	<b>1,824,788</b>	<b>78,920</b>	<b>1,745,868</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,824,788</b>
<b>Funding Source</b>											
Water Capital Reserve	1,824,788	78,920	1,745,868	0	0	0	0	0	0	0	1,824,788
<b>Total Funding Source</b>	<b>1,824,788</b>	<b>78,920</b>	<b>1,745,868</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,824,788</b>
<b>Operating Effect</b>											
Decreased Operating Costs	0	0	0	-24,480	-24,480	-24,480	-24,480	-24,480	-24,480	-24,480	-171,360
<b>Total Operating Effect</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>-24,480</b>	<b>-24,480</b>	<b>-24,480</b>	<b>-24,480</b>	<b>-24,480</b>	<b>-24,480</b>	<b>-24,480</b>	<b>-171,360</b>

## Define Problem

The county took over responsibility for operating and maintaining the Nature Trail Mobile Home Park water distribution system in 1983. The existing water mains are very old and were improperly installed. Some of the water mains were installed under and around the residences. When employees have to repair water mains located under these homes, their structural stability could be compromised. The county spends approximately 288 employee and equipment hours per year repairing these water lines, at an estimated annual cost of \$24,480.

## Recommended Solution

Replace all of the existing water mains in the Nature Trail Mobile Home Park. The project will allow the county to reduce the amount of time county employees spend on maintenance and eliminate the problems with lines being installed too close to residences.

## Alternatives

The only alternative to doing the necessary repair is to do nothing and continue to have problems with the old, improperly installed lines.

## Current Stage of Project

The Water Department applied for a Community Development Block Grant but was denied funding for this project. Before the application, the Board of Commissioner, through the CIP process, had already approved funding the project wholly from water capital reserve. The county has secured the services of an engineering/consulting firm to design and develop construction plans for bidding purposes. The design of the construction plans has been completed. The project was formally bid and the final bids were received on June 29, 2017. On August 21, 2017 the Chatham County Board of Commissioners approved the award of the project to Carolina Civilworks Inc. in the amount of \$1,502,404 with Withers and Ravenel being contracted to perform construction administration and observation services for the project. The Notice to Proceed will be issued in October 2017 and construction should begin in November 2017. The project should be completed in late spring or early summer of 2018.

# Water - Planning Western Intake and Plant

Approved-No Contracts

Construct a water intake and treatment plant on the west side of Jordan Lake

Project Budget	Budget	Prior to FY 2018	Current								Project Totals	
			Year: FY 2018	Year 1: FY 2019	Year 2: FY 2020	Year 3: FY 2021	Year 4: FY 2022	Year 5: FY 2023	Year 6: FY 2024	Year 7: FY 2025		
<b>Project Element</b>												
Design, Engineering & Construction Ad	2,200,000	34,713	2,500	500,000	500,000	0	0	0	0	0	0	1,037,213
<b>Total Project Element</b>	2,200,000	34,713	2,500	500,000	500,000	0	0	0	0	0	0	1,037,213
<b>Funding Source</b>												
Water Capital Reserve	2,200,000	34,713	2,500	500,000	500,000	0	0	0	0	0	0	1,037,213
<b>Total Funding Source</b>	2,200,000	34,713	2,500	500,000	500,000	0	0	0	0	0	0	1,037,213

## Define Problem

Chatham County is approaching the capacity of the existing Jordan Lake Water Treatment Plant and additional supply will be needed in the future. The existing maximum demand for water is approximately 2.8 million gallons per day (mgd). Expanding the capacity at the existing plant requires constructing a pipeline across Jordan Lake which is extremely expensive due to the cost of boring the lake.

## Recommended Solution

Construct a new intake and water treatment plant on the west side of Jordan Lake in cooperation with the partnering jurisdictions of Orange Water and Sewer Authority (OWASA), the City of Durham and the Town of Pittsboro. Only funds for engineering services required to plan the project are currently budgeted.

## Current Stage of Project

A scope of work for the initial feasibility study for the new intake and water treatment plant has been developed and an engineering firm has been selected to complete the study. The study is complete, and the partners are investigating finance and timing issues. Durham was the lead agency and paid 100% of the cost for the initial feasibility study. Chatham is incurring costs for its allocation request, the regional water supply plan, and an interconnection study. Raftelis was hired by the Western Intake Partners (OWASA, City of Durham, Town of Pittsboro, Chatham County) to perform an economic feasibility analysis. The analysis has been completed and meetings have been scheduled to discuss Raftelis's findings and determine the next steps. The Jordan Lake Partnership memorandum of understanding (MOU) assesses a \$2,500 fee in support of the costs of each year of general activities by the Partnership by payment to the City of Durham.

## Relation to Other Projects

The Durham interconnect project will provide additional water supply while the new intake and water plant are planned and constructed.

## Description of Land Needs

Land is needed on the western shore of Jordan Lake. The number of acres is not yet determined.

## Professional Services Needed

Environmental and engineering services will be needed.

## Operating Impact

There will be significant operational impact, but the scope of that impact will be determined as the project becomes more refined.

# **Future Projects**

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## Future Projects

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Currently, the county lacks sufficient data, revenue, or debt capacity to schedule these projects. If these issues are resolved, these projects may appear in a future CIP.

### County Buildings – Annex Campus Master Plan

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Future

Develop a long-term master plan to address long-term space needs for the Courthouse Annex, Dunlap Building, and Old Agriculture Building.

#### Define Problem

The growth that is anticipated in Chatham County within the next ten years will outpace the capacity of the existing buildings. The Courthouse Annex has been partially renovated; however, renovated areas are outgrowing the existing space. Staff housed in the Dunlap Building are overcrowded and the meeting room is now being repurposed to hold offices. The Old Agriculture Building requires significant renovation to provide office space.

#### Recommended Solution

Develop a masterplan for a downtown campus. Among other options, this masterplan will explore removing the Annex, Dunlap, and Old Ag Buildings and constructing a new building to house all of the departments currently residing in these buildings and developing a park area between the Historic Courthouse and the Justice Center to improve the appearance of downtown Pittsboro and the sight lines between the Historic Courthouse and Justice Center.

#### Alternatives

Renovate the Old Agriculture building to provide office space. This alternative is a stop-gap measure that will not address the space needed to accommodate long-term growth. Another alternative is to utilize rental space for county staff. This option is inconvenient for staff that need to work together and for residents that need to visit county offices.

#### Current Stage of Project

The Board of Commissioners approved proceeding with renovating the eastern half of the annex building, which was completed at the end of January 2014. The Manager's Office, including the County Attorney, is now consolidated in the expanded space, and the Register of Deeds office moved into the renovated space formerly occupied by the clerk of court. MIS moved into the space vacated by temporary superior court in the same timeframe. Plans to renovate the western half of the building in order to accommodate the space needs for Tax and the Finance Departments have been placed on hold in order to perform a masterplan for a downtown campus. This masterplan will explore removing the Annex, Dunlap, and Old Ag Buildings and constructing a new building to house all of the departments currently residing in these buildings and developing a park area between the Historic Courthouse and the Justice Center.

#### Relation to Other Projects

The project is related to the Performance Building renovation, construction of the Justice Center, and construction of the new Agriculture and Conference Center. Together, these projects go a long way towards addressing the county's space needs. Now that these projects are complete, a masterplan for the downtown campus area will address the space needs for the many departments that currently reside in the Annex, Dunlap, and Old Ag buildings.

#### Professional Services Needed

A Master Plan, an updated space needs assessment, detailed architectural drawings, and construction management will be needed.

### County Buildings - Emergency Operations Center Expansion

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Future

Expand the Emergency Operations Center so the Communications Division can expand.

#### Define Problem

The existing Emergency Operations Center (EOC) houses the EOC meeting room where decision makers gather during disasters to make informed decisions on response and recovery efforts. It also houses the Chatham County Public Safety Answering Point (PSAP), better known as the 911 Communications Center. The EOC was completed and occupied in 1994. The communications room was built to hold four telecommunicator consoles and associated telephone and radio equipment. In the past few years the number of consoles has increased to six, with one of those being placed in the corner of the EOC meeting room because the communications room is full. If existing estimates for population growth in Chatham County are fulfilled, the Communications Division will need to hire more full-time telecommunicators. This will require more consoles and associated equipment. Since the communications room is currently filled to capacity, there is no room for this needed expansion.

**Recommended Solution**

Obtain a feasibility study to determine the best option to expand communications/EOC.

**Alternatives**

1. Do nothing. Continue to place the consoles in the EOC portion of the building. This would reduce the space in the EOC, which is already too small and is filled to capacity during activations.
2. Expand the current Emergency Operations Center, either by constructing a second floor addition or building out from the building. The EOC was originally intended to allow a second story but current building codes would need to be evaluated to determine if a second floor or a build out is feasible.
3. The current backup center in Siler City could be used to expand communications. Smaller consoles would have to be used, so this solution would not allow the backup center to mirror the primary center.
4. Build an entirely new Emergency Operations/Communications Center at undetermined location.

**Professional Services Needed**

An architectural design feasibility study, and further architectural, design, and construction services would be needed.

**Operating Impact**

Additional funds will be needed for utilities, technical equipment and building maintenance

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**County Buildings – New Sheriff’s Office**

**Future**

Build new facility to house Sheriff’s Office employees.

**Define Problem**

The current building, built in 1982, is no longer an adequate space for Sheriff’s Office employees. Even after a partial renovation in 2007 there is still not adequate space for employees to work. The total building space consists of 16,337 square feet, 8,900 in the lower portion (formerly the jail) and 7,437 upstairs (office space). The upstairs space provides sixteen offices, some with multiple employees sharing space.

Renovation of the old detention facility was proposed. However, renovation would be costly – in excess of one million dollars – and would not provide sufficient room for the office to grow and be consolidated in one location.

**Recommended Solution**

A new Sheriff’s Office building on the space available in front of the Detention Facility will provide room for future growth and consolidate the office in a single location.

**Alternatives**

- 1) The current jail could be renovated and provide short-term space for the Sheriff’s Office, including storage of evidence and additional staff space.
- 2) Do nothing. If the space is left unused, the area will still require heating and cooling to prevent the formation of mold and mildew. Existing and future Sheriff’s office staff will have to be located in rented space.
- 3) Build a new Sheriff’s Office at the new Detention Center location.

### **Professional Services Needed**

Architectural, engineering, and construction services will be needed.

## **County Buildings - Northeast Library**

Future

Build a library branch in the northeastern area of the county.

### **Define Problem**

The library system has experienced significant changes since a facilities study was completed in 2001 by library consultant Phil Barton. The Town of Goldston completely refurbished a building for a library. The Central Carolina Regional Library system dissolved and Chatham County entered into a new partnership with Central Carolina Community College. A joint-use facility was constructed on the Pittsboro campus where both students and members of the public have received library services in the same building since 2010.

Wren Memorial Library recently completed a major renovation project initiated by the Town of Siler City. In addition to a welcoming environment throughout the building, much needed storage space was added by enclosing in an unused carport area. The community greatly benefits from an updated meeting room including audio/visual equipment installed by the county for presentations and group activities.

In 2014, a follow up library strategic plan, also authored by Barton, identified Northeast Chatham as an area that, although experiencing ongoing residential growth, did not have a nearby library location. Residents in this area who come to the Chatham County Community Library in Pittsboro have said that they would rather not travel such a distance to use the library.

Alternatives proposed to alleviate this situation have included leasing space and purchasing book-dispensing vending machines. Each of these options has limitations and shortcomings. The library has an established e-reader program that minimizes the transportation issue by providing downloadable books and devices for circulation.

### **Recommended Solution**

A suggestion which combines two alternatives has emerged as a viable solution. The concept would be to use land along 15-501 provided by Briar Chapel development and to construct another joint-use facility.

The growth in the northeastern quadrant of Chatham County has necessitated planning for other needs, such as the construction of new schools. The county currently lacks the debt capacity to add a library with these other projects on the horizon. CCCC has initiated the process of having a health sciences classroom facility completed in 2019 on the Briar Chapel tract of land. A future project to build a 10,000-square-foot library, along with an early voting site adjacent to the new classroom building has been proposed.

An advantage of this proposal is that a 10,000-square-foot facility would not require the purchase of any additional land. Most of the site preparation would occur at the time the health sciences project moves forward. CCCC and the library have an established working relationship. The location on 15-501 is easily accessible to anyone living in the NE quadrant of the county. The residents of the Briar Chapel development would also have easy access to a library without the inconvenience of library users driving through their neighborhood.

### **Description of Land Needs**

Acreage adequate to construct a 10,000-square-foot facility.

### **Professional Services Needed**

Professional design, architecture and construction would be needed.

### **Operating Impact**

Additional funding would be needed for operational expenses.

## **Emergency Communications - Radio System Upgrade**

Future

Replace current emergency radio system infrastructure and radios with a modern state-of-the-art system.

### **Define Problem**

The existing VHF frequency radio system used by county public safety and other agencies is approximately 30 years old. The system has been maintained by replacing and upgrading equipment as needed, but rapidly increasing communication demands are rendering the system obsolete. The county currently has five different tower sites that broadcast communications to fire, emergency medical services, law enforcement, school system, animal control, and the public works radio systems. Each site has a generator backup and is monitored 24/7 for issues that may arise, such as insufficient power during transmission or electrical service failure. The current system covers about 90% of the county. The mandated adoption of narrow banding created some unanticipated degradation of communications. Responders in northeast (particularly Carolina Meadows) and southwest Chatham cannot communicate back to the 911 Center at all times on their portable radios, but instead must use a vehicle radio. Also, because the frequencies are closer, Chatham County can hear other counties when they are paging, and vice versa. A short-term solution to the problem can be addressed in the operating budget with the addition of remote radio sites in Goldston and Carolina Meadows. However, a permanent replacement for the existing system will be needed in the future, and the cost of the project will be significant because it will include construction of at least eight new towers, upgrading the county's existing towers, and upgrading the existing radios used by several departments. A recent analysis conducted jointly by the Emergency Operations/Communications Division and Motorola determined that a total of 13 towers are necessary to provide 95% coverage inside buildings in Chatham County, with towers heights of between 300 and 400 feet. The county's current regulations allow towers up to only 199 feet. The cost to construct a new tower is approximately \$1,500,000, including land purchase, tower construction, equipment to run the tower and a building to house the equipment and the generator.

**Recommended Solution**

An ad hoc advisory committee with representation from each organization involved identified alternatives and the advantages and disadvantages of each. Because the project is extremely complex – involving obtaining land, constructing towers, and selecting the best technology – the county would benefit from hiring a consultant who can better define the overall project plan and the associated costs. When a project plan is in place, along with a recommendation for a system and the associated costs, the county will better understand how to plan for the project and ensure adequate funding is available.

**Alternatives**

- Staff has identified all possible alternatives but will need input from other agencies to fully define the advantages and disadvantages of each one:
- 1) 800 MHZ VIPER: The state is currently promoting this system, although other jurisdictions often experience busy signals when trying to use the frequency. The county would have to keep its existing VHF system for paging responders.
  - 2) 700 MHZ: The federal government is considering a mandate to require that public safety agencies use 700 MHZ. If this happened, grant money may become available to cover the costs, which are unknown at this time.
  - 3) Simulcast: Simulcast would use current tower sites and agencies would not have to choose the channel they wish to use for transmission as they must do currently.
  - 4) Chatham County 800 MHZ: Chatham County could choose to set up its own 800 MHZ radio system, which would be compatible with other counties on VIPER and other 800 systems. This option would be the most costly.

**Current Stage of Project**

An RFP was issued for a consultant to validate or revise Motorola's findings for coverage, develop specifications for a bid, assist in finding revenues to fund the project, assist in the bidding process, and oversee the project until completed. The study that was produced contains some issues that require clarification and follow-up. For example, during the course of the study, AT&T permits for new towers expired and AT&T's interest in renewal of the permits is uncertain. Due to the scope and cost of the project, staff is also asking an independent consultant to review the study.

**Description of Land Needs**

Between 2 and 4 acres will be needed for each tower site.

**Schools - HVAC/Lighting Replacement**

**Future**

Upgrade outdated and inefficient HVAC and lighting.

**Define Problem**

Only two of the 17 Chatham County Schools were constructed during the last ten years (Margaret Pollard Middle and Virginia Cross Elementary) using energy efficient construction and mechanical systems. The 2014 Chatham County Schools Facility Conditions Assessment indicates that HVAC systems in the majority of the remaining 15 schools have outlived their projected life expectancy, are inefficient, and need replacement. In addition, most of the lighting in these schools is provided by outdated/inefficient T-12 lighting fixtures, which could be replaced with more energy efficient T-8 lighting. Taking care of these two issues at our schools will potentially result in substantial energy savings for the district, and would create an opportunity to take advantage of more environmentally responsible (e.g., geothermal HVAC) technologies and systems. This project would provide a to-be-determined amount of money to be used each year to upgrade HVAC/lighting systems in prioritized order over several years.

**Recommended Solution**

Create a long-term (seven years or longer) project that will provide a to-be-determined amount of money to be used annually to upgrade HVAC and lighting systems to provide more energy efficient systems.

**Alternatives**

- 1) Do nothing and continue patching existing HVAC systems to keep them running until they completely fail.
- 2) Do nothing and continue paying higher energy costs for lighting.

**Professional Services Needed**

Design and engineering services will be needed.

**Operating Impact**

Energy costs will be decreased with more modern and efficient systems.

**Schools - New Schools/Capacity Expansion**

Future

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Construct new schools, add additions to existing schools, and/or add modular classrooms as most feasible.

**Define Problem**

Based on OR/Ed projections, growth associated with Chatham Park and the potential of the megasites in Moncure and Siler City bringing new residents, new schools, additions to existing schools, and/or modular classrooms will be needed within the next 10 years to accommodate student population growth.

Current projections indicate a need to begin addressing the following issues, at some point in the next ten years:

- Middle School capacity in the Northwood attendance zone
- Elementary, Middle School, and High School capacity in the Jordan-Matthews attendance zone.
- Beginning construction of the first elementary school located in Chatham Park
- House Bill 13 which takes effect at the beginning of the 2018-2019 academic year, reduces class sizes in Kindergarten through third grades from 23 students to a maximum average of 20 or less.

**Recommended Solution**

The population figures will be monitored on a yearly basis using ten-year projections, and financial and architectural planning will be requested when it is apparent that the capacity expansion is needed. Prior to proposing brick and mortar additions, and/or new schools, every effort will be made to address expansion using the modular classrooms already funded in the approved Mobile Classroom CIP project and/or possible redistricting strategies.

**Alternatives**

Do nothing.

**Professional Services Needed**

Architectural and design services will be needed.

**Operating Impact**

Additional funds will be needed for equipment, supplies, maintenance, and staff.

## Schools - Paving Repair

Future

Repair paving on all campuses.

### Define Problem

Paved areas on all our campuses continue to age and increasingly need repair. Having a scheduled funding source to address these needs will allow us to do so in a more strategic way, including asphalt overlays and crack/pothole repair.

### Recommended Solution

Create a long-term (seven years or longer) project that will provide a to-be-determined amount of money to be used annually to address paving repair issues and provide improved campuses for the students and staff of Chatham County Schools.

### Alternatives

- 1) Do nothing. This alternative would allow the issues to deteriorate.
- 2) Patch cracks/potholes as funds allow.

### Professional Services Needed

Design and engineering services will be needed.

## Schools - Replace Gymnasiums at Bennett, Silk Hope and Bonlee

Future

Replace gymnasiums at Bennett, Silk Hope, and Bonlee schools.

### Define Problem

The gymnasiums at Bennett, Silk Hope, and Bonlee schools are in poor condition. Chatham County Schools has determined that it is more economical to replace them rather than renovate them.

### Recommended Solution

Replace the gymnasiums at Bennett, Silk Hope, and Bonlee schools with gyms that meet the current size and features standards recommended by the Department of Public Instruction. The same design will be used on all gyms, with adjustments for site conditions, to reduce design costs.

### Alternatives

Chatham County Schools explored adding on to each gym to provide space for spectators and restrooms at a rough estimate of \$400,000 per gym. This option was not pursued because of the age and condition of the gyms.

### Professional Services Needed

Detailed architectural drawings and construction management will be needed.

### Operating Impact

Utility and maintenance costs are expected to decline because of updated systems and materials.

## Technology - Fiber Extension to Siler City

Future

Extend County fiber to Siler City.

### Define Problem

Currently Chatham County uses leased lines to provide network access to offices in Siler City, including the Backup 911 Center, Health Department, Social Services, Wren Library, and Sheriff. Leased lines depend on the service capacity levels of third-party providers and incur monthly recurring costs indefinitely. The departments connected by leased lines in Siler City frequently experience slow network response and would benefit from an extension of county-owned fiber. Extending fiber to Siler City would be an efficient and cost-effective solution to slow network response and enable a better placement of the backup SAN. A county fiber connection at the Backup 911 Center also provides a redundant link that is sufficient to continue operations for the county should the primary location be disrupted.

### **Recommended Solution**

The 2015 North Carolina Rural Assembly Conference identified potential sources of funding for broadband services and collaborative strategies. A collaborative effort that takes advantage of funding opportunities would be a more effective solution than an independent county effort. The county will continue with planned network upgrades and continue to pursue a broadband collaboration that will include improved redundant links.

### **Alternatives**

1. Do nothing: Planned changes in switches, potential cabling and leased line upgrades are in process. Continue to use leased lines as needed despite slow network response times until changes are in place and the problem can be reassessed. Leased lines provide a minimum estimated (not guaranteed) speed. These can be increased, but at a higher cost. Leased lines can be disconnected when a location is no longer needed which may serve the county better until various construction and renovation projects are completed.
2. Extend Fiber to Siler City: Fiber has the capacity to run network traffic at near light-speed. Fiber can provide fast speeds well into the future. With more system vendors now beginning to mandate 'external cloud' access to their systems, the demand for stable, resilient and fast internet access may outpace county capacity. Once in place, there is no further maintenance to fiber required beyond addressing cuts if they occur. Dedicated fiber to the Backup 911 cCenter would provide best access to county technical data and systems resources in the event of a problem with the primary connection or a local disaster.
3. Pursue a collaborative effort that could lead to wider service possibilities and mix funding from various sources to put a county-wide broadband foundation in place sooner.

### **Relation to Other Projects**

Since this project would include the extension of fiber to the Emergency Operations Backup Center, E-911 funds could contribute to the funding of the project.

### **Operating Impact**

Extension of county-owned fiber will eliminate approximately \$15,000 per year from the MIS operating budget to lease lines based on current costs. However, as access needs increase, leased line updates for additional speed will be needed at potentially higher monthly costs.

## **Water District - Southwest Water District Distribution Lines Construction**

**Future**

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Install approximately 48 miles of water distribution mains in the Southwest Water District.

### **Define Problem**

In order to provide county residents with a public source of drinking water, the Chatham County Board of Commissioners formed the Southwest Water District. The district is comprised of Bear Creek and Gulf townships. In November 2004, voters approved a bond referendum for extension of water lines in the district. Funding would be obtained from USDA-Rural Development. Since voting on the district, the county has solicited signups in the area to meet the requirements of USDA funding and needed density for operations. To date, the county has not received enough signups for the project to be viable. In addition, the preliminary engineering report is now outdated and would have to be redone for the project to move forward.

### **Recommended Solution**

Assuming sufficient sign-ups, the project would include installation of approximately 48 miles of distribution main, ranging in diameter from six to eight inches, located on NCDOT rights-of-way. In addition to the new connections, the Southwest Chatham Water District would assume the ownership of the Southwest Chatham area water system currently owned and operated by Chatham County. This system consists of approximately 900 residential, commercial, and industrial customers. Water for the district would be provided through a bulk purchase arrangement with the Chatham County Utilities. Operation and maintenance of the district would also be provided by Chatham County Utilities through a contractual arrangement.

**Professional Services Needed**

The preliminary engineering report that was completed several years ago will have to be updated to reflect changes in material and labor costs and changes in demand projection based on growth.

**Operating Impact**

Additional funds would be needed for maintenance of the lines and water production, which should be offset by revenues generated in the district.