

Chatham County



*Approved FY 2021-2027
Capital Improvements Program*

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Chatham County 2021-2027 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 2021.

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 September 27, 2019.
- 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 4, 2019.
- Commissioners obtain public input on the CIP before discussing it. A public hearing is scheduled for November 18, 2019.
- Commissioners review the recommendation in detail and make changes. Commissioners have a work session scheduled on November 19, 2019.

- The final action is adoption of the CIP, tentatively scheduled for the December 16, 2019 meeting.

Overall Approach

No new debt-funded projects are recommended in this CIP. Several previously approved projects have had funding shifted to ensure that the debt model remains solvent moving forward into the future. In addition, the projected budget for the new Emergency Operations Center has increased substantially. This is due to the completion of a feasibility study and the land acquisition necessary to locate the new center on a new site. In FY 2020, the annual contribution to the debt reserve increased by 1.5 cents of the property tax to a total of 9.2 cents.

Staff tries to include reasonable escalation of costs in project budgets, but because projects are scheduled in the future actual inflation may prove higher than planned inflation. Due to the current high demand for construction, prior escalation of 5-8% is now too low, and higher rates are now being applied.

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 county complex master plan, 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. 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 FY2020 -2026 CIP was approved by the Board on November 27, 2018. Board approved changes to the Approved FY2020-2026 CIP include:

- **Reduced track resurfacing project.** The school system was able to fund a portion of the project with capital outlay funds, meaning that the County's total contribution to the project has been reduced by \$100,000.

Changes to previously approved projects include the following:

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

- **Shift funding for mobile classrooms.** The school systems does not anticipate spending any funding in FY 2020 in this project. The budgeted funds will be moved one year out for all years. There is no increase in the total cost of the project; however with the change the project will now continue into FY 2025.

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

- **Central Carolina Business Campus:** Additional funds are needed to complete the required repairs to meet NC DOT requirements before they are willing to take ownership [+500,000]
- **Server Replacement:** Replace essential technology infrastructure that supports the overall County network and access to systems across all County departments. [+262,800 – 172,000 FY2025, 90,000 FY2027]
- **Increase the budget for Emergency Operations Center Expansion:** A feasibility study was completed in June 2019 to determine space needs, alternatives, and to finalize costs, leading to a change in the scope of this project. Additionally, funds are needed for land acquisition. [+8,300,000]
- **Increase the budget for Briar Chapel Park:** Additional funds are to provide lights for the multi-purpose field as well as adding a new restroom and additional parking and storage. [+156,006].

Add Future Projects:

- **Sheriff's Office Warehouse:** Build new 7,000 square foot facility to house Sheriff's Office equipment to include command bus, command trailer, boat, community service trailers, and other equipment.
- **Plans for New and Existing Parks:** Build new parks facilities and trails and update and renovate existing facilities.
- **Community College – New Career and Technical Education Building:** Construct a new building on the Chatham Main Campus for Career and Technical Education Programs.
- **Schools - Replace outdated athletic field lighting and add lighting to new athletic fields.** Much of the existing athletic field lighting is outdated or does not meet current NC High School Athletic Association (NCHSAA) standards. Additional fields with lighting will allow for increased opportunity for post-season and tournament play at Chatham County middle and high schools.

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

- 9.2 cents on the property tax rate is dedicated annually. This increased from 7.7 cents in prior year.
- 2% annual growth in property tax revenues/base.
- Impact fees are estimated to grow 3% until FY 2022, when Briar Chapel is expected to be built out and then drops back to 2%.
- No growth is projected for lottery proceeds.

Other Assumptions

- Construction costs are inflated 10-12% per year. Staff also recommends a 5-10% 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:

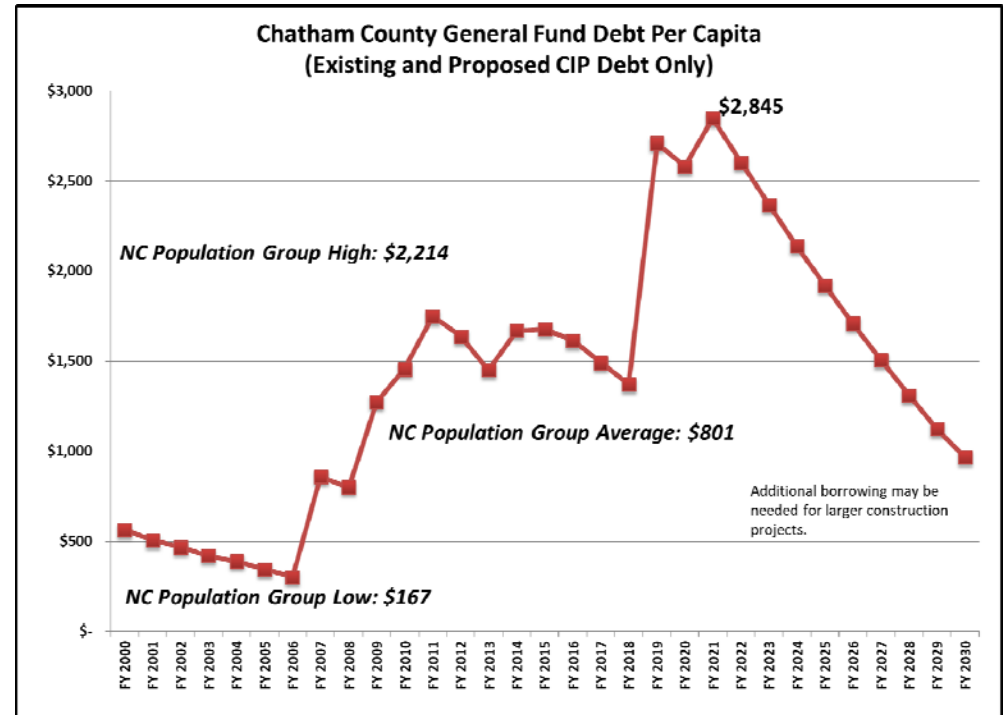
- Standard and Poor's (S&P): AAA (up from AA+)
- Moody's : Aa1 (up from Aa2/favorable outlook)

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 2.06% in FY 2021, the county's indicator is projected to be the second highest (as of June 30, 2018) within its population group (50,000 to 99,999) and below the 8% legal maximum. The highest within Chatham's population group is 2.383%. (No county in NC is anywhere near the legal debt limit. The highest in the state is 2.614 %.)
- Debt per capita: The projected high of \$2,845 in FY 2021 may give Chatham the highest per capita debt in its population group based on the most current information available (June 30, 2018). The county per capita debt would exceed the current highest county (as of June 30, 2018) in its population group, \$2,214.
- 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). 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

Project Budget: The project budget as approved by project ordinance or as approved in the FY 2020-2026 CIP

County Buildings – New Emergency Medical Services Base

Approved-No Contracts

Project Status

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

Project Element:
Expense

Funding Source:
Revenue

Operating Effect:
Impact on Operating Budget.

Project Budget	Budget	Prior to FY 2020	Current	Year 1: FY 2021	Year 2: FY 2022	Year 3: FY 2023	Year 4: FY 2024	Year 5: FY 2025	Year 6: FY 2026	Year 7: FY 2027	Project Totals
			Year: FY 2020								
Project Element											
Architectural Design & Construction Ad	206,000	0	101,085	10,000	0	0	0	0	0	0	111,085
Construction	782,075	0	694,915	182,075	0	0	0	0	0	0	876,990
Contingency	78,208	0	0	78,208	0	0	0	0	0	0	78,208
Furnishings & Equipment	263,432	0	0	263,432	0	0	0	0	0	0	263,432
Total Project Element	1,329,715	0	796,000	533,715	0	0	0	0	0	0	1,329,715
Funding Source											
Capital Reserves	1,329,715	0	796,000	533,715	0	0	0	0	0	0	1,329,715
Total Funding Source	1,329,715	0	796,000	533,715	0	0	0	0	0	0	1,329,715
Operating Effect											
Contribution to Capital Reserve	0	1,329,715	0	0	0	0	0	0	0	0	1,329,715
Increased Operating Costs	0	0	382,130	393,594	405,402	417,564	430,091	442,993	456,283	469,971	3,398,028
Total Operating Effect	0	1,329,715	382,130	393,594	405,402	417,564	430,091	442,993	456,283	469,971	4,727,743

Project Totals:
Totals all expenditures and revenues, even those expended or received in previous years.

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.

Current Stage of Project

Timmons Group has been awarded the design contract for the EMS station. Site surveys are complete and the building design for bidding purposes is underway. Bidding for the construction phase is anticipated to be done in either December, 2019, or January, 2020, with project completion by the end of 2020.

Professional Services Needed

Design, engineering, and construction services would be needed.

Operating Impact

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

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 2020-2026 CIP or by separate action and there is no substantial change in the project.

Substantially Complete

- Central Carolina Business Campus
- Community College - Health Sciences Building

New (has not been in a previous CIP)

- Technology - Core Storage/Server Replacement

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.)

- Chatham County Detention Center Generator
- Community College - Pittsboro Campus - Roof Replacement
- County Buildings - Emergency Operations Center Expansion
- County Buildings – New Emergency Medical Services Base
- Emergency Communications - Radio System Upgrade
- Parks - Lower Haw River
- Schools - New Central Services Building
- Schools - Wastewater Replacement at Silk Hope School
- Technology – Agriculture & Conference Audio/Visual Replacement
- 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 - Roof Replacements
- Technology - Body Cameras
- Technology - Increase Capacity for Data Storage

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

- Schools - Chatham Grove Elementary School
- Schools - Locker Room Renovations
- Schools - Resurface Tracks
- Schools - Seaforth High School

Approved-Contracts Let (Part)

- County Buildings - Animal Shelter Expansion and Renovation
- Community College - Trails
- Schools - Mobile Classrooms

Future

- Community College - Career and Technical Education Building
- County Buildings - Agriculture & Conference Center Phase II
- County Buildings - County Complex Master Plan
- County Buildings – New Sheriff's Office
- County Buildings - Northeast Library
- County Buildings - Sheriff's Office Warehouse
- Parks - Plans for New and Existing Parks
- Schools - Athletic Field Lighting
- Schools - HVAC/Lighting Replacement
- Schools - New Elementary School at Chatham Park
- Schools - New Schools/Capacity Expansion
- Schools - Paving Repair
- Schools - Replace Gymnasiums at Bennett, Silk Hope and Bonlee
- Technology - Expand County Network/Broadband
- Water District - Southwest Water District Distribution Lines Construction

Total Cost of Each Project by Year

	Prior to FY 2020	Current Year: FY 2020	Year 1: FY 2021	Year 2: FY 2022	Year 3: FY 2023	Year 4: FY 2024	Year 5: FY 2025	Year 6: FY 2026	Year 7: FY 2027	Totals
General										
Central Carolina Business Campus	8,427,026	350,000	500,000	500,000	0	0	0	0	0	9,777,026
Chatham County Detention Center Generator	0	0	0	0	627,738	0	0	0	0	627,738
Community College - Health Sciences Building	7,299,670	5,753,007	0	0	0	0	0	0	0	13,052,677
Community College - Pittsboro Campus - Roof Replacement	0	0	0	0	478,500	0	0	0	0	478,500
Community College - Trails	165,519	0	115,000	0	0	0	0	0	0	280,519
County Buildings - Animal Shelter Expansion and Renovation	180,169	3,460,131	1,959,700	0	0	0	0	0	0	5,600,000
County Buildings - Emergency Operations Center Expansion	0	2,600,000	7,850,000	7,850,000	0	0	0	0	0	18,300,000
County Buildings – New Emergency Medical Services Base	0	796,000	533,715	0	0	0	0	0	0	1,329,715
Emergency Communications - Radio System Upgrade	0	8,073,803	10,174,008	0	0	0	0	0	0	18,247,811
Parks - Briar Chapel Park Improvements	1,072,400	199,550	853,550	0	0	0	0	0	0	2,125,500
Parks - Lower Haw River	0	125,000	0	0	0	0	0	0	0	125,000
Schools - Chatham Grove Elementary School	16,836,347	16,216,210	57,064	0	0	0	0	0	0	33,109,621
Schools - Locker Room Renovations	670,869	62,690	406,391	0	0	0	0	0	0	1,139,950
Schools - Mobile Classrooms	224,292	0	254,400	261,600	268,800	157,803	164,800	0	0	1,331,695
Schools - New Central Services Building	18,844	457,934	9,307,751	1,357,526	0	0	0	0	0	11,142,055
Schools - Resurface Tracks	0	59,459	151,627	163,394	0	0	0	0	0	374,480
Schools - Roof Replacements	5,693,629	605,380	0	0	0	0	0	0	0	6,299,009
Schools - Seaforth High School	20,648,373	33,788,268	20,208,137	186,370	0	0	0	0	0	74,831,148
Schools - Wastewater Replacement at Silk Hope School	0	0	0	0	643,500	0	0	0	0	643,500
Technology – Agriculture & Conference Audio/Visual Replacement	0	0	0	0	0	343,475	0	0	0	343,475
Technology - Body cameras	138,030	85,071	0	0	0	0	0	0	0	223,101
Technology - Core Storage/Server Replacement	0	0	0	0	0	0	172,800	0	90,000	262,800

Total Cost of Each Project by Year

	Prior to FY 2020	Current Year: FY 2020	Year 1: FY 2021	Year 2: FY 2022	Year 3: FY 2023	Year 4: FY 2024	Year 5: FY 2025	Year 6: FY 2026	Year 7: FY 2027	Totals
Technology - Increase Capacity for Data Storage	0	706,826	0	0	0	0	0	0	0	706,826
Technology - Justice Center Audio/Visual Replacement	0	0	0	0	465,850	0	0	0	0	465,850
Technology - Tax Software	0	0	1,000,000	0	0	0	0	0	0	1,000,000
Voting Equipment Replacement	0	676,434	0	0	0	0	0	0	0	676,434
Total General	61,375,168	74,015,763	53,371,343	10,318,890	2,484,388	501,278	337,600	0	90,000	202,494,430
<u>Water</u>										
Water - Haywood Water Main Replacement	22,702	117,850	0	0	0	0	0	0	0	140,552
Water - Planning Western Intake and Plant	39,882	12,500	500,000	0	0	0	0	0	0	552,382
Total Water	62,584	130,350	500,000	0	0	0	0	0	0	692,934

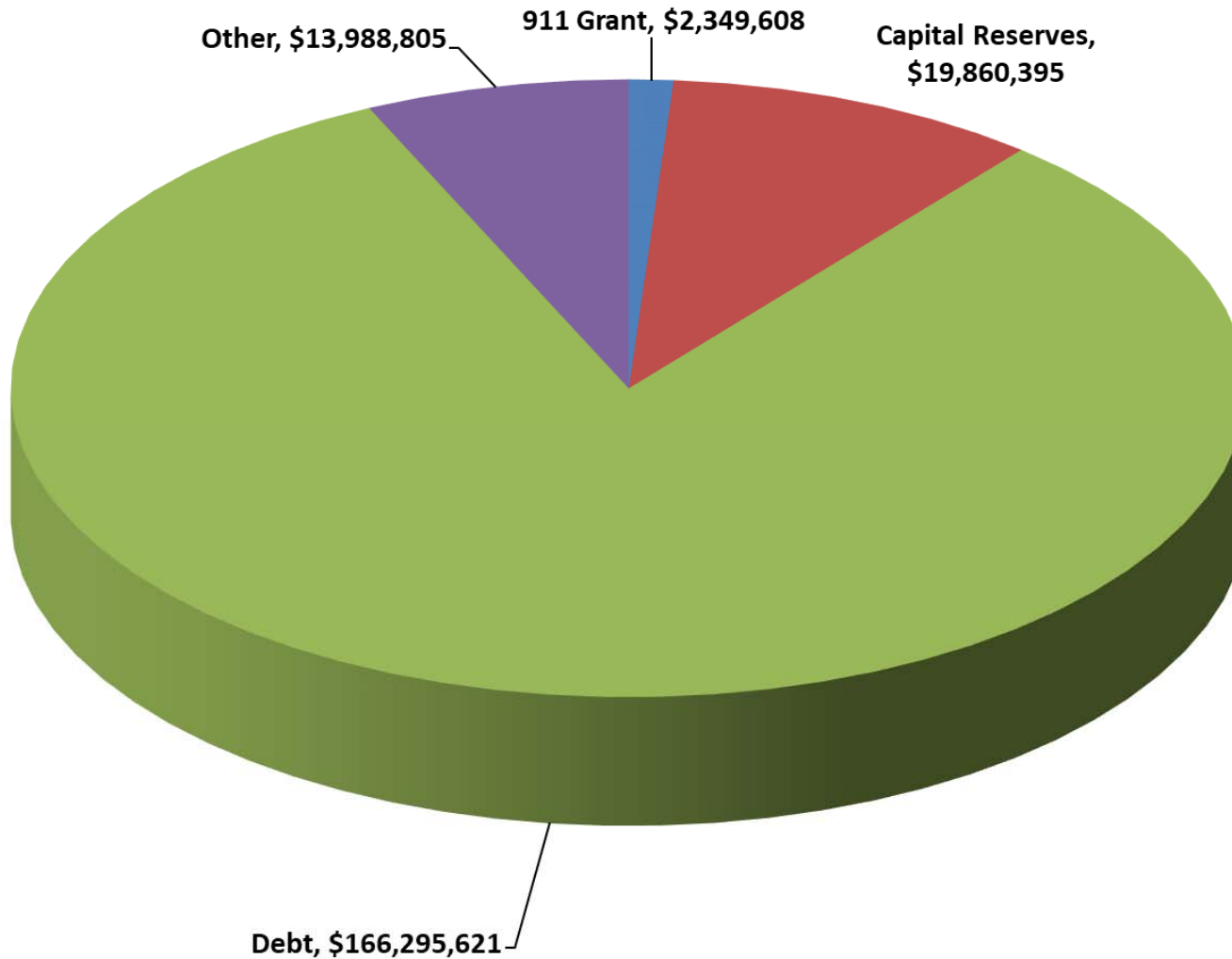
Funding Sources

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 2020	Current Year: FY 2020	Year 1: FY 2021	Year 2: FY 2022	Year 3: FY 2023	Year 4: FY 2024	Year 5: FY 2025	Year 6: FY 2026	Year 7: FY 2027	Totals
General										
911 Funds	0	0	6,078,901	0	0	0	0	0	0	6,078,901
911 Grant	0	2,349,608	0	0	0	0	0	0	0	2,349,608
Capital Reserves	3,471,047	6,778,821	5,272,267	924,994	2,484,388	501,278	337,600	0	90,000	19,860,395
Debt	18,844	8,782,129	20,901,424	9,207,526	0	0	0	0	0	38,909,923
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	42,654,390	55,757,485	20,265,201	186,370	0	0	0	0	0	118,863,446
General Fund Fund Balance	14,370	0	0	0	0	0	0	0	0	14,370
General Fund Operating Revenue	30,000	25,000	0	0	0	0	0	0	0	55,000
Grants, Gifts, Etc.	2,599,781	222,945	0	0	0	0	0	0	0	2,822,726
Interest	28,056	0	0	0	0	0	0	0	0	28,056
Other	0	0	0	0	0	0	0	0	0	0
Recreation Exaction Fee--Briar Chapel	1,022,436	99,775	853,550	0	0	0	0	0	0	1,975,761
Transfer from General Fund	2,038,117	0	0	0	0	0	0	0	0	2,038,117
Transfer from Water Capital Reserve	975,874	0	0	0	0	0	0	0	0	975,874
Total General	61,375,167	74,015,763	53,371,343	10,318,890	2,484,388	501,278	337,600	0	90,000	202,494,429
Water										
Water Capital Reserve	62,584	130,350	500,000	0	0	0	0	0	0	692,934
Total Water	62,584	130,350	500,000	0	0	0	0	0	0	692,934

CIP Funding Sources

General Fund CIP Funding Sources



General Fund Capital Reserve

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 \$11,629,298.

Parks & Recreation

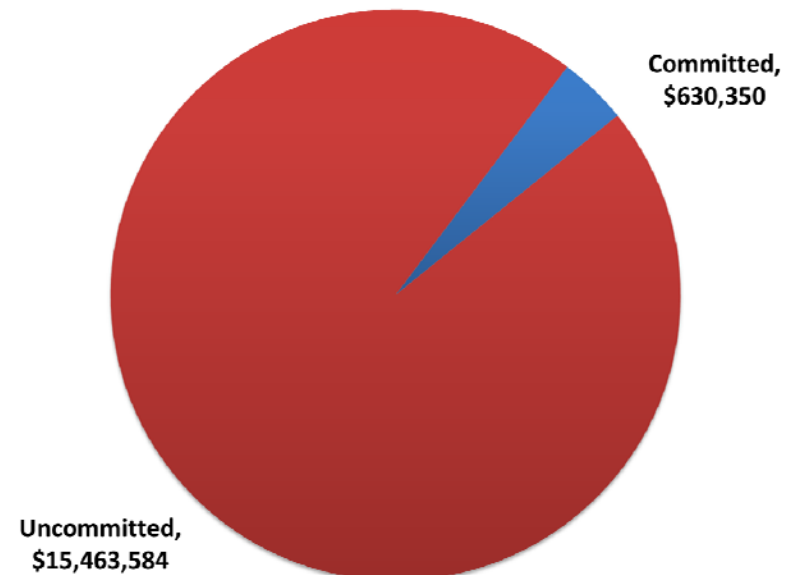
Recreation Fees: Recreation fees are established and collected in two districts. The fees must be spent in the district in which they are collected.

- 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 \$3,288 was collected in FY 2019. 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 \$114,824 in FY 2019, 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 \$35,188 in FY 2019. 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 has updated 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

\$2,123,724 in availability fees were collected in FY 2019. 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 Effects

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 2020	Current Year: FY 2020	Year 1: FY 2021	Year 2: FY 2022	Year 3: FY 2023	Year 4: FY 2024	Year 5: FY 2025	Year 6: FY 2026	Year 7: FY 2027
General									
Additional Revenues	-2,350.00	-1,120.00	-1,820.00	-1,820.00	-1,820.00	-1,820.00	-18,200.00	-1,820.00	-1,820.00
Contribution to Capital Reserve	11,980,765.00	3,211,880.00	2,114,955.00	1,716,146.00	919,653.00	120,428.00	34,560.00	45,000.00	45,000.00
Debt Service	6,201,492.00	5,396,031.00	5,555,497.00	13,120,674.00	12,783,844.00	12,202,290.00	11,843,412.00	11,764,034.00	11,214,269.00
Decreased Operating Costs	-126,000.00	-175,237.00	-175,237.00	-175,237.00	-175,237.00	-175,237.00	-175,237.00	-175,237.00	1,739,700.00
Increased Operating Costs	463,889.00	1,041,270.00	2,624,955.00	5,207,734.00	5,449,448.00	5,580,150.00	5,701,744.00	5,868,290.00	6,039,829.00
Transfer from Debt Reserve	-6,201,492.00	-5,396,031.00	-5,555,497.00	-13,120,674.00	-12,783,844.00	-12,202,290.00	-11,843,412.00	-11,764,034.00	-11,214,269.00
Total General	12,316,304.00	4,076,793.00	4,562,853.00	6,746,823.00	6,192,044.00	5,523,521.00	5,542,867.00	5,736,233.00	7,822,709.00

Completed Projects

The following projects were completed as of June 30, 2019.

Project Name	Brief Description	Final Project Budget	Final Cost
County Buildings – Chatham County Agriculture & Conference Center	Construct a new agricultural center for Chatham County of approximately 35,000 square feet.	\$15,080,496	\$15,002,807
Technology – Telephone System Replacement - Countywide	Replace the county's existing phone systems with a centralized system that will seamlessly connect all county departments.	\$261,814	\$235,799
Technology – Integrated Public Sector Software	Purchase software specifically designed to support the public sector that integrated human resources and finance.	\$1,500,000	\$974,838
Water – Nature Trail Water Main Replacement	Replace all water mains in the Nature Trail mobile home park.	\$1,824,788	\$1,588,034
Schools – Bleacher Replacements (Indoor)	Renovate and/or install new indoor bleachers at Chatham Central, Jordan-Matthews, J.S. Waters, Moncure, and Horton Middle.	\$392,088	\$333,648
Schools – Northwood High Paving Overlay	Repair pot holes and cracks in the pavement at Northwood High School in FY 2019.	\$189,002	\$179,143
Schools – Perry Harrison Elementary School Traffic Pattern	Improve the traffic pattern at Perry Harrison Elementary in FY 2019.	\$471,000	\$470,000

General Fund Projects

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	Prior to FY 2020	Current	Year 1: FY 2021	Year 2: FY 2022	Year 3: FY 2023	Year 4: FY 2024	Year 5: FY 2025	Year 6: FY 2026	Year 7: FY 2027	Project Totals
			Year: FY 2020								
Project Element											
Construction	8,108,414	7,258,414	350,000	500,000	500,000	0	0	0	0	0	8,608,414
Design, Engineering & Construction Ad	1,031,146	1,031,146	0	0	0	0	0	0	0	0	1,031,146
Land	137,466	137,466	0	0	0	0	0	0	0	0	137,466
Total Project Element	9,277,026	8,427,026	350,000	500,000	500,000	0	0	0	0	0	9,777,026
Funding Source											
Capital Reserves	888,986	38,986	350,000	500,000	500,000	0	0	0	0	0	1,388,986
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	28,056	28,056	0	0	0	0	0	0	0	0	28,056
Transfer from General Fund	257,695	257,695	0	0	0	0	0	0	0	0	257,695
Transfer from Water Capital Reserve	337,814	337,814	0	0	0	0	0	0	0	0	337,814
Total Funding Source	9,277,026	8,427,026	350,000	500,000	500,000	0	0	0	0	0	9,777,026
Operating Effect											
Contribution to Capital Reserve	0	500,000	0	388,986	500,000	0	0	0	0	0	1,388,986
Debt Service	0	2,452,054	469,762	629,228	608,606	588,726	323,922	315,304	552,676	286,150	6,226,428
Increased Operating Costs	0	51,408	52,950	54,538	56,174	57,860	59,596	61,383	63,224	65,122	522,255
Transfer from Debt Reserve	0	-2,452,054	-469,762	-629,228	-608,606	-588,726	-323,922	-315,304	-552,676	-286,150	-6,226,428
Total Operating Effect	0	551,408	52,950	443,524	556,174	57,860	59,596	61,383	63,224	65,122	1,911,241

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 has assessed the bridge and given an estimate for repairs. DOT is requiring installation of a traffic signal at Progress Blvd and Highway 64. Design is complete and bid documents will be advertised in September, 2019. Construction is expected to be complete before the end of FY20. The overlay of the road will begin after the traffic signal is installed and the bridge is repaired.

Wetherill Engineering has been retained to assist the County with further assessment and meetings with NCDOT to develop a scope of work that once completed to NCDOT's satisfaction, NCDOT will take over maintenance of Progress Blvd. The scope development should be completed by the end of December, 2019.

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.

Chatham County Detention Center Generator

Approved-No Contracts

Purchase and install a second generator at the Detention Center.

Project Budget	Budget	Current									Project Totals
		Prior to FY 2020	Year: FY 2020	Year 1: FY 2021	Year 2: FY 2022	Year 3: FY 2023	Year 4: FY 2024	Year 5: FY 2025	Year 6: FY 2026	Year 7: FY 2027	
Project Element											
Contract	43,709	0	0	0	0	43,709	0	0	0	0	43,709
Furnishings & Equipment	584,029	0	0	0	0	584,029	0	0	0	0	584,029
Total Project Element	627,738	0	0	0	0	627,738	0	0	0	0	627,738
Funding Source											
Capital Reserves	627,738	0	0	0	0	627,738	0	0	0	0	627,738
Total Funding Source	627,738	0	0	0	0	627,738	0	0	0	0	627,738
Operating Effect											
Contribution to Capital Reserve	0	0	0	209,246	209,246	209,246	0	0	0	0	627,738
Increased Operating Costs	0	0	0	0	0	0	15,750	15,750	15,750	15,750	63,000
Total Operating Effect	0	0	0	209,246	209,246	209,246	15,750	15,750	15,750	15,750	690,738

Define Problem

The generator that is currently integrated into the Detention Center’s electrical system does not power the entire building as well as all daily needs for a prolonged power outage. Additionally, the current generator only powers one water heater for the kitchen and does not power any water heaters for shower usage or other needs.

Recommended Solution

Purchase and install a second generator to ensure the availability of office space for shelter needs and as an alternative emergency operations center.

Alternatives

- 1) Rent a second generator as needed. During Hurricane Florence (September 2018), the County was quoted a price of \$30,000 to transport the generator to the Detention Center and an additional \$21,000 per week rental fee.
- 2) Do nothing at this time. This would make it impossible to utilize the administration section of the Detention Center and necessitate staff sheltering elsewhere. Additionally, during a prolonged weather event, this alternative would require additional transportation of inmates to other facilities, in order to meet North Carolina Administrative Code requirements.

Professional Services Needed

Electrical engineering services will be needed.

Operating Impact

Additional funds will be needed for fuel and a service contract.

Community College - Health Sciences Building

Substantially Complete

Construct a 40,000 square-foot Health Sciences building.

Project Budget	Budget	Current									Project Totals	
		Prior to FY 2020	Year: FY 2020	Year 1: FY 2021	Year 2: FY 2022	Year 3: FY 2023	Year 4: FY 2024	Year 5: FY 2025	Year 6: FY 2026	Year 7: FY 2027		
Project Element												
Architectural Design & Construction Ad	1,240,970	1,198,192	60,882	0	0	0	0	0	0	0	0	1,259,074
Construction	8,355,588	4,788,574	4,525,026	0	0	0	0	0	0	0	0	9,313,600
Contingency	1,287,799	0	911,672	0	0	0	0	0	0	0	0	911,672
Feasibility Study	30,000	30,000	0	0	0	0	0	0	0	0	0	30,000
Financing Costs	0	139,336	0	0	0	0	0	0	0	0	0	139,336
Furnishings & Equipment	191,675	0	203,176	0	0	0	0	0	0	0	0	203,176
Land & Easements	1,060,000	1,063,818	0	0	0	0	0	0	0	0	0	1,063,818
Other Contracted Services	162,576	79,750	52,251	0	0	0	0	0	0	0	0	132,001
Total Project Element	12,328,608	7,299,670	5,753,007	0	0	0	0	0	0	0	0	13,052,677
Funding Source												
Debt--Limited Obligation Bonds	12,298,608	5,169,670	5,753,007	0	0	0	0	0	0	0	0	10,922,677
General Fund Operating Revenue	30,000	30,000	0	0	0	0	0	0	0	0	0	30,000
Grants, Gifts, Etc.	0	2,100,000	0	0	0	0	0	0	0	0	0	2,100,000
Total Funding Source	12,328,608	7,299,670	5,753,007	0	0	0	0	0	0	0	0	13,052,677
Operating Effect												
Debt Service	0	449,933	591,152	591,152	1,321,448	1,287,914	1,254,404	1,187,384	1,153,874	1,153,874	8,991,135	
Increased Operating Costs	0	0	245,450	267,890	275,275	282,868	290,676	298,704	306,959	315,448	2,283,270	
Transfer from Debt Reserve	0	-449,933	-591,152	-591,152	-1,321,448	-1,287,914	-1,254,404	-1,187,384	-1,153,874	-1,153,874	-8,991,135	
Total Operating Effect	0	0	245,450	267,890	275,275	282,868	290,676	298,704	306,959	315,448	2,283,270	

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 programs 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.

A construction contract for this building was awarded during July of 2018. Construction on the project started in August 2018 and is expected to be completed in November 2019. The building will open in January of 2020.

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	Prior to FY 2020	Current Year:								Project Totals
			FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	
Project Element											
Architectural Design & Construction Ad	12,100	0	0	0	0	12,100	0	0	0	0	12,100
Construction	418,500	0	0	0	0	418,500	0	0	0	0	418,500
Contingency	41,850	0	0	0	0	41,850	0	0	0	0	41,850
Engineering & Construction Administrat	6,050	0	0	0	0	6,050	0	0	0	0	6,050
Total Project Element	478,500	0	0	0	0	478,500	0	0	0	0	478,500
Funding Source											
Capital Reserves	478,500	0	0	0	0	478,500	0	0	0	0	478,500
Total Funding Source	478,500	0	0	0	0	478,500	0	0	0	0	478,500
Operating Effect											
Contribution to Capital Reserve	0	205,071	0	91,143	91,143	91,143	0	0	0	0	478,500
Total Operating Effect	0	205,071	0	91,143	91,143	91,143	0	0	0	0	478,500

Define Problem

The current roof on building 42 on the Pittsboro campus is original to the building (1996). The roof is a membrane-type roof and will need to be replaced 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 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 2020	Year: FY 2020	Year 1: FY 2021	Year 2: FY 2022	Year 3: FY 2023	Year 4: FY 2024	Year 5: FY 2025	Year 6: FY 2026	Year 7: FY 2027	
Project Element											
Construction	298,750	165,519	0	115,000	0	0	0	0	0	0	280,519
Total Project Element	298,750	165,519	0	115,000	0	0	0	0	0	0	280,519
Funding Source											
Capital Reserves	298,750	165,519	0	115,000	0	0	0	0	0	0	280,519
Total Funding Source	298,750	165,519	0	115,000	0	0	0	0	0	0	280,519
Operating Effect											
Contribution to Capital Reserve	0	183,750	57,500	39,269	0	0	0	0	0	0	280,519
Total Operating Effect	0	183,750	57,500	39,269	0	0	0	0	0	0	280,519

Define Problem

Phase 1: The campus’s trail is currently in disrepair. Numerous sections 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 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: CCCC and Chatham County Agricultural & Conference Center (CCACC) 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 road 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 CCACC 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 at CCCC’s Pittsboro Campus.

Phase 2: Connect CCCC’s entrance driveway from West Street to the CCACC.

Alternatives

Phase 1:

A. The trail can be left in disrepair. This option will open CCCC 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..

Current Stage of Project

The contract has been approved by the Board of Commissioners. The project is expected to start in October 2018 and will be completed by December 1, 2018.

County Buildings - Animal Shelter Expansion and Renovation

Approved-Contracts Let(Part)

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 2020	Year: FY 2020	Year 1: FY 2021	Year 2: FY 2022	Year 3: FY 2023	Year 4: FY 2024	Year 5: FY 2025	Year 6: FY 2026	Year 7: FY 2027	
Project Element											
Architectural Design & Construction Ad	608,750	141,049	342,701	60,000	0	0	0	0	0	0	543,750
Construction	4,593,130	10,750	3,082,380	1,565,000	0	0	0	0	0	0	4,658,130
Contingency	226,688	0	0	226,688	0	0	0	0	0	0	226,688
Feasibility Study	14,370	14,370	0	0	0	0	0	0	0	0	14,370
Furnishings & Equipment	108,012	0	0	108,012	0	0	0	0	0	0	108,012
Other Contracted Services	27,250	14,000	35,050	0	0	0	0	0	0	0	49,050
Permits & Connection Fees	21,800	0	0	0	0	0	0	0	0	0	0
Total Project Element	5,600,000	180,169	3,460,131	1,959,700	0	0	0	0	0	0	5,600,000
Funding Source											
Capital Reserves	5,585,630	165,799	3,460,131	1,959,700	0	0	0	0	0	0	5,585,630
General Fund Fund Balance	14,370	14,370	0	0	0	0	0	0	0	0	14,370
Total Funding Source	5,600,000	180,169	3,460,131	1,959,700	0	0	0	0	0	0	5,600,000
Operating Effect											
Contribution to Capital Reserve	0	4,614,056	971,574	0	0	0	0	0	0	0	5,585,630
Decreased Operating Costs	0	0	-20,237	-20,237	-20,237	-20,237	-20,237	-20,237	-20,237	1,894,700	1,753,041
Increased Operating Costs	0	0	188,329	182,728	188,210	193,856	199,672	205,662	211,834	218,189	1,588,480
Total Operating Effect	0	4,614,056	1,139,666	162,491	167,973	173,619	179,435	185,425	191,597	2,112,889	8,927,151

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.

Current Stage of Project

Contracts were approved by the Board of Commissioners in September of 2018 and the project schedule has been revised. PNP is the design firm and Bordeaux Contracting is the Construction Manager. Construction Documents are complete and under review by the County and the contractor. Bidding is expected to take place in late October or November. Construction will begin when bidding is finished and will require 12 months for completion. This project is now expected to be complete by the end of 2020.

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 - Emergency Operations Center Expansion

Approved-No Contracts

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

Project Budget	Budget	Prior to FY 2020	Current								Project Totals	
			Year: FY 2020	Year 1: FY 2021	Year 2: FY 2022	Year 3: FY 2023	Year 4: FY 2024	Year 5: FY 2025	Year 6: FY 2026	Year 7: FY 2027		
Project Element												
Construction	10,000,000	0	0	7,250,000	7,250,000	0	0	0	0	0	0	14,500,000
Design, Engineering & Construction Ad	0	0	300,000	600,000	600,000	0	0	0	0	0	0	1,500,000
Land	0	0	2,300,000	0	0	0	0	0	0	0	0	2,300,000
Total Project Element	10,000,000	0	2,600,000	7,850,000	7,850,000	0	0	0	0	0	0	18,300,000
Funding Source												
911 Funds	0	0	0	5,000,000	0	0	0	0	0	0	0	5,000,000
Debt	10,000,000	0	2,600,000	2,850,000	7,850,000	0	0	0	0	0	0	13,300,000
Total Funding Source	10,000,000	0	2,600,000	7,850,000	7,850,000	0	0	0	0	0	0	18,300,000
Operating Effect												
Debt Service	0	0	0	0	1,850,000	1,803,750	1,757,500	1,711,250	1,665,000	1,618,750	10,406,250	10,406,250
Transfer from Debt Reserve	0	0	0	0	-1,850,000	-1,803,750	-1,757,500	-1,711,250	-1,665,000	-1,618,750	-10,406,250	-10,406,250
Total Operating Effect	0	0	0	0	0	0	0	0	0	0	0	0

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.

County Buildings - Emergency Operations Center Expansion

Approved-No Contracts

Current Stage of Project

A feasibility study was completed in June 2019. The purpose of the study was to determine space needs, define alternatives, and finalize costs. This project was accelerated to be included in the same time frame as the radio replacement project. This will maximize the effectiveness and efficiency of both projects. A firm was selected in August 2019 to perform design and land planning services for the construction of a new EOC on land purchased by the County.

Relation to Other Projects

This project is related to the Emergency Communications Radio Upgrade project. Both projects require debt to be funded. Upgrading the radio system will require changes to the Emergency Operations Center that should be completed at the same time in order to maximize the capacity for borrowing and to provide synchrony between the two projects. There is also the opportunity to align this project with the initiative to develop solar photovoltaic systems for onsite energy generation at County buildings.

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

County Buildings – New Emergency Medical Services Base

Approved-No Contracts

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

Project Budget	Budget	Prior to FY 2020	Current	Year 1:	Year 2:	Year 3:	Year 4:	Year 5:	Year 6:	Year 7:	Project Totals
			Year: FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	
Project Element											
Architectural Design & Construction Ad	206,000	0	101,085	10,000	0	0	0	0	0	0	111,085
Construction	782,075	0	694,915	182,075	0	0	0	0	0	0	876,990
Contingency	78,208	0	0	78,208	0	0	0	0	0	0	78,208
Furnishings & Equipment	263,432	0	0	263,432	0	0	0	0	0	0	263,432
Total Project Element	1,329,715	0	796,000	533,715	0	0	0	0	0	0	1,329,715
Funding Source											
Capital Reserves	1,329,715	0	796,000	533,715	0	0	0	0	0	0	1,329,715
Total Funding Source	1,329,715	0	796,000	533,715	0	0	0	0	0	0	1,329,715
Operating Effect											
Contribution to Capital Reserve	0	620,948	708,767	0	0	0	0	0	0	0	1,329,715
Increased Operating Costs	0	0	382,130	393,594	405,402	417,564	430,091	442,993	456,283	469,971	3,398,028
Total Operating Effect	0	620,948	1,090,897	393,594	405,402	417,564	430,091	442,993	456,283	469,971	4,727,743

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.

Current Stage of Project

Timmons Group has been awarded the design contract for the EMS station. Site surveys are complete and the building design for bidding purposes is underway. Bidding for the construction phase is anticipated to be done in either December, 2019, or January, 2020, with project completion by the end of 2020.

Professional Services Needed

Design, engineering, and construction services would be needed.

Operating Impact

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

Emergency Communications - Radio System Upgrade

Approved-No Contracts

Replace current emergency radio system infrastructure with a reliable and industry standard P25 radio system.

Project Budget	Budget	Current									Project Totals
		Prior to FY 2020	Year: FY 2020	Year 1: FY 2021	Year 2: FY 2022	Year 3: FY 2023	Year 4: FY 2024	Year 5: FY 2025	Year 6: FY 2026	Year 7: FY 2027	
Project Element											
Construction	2,047,256	0	6,055,352	676,080	0	0	0	0	0	0	6,731,432
Design, Engineering & Construction Ad	3,725,247	0	2,018,451	225,360	0	0	0	0	0	0	2,243,811
Equipment	10,247,355	0	0	9,272,568	0	0	0	0	0	0	9,272,568
Financing Costs	166,667	0	0	0	0	0	0	0	0	0	0
Total Project Element	16,186,525	0	8,073,803	10,174,008	0	0	0	0	0	0	18,247,811
Funding Source											
911 Funds	960,745	0	0	1,078,901	0	0	0	0	0	0	1,078,901
911 Grant	0	0	2,349,608	0	0	0	0	0	0	0	2,349,608
Capital Reserves	4,234,774	0	0	351,434	0	0	0	0	0	0	351,434
Debt	10,991,006	0	5,724,195	8,743,673	0	0	0	0	0	0	14,467,868
Other	0	0	0	0	0	0	0	0	0	0	0
Total Funding Source	16,186,525	0	8,073,803	10,174,008	0	0	0	0	0	0	18,247,811
Operating Effect											
Contribution to Capital Reserve	0	0	500,000	0	0	0	0	0	0	0	500,000
Increased Operating Costs	0	0	0	177,496	275,725	280,408	285,326	290,489	295,875	301,450	1,906,769
Total Operating Effect	0	0	500,000	177,496	275,725	280,408	285,326	290,489	295,875	301,450	2,406,769

Define Problem

The existing VHF/UHF radio system used by county public safety agencies is approximately 30 years old. The system has been maintained by replacing and upgrading equipment as needed, but rapidly increasing communication demands and technology advancements have rendered the system obsolete. The county currently has seven different tower sites which transmit and/or receive communications to fire, emergency medical services, and law enforcement. The current radio system does not cover the entire county. Interoperability with surrounding counties and/or agencies is limited or non-existent due to disparate radio systems. The current radio system poses a serious safety risk for responders and citizens.

Recommended Solution

Upgrade the current system to a P25 700/800 MHz radio system and connect to the NC VIPER radio system. Eliminate four of the current tower sites that are outdated and not at a location that will permit the countywide coverage that is needed. Build three new tower sites and share the new VIPER tower that the state is constructing in Pittsboro.

Alternatives

Make no changes at this time which is a serious risk to the life and safety of responders and citizens.

Current Stage of Project

A contract with Motorola was signed June 2019 and project manager has been assigned. Work started on the architectural, engineering and site survey for each tower site. The permitting process will begin second quarter FY2020.

Emergency Communications - Radio System Upgrade

Approved-No Contracts

Description of Land Needs

The county owns property for three (3) tower sites. We would collocate with the state at one (1) tower site and collaborate with two fire departments for the two (2) remaining tower sites.

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 2020	Year: FY 2020	Year 1: FY 2021	Year 2: FY 2022	Year 3: FY 2023	Year 4: FY 2024	Year 5: FY 2025	Year 6: FY 2026	Year 7: FY 2027		
Project Element												
Architectural Design & Construction Ad	76,920	23,950	0	0	0	0	0	0	0	0	0	23,950
Construction	147,626	0	0	0	0	0	0	0	0	0	0	0
Contingency	14,531	0	0	0	0	0	0	0	0	0	0	0
Equipment	63,228	58,228	0	0	0	0	0	0	0	0	0	58,228
Facilities	1,486,541	978,097	199,550	853,550	0	0	0	0	0	0	0	2,031,197
Other Contracted Services	20,680	12,125	0	0	0	0	0	0	0	0	0	12,125
Permits & Connection Fees	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Element	1,809,526	1,072,400	199,550	853,550	0	0	0	0	0	0	0	2,125,500
Funding Source												
Grants, Gifts, Etc.	233,375	49,964	99,775	0	0	0	0	0	0	0	0	149,739
Recreation Exaction Fee--Briar Chapel	1,576,151	1,022,436	99,775	853,550	0	0	0	0	0	0	0	1,975,761
Total Funding Source	1,809,526	1,072,400	199,550	853,550	0	0	0	0	0	0	0	2,125,500
Operating Effect												
Additional Revenues	0	-2,350	-1,120	-1,820	-1,820	-1,820	-1,820	-18,200	-1,820	-1,820	-1,820	-32,590
Increased Operating Costs	0	304,526	70,188	89,138	87,142	89,756	92,449	95,222	98,079	100,981	1,027,481	
Total Operating Effect	0	302,176	69,068	87,318	85,322	87,936	90,629	77,022	96,259	99,161	994,891	

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. Four years ago, Briar Chapel officials approached the county about giving the park to the county. Based on the draft 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 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
15. Lighting of soccer field

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 was completed in FY 2018. The county was awarded a PARTF grant in September 2017 to construct a playground, picnic shelter, trail and sidewalk connecting to school. Construction began in FY 2019 and is expected to be complete in FY 2020. Lighting for the soccer field and a restroom with parking and storage are planned for FY 2021 to be funded with Briar Chapel recreation fees. Additional future amenities will depend on the availability of recreation fees.

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.

Schools - Chatham Grove Elementary School

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

Project Budget	Current										
	Budget	Prior to FY 2020	Year: FY 2020	Year 1: FY 2021	Year 2: FY 2022	Year 3: FY 2023	Year 4: FY 2024	Year 5: FY 2025	Year 6: FY 2026	Year 7: FY 2027	Project Totals
Project Element											
Architectural Design & Construction Ad	1,713,200	1,422,002	316,450	0	0	0	0	0	0	0	1,738,452
Construction	27,118,892	14,245,392	13,685,811	0	0	0	0	0	0	0	27,931,203
Contingency	1,355,945	0	459,342	0	0	0	0	0	0	0	459,342
Engineering & Construction Administrat	0	0	0	0	0	0	0	0	0	0	0
Financing Costs	119,649	139,336	0	0	0	0	0	0	0	0	139,336
Furnishings & Equipment	1,506,481	0	1,449,417	57,064	0	0	0	0	0	0	1,506,481
Land & Easements	754,788	759,557	0	0	0	0	0	0	0	0	759,557
Other Contracted Services	540,666	270,060	305,190	0	0	0	0	0	0	0	575,250
Total Project Element	33,109,621	16,836,347	16,216,210	57,064	0	0	0	0	0	0	33,109,621
Funding Source											
Debt--Limited Obligation Bonds	33,109,621	16,836,347	16,216,210	57,064	0	0	0	0	0	0	33,109,621
Total Funding Source	33,109,621	16,836,347	16,216,210	57,064	0	0	0	0	0	0	33,109,621
Operating Effect											
Debt Service	0	1,012,348	1,330,093	1,330,093	2,973,258	2,897,807	2,822,409	2,747,012	2,671,614	2,596,217	20,380,851
Increased Operating Costs	0	0	0	1,380,695	1,422,116	1,464,780	1,508,723	1,553,985	1,600,604	1,648,623	10,579,526
Transfer from Debt Reserve	0	-1,012,348	-1,330,093	-1,330,093	-2,973,258	-2,897,807	-2,822,409	-2,747,012	-2,671,614	-2,596,217	-20,380,851
Total Operating Effect	0	0	0	1,380,695	1,422,116	1,464,780	1,508,723	1,553,985	1,600,604	1,648,623	10,579,526

Define Problem

The Northeast portion of Chatham County is experiencing growth. The Operations 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 additional 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 provided 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 of elementary school students in the northeast portion of Chatham County.

Current Stage of Project

At its September 12, 2016 meeting, the Chatham County 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. Bid opening was held on 04/12/18, and the construction contract was awarded to Monteith Construction.

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

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

Project Budget	Budget	Prior to FY 2020	Current								Project Totals	
			Year: FY 2020	Year 1: FY 2021	Year 2: FY 2022	Year 3: FY 2023	Year 4: FY 2024	Year 5: FY 2025	Year 6: FY 2026	Year 7: FY 2027		
Project Element												
Construction	1,090,450	620,787	62,690	386,391	0	0	0	0	0	0	0	1,069,868
Contingency	0	0	0	0	0	0	0	0	0	0	0	0
Design, Engineering & Construction Ad	49,500	50,082	0	20,000	0	0	0	0	0	0	0	70,082
Total Project Element	1,139,950	670,869	62,690	406,391	0	0	0	0	0	0	0	1,139,950
Funding Source												
Capital Reserves	1,139,950	670,869	62,690	406,391	0	0	0	0	0	0	0	1,139,950
Total Funding Source	1,139,950	670,869	62,690	406,391	0	0	0	0	0	0	0	1,139,950
Operating Effect												
Contribution to Capital Reserve	0	739,308	200,321	200,321	0	0	0	0	0	0	0	1,139,950
Total Operating Effect	0	739,308	200,321	200,321	0	0	0	0	0	0	0	1,139,950

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 of 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 2019: Jordan-Matthews High School and Chatham Central High School

FY 2020: JS Waters School and Moncure School

FY 2021: Northwood High School

Chatham Central and Jordan-Matthews High Schools have been completed. Moncure School is expected to be complete in November 2019.

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 2020	Year: FY 2020	Year 1: FY 2021	Year 2: FY 2022	Year 3: FY 2023	Year 4: FY 2024	Year 5: FY 2025	Year 6: FY 2026	Year 7: FY 2027	
Project Element											
Construction	1,313,245	205,842	0	254,400	261,600	268,800	157,803	164,800	0	0	1,313,245
Design, Engineering & Construction Ad	18,450	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
Total Project Element	1,331,695	224,292	0	254,400	261,600	268,800	157,803	164,800	0	0	1,331,695
Funding Source											
Capital Reserves	1,331,695	224,292	0	254,400	261,600	268,800	157,803	164,800	0	0	1,331,695
Transfer from Water Capital Reserve	0	0	0	0	0	0	0	0	0	0	0
Total Funding Source	1,331,695	224,292	0	254,400	261,600	268,800	157,803	164,800	0	0	1,331,695
Operating Effect											
Contribution to Capital Reserve	0	361,108	117,584	284,334	284,334	284,335	0	0	0	0	1,331,695
Increased Operating Costs	0	29,917	12,059	15,609	19,267	23,034	26,914	29,316	30,195	31,101	217,412
Total Operating Effect	0	391,025	129,643	299,943	303,601	307,369	26,914	29,316	30,195	31,101	1,549,107

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 by FY 2024.

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 space. One modular classroom was purchased and set up at Chatham Middle during the summer of 2017. Unused funds for FY 2018 and FY 2019 were reallocated to the Energy Efficiency (LED) Project, which provided LED lighting upgrades at Bennett, Horton Middle, J.S. Waters, Moncure and Pittsboro Elementary schools in FY 2019. This project was made possible with grants from Duke Progress Energy in conjunction with Lime Energy Services. The reallocated funds were replaced and assigned to FY 2023 and FY 2024.

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 34,000-square-foot building for Central Services.

Project Budget	Budget	Current		Year 1: FY 2021	Year 2: FY 2022	Year 3: FY 2023	Year 4: FY 2024	Year 5: FY 2025	Year 6: FY 2026	Year 7: FY 2027	Project Totals
		Prior to FY 2020	Year: FY 2020								
Project Element											
Construction	8,667,288	0	0	7,642,972	1,024,316	0	0	0	0	0	8,667,288
Construction Administration	157,528	0	0	132,296	25,232	0	0	0	0	0	157,528
Contingency	866,730	0	0	764,298	102,432	0	0	0	0	0	866,730
Design, Engineering & Construction Ad	472,584	14,650	457,934	0	0	0	0	0	0	0	472,584
Equipment	637,912	0	0	449,438	188,474	0	0	0	0	0	637,912
Financing Costs	166,667	0	0	166,667	0	0	0	0	0	0	166,667
LEED		0	0	0	0	0	0	0	0	0	0
Other Contracted Services	173,346	4,194	0	152,080	17,072	0	0	0	0	0	173,346
Total Project Element	11,142,055	18,844	457,934	9,307,751	1,357,526	0	0	0	0	0	11,142,055
Funding Source											
Debt	11,142,055	18,844	457,934	9,307,751	1,357,526	0	0	0	0	0	11,142,055
Total Funding Source	11,142,055	18,844	457,934	9,307,751	1,357,526	0	0	0	0	0	11,142,055
Operating Effect											
Debt Service	0	0	0	0	1,500,000	1,462,500	1,425,000	1,387,500	1,350,000	1,312,500	8,437,500
Increased Operating Costs	0	0	0	0	31,732	32,684	33,664	34,674	35,715	36,786	205,255
Transfer from Debt Reserve	0	0	0	0	-1,500,000	-1,462,500	-1,425,000	-1,387,500	-1,350,000	-1,312,500	-8,437,500
Total Operating Effect	0	0	0	0	31,732	32,684	33,664	34,674	35,715	36,786	205,255

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 two-story central services building to accommodate all departments in one location. Building design will include provisions for future expansion. The county has purchased the old bus garage site from the school system. Instead of a cash purchase, the funds will be used for the new Central Services Building, essentially offsetting the cost.

Alternatives

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

Schools - New Central Services Building

Approved-No Contracts

Current Stage of Project

Space planning is underway as a precursor to providing a new estimate. Proposed budget of \$10.9 million supports an estimated 34,000 square foot, two-story building designed to meet both current needs and those projected for the next 20 years. This design would eliminate the need for inefficient satellite offices on various school campuses.

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 - Resurface Tracks

Resurfacing of tracks at Chatham County High Schools.

Project Budget	Budget	Prior to FY 2020	Current	Year 1:	Year 2:	Year 3:	Year 4:	Year 5:	Year 6:	Year 7:	Project Totals
			Year: FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	
Project Element											
Construction	324,480	0	59,459	101,627	113,394	0	0	0	0	0	274,480
Contingency	150,000	0	0	50,000	50,000	0	0	0	0	0	100,000
Total Project Element	474,480	0	59,459	151,627	163,394	0	0	0	0	0	374,480
Funding Source											
Capital Reserves	474,480	0	59,459	151,627	163,394	0	0	0	0	0	374,480
Total Funding Source	474,480	0	59,459	151,627	163,394	0	0	0	0	0	374,480
Operating Effect											
Contribution to Capital Reserve	0	0	59,459	151,627	163,394	0	0	0	0	0	374,480
Total Operating Effect	0	0	59,459	151,627	163,394	0	0	0	0	0	374,480

Define Problem

The tracks at Chatham Central and Northwood High Schools were rebuilt in 2007. Jordan-Matthews High School's track was repaved in 2007. The latex surfaces at all three high schools have outlived their projected life spans. Holes are appearing and the latex surface is separating from the asphalt.

Recommended Solution

Resurface one high school's track annually each year from FY2020 to FY2022.

Alternatives

Do nothing to the tracks and gradually discontinue their use for events and physical education classes.

Current Stage of Project

The track resurfacing at Northwood High School has been completed, with the exception of the high jump/pole vault runway. Due to the condition of the remaining portion at NHS, it will need to be repaved and then resurfaced as part of the Jordan-Matthews project during FY2021. This will not require additional funds.

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 2020	Year: FY 2020	Year 1: FY 2021	Year 2: FY 2022	Year 3: FY 2023	Year 4: FY 2024	Year 5: FY 2025	Year 6: FY 2026	Year 7: FY 2027	
Project Element											
Construction	5,736,519	5,249,118	564,423	0	0	0	0	0	0	0	5,813,541
Contingency	246,916		28,222	0	0	0	0	0	0	0	
Design, Engineering & Construction Ad	475,510	444,510	12,735	0	0	0	0	0	0	0	457,245
Other Contracted Services	2,409	0	0	0	0	0	0	0	0	0	0
Total Project Element	6,461,354	5,693,628	605,380	0	0	0	0	0	0	0	6,299,008
Funding Source											
Capital Reserves	2,885,213	2,117,487	605,380	0	0	0	0	0	0	0	2,722,867
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	0
Total Funding Source	6,461,354	5,693,628	605,380	0	0	0	0	0	0	0	6,299,008
Operating Effect											
Contribution to Capital Reserve	0	2,885,213	0	0	0	0	0	0	0	0	2,885,213
Transfer from General Fund	0	0	0	0	0	0	0	0	0	0	0
Total Operating Effect	0	2,885,213	0	0	0	0	0	0	0	0	2,885,213

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: 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, Moncure, SAGE, Chatham Central High School, North Chatham Elementary, Bennet School, Pittsboro Elementary, Perry Harrison, and Siler City Elementary Schools are complete. Jordan-Matthews High School and Northwood High School replacements are in progress, with an estimated completion in December of 2019.

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

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									Project Totals
		Prior to FY 2020	Year: FY 2020	Year 1: FY 2021	Year 2: FY 2022	Year 3: FY 2023	Year 4: FY 2024	Year 5: FY 2025	Year 6: FY 2026	Year 7: FY 2027	
Project Element											
Architectural Design & Construction Ad	3,747,200	3,673,630	568,688	248,290	0	0	0	0	0	0	4,490,608
Construction	61,678,231	15,092,718	31,165,955	15,419,558	0	0	0	0	0	0	61,678,231
Contingency	3,084,217		1,734,466	771,284	0	0	0	0	0	0	
Engineering & Construction Administrat	0	0	0	0	0	0	0	0	0	0	0
Financing Costs	119,649	139,336	0	0	0	0	0	0	0	0	139,336
Furnishings & Equipment	3,727,405	0	0	3,541,035	186,370	0	0	0	0	0	3,727,405
Land	1,409,472	1,409,472	0	0	0	0	0	0	0	0	1,409,472
LEED	0	0	0	0	0	0	0	0	0	0	0
Other Contracted Services	1,064,974	333,217	319,159	227,970	0	0	0	0	0	0	880,346
Total Project Element	74,831,148	20,648,373	33,788,268	20,208,137	186,370	0	0	0	0	0	74,831,148
Funding Source											
Debt--Limited Obligation Bonds	74,831,148	20,648,373	33,788,268	20,208,137	186,370	0	0	0	0	0	74,831,148
Total Funding Source	74,831,148	20,648,373	33,788,268	20,208,137	186,370	0	0	0	0	0	74,831,148
Operating Effect											
Debt Service	0	2,287,157	3,005,024	3,005,024	6,717,362	6,546,897	6,376,555	6,206,212	6,035,870	5,865,528	46,045,629
Increased Operating Costs	0	0	0	0	2,316,461	2,385,955	2,457,534	2,531,260	2,607,198	2,685,414	14,983,822
Transfer from Debt Reserve	0	-2,287,157	-3,005,024	-3,005,024	-6,717,362	-6,546,897	-6,376,555	-6,206,212	-6,035,870	-5,865,528	-46,045,629
Total Operating Effect	0	0	0	0	2,316,461	2,385,955	2,457,534	2,531,260	2,607,198	2,685,414	14,983,822

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. Bid opening was held on 04/19/18 and the construction contract was awarded to New Atlantic Construction. Construction is in progress, and the current schedule supports an August 2021 owner occupancy.

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	Prior to FY 2020	Current								Project Totals	
			Year: FY 2020	Year 1: FY 2021	Year 2: FY 2022	Year 3: FY 2023	Year 4: FY 2024	Year 5: FY 2025	Year 6: FY 2026	Year 7: FY 2027		
Project Element												
Construction	585,000	0	0	0	0	585,000	0	0	0	0	0	585,000
Contingency	58,500	0	0	0	0	58,500	0	0	0	0	0	58,500
Total Project Element	643,500	0	0	0	0	643,500	0	0	0	0	0	643,500
Funding Source												
Capital Reserves	643,500	0	0	0	0	643,500	0	0	0	0	0	643,500
Total Funding Source	643,500	0	0	0	0	643,500	0	0	0	0	0	643,500
Operating Effect												
Contribution to Capital Reserve	0	0	0	214,500	214,500	214,500	0	0	0	0	0	643,500
Total Operating Effect	0	0	0	214,500	214,500	214,500	0	0	0	0	0	643,500

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.

Current Stage of Project

This project is scheduled to begin in FY 2023.

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 2020	Year: FY 2020	Year 1: FY 2021	Year 2: FY 2022	Year 3: FY 2023	Year 4: FY 2024	Year 5: FY 2025	Year 6: FY 2026	Year 7: FY 2027	
Project Element											
Contingency	31,225	0	0	0	0	0	31,225	0	0	0	31,225
Equipment	312,250	0	0	0	0	0	312,250	0	0	0	312,250
Total Project Element	343,475	0	0	0	0	0	343,475	0	0	0	343,475
Funding Source											
Capital Reserves	343,475	0	0	0	0	0	343,475	0	0	0	343,475
Total Funding Source	343,475	0	0	0	0	0	343,475	0	0	0	343,475
Operating Effect											
Contribution to Capital Reserve	0	0	0	85,869	85,869	85,869	85,868	0	0	0	343,475
Total Operating Effect	0	0	0	85,869	85,869	85,869	85,868	0	0	0	343,475

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

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 (Part)

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 2020	Current	Year 1: FY 2021	Year 2: FY 2022	Year 3: FY 2023	Year 4: FY 2024	Year 5: FY 2025	Year 6: FY 2026	Year 7: FY 2027	Project Totals
			Year: FY 2020								
Project Element											
Contract	0	91,020	0	0	0	0	0	0	0	0	91,020
Equipment	223,637	47,010	85,071	0	0	0	0	0	0	0	132,081
Total Project Element	223,637	138,030	85,071	0	0	0	0	0	0	0	223,101
Funding Source											
Capital Reserves	127,637	88,095	61,901	0	0	0	0	0	0	0	149,996
Grants, Gifts, Etc.	96,000	49,935	23,170	0	0	0	0	0	0	0	73,105
Total Funding Source	223,637	138,030	85,071	0	0	0	0	0	0	0	223,101
Operating Effect											
Contribution to Capital Reserve	0	89,072	60,924	0	0	0	0	0	0	0	149,996
Increased Operating Costs	0	0	0	9,647	0	86,547	41,594	0	0	0	137,788
Total Operating Effect	0	89,072	60,924	9,647	0	86,547	41,594	0	0	0	287,784

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 annual 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. Previous 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.

Funding from the NC Governor's Crime Commissioner was awarded in FY 2018. With an equal match from the county, 31 body cameras were purchased along with the server, hard drive and other furniture required for the body camera equipment.

An application for federal grant funds was submitted in early 2018. The application was selected to move forward and a letter of notification was received.

However, funding for this grant is not likely due to federal civil litigation currently taking place in other jurisdictions.

Some additional equipment will be purchased in FY2019 with funds already set aside in anticipation of the grant award. The remainder of the equipment will be purchased in FY2020 and FY 2021 with the county taking on the full cost at that time.

A federal grant was awarded in August, 2019 for \$23,170 to purchase additional body cameras and charging equipment. This federal grant was written the previous year and was withheld funding due to federal litigation surrounding immigration issues on a national level. This grant was awarded out of cycle and is open for purchasing through the end of September, 2020. No other federal or state grants have been obtained for future purchases. Body cameras will be purchased from this recent federal grant and remaining county funds in the fall of 2019.

Operating Impact

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

Technology - Core Storage/Server Replacement

New

Replace essential technology infrastructure that supports the overall County network and access to systems across all County departments.

Project Budget	Budget	Current									Project Totals	
		Prior to FY 2020	Year: FY 2020	Year 1: FY 2021	Year 2: FY 2022	Year 3: FY 2023	Year 4: FY 2024	Year 5: FY 2025	Year 6: FY 2026	Year 7: FY 2027		
Project Element												
Contracted Services	0	0	0	0	0	0	0	52,300	0	0	52,300	
Equipment	0	0	0	0	0	0	0	120,500	0	90,000	210,500	
Total Project Element	0	0	0	0	0	0	0	172,800	0	90,000	262,800	
Funding Source												
Capital Reserves	0	0	0	0	0	0	0	172,800	0	90,000	262,800	
Total Funding Source	0	0	0	0	0	0	0	172,800	0	90,000	262,800	
Operating Effect												
Contribution to Capital Reserve	0	0	0	34,560	34,560	34,560	34,560	34,560	45,000	45,000	262,800	
Total Operating Effect	0	0	0	34,560	34,560	34,560	34,560	34,560	45,000	45,000	262,800	

Define Problem

Technology in the primary and secondary core datacenter systems must be replaced on a recurring basis to maintain the needed and diverse functionality of all County departments. An economical solution was put in place in 2019 that doubled capacity on storage and nearly quadrupled speed. As long as support is paid annually, the solution provides for a controller upgrade option every three years 'at no additional cost'. The controller replacements have been a significant portion of replacement cost in the past, but is no longer part of the equation. Therefore, the main data storage arrays and host server components are the infrastructure that will need upgrading. These are heavy use technologies, requiring maintenance and ultimately replacement at points where impacts to staff ability to use the network and systems and malfunctions do not become a hindrance to County productivity. The industry standard for replacement cycles is five years. The upgrades/replacements we will need can be effectively planned for a two-phase approach with funds needing to be available at the five and seven year mark.

Recommended Solution

Replace the needed components in the two phase approach where host servers are replaced at five years and storage arrays at seven. We have confirmed with the vendor that the storage arrays can be planned for seven years. Because the system in place is less mechanical, its stability for two years beyond industry standard recommendations is trusted by the vendor and staff of MIS. By maintaining our annual support, taking advantage of the 'free' controller upgrades every three years, the costs of this recommendation rather than the 'rip and full replace' that has been traditional are significantly reduced.

Alternatives

- (1) No replacement – This is not a feasible option because the mechanical components of the system will ultimately fail. Industry standard is a five year replacement cycle for critical data center systems.
- (2) Full replacement of all core infrastructure at seven years. The infrastructure put in place in 2019 eliminates the need to plan in this way. This approach has been traditional for a long time, but it commonly leads to lengthy migration activities and increases costs as special expertise is needed in order to set up brand new systems. It also contributes to repeated learning curves for County support staff and holds increased risk of adverse functional impacts as the systems age after the five year mark.
- (3) Move everything to the 'cloud'. This is not viewed as feasible at this time. Hosted solutions for some applications have been done, but requirements for access via internet or other means have been found to be very slow. Data storage costs may add up, and data security breaches at key hosting sites such as Amazon and Google have weakened opinions from peers who are now moving data back on premises.

Technology - Core Storage/Server Replacement

New

Relation to Other Projects

This core infrastructure is essential to the functioning of the County network, access to all systems used by all departments and protection of the County data. This enables the County to continue operations needed in response to demands and grow as County plans change.

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	Prior to FY 2020	Current	Year 1: FY 2021	Year 2: FY 2022	Year 3: FY 2023	Year 4: FY 2024	Year 5: FY 2025	Year 6: FY 2026	Year 7: FY 2027	Project Totals
			Year: FY 2020								
Project Element											
Equipment	723,906	0	706,826	0	0	0	0	0	0	0	706,826
Total Project Element	723,906	0	706,826	0	0	0	0	0	0	0	706,826
Funding Source											
Capital Reserves	723,906	0	706,826	0	0	0	0	0	0	0	706,826
General Fund Fund Balance	0	0	0	0	0	0	0	0	0	0	0
Total Funding Source	723,906	0	706,826	0	0	0	0	0	0	0	706,826
Operating Effect											
Contribution to Capital Reserve	0	603,255	120,651	0	0	0	0	0	0	0	723,906
Decreased Operating Costs	0	-126,000	-126,000	-126,000	-126,000	-126,000	-126,000	-126,000	-126,000	-126,000	-1,134,000
General Fund Fund Balance	0	0	0	0	0	0	0	0	0	0	0
Increased Operating Costs	0	78,038	60,866	20,918	21,546	22,192	22,858	23,544	24,250	24,998	299,210
Total Operating Effect	0	555,293	55,517	-105,082	-104,454	-103,808	-103,142	-102,456	-101,750	-101,002	-110,884

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.

Technology - Increase Capacity for Data Storage

Approved-No Contracts (Part)

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.

The project ordinance for the final phase of the project was opened in summer 2019 and the project has progressed quickly as of September, 2019. Most of the equipment has arrived and efforts have begun to make space in racks, verify electrical needs and receipt of correct equipment and develop migration plans. This is a full replacement, nearly doubling capacity and quadrupling speed. The secondary system will be placed in the Detention Center MIS room to put distance between the primary and secondary systems as a best practice for disaster recovery. This replacement project is expected to be completed by end of December 2019.

The solution chosen for this replacement is a completely new system, fully mirrored in the secondary system. Taking advantage of new technology is enabling us to put in place a system that will not need a full replacement in seven years as has been traditional. This system has periodic upgrade/replacement plans associated with it that reduce replacement costs. Oversight by MIS staff is expected to be reduced, which will enable existing MIS staff to address other infrastructure and strategic needs.

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.

Technology - Increase Capacity for Data Storage

Approved-No Contracts (Part)

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. Maintenance and support are bundled into the purchase price of the equipment so there will be no unexpected additional charges for maintenance and support for five years.

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 2020	Year: FY 2020	Year 1: FY 2021	Year 2: FY 2022	Year 3: FY 2023	Year 4: FY 2024	Year 5: FY 2025	Year 6: FY 2026	Year 7: FY 2027	
Project Element											
Contingency	42,350	0	0	0	0	42,350	0	0	0	0	42,350
Equipment	423,500	0	0	0	0	423,500	0	0	0	0	423,500
Total Project Element	465,850	0	0	0	0	465,850	0	0	0	0	465,850
Funding Source											
Capital Reserves	465,850	0	0	0	0	465,850	0	0	0	0	465,850
Total Funding Source	465,850	0	0	0	0	465,850	0	0	0	0	465,850
Operating Effect											
Contribution to Capital Reserve	0	66,550	133,100	133,100	133,100	0	0	0	0	0	465,850
Total Operating Effect	0	66,550	133,100	133,100	133,100	0	0	0	0	0	465,850

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.

As of September 2018, 16 devices impacting courtrooms have begun failing without ability to repair. All are in the process of being replaced with the same model, which is older technology and may fail in less than 5 years. Upgrading to newer technology in these devices now is difficult because newer models are incompatible with the remaining equipment that is in place. There is no significant advantage to doing a full replacement now. Failing units will be replaced with the same model to minimize costs and remain in line with the total replacement planned for FY 2023.

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.

Technology - Justice Center Audio/Visual Replacement

Approved-No Contracts

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 2020	Year: FY 2020	Year 1: FY 2021	Year 2: FY 2022	Year 3: FY 2023	Year 4: FY 2024	Year 5: FY 2025	Year 6: FY 2026	Year 7: FY 2027	
Project Element											
Furnishings & Equipment	1,000,000	0	0	1,000,000	0	0	0	0	0	0	1,000,000
Total Project Element	1,000,000	0	0	1,000,000	0	0	0	0	0	0	1,000,000
Funding Source											
Capital Reserves	1,000,000	0	0	1,000,000	0	0	0	0	0	0	1,000,000
Total Funding Source	1,000,000	0	0	1,000,000	0	0	0	0	0	0	1,000,000
Operating Effect											
Contribution to Capital Reserve	0	436,000	282,000	282,000	0	0	0	0	0	0	1,000,000
Increased Operating Costs	0	0	0	0	75,000	77,250	79,568	81,955	84,413	86,946	485,132
Total Operating Effect	0	436,000	282,000	282,000	75,000	77,250	79,568	81,955	84,413	86,946	1,485,132

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 FY 2019 and will be complete in January, 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.

Voting Equipment Replacement

Approved-No Contracts

Replace voting equipment for Chatham County elections.

Project Budget			Current	Year 1:	Year 2:	Year 3:	Year 4:	Year 5:	Year 6:	Year 7:	Project Totals
	Budget	Prior to FY 2020	Year: FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	
Project Element											
Contingency	61,494	0	61,494	0	0	0	0	0	0	0	61,494
Equipment	614,940	0	614,940	0	0	0	0	0	0	0	614,940
Total Project Element	676,434	0	676,434	0	0	0	0	0	0	0	676,434
Funding Source											
Capital Reserves	676,434	0	676,434	0	0	0	0	0	0	0	676,434
Total Funding Source	676,434	0	676,434	0	0	0	0	0	0	0	676,434
Operating Effect											
Contribution to Capital Reserve	0	676,434	0	0	0	0	0	0	0	0	676,434
Decreased Operating Costs	0	0	-29,000	-29,000	-29,000	-29,000	-29,000	-29,000	-29,000	-29,000	-232,000
Increased Operating Costs	0	0	29,298	30,177	31,083	32,015	32,976	33,965	34,984	36,034	260,532
Total Operating Effect	0	676,434	298	1,177	2,083	3,015	3,976	4,965	5,984	7,034	704,966

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 28 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 eliminated the use of direct record electronic (DRE) voting systems beginning 2018, which some of the larger counties use. This will 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.

Current Stage of Project

Three vendors were certified by the SBOE they are, ES&S, Clear Ballot, and Hart InterCivic. In November 2018 the ES&S DS200 was tested in the Pittsboro Precinct as recommend before purchasing.

The Board of Elections hosted a public demonstration on September 11, 2019 and started the process by adopting a preliminary resolution to the Board of County Commissioner for the purchase of new equipment. Hart InterCivic will be tested in East and West Siler City precincts for the November 5, 2019 Municipal Election. Upon successful testing the Board of Elections will move forward with the purchasing process. The vendors are offering a one-time discount for purchase of new equipment as long as the purchase is made by December 31, 2019.

Voting equipment in this project includes tabulation machines, laptops, tablets (for curbside voting), printers, voting booths, scanners and ballot transfer boxes. These items are used for elections only therefore are considered election equipment.

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

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 2020	Year: FY 2020	Year 1: FY 2021	Year 2: FY 2022	Year 3: FY 2023	Year 4: FY 2024	Year 5: FY 2025	Year 6: FY 2026	Year 7: FY 2027	
Project Element											
Construction	112,100	5,850	106,250	0	0	0	0	0	0	0	112,100
Contingency		0	0	0	0	0	0	0	0	0	0
Design, Engineering & Construction Ad	28,452	16,852	11,600	0	0	0	0	0	0	0	28,452
Total Project Element	140,552	22,702	117,850	0	0	0	0	0	0	0	140,552
Funding Source											
Water Capital Reserve	140,552	22,702	117,850	0	0	0	0	0	0	0	140,552
Total Funding Source	140,552	22,702	117,850	0	0	0	0	0	0	0	140,552

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 an eight-inch water main and connect the six-inch water main along old US 1 with the eight -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 has been approved 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. CSX is requiring an additional approval to perform geotechnical subsurface borings within their right-of-way which has furthered delayed this project. McGill and Associates is currently working with CSX representatives to secure these final geotechnical boring approvals. Depending on this additional approval, construction is expected to begin in the late fall/early winter of 2019 and the project is scheduled to be completed by the spring of 2020.

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

Water - Haywood Water Main Replacement

Approved-No Contracts

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.

Operating Impact

None.

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 2020	Current								Project Totals	
			Year: FY 2020	Year 1: FY 2021	Year 2: FY 2022	Year 3: FY 2023	Year 4: FY 2024	Year 5: FY 2025	Year 6: FY 2026	Year 7: FY 2027		
Project Element												
Design, Engineering & Construction Ad	2,200,000	39,882	12,500	500,000	0	0	0	0	0	0	0	552,382
Total Project Element	2,200,000	39,882	12,500	500,000	0	0	0	0	0	0	0	552,382
Funding Source												
Water Capital Reserve	2,200,000	39,882	12,500	500,000	0	0	0	0	0	0	0	552,382
Total Funding Source	2,200,000	39,882	12,500	500,000	0	0	0	0	0	0	0	552,382

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, and Chatham County) to perform an economic feasibility analysis. The analysis has been completed and meetings have taken place to discuss Raftelis's findings and determine the next steps. In June of 2019 a Memorandum of Agreement (MOA) was approved and signed by the Western Intake Partners to move forward with the initial phases of the Western Intake Regional Water Plant to include policy and governance, preliminary engineering work, field evaluations and permitting with the Army Corps of Engineers and NCDEQ. A Request for Qualifications (RFQ) is being developed by the Western Intake Partners to hire a Project Management Team to oversee these initial phases and potentially future phases of the project. The Triangle Water Supply Partnership (TWSP), formerly Jordan Lake Partnership, memorandum of understanding (MOU) assesses an annual fee (fluctuates depending on projects that are scheduled for the upcoming year) in support of the costs of each year of general activities by the Partnership by payment to the Triangle J Council of Government (TJCOG) who has been recently hired as the Administrative and Fiscal Agent for the TWSP.

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

Future Projects

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.

Community College - Career and Technical Education Building

Future

Construct a new Career and Technical Education Building on the Chatham Main Campus to meet needs for skilled trade fields in the service area.

Define Problem

The college has limited physical space on the Chatham Main Campus to expand program opportunities in career and technical education programs. The college has recently started an Electrical Systems Technology program that utilizes space in the Sustainable Building, which was not designed to meet the needs of this program. The college's Building Construction Technology program is also using space in the Sustainable Building that was not designed to meet the needs of this program.

Recommended Solution

Construct a new building on the Chatham Main Campus for Career and Technical Education Programs.

Alternatives

1. Construct a new building on the Chatham Main Campus for Career and Technical Education Programs.
2. Continue offering existing programming and not offer new degree options in Career and Technical Education.

Current Stage of Project

College staff is doing additional research to determine the programming mix for this building to meet needs for skilled trade fields in the service area.

Description of Land Needs

Sufficient space is available at the main campus.

Professional Services Needed

Professional design, architecture, and construction will be needed.

Operating Impact

Additional funding will be needed for utilities and building maintenance.

County Buildings - Agriculture & Conference Center Phase II

Future

Expand the current Chatham County Agriculture & Conference Center (CCACC) to include Phase II additions, including a multi-purpose event arena, outdoor classroom space, farmers' market venue, office space, demonstration plots, and storage buildings.

Define Problem

Plan Chatham, the county's adopted comprehensive plan for the next 25 years, includes goals to preserve the rural character and lifestyle of Chatham County and to preserve, protect, and enable agriculture and forestry. Chatham County has limited venues where the county's agricultural products can be exhibited or utilized as teaching tools for both producers and the public at large. The projected growth of the county and the importance that agriculture plays in our local economy and way of life, make it important to have facilities in place to educate the public and producers. This education will enhance agricultural literacy and our county's agricultural impacts. The multipurpose nature of these facilities will facilitate their utilization by other county departments and the local public school system as well. These facilities will also serve as revenue-generating venues by outside/private entities that would have to travel to Raleigh, NC to find similar venue spaces.

Recommended Solution

Obtain a feasibility study to determine how best to proceed with Phase II additions. Funding for the study is being sought with non-county funds (donations, foundation funds, etc.).

Description of Land Needs

Adequate acreage currently held by the county is available to house the construction of new facility on the grounds of the CCACC.

Professional Services Needed

Architectural, design, and constructions services may be needed in the future.

Operating Impact

Additional funding would be needed for operational expenses; however, many of these expenses would be related to revenue-generating events and programmatic efforts.

County Buildings - County Complex Master Plan

Future

Develop a long-term master plan that will address long-term space needs for county buildings currently at the government annex campus, while being responsive to the desire for a clear vista between the Justice Center and the Historic Courthouse that would contribute to a vibrant downtown setting.

Define Problem

The growth that has already occurred in Chatham County has outpaced the capacity of the existing buildings. Anticipated future growth will exacerbate the problem. The Courthouse Annex has been partially renovated; however, renovated areas have outgrown the existing space needs. Staff housed in the Dunlap Building are overcrowded and the meeting room has been repurposed as office space. The Old Agriculture Building requires significant renovation to provide office space. At the same time, members of the Downtown Merchants Association and others have expressed the desire for more open park-like space and parking where the Courthouse Annex now exists.

Recommended Solution

Develop a master plan for a downtown campus. Among other options, this master plan will explore; 1) Removing the Annex, Dunlap, and Old Ag Buildings, 2) Constructing a new building to house all of the departments currently residing in these buildings and 3) 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

Based on the renderings provided by the feasibility study consultant, addressing the space needs and the need for open space concurrently would require a three-story building and parking deck that would leave little room for future expansion. In addition, staging of the project could create traffic, parking, and logistical issues. A possible alternative is to locate the county offices on a portion of the unused land that the county owns at the site of the Chatham County Agriculture and Conference Center (CCACC). County offices would still be close to downtown for shopping, lunch, and other business and the existing site of the Dunlap Building could be sold and begin to generate tax revenue for the Town of Pittsboro. This option could be easier to phase, because once the building was complete, all employees could be moved and the construction of the open space and parking downtown could be accomplished. In addition, there would still be sufficient remaining space at the CCACC to accommodate plans for the future while still allowing for future expansion for county offices.

Current Stage of Project

In FY 2018, the Board of Commissioners directed staff to hire a consultant to create a downtown master plan to accommodate the space needs of the county and develop a park-like area between the Historic Courthouse and the Justice Center. The consultant presented a master plan to the Board of Commissioners in October, 2018 that would address projected space needs up to 2048. Commissioners requested development of additional design options to include phasing of design such that the building would accommodate short-term space needs first but be easily expandable for long-term growth. In addition they requested that the consultant review the plan with the Town of Pittsboro to determine whether the existing restriction of 50 feet on building height might be modified so that the building could include an additional story and minimize the footprint.

Relation to Other Projects

The project is related to the Town of Pittsboro project to build a new town hall that will provide short-term space for the Chatham County Public Health Department and the Board of Elections.

Professional Services Needed

An updated Master Plan, detailed architectural drawings, and construction management will be needed.

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 former 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.

County Buildings - Sheriff's Office Warehouse

Future

Build new 7,000 square-foot facility to house Sheriff's Office equipment to include command bus, command trailer, boat, community service trailers, and other equipment.

Define Problem

The Sheriff's Office has equipment that includes a command bus, command trailer, boat, side-by-side all-terrain vehicle, golf cart, four utility trailers, two radar trailers, two electronic sign trailers, and two utility light fixture trailers. This equipment is stored at various locations instead of at a central safe location for proper upkeep and quick dispersal. A central location is needed to store Sheriff's Office property, create a work area for maintaining equipment, and create space to investigate large pieces of evidence. The space will need to be 70x100 for current operations and future growth.

Recommended Solution

Build a new warehouse near the Detention Center and new Animal Resources Center.

Alternatives

- 1) Do nothing and continue to use existing space as well as out sourced spaces.
- 2) Rent a warehouse.

Description of Land Needs

Approximately 2 acres would be needed.

Professional Services Needed

Architectural, engineering, and construction services will be needed.

Operating Impact

Additional funds will be needed to operate and maintain the facility.

Parks - Plans for New and Existing Parks

Future

Build new park facilities and trails and update and renovate existing facilities.

Define Problem

Chatham County's Parks and Recreation Comprehensive Master Plan guides improvements to Parks and Recreation facilities and programs for the next ten years. Following adoption of the Master Plan, specific park improvement plans were adopted for Southwest District Park and Earl Thompson Park. Plans for a new Southeast District Park and for the Brooks Creek Corridor are underway as well as a plans for renovations or upgrades to Northeast and Northwest District Parks.

Population growth will result in increased demand for new parks and amenities, trails, and recreation programs. The Parks and Recreation Department will have to anticipate and respond to additional demand for service.

Recommended Solution

Staff is working to develop a phasing plan for the improvements envisioned in the Southwest, Earl Thompson Park and Northeast Plans and will develop an overall strategy to address the timing and implementation of new facilities and renovations county-wide. Operating budget capital outlay funds will be used to address appropriate smaller projects. Larger projects to address new parks – such as a Southeast District Park - and additions or improvements to existing parks identified in the plans will become scheduled in the CIP when funding sources can be researched and identified.

Description of Land Needs

Adequate acreage currently held by the county is available to house the construction of a new Southeast District Park. Other future facilities could require additional land.

Professional Services Needed

Architectural, design, and constructions services may be needed in the future.

Operating Impact

Additional funding would be needed for operational expenses, including staff; some of these may be offset by revenue-generating programs and events.

Schools - Athletic Field Lighting

Future

Athletic Field Lighting Upgrades

Define Problem

Much of the existing athletic field lighting is outdated or does not meet current NC High School Athletic Association (NCHSAA) standards.

Recommended Solution

Replace outdated athletic field lighting and add lighting to newly created fields for additional teams and student population at existing middle and high schools.

Alternatives

Do nothing and limit the use of our athletic spaces.

Professional Services Needed

Design, engineering, and construction services will be needed.

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 Elementary School at Chatham Park

Future

New Elementary School at Chatham Park.

Define Problem

During the next ten years, the current Northwood attendance zone is projected to grow by almost 1,900 students. Over 600 of these students are expected to be generated by Chatham Park. We will need to construct schools in Chatham Park to meet the projected growth in population.

Recommended Solution

Monitor North Carolina State University Operations Research and Education Lab (ORED) projections and the Chatham Park buildout on an annual basis and schedule this project accordingly. Financial and architectural plans for a new elementary school will begin when it is apparent that the school is needed.

Alternatives

Do not build an additional school and continue adding modular units to the current K-5 schools in the Northwood attendance zone.

Professional Services Needed

Design, engineering, and construction services will be needed.

Operating Impact

Additional funding will be needed for operating expenses upon opening of a new school.

Schools - New Schools/Capacity Expansion

Future

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

Define Problem

Based on ORED projections, the following factors are expected to create the need for new schools, additions to existing schools, and/or modular classrooms within the next 10 years to accommodate projected student population growth:

- Potential for the Moncure and Siler City megasites to attract new industries/companies and associated student population,
- Continued residential expansion in the northeast quadrant of the county,
- Student population growth associated with and/or generated by Chatham Park,
- Potential student population growth associated with renewed residential expansion in the Siler City area.

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 - Expand County Network/Broadband

Future

Expand county network and broadband possibilities.

Define Problem

The lack of broadband service county-wide has long been identified as a major problem by residents, government agencies, businesses, fire departments and schools. While the county provides broadband internet access at its primary Pittsboro location, leased lines are used for county offices in Siler City, Goldston, and other locations. Leased lines do not reliably provide necessary bandwidth and incur monthly charges. A broader network consideration is needed if county government services are to be provided and if the county wants to pursue support for delivery of broadband services countywide.

Recommended Solution

The 2015 North Carolina Rural Assembly Conference identified potential sources of funding for broadband services and collaborative strategies. Pursue a collaborative effort with Chatham County Schools that could lead to wider service possibilities and mix funding from various sources to put a countywide network supporting county business and broadband foundation in place sooner.

Alternatives

1. Do nothing: Planned changes in switches, potential cabling and leased line upgrades will continue as needed. Continue to use leased lines 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 and incrementally to other sites over time. Fiber can provide fast speeds well into the future. With more system vendors 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, fiber requires no further maintenance beyond addressing cuts if they occur. Dedicated fiber to the Backup 911 Center 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 network supporting county business and broadband foundation in place sooner.

