



Town of Apex
Capital Improvement Plan
 Fiscal Year 2017 - 2021



Forward

This document is designed to give the reader an understanding of the Town of Apex’s Capital Improvement Plan and how the plan is developed, reviewed, funded, and implemented. Work to modify the Town’s current process and develop this new approach to capital planning was performed, beginning in FY 2014-15, by a workgroup comprised of leaders in several Town departments including: Public Works, Construction Management-Engineering, Facility and Fleet Services, Planning and Community Development, Fire, Parks, Recreation and Cultural Resources, Finance, and Administration.

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Section 1: Overview of the Capital Improvement Plan

Capital planning is an important management tool that strengthens the linkage between community infrastructure needs and the financial capacity of the Town. The Capital Improvement Plan (CIP) is the planning mechanism by which the Town Council allocates limited financial resources to implement long term goals as defined in the Town's Strategic Plan, Peak Plan 2030, the 2011 Transportation Plan (as updated), the Parks and Recreation Master Plan, and other similar planning documents. The purpose of the Capital Improvement Plan (CIP) is to forecast and match projected revenues and major capital needs over a five-year period.

The 2016-20 CIP was introduced to the Town Council at their retreat in March of 2015. Based upon discussions at that event, and subsequent discussions and decisions, the CIP was modified to reflect the wishes of the Council. Modifications included more aggressive timelines for transportation infrastructure projects, changes to the timing of parks improvements, and establishing the construction of a Senior Center as a higher priority. This current CIP reflects this same timing and adds additional projects to the Plan in current and future years.

The CIP is a multi-year plan for major capital expenditures such as the acquisition of land, construction or significant renovation of public facilities (i.e. buildings/parks), construction of new transportation infrastructure (i.e. roads, sidewalks, multi-use paths), expansion or significant renovation of water, wastewater, electric, or stormwater infrastructure, capital equipment to support operations, or any combination of the above. Projects eligible for inclusion in the CIP are those with an asset value of greater than \$100,000 and a useful life of greater than three years.

When identifying new projects, staff looks to the long-term priorities and direction set by Town Council and submits formal requests through the CIP process. A formal request includes description of the project, an explanation of how the project implements an established goal, the estimated cost of the project, and an estimate of the recurring costs associated with a completed project (i.e. additional staff, additional utilities, etc.). The formal request also includes an analysis of alternative solutions, if any, and a statement as to the effect on services and/or programs if the project is not funded.

Once adopted by the Town Council, the CIP becomes a statement of Town policy regarding the need, priority, timing, and funding of future capital projects. The Capital Improvement Plan is simply that – a *plan*. As such, projects and funding mechanisms are subject to change based on new or shifting service needs, special financing opportunities, emergency needs, or other directives or priorities established by the Town Council. Future needs and financial constraints may result in changes in priority over the five year period, and because priorities can change, projects included in outward planning years are not guaranteed for funding. The CIP represents the best judgment of Town Administration and Town Council at the time the Plan is adopted. Priorities established in the CIP guide subsequent decisions made by Town Administration and the various boards and commissions appointed by Town Council.

The Town of Apex CIP achieves five major objectives as a component of the Town's budget and financial planning process:

1. Helps the Town rationally and intelligently plan for the repair, replacement, and acquisition of capital items that are necessary in providing high quality services to the citizens of Apex.
2. Assists in fiscal planning by forecasting capital demands together with future revenues and expenditures.
3. Ensures better coordination, evaluation, and planning of projects to serve the community and its needs.
4. Serves, together with the annual budget and other financial plans, as a guide to decision-making for the Town Council, Town Manager, and staff.
5. Serves as a systematic and comprehensive analysis of capital needs, increasing the probability of making rational budgetary judgments since improvements are identified, prioritized, and matched to the projected fiscal resources of the Town.

Relationship to the Annual Operating Budget

Some CIP projects are funded through annual operating funds, such as the General Fund, Electric Fund, and the Water/Sewer Fund. In these cases, the CIP and the Annual Operating Budget are directly linked as CIP projects become authorized through the adoption of the Annual Operating Budget. Projects funded through debt financing also impact the operating budget through ongoing debt service expense. Finally, some completed CIP projects will directly impact the operating budget in that they will require ongoing expenses for staff and other operating costs.

CIP Structure

The CIP is organized into seven functional categories, called "elements," in order to group projects with similar items.

1. **Transportation element:** funds the construction of new or improved roadways, sidewalks, and multi-use paths. Implementation of the 2011 Transportation Plan (as amended) is funded in this element.
2. **Parks, recreation and cultural resources element:** funds the acquisition of land for new park and greenway facilities, the construction of park and recreation amenities, and major maintenance of current facilities. Implementation of the Parks and Recreation Master Plan is funded in this element.
3. **Public safety element:** funds the acquisition of capital equipment to support the operations of the three public safety departments in the Town (Fire, Police, and EMS). Public safety facilities are considered in the public facilities element.
4. **Public facilities element:** funds construction and major maintenance of general government and public safety facilities and infrastructure. This element also funds improvements to communications and technology infrastructure.
5. **Stormwater and environmental services element:** funds projects designed to manage and mitigate the effects of stormwater runoff and manage the collection and disposal of solid waste. These projects include structural improvements, BMP construction, and major maintenance of this infrastructure. They also include equipment needed to manage solid waste collection.

6. **Electric utility element:** funds the construction and improvement of electric distribution infrastructure. These projects include substation additions and upgrades, distribution line extensions, and major maintenance of this infrastructure.
7. **Water and sewer utility element:** funds the construction and improvement of water and sewer infrastructure. These projects include main additions and replacements, water/wastewater treatment plant renovations/expansions, filter rehabilitation, pump station additions, and major maintenance of this infrastructure.

Capital Improvement Funding

As important as the capital projects contained in the Plan are the sources of funding used to execute the Plan. Capital Improvements for the Town of Apex are funded using a variety of sources that are broadly categorized as cash or debt-financing.

Cash, or pay-as-you-go (paygo) funds come from sources such as tax revenue, development related fees (recreation, transportation, and acreage fees), program fees, State revenue, and interest earnings. Some of these sources, such as State revenue from the Powell Bill, our own recreation fees, and certain others, may only be spent to meet certain needs. Other revenue sources come with no restriction on the needs they may be used to address.

Major funding sources for the CIP are described below:

General Fund: General Fund revenue such as ad valorem taxes, sales taxes, utility taxes and other similar revenue are used to fund Town operations and may be used to fund capital projects such as facility improvements, transportation system improvements, stormwater infrastructure improvements, and other similar projects. Compared to other sources, general fund resources are a flexible revenue source without restrictions on their use.

Enterprise Funds: Enterprise funds, such as the water/sewer fund and the electric fund, collect user fees as part of their operations, then invest a portion of that revenue into capital projects. The Town uses these funds only for corresponding enterprise projects. For instance, the electric fund only pays for projects related to the electric system, and not for projects related to the water/sewer fund, or any general fund related project.

Water/Sewer Acreage and Capacity Fees: These fees are charged, based upon a Town Council-approved Development Fee Schedule, to developers of land within the Town of Apex to pay for the capital facility burden created by new development. Revenue from these fees is restricted to be used for capital improvements to the water/sewer system or to fund payment of debt service for improvements to these systems. Specifically, acreage fees are used to recover costs of previous improvements and build reserves for future improvements, and capacity fees are designated specifically for water and wastewater treatment projects (and debt service).

Debt Financing: For debt-financing, the Town uses a several types of debt mechanisms, including general obligation bonds, revenue bonds, and traditional lease-purchase or installment financing. The mechanism selected varies depending on the level of funding needed, the term of the need, and the current debt market conditions. General obligation bonds are approved by voters and are backed by the Town's taxing authority to repay the bonds. Revenue bonds pledge the revenue generated by specific enterprise (water, sewer, electric) charges.

Transportation Development Fees: These fees are charged, based upon a Town Council approved Development Fee Schedule, to developers of land within the Town of Apex and its Extraterritorial Jurisdiction (ETJ) to pay for improvements to the Town's transportation infrastructure to respond to the additional burden placed upon it by new development. Revenue from these fees is restricted to be used for capital transportation system improvements or to fund payment of debt service for improvements to this system.

Recreation Subdivision Fee-in-Lieu of Dedication: These fees are charged, based upon a Town Council-approved Development Fee Schedule, to developers of land within the Town of Apex and its Extraterritorial Jurisdiction (ETJ). Revenue from these fees is restricted to be used for park and recreation system expansion or improvements or to fund payment of related debt service.

Reserve from Prior Years: As capital projects are completed, any unspent budgeted amounts accumulate into capital reserves, which are available to fund future projects. Capital reserves can also build up when the Town collects revenue in excess of the amount budgeted for development fees described above.

The CIP Process

The process for developing the CIP, as illustrated below begins shortly after the beginning of a new fiscal year (July 1) as staff considers unmet capital needs in the recently adopted budget and other emerging needs. During the first three months of the fiscal year, staff evaluates the need to include additional projects in the coming CIP and considers the relative priority of unapproved projects. For each project, staff in the requesting department completes a CIP project request form and compiles supporting documentation. All CIP project requests are due by October 15 of each year. A committee comprised of the Assistant Town Manager and several Department Directors then begins the process of scoring each project against an evaluation matrix to help determine the relative priority the committee will assign to each project.

Once all submitted projects are ranked, a draft Capital Improvement Plan covering the next five fiscal years is developed by the Assistant Town Manager and the CIP workgroup. This draft plan is then submitted to the Town Manager by mid-December for review and consideration. Following the Manager's review the CIP document is prepared for consideration by the Town Council at their Annual Retreat in the first quarter of the new calendar year. Once Council input and approval is accomplished, the CIP is used as a basis for budgeting in the coming fiscal year and in formulating financial forecasts prepared as part of the budget process.



CIP Practices

Long-range cost estimates: Using the upcoming fiscal year as the base, staff will apply cost escalators to better estimate future construction costs. Staff applies the escalator to new construction and significant building rehabilitations. In some elements, such as public utilities and transportation, staff applies other escalators developed for those specific service areas.

Closing Projects: Projects are closed when the approved scope of work is complete. Staff reviews project statuses periodically to identify projects that are finished and can be closed. If the budget for a completed project is not fully expended, generally, the budget is closed and the remaining balance accumulates in fund balance. The accumulated fund balance is available to pay for future projects.

Horizon Issues: The proposed CIP funds the Town's highly prioritized needs. Staff reviews and analyzes the business cases supporting these projects and considers them ready to move forward. In many situations, however, the Town has identified a future need, but has not yet completed a detailed analysis, considered options, or designed a specific facility. These projects include facilities, capital maintenance, and business systems that will be needed in the future, often beyond the CIP's five-year timeframe.

Planning By Fund

What follows is a description of the projects submitted, by element (as described on Page 4), for the five year planning timeframe under consideration. The element begins with a brief description of what types of projects are funded and includes a tabular summary of all projects considered and the proposed revenue source to fund the projects in each year. At the end of each section there is a summary table showing the total cost of the projects in each year and the total of each revenue source. More details regarding the cost of borrowing is provided in each summary section. The reference to "Local Revenue" in the revenue portion of the tables is indicative of the need for current year funding for some projects/purchases in each year. This could include appropriation of reserve funds in the three major funds.

Section 2: General Fund

A majority of projects included in the CIP are housed in the General Fund. This revenue is generated in a large part by ad valorem taxes, along with sales taxes, utility taxes and other similar revenue.

The types of capital projects that qualify for this fund include facility improvements, transportation system improvements, stormwater infrastructure improvements, and other similar projects.

Compared to other sources, general fund resources are a flexible revenue source without restrictions on their use.

The icons below signify each element within the general fund, and are placed on the top left corner of the pages which are associated with their projects.



Transportation



*Parks, Recreation
and Cultural
Resources*



Public Safety



*Stormwater and
Environment*



Public Facilities

Transportation Element Projects

Projects Funded: Construction of new roadways, improvements to existing roadways, sidewalks, and multi-use paths.

Peak Plan 2030 Recommendation: Implementation of the 2011 Transportation Plan (as amended) is funded in this element.

Transportation infrastructure, like the Peakway shown to the right, has a long lasting effect on the quality of life in Apex giving easier access to all areas of town and helping ease commuter traffic congestion as residents travel to and from employment centers.



The table below shows each of the projects submitted for consideration in this year's CIP process, the estimated cost of the project, and a summary of the proposed source of funding in each fiscal year in the plan. Section 5 of this document contains detailed information regarding the proposed funding source for each individual project.

		Transportation				
Project	ID #	2016-17	2017-18	2018-19	2019-20	2020-21
Project Cost:						
Apex Barbecue Road - Sidewalk	CM 4			975,000		
James St & Schieffelin Rd - Sidewalk	CM 5			519,000		
Apex Peakway - Southwest Connector	CM 6	1,500,000	7,500,000			
Center St & E. Chatham St Crossing Improvements	CM 7					1,000,000
Olive Chapel Rd - Sidewalk	CM 8			600,000		
West Chatham St - Sidewalk	CM 9		250,000			
Apex Peakway - Schieffelin Road Connector	CM 10		1,000,000		7,500,000	
Kelly Rd - Sidewalk	CM 11			600,000		
East Williams St - Sidewalk	CM 12			250,000		
Hillcrest St - Sidewalk	CM 13			200,000		
US 1 & NC 55 Interchange	CM 14				500,000	
Apex Barbecue Road - Bridge Replacement	CM 15	200,000	200,000			
Perry Road Sidewalk	CM 16					150,000
Apex Peakway Traffic Signals	CM 17				500,000	
Tingen Road Sidewalk	CM 18					275,000
Street Resurfacing			1,700,000	1,700,000	1,600,000	
Total		1,700,000	10,650,000	4,844,000	10,100,000	1,425,000
Revenue Sources:						
Local Revenue		1,700,000	1,450,000	1,314,050	1,000,000	1,260,000
Fees						
Federal Grant			2,500,000	1,829,950	2,500,000	165,000
State Grant						
Local Grant						
Debt			6,700,000	1,700,000	6,600,000	
Total		1,700,000	10,650,000	4,844,000	10,100,000	1,425,000



FY 2016-17

Apex Peakway Interchange at South Salem Street **\$9,000,000**

The project provides a contiguous route from NC 55 in the east to NC 55 in the west to act as a bypass to NC 55 and to provide improved local connectivity to the south and west. The project includes a grade separation of the CSX railroad line and South Salem Street with a connection to South Salem Street, and sidewalks along all roadways. The planning study currently underway will evaluate options for an underpass compared with an overpass. The rail crossing at Tingen Road will be closed as part of this project (and proposed to be a pedestrian-only crossing similar to the Thompson Street crossing) as required by the master agreement between Town of Apex and CSX Transportation. Traffic signals may be required at each end of the loop road. The estimated cost of this project has increased since last year's CIP due to input from consultants working on the grade separation study. Funding for the construction of this project, targeted to begin in FY 2017-18, is planned to come from the proceeds of bond debt sales as a result of a \$15 million transportation bond approved by voters in November 2015, combine with a \$2.5 million federal grant. We plan to use local revenue to fund permitting and design work. Refer to map on at the end of this section to see the location of this project.

Apex Barbecue Road – Bridge Replacement **\$400,000**

The project will allow the greenway to pass underneath the bridge rather than crossing Apex Barbecue Road at-grade, so pedestrians and cyclists on the greenway do not have to travel to the roadway surface and compete with vehicular traffic. This is a contribution toward an NCDOT project (B-5161) to replace the Apex Barbecue Road Bridge over Beaver Creek. NCDOT is seeking enhancement cost sharing in order to replace the bridge with one higher than would normally be provided so the Beaver Creek Greenway can pass underneath. The higher structure is estimated to cost \$2.5 million compared with \$1.15 million for the structure they would otherwise construct. The project is planned to be implemented over two fiscal years, 2016-17 and 2017-18 with \$200,000 in funding required each year. Refer to map on at the end of this section to see the location of this project.

FY 2017-18

West Chatham Street Sidewalk **\$250,000**

The project consists of completing a gap in sidewalk west of Saunders Street to provide a contiguous pedestrian route for the entire length of West Chatham Street, from North Salem Street to Hunter Street. The project will complete a pedestrian route along West Chatham Street between downtown Apex and Hunter Street. West of the project, sidewalk and crosswalks provide for crossing NC 55 and continuing along Olive Chapel Road to Apex Barbecue Road, past Olive Chapel Elementary School. Refer to map at the end of this section to see the location of this project.

Apex Peakway – Schiefflin Road Connector **\$8,500,000**

The project includes extension of the Apex Peakway eastward from NC 55 to Schieffelin Road and upgrading existing Schieffelin Road from that point northward to Center Street. Schieffelin Road will also



be renamed to Apex Peakway. The project requires the Town assuming maintenance of the portion of Schieffelin Road (formerly a state maintained road) converted to Apex Peakway. The project completes a continuous loop route of the Apex Peakway to act as a bypass to NC 55 and to provide improved local connectivity to the north and east. Funding for the construction of this project, targeted for FY 2019-20, is planned to come from the proceeds of bond debt sales as a result of a \$15 million transportation bond approved by voters in November 2015, combined with \$2.5 million in anticipated federal grant funding. We plan to use local revenue to fund permitting and design work. Refer to map at the end of this section to see the location of this project.

Street Resurfacing **\$5,000,000**

A recent survey of our streets reveals that we have deferred maintenance that needs to be addressed over the next three years. The total amount shown will be used in roughly equal increments in FY 16-17, 17-18, and 18-19 to resurface streets in order of priority based upon the survey. This amount is in addition to the annual amount allocated each year as part of the general fund budget. Funding for this project is planned to come from the proceeds of bond debt sales as a result of a \$15 million transportation bond approved by voters in November 2015.

FY 2018-19

Apex Barbecue Road Sidewalk **\$975,000**

The project consists of completing sidewalk gaps to provide a contiguous pedestrian route for the entire length of Apex Barbecue Road, from Olive Chapel Road to South Salem Street. The traffic signal at the intersection of Kelly Road and Apex Barbecue Road will be upgraded to include a crosswalk. The project will provide a pedestrian facility along a 45 mph thoroughfare and connect pedestrian routes to subdivisions between important amenities including Apex Nature Park and Scotts Ridge Elementary School. Refer to map at the end of this section to see the location of this project.

James Street and Schieffelin Road Sidewalk **\$519,000**

The project consists of completing sidewalk gaps to provide a contiguous pedestrian route on James Street from west of NC 55 to Schieffelin Road and along Schieffelin Road from James Street to Center Street. The traffic signals at the intersections of NC 55 at James Street and Center Street at Schieffelin Road will be upgraded to include crosswalks. The project will provide a pedestrian facility along a collector street and along a 35 mph thoroughfare and connect pedestrian routes to subdivisions between important land uses including Apex Elementary School, commercial uses at NC 55, and subdivisions along James Street. The project will provide signalized pedestrian crossings across NC 55 and across Center Street. Refer to map at the end of this section to see the location of this project.

Olive Chapel Road Sidewalk **\$600,000**

The project consists of extending sidewalk west of Piney Woods Lane along Olive Chapel Road to provide a contiguous pedestrian route along Olive Chapel Road from NC 55 to the American Tobacco Trail. The project will extend the sidewalk west along a 45 mph thoroughfare to tie-in to the American Tobacco



Trail, linking NC 55 to the trail. Pedestrian trips from Olive Chapel Elementary School and subdivisions along Olive Chapel Road will be provided a direct connecting route to the trail that was not previously available along the road. Refer to map on page 15 to see the location of this project.

Kelly Road Sidewalk

\$600,000

The project consists of extending sidewalk north of Apex Barbecue Road along Kelly Road to provide a pedestrian route to Kelly Road Park and Olive Chapel Elementary School from subdivisions along Apex Barbecue Road. The project will extend sidewalk north along a 45 mph thoroughfare to tie in to existing sidewalk and multi-use path at Kelly Road Park. Pedestrian trips from subdivisions along Apex Barbecue Road will be provided a direct connecting route to the park and school that was not previously available along the road. The project will provide a crosswalk for the Kelly Road at Apex Barbecue Road traffic signal. Refer to map at the end of this section to see the location of this project.

East Williams Street Sidewalk

\$250,000

The project consists of extending sidewalk north of Straywhite Avenue from the intersection with East Williams Street to Bobbitt Road, north along Bobbitt Road to the old East Williams Street corridor, and north along East Williams Street to tie to existing sidewalk north of Technology Drive. The project will provide sidewalk from neighborhoods along East Williams Street east of the NC 55 Bypass to connect with the sidewalk north of the NC 55 Bypass intersection. Pedestrian trips east of the NC 55 Bypass are currently not served by a sidewalk route to the north. Refer to map at the end of this section to see the location of this project.

Hillcrest Street Sidewalk

\$200,000

The project consists of constructing sidewalk along the entire length of Hillcrest Street, from Hunter Street to Apex Peakway. The project will provide sidewalk from Hunter Street in the vicinity of Baucom Elementary School to the Apex Peakway. Sidewalk along this route will link pedestrian trips from the school and neighborhoods along Hunter Street to neighborhoods along Apex Peakway. Refer to map at the end of this section to see the location of this project.

FY 2019-20

US 1 at US 55 Interchange

\$500,000

This is a contribution toward an NCDOT project to convert the US 1 interchange at NC 55 to a Diverging Diamond Interchange (DDI). NCDOT is seeking cost sharing partners in order to complete this project, estimated to be \$2,000,000 or more, that will require widening on NC 55 east of the bridge to add and drop lanes for the 6-lane DDI along with modifications to the Lufkin Road intersection. The project will add capacity at the interchange without requiring the bridge to be widened, accelerating improvement of traffic congestion currently blocking movements along NC 55 and causing long queue backups on the southbound ramp. Refer to map at the end of this section to see the location of this project.



Apex Peakway Traffic Signals

\$500,000

The project consists of designing and installing traffic signals on the Apex Peakway where warranted. The project will provide traffic signals for up to three locations along Apex Peakway. Useful life of the signals will be approximately 20 years prior to requiring major improvements. Annual maintenance and non-routine repairs will be the responsibility of the Town for locations not on the state system and for any emergency vehicle preemption equipment.

FY 2020-21

Center Street & East Chatham Street Crossing Improvements \$1,000,000

The project includes improvement of the road crossing surfaces and addition of sidewalk across CSX railroad with installation of four quadrant gates at both locations. The project completes gaps in the sidewalk network across the railroad and improves the quality of the vehicular crossing surfaces for improved ride comfort at both locations. In addition, four quadrant gates will provide a higher level of safety measures. Refer to map at the end of this section to see the location of this project.

Perry Road Sidewalk

\$150,000

The project will provide sidewalk, by completing current gaps, from South Hughes Street to the Apex Peakway. Sidewalk along this route will link pedestrian trips along the Apex Peakway from the south side of the loop to businesses, retail, services, and residences along Perry Road. A contiguous sidewalk will connect Apex Peakway to NC 55 along Perry Road. Useful life of the sidewalk will be approximately 20 years prior to requiring rehabilitation. Following project completion the Town of Apex will maintain the sidewalk. Refer to map at the end of this section to see the location of this project.

Tingen Road Sidewalk

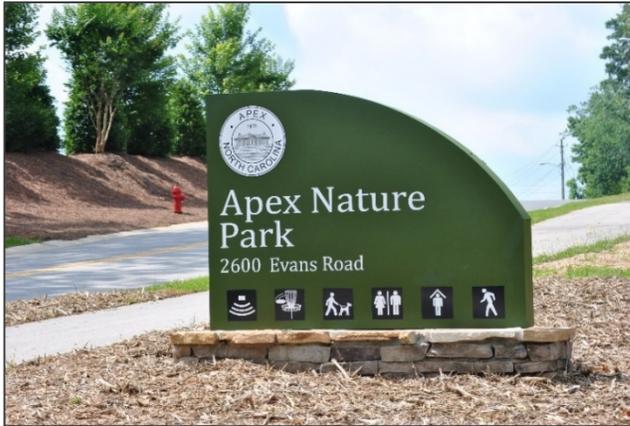
\$275,000

The project will provide sidewalk from Widger Lane to the Apex Peakway. Sidewalk along this route will provide a direct route for pedestrian trips from the southern end of the Salem Village neighborhood northward to Apex Elementary School and eastward toward businesses, retail, services, and residences along Apex Peakway. Useful life of the sidewalk will be approximately 20 years prior to requiring rehabilitation. Following project completion the Town of Apex will maintain the sidewalk. Refer to map at the end of this section to see the location of this project.

Parks, Recreation and Cultural Resources Element Projects

Projects Funded: Acquisition of land for new park and greenway facilities, the construction of park and recreation amenities, and major maintenance of current facilities.

Peak Plan 2030 Recommendation: That the Town “Implement recommendations of the recently updated Parks, Recreation, Greenways, and Open Space Master Plan”. Projects shown in this element address needs reflected in this plan.



The recently opened Apex Nature Park expanded our ability to serve the growing population of Apex with a variety of active and passive recreational opportunities. Our high quality park facilities, greenway network, and the programs we offer contribute greatly to the high quality of life people in Apex enjoy. This element suggests funding several other quality projects in response to our Parks Plan and the expressed needs of those we serve.

The table below shows each of the projects submitted for consideration in this year’s CIP process, the estimated cost of the project, and a summary of the proposed source of funding in each fiscal year in the plan. The “Fees” shown in the revenue section reflect the expenditure of Recreation Subdivision Fees. Section 5 of this document contains detailed information regarding the proposed funding source for each individual project.

Parks, Recreation, and Cultural Resources						
Project	ID #	2016-17	2017-18	2018-19	2019-20	2020-21
Project Cost:						
Salem Pond Park - Phase 2	PR 4	349,264				
Middle Creek Greenway - Pemberley to Holly Springs	PR 5	760,000	712,517		1,000,000	
Pleasant Park - Phase 1	PR 6		1,697,960			
Environmental Education Center - Nature Park	PR 7			935,000		
Northwest Area - Park Land	PR 8				5,000,000	
Pleasant Park - Phase 2	PR 9			10,000,000		
Apex Elementary School Tennis Court Reconstruction	PR 11	205,138				
Jaycee Park Expansion	PR 12				750,000	
Kelly Road to Nature Park	PR 13	1,348,200	865,240			
Apex Nature Park Soccer Field Turf Conversion	PR 14		2,000,000			
Total		2,662,602	5,275,717	10,935,000	6,750,000	0
Revenue Sources:						
Local Revenue		275,138	127,886	0	0	0
Fees		349,264	449,871			
Federal Grant						
State Grant		188,200				
Local Grant (USTA / County)		330,000	330,000			
Debt		1,520,000	4,367,960	10,935,000	6,750,000	
Total		2,662,602	5,275,717	10,935,000	6,750,000	0



FY 2016-17

Salem Pond Park – Phase 2

\$349,264

Following Phase 1, anticipated to be completed in FY 2014-15, this project involves the continued development and construction of approximately 11 acres of park land, donated to the Town by Wake County, located across from Salem Middle School. This second phase of the project includes construction of a restroom, shelter, and associated site amenities such as trash cans, dog stations, signage, etc. Refer to map at the end of this section to see the location of this project.

Middle Creek Greenway Connection – Phase 1 Miramonte to Holly Springs

\$760,000

This project involves approximately 2,722 linear feet (combination of boardwalk, concrete, and asphalt) covering the section of the Middle Creek Greenway from Miramonte south to Holly Springs. This regional greenway connection is important for a variety of reasons. First, it is one of the greenway priorities established by the Parks, Recreation, Greenways, and Open Space Master Plan. Second, it fulfills the promises made to various developments (Pemberly, Miramonte, Sunset Lake) when they were approved. Finally, and most importantly, it is critical that the Town get this project underway so that when I-540 is extended, the State will be required to make the connection to Holly Springs under I-540. The greenway shows on the I-540 plan and all TOA planning documents. Town has received a \$140,000 Grant from Wake County to construct this segment of greenway. Refer to map at the end of this section to see the location of this project.

Apex Elementary Tennis Court Reconstruction

\$205,138

The Town is required, by the Level 4 Use Agreement for Apex Elementary School Park, to maintain the existing tennis courts. No repairs have been made for over 20 years and the courts have deteriorated to the point where they are unsafe and unplayable. Both Wake County Schools and Wake County Parks, Recreation, and Open Space have declined to contribute to the reconstruction. Staff is working with the USTA to attempt to receive some grant funds, similar to what was done at other parks, but we have not yet been informed of any grant award. These courts, as the area around Apex Elementary has grown, have truly become public courts and are within walkable distance of many citizens. These courts would also be incorporated into the Town's public tennis programs. The reconstruction would also feature new LED lighting technology to save on maintenance and energy costs. Refer to map at the end of this section to see the location of this project.

Kelly Road to Nature Park Greenway – Phase 1

\$1,348,200

This project was identified by the Citizens of Apex as the #1 priority in the Parks, Recreation, Greenways and Open Space Master Plan adopted in 2013. It has also been approved and adopted by the Parks, Recreation, and Cultural Resources Advisory Commission as their #1 greenway priority and is also endorsed by the Apex Town Council. Phase I of the project involves the construction of approximately 1 mile of greenway (almost all boardwalk) and will connect from Kelly Road Park to Kelly Point Court in the



Kelly West subdivision. The trail will be located within the existing utility easement. Construction estimates are from Kimley Horn with the majority of the cost being associated with the construction of boardwalk and environmental issues associated with the floodplain and wetlands.

FY 2017-18

Middle Creek Greenway Connection – Phase 2 **\$712,517** Pemberly through Miramonte

This project involves approximately 2,871 linear feet (boardwalk, concrete, asphalt) covering the section of the Middle Creek Greenway from Pemberly through Miramonte and is Phase 2 of the regional connection between Apex and Holly Springs. It also contains two planned connections to Miramonte as shown on the approved plans. It continues work on one of the greenway priorities established by the Parks, Recreation, Greenways, and Open Space Master Plan. Refer to map at the end of this section to see the location of this project.

Pleasant Park – Phase 1 **\$1,697,960**

This 92 acre tract was acquired by the Town of Apex in November of 2014. The site, as currently envisioned, would include a mixture of active and passive activities with priority being given to athletic activities that, in addition to expanding and serving the Town’s current program offerings, could also be used to enhance economic development within the Town by serving as a regional sports tournament venue. This first phase is in response to a HUD grant request submitted to Wake County which envisions 2017-2018 construction of items such as a sprayground, a basketball court, and a picnic shelter. This initial phase will include infrastructure and site work. Refer to map at the end of this section to see the location of this project.

Kelly Road to Nature Park Greenway – Phase 2 **\$865,240**

The project involves the construction of approximately 4,300 lf of greenway and provides the final connection of the Beaver Creek Greenway from Downtown Apex to the Apex Nature Park. Eventual connection will be to the American Tobacco Trail. The trail will be located within the recently completed utility easement in the same location and be a combination of asphalt and boardwalk. This phase involves approximately .25 miles and continues the greenway from Kelly Pointe Court (Kelly West and stopping point of Phase I) under the Barbecue Road Bridge to the Apex Nature Park. Based on estimates from Kimley Horn (\$127,940 Design) (\$737,300 Construction) = \$865,240 with the majority of the cost being associated with the construction of boardwalk and environmental issues associated with the floodplain and wetlands.



FY 2018-19

Environmental Education Center – Nature Park

\$935,000

The Nature and Environmental Education facility was part of the initial Master Plan for the Nature Park site which was part of a 2004 bond package. The intent was to utilize the facility as a headquarters for the operation of the park and provide someone on-site to program and oversee the park. In addition, it is viewed as a place where environmental and nature exhibits can be seen as part of the Town's effort to educate and support environmental initiatives such as conservation and good stewardship. It was envisioned that a large portion of the potential programming for this facility would be achieved by developing collaborative relationships with area schools and universities in addition to supporting Town environmental initiatives. Refer to map at the end of this section to see the location of this project.

Pleasant Park – Phase 2

\$10,000,000

Following the construction of phase 1 of this project as noted above, phase 2 development would include, but not be limited to the following items: infrastructure, lighted turf playing fields for soccer, lacrosse, etc., lighted playing fields for baseball/softball, tennis courts, shelters, comfort stations, trails, dog park, and other amenities as identified by the Town Council. Refer to map at the end of this section to see the location of this project.

FY 2019-20

Middle Creek Greenway Connection – Phase 3 Lufkin Road Middle School to Pemberly

\$1,000,000

This project involves approximately 5,862 linear feet (boardwalk, concrete, asphalt) covering the section of the Middle Creek Greenway from Lufkin Road Middle School to Pemberly. This completes the regional greenway connection from Lufkin Middle to Holly Springs. It is one of the greenway priorities established by the Parks, Recreation, Greenways, and Open Space Master Plan. Second, it fulfills the promises made to various developments (Pemberly, Miramonte) when they were approved. Refer to map at the end of this section to see the location of this project.

Northwest Area Park Land Acquisition

\$5,000,000

The acquisition of regional park land in the northwest area of Town has been a priority of the Town Council and citizens of Apex for many years. This priority was also noted in the Parks Plan, adopted in 2013, in order to ensure the provision of recreation opportunities in the northwest portion of Apex which is one of the fastest growing areas of Town. The Town has been researching potential land sites for the past 18 months, working with various developers and contacting landowners in the area. The target acreage is between 30-50 acres with an estimated average cost of \$100,000 per acre. Refer to map at the end of this section to see the location of this project.



Jaycee Park Expansion

\$750,000

The expansion of Jaycee Park was discussed as part of a larger discussion whether to locate a cell tower on the existing Jaycee Park property adjacent to The Peakway. After researching options and opportunities for the site, staff came up with a sketch showing a park that is expanded to the Peakway. The sketch showed new amenities that included an open play field, shelter, playground and volleyball/ basketball courts. Refer to map at the end of this section to see the location of this project.



Public Safety Element Projects

Projects Funded: Acquisition of capital equipment to support the operations of the three public safety departments in the Town. (Note: Public safety *facilities* are considered in the *public facilities* element.)

Peak Plan 2030 Recommendation: That the Town “provide adequate fire, police, and emergency services in all areas.” This element considers the projects necessary to maintain adequate and responsive services to our citizens.



The table below shows each of the projects submitted for consideration in this year’s CIP process, the estimated cost of the project, and a summary of the proposed source of funding in each fiscal year in the plan. Section 5 of this document contains detailed information regarding the proposed funding source for each individual project.

Public Safety						
Project	ID #	2016-17	2017-18	2018-19	2019-20	2020-21
Project Cost:						
SCBA Replacement	FD 3	277,000				
Radio Replacement - Fire	FD 4	53,900	59,100			
Fire Engine Replacement (repl. 2002)	FD 5	515,000				
Ladder Truck for Station 5	FD 6			1,390,000		
Engine for Station 6	FD 7					718,500
Fire Engine Replacement (repl. 2001)	FD 8		570,000			
911 Phone System Replacement	PD 1	185,000				
Radio Replacement - Police	PD 2	181,800	172,200	172,200	172,200	25,000
Console Replacement - Police	PD 3		440,000			
CAD Replacement - Police	PD 4	280,000				
Total		1,492,700	1,241,300	1,562,200	172,200	743,500
Revenue Sources:						
Local Revenue		1,492,700	1,241,300	1,562,200	172,200	743,500
Fees						
Federal Grant						
State Grant						
Local Grant						
Debt						
Total		1,492,700	1,241,300	1,562,200	172,200	743,500



FY 2016-17

Self-Contained Breathing Apparatus (SCBA) - Replacement \$277,000

The fire department currently has 60 Self Contained Breathing Apparatus (SCBA). All but 4 of these SCBA units were purchased in 2005 to replace older SCBA's in use. Since the purchase of these units in 2005, the NFPA standard for SCBA's have been updated twice; most recently in 2012. With the changes, parts for the SCBA unit we are using are no longer being made but can still be purchased until current stock is exhausted. The new SCBA units have several features that increase firefighter safety that our current units do not have. This project calls for a phased approach to replacement to spread out the cost of the replacement now and attempt to phase obsolescence in consideration of future replacement. Last year, the first year of this two year project, the department replaced all the SCBA's in the seats firefighters staff each day and issued a new mask (compliant with new standards and able to function with new and old SCBA) for each active firefighter. In the second year, the department would purchase the remaining 40 SCBA units.

Two-Way Radio – Replacement - Fire \$113,000 (\$53,900 in 16-17 and \$59,100 in 17-18)

Our radios operate as part of the Wake County 800 Mhz. interoperable system. The current system has exceeded its life expectancy, Motorola no longer supports the radios we are using, and will no longer provide service or parts as of 2018. Four years ago, the fire department began a phased replacement of our radios and this project contemplates continuing this planned approach to replace all existing radios with compliant units for interoperability. This project replaces ten radios per year for the remaining three years of the replacement program. This replacement approach is an attempt to phase obsolescence in consideration of future replacement. In total, 30 radios will be replaced.

Fire Engine - Replacement \$515,000

This is a request to replace the 2002 Quality Engine that is serving as a reserve engine. This engine will be 15 years old and have over 100,000 miles on it. By replacing the engine the department will be able to move an older first due truck to reserve status and place this new truck in service as a first due truck.

911 Phone System - Replacement \$185,000

This system would replace the current 4 position 911 emergency phone system with an IP based system and replace the current recording system that is compatible with the new telephone system. The new systems meet current technology needs and would allow us to move forward with Next Gen 911 capabilities including mapping and the ability to receive text to 911. The current 911 system with the end of life approaching, would have little value in the sale of the system. There are recurring costs for maintenance, support, and 24/7 system monitoring above our current budgeted costs for 911 maintenance.



Two-Way Radio – Replacement - Police

\$723,400

(five year total)

Our radios operate as part of the Wake County 800 Mhz. interoperable system. The current system has exceeded its life expectancy and Motorola no longer manufactures the radios we are using and will no longer provide service or parts as of 2018. Therefore, we have begun a phased replacement of our radios with this being the second year of replacement. To effectively replace all existing radios with compliant units for interoperability, and to phase obsolescence for future replacement, this project will purchase base, portable, and mobile radios in quantities over the next four years that will complete the replacement of all radios. In total, 13 base radios, 65 portable radios, 10 SRT helmet headsets, and 47 mobile radios will be replaced.

CAD Replacement - Police

\$280,000

The current CAD System that we use as a remote station with Wake County has reached the end of its life and the County is currently working to replace the system. The current system is currently not receiving regular enhancements and does not meet the needs of next generation 911. It does not have many of the common functions of new CAD systems including the ability to link with multiple other CAD systems to allow the users to move complete call information from center to center without having the same system. As we are a remote user this will require us to also change systems as part of this process. The County expects to select a vendor in 2016.

FY 2017-18

Fire Engine - Replacement

\$570,000

This is a request to replace the 2001 HME engine that currently serves as a reserve engine out of fire station 3. This engine is 14 years old, with nearly 70,000 miles and is the smallest engine in the fleet. The engine has small compartments and small areas for firefighters to sit. Maintenance costs for the past two years have exceeded \$10,000 per year. By replacing the engine it would allow the department to move a 2006 engine to a reserve status. The 2006 engine is starting to cost the department more each year to keep in service because of the number of calls for service and mileage. By making the 2006 engine a reserve this would reduce maintenance costs and put a current NFPA compliant engine in service as a first due engine in a busy station.

Console Replacement - Police

\$440,000

The current radio console does not have the features and functionality needed in as we move to the new P25 radio system that the county is in the process of phasing in. The console, with a direct link to the new county radio system, would allow the communications center to have access to all the radio talk groups. With the current system we are limited on the radio talk groups as we are limited by the amount of radios tied to the system. The new system would allow us to better link with other agencies and give us enhanced audio capabilities. As we add new radios and the new phone system they all tie to the radio console and the limited audio capabilities will minimize the effectiveness of the other systems.



FY 2018-19

Ladder Truck – Station 5

\$1,390,000

This request is to add an additional ladder truck to our fleet for Public Safety Station 5; located at the intersection of Apex Barbecue and Kelly Road. That area of Apex is rapidly growing with single family homes, townhomes, apartment complexes, and public and private schools. ISO requires a municipal department to have a ladder truck cover a 2.5 mile area. The ISO inspection of the department in May

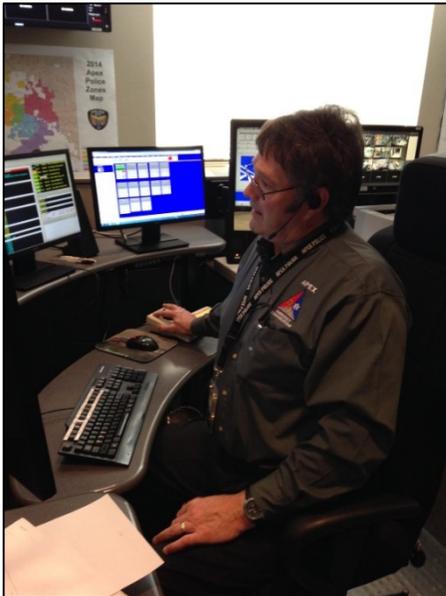
2013 noted that three ladder trucks are needed in Apex to properly cover the town. Purchasing the additional ladder will improve response times in the western side of town that includes five schools, part of the Beaver Creek Shopping Center and everything north of Highways 64 and 55.

FY 2020-21

Fire Engine – Station 6

\$718,500

As Public Safety Station 6 (as described later in this document) is constructed, a new fire engine will be required to operate from this location in the Green Level/White Oak Basin section of our community. This is an area that will experience rapid growth in the coming years due to the number of projects in that area. This would be a fleet addition. The Engine would meet all current NFPA standards for a Class A pumper with a minimum of a 1,500 gallon per minute pump and a 750 gallon water tank. All equipment such as fire hose, breathing air packs, medical bags, and firefighting tools would need to be purchased since this is an addition to the fleet.



Public Facilities Element Projects

Projects Funded: Construction and major maintenance of general government and public safety facilities and infrastructure.

Peak Plan 2030 Recommendations: Contains two general recommendations, and several supporting specific recommendations, regarding facilities that this CIP element addresses. The Peak Plan recommends: 1) Provide adequate fire, police, and emergency services in all areas. 2) Continue to assess public facility needs to meet demand generated by existing, as well as future growth and development.

Shown to the right is the recently completed Public Works Administration building which was a part of a project that included a new Purchasing and Inventory Building, storage yard, and upgrades to other facilities in the public works complex. This element suggests funding several other quality projects such as this to address current and future facility needs.



The table below shows each of the projects approved for consideration in this year's CIP process, the estimated cost of the project, and a summary of the proposed source of funding in each fiscal year in the plan. Section 5 of this document contains detailed information regarding the proposed funding source for each individual project.

Public Facilities						
Project	ID #	2016-17	2017-18	2018-19	2019-20	2020-21
Project Cost:						
Renovations PSS 4 - PD	F&FS 2	253,890				
Fire Station 1 - Renovation	F&FS 8			1,500,000		
Town Campus Annex	F&FS 3					9,700,000
Public Safety Station 6	F&FS 4					4,174,500
Senior Center	F&FS 6		3,726,000	\$6.3m for 2 floors		
Tunstall House Restoration	F&FS 7	706,300		\$7.9m for 3 floors		
Town Fiber Expansion	IT 1	150,000	100,000	100,000		
Total		1,110,190	3,826,000	1,600,000	0	13,874,500
Revenue Sources:						
Local Revenue		1,110,190	100,000	100,000	0	0
Fees						
Federal Grant						
State Grant						
Local Grant						
Debt			3,726,000	1,500,000		13,874,500
Total		1,110,190	3,826,000	1,600,000	0	13,874,500



FY 2016-17

Renovations to Public Safety Station 4**\$253,890**

This project is to renovate PSS4 to allow the relocation of the Apex Police Department Traffic Safety Unit (TSU). Included in the relocation will be personnel, equipment, trailers, and vehicles associated with this police function. Currently, the police section of this facility includes only a small office and the department's intoximeter. Space at the current APD headquarters facility is limited and the TSU currently occupies two office areas and several storage areas that are needed for other Patrol Division uses. The TSU has dedicated vehicles and trailers, once moved, will provide relief for overcrowded parking and storage areas. The area of NC 55 and US 1 has traditionally been the busiest location for traffic crashes and complaints in Apex. Moving the TSU to PSS4 gives the department a strategic position to better deploy traffic safety officers to problem areas while also allowing for easy access to other areas of town.

Tunstall House Restoration**\$706,300**

Restoration of the existing Tunstall House would be not only a prescriptive plan to save the current structure but also provide long term use as well as mediating any deterioration to the existing structure. This project contemplates the historic restoration of the house and "contributing" outbuildings. The house is suffering from deferred maintenance and currently serves no useful purpose. In the past, the house has been looked at for public purpose, such as for a senior center, but the restoration/renovation costs have been prohibitive. Once restored, the Town could seek to lease the property to a private party for office space and/or explore other similar uses.

Town Fiber Optic Expansion**\$350,000**

The proposed fiber project will provide funding for expansion of the existing Town fiber network to greater support operational efficiencies, create redundancy, and expand the fiber optic backbone and fiber optic connections to key locations throughout the Town. The Town's current fiber network supports a variety of operational areas. This project will help fund additional fiber strands, equipment and installation as incremental costs to other planned projects. The proposed project will leverage current communication infrastructure and provide redundancy to promote and ensure broadband infrastructure evolves over time to meet the needs of the Town residents, staff, equipment, facilities and connected utility services.

FY 2017-18

Senior Center**\$3,726,000**

Design and construction of a Senior Center facility to accommodate the needs of the senior citizens in Apex by providing additional space for senior programming. Work to determine space needs and a building design are currently underway, being funded by an appropriation of Fund Balance at the end of fiscal year 2014-15. The building would be designed to allow for future vertical expansion. There is an expressed desire for space designed and designated for activities geared toward our senior population.



The Parks and Recreation department has staff that is experienced in providing appropriate programming, but there is a lack of space in the heavily used Community Center building.

FY 2018-19

Fire Station 1 - Renovation

\$1,500,000

The prior version of the CIP included a project to relocate Fire Station 1 from its downtown location to a small piece of town owned land at the corner of the Apex Peakway and Old Raleigh Road. This project was largely driven by a perception rather than an actual need of the fire department. Current department leadership and other staff recommend maintaining a presence on Salem Street in a building that is renovated to serve the needs of the Department and the needs of the community. The “small town” character of our downtown area, we feel, is enhanced by having a fire station and police station on or near our main street. The fire department welcomes visitors when they are not otherwise committed on calls for service or training. The project will consist of renovating the building to improve the functional efficiency of the space for a single fire company, including crew quarters, apparatus storage, and other support areas.

FY 2020-21

Town Campus Annex Building

\$9,700,000

As the Town continues to grow and staffing increases in response to service demands for our population, the current Town Hall does not have sufficient space to meet the needs of increased staffing levels. Given the current rate of growth in the town and projections for future growth, there is a need for additional space and redesign of current space to improve service efficiency. This project contemplates the construction of a new 36,000 - 42,000 square foot annex building to accommodate growth in staff as well as relocation of Town Council to a more secure environment. This project will begin with planning and design services in the first year of the project and culminate with construction that begins the following fiscal year. Preliminary needs analysis work funded in a prior fiscal year is nearly complete and points to the need for the amount of additional space to serve our current and future needs.

Public Safety Station 6

\$4,174,500

Station 6, modeled after PSS5, will provide fire and emergency services to the White Oak Basin and Green Level areas of Apex. It is forecast that there will be upwards of 1,700 new homes in this area within the next few years along with related services. This coupled with the existing 540 corridor will continue to generate pressure on existing fire services and require an additional station in order to provide adequate service. Although not projected for construction until FY 2020-21, there is a current need to identify and ultimately acquire land for this facility. Station 6 will be proposed to house a new Engine and 12 personnel. The implementation of this station will also generate the need for a second Battalion Chief to maintain span of control over suppression personnel.

Stormwater and Environmental Services Element Projects

Projects Funded: Projects designed to manage and mitigate the effects of stormwater runoff and manage the collection and disposal of solid waste, including structural improvements, BMP construction, and major maintenance of this infrastructure, and equipment needed to manage solid waste collection.

Peak Plan 2030 Recommendation: There are no direct recommendations in the plan regarding Stormwater and Environmental Services



Focus on maintaining and improving the conveyance of stormwater protects property, infrastructure, and the environment. A well-managed yard waste collection program assists in this effort by keeping roadside gutters and drains clear.

The table below shows each of the projects submitted for consideration in this year’s CIP process, the estimated cost of the project, and a summary of the proposed source of funding in each fiscal year in the plan. Section 5 of this document contains detailed information regarding the proposed funding source for each individual project.

Stormwater and Environmental Services							
Project	ID #	2016-17	2017-18	2018-19	2019-20	2020-21	
Project Cost:							
Vacuum Truck Replacement	EP 7	145,000					
Grapple Truck Replacement	EP 8			140,000			
Chipper Truck Replacement	EP 9				100,000		
Total		145,000	0	140,000	100,000	0	
Revenue Sources:							
Local Revenue		145,000	0	140,000	100,000	0	
Fees							
Federal Grant							
State Grant							
Local Grant							
Debt							
Total		145,000	0	140,000	100,000	0	



FY 2016-17

Vacuum Truck - Replacement

\$145,000

There are currently five vacuum trucks in the yard waste fleet to support the Town's yard waste program by providing grass clipping and leaf collection service. Three of the vacuum trucks are used on a daily basis while the other two serve as backups but are routinely utilized during peak seasons as well as during normal maintenance/repair. This project will replace a truck, that at the time proposed, will be over 14 years old and have over 120,000 miles. These trucks have a lot of moving parts and routinely need servicing. When they are down it is very important to have a backup ready to go in order to provide reliable weekly service to our citizens.

FY 2018-19

Grapple Truck - Replacement

\$140,000

There are currently two grapple trucks in the yard waste fleet to support the Town's yard waste program by providing large limb and tree stump removal service. Only one of the grapple trucks is used on a daily basis with a second truck serving as a backup. This second truck is also used to support our bulk item pickup program; collecting oversized items that cannot be lifted by hand. This project will replace a truck, that at the time proposed, will be over 12 years old and have over 100,000 miles.

FY 2019-20

Chipper Truck - Replacement

\$100,000

There are currently two chipper trucks in the yard waste fleet to support the Town's yard waste program by providing curbside limb chipping service. Both of these trucks operate on a daily basis with no back-up trucks in the fleet. When any of the chipper trucks are down for repair for extended periods it puts significant stress on other resources which can result in service delays. This project will replace a truck, that at the time proposed, will be over 12 years old and have over 100,000 miles.



General Fund Summary

The table below shows the total of the capital needs in each of the CIP elements supported by the General Fund and the revenue sources proposed to support these needs. The grant and fee revenues are explained in the applicable sections above. Local revenue is indicative of the need for current year revenue supported funding for some projects/purchases in each year. Section 5 of this document contains detailed information regarding the proposed funding source for each individual project.

The level of pent up capital need reflected in this document necessitates the issuance of additional debt to meet these needs. In the table below, new debt service is shown as a total amount proposed in each fiscal year. Installment purchase is used primarily for debt issues that are shorter in term and/or for relatively small projects. Bond debt is issued for longer term, high cost projects. Some bond issues cover multiple projects. For the purpose of the estimates shown, we have used an interest rate of 4% for installment and bond debt issues. While bond debt will carry a lower interest rate, we opted to keep this illustration simpler by using a common interest rate.

For fire apparatus purchases, we use “pay go” financing to avoid interest costs and use accumulated fund balance for these one time purchases. For all other issues in the general fund we use a twenty year term for the purpose of this illustration. Increasing the length of the term for these issues would result in a lower annual payment, but a higher over-all interest cost over the life of the borrowing.

General Fund						
	Totals					
Project	2016-17	2017-18	2018-19	2019-20	2020-21	
Element Cost:						
Transportation	1,700,000	10,650,000	4,844,000	10,100,000	1,425,000	
Parks, Recreation, & Cultural Resources	2,662,602	5,275,717	10,935,000	6,750,000	0	
Public Safety	1,492,700	1,241,300	1,562,200	172,200	743,500	
Public Facilities	1,110,190	3,826,000	1,600,000	0	13,874,500	
Stormwater and Environmental Service	145,000	0	140,000	100,000	0	
TOTAL	7,110,492	20,993,017	19,081,200	17,122,200	16,043,000	
Revenue Sources:						
Local Revenue	4,723,028	2,919,186	3,116,250	1,272,200	2,003,500	
Fees	349,264	449,871	0	0	0	
Federal Grant	0	2,500,000	1,829,950	2,500,000	165,000	
State Grant	188,200	0	0	0	0	
Local Grant	330,000	330,000	0	0	0	
Debt	1,520,000	14,793,960	14,135,000	13,350,000	13,874,500	
Total	7,110,492	20,993,017	19,081,200	17,122,200	16,043,000	
New Debt Service	111,844	1,200,410	2,240,488	3,222,805	4,243,715	
Current Debt Service	3,497,224	3,234,716	2,836,123	2,650,469	2,575,927	
Total Debt Service	3,609,068	4,435,126	5,076,611	5,873,274	6,819,642	

Section 3: Electric Utility

The projects funded through the Electric Utility element pull from the Electric Enterprise Fund. This fund pays only for projects related to the electric system, and not for projects related to the water/sewer fund, or any general fund related project.

The types of capital projects that qualify for this fund include construction, maintenance, and improvement of electric distribution infrastructure. These projects include substation additions and upgrades, distribution line extensions, and major maintenance of this infrastructure.

The icon below signifies the electric utility element, and is placed on the top left corner of the pages which are associated with these projects.



Electric Utility Element Projects

Projects Funded: Construction, maintenance, and improvement of electric distribution infrastructure. These projects include substation additions and upgrades, distribution line extensions, and major maintenance of this infrastructure.

Peak Plan 2030 Recommendation: Continuing to assess, plan, and fund infrastructure needs through a capital improvement program and manage growth through utility investments.



From our newest substation, Mt. Zion (shown to the left), and throughout our system, we work to improve the reliability of our electric system.

Well trained and well equipped technicians are required to maintain a first rate utility.



The table below shows each of the projects submitted for consideration in this year's CIP process, the estimated cost of the project, and a summary of the proposed source of funding in each fiscal year in the plan. This element has one horizon issue that is described later in this section but not shown on the table below. Section 5 of this document contains detailed information regarding the proposed funding source for each individual project.

Electric Fund						
Project	ID #	2016-17	2017-18	2018-19	2019-20	2020-21
Smart Meters and Load Control	EL 3	1,200,000	1,200,000	2,000,000		
Green Level Substation	EL 4	550,000	3,575,000		3,575,000	
East Williams Substation	EL 6			1,800,000	1,250,000	
Electric Fund Total		1,750,000	4,775,000	3,800,000	4,825,000	0
Revenue Sources:						
Local Revenue		1,750,000	1,200,000	1,800,000	1,250,000	
Fees						
Federal Grant						
State Grant						
Local Grant						
Debt			3,575,000	2,000,000	3,575,000	
Total		1,750,000	4,775,000	3,800,000	4,825,000	0



FY 2016-17

Smart Grid Meters and Load Control

\$4,400,000
(two year total)

This project provides an end-to-end solution for wireless smart grid and advanced metering. It will provide the ability to manage and monitor our electrical service customers by utilizing high speed, standards-based communications to access real-time data. In addition to advanced metering, this project will also provide updated load control devices, thermostats and street light control hardware. The software provides meter data, network, load control, street light, outage and customer portal management all in one easy to use platform.

Green Level Substation

\$7,700,000
(three year total)

The Green Level area is expected to add more than 1,700 new homes and associated services in the next few years. To support this scale of development, we will need to build a new 80 MVA substation with one 40 MVA Power Transformer initially installed. Having the electrical capacity ready in the form of a new substation (and distribution lines) will help ensure that we can provide reliable electrical service to this area. This project is contemplated in three phases. The first phase, in FY 17 will locate and acquire the land for the substation, and phase 2 in FY 18 will design and build the substation with one 40 MVA transformer, and phase 3 in FY 20 will add the second 40 MVA transformer.

FY 2018-19

East Williams Street Substation

\$3,050,000
(three year total)

As Veridea begins to develop along East Williams Street, near the East Williams Substation, consisting of approved development of 2.2 million square feet of mixed-used commercial development, one-half million square feet of office development, and 4,000 residential units located on approximately 1,000 acres, we will need to improve our ability to serve this area. To support this scale of development, we would need to add two 40 MVA Power Transformers to the East Williams Substation to provide the additional capacity and reduce delivery point charges from Duke Energy. This project is contemplated in two phases. The first phase, in FY19 will install one 40 MVA transformer, and phase 2 in FY20 will add the second 40 MVA transformer.



Horizon Issue

Facility Construction – Mt. Zion

\$3,710,000

Construction of an administrative and operations facility to allow for the relocation of Electric Division personnel, vehicles, equipment, and supplies. Relocation of the Electric Division would free up additional space for personnel, vehicles, equipment, and supplies allowing existing staff the room to grow into the foreseeable future with no new facilities needed for 10-15 years in the current Public Works complex. The current inventory yard does not allow for storage of all needed inventory so some is stored in a less secure location. This project would allow for ample room for electric division inventory in a single secure location and allow PW operations ample room in the current secure yard for inventory specific to those operations.



Electric Fund Summary

The table below shows the total of the capital needs for the Electric Fund element and the revenue sources proposed to support these needs. Local revenue is indicative of the need for current year revenue supported funding for some projects/purchases in each year.

The level of pent up capital need reflected in this document necessitates the issuance of additional debt to meet these needs. In the table below, new debt service is shown as a total amount proposed in each fiscal year. Installment purchase is used primarily for debt issues that are shorter in term and/or for relatively small projects. Bond debt is issued for longer term, high cost projects. Some bond issues cover multiple projects. For the purpose of the estimates shown, we have used an interest rate of 4% for installment and bond debt issues. While bond debt will carry a lower interest rate, we opted to keep this illustration simpler by using a common interest rate.

For debt issues in this fund we use a twenty-year term for bond issues for the purpose of this illustration. Increasing the length of the term for these issues would result in a lower annual payment, but a higher over-all interest cost over the life of the borrowing.

Electric Fund						
Project	ID #	2016-17	2017-18	2018-19	2019-20	2020-21
Smart Meters and Load Control	EL 3	1,200,000	1,200,000	2,000,000		
Green Level Substation	EL 4	550,000	3,575,000		3,575,000	
East Williams Substation	EL 6			1,800,000	1,250,000	
Electric Fund Total		1,750,000	4,775,000	3,800,000	4,825,000	0
Revenue Sources:						
Local Revenue		1,750,000	1,200,000	2,000,000		
Fees						
Federal Grant						
State Grant						
Local Grant						
Debt			3,575,000	1,800,000	4,825,000	
Total		1,750,000	4,775,000	3,800,000	4,825,000	0
New Debt Service			263,055	395,502	750,534	750,534
Current Debt Service		639,266	638,854	638,827	639,147	639,780
Total Debt Service		639,266	901,909	1,034,329	1,389,681	1,390,314

Section 4: Water and Sewer Utility

Projects assigned to the Water and Sewer Utility element are funded through the Water and Sewer Enterprise Fund. This fund pays only for projects related to the water and sewer system, and not for projects related to the electric fund, or any general fund related project.

The types of capital projects that qualify for this fund include main additions and replacements, water/wastewater treatment plant renovations/expansions, filter rehabilitation, pump station additions, and major maintenance of this infrastructure.

The icon below signifies the water and sewer utility element, and is placed on the top left corner of the pages which are associated with these projects.



Water & Sewer Element Projects

Projects Funded: Construction and improvement of water and sewer infrastructure. These projects include main additions and replacements, water/wastewater treatment plant renovations/expansions, filter rehabilitation, pump station additions, and major maintenance of this infrastructure.

Peak Plan 2030 Recommendation: Continue to assess, plan, and fund infrastructure needs through a capital improvement program and manage growth through utility investments.

Our water and sewer utilities face increasing demands for maintenance and improvements in order to serve current and future needs. Our wastewater treatment plant (shown to the right) treats a portion of the wastewater generated in Apex, with the remainder going to the new regional plant in New Hill.



The table below shows each of the projects submitted for consideration in this year’s CIP process, the estimated cost of the project, and a summary of the proposed source of funding in each fiscal year in the plan. Section 5 of this document contains detailed information regarding the proposed funding source for each individual project.

Water & Sewer Fund						
Project	ID #	2016-17	2017-18	2018-19	2019-20	2020-21
Lake Aeration Mixing System	WS9	850,000				
48" raw water transmission line	WS8	4,500,000				
Downtown water line upgrades	WS 2	1,400,000				
Commerce Street - Sewer Replacement	WS 4	125,000				
Laura Duncan Rd & US 64 - Water line tie in	WS 5		550,000			
Old Raleigh Rd - Water Line Replacement	WS 6			3,000,000		
Smart meters for water (15,000 at \$101)	WS 7				1,515,000	
Western Pressure Zone - Phase I	WS 10	130,000				
Western Pressure Zone - Phase II	WS 11			920,000		
Western Pressure Zone - Phase III	WS 12					4,100,000
Refurbish/Replace existing Sand Filters	WS 13		590,000			
Water & Sewer Fund Total		7,005,000	1,140,000	3,920,000	1,515,000	4,100,000
Revenue Sources:						
Local Revenue		2,505,000	1,140,000	920,000	1,515,000	0
Fees						
Federal Grant						
State Grant						
Local Grant						
Debt		4,500,000		3,000,000		4,100,000
Total		7,005,000	1,140,000	3,920,000	1,515,000	4,100,000



FY 2016-17

Lake Aeration Mixing System – Source Water **\$850,000**

The Cary/Apex Water Treatment Plant Lake Aeration Mixing System project provides for aeration improvements to enhance the existing raw water supply at Jordan Lake. Proposed aeration improvements at Jordan Lake located near the raw water intake can prevent lake stratification that typically occurs during the summer months and enhance raw water quality, thereby reducing treatment costs. The aeration system could provide for more reliable supply during droughts or periods of lake drawdown (for example when peak water demand increases in the future and lake level fluctuations are more common) by providing a more stable supply of "treatable" source water such that droughts and routine lower lake levels would not be as detrimental to water quality. As with all Cary/Apex Water Treatment Plant Projects, the Town of Apex is responsible for 23% of the project cost while the Town of Cary addresses the remaining 77%.

48" Raw Water Transmission Line **\$4,500,000**

This project represents our share (23%) of joint project with Cary to install a new 48" raw water transmission line that will run from Jordan Lake to the Cary-Apex Water Treatment Plant. A new line of this size is required to feed the expanding capacity in the new treatment facility in order to meet the needs of the growing population served by this facility.

Downtown Water Line Upgrades **\$1,400,000**

Chatham Street water line is a combination of cast iron (CI) and asbestos cement (AC) pipe that was installed pre 1960, and is now surpassing its design life expectancy and starting to fail. The benefits for replacement and possible upsize of the water line are improved water conservation, better hydraulics, much improved firefighting capabilities, and improvement of water quality. There is a relatively new 16" water line on Hunter Street, an 8" water line that is less than ten years old on Elm Street, and a 10" water line on Seaboard Street that is less than seven years old. This would be a good first step to begin replacement of the Downtown/Historic district water utilities. It is estimated that the CI water lines in the downtown area are 30 to 40 percent tuberculated and the current flow rates in that area are far from optimal. Upgrading the line on Elm Street would complete a loop around the Methodist Church which has now grown to cover two blocks. The 6" line serving the fire line for the Church has such poor flow that we cannot flush the line without activating the fire alarm.

Commerce Street Sewer Replacement **\$125,000**

Commerce Street sewer lines are in very poor condition. The old clay pipe has deteriorated over the last several years with a lot of root penetration and ground water infiltration. On the most upstream side of the line there is no manhole, just a 90 degree bend turned straight up. Public Works has had to clean and flush this line several times over the past few years. Keeping the line clean has become a regular task which could be eliminated with replacement.



Western Pressure Zone – Phase I

\$130,000

This work is the first phase of a three phase project to create a Western Pressure Zone for water distribution on the rapidly developing western side of Apex. As Apex develops to the west toward Jordan Lake the ground elevations decrease resulting in excessively high water pressures in that portion of the system (greater than 100 psi). This first phase of the overall plan calls for the construction of two pressure reducing valve stations (PRV). One would be located near the Kelly Road Park and the other would be near the intersection of Holland Road and Old US 1. The water lines that are west of Kelly Road would be in the new Western Pressure Zone with a hydraulic grade of 530 feet vs. the existing 616 feet in the central part of Apex.

FY 2017-18

Laura Duncan Road and Highway 64 Water Tie-In

\$550,000

This project will extend a 12" water line down Laura Duncan Road, install a bore casing, extend the 12" line to the north side of US 64, and tie in to the existing 12" line that runs parallel to US 64. Our water model indicates that this will improve flow and pressure on that line, it will also help with water conservation, fire flows, and water quality by eliminating a dead end line.

Refurbish/Replace Sand Filters

\$590,000

This equipment (WesTech Super Disc Filter) will replace two of the four existing Traveling Bridge Sand Filters at the Middle Creek WWTP with the same operating capacity as the current four filters. It will use the same foot print and install within the existing structures. The SuperDisc is compact and has a low head filtration. It consists of multiple rotating discs with fine woven filter media. The design will allow for high rate filtration. We employ traveling bridge filters for tertiary treatment. Frequent problems with these filters included: bridge derailment, sand migration, inconsistency during high flows. The current filtration units are at their "End of life" cycle. They were installed in 1988 and the technology has since been updated. With an aging system, there is a need to upgrade our tertiary treatment so we continue to meet the TSS effluent standards. Installing new more efficient filters will require less energy and less maintenance.

FY 2018-19

Old Raleigh Road – Water Line Replacement

\$3,000,000

The 10" water main in Old Raleigh Road was installed in the early 1960s. At the time, it was the Town's largest water line, providing water from Lake Pine to the Town's original water tank at Seaboard Street. The pipe was manufactured using asbestos cement (AC) and is now surpassing the designed 50 year life expectancy. Of additional concern is the improvements to Old Raleigh that have taken place over the years, subjecting this pipe to increasing vibration and stress from vehicle traffic. Research shows that expansive clay soil such as we have here in Apex is a definite contributor to pipe failure, particularly in the smaller diameters like the existing 10" line. The same research shows internal degradation of AC pipe to be the most severe when conveyed water is of a low aggressive index as is the case with the



Town system. Another issue to be taken into consideration is the lack of 10" valves that were provided for at the time of construction. While we do have redundancy, a pipe failure along this line would require an inordinate number of other valves and loops to be closed. The project may be achieved by Pipe Bursting, Pipe Reaming, or a traditional open cut and abandon in place.

Western Pressure Zone – Phase II

\$920,000

This work is a continuation of the Western Pressure Zone project for water distribution. The work will consist of constructing a pressure reducing valve station (PRV) at the old Kelly Road pump station site and extending the existing 24 inch main 3200 feet north from the intersection of Apex Barbecue Road/Kelly Road to the previously noted PRV station. The primary purpose of this work is to provide adequate water flow to the developing western portions of Apex south of Olive Chapel Road as demand grows. This work will also ensure that adequate flow and proper velocities are maintained in the other areas of Apex as growing demand to the west pulls water in that direction.

FY 2019-20

NexGrid Water Meter Interface

\$1,515,000

This project will full deploy Advanced Metering Infrastructure (AMI) interfaces for all water meters. This technology will allow staff to take meter readings from a fixed location and have the readings enter directly into billing software. It will also allow staff to detect excessive water use that could be a sign of a leak and communicate with customers so leaks can be fixed before thus avoiding higher than necessary water bills. AMI provides an end-to-end solution for wireless smart grid and advanced metering. It will provide the ability to manage and monitor our water service customers by utilizing high speed, standards-based communications to access real-time data. Tied with our proposed electric meter replacement, this project will allow us to deploy an advanced outage management system to greatly improve service to our customers.

FY 2020-21

Western Pressure Zone – Phase III

\$4,100,000

This work is a follow on to the construction associated with WPZ phase II. The work is constructing larger diameter waterlines to complete the delineation of the two pressure zones, and entails the following: 2,000 feet of 12 inch waterline on Kelly Road from Apex BBQ Road to Holland Road; 4,100 feet of 24 inch waterline on Kelly Road from Holland Road to Old US1; 6,900 feet of 24 inch waterline on Old US 1 from Kelly Road to Apex BBQ Road; 900 feet of 18 inch waterline on Salem Street from Apex BBQ Road to the Peakway; 5,000 feet of 24 inch waterline on Old US 1 from Kelly Road to Holland Road PRV station. The purpose of this work is very similar to the work in Phase II in that larger diameter lines are required as the western portions of Apex develop and water demand increases. Larger lines are required to provide adequate flows and fire protection to these areas.

Water and Sewer Fund Summary

The table below shows the total of the capital needs for the Water and Sewer Fund element and the revenue sources proposed to support these needs. Local revenue is indicative of the need for current year revenue supported funding for some projects/purchases in each year.

The level of pent up capital need reflected in this document necessitates the issuance of additional debt to meet these needs. In the table below new debt service is shown as a total amount proposed in each fiscal year. Installment purchase is used primarily for debt issues that are shorter in term and/or for relatively small projects. Bond debt is issued for longer term, high cost projects. Some bond issues cover multiple projects. For the purpose of the estimates shown, we have used an interest rate of 4% for installment and bond debt issues. While bond debt will carry a lower interest rate, we opted to keep this illustration simpler by using a common interest rate.

For debt issues in this fund we use a twenty year term for installment financing and contemplate no additional bond issues for the purpose of this illustration. Increasing the length of the term for these issues would result in a lower annual payment, but a higher over-all interest cost over the life of the borrowing.

Water & Sewer Fund						
Project	ID #	2016-17	2017-18	2018-19	2019-20	2020-21
Lake Aeration Mixing System	WS9	850,000				
48" raw water transmission line	WS8	4,500,000				
Downtown water line upgrades	WS 2	1,400,000				
Commerce Street - Sewer Replacement	WS 4	125,000				
Laura Duncan Rd & US 64 - Water line tie in	WS 5		550,000			
Old Raleigh Rd - Water Line Replacement	WS 6			3,000,000		
Smart meters for water (15,000 at \$101)	WS 7				1,515,000	
Western Pressure Zone - Phase I	WS 10	130,000				
Western Pressure Zone - Phase II	WS 11			920,000		
Western Pressure Zone - Phase III	WS 12					4,100,000
Refurbish/Replace existing Sand Filters	WS 13		590,000			
Water & Sewer Fund Total		7,005,000	1,140,000	3,920,000	1,515,000	4,100,000
Revenue Sources:						
Local Revenue		2,505,000	1,140,000	920,000	1,515,000	0
Fees						
Federal Grant						
State Grant						
Local Grant						
Debt		4,500,000		3,000,000		4,100,000
Total		7,005,000	1,140,000	3,920,000	1,515,000	4,100,000
New Debt Service		331,118	331,118	551,863	551,863	853,548
Current Debt Service		4,048,802	4,068,643	3,931,006	3,953,791	3,951,520
Total Debt Service		4,379,920	4,399,761	4,482,869	4,505,654	4,805,068

Section 5: Project Funding Detail

The following pages contain project funding details.

General Fund

Transportation

ID #	Project and Cost	2016-17	2017-18	2018-19	2019-20	2020-21
CM 4	Apex Barbecue Road - Sidewalk			975,000		
	Revenue Sources:					
	Local Revenue			341,250		
	Federal Grant			633,750		
CM 5	James St & Schieffelin Rd - Sidewalk			519,000		
	Revenue Sources:					
	Local Revenue			192,800		
	Federal Grant			326,200		
CM 6	Apex Peakway - Southwest Connector	1,500,000	7,500,000			
	Revenue Sources:					
	Local Revenue	1,500,000				
	Federal Grant		2,500,000			
	Debt		5,000,000			
CM 7	Center St & E. Chatham St Crossing Improvements					1,000,000
	Revenue Sources:					
	Local Revenue					1,000,000
CM 8	Olive Chapel Rd - Sidewalk			600,000		
	Revenue Sources:					
	Local Revenue			240,000		
	Federal Grant			360,000		
CM 9	West Chatham St - Sidewalk		250,000			
	Revenue Sources:					
	Local Revenue		250,000			

ID #	Project and Cost	2016-17	2017-18	2018-19	2019-20	2020-21
CM 10	Apex Peakway - Schiefflin Road Connector		1,000,000		7,500,000	
	Revenue Sources:					
	Local Revenue		1,000,000			
	Federal Grant				2,500,000	
	Debt				5,000,000	
CM 11	Kelly Rd - Sidewalk			600,000		
	Revenue Sources:					
	Local Revenue			240,000		
	Federal Grant			360,000		
CM 12	East Williams St - Sidewalk			250,000		
	Revenue Sources:					
	Local Revenue			100,000		
	Federal Grant			150,000		
CM 13	Hillcrest St - Sidewalk			200,000		
	Revenue Sources:					
	Local Revenue			200,000		
CM 14	US 1 & NC 55 Interchange				500,000	
	Revenue Sources:					
	Local Revenue				500,000	
CM 15	Apex Barbecue Road - Bridge Replacement	200,000	200,000			
	Revenue Sources:					
	Local Revenue	200,000	200,000			
CM 16	Perry Road Sidewalk					150,000
	Revenue Sources:					
	Local Revenue					150,000
CM 17	Apex Peakway Traffic Signals				500,000	
	Revenue Sources:					
	Local Revenue				500,000	

ID #	Project and Cost	2016-17	2017-18	2018-19	2019-20	2020-21
CM 18	Tingen Road Sidewalk					275,000
	Revenue Sources:					
	Local Revenue					110,000
	Federal Grant					165,000
CM P	Street Resurfacing		1,700,000	1,700,000	1,600,000	
	Revenue Sources:					
	Debt		1,700,000	1,700,000	1,600,000	

Transportation Summary						
		2016-17	2017-18	2018-19	2019-20	2020-21
Total Costs		1,700,000	10,650,000	4,844,000	10,100,000	1,425,000

Revenue Sources Summary:						
		2016-17	2017-18	2018-19	2019-20	2020-21
	Local Revenue	1,700,000	1,450,000	1,314,050	1,000,000	1,260,000
	Fees					
	Federal Grant		2,500,000	1,829,950	2,500,000	165,000
	State Grant					
	Local Grant					
	Debt		6,700,000	1,700,000	6,600,000	
	Total	1,700,000	10,650,000	4,844,000	10,100,000	1,425,000

New Debt Service		492,998	618,087	1,103,727	1,103,727	
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General Fund

Public Facilities

ID #	Project and Cost	2016-17	2017-18	2018-19	2019-20	2020-21
F&FS 2	Renovations PSS 4 - PD	253,890				
	Revenue Sources:					
	Local Revenue	253,890				
F&FS 8	Fire Station 1 - Renovation			1,500,000		
	Revenue Sources:					
	Debt			1,500,000		
F&FS 3	Town Campus Annex					9,700,000
	Revenue Sources:					
	Debt					9,700,000
F&FS 4	Public Safety Station 6					4,174,500
	Revenue Sources:					
	Debt					4,174,500
F&FS 6	Senior Center		3,726,000			
	Revenue Sources:					
	Debt		3,726,000			
F&FS 7	Tunstall House Restoration	706,300				
	Revenue Sources:					
	Local Revenue	706,300				
IT 1	Town Fiber Expansion	150,000	100,000	100,000		
	Revenue Sources:					
	Local Revenue	150,000	100,000	100,000		
Total		1,110,190	3,826,000	1,600,000	0	13,874,500

\$6.3m for 2 floors
\$7.9m for 3 floors

Revenue Sources Summary:	2016-17	2017-18	2018-19	2019-20	2020-21
Local Revenue	1,110,190	100,000	100,000	0	0
Fees					
Federal Grant					
State Grant					
Local Grant					
Debt	0	3,726,000	1,500,000	0	13,874,500
Total	1,110,190	3,826,000	1,600,000	0	13,874,500

New Debt Service	0	274,166	384,539	384,539	1,405,449
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General Fund

Public Safety

ID #	Project and Cost	2016-17	2017-18	2018-19	2019-20	2020-21
FD 3	SCBA Replacement	277,000				
	Revenue Sources:					
	Local Revenue	277,000				
FD 4	Radio Replacement - Fire	53,900	59,100			
	Revenue Sources:					
	Local Revenue	53,900	59,100			
FD 5	Fire Engine Replacement (repl. 2002)	515,000				
	Revenue Sources:					
	Local Revenue	515,000				
FD 6	Ladder Truck for Station 5			1,390,000		
	Revenue Sources:					
	Local Revenue			1,390,000		
FD 7	Engine for Station 6					718,500
	Revenue Sources:					
	Local Revenue					718,500
FD 8	Fire Engine Replacement (repl. 2001)		570,000			
	Revenue Sources:					
	Local Revenue		570,000			
PD 1	911 Phone System Replacement	185,000				
	Revenue Sources:					
	Local Revenue	185,000				
PD 2	Radio Replacement - Police	181,800	172,200	172,200	172,200	25,000
	Revenue Sources:					
	Local Revenue	181,800	172,200	172,200	172,200	25,000
PD 3	Console Replacement - Police		440,000			
	Revenue Sources:					
	Local Revenue		440,000			

ID #	Project and Cost	2016-17	2017-18	2018-19	2019-20	2020-21
PD 4	CAD Replacement - Police	280,000				
	Revenue Sources:					
	Local Revenue	280,000				
Total		1,492,700	1,241,300	1,562,200	172,200	743,500

Revenue Sources Summary:						
	Local Revenue	1,492,700	1,241,300	1,562,200	172,200	743,500
	Fees					
	Federal Grant					
	State Grant					
	Local Grant					
	Debt					
Total		1,492,700	1,241,300	1,562,200	172,200	743,500

New Debt Service

General Fund

Parks, Recreation, and Cultural Resources

ID #	Project and Cost	2016-17	2017-18	2018-19	2019-20	2020-21
PR 4	Salem Pond Park - Phase 2	349,264				
	Revenue Sources:					
	Fees	349,264				
PR 5	Middle Creek Greenway - Pemberley to Holly Springs	760,000	712,517		1,000,000	
	Revenue Sources:					
	Fees		212,517			
	Local Revenue	100,000				
	Local Grant	140,000				
	Debt	520,000	500,000		1,000,000	
PR 6	Pleasant Park - Phase 1		1,697,960			
	Revenue Sources:					
	Local Grant - CDBG		330,000			
	Debt		1,367,960			
PR 7	Environmental Education Center - Nature Park			935,000		
	Revenue Sources:					
	Debt			935,000		
PR 8	Northwest Area - Park Land				5,000,000	
	Revenue Sources:					
	Debt				5,000,000	
PR 9	Pleasant Park - Phase 2			10,000,000		
	Revenue Sources:					
	Debt			10,000,000		
PR 11	Apex Elementary School Tennis Court Reconstruction	205,138				
	Revenue Sources:					
	Local Revenue	175,138				
	USTA Grant	30,000				

ID #	Project and Cost	2016-17	2017-18	2018-19	2019-20	2020-21
PR 12	Jaycee Park Expansion				750,000	
	Revenue Sources:					
	Debt				750,000	
PR 13	Kelly Road to Nature Park	1,348,200	865,240			
	Revenue Sources:					
	Local Revenue		127,940			
	Fees		237,300			
	State Grant	188,200				
	Local Grant	160,000				
	Debt	1,000,000	500,000			
PR 14	Apex Nature Park Soccer Field Turf Conversion		2,000,000			
	Revenue Sources:					
	Debt		2,000,000			
Total		2,662,602	5,275,717	10,935,000	6,750,000	0

Revenue Sources Summary:

Local Revenue	275,138	127,940	0	0	0
Fees	349,264	449,817	0	0	0
Federal Grant					
State Grant	188,200	0	0	0	0
Local Grant (USTA / County)	330,000	330,000	0	0	0
Debt	1,520,000	4,367,960	10,935,000	6,750,000	0
Total	2,662,602	5,275,717	10,935,000	6,750,000	0

New Debt Service	111,844	433,246	1,237,862	1,734,539	1,734,539
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General Fund

Stormwater and Environmental Services

ID #	Project and Cost	2016-17	2017-18	2018-19	2019-20	2020-21
EP 7	Vacuum Truck Replacement	145,000				
	Revenue Sources:					
	Local Revenue	145,000				
EP 8	Grapple Truck Replacement			140,000		
	Revenue Sources:					
	Local Revenue			140,000		
EP 9	Chipper Truck Replacement				100,000	
	Revenue Sources:					
	Local Revenue				100,000	
Total		145,000	0	140,000	100,000	0

Revenue Sources:

Local Revenue	145,000	0	140,000	100,000	0
Fees					
Federal Grant					
State Grant					
Local Grant					
Debt					
Total	145,000	0	140,000	100,000	0

New Debt Service

General Fund

Totals

2016-17 2017-18 2018-19 2019-20 2020-21

Total Expense by Element

Transportation	1,700,000	10,650,000	4,844,000	10,100,000	1,425,000
Parks, Recreation, & Cultural Resources	2,662,602	5,275,717	10,935,000	6,750,000	0
Public Safety	1,492,700	1,241,300	1,562,200	172,200	743,500
Public Facilities	1,110,190	3,826,000	1,600,000	0	13,874,500
Stormwater and Environmental Service	145,000	0	140,000	100,000	0
TOTAL	7,110,492	20,993,017	19,081,200	17,122,200	16,043,000

Total Revenue by Source:

Local Revenue	4,723,028	2,919,240	3,116,250	1,272,200	2,003,500
Fees	349,264	449,817	0	0	0
Federal Grant	0	2,500,000	1,829,950	2,500,000	165,000
State Grant	188,200	0	0	0	0
Local Grant	330,000	330,000	0	0	0
Debt	1,520,000	14,793,960	14,135,000	13,350,000	13,874,500
Total	7,110,492	20,993,017	19,081,200	17,122,200	16,043,000

New Debt Service	111,844	1,200,410	2,240,488	3,222,805	4,243,715
Current Debt Service	3,497,224	3,234,716	2,836,123	2,650,469	2,575,927
Total Debt Service	3,609,068	4,435,126	5,076,611	5,873,274	6,819,642

Electric Fund

ID #	Project and Cost	2016-17	2017-18	2018-19	2019-20	2020-21
EL 3	Smart Meters and Load Control	1,200,000	1,200,000	2,000,000		
	Revenue Sources:					
	Local Revenue	1,200,000	1,200,000	2,000,000		
EL 4	Green Level Substation	550,000	3,575,000		3,575,000	
	Revenue Sources:					
	Local Revenue	550,000				
	Debt		3,575,000		3,575,000	
EL 6	East Williams Substation			1,800,000	1,250,000	
	Revenue Sources:					
	Debt			1,800,000	1,250,000	
Electric Fund Total		1,750,000	4,775,000	3,800,000	4,825,000	0

Revenue Sources:

Local Revenue	1,750,000	1,200,000	2,000,000	0	0
Fees					
Federal Grant					
State Grant					
Local Grant					
Debt	0	3,575,000	1,800,000	4,825,000	0
Total	1,750,000	4,775,000	3,800,000	4,825,000	0

New Debt Service

Current Debt Service

Total Debt Service

	263,055	395,502	750,534	750,534
	639,266	638,854	638,827	639,147
	639,266	901,909	1,034,329	1,389,681
				750,534
				639,780
				1,390,314

Water & Sewer Fund

ID #	Project and Cost	2016-17	2017-18	2018-19	2019-20	2020-21
WS9	Lake Aeration Mixing System	850,000				
	Revenue Sources:					
	Local Revenue	850,000				
WS8	48" raw water transmission line	4,500,000				
	Revenue Sources:					
	Debt	4,500,000				
WS 2	Downtown water line upgrades	1,400,000				
	Revenue Sources:					
	Local Revenue	1,400,000				
WS 4	Commerce Street - Sewer Replacement	125,000				
	Revenue Sources:					
	Local Revenue	125,000				
WS 5	Laura Duncan Rd & US 64 - Water line tie in		550,000			
	Revenue Sources:					
	Local Revenue		550,000			
WS 6	Old Raleigh Rd - Water Line Replacement			3,000,000		
	Revenue Sources:					
	Debt			3,000,000		
WS 7	Smart meters for water (15,000 at \$101)				1,515,000	
	Revenue Sources:					
	Local Revenue				1,515,000	
WS 10	Western Pressure Zone - Phase I	130,000				
	Revenue Sources:					
	Local Revenue	130,000				
WS 11	Western Pressure Zone - Phase II			920,000		
	Revenue Sources:					
	Local Revenue			920,000		

ID #	Project and Cost	2016-17	2017-18	2018-19	2019-20	2020-21
WS 12	Western Pressure Zone - Phase III					4,100,000
	Revenue Sources:					
	Debt					4,100,000
WS 13	Refurbish/Replace existing Sand Filters		590,000			
	Revenue Sources:					
	Local Revenue		590,000			
Water & Sewer Fund Total		7,005,000	1,140,000	3,920,000	1,515,000	4,100,000

Revenue Sources:						
	Local Revenue	2,505,000	1,140,000	920,000	1,515,000	0
	Fees					
	Federal Grant					
	State Grant					
	Local Grant					
	Debt	4,500,000	0	3,000,000	0	4,100,000
Total		7,005,000	1,140,000	3,920,000	1,515,000	4,100,000

New Debt Service	331,118	331,118	551,863	551,863	853,548
Current Debt Service	4,025,854	4,045,304	3,953,850	3,976,243	3,973,581
Total Debt Service	4,356,972	4,376,422	4,505,713	4,528,106	4,827,129