

# Discussion Materials

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Town of Chapel Hill, North Carolina



January 31, 2020

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# Topics for Discussion

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- Davenport History with the Town.
  
- Current Credit Ratings and Rating Peers.
  
- Existing Tax Supported Debt and Financial Profile.
  - Key Financial Ratios / Policies.
  - Peer Comparatives.
  - Debt Service Budgeting Approach.
  
- Capital Planning.
  - Capital Projects / Funding Overview.
  - Debt Capacity.
  - Debt Affordability.
  
- Observations.



# Davenport History with the Town



# Role of a Financial Advisor Scope

*As Financial Advisor to the Town, Davenport has a Fiduciary Duty to the Town and as such provides the Town with guidance and assistance to ensure that the Town's interests are protected throughout the issuance process – from the planning stages through post-issuance decisions.*

## Planning and Pre-Transaction Related Services

- Long Term Capital Planning Strategy
- Financial Policy Development
- Peer Comparative Analysis
- Debt Capacity Analysis
- Debt Affordability Analysis
- Debt Service Structuring Options
- Plan of Finance Development
- Rating Agency Strategy
- Rating Agency Surveillance
- Refunding Opportunity Monitoring
- Investment Management Services

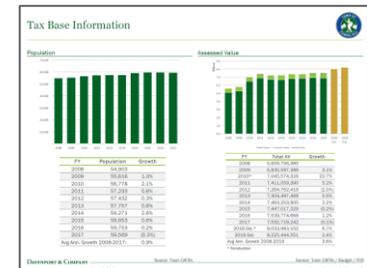
## Transaction Related Services

- Rating Agency Coordination including:
  - Schedule the rating agency meetings / calls
  - Provide each rating agency with the required background information on the Town
  - Draft a comprehensive rating agency presentation
  - Prepare Town participants for rating interactions
  - Coordinate any required follow-up correspondence
  - Coordinate the drafting and publication of the Town's official rating reports
- LGC coordination / due diligence process
- Development / review of Bond Documents
  - Assist in preparation of the POS and NOS
  - Provide insight / guidance on NOS bid parameters that maximize bidder participation while meeting the Town's objectives
- Assistance in researching and disclosing prior 15c2-12 Disclosure Compliance.
- Provide Pricing Oversight:
  - Monitor bidder registration to maximize the competitive bids
  - Analyze bids received to ensure accuracy of the bid process
  - Provide preliminary and final bond sizing models on day of sale
- Coordinate the closing process
- Investment of Bond Proceeds

# Davenport History with Chapel Hill



- Davenport has served as Financial Advisor to Chapel Hill since 2009 and has assisted the Town with the following services:
  - Bond Issuances
  - Refunding Strategies
  - Capital Planning
    - Debt Capacity
    - Debt Affordability
    - Monitoring of Peer Rating Medians
  - Rating Agency Strategies / Interactions
  - Town Council Education / Interaction
  - General Obligation Referendum Analysis
- Davenport works with the Town to document all pertinent information regarding the Town's debt issuances, including debt service schedules, call dates, call premiums, and refunding eligibility.
  - This includes monitoring the Town's Existing Debt Portfolio, identifying opportunities to lower Debt Service Costs through a variety of strategies, and updating the Town on a regular basis on its ability to Refinance / Refund debt for savings purposes. Davenport has assisted the Town in identifying and executing the following transactions:



## Transactions Completed

Issue	Size	Method of Sale	Debt Service Savings	% Net Present Value Savings
General Obligation Refunding Bonds, Series 2019	\$9,505,000	Public Issuance – Competitive	\$854,767	6.99%
General Obligation Public Improvement Bonds, Series 2018	\$12,500,000	Public Issuance – Competitive	-	-
Installment Purchase Contract, Series 2017	\$6,408,000	Direct Bank Loan	-	-
General Obligation Public Improvement Bonds, Series 2017	\$9,000,000	Public Issuance – Competitive	-	-
General Obligation Public Safety Bonds, Series 2017	\$1,460,000	Public Issuance – Competitive	-	-
Installment Financing Contract, Series 2016	\$7,984,000	Direct Bank Loan	-	-
Installment Financing Contract, Series 2015	\$2,395,000	Direct Bank Loan	-	-
General Obligation Refunding Bond, Series 2013	\$3,050,000	Direct Bank Loan	\$178,820	5.88%
Limited Obligation Bonds, Series 2012	\$28,800,000	Public Issuance – Negotiated	\$812,572	3.17%
General Obligation Refunding Bonds, Series 2012	\$4,655,000	Public Issuance – Competitive	\$466,077	9.15%
General Obligation Public Improvement Bonds, Series 2012	\$1,700,000	Public Issuance – Competitive	-	-
General Obligation Public Improvement Bonds, Series 2010B (BABs)	\$12,250,000	Public Issuance – Competitive	-	-
General Obligation Public Improvement Bonds, Series 2010A	\$8,160,000	Public Issuance – Competitive	-	-
<b>Total</b>	<b>\$107,867,000</b>		<b>\$2,312,236</b>	

Project Name	Date	Year of Issuance	Amount
1. Infrastructure	10/1/2022	21	\$1,000,000
2. Water	10/1/2022	21	\$1,000,000
3. Sewer	10/1/2022	21	\$1,000,000
4. Stormwater	10/1/2022	21	\$1,000,000
5. Parks	10/1/2022	21	\$1,000,000
6. Public Safety	10/1/2022	21	\$1,000,000
7. Economic Development	10/1/2022	21	\$1,000,000
8. Other	10/1/2022	21	\$1,000,000
<b>Total</b>			<b>\$7,000,000</b>



# Credit Rating Overview and Peer Comparatives



# Credit Rating Overview and Peer Comparatives

## Peer Comparative Introduction

- The Town is currently rated Aaa by Moody’s Investors Service (November 2019 and May 2019 AICR) and AAA by Standard and Poor’s (November 2019).
  - The Town received its Aaa rating from Moody’s in 1998 and its AAA rating from S&P in 2006.
  
- The following pages contain peer comparatives based on the below Moody’s rating categories.
  - National Cities and Towns
    - Aaa 236 Credits
    - Aa1 303 Credits
    - Aa2 699 Credits
  
  - Moody’s North Carolina Cities and Towns
    - Aaa 12 Credits
      - Apex, Asheville, Cary, Chapel Hill, Charlotte, Durham, Greensboro, Huntersville, Morrisville, Raleigh, Wilmington, Winston-Salem
    - Aa1 10 Credits
      - Carrboro, Concord, Fayetteville, Fuquay-Varina, Garner, Hickory, High Point, Indian Trail, Matthews, Wake Forest
    - Aa2 15 Credits
      - Burlington, Clayton, Gastonia, Goldsboro, Greenville, Holly Springs, Jacksonville, Mint Hill, Monroe, Mooresville, Mount Holly, Rocky Mount, Sanford, Thomasville, Wilson

Moody's Investors Service	Standard & Poor's	Fitch Ratings
<b>Aaa</b>	<b>AAA</b>	AAA
Aa1	AA+	AA+
Aa2	AA	AA
Aa3	AA-	AA-
A1	A+	A+
A2	A	A
A3	A-	A-
Baa1	BBB+	BBB+
Baa2	BBB	BBB
Baa3	BBB-	BBB-
Non Investment Grade		

Note: The data shown in the peer comparatives is from Moody’s Municipal Financial Ratio Analysis database. The figures shown are derived from the most recent financial statement available as of January 7, 2020 (FY 2018 figures in most cases).



# Moody's Methodology Update

## Quantitative Scoring Factors

- On December 16, 2016, Moody's updated its US Local Governments General Obligation Debt methodology and assumptions. Under the new methodology, an initial indicative rating is calculated from a weighted average of four key factors. Below the line qualitative adjustments can be made after the initial indicative rating.

US Local Governments General Obligation Debt Methodology		
1	<b>Economy / Tax Base</b>	<b>30%</b>
	Tax Base Size (Full Value)	10%
	Full Value Per Capita	10%
	Wealth (Median Family Income)	10%
2	<b>Finances</b>	<b>30%</b>
	Fund Balance (% of Revenues)	10%
	Fund Balance Trend (5-Year Change)	5%
	Cash Balance (% of Revenues)	10%
	Cash Balance Trend (5-Year Change)	5%
3	<b>Management</b>	<b>20%</b>
	Institutional Framework	10%
	Operating History	10%
4	<b>Debt / Pensions</b>	<b>20%</b>
	Debt to Full Value	5%
	Debt to Revenue	5%
	Moody's Adjusted Net Pension Liability (3-Year Average) to Full Value	5%
	Moody's Adjusted Net Pension Liability (3-Year Average) to Revenue	5%

## Qualitative Scoring Factors

Below-the-Line Adjustments		Other Considerations <sup>1</sup>
1	<b>Economy / Tax Base</b>	
2	Institutional presence (+)	Per capita income
3	Regional economic center (+)	Composition of workforce/employment opportunities
4	Economic concentration (-)	Proportion of tax base that is vacant or exempt from taxes
5	Outsized unemployment or poverty levels (-)	Median home value
6		Trend of real estate values
7		Population trends
8		Property tax appeals outstanding
9		Unusually significant tax base declines or growth
10		
11	<b>Finances</b>	
12	Outsized enterprise or contingent liability risk (-)	Questionable balance sheet items that may distort fund balance
13	Unusually volatile revenue structure (-)	Large portion of fund balance that is restricted or unusable
14		Labor contracts that materially affect credit strength
15		Limited revenue raising ability:
16		Restrictive property tax cap
17		Constraints on capturing tax base growth
18		Other levy-raising limitation
19		Limited ability to cut or control expenditures:
20		Limitation constrains budgetary flexibility to a degree not already captured in the scorecard
21		Heavy fixed costs, including contractually fixed costs such as pension payments
22	<b>Management</b>	
23	State oversight or support (+ or -)	
24	Unusually strong or weak budget management and planning (+ or -)	
25		
26	<b>Debt / Pensions</b>	
27	Unusually weak or strong security features (- or +)	Very high or low debt service relative to budget
28	Unusual risk posed by debt structure (-)	Very high or low overall debt burden (including overlapping debt)
29	History of missed debt service payments (-)	Heavy capital needs implying future debt increases
30		Unusually slow or rapid amortization of debt principal (gauged by the percentage of principal repaid within 10 years)
31		Other post-employment benefits (OPEB), the most significant of which is retiree healthcare liabilities, when they have the potential to significantly constrain operational flexibility

<sup>1</sup> These other considerations include factors specifically outlined in Moody's rating methodology. However, any information regarding an issuer can rise to the level of a qualitative factor/consideration as deemed appropriate by the rating analyst and credit committee.

Note: Qualitative adjustments consisting of either a ½ “notch” up or down (+/- ~0.16 on the scorecard) or a full “notch” up or down (+/- ~0.33 on the scorecard) can be added or subtracted from the initial indicative rating, as applicable.

# Moody's FY 2018 Scorecard Results



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
Chapel Hill, NC	Very Strong (Aaa)		Strong (Aa)		Moderate (A)		Weak (Baa)		Poor (Ba)		Very Poor (B & Below)		Input	Weight	Score	Weighted Score	
Numerical Score	0.50	1.49	1.50	2.49	2.50	3.49	3.50	4.49	4.50	5.49	5.50	6.50					
<b>1 Economy / Tax Base (30%)</b>																	
2 Total Full Value (\$000)	> \$12B	<b>\$12B &gt;</b>	<b>&gt; \$1.4B</b>	\$1.4B >	> \$240M	\$240M >	> \$120M	\$120M >	> \$60M	\$60M >	> \$30M	< \$30M	8,034,649	10%	1.86	0.19	
3 Full Value Per Capita (\$)	> \$150,000	<b>\$150,000 &gt;</b>	<b>&gt; \$65,000</b>	\$65,000 >	> \$35,000	\$35,000 >	> \$20,000	\$20,000 >	> \$10,000	\$10,000 >	> \$5,000	< \$5,000	134,128	10%	1.68	0.17	
4 Median Family Income as % of U.S. (2010 Census)	<b>&gt; 150%</b>	150% >	> 90%	90% >	> 75%	75% >	> 50%	50% >	> 40%	40% >	> 30%	< 30%	169.73%	10%	1.10	0.11	
<b>5 Finances (30%)</b>																	
6 Available Op Fund Balance as % of Revenue	<b>&gt; 30.0%</b>	30.0% >	> 15.0%	15.0% >	> 5.0%	5.0% >	> 0.0%	0.0% >	> -2.5%	-2.5% >	> -5.0%	< -5.0%	45.46%	10%	0.97	0.10	
7 5-Year Dollar Change in Fund Balance as % of Revenues	> 25.0%	25.0% >	> 10.0%	<b>10.0% &gt;</b>	<b>&gt; 0.0%</b>	0.0% >	> -10.0%	-10.0% >	> -18.0%	-18.0% >	> -25.0%	< -25.0%	9.78%	5%	2.51	0.13	
8 Operating Net Cash as % of Operating Revenues	<b>&gt; 25.0%</b>	25.0% >	> 10.0%	10.0% >	> 5.0%	5.0% >	> 0.0%	0.0% >	> -2.5%	-2.5% >	> -5.0%	< -5.0%	38.04%	10%	0.62	0.06	
9 5-Year Dollar Change in Cash Balance as % of Revenues	> 25.0%	25.0% >	> 10.0%	<b>10.0% &gt;</b>	<b>&gt; 0.0%</b>	0.0% >	> -10.0%	-10.0% >	> -18.0%	-18.0% >	> -25.0%	< -25.0%	4.64%	5%	3.03	0.15	
<b>10 Management (20%)</b>																	
11 Institutional Framework	<b>Very strong legal ability to match resources with spending</b>	Strong legal ability to match resources with spending		Moderate legal ability to match resources with spending		Limited legal ability to match resources with spending		Poor legal ability to match resources with spending		Very Poor or no legal ability to match resources with spending		Aaa	10%	1.00	0.10		
12 Operating History: (5 Year Average of Operating Revenues / Operating Expenditures)	> 1.05x	1.05x >	> 1.02x	<b>1.02x &gt;</b>	<b>&gt; 0.98x</b>	0.98x >	> 0.95x	0.95x >	> 0.92x	0.92x >	> 0.90x	< 0.90x	1.01	10%	2.74	0.27	
<b>13 Debt / Pensions (20%)</b>																	
14 Direct Net Debt as % of Full Value	< 0.75%	<b>0.75% &lt;</b>	<b>&lt; 1.75%</b>	1.75% <	< 4.00%	4.00% <	< 10.00%	10.00% <	< 15.00%	15.00% <	> 15.00%	> 15.00%	0.83%	5%	1.57	0.08	
15 Net Direct Debt / Operating Revenues (x)	< 0.33x	<b>0.33x &lt;</b>	<b>&lt; 0.67x</b>	0.67x <	< 3.00x	3.00x <	< 5.00x	5.00x <	< 7.00x	7.00x <	> 7.00x	> 7.00x	1.00	5%	2.63	0.13	
16 3-Year Avg of Moody's ANPL / Full Value	< 0.90%	<b>0.90% &lt;</b>	<b>&lt; 2.10%</b>	2.10% <	< 4.80%	4.80% <	< 12.00%	12.00% <	< 18.00%	18.00% <	> 18.00%	> 18.00%	1.15%	5%	1.70	0.08	
17 3-Year Avg of Moody's ANPL / Operating Revenues	< 0.40x	<b>0.40x &lt;</b>	<b>&lt; 0.80x</b>	0.80x <	< 3.60x	3.60x <	< 6.00x	6.00x <	< 8.40x	8.40x <	> 8.40x	> 8.40x	1.30	5%	2.67	0.13	
18																	
19 <b>Total Score</b>																	<b>1.70</b>
20 <b>Unadjusted Rating</b>																	<b>Aa1</b>

## Moody's Rating Scorecard: Indicative Ratings

HI	LO	Rating
0.50	1.50	Aaa
<b>1.50</b>	<b>1.83</b>	<b>Aa1</b>
1.83	2.17	Aa2

# Rating Agency Commentary – Moody’s (11/14/2019)



U.S. PUBLIC FINANCE

**CREDIT OPINION**  
14 November 2019

✔ Rate this Research

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**Chapel Hill (Town of) NC**  
Update to analysis

**Summary**  
The town of Chapel Hill (Aaa, stable) benefits from a sound financial position following multi-year General Fund surpluses. Reserves and cash balances remained strong despite a planned draw down on reserves for various pay-go capital improvements including parks and affordable housing as well as transfer to OPEB trust. The town's tax base continues to grow largely due to its advantageous location in the burgeoning Research Triangle region and is anchored by the strong institutional presence of the flagship campus of the University of North Carolina. Income and wealth levels are well above average despite the large student population. Lastly, the town's fixed costs will remain affordable despite future borrowing plans due to a conservatively constructed CIP and an average pension position.

**Credit strengths**

- » Sound financial position with healthy reserves
- » Stable economy with strong institutional presence
- » Affordable debt profile

**Credit challenges**

- » Slightly elevated debt compared to state median

**Rating outlook**  
The stable outlook reflects the economic strength of the tax base as well as the town's sound financial position.

**Factors that could lead to an upgrade**

- » Not applicable

**Factors that could lead to a downgrade**

- » Multi-year trend of structural budget imbalance
- » Reduction of General Fund balance and other available reserves
- » Deterioration of the town's tax base

- Credit Strengths
  - Sound financial position with healthy reserves
  - Stable economy with strong institutional presence
  - Affordable debt profile
  
- Credit Challenges
  - Slightly elevated debt compared to state median
  
- Factors that could lead to an upgrade
  - Not applicable
  
- Factors that could lead to a downgrade
  - Multi-year trend of structural budget imbalance
  - Reduction of General Fund balance and other available reserves
  - Deterioration of the town's tax base

# S&P Methodology Update & Scorecard



## Methodology Update

- On September 12, 2013, Standard & Poor's updated its US Local Governments General Obligation Ratings methodology and assumptions.
- Under the new methodology, an initial indicative rating is calculated from a weighted average of seven key factors:

### US Local Governments General Obligation Ratings Methodology

<b>1. Economy</b>	<b>30%</b>
Total Market Value Per Capita	
Projected per capita effective buying income as a % of US	
<b>2. Management</b>	<b>20%</b>
Impact of management conditions on the likelihood of repayment	
<b>3. Budgetary Flexibility</b>	<b>10%</b>
Available Fund Balance as a % of Expenditures	
<b>4. Budgetary Performance</b>	<b>10%</b>
Total Government Funds Net Result (%)	
General Fund Net Revenue	
<b>5. Liquidity</b>	<b>10%</b>
Total Gov't Available Cash as a % of Total Gov't Funds Debt Service	
Total Gov't Cash as a % of Total Gov't Funds Expenditures	
<b>6. Debt and Contingent Liabilities</b>	<b>10%</b>
Net Direct Debt as a % of Total Governmental Funds Revenue	
Total Governmental Funds Debt Service as a % of Total	
<b>7. Institutional Framework</b>	<b>10%</b>
Legal and practical environment in which the local gov't operates	

- Up to a one-notch adjustment can be made from the indicative rating based on other qualitative factors.

## Sample S&P Scorecard

### Town of Chapel Hill, NC 2019 S&P Scorecard - As Calculated by Davenport

Factor	Weight	Score	Weighted Score
Economy	30%	1.00	0.30
Budgetary flexibility	10%	1.00	0.10
<b>Budgetary performance</b>	<b>10%</b>	<b>2.00</b>	<b>0.20</b>
Liquidity	10%	1.00	0.10
Management	20%	1.00	0.20
<b>Debt and contingent liabilities</b>	<b>10%</b>	<b>2.00</b>	<b>0.20</b>
Institutional framework	10%	1.00	0.10
<b>Weighted Average</b>			<b>1.20</b>

### Indicative Rating

<b>1.00 - 1.64</b>	<b>AAA</b>
1.65 - 1.94	AA+
1.95 - 2.34	AA
2.35 - 2.84	AA-

S&P affirmed the Town's 'AAA' rating in its November 5, 2019 Report and assigned a Stable Outlook.

Note: The Budgetary Performance score measures the current fiscal balance (Revenues Over/Under Expenditures) of the Town, both from a general fund and total governmental funds perspective.

Note: The Debt and Contingent Liabilities score is a combination of two measures: total governmental funds debt service as a percentage of total governmental funds expenditures and net direct debt as a percentage of total governmental funds revenue.



# Rating Agency Commentary – S&P (11/5/2019)

## Summary:

### Chapel Hill, North Carolina; Appropriations; General Obligation

Credit Profile		
US\$9.565 mil GO rfdg bnds ser 2019 due 04/01/2031		
Long Term Rating	AAA/Stable	New
<b>Chapel Hill GO</b>		
Long Term Rating	AAA/Stable	Affirmed

## Rationale

S&P Global Ratings assigned its 'AAA' long-term rating to Chapel Hill, N.C.'s series 2019 general obligation (GO) refunding bonds. At the same time, we affirmed our 'AAA' long-term rating on the town's GO bonds outstanding and our 'AA+' long-term rating on the town's appropriation-backed debt. The outlook is stable.

## Security and use of proceeds

Securing debt service on the refunding and GO debt outstanding is the town's full faith and credit, including its statutory authority to levy ad valorem taxes on all real and tangible personal property without limitation as to rate or amount. Proceeds will be used to refund certain maturities of the series 2010B bonds for an estimated net present value savings of 6.5% of the refunded bonds.

## Credit overview

Chapel Hill, home to the University of North Carolina's (UNC) flagship institution and with its participation in the Research Triangle Park, has experienced robust economic growth while maintaining stable financial trends through various economic cycles. Furthermore, we believe the management team's adherence to long-term financial and capital planning as well as its adoption of a policy to continue prefunding its retiree health care benefits support our view of the 'AAA' rating.

We rate Chapel Hill's GO debt higher than the sovereign because we believe the town can maintain better credit characteristics than the U.S. in a stress scenario. Under our criteria "Ratings Above The Sovereign: Corporate And Government Ratings--Methodology And Assumptions," published Nov. 19, 2013 on RatingsDirect, the town primarily has a locally derived revenue base with roughly 73% of total governmental revenue and maintains independent taxing authority as well as independent treasury management from the federal government.

The ratings further reflect our view of the town's:

- Very strong economy, with access to a broad and diverse metropolitan statistical area and a local stabilizing institutional influence;
- Very strong management, with strong financial policies and practices under our financial management assessment

- The 'AAA' rating reflects S&P's opinion of the Town's:
  - Very strong economy
  - Very strong management
  - Strong budgetary performance
  - Very strong budgetary flexibility
  - Very strong liquidity
  - Strong debt and contingent liability position
  - Very strong institutional framework score
- Outlook
  - The stable outlook reflects our view of the town's robust economy that generates its primary operating revenue sources to maintain budgetary balance and very strong reserves. Furthermore, we believe the management team's adherence to its well-embedded policies and procedures will support the 'AAA' rating over the long term. For these reasons, we do not expect to change the rating over the two-year outlook period. All other factors equal, if performance were to deteriorate significantly--potentially stemming from fixed-cost pressure related to the town's large OPEB liability--causing a substantial weakening of reserves and liquidity, we could lower the rating.

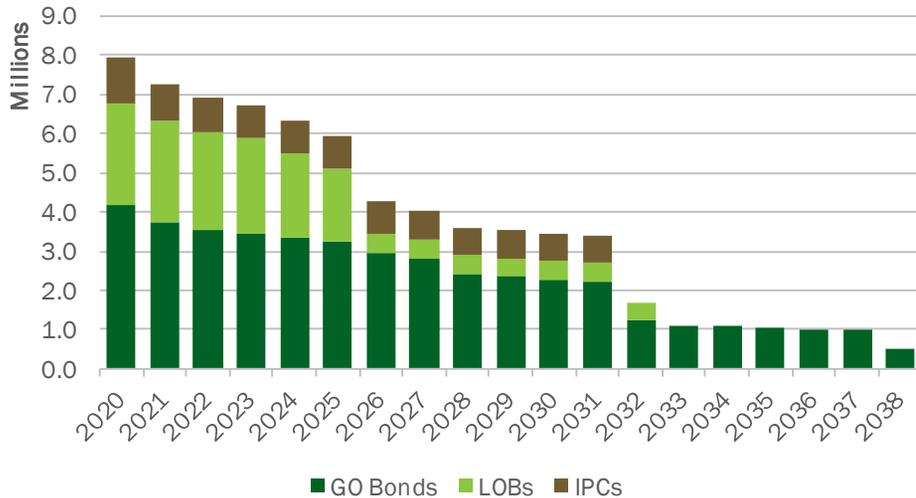


# Existing Tax Supported Debt Profile



# Existing Tax Supported Debt

## Tax Supported Debt Service



## Tax Supported Debt Service

FY	Principal	Interest	Total	10-yr Payout
<b>Total</b>	<b>56,709,297</b>	<b>14,095,293</b>	<b>70,804,590</b>	
2020	5,832,742	2,097,574	7,930,316	77.5%
2021	5,289,555	1,966,687	7,256,242	80.9%
2022	5,161,000	1,749,853	6,910,853	85.4%
2023	5,207,000	1,530,535	6,737,535	87.2%
2024	5,013,000	1,313,411	6,326,411	87.9%
2025	4,836,000	1,096,881	5,932,881	89.0%
2026	3,371,000	891,969	4,262,969	90.7%
2027	3,265,000	762,269	4,027,269	93.5%
2028	2,960,000	645,979	3,605,979	97.4%
2029	2,998,000	538,647	3,536,647	100.0%
2030	3,036,000	427,287	3,463,287	100.0%
2031	3,080,000	319,462	3,399,462	100.0%
2032	1,470,000	211,615	1,681,615	100.0%
2033	940,000	163,363	1,103,363	100.0%
2034	940,000	135,163	1,075,163	100.0%
2035	940,000	105,788	1,045,788	100.0%
2036	940,000	76,413	1,016,413	100.0%
2037	940,000	46,475	986,475	100.0%
2038	490,000	15,925	505,925	100.0%

## Par Outstanding – Estimated as of 6/30/2019

Type	Par Amount
General Obligation Bonds (Debt Service Fund)	\$33,803,000
Limited Obligation Bonds (Debt Service Fund)	\$7,880,000
Limited Obligation Bonds (Parking Fund)	\$6,355,000
IPCs (Debt Service Fund)	\$8,345,000
IPCs (Vehicle Replacement Fund)	\$326,297
<b>Total</b>	<b>\$56,709,297</b>

Notes:

-Includes 2019 GO Refunding Bonds issued in December 2019.



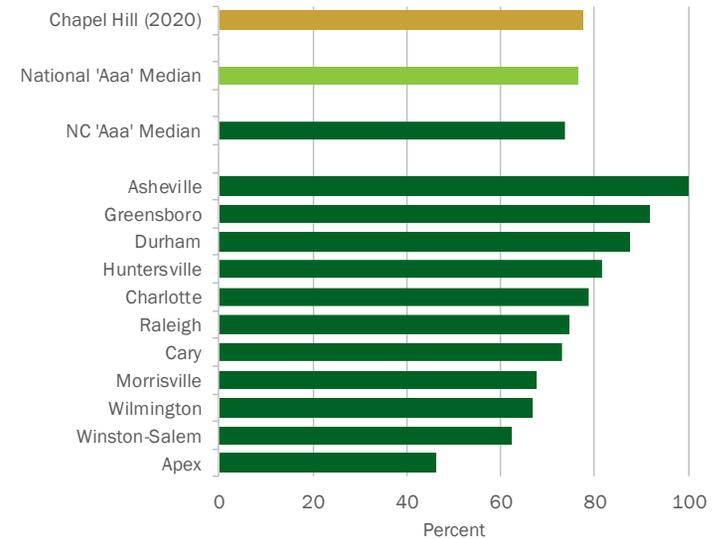
# Key Debt Ratio: Tax Supported Payout Ratio

## 10-Year Payout Ratio



- Existing 10-year Payout Ratio
  - FY 2020: 77.5%
- The 10-Year Payout Ratio measures the amount of principal to be retired in the next 10 years.
- This ratio is an important metric that indicates whether or not a locality is back-loading its debt.
- The Town has a policy establishing a minimum 10-Year Payout Ratio of 65%.

## 10-year Payout Ratio Peer Comparative



- Rating Considerations:
  - Moody's: Moody's rating criteria for General Obligation credits allows for a scorecard adjustment if an issuer has unusually slow or rapid amortization of debt principal.
  - S&P: A payout ratio greater than 65% results in a one point positive qualitative adjustment to the Debt & Contingent Liabilities section of S&P's General Obligation rating methodology.



# Key Debt Ratio: Debt to Assessed Value

## Debt to Assessed Value



- Existing Debt to Assessed Value

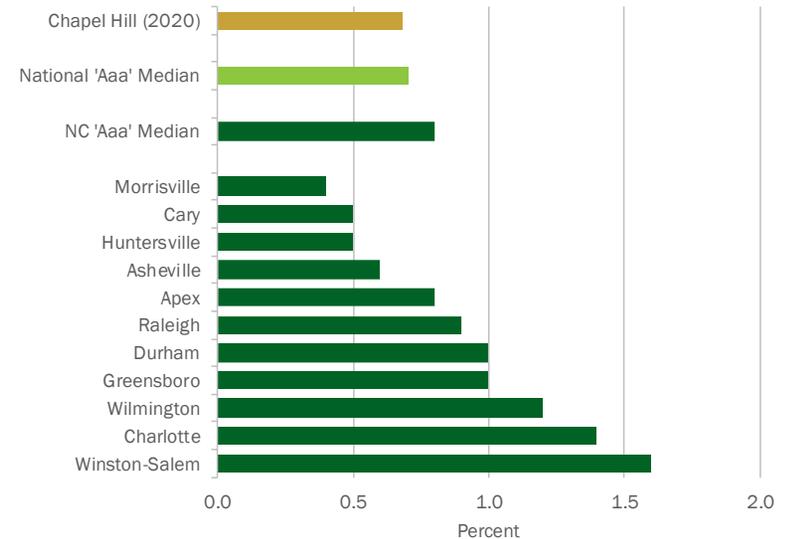
- FY 2020: 0.68%

- Assumed Future Growth Rates

- 2018 Assessed Value: \$8,034,649,409
  - 2019 Unaudited Assessed Value: \$8,223,292,265
  - 2020 Budgeted Assessed Value: \$8,307,698,997
  - 2021 & Beyond: 1.50%

- The Town has a policy establishing a maximum Debt to Assessed Value of 1.50%.

## Debt to Assessed Value Peer Comparative



- Rating Considerations:

- Moody's: Criteria for General Obligation Credits defines categories of Debt to Assessed Values as:

– <b>Very Strong (Aaa):</b>	<b>&lt; 0.75%</b>
– Strong (Aa):	0.75% - 1.75%
– Moderate (A):	1.75% - 4.00%
– Weak – Very Poor (Baa and below):	> 4.00%

- S&P: A positive qualitative adjustment is made to the Debt and Contingent Liabilities score for a debt to market value ratio below 3.00%, while a negative adjustment is made for a ratio above 10.00%.



# Key Debt Ratio: Debt Service vs. Expenditures

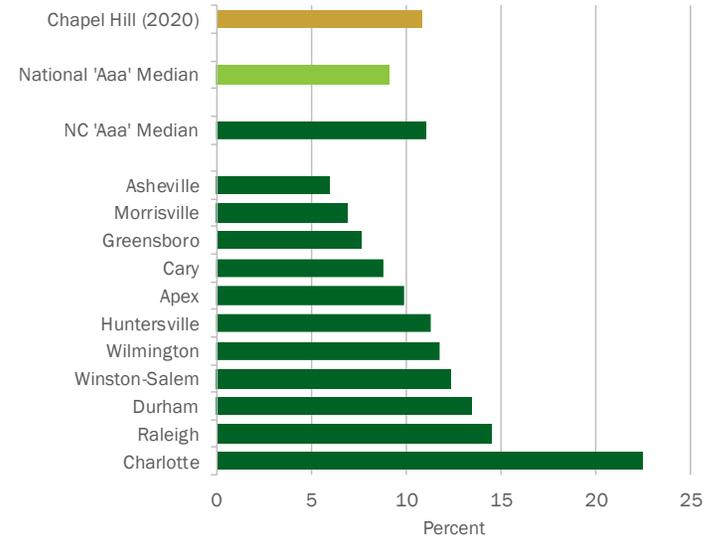
## Debt Service vs. Governmental Expenditures



- Existing Debt Service vs. Expenditures
  - FY 2020: 10.82%
- Assumed Future Growth Rates
  - 2018 Adjusted Expenditures: \$63,436,563
  - 2019 and Beyond: 1.50%
- The Town has a policy establishing a maximum level of Debt Service to Expenditures of 15.00%.

Note: Governmental Expenditures represent the ongoing operating expenditures of the Town. In this analysis, debt service and capital outlay expenditures are excluded.

## Debt Service vs. Expenditures Peer Comparative



- Rating Considerations:
  - Moody's: Moody's criteria allows for a scorecard adjustment if an issuer has very high or low debt service relative to its budget Percent.
  - S&P: The Debt and Contingent Liabilities section defines categories of Net Direct Debt as a % of Total Governmental Funds Expenditures as follows:
    - Very Strong: <8%
    - **Strong: 8% to 15%**
    - Adequate: 15% - 25%
    - Weak: 25% - 35%
    - Very Weak: > 35%



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# Debt Fund Cash Flow Forecast



# Debt Service Fund and Vehicle Replacement Fund Overview

## Debt Service Fund

- The Town has established a Debt Service Fund for the repayment of tax supported debt obligations.
- The Town has dedicated 9.8 cents on the tax rate to fund the Debt Service Fund. In anticipation of upcoming debt obligations, the Town increased the tax rate that supports the Debt Service Fund by 1.6 cents in FY 2020 to fund debt service on the planned Affordable Housing Bonds and other planned capital projects.
- The Debt Service Fund also receives revenues from:
  - Transfers from the Parking Fund for repayment of parking related Debt Service
  - BABs Subsidy
  - Interest on Investments
- The Town's Debt Service Fund pays for debt service on the following obligations:
  - 2012 General Obligation Refunding Bonds
  - 2012 General Obligation Public Improvement Bonds
  - 2012 Limited Obligation Bonds
  - 2013 General Obligation Refunding Bond
  - 2015 Bank of North Carolina IPC
  - 2016 Raymond James IPC
  - 2017 General Obligation Public Improvement Bonds
  - 2017 General Obligation Public Safety Bonds
  - 2018 General Obligation Public Improvement Bonds
  - 2019 General Obligation Refunding Bonds

## Vehicle Replacement Fund & Other Funds

- The Town has a Vehicle replacement internal service fund that pays the debt service on the loans that are not paid by the Debt Service Fund.
- The fund receives vehicle use fees from participating departments and also gets the proceeds of vehicle sales.
- Starting in FY 2015 the Town moved to a pay-go basis for most vehicles.
- The Town's Vehicle Replacement Fund pays for debt service on the following obligations:
  - 2012 BB&T IPC
  - 2012 SunTrust IPC
  - 2013 Wells Fargo IPC
  - 2013 SunTrust IPC
- The Town's Parking Fund pays for debt service on the Limited Obligation Bonds, Series 2012.
- Additionally, the Town operates both a Transit Fund (funded primarily by 6 cents on the tax rate) and Storm Water Management Fund (funded primarily by Storm Water fees) that pays the debt service on certain transit and storm water related loans that are not paid by the debt fund.
  - Transit Fund:
    - 2017 Pinnacle Bank IFC
  - Storm Water Management Fund:
    - 2018 General Obligation Public Improvement Bonds





# Capital Planning



# 2015 and 2018 General Obligation Bond Referendums

- On November 3, 2015, the Town passed a GO Bond Referendum for 5 separate purposes. A total of \$40,300,000 in General Obligation Bonds was proposed and passed by the Town.
  - \$16,200,000 Streets and Sidewalks
  - \$5,000,000 Trails & Greenways
  - \$8,000,000 Parks & Recreation
  - \$5,200,000 Solid Waste
  - \$5,900,000 Storm Water
  
- Additionally, on November 6, 2018, the Town passed a GO Bond Referendum for \$10 million of Affordable Housing Bonds.
  
- The Town’s GO Bond authorization will expire 7 years from the date of the Referendum. The Town would have the ability to extend the approval for 3 additional years, subject to LGC approval, for a total of up to 10 years from the date of the Referendum.
  
- The Town has issued \$21,500,000 of General Obligation Bonds to date and \$28,800,000 of the referendum authorization remains unissued:

A	B	C	D	E	F	G
Referendum Question	Authorized GO Bonds	2017 Issuance	2018 Issuance	Remaining Authorized / Unissued	Initial Expiration	Final Expiration (if extended)
1 Streets and Sidewalks	\$ 16,200,000	\$ 3,000,000	\$ 5,500,000	\$ 7,700,000	11/3/2022	11/3/2025
2 Trails & Greenways	5,000,000	5,000,000	-	-	11/3/2022	11/3/2025
3 Parks & Recreation	8,000,000	1,000,000	4,300,000	2,700,000	11/3/2022	11/3/2025
4 Solid Waste	5,200,000	-	-	5,200,000	11/3/2022	11/3/2025
5 Storm Water	5,900,000	-	2,700,000	3,200,000	11/3/2022	11/3/2025
6 Affordable Housing	10,000,000	-	-	10,000,000	11/6/2025	11/6/2028
<b>7 Total</b>	<b>\$ 50,300,000</b>	<b>\$ 9,000,000</b>	<b>\$ 12,500,000</b>	<b>\$ 28,800,000</b>		



# Capital Projects Under Consideration

- The Town has identified the following Capital Projects that it is considering funding in the next few years. Following the issuance of the proposed General Obligation Bonds mentioned below, the Town will have \$8.4 million of remaining authorized but unissued General Obligation Bonds (\$5.2 million for Solid Waste and \$3.2 million for Storm Water). Solid Waste and Storm Water are not included in this analysis as they are repaid from dedicated funds.

A	B	C	D	E	F
Project	Issuance by Type			Total	Debt Source
	GO Bonds	LOBs / IFC	Cash on Hand		
<b>1 Summer 2020 (FY 2021) Projects</b>					
2 Wallace Deck	-	2,400,000	-	<b>2,400,000</b>	LOBs / IFC
3 Blue Hill Phase II	-	2,600,000	1,600,000	<b>4,200,000</b>	LOBs / IFC
4 Municipal Services Center	2,700,000	31,300,000	-	<b>34,000,000</b>	GO / LOBs / IFC
5 Affordable Housing	5,000,000	-	-	<b>5,000,000</b>	GO Bonds
6 West End Parking (Land)	-	6,000,000	-	<b>6,000,000</b>	LOBs / IFC
8 <b>Total Summer 2020 Projects</b>	<b>\$ 7,700,000</b>	<b>\$ 42,300,000</b>	<b>\$ 1,600,000</b>	<b>\$ 51,600,000</b>	
<b>11 Spring 2022 Projects</b>					
12 Affordable Housing	\$ 5,000,000	\$ -	\$ -	<b>\$ 5,000,000</b>	GO Bonds
13 Streets & Sidewalks	7,700,000	-	-	<b>7,700,000</b>	GO Bonds
14 West End Parking (Construction)	-	10,000,000	-	<b>10,000,000</b>	LOBs / IFC
15 <b>Total Spring 2022 Projects</b>	<b>\$ 12,700,000</b>	<b>\$ 10,000,000</b>	<b>\$ -</b>	<b>\$ 22,700,000</b>	
18 <b>Total Projects (Without West End)</b>	<b>\$ 20,400,000</b>	<b>\$ 36,300,000</b>	<b>\$ 1,600,000</b>	<b>\$ 58,300,000</b>	<b>(Case 1)</b>
19 <b>Total Projects (With West End)</b>	<b>\$ 20,400,000</b>	<b>\$ 52,300,000</b>	<b>\$ 1,600,000</b>	<b>\$ 74,300,000</b>	<b>(Case 2)</b>

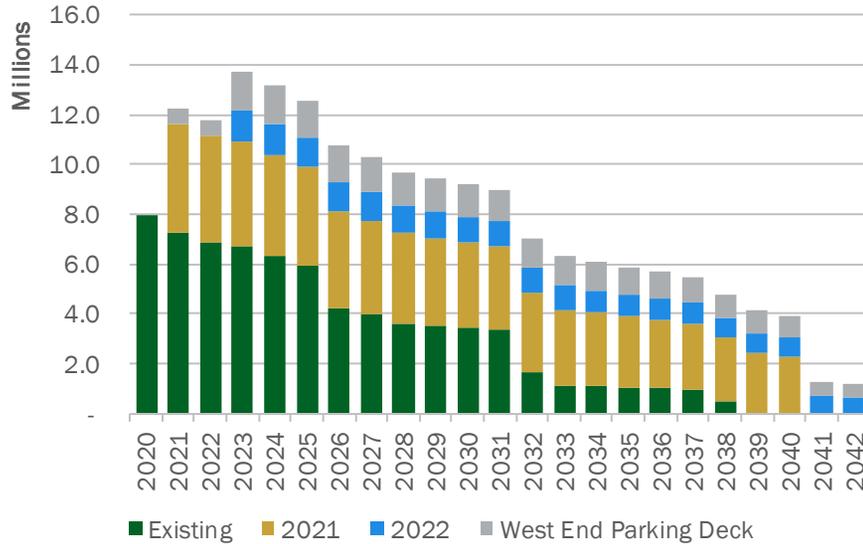
- The following debt assumptions have been included:
  - Term: 20 Years
  - Amortization: Level Principal
  - Interest Rate: 5.00%
  - First Interest:
    - Summer 2020 Issuance: FY 2021
    - Spring 2022 Issuance: FY 2023
  - First Principal:
    - Summer 2020 Issuance: FY 2021
    - Spring 2022 Issuance: FY 2023
- The Town estimates that the new West End Parking Deck parking facilities could provide additional revenue sources in FY 2023. The medium range net revenues available for debt service for the facility ranges from \$735,435 in FY 2023 to \$905,591 in FY 2029.



# Existing and Proposed Debt Service

## All Projects Including West End (Case 2)

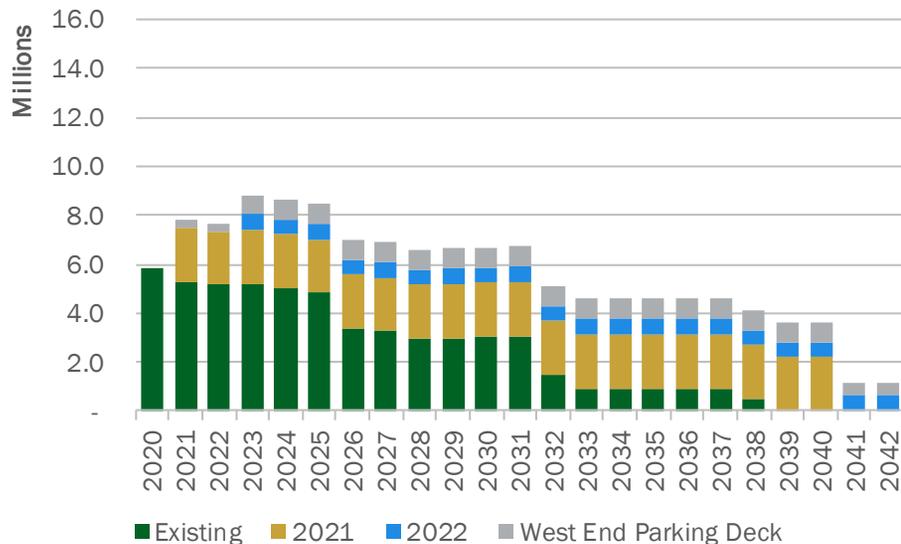
### Existing and Proposed Debt Service



### Assumptions

- Financing Assumptions:
  - Amortization: Level Principal
  - Term: 20 Years
  - Interest Rate: 5.00%
  - First Interest Payment
  - Summer 2020 Issuance: FY 2021
  - Spring 2022 Issuance: FY 2023
  - First Principal Payment:
  - Summer 2020 Issuance: FY 2021
  - Spring 2022 Issuance: FY 2023

### Existing and Proposed Principal



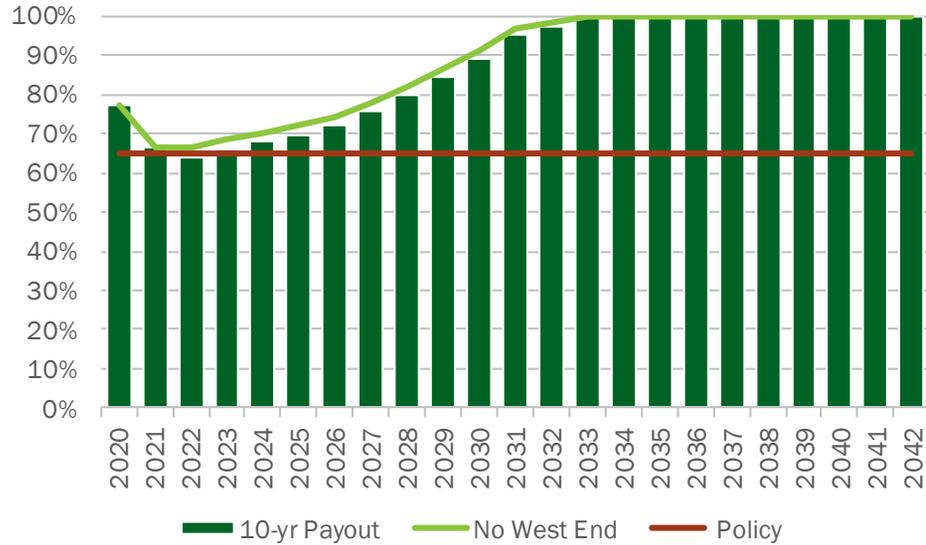
- Proposed Debt Issuance by Fiscal Year:
  - FY 2021: \$50,000,000
  - FY 2022: \$22,700,000
  - Total: \$72,700,000
- Proposed Debt Service by Fiscal Year:
  - FY 2021: \$76,250,000
  - FY 2022: \$34,617,500
  - Total: \$110,867,500



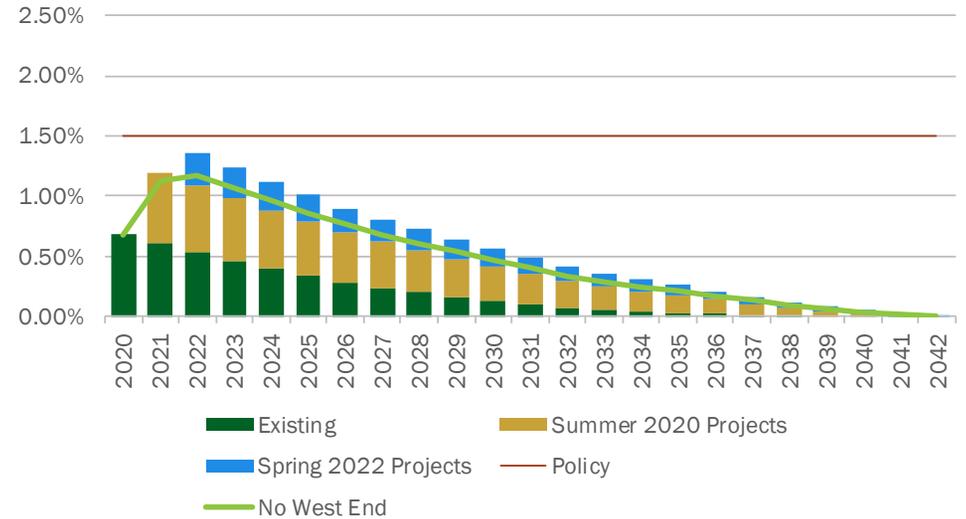
# Key Debt Ratios

## All Projects Including West End (Case 2)

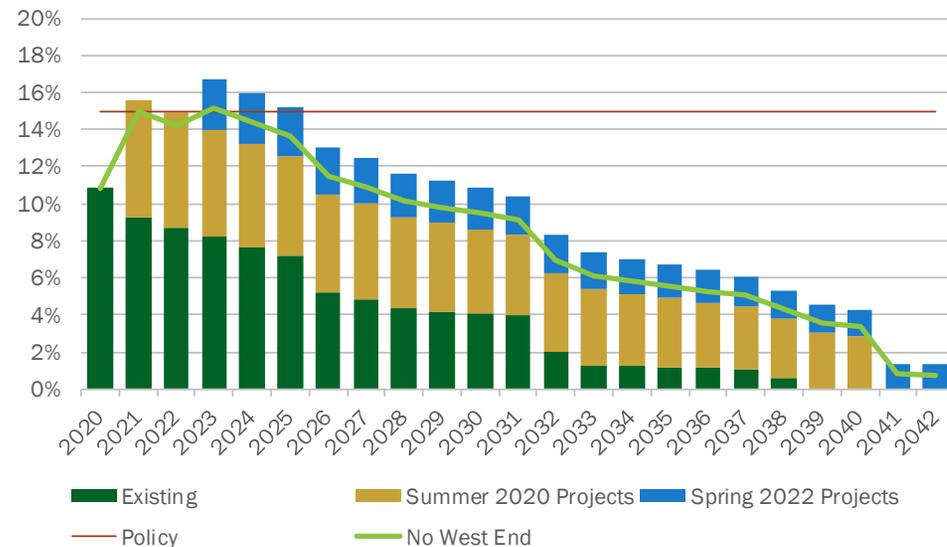
### 10-Year Payout



### Debt to Assessed Value



### Debt Service to Expenditures



# Debt Affordability Cases

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- In order to provide perspective on the potential cash flow impact of the potential financings, the following cases have been analyzed:
  - Case 1: Fund All Projects Except the West End Parking Project – **\$58.3M Total Capital Funding**
  - Case 2: Fund All Projects Including the West End Parking Project – **\$74.3M Total Capital Funding**

# Summary of Results



A	B	C	D
Case		Case 1 <i>Fund All Projects Except the West End Parking Project</i>	Case 2 <i>Fund All Projects Including the West End Parking Project</i>
1	<b>Debt Issued</b>		
2	<b>FY 2021 Projects</b>		
3	Wallace Deck	\$2,400,000	\$2,400,000
4	Blue Hill Phase II	\$2,600,000	\$2,600,000
5	Municipal Services Center	\$34,000,000	\$34,000,000
6	Affordable Housing	\$5,000,000	\$5,000,000
7	West End Parking (Land)	\$0	\$6,000,000
8	<b>Total FY 2021 Projects</b>	<b>\$44,000,000</b>	<b>\$50,000,000</b>
9			
10	<b>FY 2022 Projects</b>		
11	Affordable Housing	\$5,000,000	\$5,000,000
12	Streets & Sidewalks	\$7,700,000	\$7,700,000
13	West End Parking (Construction)	\$0	\$10,000,000
14	<b>Total FY 2022 Projects</b>	<b>\$12,700,000</b>	<b>\$22,700,000</b>
15			
16	<b>Total Debt Issued</b>	<b>\$56,700,000</b>	<b>\$72,700,000</b>
17	<b>Cash Funding</b>	<b>\$1,600,000</b>	<b>\$1,600,000</b>
18	<b>Total Projects Funded</b>	<b>\$58,300,000</b>	<b>\$74,300,000</b>
19			
20	<b>Total Debt Service</b>	<b>\$86,467,500</b>	<b>\$110,867,500</b>
21			
22	<b>Debt Ratios (Worst Shown)</b>	<b>Existing</b>	
23	10-Year Payout	77.50%	66.55%
24	Debt to Assessed Value	0.68%	1.17%
25	Debt Service to Expenditures	10.82%	15.13%
26			
27	<b>Equivalent Tax Impact</b>		
28	FY 2020	-	-
29	FY 2021	-	-
30	FY 2022	-	-
31	FY 2023	-	-
32	FY 2024	-	0.94¢
33	FY 2025	-	1.46¢
34	<b>Total</b>	<b>0.00¢</b>	<b>2.40¢</b>
35			
36	<b>FY 2020 Upfront Impact</b>	<b>0.00¢</b>	<b>0.69¢</b>
37			
38	<b>Equivalent Reserve / Revenue Requirement</b>	<b>-</b>	<b>\$3,096,229</b>



# Debt Affordability Analysis

## Case 1: Fund All Projects Except the West End Parking Project

A	B	C	D	E	F	G	H	I	J
Project	Issuance by Type			Total	Debt Source	Timing	Term	Interest Rate	Amortization
	GO Bonds	LOBs / IFC	Cash on Hand						
<b>1 Summer 2020 (FY 2021) Projects - Option 1</b>									
2 Wallace Deck	-	2,400,000	-	2,400,000	LOBs / IFC	Summer 2020 (FY 21)	20 Years	5.00%	Level Principal
3 Blue Hill Phase II	-	2,600,000	1,600,000	4,200,000	LOBs / IFC	Summer 2020 (FY 21)	20 Years	5.00%	Level Principal
4 Municipal Services Center	2,700,000	31,300,000	-	34,000,000	GO / LOBs / IFC	Summer 2020 (FY 21)	20 Years	5.00%	Level Principal
5 Affordable Housing	5,000,000	-	-	5,000,000	GO Bonds	Summer 2020 (FY 21)	20 Years	5.00%	Level Principal
6 West End Parking (Land)	-	-	-	-	LOBs / IFC	Summer 2020 (FY 21)	20 Years	5.00%	Level Principal
<b>7 Total Summer 2020 Projects</b>	<b>\$ 7,700,000</b>	<b>\$ 36,300,000</b>	<b>\$ 1,600,000</b>	<b>\$ 45,600,000</b>					
<b>10 Spring 2022 Projects</b>									
11 Affordable Housing	\$ 5,000,000	\$ -	\$ -	\$ 5,000,000	GO Bonds	Spring 2022 (FY 22)	20 Years	5.00%	Level Principal
12 Streets & Sidewalks	7,700,000	-	-	7,700,000	GO Bonds	Spring 2022 (FY 22)	20 Years	5.00%	Level Principal
13 West End Parking (Construction)	-	-	-	-	LOBs / IFC	Spring 2022 (FY 22)	20 Years	5.00%	Level Principal
<b>14 Total Spring 2022 Projects</b>	<b>\$ 12,700,000</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 12,700,000</b>					
<b>17 Total Projects (Option 1)</b>	<b>\$ 20,400,000</b>	<b>\$ 36,300,000</b>	<b>\$ 1,600,000</b>	<b>\$ 58,300,000</b>					

**Total Funding:**  
 GO Bonds: \$20,400,000  
 LOBs / IFCs: \$36,300,000  
 Cash on Hand: \$1,600,000  
**Total: \$58,300,000**

A	B	C	D	E	F	G	H	I	J	K	L	M	N
FY	Debt Service Requirements			Revenue Available for DS				Debt Service Cash Flow Surplus (Deficit)					
	Existing Debt Service <sup>1</sup>	CIP Debt Service	Total	Existing Revenue Sources <sup>2,3</sup>	Transfer from Parking for existing debt <sup>4</sup>	West End Parking Deck Net Revenues <sup>5</sup>	Total Revenues Available	Surplus/ (Deficit)	Revenue From Prior Tax Impact	Debt Fund Balance Utilized	Adjusted Surplus/ (Deficit)	Estimated Incremental Tax Equivalent	Debt Fund Balance
2020	7,930,316	-	7,930,316	9,007,523	905,331	-	9,912,854	1,982,538	-	-	1,982,538	-	7,494,829
2021	7,256,242	4,400,000	11,656,242	8,827,592	914,831	-	9,742,423	(1,913,819)	-	(1,913,819)	-	-	7,563,547
2022	6,910,853	4,290,000	11,200,853	8,865,332	916,831	-	9,782,163	(1,418,689)	-	(1,418,689)	-	-	6,144,858
2023	6,737,535	5,450,000	12,187,535	8,976,472	912,081	-	9,888,553	(2,298,981)	-	(2,298,981)	-	-	3,845,877
2024	6,326,411	5,308,250	11,634,661	9,080,689	680,831	-	9,761,520	(1,873,141)	-	(1,873,141)	-	-	1,972,736
2025	5,932,881	5,166,500	11,099,381	9,191,073	464,331	-	9,655,404	(1,443,977)	-	(1,443,977)	-	-	528,759
2026	4,262,969	5,024,750	9,287,719	9,307,684	462,331	-	9,770,016	482,297	-	-	482,297	-	1,011,056
2027	4,027,269	4,883,000	8,910,269	9,445,525	465,350	-	9,910,875	1,000,606	-	-	1,000,606	-	2,011,662
2028	3,605,979	4,741,250	8,347,229	9,590,543	462,400	-	10,052,943	1,705,715	-	-	1,705,715	-	3,717,376
2029	3,536,647	4,599,500	8,136,147	9,744,638	462,200	-	10,206,838	2,070,692	-	-	2,070,692	-	5,788,068
2030	3,463,287	4,457,750	7,921,037	9,904,439	461,400	-	10,365,839	2,444,802	-	-	2,444,802	-	8,232,870
2031	3,399,462	4,316,000	7,715,462	10,070,067	465,000	-	10,535,067	2,819,605	-	-	2,819,605	-	11,052,474
2032	1,681,615	4,174,250	5,855,865	10,241,560	462,800	-	10,704,360	4,848,495	-	-	4,848,495	-	15,900,970
2033	1,103,363	4,032,500	5,135,863	10,435,492	-	-	10,435,492	5,299,630	-	-	5,299,630	-	21,200,599
2034	1,075,163	3,890,750	4,965,913	10,636,117	-	-	10,636,117	5,670,204	-	-	5,670,204	-	26,870,804
2035	1,045,788	3,749,000	4,794,788	10,842,662	-	-	10,842,662	6,047,875	-	-	6,047,875	-	32,918,678
2036	1,016,413	3,607,250	4,623,663	11,055,232	-	-	11,055,232	6,431,569	-	-	6,431,569	-	39,350,247
2037	986,475	3,465,500	4,451,975	11,273,919	-	-	11,273,919	6,821,944	-	-	6,821,944	-	46,172,192
2038	505,925	3,323,750	3,829,675	11,498,826	-	-	11,498,826	7,669,151	-	-	7,669,151	-	53,841,343
2039	-	3,182,000	3,182,000	11,734,556	-	-	11,734,556	8,552,556	-	-	8,552,556	-	62,393,899
2040	-	3,040,250	3,040,250	11,981,505	-	-	11,981,505	8,941,255	-	-	8,941,255	-	71,335,154
2041	-	698,500	698,500	12,234,763	-	-	12,234,763	11,536,263	-	-	11,536,263	-	82,871,417
2042	-	666,750	666,750	12,516,428	-	-	12,516,428	11,849,678	-	-	11,849,678	-	94,721,094
2043	-	-	-	12,803,722	-	-	12,803,722	12,803,722	-	-	12,803,722	-	107,524,816
2044	-	-	-	13,103,088	-	-	13,103,088	13,103,088	-	-	13,103,088	-	120,627,904
<b>Total</b>	<b>70,804,590</b>	<b>86,467,500</b>	<b>157,272,090</b>					<b>Total</b>		<b>(8,948,608)</b>	<b>Total Tax Effect</b>	<b>0.00¢</b>	

<sup>1</sup> 2010B GO debt service is shown gross of BAB subsidy.  
<sup>2</sup> BABs subsidies are assumed to be reduced by 5.9% due to Federal Sequestration resulting in an effective subsidy rate of 32.94%.  
<sup>3</sup> Assumed to be equal to 1.00% of prior years ending Debt Fund Balance.  
<sup>4</sup> The Parking Fund is assumed to cover annual debt service on existing Parking Fund debt.  
<sup>5</sup> Shown net of operating expenses adjusted for existing Lease savings. Per Town Staff.



# Debt Affordability Analysis

## Case 2: Fund All Projects Including the West End Parking Project

A	B	C	D	E	F	G	H	I	J
Project	Issuance by Type			Total	Debt Source	Timing	Term	Interest Rate	Amortization
	GO Bonds	LOBs / IFC	Cash on Hand						
<b>1 Summer 2020 (FY 2021) Projects - Option 1</b>									
2 Wallace Deck	-	2,400,000	-	2,400,000	LOBs / IFC	Summer 2020 (FY 21)	20 Years	5.00%	Level Principal
3 Blue Hill Phase II	-	2,600,000	1,600,000	4,200,000	LOBs / IFC	Summer 2020 (FY 21)	20 Years	5.00%	Level Principal
4 Municipal Services Center	2,700,000	31,300,000	-	34,000,000	GO / LOBs / IFC	Summer 2020 (FY 21)	20 Years	5.00%	Level Principal
5 Affordable Housing	5,000,000	-	-	5,000,000	GO Bonds	Summer 2020 (FY 21)	20 Years	5.00%	Level Principal
6 West End Parking (Land)	-	6,000,000	-	6,000,000	LOBs / IFC	Summer 2020 (FY 21)	20 Years	5.00%	Level Principal
<b>7 Total Summer 2020 Projects</b>	<b>\$ 7,700,000</b>	<b>\$ 42,300,000</b>	<b>\$ 1,600,000</b>	<b>\$ 51,600,000</b>					
<b>10 Spring 2022 Projects</b>									
11 Affordable Housing	\$ 5,000,000	\$ -	\$ -	\$ 5,000,000	GO Bonds	Spring 2022 (FY 22)	20 Years	5.00%	Level Principal
12 Streets & Sidewalks	7,700,000	-	-	7,700,000	GO Bonds	Spring 2022 (FY 22)	20 Years	5.00%	Level Principal
13 West End Parking (Construction)	-	10,000,000	-	10,000,000	LOBs / IFC	Spring 2022 (FY 22)	20 Years	5.00%	Level Principal
<b>14 Total Spring 2022 Projects</b>	<b>\$ 12,700,000</b>	<b>\$ 10,000,000</b>	<b>\$ -</b>	<b>\$ 22,700,000</b>					
<b>17 Total Projects (Option 1)</b>	<b>\$ 20,400,000</b>	<b>\$ 52,300,000</b>	<b>\$ 1,600,000</b>	<b>\$ 74,300,000</b>					

**Total Funding:**  
 GO Bonds: \$20,400,000  
 LOBs / IFCs: \$52,300,000  
 Cash on Hand: \$1,600,000  
**Total: \$74,300,000**

A	B	C	D	E	F	G	H	I	J	K	L	M	N
FY	Debt Service Requirements			Revenue Available for DS				Debt Service Cash Flow Surplus (Deficit)					
	Existing Debt Service <sup>1</sup>	CIP Debt Service	Total	Existing Revenue Sources <sup>2,3</sup>	Transfer from Parking for existing debt <sup>4</sup>	West End Parking Deck Net Revenues <sup>5</sup>	Total Revenues Available	Surplus/ (Deficit)	Revenue From Prior Tax Impact	Debt Fund Balance Utilized	Adjusted Surplus/ (Deficit)	Estimated Incremental Tax Equivalent	Debt Fund Balance
2020	7,930,316	-	7,930,316	9,007,523	905,331	-	9,912,854	1,982,538	-	-	1,982,538	-	7,494,829
2021	7,256,242	5,000,000	12,256,242	8,827,592	914,831	-	9,742,423	(2,513,819)	-	(2,513,819)	-	-	6,963,547
2022	6,910,853	4,875,000	11,785,853	8,859,332	916,831	-	9,776,163	(2,009,689)	-	(2,009,689)	-	-	4,953,858
2023	6,737,535	7,020,000	13,757,535	8,964,562	912,081	735,435	10,612,078	(3,145,456)	-	(3,145,456)	-	-	1,808,402
2024	6,326,411	6,838,250	13,164,661	9,060,314	680,831	792,570	10,533,716	(2,630,945)	-	(1,808,402)	(822,544)	0.94¢	-
2025	5,932,881	6,656,500	12,589,381	9,171,345	464,331	815,197	10,450,874	(2,138,507)	834,882	-	(1,303,626)	1.46¢	-
2026	4,262,969	6,474,750	10,737,719	9,302,397	462,331	837,813	10,602,541	(135,178)	2,170,585	-	2,035,407	-	2,035,407
2027	4,027,269	6,293,000	10,320,269	9,455,768	465,350	860,418	10,781,536	461,267	2,203,144	-	2,664,411	-	4,699,819
2028	3,605,979	6,111,250	9,717,229	9,617,425	462,400	883,011	10,962,836	1,245,607	2,236,191	-	3,481,798	-	8,181,617
2029	3,536,647	5,929,500	9,466,147	9,789,281	462,200	905,591	11,157,072	1,690,925	2,269,734	-	3,960,659	-	12,142,276
2030	3,463,287	5,747,750	9,211,037	9,967,981	461,400	905,591	11,334,972	2,123,935	2,303,780	-	4,427,715	-	16,569,991
2031	3,399,462	5,566,000	8,965,462	10,153,438	465,000	905,591	11,524,029	2,558,567	2,338,336	-	4,896,904	-	21,466,895
2032	1,681,615	5,384,250	7,065,865	10,345,704	462,800	905,591	11,714,096	4,648,231	2,373,412	-	7,021,642	-	28,488,537
2033	1,103,363	5,202,500	6,305,863	10,561,368	-	905,591	11,466,959	5,161,097	2,409,013	-	7,570,109	-	36,058,646
2034	1,075,163	5,020,750	6,095,913	10,784,697	-	905,591	11,690,289	5,594,376	2,445,148	-	8,039,524	-	44,098,170
2035	1,045,788	4,839,000	5,884,788	11,014,936	-	905,591	11,920,527	6,035,740	2,481,825	-	8,517,565	-	52,615,735
2036	1,016,413	4,657,250	5,673,663	11,252,202	-	905,591	12,157,794	6,484,131	2,519,053	-	9,003,184	-	61,618,919
2037	986,475	4,475,500	5,461,975	11,496,606	-	905,591	12,402,197	6,940,222	2,556,838	-	9,497,061	-	71,115,979
2038	505,925	4,293,750	4,799,675	11,748,264	-	905,591	12,653,856	7,854,181	2,595,191	-	10,449,372	-	81,565,351
2039	-	4,112,000	4,112,000	12,011,796	-	905,591	12,917,387	8,805,387	2,634,119	-	11,439,506	-	93,004,857
2040	-	3,930,250	3,930,250	12,287,615	-	905,591	13,193,206	9,262,956	2,673,631	-	11,936,587	-	104,941,444
2041	-	1,248,500	1,248,500	12,570,825	-	905,591	13,476,417	12,227,917	2,713,735	-	14,941,652	-	119,883,095
2042	-	1,191,750	1,191,750	12,886,545	-	905,591	13,792,136	12,600,386	2,754,441	-	15,354,827	-	135,237,922
2043	-	-	-	13,208,890	-	905,591	14,114,481	14,114,481	2,795,758	-	16,910,239	-	152,148,161
2044	-	-	-	13,549,321	-	905,591	14,454,913	14,454,913	2,837,694	-	17,292,607	-	169,440,768
<b>Total</b>	<b>70,804,590</b>	<b>110,867,500</b>	<b>181,672,090</b>					<b>Total</b>		<b>(9,477,367)</b>	<b>Total Tax Effect</b>	<b>2.40¢</b>	

<sup>1</sup> 2010B GO debt service is shown gross of BAB subsidy.  
<sup>2</sup> BABs subsidies are assumed to be reduced by 5.9% due to Federal Sequestration resulting in an effective subsidy rate of 32.94%.  
<sup>3</sup> Assumed to be equal to 1.00% of prior years ending Debt Fund Balance.  
<sup>4</sup> The Parking Fund is assumed to cover annual debt service on existing Parking Fund debt.  
<sup>5</sup> Shown net of operating expenses adjusted for existing Lease savings. Per Town Staff.

- Alternatively, the Town could utilize an additional 0.69¢ Upfront Tax Increase in FY 2021 or \$3,096,229 of additional revenues or reserves to offset the need for a future tax impact.



# Debt Affordability Considerations

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- The debt affordability scenarios presented in this analysis assume that the Debt Fund will need to support debt service associated with all proposed projects including the parking garages from currently dedicated resources as well as potential new revenue sources from the West End Parking Deck.
  - The Town estimates that the new parking facilities could provide additional revenue sources, potentially beginning in FY 2023 for the West End Parking Deck.
  - The parking garage debt issuances are modeled conservatively, consistent with North Carolina tax-supported debt practices (i.e. 20-year level principal amortization).
  
- For Parking-related projects, there are a number of potential factors that could improve the results shown, including:
  - Potential partnership with a developer could result in alternative financing scenarios that might be more advantageous to the Town than those currently included (e.g. deferred payments, longer amortizations).
  - Potential cash contributions from development partners (i.e. payments in lieu of parking) could reduce the amount of debt issued / outstanding and associated debt service.
  - Increased parking usage through agreements with development partners and/or increased retail / residential traffic.
  - Increased tax revenue resulting from new development directly or indirectly associated with construction of parking garages.
  - Sale of existing land / surface parking lots no longer needed could generate one time revenue.
  - Lower interest rates on the proposed financings.
  - Alternative amortization structures (e.g. interest only periods, longer term debt amortization or level debt service payments) utilized due to the enterprise nature of parking facilities could lower annual debt service payments (total payments would increase over). These are debt structuring options that would be subject to Local Government Commission review and approval.



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# Observations



# Observations

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- The Town has a Aaa / AAA rating from both Moody's and S&P, which are the highest credit ratings a local government can achieve.
  - The Town received its Aaa rating from Moody's in 1998 and its AAA rating from S&P in 2006.
  
- The Town has managed its debt issuance activities in a responsible fashion and has a Debt Profile that compares favorably to other highly rated Cities and Towns.
  
- As measured by certain key Debt Ratios and rating agency guidelines, the Town has Debt Capacity to accommodate its current CIP without the West End Deck through FY 2022.
  - Debt Capacity with new West End Deck is more limited by these same measures.
  
- The Town has well established and sustainable debt service budgeting practices which provide for some additional Debt Affordability beyond current debt levels.
  - Without the new West End parking deck project, the Town has adequate revenue sources to fund existing and proposed debt service. With the potential new West End parking deck project, the Town would need to identify additional revenue sources for the Debt Fund.
  
- Capital planning beyond the FY 2022 horizon will allow the Town to identify potential funding issues / opportunities and work towards developing a responsible Plan of Finance.



# Appendix A

## Financial Policies



# Rating Agency Commentary on Management and Policies

## Moody's

- “A local government’s success in navigating the legal, political and practical environment in which it operates depends on a multitude of factors, including management’s mastery in understanding its resources and managing its responsibilities, public and executive support for its plans, and its willingness to use the tools at its disposal.”
- **“When evaluating a credit, we seek to understand the probable impact of fund balance policies, multi-year financial or capital planning, liquidity management, accuracy of budget forecasts, and willingness to make midyear adjustments.** Reliance on non-recurring, or “one-shot” revenues, such as proceeds from the sale of assets, windfall delinquent tax collections, or the use of fund balance as a revenue source, leaves the municipality vulnerable should these one-time revenues fail to materialize.”

Source: Moody’s US Local Government General Obligation Debt, January 2014

## S&P

- “The rigor of a government’s financial management practices is an important factor in Standard & Poor’s Ratings Services analysis of that government’s creditworthiness. Managerial decisions, policies, and practices apply directly to the government’s financial position and operations, debt burden, and other key credit factors. A government’s ability to implement timely and sound financial and operational decisions in response to economic and fiscal demands is a primary determinant of near-term changes in credit quality.”
- S&P measures the strength of governmental financial management through seven key factors:
  - Revenue and expenditure assumptions
  - Budget amendments and updates
  - Long term financial planning
  - Long term capital planning
  - Investment management policies
  - Debt management policies
  - Reserve and liquidity policies

Source: S&P’s U.S. Local Governments General Obligation Ratings: Methodology And Assumptions, September 2013



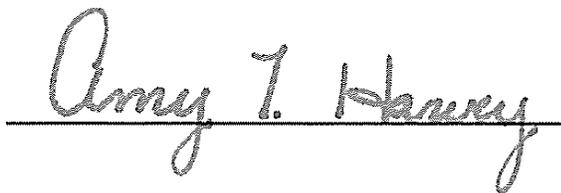
# Financial Policy Overview

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- Financial Policies that are adopted, adhered to, and regularly reviewed are recognized as a cornerstone of sound financial management.
  
- Effective Financial Policies:
  - Contribute to the Town's ability to insulate itself from fiscal crisis;
  - Enhance access to short term and long term financial credit by helping to achieve the highest credit ratings possible;
  - Promote long-term financial stability by establishing clear and consistent guidelines;
  - Direct attention to the total financial picture of the Town rather than single issue areas;
  - Promote the view of linking long-run financial planning with day-to-day operations, and;
  - Provide the Town Staff, the Town Council and the Town citizens a framework for measuring the fiscal impact of government services against established fiscal parameters and guidelines.
  
- Financial Policies should be reviewed periodically by Town staff and any recommended changes should be presented to the Governing Body for formal approval / adoption.
  
- The Town has adopted a series of financial policies, including:
  - Debt Policy
  - Fund Balance Reserve Policy
  - Cash Management and Investment Policy
  - Other Post Employment Benefit (OPEB) Pre-Funding Policy

**I, Amy T. Harvey, Deputy Town Clerk of the Town of Chapel Hill, North Carolina, hereby certify that the attached is a true and correct copy of (2019-06-12/R-2) adopted by the Chapel Hill Town Council on June 12, 2019.**

**This the 13th day of June, 2019.**

A handwritten signature in cursive script that reads "Amy T. Harvey". The signature is written in black ink and is positioned above a solid horizontal line.

**Amy T. Harvey  
Deputy Town Clerk**



**A RESOLUTION FOR THE ADOPTION OF FINANCIAL POLICY GUIDELINES (2019-06-12/R-2)**

WHEREAS, financial policies are central to a strategic, long-term approach to financial management;  
and

WHEREAS, the Government Finance Officers Association (GFOA) has recognized financial policies as an essential part of public financial management; and

WHEREAS, formal, written financial policies help governments promote financial stability and continuity, manage financial risks, promote long-term strategic thinking, and support the Town's excellent bond ratings;

NOW, THEREFORE, BE IT RESOLVED by the Council of the Town of Chapel Hill that the Council hereby adopts the Financial Policy Guidelines which includes: Debt Policy, Fund Balance Reserve Policy, Cash Management and Investment Policy, and Other Post-Employment Benefit (OPEB) Pre-Funding Policy.

This the 12<sup>th</sup> day of June, 2019.

# **Financial Policy Guidelines**

**For:**



**Town of Chapel Hill, North Carolina**

**Adopted: June 12, 2019**

**Maurice Jones, Town Manager  
Amy Oland, Business Management Director**

# FISCAL POLICY GUIDELINES

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<u>Section Contents:</u>	<u>Page:</u>
• Objectives	2
• Debt Policy	3
• Fund Balance Reserve Policy	4
• Cash Management and Investment Policy	5
• Other Post Employment Benefit (OPEB) Pre-Funding Policy	6

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## OBJECTIVES

This fiscal policy is a statement of the guidelines and goals that will influence and guide the financial management practice. A fiscal policy that is adopted, adhered to, and regularly reviewed is recognized as the cornerstone of sound financial management. Effective fiscal policy:

- Contributes significantly to the Town’s ability to insulate itself from fiscal crisis;
- Enhances short-term and long-term financial credit ability by helping to achieve the highest credit and bond ratings possible;
- Promotes long-term financial stability by establishing clear and consistent guidelines;
- Directs attention to the total financial picture of the Town rather than single issue areas;
- Promotes the view of linking long-run financial planning with day to day operations;
- Provides the Council, community and management a framework for measuring the fiscal impact of government services against established fiscal parameters and guidelines.

To these ends, the following fiscal policy statements are presented.

## **DEBT POLICIES**

### **General**

1. The Town will confine long-term borrowing to capital improvements or projects that cannot be financed from current revenues except where approved justification is provided.
2. The Town will utilize a balanced approach to capital funding utilizing debt financing, draws on capital reserves and/or fund balances in excess of policy targets, and current-year pay-as-you-go appropriations.
3. When the Town finances capital improvements or other projects by issuing bonds or entering into capital leases, it will repay the debt within a period not to exceed the expected useful life of the project. Target debt ratios will be annually calculated and included in the review of financial trends.
4. Where feasible, the Town will explore the usage of special assessment, revenue, or other self-supporting bonds instead of general obligation bonds.
5. Where feasible, the Town will limit the amount of debt issued each calendar year to remain Bank Qualified eligible per Internal Revenue Service (IRS) guidelines (currently \$10,000,000).

### **Tax Supported Debt**

1. Net Debt as a percentage of total assessed value of taxable property should not exceed 1.5%. Net Debt is defined as any and all debt that is tax supported.
2. The ratio of debt service expenditures as a percent of total governmental fund expenditures should not exceed 15% with an aggregate ten-year principal payout ratio target of 65% or better.

## **FUND BALANCE RESERVE POLICIES**

1. Unassigned Fund Balances will mean funds that remain available for appropriation by the Council after all commitments for future expenditures, required reserves defined by State statutes, and previous designations have been calculated. The Town will define these remaining amounts as “available fund balances.”
2. The Town will strive to maintain a targeted Unassigned Fund Balance, as defined by the Governmental Accounting Standards Board, at the close of each fiscal year equal to 22% of General Fund Expenditures. Unassigned Fund Balance in excess of 22% of General Fund Expenditures may be appropriated from time to time for pay-as-you-go capital and other one-time uses.
3. In the event that funds are available over and beyond the targeted amount, those funds may be transferred to the Capital Reserve Fund at the Council discretion.
4. The Town Council may, from time-to-time, utilize fund balances that will reduce Unassigned Fund Balance below the 22% target for the purposes of a declared fiscal emergency or other such purpose as to protect or enhance the long-term fiscal security of the Town. In such circumstances, the Council will adopt a plan to restore the Unassigned Fund Balance to the target level within 24 months. If restoration cannot be accomplished within such time period without severe hardship to the Town, then the Council will establish a different but appropriate time period.

## **CASH MANAGEMENT AND INVESTMENT POLICIES & STRATEGIES**

1. It is the intent of the Town that public funds will be invested to the extent possible to reduce the need for property tax revenues. Funds will be invested with the chief objectives of safety of principal, liquidity, and yield, in that order. All deposits and investments of Town funds will be in accordance with N.C.G.S. 159.
2. The Town will use a Central Depository to maximize the availability and mobility of cash for all funds that can be legally and practically combined.
3. Cash Flows will be forecasted and investments will be made to mature when funds are projected to be needed to meet cash flow requirements.
4. Liquidity: No less than 20% of funds available for investment will be maintained in liquid investments at any point in time.
5. Maturity: All investments will mature in no more than 36 months from their purchase date.
6. Custody: All investments will be purchased “payment versus delivery” and if certificated will be held by the Finance Officer in the name of the Town. All non-certificated investment will be held in book-entry form in the name of the Town with the Town’s third party Custodian (Safekeeping Agent).
7. Authorized Investments: The Town may deposit Town funds into: Any Council approved Official Depository, if such funds are secured in accordance with N.C.G.S. 159-31. The Town may invest Town funds in: the North Carolina Capital Management Trust, U.S. Treasuries, U.S. Agency Securities specifically authorized in G.S. 159 and rated no lower than “AAA”, and Commercial Paper meeting the requirements of N.C.G.S. 159 plus having a national bond rating.
8. Diversification: No more than 5% of the Town’s investment funds may be invested in a specific company’s commercial paper and no more than 20% of the Town’s investment funds may be invested in commercial paper. No more than 25% of the Town’s investments may be invested in any one U.S. Agency’s Securities.
9. Allocation: Investment income will be allocated to each participating fund or account based on a fair and equitable formula determined by the Finance Director.

## **OTHER POST-EMPLOYMENT BENEFIT PRE-FUNDING POLICIES & STRATEGIES**

1. By ordinance of the Town Council, the Town administers the Healthcare Benefits Plan (HCB Plan), a single-employer defined benefit plan that is used to provide postemployment benefits for all retirees of the Town who were hired before July 1, 2010, participate in the North Carolina Local Government Employees' Retirement System, and have at least five years of creditable service with the Town.
2. Retirees who qualify for coverage receive the same benefits as active employees, wherein the Town pays all or a portion of the costs of coverage for the benefits based on years of service.
3. Actuarial Valuation: The total other post-employment benefit (OPEB) liability is determined by an actuary on an annual basis. The actuary bases this calculation on several actuarial assumptions: inflation rate, salary increases, investment rate of return and healthcare cost trend rates.
4. Pay-Go Contributions: The Town is required to pay annually the projected pay-as-you-go financing requirements for the retiree healthcare benefits.
5. Pre-Funding Contributions: The Town may contribute an additional amount to prefund benefits contributed to the trust annually as determined by the Council.
6. Benefits of Pre-Funding: Multiple outside entities use the actuary information that resides in the Comprehensive Annual Financial Report to assess the creditworthiness and financial soundness of the Town. The amount of pay-go and pre-funding contributions helps reduce the total OPEB liability.
7. The Town will contribute annually to the OPEB trust to help fund the Annually Required Contribution and work towards reducing the overall OPEB liability. In the event that funds are available over the General Fund 22% targeted fund balance amount, the Council may choose to contribute a portion of this amount to the OPEB trust.

# General Fund Balance



## General Fund Balance

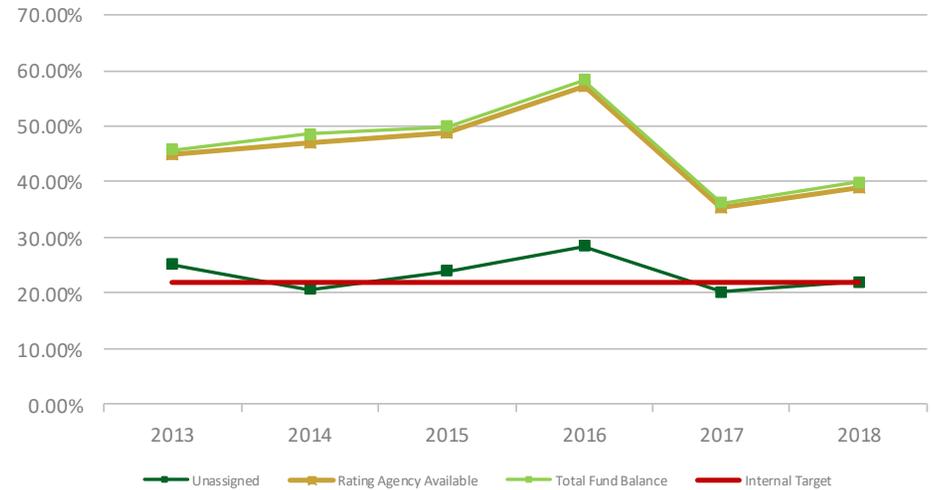
	2013	2014	2015	2016	2017	2018
<b>1 General Fund Budget</b>						
2 Revenues	52,477,610	56,215,276	57,349,320	58,863,263	59,453,389	61,850,212
3 Expenditures (Including Transfers Out)	51,379,266	53,773,991	55,709,763	56,188,531	67,732,197	61,723,687
4						
<b>5 General Fund Balance</b>						
6 Nonspendable	22,561	3,020	50,956	8,391	77,818	100,955
7 Restricted - Other	428,261	820,632	633,449	653,154	577,200	573,464
8 Restricted - Stabilization for State Statute	6,697,509	9,994,453	8,825,428	10,706,650	7,234,759	6,955,024
9 Committed	121,811	72,513	-	-	-	-
10 Assigned	3,373,643	4,105,066	4,939,269	5,385,390	2,958,533	3,430,129
11 Unassigned	12,883,997	11,143,807	13,374,946	15,990,195	13,661,662	13,621,925
<b>12 Total</b>	<b>23,527,782</b>	<b>26,139,491</b>	<b>27,824,048</b>	<b>32,743,780</b>	<b>24,509,972</b>	<b>24,681,497</b>
13						
14 Rating Agency Available <sup>1</sup>	23,076,960	25,315,839	27,139,643	32,082,235	23,854,954	24,007,078
15						
<b>16 General Fund Balance Ratios</b>						
17 Unassigned as a % of GF Revenues	24.55%	19.82%	23.32%	27.16%	22.98%	22.02%
18 Unassigned as a % of GF Expenditures	25.08%	20.72%	24.01%	28.46%	20.17%	22.07%
19 Rating Agency Available as a % of GF Revenues	43.97%	45.03%	47.32%	54.50%	40.12%	38.81%
20 Rating Agency Available as a % of GF Expenditures	44.91%	47.08%	48.72%	57.10%	35.22%	38.89%
21 Total General Fund Balance as a % of GF Revenues	44.83%	46.50%	48.52%	55.63%	41.23%	39.91%
22 Total General Fund Balance as a % of GF Expenditures	45.79%	48.61%	49.94%	58.27%	36.19%	39.99%
23						
<b>24 Debt Service Fund Balance</b>	<b>5,340,180</b>	<b>4,803,926</b>	<b>5,452,410</b>	<b>6,615,510</b>	<b>7,048,523</b>	<b>7,189,658</b>
25						
<b>26 Affordable Housing Fund Balance</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1,060,385</b>	<b>830,452</b>
27						
28 Rating Agency Available Op. Fund Balance <sup>2</sup>	28,417,140	30,119,765	32,592,053	38,697,745	30,903,477	31,196,736
29 Rating Agency Operating Fund Revenues	58,187,000	61,975,000	63,851,000	67,191,000	66,033,000	68,627,177
30 Rating Agency Operating Fund Expenditures	58,204,000	59,900,000	61,518,000	61,109,000	73,834,000	68,359,517
31 Rating Agency Available Op. as a % of Op. Revenues	48.84%	48.60%	51.04%	57.59%	46.80%	45.46%
32 Rating Agency Available OP. as a % of Op. Expenditures	48.82%	50.28%	52.98%	63.33%	41.86%	45.64%

<sup>1</sup> Includes Stabilization by State Statute, Committed, Assigned, and Unassigned Fund Balance

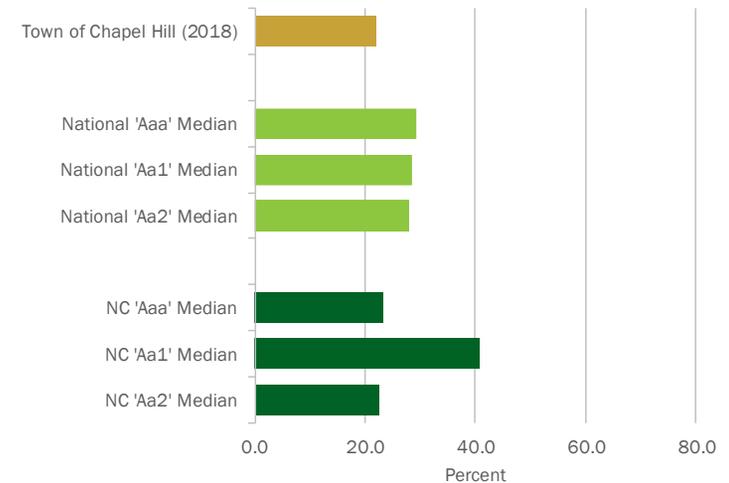
<sup>2</sup> Includes Rating Agency Available and Debt Service Fund Balance

- “The Town will strive to maintain a targeted Unassigned Fund Balance, as defined by the Governmental Accounting Standards Board, at the close of each fiscal year equal to 22% of General Fund Expenditures. Unassigned Fund Balance in excess of 22% of General Fund Expenditures may be appropriated from time to time for pay-as-you-go capital and other one-time uses.”

General Fund Balance as a % of Expenditures



Unassigned Fund Balance as a % of Revenues





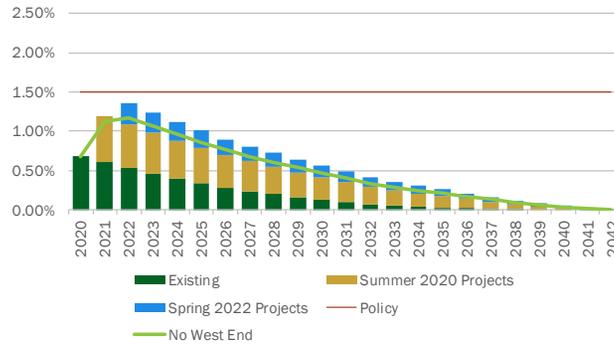
# Key Debt Ratios and Peer Comparatives

## All Projects Including West End (Case 2)

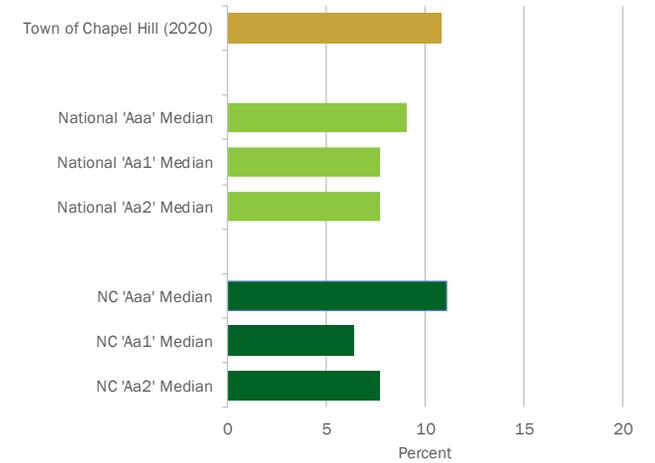
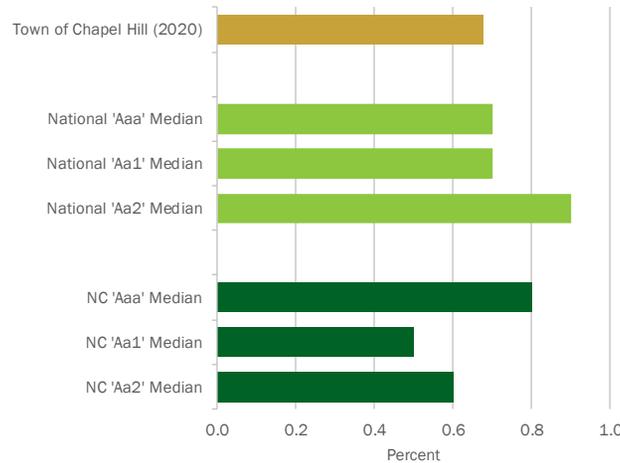
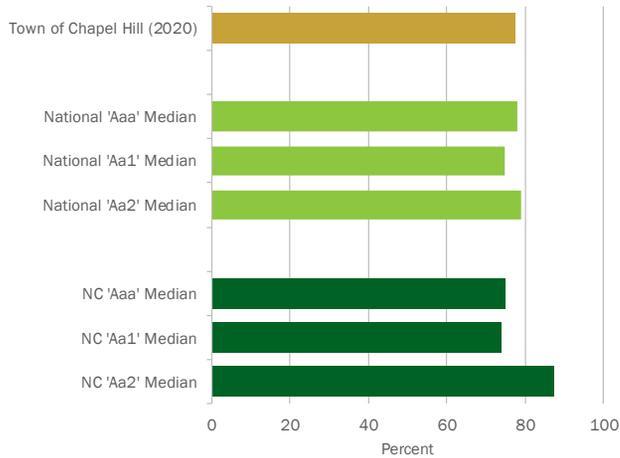
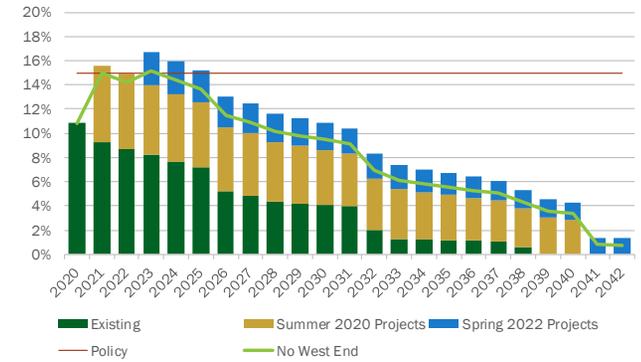
### 10-Year Payout Ratio



### Debt to Assessed Value



### Debt Service to Expenditures





# Appendix B

## Aaa North Carolina Cities' and Towns' Financial Policy Summary

# Aaa North Carolina Cities' and Towns' Financial Policy Summary



A	B	C	D	E
Policy	Fund Balance	10-Year Payout	Debt to Assessed Value	Debt Service to Expenditures
1 Chapel Hill	The Town will strive to maintain a targeted Unassigned Fund Balance at the close of each fiscal year equal to 22% of General Fund Expenditures.	> 65%	< 1.50%	< 15%
2				
3 Apex	Available fund balances at the close of each fiscal year should be at least 25% of the Total Annual Operating Budget of the Town. <sup>1</sup>	> 55%	< 2.50%	< 12%
4				
5 Asheville	The City will maintain an undesignated fund balance equal to 15% of the General Fund operating budget.	n/a	n/a	n/a
6				
7 Cary	The Town will maintain a minimum Accessible Fund Balance of at least 25% of budgeted General Fund Expenditures. <sup>2</sup>	n/a	< 8%	< 15%
8				
9 Charlotte	The Budget will maintain a General Fund balance equal to 16% of the operating budget.	n/a	n/a	n/a
10				
11 Durham	The City will maintain an unassigned fund balance no less than 12% of the General Fund adjusted operating expenditures.	n/a	n/a	n/a
12				
13 Greensboro	The City shall maintain unassigned fund balance in the General Fund equal to 9% of the following fiscal year's General Fund adopted budget.	n/a	< 4%	n/a
14				
15 Huntersville	The Town will maintain an unallocated fund balance to be used for unanticipated emergencies of 45% of the general operating budget.	> 55%	< 2%	< 15%
16				
17 Morrisville	The Town will maintain an unassigned fund balance no less than three months operating expenditures or 25% of the total budgeted operating expenditures.	> 55%	< 2%	< 15%
18				
19 Raleigh	The City seeks to maintain an undesignated General Fund balance of approximately 14% of the subsequent year's budget.	n/a	n/a	n/a
20				
21 Wilmington	The City shall maintain a minimum unassigned fund balance equal to 20-25% of the operating budget.	n/a	< 2%	< 20%
22				
23 Winston-Salem	The City will maintain a minimum unassigned fund balance of 14% of estimated expenditures in the general fund.	n/a	n/a	< 20%

<sup>1</sup> Unassigned Fund Balances will mean funds that remain available for appropriation by the Town Council after all commitments for future expenditures, required reserves defined by State statutes, and previous Council designations have been calculated. The Town will define these remaining amounts as "available fund balances."

<sup>2</sup> Accessible fund balance is defined as the total of Assigned Fund Balance and Unassigned Fund Balance.



# Appendix C

## New West End Parking Revenues vs. Estimated Debt Service

# New West End Parking Revenues vs. Estimated Debt Service



West End Parking Deck			
FY	Debt Service	Net Revenues	Surplus / Deficit
2020	\$ -	\$ -	\$ -
2021	600,000	-	(600,000)
2022	585,000	-	(585,000)
2023	1,570,000	735,435	(834,565)
2024	1,530,000	792,570	(737,430)
2025	1,490,000	815,197	(674,803)
2026	1,450,000	837,813	(612,187)
2027	1,410,000	860,418	(549,582)
2028	1,370,000	883,011	(486,989)
2029	1,330,000	905,591	(424,409)
2030	1,290,000	905,591	(384,409)
2031	1,250,000	905,591	(344,409)
2032	1,210,000	905,591	(304,409)
2033	1,170,000	905,591	(264,409)
2034	1,130,000	905,591	(224,409)
2035	1,090,000	905,591	(184,409)
2036	1,050,000	905,591	(144,409)
2037	1,010,000	905,591	(104,409)
2038	970,000	905,591	(64,409)
2039	930,000	905,591	(24,409)
2040	890,000	905,591	15,591
2041	550,000	905,591	355,591
2042	525,000	905,591	380,591
<b>Total</b>	<b>\$ 24,400,000</b>	<b>\$ 17,602,723</b>	<b>\$ (6,797,277)</b>

Note: For purposes of this analysis, no revenue growth is assumed after FY 2029.



# Appendix D

## Existing Tax Supported Debt



# Existing Tax Supported Debt

By Credit

# Tax Supported Debt



## Total Tax Supported Debt Service

FY	Principal	Interest	Total
Total	56,709,297	14,095,293	70,804,590
2020	5,832,742	2,097,574	7,930,316
2021	5,289,555	1,966,687	7,256,242
2022	5,161,000	1,749,853	6,910,853
2023	5,207,000	1,530,535	6,737,535
2024	5,013,000	1,313,411	6,326,411
2025	4,836,000	1,096,881	5,932,881
2026	3,371,000	891,969	4,262,969
2027	3,265,000	762,269	4,027,269
2028	2,960,000	645,979	3,605,979
2029	2,998,000	538,647	3,536,647
2030	3,036,000	427,287	3,463,287
2031	3,080,000	319,462	3,399,462
2032	1,470,000	211,615	1,681,615
2033	940,000	163,363	1,103,363
2034	940,000	135,163	1,075,163
2035	940,000	105,788	1,045,788
2036	940,000	76,413	1,016,413
2037	940,000	46,475	986,475
2038	490,000	15,925	505,925

## LOBs

FY	Principal	Interest	Total
Total	14,235,000	3,057,969	17,292,969
2020	1,930,000	678,331	2,608,331
2021	1,980,000	583,331	2,563,331
2022	2,010,000	484,331	2,494,331
2023	2,040,000	383,831	2,423,831
2024	1,840,000	281,831	2,121,831
2025	1,650,000	189,831	1,839,831
2026	355,000	107,331	462,331
2027	370,000	95,350	465,350
2028	380,000	82,400	462,400
2029	395,000	67,200	462,200
2030	410,000	51,400	461,400
2031	430,000	35,000	465,000
2032	445,000	17,800	462,800
2033	-	-	-
2034	-	-	-
2035	-	-	-
2036	-	-	-
2037	-	-	-
2038	-	-	-

## GO Bonds

FY	Principal	Interest	Total
Total	33,803,000	9,813,389	43,616,389
2020	2,952,000	1,224,132	4,176,132
2021	2,547,000	1,207,932	3,754,932
2022	2,447,000	1,107,179	3,554,179
2023	2,456,000	1,004,564	3,460,564
2024	2,455,000	905,806	3,360,806
2025	2,460,000	797,804	3,257,804
2026	2,284,000	692,106	2,976,106
2027	2,237,000	591,228	2,828,228
2028	1,915,000	503,025	2,418,025
2029	1,930,000	426,193	2,356,193
2030	1,945,000	346,118	2,291,118
2031	1,960,000	270,363	2,230,363
2032	1,025,000	193,815	1,218,815
2033	940,000	163,363	1,103,363
2034	940,000	135,163	1,075,163
2035	940,000	105,788	1,045,788
2036	940,000	76,413	1,016,413
2037	940,000	46,475	986,475
2038	490,000	15,925	505,925

## IPCs

FY	Principal	Interest	Total
Total	8,671,297	1,223,935	9,895,232
2020	950,742	195,110	1,145,853
2021	762,555	175,424	937,979
2022	704,000	158,342	862,342
2023	711,000	142,139	853,139
2024	718,000	125,774	843,774
2025	726,000	109,246	835,246
2026	732,000	92,532	824,532
2027	658,000	75,690	733,690
2028	665,000	60,554	725,554
2029	673,000	45,254	718,254
2030	681,000	29,770	710,770
2031	690,000	14,099	704,099
2032	-	-	-
2033	-	-	-
2034	-	-	-
2035	-	-	-
2036	-	-	-
2037	-	-	-
2038	-	-	-

# General Obligation Bonds



**\$12,250,000**

General Obligation Public Improvement Bonds, Series 2010B (BABs)

FY	Coupon	Principal	Interest	Total
Total		1,020,000	278,574	1,298,574
2020	3.500%	1,020,000	278,574	1,298,574
2021		-	-	-
2022		-	-	-
2023		-	-	-
2024		-	-	-
2025		-	-	-
2026		-	-	-
2027		-	-	-
2028		-	-	-
2029		-	-	-
2030		-	-	-
2031		-	-	-
2032		-	-	-
2033		-	-	-
2034		-	-	-
2035		-	-	-
2036		-	-	-
2037		-	-	-
2038		-	-	-
2039		-	-	-

Dated Date: 10/12/2010      Next Call: 4/1/2020

Purpose: Public Improvement      Insurance: n/a

Coupon Dates: Apr 1 / Oct 1      Maturity Date: Apr 1

Note: Interest shown gross of subsidy

**\$4,655,000**

General Obligation Refunding Bonds, Series 2012

FY	Coupon	Principal	Interest	Total
Total		1,550,000	135,450	1,685,450
2020	3.000%	480,000	46,500	526,500
2021	3.000%	305,000	32,100	337,100
2022	3.000%	195,000	22,950	217,950
2023	3.000%	195,000	17,100	212,100
2024	3.000%	190,000	11,250	201,250
2025	3.000%	185,000	5,550	190,550
2026		-	-	-
2027		-	-	-
2028		-	-	-
2029		-	-	-
2030		-	-	-
2031		-	-	-
2032		-	-	-
2033		-	-	-
2034		-	-	-
2035		-	-	-
2036		-	-	-
2037		-	-	-
2038		-	-	-
2039		-	-	-

Dated Date: 6/5/2012      Next Call: 4/1/2022

Purpose: Refunding      Insurance: n/a

Coupon Dates: Apr 1 / Oct 1      Maturity Date: Apr 1

**\$1,700,000**

General Obligation Public Improvement Bonds, Series 2012

FY	Coupon	Principal	Interest	Total
Total		1,105,000	184,578	1,289,578
2020	2.000%	85,000	24,948	109,948
2021	2.000%	85,000	23,248	108,248
2022	2.000%	85,000	21,548	106,548
2023	2.000%	85,000	19,848	104,848
2024	2.000%	85,000	18,148	103,148
2025	2.100%	85,000	16,448	101,448
2026	2.200%	85,000	14,663	99,663
2027	2.300%	85,000	12,793	97,793
2028	2.450%	85,000	10,838	95,838
2029	2.500%	85,000	8,755	93,755
2030	2.550%	85,000	6,630	91,630
2031	2.600%	85,000	4,463	89,463
2032	2.650%	85,000	2,253	87,253
2033		-	-	-
2034		-	-	-
2035		-	-	-
2036		-	-	-
2037		-	-	-
2038		-	-	-
2039		-	-	-

Dated Date: 7/3/2012      Next Call: 4/1/2022

Purpose: Public Improvement      Insurance: n/a

Coupon Dates: Apr 1 / Oct 1      Maturity Date: Apr 1

# General Obligation Bonds



## \$3,050,000

### General Obligation Refunding Bond, Series 2013 (SunTrust)

FY	Coupon	Principal	Interest	Total
Total		2,053,000	156,203	2,209,203
2020	1.770%	282,000	36,338	318,338
2021	1.770%	277,000	31,347	308,347
2022	1.770%	272,000	26,444	298,444
2023	1.770%	266,000	21,629	287,629
2024	1.770%	260,000	16,921	276,921
2025	1.770%	255,000	12,319	267,319
2026	1.770%	249,000	7,806	256,806
2027	1.770%	192,000	3,398	195,398
2028	-	-	-	-
2029	-	-	-	-
2030	-	-	-	-
2031	-	-	-	-
2032	-	-	-	-
2033	-	-	-	-
2034	-	-	-	-
2035	-	-	-	-
2036	-	-	-	-
2037	-	-	-	-
2038	-	-	-	-
2039	-	-	-	-

Dated Date: 2/28/2013      Next Call: 2/28/2020  
 Purpose: Refunding      Insurance: n/a  
 Coupon Dates: May 1 / Nov 1      Maturity Date: May 1

## \$1,460,000

### General Obligation Public Safety Bonds, Series 2017

FY	Coupon	Principal	Interest	Total
Total		1,160,000	200,100	1,360,100
2020	5.000%	145,000	49,300	194,300
2021	5.000%	145,000	42,050	187,050
2022	5.000%	145,000	34,800	179,800
2023	5.000%	145,000	27,550	172,550
2024	5.000%	145,000	20,300	165,300
2025	3.000%	145,000	13,050	158,050
2026	3.000%	145,000	8,700	153,700
2027	3.000%	145,000	4,350	149,350
2028	-	-	-	-
2029	-	-	-	-
2030	-	-	-	-
2031	-	-	-	-
2032	-	-	-	-
2033	-	-	-	-
2034	-	-	-	-
2035	-	-	-	-
2036	-	-	-	-
2037	-	-	-	-
2038	-	-	-	-
2039	-	-	-	-

Dated Date: 2/21/2017      Next Call: Noncallable  
 Purpose: Equipment      Insurance: n/a  
 Coupon Dates: Feb 1 / Aug 1      Maturity Date: Feb 1

## \$9,000,000

### General Obligation Public Improvement Bonds, Series 2017

FY	Coupon	Principal	Interest	Total
Total		8,100,000	2,698,313	10,798,313
2020	3.000%	450,000	295,875	745,875
2021	3.000%	450,000	282,375	732,375
2022	4.000%	450,000	268,875	718,875
2023	3.000%	450,000	250,875	700,875
2024	5.000%	450,000	237,375	687,375
2025	5.000%	450,000	214,875	664,875
2026	5.000%	450,000	192,375	642,375
2027	5.000%	450,000	169,875	619,875
2028	4.000%	450,000	147,375	597,375
2029	4.000%	450,000	129,375	579,375
2030	3.000%	450,000	111,375	561,375
2031	3.000%	450,000	97,875	547,875
2032	3.000%	450,000	84,375	534,375
2033	3.000%	450,000	70,875	520,875
2034	3.125%	450,000	57,375	507,375
2035	3.125%	450,000	43,313	493,313
2036	3.250%	450,000	29,250	479,250
2037	3.250%	450,000	14,625	464,625
2038	-	-	-	-
2039	-	-	-	-

Dated Date: 2/22/2017      Next Call: 2/1/2027  
 Purpose: Land, Streets, and Parks & Rec      Insurance: n/a  
 Coupon Dates: Feb 1 / Aug 1      Maturity Date: Feb 1

# General Obligation Bonds



\$9,800,000

General Obligation Public Improvement Bonds, Series 2018 (No Stormwater)

FY	Coupon	Principal	Interest	Total
Total		9,310,000	3,086,388	12,396,388
2020	5.000%	490,000	346,063	836,063
2021	5.000%	490,000	321,563	811,563
2022	5.000%	490,000	297,063	787,063
2023	5.000%	490,000	272,563	762,563
2024	5.000%	490,000	248,063	738,063
2025	5.000%	490,000	223,563	713,563
2026	5.000%	490,000	199,063	689,063
2027	2.500%	490,000	174,563	664,563
2028	2.500%	490,000	162,313	652,313
2029	3.000%	490,000	150,063	640,063
2030	2.875%	490,000	135,363	625,363
2031	2.875%	490,000	121,275	611,275
2032	3.000%	490,000	107,188	597,188
2033	3.000%	490,000	92,488	582,488
2034	3.125%	490,000	77,788	567,788
2035	3.125%	490,000	62,475	552,475
2036	3.125%	490,000	47,163	537,163
2037	3.250%	490,000	31,850	521,850
2038	3.250%	490,000	15,925	505,925
2039				-

Dated Date: 4/19/2018 Next Call: 5/1/2026

Purpose: Parks & Rec and Streets & Sidewalks Only Insurance: n/a

Coupon Dates: May 1 / Nov 1 Maturity Date: May 1

Note: Excludes Stormwater Component of issuance.

\$9,505,000

General Obligation Refunding Bonds, Series 2019

FY	Coupon	Principal	Interest	Total
Total		9,505,000	3,073,785	12,578,785
2020		-	146,535	146,535
2021	5.000%	795,000	475,250	1,270,250
2022	5.000%	810,000	435,500	1,245,500
2023	5.000%	825,000	395,000	1,220,000
2024	5.000%	835,000	353,750	1,188,750
2025	5.000%	850,000	312,000	1,162,000
2026	5.000%	865,000	269,500	1,134,500
2027	5.000%	875,000	226,250	1,101,250
2028	5.000%	890,000	182,500	1,072,500
2029	5.000%	905,000	138,000	1,043,000
2030	5.000%	920,000	92,750	1,012,750
2031	5.000%	935,000	46,750	981,750
2032		-	-	-
2033		-	-	-
2034		-	-	-
2035		-	-	-
2036		-	-	-
2037		-	-	-
2038		-	-	-
2039		-	-	-

Dated Date: 12/10/2019 Next Call: Noncallable

Purpose: Refunding Insurance: n/a

Coupon Dates: Apr 1 / Oct 1 Maturity Date: Apr 1

# LOBs



\$28,800,000

Limited Obligation Bonds, Series 2012

FY	Coupon	Principal	Interest	Total
Total		7,880,000	1,377,250	9,257,250
2020	5.000%	1,310,000	393,000	1,703,000
2021	5.000%	1,320,000	328,500	1,648,500
2022	5.000%	1,315,000	262,500	1,577,500
2023	5.000%	1,315,000	196,750	1,511,750
2024	5.000%	1,310,000	131,000	1,441,000
2025	5.000%	1,310,000	65,500	1,375,500
2026	-	-	-	-
2027	-	-	-	-
2028	-	-	-	-
2029	-	-	-	-
2030	-	-	-	-
2031	-	-	-	-
2032	-	-	-	-
2033	-	-	-	-
2034	-	-	-	-
2035	-	-	-	-
2036	-	-	-	-
2037	-	-	-	-
2038	-	-	-	-
2039	-	-	-	-

Dated Date: 6/27/2012      Next Call: 6/1/2022  
 Purpose: Refunding - Chapel Hill Portion Insurance: n/a  
 Coupon Dates: Jun 1 / Dec 1      Maturity Date: Jun 1

\$28,800,000

Limited Obligation Bonds, Series 2012

FY	Coupon	Principal	Interest	Total
Total		1,755,000	249,800	2,004,800
2020	5.000%	355,000	87,550	442,550
2021	5.000%	380,000	70,000	450,000
2022	5.000%	400,000	51,000	451,000
2023	5.000%	415,000	31,000	446,000
2024	5.000%	205,000	10,250	215,250
2025	-	-	-	-
2026	-	-	-	-
2027	-	-	-	-
2028	-	-	-	-
2029	-	-	-	-
2030	-	-	-	-
2031	-	-	-	-
2032	-	-	-	-
2033	-	-	-	-
2034	-	-	-	-
2035	-	-	-	-
2036	-	-	-	-
2037	-	-	-	-
2038	-	-	-	-
2039	-	-	-	-

Dated Date: 6/27/2012      Next Call: 6/1/2022  
 Purpose: Refunding - Parking Portion Insurance: n/a  
 Coupon Dates: Jun 1 / Dec 1      Maturity Date: Jun 1

\$28,800,000

Limited Obligation Bonds, Series 2012

FY	Coupon	Principal	Interest	Total
Total		4,600,000	1,430,919	6,030,919
2020	5.000%	265,000	197,781	462,781
2021	5.000%	280,000	184,831	464,831
2022	5.000%	295,000	170,831	465,831
2023	5.000%	310,000	156,081	466,081
2024	5.000%	325,000	140,581	465,581
2025	5.000%	340,000	124,331	464,331
2026	3.375%	355,000	107,331	462,331
2027	3.500%	370,000	95,350	465,350
2028	4.000%	380,000	82,400	462,400
2029	4.000%	395,000	67,200	462,200
2030	4.000%	410,000	51,400	461,400
2031	4.000%	430,000	35,000	465,000
2032	4.000%	445,000	17,800	462,800
2033	-	-	-	-
2034	-	-	-	-
2035	-	-	-	-
2036	-	-	-	-
2037	-	-	-	-
2038	-	-	-	-
2039	-	-	-	-

Dated Date: 6/27/2012      Next Call: 6/1/2022  
 Purpose: New Money - 140 West Portion Insurance: n/a  
 Coupon Dates: Jun 1 / Dec 1      Maturity Date: Jun 1



**\$431,200**

2012 IPC (SunTrust)

FY	Coupon	Principal	Interest	Total
Total		64,294	851	65,145
2020	1.510%	64,294	851	65,145
2021		-	-	-
2022		-	-	-
2023		-	-	-
2024		-	-	-
2025		-	-	-
2026		-	-	-
2027		-	-	-
2028		-	-	-
2029		-	-	-
2030		-	-	-
2031		-	-	-
2032		-	-	-
2033		-	-	-
2034		-	-	-
2035		-	-	-
2036		-	-	-
2037		-	-	-
2038		-	-	-
2039		-	-	-

Dated Date: **Unknown**      Next Call: **Unknown**  
 Purpose: **Unknown**      Insurance: **Unknown**  
 Coupon Dates: **Annual**      Maturity Date: **Annual**  
 Note: Interpolated from FY 2017 CAFR

**\$445,000**

2013 IPC (Wells Fargo)

FY	Coupon	Principal	Interest	Total
Total		66,363	891	67,254
2020	1.520%	66,363	891	67,254
2021		-	-	-
2022		-	-	-
2023		-	-	-
2024		-	-	-
2025		-	-	-
2026		-	-	-
2027		-	-	-
2028		-	-	-
2029		-	-	-
2030		-	-	-
2031		-	-	-
2032		-	-	-
2033		-	-	-
2034		-	-	-
2035		-	-	-
2036		-	-	-
2037		-	-	-
2038		-	-	-
2039		-	-	-

Dated Date: **Unknown**      Next Call: **Unknown**  
 Purpose: **Unknown**      Insurance: **Unknown**  
 Coupon Dates: **Annual**      Maturity Date: **Annual**  
 Note: Interpolated from FY 2018 CAFR

**\$872,000**

2013 IPC (SunTrust)

FY	Coupon	Principal	Interest	Total
Total		195,640	4,148	199,788
2020	1.810%	130,085	3,107	133,192
2021	1.810%	65,555	1,041	66,596
2022		-	-	-
2023		-	-	-
2024		-	-	-
2025		-	-	-
2026		-	-	-
2027		-	-	-
2028		-	-	-
2029		-	-	-
2030		-	-	-
2031		-	-	-
2032		-	-	-
2033		-	-	-
2034		-	-	-
2035		-	-	-
2036		-	-	-
2037		-	-	-
2038		-	-	-
2039		-	-	-

Dated Date: **Unknown**      Next Call: **Unknown**  
 Purpose: **Unknown**      Insurance: **Unknown**  
 Coupon Dates: **Annual**      Maturity Date: **Annual**  
 Note: Interpolated from FY 2018 CAFR



\$2,395,000

2015 IPC (Bank of NC)

FY	Coupon	Principal	Interest	Total
Total		1,915,000	256,869	2,171,869
2020	2.239%	160,000	41,086	201,086
2021	2.239%	160,000	37,503	197,503
2022	2.239%	160,000	33,921	193,921
2023	2.239%	160,000	30,338	190,338
2024	2.239%	160,000	26,756	186,756
2025	2.239%	160,000	23,174	183,174
2026	2.239%	160,000	19,591	179,591
2027	2.239%	159,000	16,020	175,020
2028	2.239%	159,000	12,460	171,460
2029	2.239%	159,000	8,900	167,900
2030	2.239%	159,000	5,340	164,340
2031	2.239%	159,000	1,780	160,780
2032		-	-	-
2033		-	-	-
2034		-	-	-
2035		-	-	-
2036		-	-	-
2037		-	-	-
2038		-	-	-
2039		-	-	-

Dated Date: 6/4/2015      Next Call: Current  
 Purpose: Equipment / Buildings      Insurance: n/a  
 Coupon Dates: Feb 1 / Aug 1      Maturity Date: Aug 1

\$7,984,000

2016 IPC (Raymond James)

FY	Coupon	Principal	Interest	Total
Total		6,430,000	961,176	7,391,176
2020	2.320%	530,000	149,176	679,176
2021	2.320%	537,000	136,880	673,880
2022	2.320%	544,000	124,422	668,422
2023	2.320%	551,000	111,801	662,801
2024	2.320%	558,000	99,018	657,018
2025	2.320%	566,000	86,072	652,072
2026	2.320%	572,000	72,941	644,941
2027	2.320%	499,000	59,670	558,670
2028	2.320%	506,000	48,094	554,094
2029	2.320%	514,000	36,354	550,354
2030	2.320%	522,000	24,430	546,430
2031	2.320%	531,000	12,319	543,319
2032		-	-	-
2033		-	-	-
2034		-	-	-
2035		-	-	-
2036		-	-	-
2037		-	-	-
2038		-	-	-
2039		-	-	-

Dated Date: 3/10/2016      Next Call: 3/1/2026  
 Purpose: Capital / Fire Station / EF / Town Hall      Insurance: n/a  
 Coupon Dates: Mar 1 / Sep 1      Maturity Date: Mar 1



# Existing Tax Supported Debt

By Fund

# Tax Supported Debt



## Total Tax Supported Debt Service

FY	Principal	Interest	Total
Total	56,709,297	14,095,293	70,804,590
2020	5,832,742	2,097,574	7,930,316
2021	5,289,555	1,966,687	7,256,242
2022	5,161,000	1,749,853	6,910,853
2023	5,207,000	1,530,535	6,737,535
2024	5,013,000	1,313,411	6,326,411
2025	4,836,000	1,096,881	5,932,881
2026	3,371,000	891,969	4,262,969
2027	3,265,000	762,269	4,027,269
2028	2,960,000	645,979	3,605,979
2029	2,998,000	538,647	3,536,647
2030	3,036,000	427,287	3,463,287
2031	3,080,000	319,462	3,399,462
2032	1,470,000	211,615	1,681,615
2033	940,000	163,363	1,103,363
2034	940,000	135,163	1,075,163
2035	940,000	105,788	1,045,788
2036	940,000	76,413	1,016,413
2037	940,000	46,475	986,475
2038	490,000	15,925	505,925

## Parking Fund

FY	Principal	Interest	Total
Total	6,355,000	1,680,719	8,035,719
2020	620,000	285,331	905,331
2021	660,000	254,831	914,831
2022	695,000	221,831	916,831
2023	725,000	187,081	912,081
2024	530,000	150,831	680,831
2025	340,000	124,331	464,331
2026	355,000	107,331	462,331
2027	370,000	95,350	465,350
2028	380,000	82,400	462,400
2029	395,000	67,200	462,200
2030	410,000	51,400	461,400
2031	430,000	35,000	465,000
2032	445,000	17,800	462,800
2033	-	-	-
2034	-	-	-
2035	-	-	-
2036	-	-	-
2037	-	-	-
2038	-	-	-

## Debt Fund (Excluding Parking Fund)

FY	Principal	Interest	Total
Total	56,383,000	14,089,403	70,472,403
2020	5,572,000	2,092,725	7,664,725
2021	5,224,000	1,965,646	7,189,646
2022	5,161,000	1,749,853	6,910,853
2023	5,207,000	1,530,535	6,737,535
2024	5,013,000	1,313,411	6,326,411
2025	4,836,000	1,096,881	5,932,881
2026	3,371,000	891,969	4,262,969
2027	3,265,000	762,269	4,027,269
2028	2,960,000	645,979	3,605,979
2029	2,998,000	538,647	3,536,647
2030	3,036,000	427,287	3,463,287
2031	3,080,000	319,462	3,399,462
2032	1,470,000	211,615	1,681,615
2033	940,000	163,363	1,103,363
2034	940,000	135,163	1,075,163
2035	940,000	105,788	1,045,788
2036	940,000	76,413	1,016,413
2037	940,000	46,475	986,475
2038	490,000	15,925	505,925

## Vehicle Replacement Fund

FY	Principal	Interest	Total
Total	326,297	5,890	332,187
2020	260,742	4,849	265,591
2021	65,555	1,041	66,596
2022	-	-	-
2023	-	-	-
2024	-	-	-
2025	-	-	-
2026	-	-	-
2027	-	-	-
2028	-	-	-
2029	-	-	-
2030	-	-	-
2031	-	-	-
2032	-	-	-
2033	-	-	-
2034	-	-	-
2035	-	-	-
2036	-	-	-
2037	-	-	-
2038	-	-	-

# Debt Fund



**\$12,250,000**

General Obligation Public Improvement Bonds, Series 2010B (BABs)

FY	Coupon	Principal	Interest	Total
Total		1,020,000	278,574	1,298,574
2020	3.500%	1,020,000	278,574	1,298,574
2021		-	-	-
2022		-	-	-
2023		-	-	-
2024		-	-	-
2025		-	-	-
2026		-	-	-
2027		-	-	-
2028		-	-	-
2029		-	-	-
2030		-	-	-
2031		-	-	-
2032		-	-	-
2033		-	-	-
2034		-	-	-
2035		-	-	-
2036		-	-	-
2037		-	-	-
2038		-	-	-
2039		-	-	-

Dated Date: 10/12/2010      Next Call: 4/1/2020

Purpose: Public Improvement      Insurance: n/a

Coupon Dates: Apr 1 / Oct 1      Maturity Date: Apr 1

Note: Interest shown gross of subsidy

**\$4,655,000**

General Obligation Refunding Bonds, Series 2012

FY	Coupon	Principal	Interest	Total
Total		1,550,000	135,450	1,685,450
2020	3.000%	480,000	46,500	526,500
2021	3.000%	305,000	32,100	337,100
2022	3.000%	195,000	22,950	217,950
2023	3.000%	195,000	17,100	212,100
2024	3.000%	190,000	11,250	201,250
2025	3.000%	185,000	5,550	190,550
2026		-	-	-
2027		-	-	-
2028		-	-	-
2029		-	-	-
2030		-	-	-
2031		-	-	-
2032		-	-	-
2033		-	-	-
2034		-	-	-
2035		-	-	-
2036		-	-	-
2037		-	-	-
2038		-	-	-
2039		-	-	-

Dated Date: 6/5/2012      Next Call: 4/1/2022

Purpose: Refunding      Insurance: n/a

Coupon Dates: Apr 1 / Oct 1      Maturity Date: Apr 1

**\$1,700,000**

General Obligation Public Improvement Bonds, Series 2012

FY	Coupon	Principal	Interest	Total
Total		1,105,000	184,578	1,289,578
2020	2.000%	85,000	24,948	109,948
2021	2.000%	85,000	23,248	108,248
2022	2.000%	85,000	21,548	106,548
2023	2.000%	85,000	19,848	104,848
2024	2.000%	85,000	18,148	103,148
2025	2.100%	85,000	16,448	101,448
2026	2.200%	85,000	14,663	99,663
2027	2.300%	85,000	12,793	97,793
2028	2.450%	85,000	10,838	95,838
2029	2.500%	85,000	8,755	93,755
2030	2.550%	85,000	6,630	91,630
2031	2.600%	85,000	4,463	89,463
2032	2.650%	85,000	2,253	87,253
2033		-	-	-
2034		-	-	-
2035		-	-	-
2036		-	-	-
2037		-	-	-
2038		-	-	-
2039		-	-	-

Dated Date: 7/3/2012      Next Call: 4/1/2022

Purpose: Public Improvement      Insurance: n/a

Coupon Dates: Apr 1 / Oct 1      Maturity Date: Apr 1

# Debt Fund



## \$3,050,000

### General Obligation Refunding Bond, Series 2013 (SunTrust)

FY	Coupon	Principal	Interest	Total
Total		2,053,000	156,203	2,209,203
2020	1.770%	282,000	36,338	318,338
2021	1.770%	277,000	31,347	308,347
2022	1.770%	272,000	26,444	298,444
2023	1.770%	266,000	21,629	287,629
2024	1.770%	260,000	16,921	276,921
2025	1.770%	255,000	12,319	267,319
2026	1.770%	249,000	7,806	256,806
2027	1.770%	192,000	3,398	195,398
2028	-	-	-	-
2029	-	-	-	-
2030	-	-	-	-
2031	-	-	-	-
2032	-	-	-	-
2033	-	-	-	-
2034	-	-	-	-
2035	-	-	-	-
2036	-	-	-	-
2037	-	-	-	-
2038	-	-	-	-
2039	-	-	-	-

Dated Date: 2/28/2013      Next Call: 2/28/2020  
 Purpose: Refunding      Insurance: n/a  
 Coupon Dates: May 1 / Nov 1      Maturity Date: May 1

## \$1,460,000

### General Obligation Public Safety Bonds, Series 2017

FY	Coupon	Principal	Interest	Total
Total		1,160,000	200,100	1,360,100
2020	5.000%	145,000	49,300	194,300
2021	5.000%	145,000	42,050	187,050
2022	5.000%	145,000	34,800	179,800
2023	5.000%	145,000	27,550	172,550
2024	5.000%	145,000	20,300	165,300
2025	3.000%	145,000	13,050	158,050
2026	3.000%	145,000	8,700	153,700
2027	3.000%	145,000	4,350	149,350
2028	-	-	-	-
2029	-	-	-	-
2030	-	-	-	-
2031	-	-	-	-
2032	-	-	-	-
2033	-	-	-	-
2034	-	-	-	-
2035	-	-	-	-
2036	-	-	-	-
2037	-	-	-	-
2038	-	-	-	-
2039	-	-	-	-

Dated Date: 2/21/2017      Next Call: Noncallable  
 Purpose: Equipment      Insurance: n/a  
 Coupon Dates: Feb 1 / Aug 1      Maturity Date: Feb 1

## \$9,000,000

### General Obligation Public Improvement Bonds, Series 2017

FY	Coupon	Principal	Interest	Total
Total		8,100,000	2,698,313	10,798,313
2020	3.000%	450,000	295,875	745,875
2021	3.000%	450,000	282,375	732,375
2022	4.000%	450,000	268,875	718,875
2023	3.000%	450,000	250,875	700,875
2024	5.000%	450,000	237,375	687,375
2025	5.000%	450,000	214,875	664,875
2026	5.000%	450,000	192,375	642,375
2027	5.000%	450,000	169,875	619,875
2028	4.000%	450,000	147,375	597,375
2029	4.000%	450,000	129,375	579,375
2030	3.000%	450,000	111,375	561,375
2031	3.000%	450,000	97,875	547,875
2032	3.000%	450,000	84,375	534,375
2033	3.000%	450,000	70,875	520,875
2034	3.125%	450,000	57,375	507,375
2035	3.125%	450,000	43,313	493,313
2036	3.250%	450,000	29,250	479,250
2037	3.250%	450,000	14,625	464,625
2038	-	-	-	-
2039	-	-	-	-

Dated Date: 2/22/2017      Next Call: 2/1/2027  
 Purpose: Land, Streets, and Parks & Rec      Insurance: n/a  
 Coupon Dates: Feb 1 / Aug 1      Maturity Date: Feb 1

# Debt Fund



**\$9,800,000**  
**General Obligation Public Improvement Bonds, Series 2018 (No Stormwater)**

FY	Coupon	Principal	Interest	Total
<b>Total</b>		<b>9,310,000</b>	<b>3,086,388</b>	<b>12,396,388</b>
2020	5.000%	490,000	346,063	836,063
2021	5.000%	490,000	321,563	811,563
2022	5.000%	490,000	297,063	787,063
2023	5.000%	490,000	272,563	762,563
2024	5.000%	490,000	248,063	738,063
2025	5.000%	490,000	223,563	713,563
2026	5.000%	490,000	199,063	689,063
2027	2.500%	490,000	174,563	664,563
2028	2.500%	490,000	162,313	652,313
2029	3.000%	490,000	150,063	640,063
2030	2.875%	490,000	135,363	625,363
2031	2.875%	490,000	121,275	611,275
2032	3.000%	490,000	107,188	597,188
2033	3.000%	490,000	92,488	582,488
2034	3.125%	490,000	77,788	567,788
2035	3.125%	490,000	62,475	552,475
2036	3.125%	490,000	47,163	537,163
2037	3.250%	490,000	31,850	521,850
2038	3.250%	490,000	15,925	505,925
2039				-

Dated Date: **4/19/2018**                      Next Call: **5/1/2026**  
 Purpose: **Parks & Rec and Streets & Sidewalks Only**                      Insurance: **n/a**  
 Coupon Dates: **May 1 / Nov 1**                      Maturity Date: **May 1**  
 Note: Excludes Stormwater Component of issuance.

**\$9,505,000**  
**General Obligation Refunding Bonds, Series 2019**

FY	Coupon	Principal	Interest	Total
<b>Total</b>		<b>9,505,000</b>	<b>3,073,785</b>	<b>12,578,785</b>
2020		-	146,535	146,535
2021	5.000%	795,000	475,250	1,270,250
2022	5.000%	810,000	435,500	1,245,500
2023	5.000%	825,000	395,000	1,220,000
2024	5.000%	835,000	353,750	1,188,750
2025	5.000%	850,000	312,000	1,162,000
2026	5.000%	865,000	269,500	1,134,500
2027	5.000%	875,000	226,250	1,101,250
2028	5.000%	890,000	182,500	1,072,500
2029	5.000%	905,000	138,000	1,043,000
2030	5.000%	920,000	92,750	1,012,750
2031	5.000%	935,000	46,750	981,750
2032		-	-	-
2033		-	-	-
2034		-	-	-
2035		-	-	-
2036		-	-	-
2037		-	-	-
2038		-	-	-
2039		-	-	-

Dated Date: **12/10/2019**                      Next Call: **Noncallable**  
 Purpose: **Refunding**                      Insurance: **n/a**  
 Coupon Dates: **Apr 1 / Oct 1**                      Maturity Date: **Apr 1**

# Debt Fund



\$2,395,000  
2015 IPC (Bank of NC)

FY	Coupon	Principal	Interest	Total
Total		1,915,000	256,869	2,171,869
2020	2.239%	160,000	41,086	201,086
2021	2.239%	160,000	37,503	197,503
2022	2.239%	160,000	33,921	193,921
2023	2.239%	160,000	30,338	190,338
2024	2.239%	160,000	26,756	186,756
2025	2.239%	160,000	23,174	183,174
2026	2.239%	160,000	19,591	179,591
2027	2.239%	159,000	16,020	175,020
2028	2.239%	159,000	12,460	171,460
2029	2.239%	159,000	8,900	167,900
2030	2.239%	159,000	5,340	164,340
2031	2.239%	159,000	1,780	160,780
2032		-	-	-
2033		-	-	-
2034		-	-	-
2035		-	-	-
2036		-	-	-
2037		-	-	-
2038		-	-	-
2039		-	-	-

Dated Date: 6/4/2015      Next Call: Current  
 Purpose: Equipment / Buildings      Insurance: n/a  
 Coupon Dates: Feb 1 / Aug 1      Maturity Date: Aug 1

\$7,984,000  
2016 IPC (Raymond James)

FY	Coupon	Principal	Interest	Total
Total		6,430,000	961,176	7,391,176
2020	2.320%	530,000	149,176	679,176
2021	2.320%	537,000	136,880	673,880
2022	2.320%	544,000	124,422	668,422
2023	2.320%	551,000	111,801	662,801
2024	2.320%	558,000	99,018	657,018
2025	2.320%	566,000	86,072	652,072
2026	2.320%	572,000	72,941	644,941
2027	2.320%	499,000	59,670	558,670
2028	2.320%	506,000	48,094	554,094
2029	2.320%	514,000	36,354	550,354
2030	2.320%	522,000	24,430	546,430
2031	2.320%	531,000	12,319	543,319
2032		-	-	-
2033		-	-	-
2034		-	-	-
2035		-	-	-
2036		-	-	-
2037		-	-	-
2038		-	-	-
2039		-	-	-

Dated Date: 3/10/2016      Next Call: 3/1/2026  
 Purpose: Capital / Fire Station / EF / Town Hall      Insurance: n/a  
 Coupon Dates: Mar 1 / Sep 1      Maturity Date: Mar 1

# Debt Fund



\$28,800,000

Limited Obligation Bonds, Series 2012

FY	Coupon	Principal	Interest	Total
Total		7,880,000	1,377,250	9,257,250
2020	5.000%	1,310,000	393,000	1,703,000
2021	5.000%	1,320,000	328,500	1,648,500
2022	5.000%	1,315,000	262,500	1,577,500
2023	5.000%	1,315,000	196,750	1,511,750
2024	5.000%	1,310,000	131,000	1,441,000
2025	5.000%	1,310,000	65,500	1,375,500
2026		-	-	-
2027		-	-	-
2028		-	-	-
2029		-	-	-
2030		-	-	-
2031		-	-	-
2032		-	-	-
2033		-	-	-
2034		-	-	-
2035		-	-	-
2036		-	-	-
2037		-	-	-
2038		-	-	-
2039		-	-	-

Dated Date: 6/27/2012                      Next Call: 6/1/2022

Purpose: Refunding - Chapel Hill Portion Insurance: n/a

Coupon Dates: Jun 1 / Dec 1                      Maturity Date: Jun 1

# Parking Fund



\$28,800,000

Limited Obligation Bonds, Series 2012

FY	Coupon	Principal	Interest	Total
Total		1,755,000	249,800	2,004,800
2020	5.000%	355,000	87,550	442,550
2021	5.000%	380,000	70,000	450,000
2022	5.000%	400,000	51,000	451,000
2023	5.000%	415,000	31,000	446,000
2024	5.000%	205,000	10,250	215,250
2025		-	-	-
2026		-	-	-
2027		-	-	-
2028		-	-	-
2029		-	-	-
2030		-	-	-
2031		-	-	-
2032		-	-	-
2033		-	-	-
2034		-	-	-
2035		-	-	-
2036		-	-	-
2037		-	-	-
2038		-	-	-
2039		-	-	-

Dated Date: 6/27/2012      Next Call: 6/1/2022  
 Purpose: Refunding - Parking Portion      Insurance: n/a  
 Coupon Dates: Jun 1 / Dec 1      Maturity Date: Jun 1

\$28,800,000

Limited Obligation Bonds, Series 2012

FY	Coupon	Principal	Interest	Total
Total		4,600,000	1,430,919	6,030,919
2020	5.000%	265,000	197,781	462,781
2021	5.000%	280,000	184,831	464,831
2022	5.000%	295,000	170,831	465,831
2023	5.000%	310,000	156,081	466,081
2024	5.000%	325,000	140,581	465,581
2025	5.000%	340,000	124,331	464,331
2026	3.375%	355,000	107,331	462,331
2027	3.500%	370,000	95,350	465,350
2028	4.000%	380,000	82,400	462,400
2029	4.000%	395,000	67,200	462,200
2030	4.000%	410,000	51,400	461,400
2031	4.000%	430,000	35,000	465,000
2032	4.000%	445,000	17,800	462,800
2033		-	-	-
2034		-	-	-
2035		-	-	-
2036		-	-	-
2037		-	-	-
2038		-	-	-
2039		-	-	-

Dated Date: 6/27/2012      Next Call: 6/1/2022  
 Purpose: New Money - 140 West Portion      Insurance: n/a  
 Coupon Dates: Jun 1 / Dec 1      Maturity Date: Jun 1

# Vehicle Replacement Fund



\$431,200

2012 IPC (SunTrust)

FY	Coupon	Principal	Interest	Total
Total		64,294	851	65,145
2020	1.510%	64,294	851	65,145
2021		-	-	-
2022		-	-	-
2023		-	-	-
2024		-	-	-
2025		-	-	-
2026		-	-	-
2027		-	-	-
2028		-	-	-
2029		-	-	-
2030		-	-	-
2031		-	-	-
2032		-	-	-
2033		-	-	-
2034		-	-	-
2035		-	-	-
2036		-	-	-
2037		-	-	-
2038		-	-	-
2039		-	-	-

Dated Date: [Unknown](#)      Next Call: [Unknown](#)

Purpose: [Unknown](#)      Insurance: [Unknown](#)

Coupon Dates: [Annual](#)      Maturity Date: [Annual](#)

Note: Interpolated from FY 2017 CAFR

\$445,000

2013 IPC (Wells Fargo)

FY	Coupon	Principal	Interest	Total
Total		66,363	891	67,254
2020	1.520%	66,363	891	67,254
2021		-	-	-
2022		-	-	-
2023		-	-	-
2024		-	-	-
2025		-	-	-
2026		-	-	-
2027		-	-	-
2028		-	-	-
2029		-	-	-
2030		-	-	-
2031		-	-	-
2032		-	-	-
2033		-	-	-
2034		-	-	-
2035		-	-	-
2036		-	-	-
2037		-	-	-
2038		-	-	-
2039		-	-	-

Dated Date: [Unknown](#)      Next Call: [Unknown](#)

Purpose: [Unknown](#)      Insurance: [Unknown](#)

Coupon Dates: [Annual](#)      Maturity Date: [Annual](#)

Note: Interpolated from FY 2018 CAFR

\$872,000

2013 IPC (SunTrust)

FY	Coupon	Principal	Interest	Total
Total		195,640	4,148	199,788
2020	1.810%	130,085	3,107	133,192
2021	1.810%	65,555	1,041	66,596
2022		-	-	-
2023		-	-	-
2024		-	-	-
2025		-	-	-
2026		-	-	-
2027		-	-	-
2028		-	-	-
2029		-	-	-
2030		-	-	-
2031		-	-	-
2032		-	-	-
2033		-	-	-
2034		-	-	-
2035		-	-	-
2036		-	-	-
2037		-	-	-
2038		-	-	-
2039		-	-	-

Dated Date: [Unknown](#)      Next Call: [Unknown](#)

Purpose: [Unknown](#)      Insurance: [Unknown](#)

Coupon Dates: [Annual](#)      Maturity Date: [Annual](#)

Note: Interpolated from FY 2018 CAFR



# Appendix E

## Rating Reports

## CREDIT OPINION

14 November 2019

 Rate this Research

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# Chapel Hill (Town of) NC

## Update to analysis

### Summary

The town of Chapel Hill (Aaa, stable) benefits from a sound financial position following multi-year General Fund surpluses. Reserves and cash balances remained strong despite a planned draw down on reserves for various pay-go capital improvements including parks and affordable housing as well as transfer to OPEB trust. The town's tax base continues to grow largely due to its advantageous location in the burgeoning Research Triangle region and is anchored by the strong institutional presence of the flagship campus of the University of North Carolina. Income and wealth levels are well above average despite the large student population. Lastly, the town's fixed costs will remain affordable despite future borrowing plans due to a conservatively constructed CIP and an average pension position.

### Credit strengths

- » Sound financial position with healthy reserves
- » Stable economy with strong institutional presence
- » Affordable debt profile

### Credit challenges

- » Slightly elevated debt compared to state median

### Rating outlook

The stable outlook reflects the economic strength of the tax base as well as the town's sound financial position.

### Factors that could lead to an upgrade

- » Not applicable

### Factors that could lead to a downgrade

- » Multi-year trend of structural budget imbalance
- » Reduction of General Fund balance and other available reserves
- » Deterioration of the town's tax base

## Key indicators

Exhibit 1

Chapel Hill (Town of) NC	2014	2015	2016	2017	2018
<b>Economy/Tax Base</b>					
Total Full Value (\$000)	\$7,463,254	\$7,447,206	\$7,539,775	\$7,532,719	\$8,034,649
Population	58,379	58,766	59,005	59,234	59,903
Full Value Per Capita	\$127,841	\$126,726	\$127,782	\$127,169	\$134,128
Median Family Income (% of US Median)	172.6%	174.2%	170.2%	169.7%	169.7%
<b>Finances</b>					
Operating Revenue (\$000)	\$61,975	\$63,851	\$67,191	\$66,033	\$68,627
Fund Balance (\$000)	\$26,450	\$32,592	\$38,698	\$30,903	\$31,197
Cash Balance (\$000)	\$23,201	\$27,509	\$32,689	\$25,926	\$26,108
Fund Balance as a % of Revenues	42.7%	51.0%	57.6%	46.8%	45.5%
Cash Balance as a % of Revenues	37.4%	43.1%	48.7%	39.3%	38.0%
<b>Debt/Pensions</b>					
Net Direct Debt (\$000)	\$56,620	\$53,592	\$56,398	\$65,260	\$66,943
3-Year Average of Moody's ANPL (\$000)	N/A	\$59,919	\$55,610	\$74,843	\$92,428
Net Direct Debt / Full Value (%)	0.8%	0.7%	0.7%	0.9%	0.8%
Net Direct Debt / Operating Revenues (x)	0.9x	0.8x	0.8x	1.0x	1.0x
Moody's - adjusted Net Pension Liability (3-yr average) to Full Value (%)	N/A	0.8%	0.7%	1.0%	1.2%
Moody's - adjusted Net Pension Liability (3-yr average) to Revenues (x)	N/A	0.9x	0.8x	1.1x	1.3x

Source: Moody's Investors Service, Town of Chapel Hill, NC, US Census

## Profile

Located in the central portion of the state, the town sits within Orange County (Aaa stable). The town covers a land area of 21.6 square miles and has a population estimated at 63,178.

## Detailed credit considerations

### University and proximity to research triangle park support robust local economy

The town's tax base is expected to remain stable and healthy, given the stabilizing presence of the University of North Carolina (UNC) at Chapel Hill (Aaa stable) and the important role the town plays as one of the anchors of Research Triangle Park (RTP). The university enrolls over 29,000 students and employs approximately 20,000 people. UNC's footprint in the community is expected to increase substantially over the next 10 to 20 years with the construction of Carolina North, a major satellite research campus. The project will occupy over 250 acres in town and include new academic buildings, retail space, research facilities, businesses and public schools. At completion, the project is expected to include sizable employment and enrollment gains. Also of note, approximately half of the project is expected to be taxable. UNC Healthcare employs over 13,000 individuals. In addition to not-for-profit employment opportunities in surrounding communities including Duke University (Aa1 stable) and Duke University Health System (over 20,000 employees), the area is characterized by a robust and diverse private sector centered around RTP including several large employers including International Business Machines Corporation-IBM (A1 stable-11,500 employees), SAS (4,200 employees), and GlaxoSmithKline plc (A2 stable). Over 39,000 people are employed by RTP's various entities, producing an annual payroll of over \$2.8 billion.

Chapel Hill's \$8 billion tax base has grown at an average annual rate of almost 2% for the past five years. The relatively low growth rate is largely due to some major redevelopment projects downtown which temporarily lowered valuations in the interim. The high quality nature of the tax base is evidenced by a full value per capita of \$134,128. Despite the large student presence, wealth levels are well above those of the state and the U.S.

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on [www.moody's.com](http://www.moody's.com) for the most updated credit rating action information and rating history.

### Continued maintenance of healthy reserves and liquidity despite active pay-go capital funding

The town's financial position will likely remain healthy given a solid track record of positive operating results, conservative budgeting practices, and sound reserve levels. Positive fiscal 2018 results increased total Operating Fund balance to a strong \$31.8 million (46.4% of revenues). At these levels the town's reserve position remains in line with the national Aaa median and above the town's target minimum available General Fund balance of 22% of General Fund expenditures.

In fiscal 2017, officials had a planned spend-down of reserves for pay-go projects including parks & recreation, land acquisition, affordable housing as well as \$2.7 million for OPEB trust funding.

Officials report year-to-date fiscal 2019 results are positive.

### LIQUIDITY

The town continues to carry a healthy amount of cash and investments with \$26.1 million in fiscal 2018, representing 38% of combined operating fund revenues

### Fixed costs expected to remain affordable

The town's debt position will remain manageable given a slightly elevated direct debt burden of 0.8% of full value (North Carolina Aaa town median 0.6%) and debt service levels representing 11% of expenditure in fiscal 2018.

Further, the town employs an average repayment schedule with 91% of principal repaid within 10 years. The town's CIP totals \$58 million and anticipates an additional \$12.7 in GO borrowing.

### DEBT STRUCTURE

The town's debt profile consists entirely of fixed rate borrowing.

### DEBT-RELATED DERIVATIVES

The town has not entered into any swap agreements.

### PENSIONS AND OPEB

The town contributes to the North Carolina Local Government Employees Retirement System (NCLGERS), defined benefit retirement plan administered by the State of North Carolina. Moody's uses the adjusted net pension liability to improve comparability of reported pension liabilities. The adjustments are not intended to replace the town's reported liability information, but to improve comparability with other rated entities. We determined the town's share of liability for the state-run plan in proportion to its contributions to the plan. In addition to participating in the state plan, the town has a separate plan for law enforcement and to which the town consistently makes over 100% of the annual required contribution. The three year average Moody's adjusted net pension liability (ANPL) for the town is an average 1.13 times operating revenues and 0.99% of full value.

In June of 2016, the town created an irrevocable trust exclusively for pre-funding assets of the Town's defined benefit OPEB Plan. In Fiscal 2018 and 2019 the town deposited \$840,000 into the trust, \$666,400 is included in the fiscal 2020 budget.

### Town operations within a strong state institutional framework

Chapel Hill's management has a long-standing history of conservative budgetary practice and prudent policies. The town maintains an Unassigned Fund Balance target of 22% of General Fund expenditures or higher and utilizes overages for one time pay-go capital projects.

North Carolina towns have an institutional framework score of Aaa, which is high compared to the nation. Institutional framework scores measure a sector's legal ability to increase revenues and decrease expenditures. The sector's major revenue sources are subject to a cap, which can be overridden. However, the cap of 15%, still allows for significant revenue-raising ability. Unpredictable revenue fluctuations tend to be minor, or under 5% annually. Across the sector, fixed and mandated costs are generally less than 25% of expenditures. North Carolina is a "right to work" state, providing significant expenditure-cutting ability to local governments. Unpredictable expenditure fluctuations tend to be minor, under 5% annually

## Rating methodology and scorecard factors

The US Local Government General Obligation Rating Methodology includes a scorecard, a tool providing a composite score of a local government's credit profile based on the weighted factors we consider most important, universal and measurable, as well as possible notching factors dependent on individual credit strengths and weaknesses. Its purpose is not to determine the final rating, but rather to provide a standard platform from which to analyze and compare local government credits.

Exhibit 2

### Chapel Hill (Town of) NC

Rating Factors	Measure	Score
<b>Economy/Tax Base (30%)</b> <sup>[1]</sup>		
Tax Base Size: Full Value (in 000s)	\$8,034,649	Aa
Full Value Per Capita	\$134,128	Aa
Median Family Income (% of US Median)	169.7%	Aaa
<b>Notching Factors:</b> <sup>[2]</sup>		
Institutional Presence		Up
<b>Finances (30%)</b>		
Fund Balance as a % of Revenues	45.5%	Aaa
5-Year Dollar Change in Fund Balance as % of Revenues	9.8%	A
Cash Balance as a % of Revenues	38.0%	Aaa
5-Year Dollar Change in Cash Balance as % of Revenues	4.6%	A
<b>Management (20%)</b>		
Institutional Framework	Aaa	Aaa
Operating History: 5-Year Average of Operating Revenues / Operating Expenditures	1.0x	A
<b>Debt and Pensions (20%)</b>		
Net Direct Debt / Full Value (%)	0.8%	Aa
Net Direct Debt / Operating Revenues (x)	1.0x	A
3-Year Average of Moody's Adjusted Net Pension Liability / Full Value (%)	1.2%	Aa
3-Year Average of Moody's Adjusted Net Pension Liability / Operating Revenues (x)	1.3x	A
	Scorecard-Indicated Outcome	Aaa
	Assigned Rating	Aaa

[1]Economy measures are based on data from the most recent year available.

[2]Notching Factors are specifically defined in the US Local Government General Obligation Debt methodology dated September 27, 2019.

[3]Standardized adjustments are outlined in the GO Methodology Scorecard Inputs Updated for 2019 publication

Source: US Census Bureau, Issuer CAFRs, Moody's Investors Service

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## ISSUER COMMENT

16 May 2019

### RATING

**General Obligation (or GO Related)** <sup>1</sup>

Aaa Stable

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# Town of Chapel Hill, NC

## Annual Comment on Chapel Hill

### Issuer Profile

The town of Chapel Hill is located in Orange County in north central North Carolina, just southwest of the Durham metro area and approximately 25 miles northwest of Raleigh. The county has a population of 141,812 and a moderate population density of 355 people per square mile. The county's median family income is \$91,655 (1st quartile) and the March 2019 unemployment rate was 3.6% (2nd quartile) <sup>2</sup>. The largest industry sectors that drive the local economy are state government, retail trade, and accommodation/food services.

### Credit Overview

Chapel Hill's credit position is excellent. Its Aaa rating is well above the median rating of Aa3 for US cities. Key credit factors include a very healthy financial position, a very strong wealth and income profile and a considerable tax base. It also reflects an affordable debt burden and a moderate pension liability.

**Finances:** The town has a robust financial position, which is consistent with the assigned rating of Aaa. Chapel Hill's cash balance as a percent of operating revenues (38%) is on par with the US median, and was flat from 2014 to 2018. Furthermore, the fund balance as a percent of operating revenues (45.5%) is stronger than other Moody's-rated cities nationwide.

**Economy and Tax Base:** The economy and tax base of the town are very healthy, though the factor is slightly weak relative to its Aaa rating. The median family income equates to a robust 170.2% of the US level. Additionally, Chapel Hill's full value per capita (\$134,128) is much stronger than the US median, and rose modestly from 2014 to 2018. Lastly, the total full value (\$8 billion) is materially above other Moody's-rated cities nationwide.

**Debt and Pensions:** The debt and pension liabilities of the town are affordable overall, though they are unfavorable relative to the assigned rating of Aaa. The net direct debt to full value (0.8%) is on par with the US median and remained stable between 2014 and 2018. Also, the Moody's-adjusted net pension liability to operating revenues (1.4x) is roughly equivalent to the US median.

**Management and Governance:** North Carolina cities have an Institutional Framework score <sup>3</sup> of Aaa, which is high compared to the nation. Institutional Framework scores measure a sector's legal ability to increase revenues and decrease expenditures. Property taxes, the sector's major revenue source, is subject to a cap which can be overridden with voter approval. However, the cap of \$15 per \$1,000 of assessed value still allows for significant revenue-raising ability. Unpredictable revenue fluctuations tend to be minor, or under 5% annually. Across the sector, fixed and mandated costs are generally less than 25% of

expenditures. North Carolina is a Right to Work state, providing significant expenditure-cutting ability. Unpredictable expenditure fluctuations tend to be minor, under 5% annually.

## Sector Trends - North Carolina Cities

North Carolina cities will generally benefit from a robust state economy, although rural areas still transitioning from a high reliance on textile, furniture and tobacco employment will lag the rest of the state. Most cities benefit from diverse economic expansion of the technology, pharmaceutical, financial and tourism sectors. Sales tax collections are increasing and an improving housing market has bolstered property tax revenues. Pensions are well funded and not expected to have an outsized negative impact on the credit quality of cities as a whole.

EXHIBIT 1

### Key Indicators <sup>4</sup> <sup>5</sup> Chapel Hill

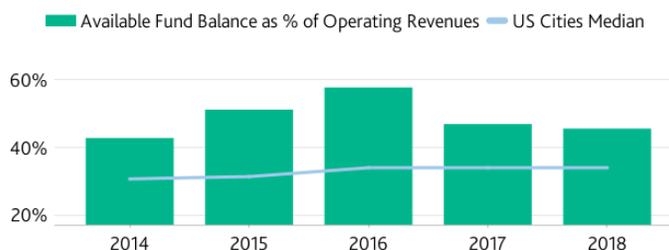
	2014	2015	2016	2017	2018	US Median	Credit Trend
<b>Economy / Tax Base</b>							
Total Full Value	\$7,463M	\$7,447M	\$7,539M	\$7,532M	\$8,034M	\$1,867M	Improved
Full Value Per Capita	\$127,841	\$126,726	\$127,782	\$127,169	\$134,128	\$89,200	Stable
Median Family Income (% of US Median)	173%	174%	170%	170%	170%	113%	Stable
<b>Finances</b>							
Available Fund Balance as % of Operating Revenues	42.7%	51.0%	57.6%	46.8%	45.5%	33.9%	Stable
Net Cash Balance as % of Operating Revenues	37.4%	43.1%	48.7%	39.3%	38.0%	36.9%	Stable
<b>Debt / Pensions</b>							
Net Direct Debt / Full Value	0.8%	0.7%	0.7%	0.9%	0.8%	1.1%	Stable
Net Direct Debt / Operating Revenues	0.91x	0.84x	0.84x	0.99x	0.98x	0.88x	Stable
Moody's-adjusted Net Pension Liability (3-yr average) to Full Value	N/A	0.8%	0.7%	1.0%	1.2%	1.8%	Stable
Moody's-adjusted Net Pension Liability (3-yr average) to Operating Revenues	N/A	0.94x	0.83x	1.13x	1.35x	1.51x	Stable
	2014	2015	2016	2017	2018	US Median	
<b>Debt and Financial Data</b>							
Population	58,379	58,766	59,005	59,234	59,903	N/A	
Available Fund Balance (\$000s)	\$26,450	\$32,592	\$38,698	\$30,903	\$31,197	\$7,419	
Net Cash Balance (\$000s)	\$23,201	\$27,509	\$32,689	\$25,926	\$26,108	\$8,404	
Operating Revenues (\$000s)	\$61,975	\$63,851	\$67,191	\$66,033	\$68,627	\$21,930	
Net Direct Debt (\$000s)	\$56,620	\$53,592	\$56,398	\$65,260	\$66,943	\$18,580	
Moody's Adjusted Net Pension Liability (3-yr average) (\$000s)	N/A	\$59,919	\$55,610	\$74,843	\$92,428	\$32,507	

Source: Moody's Investors Service

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on [www.moody's.com](http://www.moody's.com) for the most updated credit rating action information and rating history.

## EXHIBIT 3

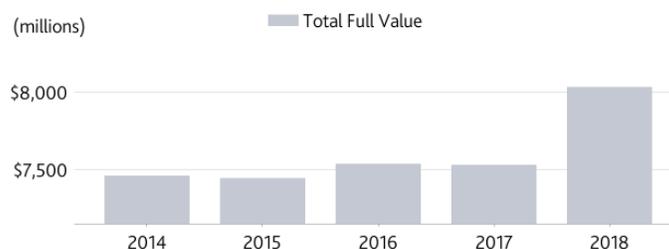
## Available fund balance as a percent of operating revenues consistent from 2014 to 2018



Source: Issuer financial statements; Moody's Investors Service

## EXHIBIT 4

## Full value of the property tax base increased from 2014 to 2018



Source: Issuer financial statements; Government data sources; Offering statements; Moody's Investors Service

## Exhibit 5

## Moody's-adjusted net pension liability to operating revenues consistent from 2015 to 2018



Source: Issuer financial statements; Government data sources; Offering statements; Moody's Investors Service

## Endnotes

- The rating referenced in this report is the issuer's General Obligation (GO) rating or its highest public rating that is GO-related. A GO bond is generally backed by the full faith and credit pledge and total taxing power of the issuer. GO-related securities include general obligation limited tax, annual appropriation, lease revenue, non-ad valorem, and moral obligation debt. The referenced ratings reflect the government's underlying credit quality without regard to state guarantees, enhancement programs or bond insurance.
  - The demographic data presented, including population, population density, per capita personal income and unemployment rate are derived from the most recently available US government databases. Population, population density and per capita personal income come from the American Community Survey while the unemployment rate comes from the Bureau of Labor Statistics.
- The largest industry sectors are derived from the Bureau of Economic Analysis. Moody's allocated the per capita personal income data and unemployment data for all counties in the US census into quartiles. The quartiles are ordered from strongest-to-weakest from a credit perspective: the highest per capita personal income quartile is first quartile, and the lowest unemployment rate is first quartile.
- The institutional framework score assesses a municipality's legal ability to match revenues with expenditures based on its constitutionally and legislatively conferred powers and responsibilities. See [US Local Government General Obligation Debt \(December 2016\)](#) methodology report for more details.
  - For definitions of the metrics in the Key Indicators Table, [US Local Government General Obligation Methodology and Scorecard User Guide \(July 2014\)](#). Metrics represented as N/A indicate the data were not available at the time of publication.
  - The medians come from our most recently published local government medians report, [Medians - Property values key to stability, but pension burdens remain a challenge \(March 2018\)](#) which is available on Moodys.com. The medians presented here are based on the key metrics outlined in Moody's GO methodology and the associated scorecard.

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**Summary:**

## Chapel Hill, North Carolina; Appropriations; General Obligation

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Rationale

Outlook

Related Research

## Summary:

# Chapel Hill, North Carolina; Appropriations; General Obligation

### Credit Profile

US\$9.565 mil GO rfdg bnnds ser 2019 due 04/01/2031

*Long Term Rating*

AAA/Stable

New

### Chapel Hill GO

*Long Term Rating*

AAA/Stable

Affirmed

## Rationale

S&P Global Ratings assigned its 'AAA' long-term rating to Chapel Hill, N.C.'s series 2019 general obligation (GO) refunding bonds. At the same time, we affirmed our 'AAA' long-term rating on the town's GO bonds outstanding and our 'AA+' long-term rating on the town's appropriation-backed debt. The outlook is stable.

### Security and use of proceeds

Securing debt service on the refunding and GO debt outstanding is the town's full faith and credit, including its statutory authority to levy ad valorem taxes on all real and tangible personal property without limitation as to rate or amount. Proceeds will be used to refund certain maturities of the series 2010B bonds for an estimated net present value savings of 6.5% of the refunded bonds.

### Credit overview

Chapel Hill, home to the University of North Carolina's (UNC) flagship institution and with its participation in the Research Triangle Park, has experienced robust economic growth while maintaining stable financial trends through various economic cycles. Furthermore, we believe the management team's adherence to long-term financial and capital planning as well as its adoption of a policy to continue prefunding its retiree health care benefits support our view of the 'AAA' rating.

We rate Chapel Hill's GO debt higher than the sovereign because we believe the town can maintain better credit characteristics than the U.S. in a stress scenario. Under our criteria "Ratings Above The Sovereign: Corporate And Government Ratings--Methodology And Assumptions," published Nov. 19, 2013 on RatingsDirect, the town primarily has a locally derived revenue base with roughly 73% of total governmental revenue and maintains independent taxing authority as well as independent treasury management from the federal government.

The ratings further reflect our view of the town's:

- Very strong economy, with access to a broad and diverse metropolitan statistical area and a local stabilizing institutional influence;
- Very strong management, with strong financial policies and practices under our financial management assessment

methodology;

- Strong budgetary performance, with balanced operating results in the general fund and at the total governmental fund level in fiscal 2018;
- Very strong budgetary flexibility, with an available fund balance in fiscal 2018 of 28% of operating expenditures;
- Very strong liquidity, with total government available cash at 69.8% of total governmental fund expenditures and 6.1x governmental debt service, and access to external liquidity we consider strong;
- Strong debt and contingent liability position, with debt service carrying charges at 11.4% of expenditures and net direct debt that is 76.7% of total governmental fund revenue, as well as low overall net debt at less than 3.0% of market value and rapid amortization, with 77.9% of debt scheduled to be retired in 10 years; and
- Very strong institutional framework score.

### **Very strong economy**

We consider Chapel Hill's economy very strong. The town, with an estimated population of 63,178, is located in Durham and Orange counties in the Durham-Chapel Hill metropolitan statistical area, which we consider broad and diverse. The town also benefits, in our view, from a stabilizing institutional influence. The town has a projected per capita effective buying income of 143% of the national level and per capita market value of \$131,497. Overall, the town's market value grew by 1% over the past year to \$8.3 billion in 2020. The weight-averaged unemployment rate of the counties was 3.3% in 2018.

Anchoring Chapel Hill's economy is the UNC flagship campus, as well as UNC Medical Center, which together provide substantial stability while driving research and innovation activities throughout the region, particularly given the town's participation in the North Carolina Research Triangle. The region's economic diversity includes technology, electronics, pharmaceutical, biotech, and financial services employers.

Given the town's favorable proximity to major employers and access to transportation networks such as the I-95 corridor, Chapel Hill has grown as a premier residential location, with several mixed-used developments recently completed or underway. The Blue Hill district has garnered investment totaling \$100 million, including Greenfield Place, an affordable housing development with 149 units. Ongoing development over a five- to 10 year horizon will eventually consist of additional residential units, walking and bike paths, restaurants, and commercial space. In addition, phase one of Glen Lennox is underway with 215 multifamily housing units and a parking deck. When development is complete, management expects investments in the area in excess of \$1 billion.

Despite the benefits derived from the town's robust economic growth, management identified traffic congestion and affordable housing as key determinants that could affect long-term demographic and development trends. To alleviate these concerns, the town's transit system partners with UNC to provide free service to faculty, staff, and students and is planning its expansion for bus rapid transit services while collaborating with GoTriangle, the regional transit provider. In addition, a \$10 million referendum was passed in November 2018 for affordable housing initiatives. The town will utilize bond proceeds from its referendum authority to leverage federal and state grants to support construction of affordable housing units.

We believe the town's economy will remain very strong given the long-term development trends, stability provided by

UNC, and the town's arts and culture activities, tourism, and sporting event attractions.

### **Very strong management**

In June 2019, the town adopted a comprehensive set of financial policies, which complements existing policies and procedures already in place. Inclusive in the policies is the objective to adopt, adhere, and regularly review the town's compliance with its policies and practices, which we view as being consistent with very strong management.

Management utilizes conservative budgeting practices that take into account historical and projected trends, which have contributed to the maintenance of the town's strong reserve levels over the past three fiscal years. Furthermore, monthly monitoring of its financial performance is supplemented with quarterly formal reports provided to the town council. Long term financial planning is detailed in a rolling, multiyear plan that projects revenue and expenditures over a five-year period. The town also annually updates its 15-year capital improvement plan that identifies potential funding sources for its projects. Policies adopted in June include a formal debt policy that outlines key affordability metrics, including maintaining net tax-supported debt equal to 1.5% of assessed valuation, ensuring debt service expenditures do not exceed 15% of total governmental expenditures, and targeting 10-year principal amortization at 65% or better. The town's formal reserve policy requires maintenance of the unassigned general fund balance at a minimum of 22% of general fund expenditures. The policy also requires the town council to adopt a restoration plan should the unassigned amount fall below the minimum threshold. A formal cash management and investment policy was also adopted in June that dictates that investments will adhere to state guidelines, 20% will be immediately available for liquidity purposes, and all investments should mature in no less than 36 months.

In addition to financial policies, the town adopted formalized policies for technology and data security, which we view favorably given the frequency of cybersecurity threats throughout the nation. To protect its systems, employees are required to participate in cybersecurity awareness training and the town maintains liability insurance to offset costs associated with a cybersecurity incident. Furthermore, technology systems are updated with virus and malware protections to help mitigate threats.

### **Strong budgetary performance**

Chapel Hill's budgetary performance is strong, in our opinion. The town had balanced operating results of 0.3% of expenditures in the general fund and of 0.2% across all governmental funds in fiscal 2018.

In assessing the town's budgetary performance, we adjusted for annually recurring transfers into and out of the general fund, and for large one-time capital outlay expenditures funded with debt proceeds across total governmental funds.

The town's budget is primarily funded with property taxes (49%), sales taxes (about 22%), and intergovernmental revenue (about 14%). Both property and sales taxes have shown steady increases in recent years, and town officials expect these trends to continue--budgeting for 4.9% sales tax growth in fiscal 2020.

Chapel Hill regularly includes an appropriation of fund balance in the budget, but year-end results have generally exceeded expectations as a result of management's conservative budgeting practices. In fiscal 2018, the town produced break-even general fund results after including an appropriation of approximately \$2.7 million in the budget. For fiscal 2019, unaudited results show Chapel Hill produced an operating surplus of about \$1.6 million (after transferring out about \$2.2 million to other funds). The positive results stemmed from sales taxes outperforming

estimates while management kept close control of expenditures.

The fiscal 2020 budget totals \$68.1 million (5.5% increase over the fiscal 2019 original budget). The budget includes an appropriation of fund balance equal to \$3.4 million. The primary increases in expenditures are personnel related, particularly in public safety. Despite the inclusion of reserves to balance the budget, we believe the town's budgetary performance will remain consistent with historical results.

### **Very strong budgetary flexibility**

Chapel Hill's budgetary flexibility is very strong, in our view, with an available fund balance in fiscal 2018 of 28% of operating expenditures, or \$17.1 million.

Chapel Hill has historically maintained very strong reserves, in our view, with available fund balance exceeding 26% of operating expenditures in each of the three most recent audited fiscal years. The town's formal reserve policy targets the maintenance of an unassigned general fund balance equal to 22% of operating expenditures, with any excess balance available for capital expenditures. Management reports no plans to materially spend down reserves in the next two years. Furthermore, town officials report that the combined \$8.4 million of reserves held in the debt service and affordable housing development reserve funds are also available with the approval of council. Therefore, we expect the town's budgetary flexibility to remain very strong in the near term.

### **Very strong liquidity**

In our opinion, Chapel Hill's liquidity is very strong, with total government available cash at 69.8% of total governmental fund expenditures and 6.1x governmental debt service in 2018. In our view, the town has strong access to external liquidity if necessary given its regular issuance of debt over the past 20 years.

While the state allows for what we view as permissive investments, we believe the town has no aggressive investments, with the majority of investments held in local government investment pools and mutual funds at the end of fiscal 2018. Additionally, we have identified no contingent liabilities that could pose a material risk to the town's liquidity. Therefore, we do not expect Chapel Hill's liquidity position to deteriorate from its very strong position in the near term.

### **Strong debt and contingent liability profile**

In our view, Chapel Hill's debt and contingent liability profile is strong. Total governmental fund debt service is 11.4% of total governmental fund expenditures, and net direct debt is 76.7% of total governmental fund revenue. Overall net debt is low at 1.1% of market value, and approximately 77.9% of the direct debt is scheduled to be repaid within 10 years, which are, in our view, positive credit factors.

Following the current transaction, the town's net direct debt outstanding totals \$59.3 million. In fiscal 2020, the town may issue as much as \$7.7 million in GO bonds and \$36.3 million in appropriation-backed debt primarily for its municipal services center, and for the first installment of the affordable housing bonds authorized by voters in November 2018. We do not view the additional debt as significant given the town's debt policies that consider affordability as well as its rapid retirement of existing principal.

## Pension and OPEB liabilities

Chapel Hill's required pension and actual other postemployment benefits (OPEB) contributions totaled 7.3% of total governmental fund expenditures in 2018, with 4.0% representing required contributions to pension obligations and 3.2% representing OPEB payments. The town made its full annual required pension contribution.

Chapel Hill participates in the statewide Local Governmental Employees' Retirement System (LGERS), a cost-sharing, multiple-employer plan administered by the state. The town funds its annually required contribution at 100%, and reported a proportionate share of the net pension liability of \$9.2 million as of June 30, 2018. The town also maintains a single-employer, defined benefit plan for qualified sworn law enforcement officers. The special separation allowance plan is funded on a pay-as-you-go basis with the town contributing about \$393,000 in fiscal 2018. The plan reported a total pension liability of \$4.9 million at fiscal year-end 2018.

Additionally, the town provides other postemployment benefits through its Healthcare Benefits Plan--a single-employer, defined benefit plan--and has historically made contributions on a pay-as-you-go basis. The town pays all or a portion of the costs of coverage for the benefits based on years of service, and the plan is available to all qualified retirees until the age of 65 or until Medicare eligible. In fiscal 2018, the town made contributions of \$1.6 million toward premium costs and transferred \$840,000 into the irrevocable trust for OPEB. Furthermore in June 2019, the town adopted a policy to require annual contributions to the trust fund to reduce the overall OPEB liability, which stood at \$53.6 million as of June 30, 2018 and was 7.6% funded. Despite the substantial liability associated with OPEB, we believe the town's conservative budgeting practices and historical financial results provide flexibility to contribute additional amounts to the trust fund, as required by the new adopted policy.

## Very strong institutional framework

The institutional framework score for North Carolina municipalities is very strong.

## Outlook

The stable outlook reflects our view of the town's robust economy that generates its primary operating revenue sources to maintain budgetary balance and very strong reserves. Furthermore, we believe the management team's adherence to its well-embedded policies and procedures will support the 'AAA' rating over the long term. For these reasons, we do not expect to change the rating over the two-year outlook period. All other factors equal, if performance were to deteriorate significantly--potentially stemming from fixed-cost pressure related to the town's large OPEB liability--causing a substantial weakening of reserves and liquidity, we could lower the rating.

## Related Research

2019 Update Of Institutional Framework For U.S. Local Governments

### Ratings Detail (As Of November 5, 2019)

Chapel Hill ltd oblig rfdg bnds

Long Term Rating

AA+/Stable

Affirmed

*Summary: Chapel Hill, North Carolina; Appropriations; General Obligation*

Certain terms used in this report, particularly certain adjectives used to express our view on rating relevant factors, have specific meanings ascribed to them in our criteria, and should therefore be read in conjunction with such criteria. Please see Ratings Criteria at [www.standardandpoors.com](http://www.standardandpoors.com) for further information. Complete ratings information is available to subscribers of RatingsDirect at [www.capitaliq.com](http://www.capitaliq.com). All ratings affected by this rating action can be found on S&P Global Ratings' public website at [www.standardandpoors.com](http://www.standardandpoors.com). Use the Ratings search box located in the left column.

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