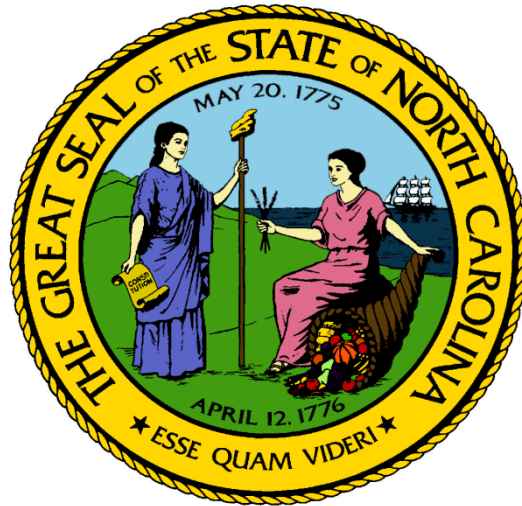


# State of North Carolina



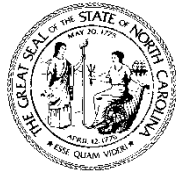
## Debt Affordability Study

**January 25, 2016**

**Debt Affordability Advisory Committee**

**Department of State Treasurer  
3200 Atlantic Avenue  
Raleigh, NC 27604  
Phone: 919-814-3807**

STATE OF NORTH CAROLINA  
DEBT AFFORDABILITY ADVISORY COMMITTEE



January 25, 2016

To: Governor Pat McCrory  
Lieutenant Governor Daniel J. Forest, President of the North Carolina Senate  
Senator Phil Berger, President Pro Tempore of the North Carolina Senate  
Representative Tim Moore, Speaker of the North Carolina House of Representatives  
Members of the 2016 General Assembly through the Fiscal Research Division

Attached is the February 1, 2016 report of the Debt Affordability Advisory Committee submitted to you pursuant to North Carolina General Statute §142-101. The report was created to serve as a tool for sound debt management practices by the State of North Carolina.

The report provides the Governor and the General Assembly with a basis for assessing the impact of future debt issuance on the State's fiscal position and enables informed decision-making regarding both financing proposals and capital spending priorities. A secondary purpose of the report is to provide a methodology for measuring, monitoring and managing the State's debt levels, thereby protecting North Carolina's bond ratings of AAA/Aaa/AAA. The methodology used by the Committee to analyze the State's debt position incorporates trends in debt levels and peer group comparisons, and provides recommendations within adopted guidelines. The report provides analysis including the proposed \$2 billion Connect NC General Obligation Bonds that will be considered by the voters of North Carolina on March 15, 2016.

The Committee has also provided recommendations regarding other debt and financial management-related policies considered desirable and consistent with the sound management of the State's debt. An area of special concern to the Committee is the ability of State entities to enter into arrangements which utilize the State's debt capacity without centralized authorization, control, issuance or management.

Respectfully submitted,

Janet Cowell, State Treasurer  
Chair, Debt Affordability Advisory Committee

## **Debt Affordability Advisory Committee Membership**

Ms. Janet Cowell, State Treasurer, Chair

Mr. Lyons Gray, Secretary of Revenue

Dr. Linda M. Combs, State Controller

Mr. Lee Harriss Roberts, State Budget Director

Ms. Beth Wood, State Auditor

Mr. Frank H. Aikmus, Senate Appointee

Mr. Bradford B. Briner, Senate Appointee

Mr. Eugene W. “Gene” Chianelli, Jr., House Appointee

Mr. Cecil T. “Tom” Turner, House Appointee

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## SUMMARY

### **Background and Context**

A study of debt affordability is an essential management tool that helps to provide a comprehensive assessment of a government's ability to issue debt for its capital needs. Standard & Poor's Ratings Services ("S&P"), one of the three major bond rating agencies, has stated that "Most of the 'AAA' states have a clearly articulated debt management policy. Evaluating the impact of new or authorized but unissued bond programs on future operating budgets is an important element of debt management and assessing debt affordability." Control of debt burden is one of the key factors used by rating agencies' analysts in assessing credit quality.

The Debt Affordability Advisory Committee (the "Committee" or "DAAC") is required to annually advise the Governor and the General Assembly of the estimated debt capacity of the General, Highway and Highway Trust Funds for the upcoming ten fiscal years. The legislation also directs the Committee to recommend other debt management policies it considers desirable and consistent with the sound management of the State's debt. The Committee hereby presents its study for 2016.

### **Debt Controls and Ratings**

Debt capacity is a limited and scarce resource. It should be used only after evaluating the expected results and foregone opportunities. The Study enables the State to structure its future debt issuances within existing and future resource constraints by providing a comparison of its current debt position to relevant industry and peer group standards. The Study can thus be used to help develop and implement the State's capital budget and is premised on the concept that resources, not only needs, should guide the State's debt issuance program. The Committee's adopted guidelines attempt to strike a balance between providing sufficient debt capacity to allow for the funding of essential capital projects and imposing sufficient discipline so that the State does not create a situation that results in a loss of future budgetary flexibility and deteriorating credit position.

The State's ratings were affirmed in 2015 at Aaa (Moody's), AAA (Standard & Poor's or "S&P") and AAA (Fitch). Currently, all of the State's debt ratios remain well below the median levels for the State's peer group comprised of all nine states currently rated "triple A" by all three rating agencies. North Carolina's debt is considered manageable at current levels. In affirming the State's rating, Fitch stated that a key rating driver for North Carolina is "a low-to-moderate debt burden and strong debt management practices including an affordability planning process." Moody's noted that "The state's debt burden is below average when compared with other states..."

The Committee has adopted the ratio of debt service as a percentage of revenues as the controlling metric that determines the State's debt capacity. Over the ten year planning horizon and after adjusting revenue for the tax rate changes passed during the last legislative session, the State's revenue picture is positive overall, reflecting a continued economic recovery. The amount of debt service is projected including the issuance of the \$2 billion Connect NC Bond package if approved by the voters on March 15, 2016. The model results show that the State's General Fund has debt capacity of nearly \$210 million in each of the next 10 years. The ratio of debt service to revenues peaks at 3.76%, in fiscal 2019 as the debt service arising from the Connect NC Bonds is incorporated into the model, still well below the 4.00% target.

The ratio of transportation debt service to revenues is projected to have peaked at 3.56% last fiscal year versus the limit of 6%. Transportation debt capacity equals approximately \$1.131 billion in the current fiscal year and totals approximately \$2.121 billion through fiscal year 2020. The Committee also notes that the State has provided significant financial support for transportation

projects through the issuance of Grant Anticipation Revenue Vehicle Bonds, direct debt service support for the North Carolina Turnpike Authority revenue bonds and contractual payments supporting Public Private Partnerships (“P3”) projects. On a combined basis, the General Fund and Transportation Fund’s debt service is projected to peak at approximately 3.67% of combined revenues in fiscal 2019.

**Table 1**

<b>General Fund</b>					
<b>Net Tax-Supported Debt Capacity using 4.0% debt service/revenues target ratio</b>					
<b>(In millions of dollars)</b>					
<b>Fiscal Year</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>
<b>Total Additional Debt Capacity per Year *</b>	\$621.6	\$0.0	\$0.0	\$455.6	\$853.6
<b>Debt Capacity Available Each and Every Year</b>	\$209.0	\$209.0	\$209.0	\$209.0	\$209.0

\* In addition to that already authorized but unissued. Assumes additional debt capacity is authorized and issued in stated fiscal year.

**Table 2**

<b>Transportation</b>					
<b>Net Tax-Supported Debt Capacity using 6.0% debt service/revenues target ratio</b>					
<b>(In millions of dollars)</b>					
<b>Fiscal Year</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>
<b>Total Additional Debt Capacity per Year *</b>	\$1,130.8	\$99.6	\$0.0	\$0.0	\$890.4
<b>Debt Capacity Available Each and Every Year</b>	240.3	240.3	240.3	240.3	240.3

\* In addition to that already authorized but unissued. Assumes additional debt capacity is authorized and issued in stated fiscal year.  
 GAP Funding for North Carolina Turnpike Authority projects assumed to total \$49 million annually.

**Table 3**

<b>General Fund and Transportation Funds Combined Debt Service / Revenue Percentages</b>					
<b>Fiscal Year</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>
<b>General Fund</b>	3.47%	3.38%	3.66%	3.76%	3.59%
<b>Transportation *</b>	3.18%	3.30%	3.10%	3.11%	3.22%
<b>Combined</b>	3.43%	3.37%	3.58%	3.67%	3.55%

Note: Percentages are based on forecasted revenues and debt service.

\* GAP Funding for North Carolina Turnpike Authority projects assumed to total \$49 million annually.

Interest rate levels remain at or near historic lows, and the State has been able to capitalize on the very favorable market conditions by refinancing over \$3.3 billion of outstanding debt since 2009, achieving aggregate debt service savings of nearly \$195 million. Additional refundings are currently being evaluated. Refundings provide additional budgetary flexibility and increase debt capacity by reducing debt service costs.

### **Other Recommendations**

**(See Appendix C for further discussion)**

- **Control of Debt Authorization Authority and Management**  
Centralized debt authorization, issuance and management are considered one of North Carolina’s credit strengths. Sponsoring agencies whose mission is to provide a particular service or assets are not in the best position to make decisions that prioritize the use of the State’s debt capacity. In the Committee’s view, the prioritization of capital projects and the issuance of obligations or entering into financial arrangements that create debt or debt like obligations that increase the State’s debt burden should remain the prerogative of the General Assembly.
- **State-Aid Intercept**  
The Committee strongly opposes proposals that would utilize a back-up pledge of State appropriations to provide support for debt issued by other entities.
- **Structural Budget Balance and Continued Replenishment of Reserves Should Continue to be a Priority**  
These are key ratings drivers contributing to the State’s “AAA” rating.
- **Consider General Obligation Bonds as the Preferred Financing Vehicle**  
The Committee recommends that the State consider General Obligation (“GO”) Bonds as the preferred, but not exclusive, financing vehicle to provide funding for the State’s capital projects.



# SECTION I GENERAL FUND DEBT AFFORDABILITY

## Review of General Fund Debt

### Outstanding Debt

The State issues two kinds of tax-supported debt: GO Bonds and various kinds of “Special Indebtedness,” which are also known as non-GO debt or appropriation-supported debt. GO Bonds are secured by the full faith, credit and taxing power of the State. The payments on all other kinds of long-term debt, including Limited Obligation Bonds, Certificates of Participation (“COPs”), lease-purchase revenue bonds, capital lease obligations and installment purchase contracts are subject to appropriation by the General Assembly. Appropriation-supported debt may sometimes also be secured by a lien on facilities or equipment.

Debt that is determined to be self-supporting or supported by non-General Fund tax revenues does not constitute net tax-supported debt, but is included in the definition of “gross” tax-supported debt used by some rating analysts.

The State's outstanding debt positions as of June 30, 2015 are shown below.

**Chart 1**

<b>State of North Carolina Outstanding Net Tax-Supported Debt</b>	
<b>The State's total outstanding debt at June 30, 2015 totaled approximately \$8.1 billion of which \$6.5 billion was tax-supported.</b>	
<b><u>Tax-Supported</u></b>	<b><u>Amounts (\$millions)</u></b>
<input type="checkbox"/> <b>General Obligation Debt</b>	<b>\$3,469.3</b>
<input type="checkbox"/> <b>General Fund (\$3,233.3)</b>	
<input type="checkbox"/> <b>Highway Fund (\$236.0)</b>	
<input type="checkbox"/> <b>Special Indebtedness</b>	<b>\$2,249.3</b>
<input type="checkbox"/> <b>NCTA Gap-Funded Appropriation Bonds</b>	<b>\$749.5</b>
<input type="checkbox"/> <b>Installment Purchase / Equipment &amp; Capital Leases</b>	<b><u>\$33.8</u></b>
<b>Total General Fund Tax-Supported Debt</b>	<b>\$5,516.4</b>
<b>Total Highway Tax-Supported Debt</b>	<b>\$985.5</b>
<b>Total Tax-Supported Debt</b>	<b><u>\$6,501.9</u></b>
<b><u>Non Tax-Supported</u></b>	
<input type="checkbox"/> <b>GARVEEs</b>	<b>\$743.7</b>
<input type="checkbox"/> <b>NC Turnpike Authority (includes TIFIA)</b>	<b>\$621.6</b>
<input type="checkbox"/> <b>Guaranteed Energy Savings Contracts <sup>(1)</sup></b>	<b><u>\$229.7</u></b>
<b>Total Debt</b>	<b><u>\$8,096.9</u></b>

(1) Total GESCs entered into through June 30, 2015.

## Trends in Amounts of General Fund Debt

After showing substantial growth in the early 2000s, the State's outstanding net tax-supported debt peaked in FY 2012 at approximately \$6.5 billion and declined by nearly \$1 billion by June 30, 2015. The amount outstanding will further decline by over \$500 million over the next two years before rising very modestly as the Connect NC Bonds, if approved, are gradually issued over the next four years. Chart 2 below illustrates the outstanding amounts of General Fund net tax-supported debt over the last five years and projects the amount outstanding through FY 2020. Absent additional authorizations, the absolute level of General Fund tax-supported debt is not projected to exceed \$5.1 billion over the projection period, well below its peak.

**Chart 2**

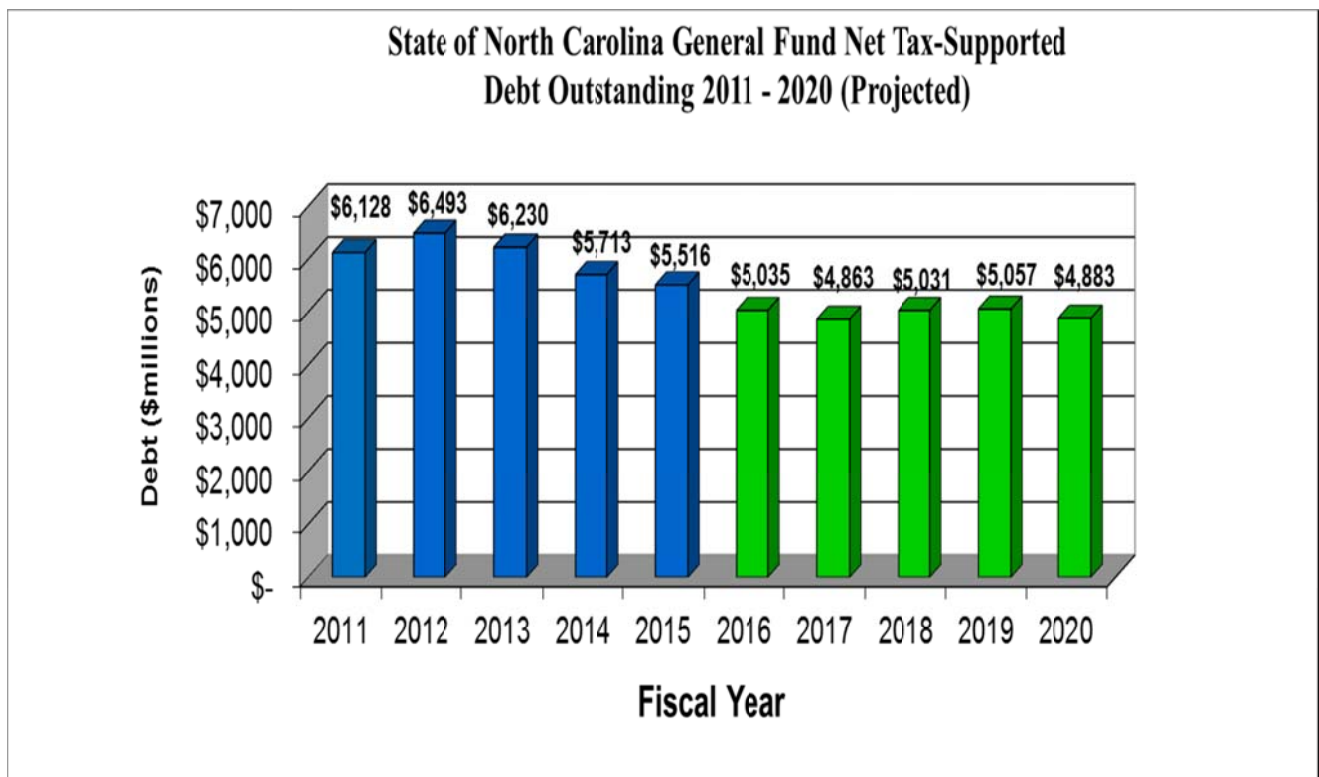


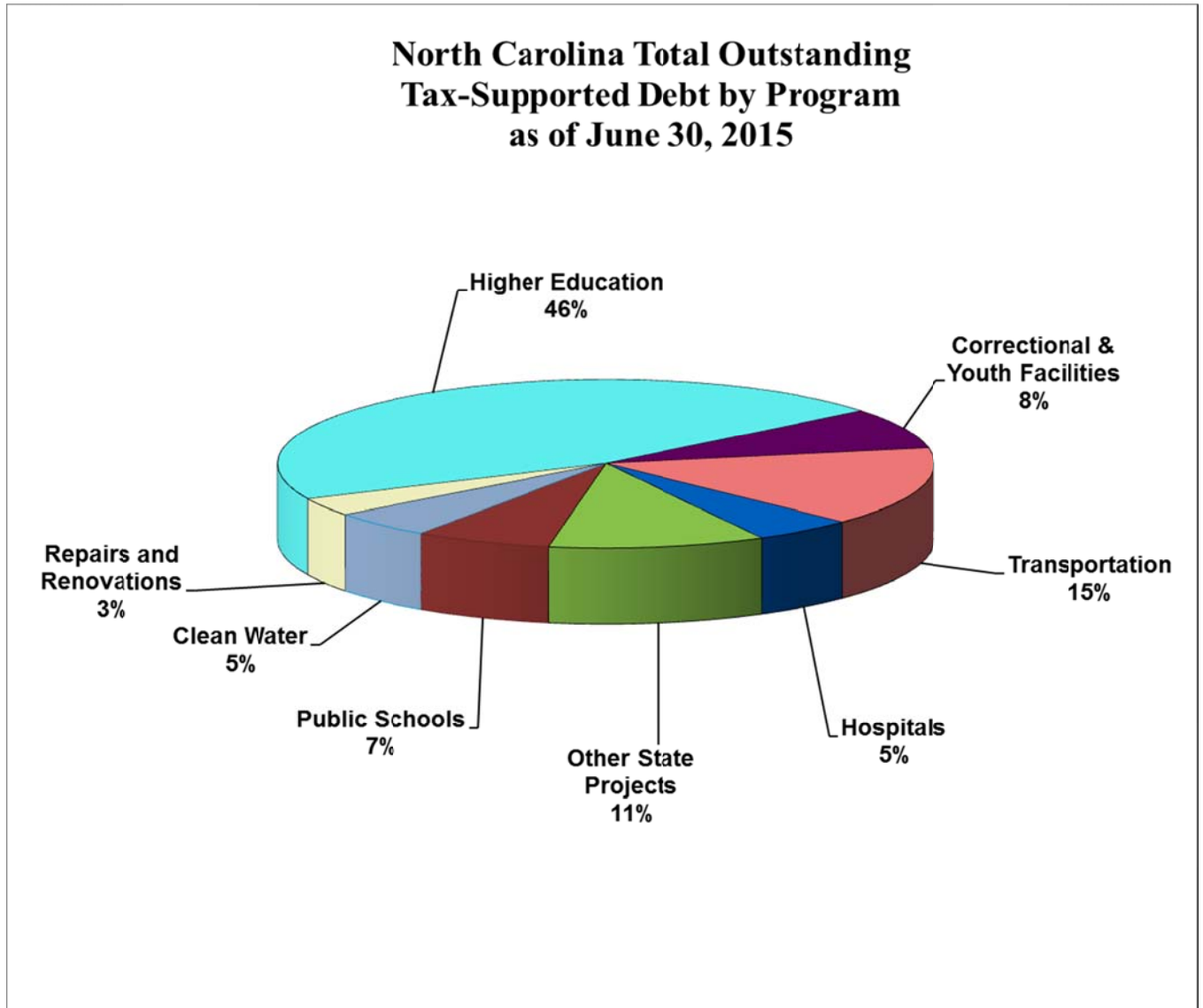
Chart 2 above incorporates all of the State's currently outstanding and all authorized, but unissued, debt including the Connect NC Bonds. The State issues debt on a cash flow basis and bond issues are timed to provide funds as they are actually needed typically creating a lag between when debt is authorized and when it is actually issued. As of December 31, 2015, the State did not have any authorized but unissued tax-supported debt except for the Connect NC Bonds.

## Uses of Total Outstanding Tax-Supported Debt

The following chart illustrates the uses for which the State has issued tax-supported debt, including that used for transportation purposes, calculated on the amount outstanding at June 30, 2015. The State has used the proceeds of its debt programs for many purposes with the two largest being to

provide facilities and infrastructure for higher education (46%) and transportation (15%).

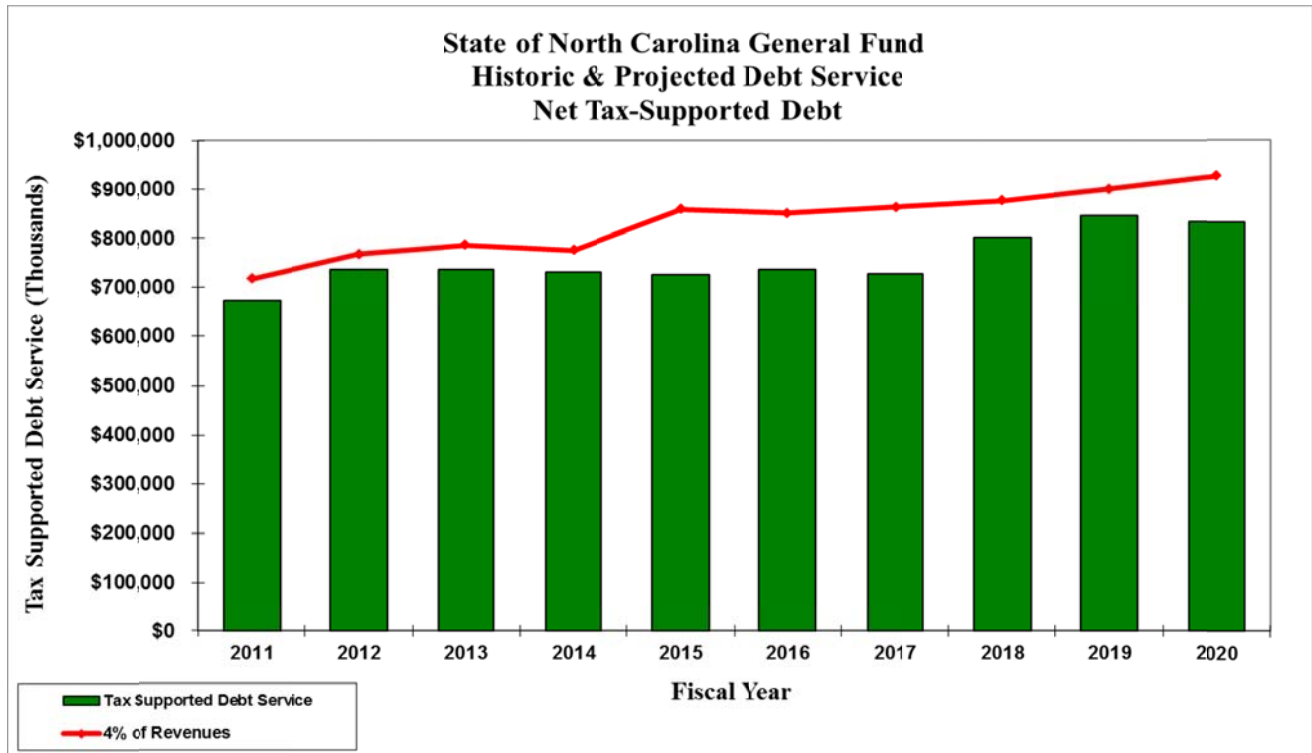
**Chart 3**



### Debt Service

Debt service as a percentage of revenues is projected to peak in FY 2019 at 3.76%. The absolute amount of annual debt service peaks at approximately \$843 million that same year. As stated previously, this includes the debt service for the NC Connect Bonds using the assumptions contained in Appendix A. Both the State's historic and projected debt service is illustrated below in Chart 4. This chart also illustrates the amount of capacity for additional debt service that exists while remaining under the 4% limit. For example, even in the years where the State is projected to be closest to the limitation, there is capacity to issue additional debt. The model calculates the additional debt that could be serviced by this capacity.

**Chart 4**



**General Obligation Bonds versus Special Indebtedness**

Prior to 2001, the State only issued GO bonded indebtedness. Such debt is usually considered to be the highest quality of all the various types of debt or debt-like instruments and usually carries the highest credit rating. Several factors contribute to the high rating, including the legal protections inherent in constitutionally permitted debt, investor confidence in the pledge of the full faith and credit of the State and the presumption of the availability of the government’s full resources. GO bonds are generally the most transparent of the various types of State debt obligations and typically carry the lowest interest cost. The Fiscal Research Division estimates that the costs of holding a GO bond referendum would be extremely modest and would not add substantially to the cost of the projects being financed.

Special Indebtedness (as defined in G.S. §142-82), is a commonly-used financing vehicle employed by most states and localities. Sometimes issued on an unsecured basis or secured by a specific stream of revenues, a lease payment or financing agreement (and sometimes by a security interest in the project being financed), such obligations are paid from annual appropriated amounts for debt service. Depending upon market conditions, additional credit support and structure, the financial markets usually assess an interest rate penalty of approximately 25 basis points for the State’s appropriation-supported debt when compared with the State’s GO bonds. This translates into approximately \$3.4 million of additional interest over the life of a typical \$100 million debt issue. Although modest, the interest rate penalty does increase the cost of the projects being financed. Most states have diversified their debt portfolios and utilize one or more of the various types of non-GO structures.

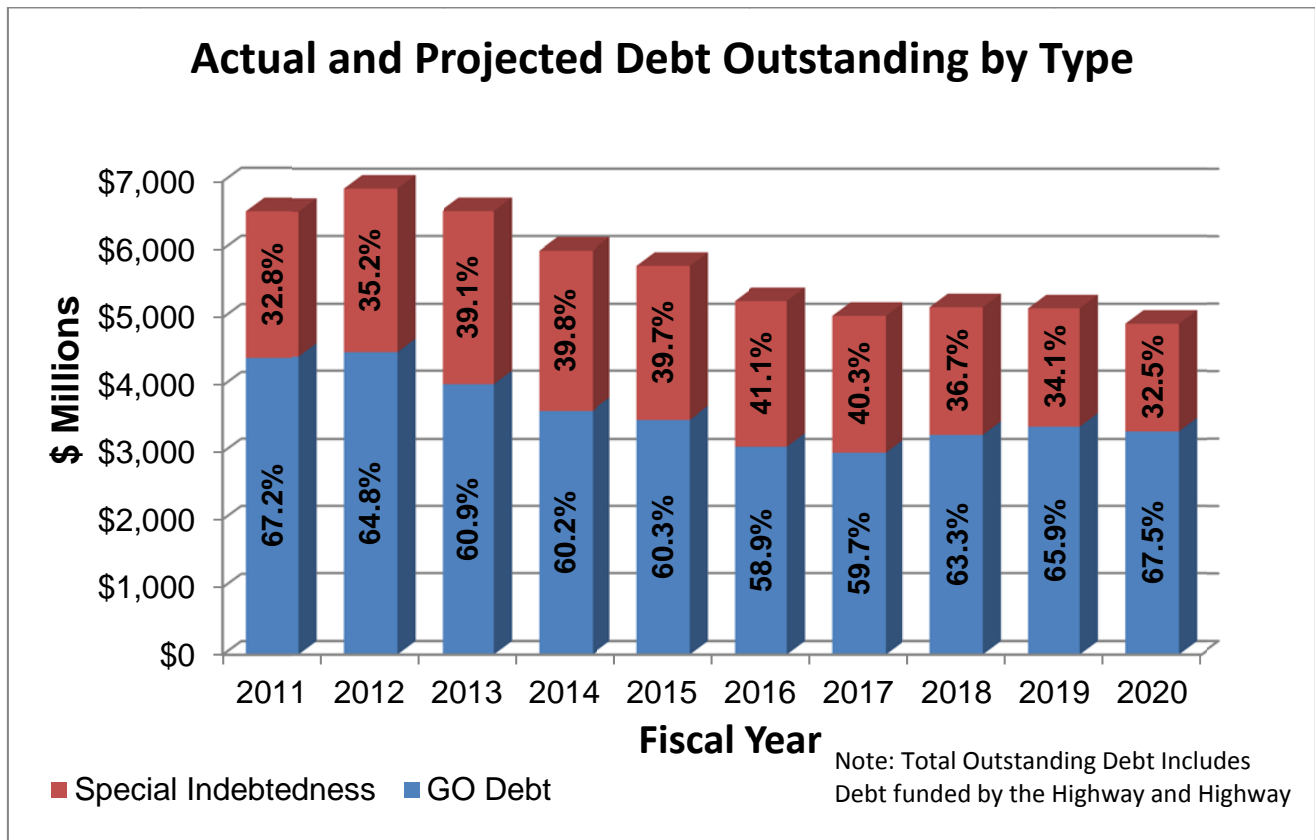
The \$2 billion Connect NC Bonds represent the State’s first GO bond authorization requiring a referendum since 2000.

The rating agencies note that most states have incorporated alternative financing methods, including lease revenue, appropriation-supported or special-tax debt into their liability profile. In addition, GO debt currently represents only 52% of overall state debt according to Moody’s with eleven states having no GO debt at all. A Fitch report from 2006 notes that GO debt as a percentage of total debt for the states that they rate AAA was approximately 74%. With the authorization and issuance of the Connect NC Bonds, the State will reverse a trend of appropriation-supported debt representing an increasing amount of total debt.

The State is currently limited in the amount of Special Indebtedness it may issue by the provisions of S.L. 2013-78 that limits the amount of Special Indebtedness that may be authorized to 25% of the total general fund supported debt authorized after January 1, 2013. Currently the State has the ability to authorize approximately \$577 million of additional Special Indebtedness.

The amount of the State’s historic and projected outstanding appropriation-supported debt is shown below in Chart 5, with the percentage of appropriation-supported debt to total debt (including transportation debt) noted.

**Chart 5**



**Two-Thirds Bonds**

North Carolina’s Constitution permits the State to issue GO bonds without a referendum, to the extent of two-thirds of the amount that GO bonds have been paid down over the previous biennium. The current estimate is that approximately \$353.6 million of Two-Thirds GO capacity is available

this biennium. However counsel cautions that this estimate holds only if the State issues the Two-Thirds debt prior to any other GO Bonds (including the Connect NC Bonds) being issued.

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## Review of State Credit Ratings and Comparative Ratios

Credit ratings are the rating agencies' assessment of a governmental entity's ability and willingness to repay debt on a timely basis. As a barometer of financial stress, credit ratings are an important factor in the public credit markets and can influence interest rates a borrower must pay.

Chart 6

<b>North Carolina Credit Rating Matrix</b>		
<i>State of North Carolina</i>		
<i>General Obligation Bond Credit Ratings</i>		
<b><i>Rating Agency</i></b>	<b><i>Rating</i></b>	<b><i>Outlook</i></b>
Fitch Ratings	AAA	Stable
Moody's Investors Service	Aaa	Stable
Standard & Poor's Rating Services	AAA	Stable

The State's general obligation bonds are rated AAA with a "stable" outlook by Fitch, AAA with a "stable" outlook by S&P and Aaa with a "stable" outlook by Moody's Investors Service. These ratings are the highest ratings attainable from all three rating agencies.

### Comparison of Debt Ratios to Selected Medians

A comparison to peer group medians is helpful because absolute values are more useful with a basis for comparison. In addition, the rating agencies combine General Fund and Transportation tax-supported debt in their comparative analysis. The sources for this information are reports issued by Moody's and S&P in 2015.

How North Carolina compares with its peers is presented below. The peer group is composed of states rated "triple A" by all three credit rating agencies (often termed "triple-triple A"). Iowa has earned a "triple A" implied rating by all three agencies, but does not actually issue general obligation debt, relying solely on debt supported by appropriations or other sources. Alaska was downgraded by S&P in early January (from AAA to AA+) citing persistent low oil prices and reduced government revenues and consequently are no longer shown as part of our peer group. As shown in Chart 7, the State's debt ratios are well below the median levels for its peer group.

Chart 7

General Fund North Carolina Net Tax-Supported Comparative Debt Ratios <sup>(1)</sup>					
State	Ratings (Fitch/S&P/Moody's)	Debt to Personal Income % <sup>(1)</sup>	Debt per Capita <sup>(1)</sup>	Debt as % Of GDP <sup>(1)</sup>	Debt Service Ratio <sup>(2)</sup>
Delaware	AAA/AAA/Aaa	5.5%	2,438	3.64%	6.90%
Georgia	AAA/AAA/Aaa	2.8%	1,043	2.32%	7.00%
Iowa	AAA/AAA/Aaa <sup>(3)</sup>	0.6%	250	0.47%	1.17%
Maryland	AAA/AAA/Aaa	3.5%	1,889	3.30%	5.00%
Missouri	AAA/AAA/Aaa	1.5%	606	1.33%	3.60%
North Carolina	AAA/AAA/Aaa	1.9%	739	1.56%	3.30%
Texas	AAA/AAA/Aaa	1.0%	406	0.71%	1.60%
Utah	AAA/AAA/Aaa	3.0%	1,060	2.21%	5.35%
Virginia	AAA/AAA/Aaa	2.8%	1,356	2.49%	3.90%
	Peer Group Median	2.8%	\$1,043	2.21%	3.90%
<b>Projected Tax-Supported Debt Ratios <sup>(4)</sup></b>					<b>Tax-Supported Debt Service as a % of DAAC Revenues</b>
<b>North Carolina</b>		<b>Debt to Personal Income %</b>	<b>Debt per Capita</b>		
2015 (Actual)		1.4%	\$551	3.38%	
2016		1.2%	\$497	3.47%	
2017		1.1%	\$473	3.38%	
2018		1.1%	\$481	3.66%	

<sup>(1)</sup> Source: Moody's 2015 State Debt Medians.

<sup>(2)</sup> Source: S&P Report October 19, 2015.

<sup>(3)</sup> Implied by all three rating agencies. Iowa does not issue GO debt.

<sup>(4)</sup> North Carolina projections are based on February 1, 2016 DAAC Report.



# **General Fund Guidelines, Debt Affordability Model and Results**

## **General Fund Debt Capacity Recommendations**

The Committee has adopted targets and outside guidelines to analyze and/or serve as the basis of calculating the recommended amount of General Fund–supported debt that the State could prudently authorize and issue over the next 10 years. Each measure is discussed in more detail below.

1. Net Tax-Supported Debt Service as a percentage of General Tax Revenues should be targeted at no more than 4% and not exceed 4.75%;
2. Net Tax-Supported Debt as a percentage of Personal Income should be targeted at no more than 2.5% and not exceed 3.0%; and
3. The amount of debt to be retired over the next ten years should be targeted at no less than 55% and not decline below 50%.

### **Net Tax-Supported Debt Service as a Percentage of General Tax Revenues (4% Target, 4.75% Ceiling)**

The Committee has adopted the measure of annual debt service arising from net tax-supported debt as a percentage of general tax revenues as the basis to evaluate the State’s existing and projected debt burden for the General Fund and as the basis for calculating how much additional debt the State can prudently incur. The Committee notes that policy makers control both variables that determine this ratio. In addition, the Committee believes that by measuring what portion of the State’s resources is committed to debt-related fixed costs, this ratio is a measure of the State’s budgetary flexibility and its ability to respond to economic downturns. In 2012, Moody’s stated that “the debt service ratio (is incorporated into) our assessment of fiscal flexibility, which measures the extent to which a state’s operating budget is burdened by fixed costs. The larger the fixed costs, the less flexibility a state has to structurally balance its budget in response to discretionary cost growth and revenue volatility...”. “[S]tates with high fixed costs have lower budgetary flexibility and are more likely to rely on one-time budget solutions, creating structural budget imbalances that are difficult to reverse.”

Because there is often a time lag, sometimes of multiple years, between when debt is authorized and when it is issued, the Committee determined that an optimized solution, whereby a fixed amount of debt could be authorized and issued each and every year over the model horizon provides a more useful management tool, and facilitates capital planning more effectively, than a measure that assumes that all available debt capacity is utilized in the year in which it is available. In practice, the limit imposed by the year(s) of the least capacity over the model horizon drives the calculation process.

### **DAAC Revenues**

The model uses general tax revenues adjusted for one-time or non-recurring items plus certain investment income and miscellaneous revenues (“DAAC Revenues”). These revenue items are contained in the State’s Comprehensive Annual Financial Report. The Office of State Budget and Management (“OSBM”) has been consulted to provide actual projections through FY 2025. See Appendix A for more details on the specific revenue items utilized by the model and the revenue projections utilized throughout the model horizon.

### **Debt Used in the General Fund Model Calculation**

The model uses a definition of net tax-supported debt that includes all outstanding and authorized,

but unissued, GO Bonds, Special Indebtedness, Capital Lease Obligations, Installment/Equipment Leasing Obligations and any other such obligations that are owed to a third party over a predetermined schedule payable from General Fund tax revenues. The Connect NC Bonds have been included (see Appendix A for further discussion.) Excluded are obligations of Component Units, Highway Fund debt actually paid from Highway Fund revenues, unfunded amounts in the Pension Plans, Employment Security “borrowings”, OPEB liabilities and Energy Performance Contracts if the debt service is actually being paid from energy savings. See Appendix A for further details.

Debt Structuring Assumptions

The General Fund model uses a standard fixed-rate 20-year level principal or payment structure. See Appendix A for further details.

Model Solution

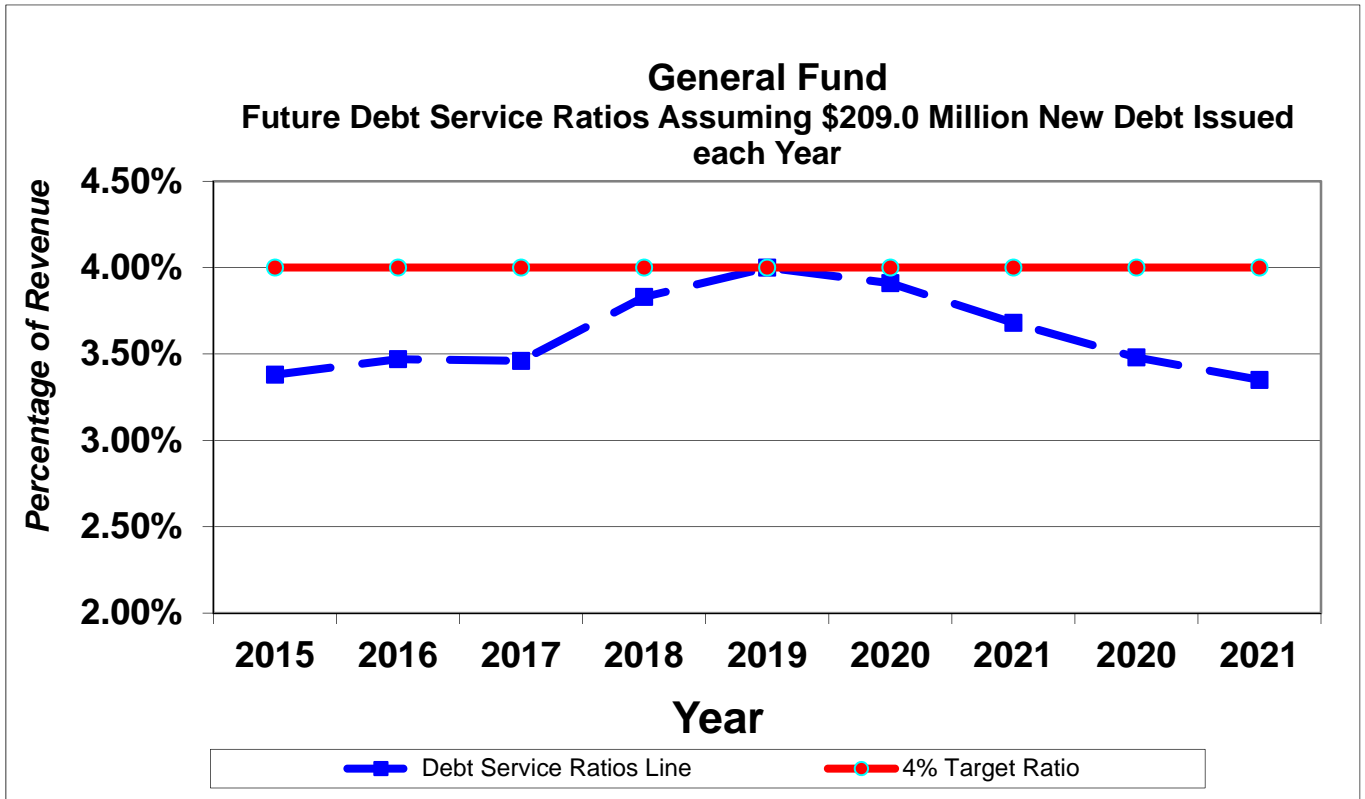
Illustrated below is the actual amount of new tax-supported debt that could be authorized and issued, by year, and remain within the 4.0% target ratio.

**Table 4**

<b>General Fund</b>					
<b>Net Tax-Supported Debt Capacity using 4.0% debt service/revenues target ratio</b>					
<b>(In millions of dollars)</b>					
<b>Fiscal Year</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>
<b>Total Additional Debt Capacity per Year *</b>	\$621.6	\$0.0	\$0.0	\$455.6	\$853.6
<b>Debt Capacity Available Each and Every Year</b>	\$209.0	\$209.0	\$209.0	\$209.0	\$209.0

\* In addition to that already authorized but unissued. Assumes additional debt capacity is authorized and issued in stated fiscal year.

Chart 8



Sensitivity Analysis on 4% Target Solution

The model results are highly sensitive to changes in revenue and interest rate assumptions. A one percent change, either up or down, in general tax revenues in each and every year of the model horizon will change the amount of annual debt capacity each and every year by approximately \$29 million. A variation in revenues of \$100 million per year will impact the amount of new debt that may be prudently issued each and every year by approximately \$13 million. If the interest rate assumption for all incremental model debt is reduced to 5%, approximately \$57 million of additional annual capacity is created.

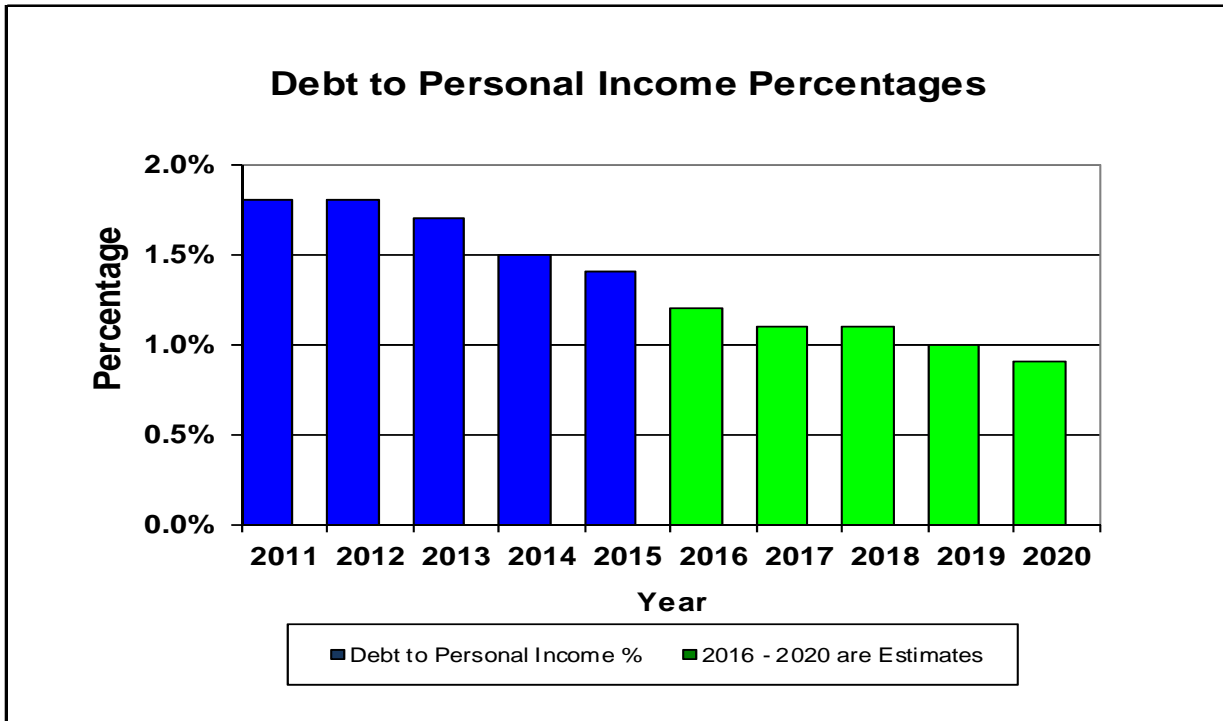
## General Fund Analysis – Other

### Net Tax-Supported Debt to Personal Income (2.5% Target, 3% Ceiling)

As required by statute, the Committee has also established guidelines for evaluating the State’s debt burden as a measure of personal income.

The ratio of debt to personal income is projected to have peaked at 1.8% in FY 2012 and is projected to further decline from the 1.2% projected for this fiscal year. Chart 9 below shows the amount of tax-supported debt as a percentage of personal income.

Chart 9



Source: Population and Personal Income statistics provided by “Moody’s Economy.com”, courtesy of the North Carolina General Assembly Fiscal Research Division.

### Ten-Year Payout Ratio (55% Target, 50% Minimum)

The rating agencies consider the payout ratio (a measure of the period of time over which a State pays off its debt) as a credit factor. A fast payout ratio is a positive credit attribute. As illustrated in Chart 10 below, the State’s payout ratio exceeds its targeted level and is projected to improve further. S&P notes that North Carolina has, “a low-to-moderate debt burden with very rapid amortization...”. The chart illustrates that over 65% of the State’s debt will be retired over the next 10 years (even after inclusion of the Connect NC Bonds).

**Chart 10**



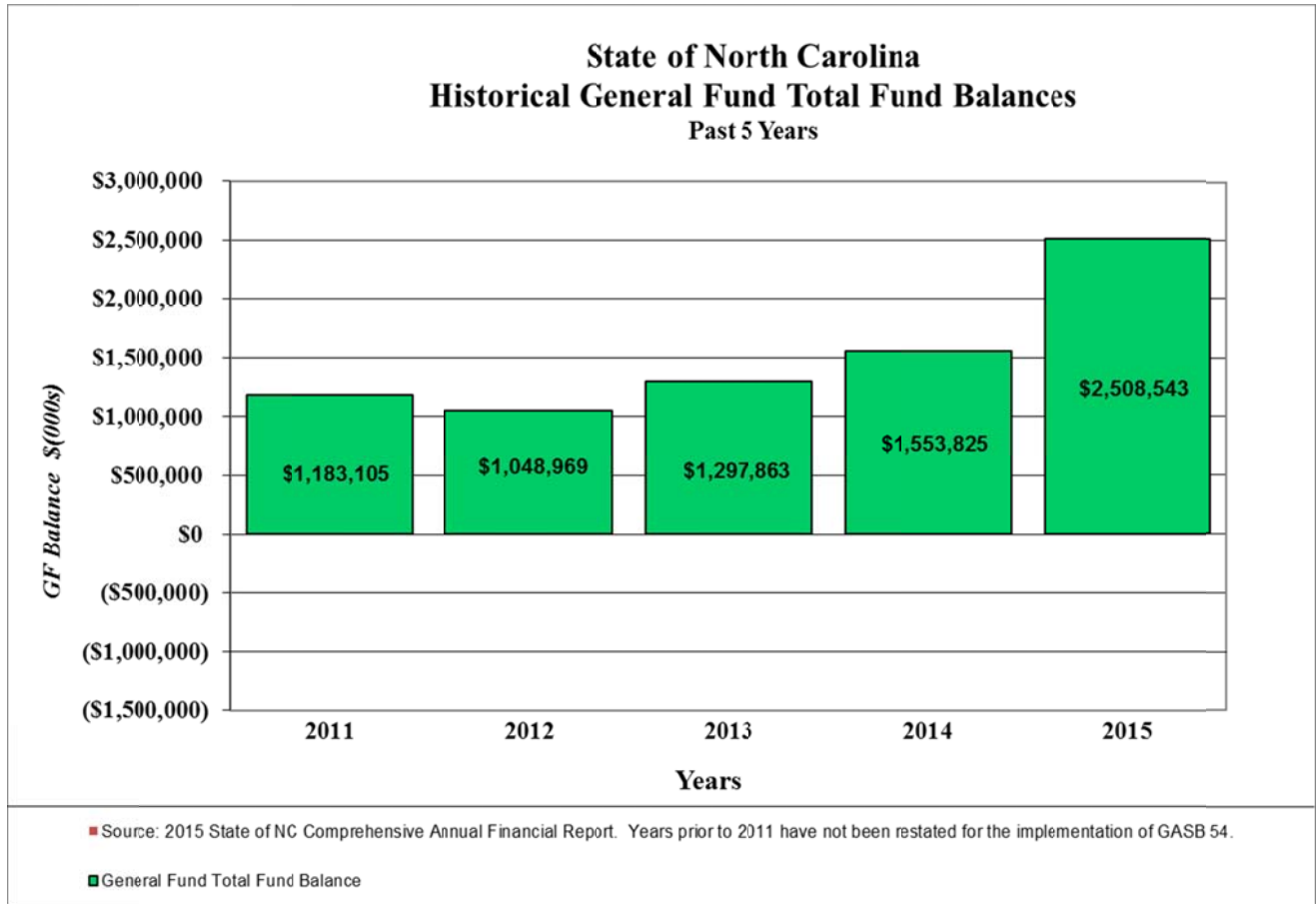
### Level of Unreserved Fund Balance

As discussed previously, the rating agencies place a great deal of emphasis on budgetary reserves. In a 2005 report, S&P stated that “...reserves are critical to managing economic cycles and providing substantial flexibility to manage the budget and capital requirements of a government.”

The State ended FY 2015 with a positive fund balance in the General Fund of approximately \$2.5 billion as calculated under generally accepted accounting principles (“GAAP”). This represents a significant turnaround from the negative ending balances experienced during the recession which reached -\$778 million at June 30, 2009. The Rainy Day Fund has been boosted to \$1.102 billion, surpassing its previous high balance of nearly \$800 million in FY 2008 but still short of the amount specified by the General Assembly in S.L. 2006-203 (8% of the prior year’s operating budget or approximately \$1.652 billion). The Committee notes that the State replenished the balances used during the recession. The Committee recommends that sustainable structural budgetary balance and continuing provision for an adequate level of reserves, remain a priority.

Chart 11 depicts the State’s historic General Fund Balance on a GAAP basis over the last five years. The Rainy Day Fund is a budgetary reserve account and is not reported as an individual item in the GAAP basis financial statements, but as part of the fund balance.

**Chart 11**



**Refunding Opportunities**

Yields on tax-exempt debt obligations remain at or near historic lows although most analysts expect them to begin to rise before the end of the calendar year. The State has standard procedures in place to monitor and take advantage of market opportunities by refinancing outstanding debt and replacing it with debt that carries lower interest costs. Typical refinancing structures employed by the State and its “triple-triple A” rated peers do not significantly extend maturities nor provide other one-time fixes to meet budgetary challenges. Since 2009, the State has refinanced a total of \$3.3 billion of previously outstanding GO Bonds and Special Indebtedness achieving aggregate debt service savings of \$193.9 million. The State anticipates that additional refundings will occur this year.

## **SECTION II**

### **TRANSPORTATION DEBT AFFORDABILITY**

#### **Review of Transportation Funds, Debt and Other Commitments**

##### **Highway Fund**

The Highway Fund accounts for most of the activities of the Department of Transportation (“DOT”), including the construction and maintenance of the State’s primary and secondary road systems. In addition, it supports areas such as the North Carolina Ferry System and the Division of Motor Vehicles and provides revenue to municipalities for local street projects (termed “Powell Bill Transfers”) and to other State agencies. The principal revenues are motor fuels taxes, motor vehicle registration fees, driver’s license fees and federal aid.

##### **Highway Trust Fund**

The Highway Trust Fund was established by Chapter 692 of the 1989 Session Laws to provide a dedicated funding mechanism to meet the State’s highway construction needs. The Highway Trust Fund also provides allocations for secondary road construction, to municipalities for local street projects and historically provided transfers to both the General Fund and the Highway Fund. The principal revenues are highway use taxes, motor fuels taxes and various fees.

The Highway Fund and the Highway Trust Fund are in many ways managed as a combined entity. Certain transportation revenues are deposited in each fund on a formulaic basis. For example, the Highway Fund receives three-fourths of the Motor Fuels Tax and the Highway Trust Fund receives the remaining one fourth. However, various combined expenditures are routinely paid from one fund or another. For example, salary expenses associated with the management of the Highway Trust Fund are actually paid out of the Highway Fund and debt service on the existing Highway GO Bonds is paid from the Highway Trust Fund. Powell Bill transfers are made from both Funds. Due to the interdependent nature of these funds, the Committee has determined that it is most useful to calculate the available debt capacities of these funds (collectively “Transportation Funds”) on an aggregate, rather than individual, basis. The resulting debt capacity is termed the “Transportation” debt capacity.

On a combined basis, the Highway Fund and Highway Trust Fund are primarily involved with construction and maintenance of the State’s highways. From total budgeted sources in FY 2015, the Transportation Funds in total allocated approximately 83 percent (\$3.83 billion) to capital intensive infrastructure improvements (Transportation Improvement Plan (“TIP”) Construction, Highway Maintenance and Other Construction).

## Highway Debt

The State has a long history dating back to 1921 of authorizing debt to fund transportation projects. The most recent authorization of \$950 million of GO Bonds (the “1996 Bonds”) was enacted in 1996 by Chapter 590 of the Session Laws of the 1995 General Assembly, as amended (“The State Highway Bond Act of 1996” or “the 1996 Act”). The 1996 Bonds authorized debt to finance the capital costs of urban loops (\$500 million), Intrastate System projects (\$300 million) and secondary highway system paving projects (\$150 million). All the Bonds authorized by the 1996 Act have been issued and as of June 30, 2015 the amount outstanding was \$236 million. These are the only currently outstanding Highway Bonds.

The 1996 Act stated the General Assembly’s intention to pay the debt service on the Bonds from the Highway Trust Fund, but did not pledge the Highway Trust Fund revenues to make such payments. Although the Act contained amendments regarding the priorities of the payment of funds from the Highway Trust Fund to provide for the payment of debt service, *such funds are not pledged* to secure the Bonds. Instead, the bonds are secured by “the faith and credit and taxing power of the State.” As such, the bond rating agencies did not analyze the ability of the Highway Trust Fund on a stand-alone basis to service the debt when assigning their ratings.

### General Obligation Bonds versus Special Indebtedness-Transportation Implications

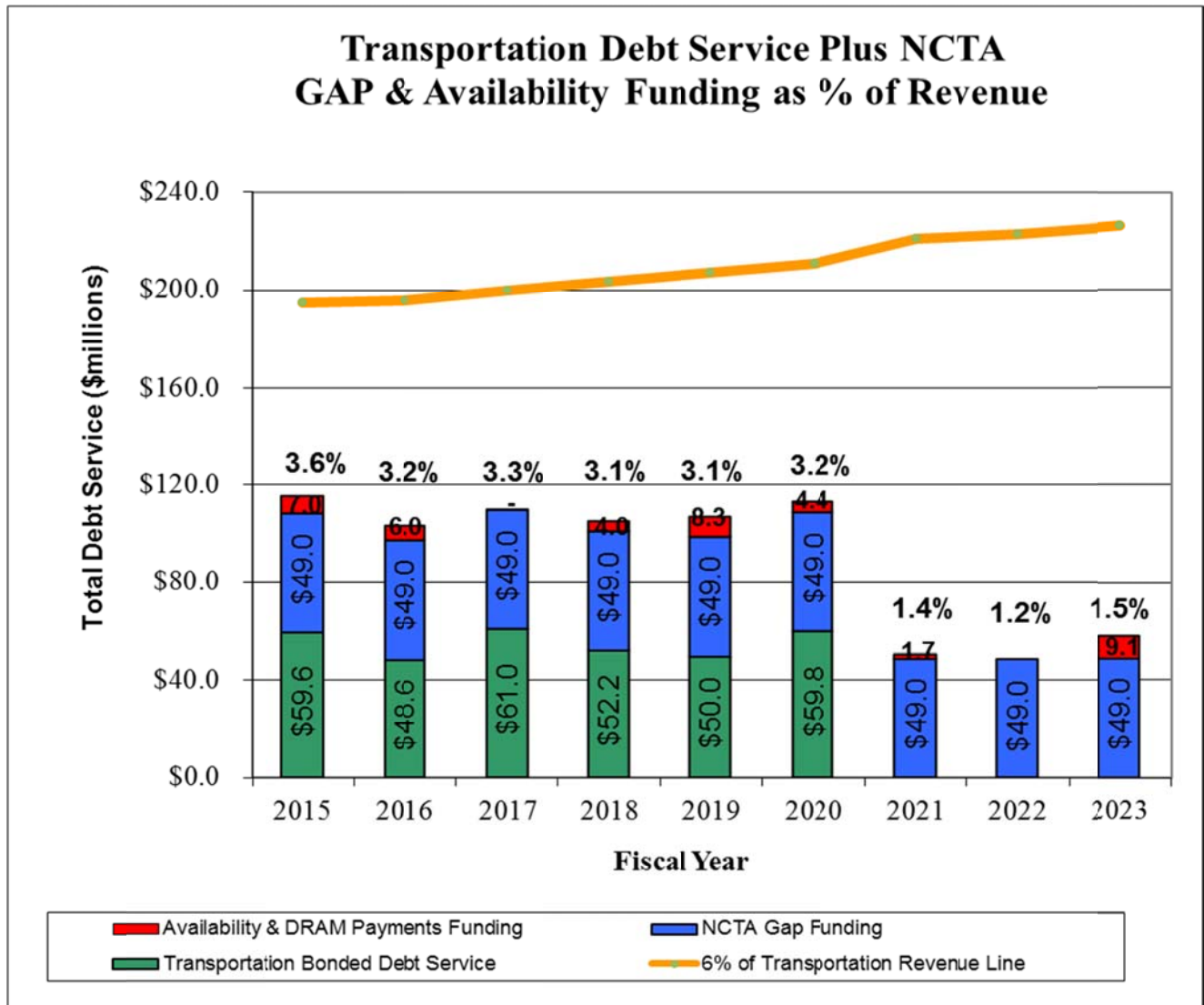
As discussed above, the State’s outstanding Highway Bonds were issued as GO Bonds and are not secured by any transportation revenues, but enjoy an implied General Fund back-up. As a result, the bonds were rated on a parity with the State’s other GO Bonds (“triple A”), permitting them to be issued at the lowest possible interest rates. If the Bonds had not been on a parity basis but been rated on a stand-alone basis based solely on transportation backing, they may not have been rated at the same level as the State’s GO Bonds. For example, the “Gap-Funded” bonds issued for the Triangle Expressway project where transportation appropriations provide for the payment of debt service were only rated “double A” by one of the rating agencies. The same logic may apply to any Special Indebtedness where the source of repayment is solely transportation appropriations. In addition, bond counsel has determined that any bonding structure that involves a true pledge of transportation revenues, the source of which is state-wide taxes or user fees, would most likely require a voter referendum. Therefore, the Committee does not advocate the use of transportation-supported stand-alone Special Indebtedness and instead advocates the use of GO Bonds for Transportation debt.

### Debt Service

Debt Service on Highway Bonds peaked in FY 2006 at \$93.6 million. In the future, the amount of actual debt service will decline as outstanding bonds are retired. Debt service, both on an absolute basis and as a percentage of Transportation revenues, is illustrated below. As discussed in more detail in Appendix B, appropriation of funds to support debt obligations issued by the North Carolina Turnpike Authority and any “availability payments” or other long term contractual arrangements that support P3 projects or similar arrangements are treated the same as any other debt service obligation. This is consistent with rating agency treatment. See Appendix B for further details.



Chart 12



### Grant Anticipation Revenue Vehicle Bonds (“GARVEEs”)

A review of Transportation-related debt would be incomplete without a discussion of the State’s GARVEE program. Although not supported by State Transportation or General Fund revenues and therefore not technically a part of the Transportation debt affordability model, GARVEEs do represent a financing vehicle that provides significant funds to the State to accelerate transportation projects.

North Carolina General Statute §136-18 (12b) as codified by Session Law 2005-403 (“the GARVEE Act”) authorized the State to issue GARVEEs to accelerate the funding of transportation improvement projects across the State. GARVEEs are a revenue bond-type debt instrument where the debt service is to be paid solely from future federal transportation revenues and has no other State support. The State has issued five series of GARVEEs totaling approximately \$1 billion (\$ 743.7 million outstanding at 6/30/15) and an additional issue is expected this spring. The ratings

assigned by Fitch, S&P and Moody's for NC's GARVEEs are, respectively: A+/AA/A2. In 2014, Moody's downgraded the GARVEE ratings, citing concerns about federal transportation funding policy, not concerns with the State's GARVEE program. The low amount of GARVEE debt service relative to the total amount of federal reimbursements (approximately \$86 million for FY 2015 versus actual collections of approximately \$1.07 billion) means that federal sequestration should not impair bondholder payments.

### **North Carolina Turnpike Authority**

The North Carolina Turnpike Authority ("NCTA") as a part of the Department of Transportation is authorized to construct and operate toll roads within the State and to issue revenue bonds to finance the costs. The General Assembly has authorized funding to "pay debt service or related financing costs" for various series of revenue bonds issued by the NCTA (called "gap funding"). As of December 31, 2014, the NCTA had issued a total of \$811 million of appropriation-supported bonds supported in part by this authorization utilizing a total of \$49 million of gap funding to provide funding for two projects: the Triangle Expressway project and the Monroe Connector project. The NCTA has also issued approximately \$622 million in toll-supported debt and is utilizing \$146 million of GARVEEs for NCTA projects that are also not included in the model.

#### NCTA Build America Bonds ("BABs") and Federal Sequestration

As part of the plan of finance for both the Triangle Expressway project and the Monroe Connector project, the NCTA issued a total of approximately \$469.6 million of BABs. These bonds depend upon a federal subsidy to make a portion of the interest payments due to bondholders. The federal subsidy was reduced by approximately \$836,700 for FY 2015 due to Federal Sequestration. Reductions of a similar or slightly lesser size are anticipated for a number of the years into the future. DOT reports that there were sufficient funds in the general reserve accounts to make up for the shortfall so that bondholders were not affected. In addition, the debt service reserve funds for these issues total approximately \$32.3 million at 6/30/15 and the total (net) annual subsidy for the current federal fiscal year totals \$11.3 million.

### **Other Transportation Expenditures**

Consistent with its treatment for General Fund debt affordability, the Committee does not advocate including non-debt related Transportation obligations or commitments in the definition of liabilities when measuring debt capacity. It is useful, however, to review the level of ongoing administrative and other recurring expenses/transfers when analyzing the level of flexibility in the Transportation Funds. From FY 2010-14, the levels of these commitments are shown below both with and without debt service as a percentage of total Transportation Revenues, including federal revenues. Over the last five years, between 17 percent and 21 percent of total Transportation revenues are allocated to administrative costs, transfers and debt service.

Chart 13

<b>Transportation Expenses by Year</b>					
(\$ Dollars in Millions)					
	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>
<b>Total Transportation Revenues <sup>(1)</sup></b>	<b>\$4,262.8</b>	<b>\$4,306.8</b>	<b>\$4,414.4</b>	<b>\$4,726.9</b>	<b>\$4,617.0</b>
<b>Administration <sup>(2)</sup></b>	<b>\$250.3</b>	<b>\$237.3</b>	<b>\$231.9</b>	<b>\$264.0</b>	<b>\$278.2</b>
<b>Powell Bill Transfers</b>	<b>134.3</b>	<b>138.3</b>	<b>142.8</b>	<b>145.6</b>	<b>147.1</b>
<b>Transfers to Other State Agencies</b>	<b>289.5</b>	<b>313.0</b>	<b>257.7</b>	<b>255.4</b>	<b>272.8</b>
<b>General Fund Transfers</b>	<b><u>72.9</u></b>	<b><u>76.7</u></b>	<b><u>27.6</u></b>	<b><u>-</u></b>	<b><u>-</u></b>
<b>Expenditures excluding Debt Service</b>	<b>\$747.0</b>	<b>\$765.3</b>	<b>\$660.0</b>	<b>\$665.0</b>	<b>\$698.1</b>
<b>% Total Transportation Revenues</b>	<b>18%</b>	<b>18%</b>	<b>15%</b>	<b>14%</b>	<b>15%</b>
<b>Debt Service</b>					
<b>Bonds</b>	<b>\$84.3</b>	<b>\$79.2</b>	<b>\$81.5</b>	<b>\$73.1</b>	<b>\$59.8</b>
<b>GAP Funding</b>	<b><u>84.0</u></b>	<b><u>49.0</u></b>	<b><u>49.0</u></b>	<b><u>49.0</u></b>	<b><u>49.0</u></b>
<b>Total Debt Service <sup>(3)</sup></b>	<b>\$ 168.3</b>	<b>\$ 128.2</b>	<b>\$ 130.5</b>	<b>\$ 122.1</b>	<b>\$108.8</b>
<b>Total Expenditures</b>	<b><u>880.2</u></b>	<b><u>893.5</u></b>	<b><u>790.5</u></b>	<b><u>787.1</u></b>	<b><u>806.9</u></b>
<b>% Expenditures/Revenues</b>	<b>21%</b>	<b>21%</b>	<b>18%</b>	<b>17%</b>	<b>17%</b>

(1) Includes Federal Revenues.  
 (2) Prior year administrative expenses have been restated to be net of receipts.  
 (3) State tax-supported debt service.

### Comparative Transportation Ratios

The State’s transportation-related debt service as a percentage of State transportation revenues appears modest when compared with a peer group composed primarily of states in the Southeast region but also certain other states selected after consultation with DOT. Within the peer group, both Missouri and South Carolina utilize an approach that limits transportation debt separately from other state-level debt. In contrast, Georgia measures available debt capacity on a combined basis, but has dedicated a great deal of that capacity toward transportation priorities as shown in Chart 14 below. Finally, Tennessee had not issued state-level debt for transportation purposes. The data was updated using FY 2014 information where available.

Chart 14

### Transportation Historical Peer Group Comparisons

State	Ratings <sup>(5)</sup>	Maturity / Yrs	Transportation DS % of Transportation Revenues <sup>(1) (2)</sup>
Florida	AAA/AAA/Aa1	30	6.2%
Georgia <sup>(3)</sup>	AAA/AAA/Aaa	15	17.7%
Kentucky	AA-/A+/Aa2	20	8.6%
Missouri <sup>(4)</sup>	AAA/AAA/Aaa	20	15.2%
<b>North Carolina</b>	<b>AAA/AAA/Aaa</b>	<b>20</b>	<b>3.8%</b>
South Carolina	AAA/AA+/Aaa	10	6.0%
Tennessee	AAA/AA+/Aaa	N/A	0.0%
Texas	AAA/AAA/Aaa	30	13.8%
Virginia	AAA/AAA/Aaa	25	3.0%
	<b>Median</b>		<b>6.2%</b>
	<b>Average</b>		<b>8.2%</b>

(1) The data for North Carolina, Kentucky and Missouri are from the 2014 CAFR, all others are from the 2013 CAFR.

(2) Excludes Garvee debt service (if any) and Federal Revenues.

(3) Allocated Debt Service.

(4) Missouri uses overall capacity to support transportation debt; overall debt service as % of revenue = 1.8% (2013 CAFR).

(5) Fitch / Standard & Poors / Moodys.

### Transportation Debt Guidelines, Affordability Model and Results

The rating agencies view all debt supported by state-wide, generally applied taxes and/or user fees to be “Tax-Supported Debt”. This combined treatment extends to all General Fund-supported, and to Highway Fund and Highway Trust Fund-supported (“Transportation Fund”) debt. Some analysts apply the same treatment to debt supported by non-State revenues such as GARVEE bonds. The Committee recognizes that the rating agencies compare the State to its peers utilizing a broad measure of Transportation and General Fund debt, and has reviewed the State’s relative status on this basis (see Chart 7).

However, the State of North Carolina has a long history of viewing the debt supported by the General Fund as tax-supported debt and its Highway Bonds as being non-tax supported (in this case, Highway Trust Fund-supported) debt. The State’s existing debt affordability model excludes both transportation revenues and transportation debt service as components of the General Fund calculation. Continuing this practice, the Committee has determined that it should adopt a measure of Highway Fund and Highway Trust Fund debt capacity that is separate and distinct from that calculated for the General Fund. Although not common, this practice has been discussed with the

rating agencies who understand North Carolina's incremental and separate approach to debt affordability measurement.

The Committee also recognizes the inherent differences between the General Fund and the Transportation Funds, not only in terms of the revenue streams, but also in terms of the commitments on those revenues. In addition, the State's transportation "enterprise" is, by its nature, a long-lived, capital intensive, rapidly growing program. As such, a customized individual debt capacity model is appropriate to measure the debt capacities of the Transportation Funds. Finally, the Committee believes that an individual Transportation debt capacity calculation is consistent with the legislative intent of S.L. 2007-551.

Due to the interdependent nature of the Highway and Highway Trust Funds as discussed earlier, the Committee has determined that it is more useful to calculate the available debt capacities of these Funds on an aggregate, rather than individual, basis. The resulting debt capacity is termed the "Transportation" debt capacity.

The Committee has adopted the ratio of annual transportation-related debt service as a percentage of State transportation revenues as the measure to evaluate the level of Transportation debt capacity. By measuring what portion of the State's transportation resources is committed to debt-related fixed costs, this ratio reflects the flexibility (or lack thereof) to allocate transportation resources to other priorities.

### **Revenues Used in the Transportation Model Calculation**

The model uses a definition of State transportation revenues that includes an aggregate of all State-level revenues deposited into the Highway Fund and the Highway Trust Fund including the motor fuels tax, highway use tax, motor vehicle license tax and certain non-tax revenue such as investment income. Consistent with the model mechanics for the General Fund, there is no deduction for projected transfers to the General Fund, Powell Bill transfers or other non-debt commitments. Federal transportation revenues are specifically excluded from the definition of revenues used to calculate Transportation debt capacity as federal revenues have been pledged to the State's GARVEE program and are not available to back other transportation-related debt.

### **Debt Used in the Transportation Model Calculation**

The model uses a definition of State transportation debt service that includes outstanding Highway GO Bonds, gap funding, availability payments and long term contractual payments to support P3 or other structures (see Appendix B for further discussion of DRAM payments) but excludes the GARVEEs supported by federal revenues. There are currently no tax-supported capital lease obligations that need to be included. Highway Trust Fund support for debt issued by the North Carolina Turnpike Authority is included as a liability for model purposes.

### **Debt Structuring Assumptions**

This year's Transportation debt affordability model assumes that model debt is fixed-rate 25-year maturity debt with an average interest cost of 6.15% and a level debt service profile after the first year.

## Transportation Debt Capacity Guidelines

The Committee has adopted a guideline of 6% for transportation-related debt service as a percentage of state transportation revenues. In doing so, the Committee determined that the Transportation Funds enjoy a greater degree of budgetary flexibility than does the General Fund, and the Committee determined that the State’s Transportation funds could support a higher ongoing level of debt service as a percentage of revenues than was deemed appropriate for the General Fund. However, the Committee also determined not to adopt the same 15% guideline for Transportation debt capacity as was contained in the GARVEE legislation because GARVEEs have higher annual debt service requirements due to their shorter maturity.

**Table 5**

<b>Transportation</b>					
<b>Net Tax-Supported Debt Capacity using 6.0% debt service/revenues target ratio</b>					
<b>(In millions of dollars)</b>					
<b>Fiscal Year</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>
<b>Total Additional Debt Capacity per Year *</b>	\$1,130.8	\$99.6	\$0.0	\$0.0	\$890.4
<b>Debt Capacity Available Each and Every Year</b>	240.3	240.3	240.3	240.3	240.3

\* In addition to that already authorized but unissued. Assumes additional debt capacity is authorized and issued in stated fiscal year.  
 GAP Funding for North Carolina Turnpike Authority projects assumed to total \$49 million annually.

## Model Assumptions regarding Revenue Growth and Sensitivity Analysis

The model uses NCDOT estimates for the revenues over the model horizon (see Appendix B).

A one percent change, either up or down, in transportation revenues in each and every year of the model horizon will change the amount of first year debt capacity by about \$25.2 million. A variation in revenues of \$100 million per year will impact the amount of capacity in the first year by about \$76 million. If the interest rate assumption for all incremental debt is lowered by 100 basis points (1%), an additional \$115 million of first year capacity is created.

## SECTION III

### Transportation and General Fund Ratios Combined

The Committee adopted the 6% Transportation guideline after analyzing the State's position relative to its peer group on an aggregate basis (General Fund and Transportation Funds combined), consistent with rating agency practice. Illustrated below is how the State appears on a combined basis utilizing debt service as a percentage of revenue percentages for both the General Fund and the Transportation Funds. The Committee notes that the combined ratio (3.67% in FY 2019) is below the 4% target and is substantially below the 4.75% ceiling. Depending upon the reactions by the rating agencies and financial markets, the Committee may choose to revisit the 6% guideline for Transportation Debt.

**Table 6**

<b>General Fund and Transportation Funds Combined Debt Service / Revenue Percentages</b>					
<b>Fiscal Year</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>
<b>General Fund</b>	3.47%	3.38%	3.66%	3.76%	3.59%
<b>Transportation *</b>	3.18%	3.30%	3.10%	3.11%	3.22%
<b>Combined</b>	3.43%	3.37%	3.58%	3.67%	3.55%

Note: Percentages are based on forecasted revenues and debt service.

\* GAP Funding for North Carolina Turnpike Authority projects assumed to total \$49 million annually.

## Appendix A

### General Fund Revenues and Liabilities and Debt Affordability Model 10-Year Solutions

#### DAAC Revenues

The model uses general tax revenues adjusted for one-time or non-recurring items plus certain other revenue items deemed available to service debt from the most recently available *Comprehensive Annual Financial Report*. The following items are included:

#### General Fund Tax Revenues

- Individual Income Tax
- Corporate Income Tax
- Sales & Use Tax
- Franchise Tax
- Insurance Tax
- Beverage Tax
- Tobacco Products Tax
- Other Taxes

#### Other General Fund Revenue Items

- Investment Income
- Miscellaneous Revenues

#### Revenue Growth and Other Assumptions

Changes to revenue estimates have a significant impact on the calculation of available debt capacity because of the multiplier effect of compounding growth over the ten-year period. Such projections are especially important when they reflect changing or differing economic outlooks.



In consultation with OSBM, DAAC revenue projections are assumed to be as follows:

**Table 7**

<b>General Fund Revenue (\$ millions)<sup>(1)</sup></b>					
<b>Used in the Debt Affordability Model *</b>					
	<b>Revenues</b>	<b>Growth</b>		<b>Revenues</b>	<b>Growth</b>
<b>Fiscal Year</b>	<b>(\$ millions)</b>	<b>Rate</b>	<b>Fiscal Year</b>	<b>(\$ millions)</b>	<b>Rate</b>
<b>2015</b>	\$21,470.0	10.7%	<b>2021</b>	\$23,873.6	3.0%
<b>2016</b>	21,252.6	-1.0%	<b>2022</b>	24,589.9	3.0%
<b>2017</b>	21,565.8	1.5%	<b>2023</b>	25,327.5	3.0%
<b>2018</b>	21,903.8	1.6%	<b>2024</b>	26,087.4	3.0%
<b>2019</b>	22,503.2	2.7%	<b>2025</b>	26,870.0	3.0%
<b>2020</b>	23,178.3	3.0%	<b>2026</b>	27,676.1	3.0%

\* General Fund recurring tax revenues, miscellaneous revenues and Treasurer's investments.  
<sup>(1)</sup> Fiscal Years 2016 - 2026 revenue forecast as of May 2015. Fiscal Year 2015 is actual.

**Liabilities**

To calculate net tax-supported debt, credit analysts take into account all debt supported by general tax revenues. This debt position shows the amount of indebtedness serviced from an issuer’s General Fund; that is, it reflects the debt service payments made directly from tax revenues and is known as net tax-supported debt. Although a consensus appears to exist among credit analysts as to the appropriateness of using net tax-supported debt as the standard for determining an issuer’s debt position, there is less unanimity about the precise calculation. The Committee has determined to exclude self-supporting debt from its calculations.

The model uses a definition of net tax-supported debt that includes GO Bonds, Special Indebtedness, Capital Lease Obligations, and any other obligations that are owed to a third party over a predetermined schedule and paid from General Fund Revenues. Should mandatory payments be due to contractors or others under P3s, “Design/Build/Finance” or other such arrangements, those payments would be counted as a liability for the model. Obligations of Component Units, Highway Fund debt that is paid from Highway Fund revenues and other self-supporting debt, including performing Energy Performance Contracts where the debt service is actually being paid from energy savings, are also excluded.

The model includes the actual debt service from all outstanding net tax-supported debt and for all authorized, but currently unissued, tax-supported debt if such issuance does not require further action on the part of the General Assembly including the NC Connect Bonds. See below for further discussion of how the NC Connect bonds have been incorporated into the model.

## **OPEB**

Other Post Employment Benefits (OPEB) plans administered by the State include the Retiree Health Benefit Fund and the Disability Income Plan. The most recent actuarial study (as of December 31, 2014) estimates the size of the State's unfunded liability for OPEB at \$26.61 billion, an increase of \$1.1 billion from the prior year. The Annual Required Contribution (ARC) was estimated to be \$2.223 billion. There has been minimal accumulation of assets in the OPEB Trust Fund (\$945 million) which represents the contributions in excess of actual costs.

The bond rating agencies have been clear that OPEB liabilities do not represent a hard liability in the same way that debt service does and should not be considered part of a state's debt burden unless bonds are actually issued to fund the liability. Fitch, in particular, states that "Fitch believes that OPEB is a legally softer obligation than debt or pensions... [and] that a combined statistic for all three liabilities is not a key metric in Fitch's state credit analysis." (Fitch Special Report June 11, 2014). Nevertheless, OPEB is receiving increased attention by the rating agencies including the development of analytics that calculate the burden as a percentage of personal income and other measures. According to Moody's, only 32 states have any balances in trust and the amounts remain very low. We understand that the rating agency emphasis will be on determining the State's flexibility to address and manage OPEB costs. S&P in particular notes that "Although North Carolina's OPEB liabilities continue to be high... the state has made adjustments...to control costs and provide a mechanism to accumulate assets".

Although most states utilize a "pay as you go" funding model for OPEB (Moody's Special Commentary, November 10, 2014), Fitch notes that states that utilize such a model "could be saddled with ballooning payments as a result of rising retirement and medical costs over time" (Fitch Special Report, June 11, 2014).

## **Employment Security Commission Borrowings**

The liability the State incurred to the U.S. Treasury for funds borrowed to make unemployment benefit payments was fully retired in April 2015. This debt was not considered an obligation of the General Fund as its repayment, including interest costs, was paid from contributions by our employers and was therefore not included in the model.

## **Teachers' and State Employees' Retirement System – Annual Required Contribution**

The State has fully funded the ARC for the TSERS in 73 of the last 74 years, helping to ensure that the State maintains a responsibly-funded system. At over 95 percent funded, the System remains one of the best-funded state retirement systems in the country. Like OPEB, any unfunded obligations do not represent a hard liability in the same way that debt service does and are not counted in the model.

The following is a list of those liabilities that are included in the General Fund model (outstanding amounts as of June 30, 2015):

- GO Bonds supported by General Fund Tax Revenue - \$3.2 billion
- Supported by General Funds

- Limited Obligation Bonds - \$2,095.6 million
- Certificates of Participation- \$151.7 million
- Capital Leases, Installment Purchase Contracts and Equipment lease obligations determined pursuant to G.S. 147-33.72H - \$33.8 million
- Lease Revenue or Lease-Purchase Revenue Bonds - \$2.0 million

Liabilities not included in the General Fund model (outstanding amounts as of June 30, 2015):

- Highway Construction General Obligation Debt supported by Highway Trust Fund - \$ 236 million
- Short Term Tax Anticipation Notes (not supported by General Tax Revenue) - \$0
- Obligations of the University of North Carolina System or other Component Units – \$8.0 billion
- Energy Performance Contract obligations where such obligations are guaranteed and approved pursuant to G.S. 142-64 and not supported by separate appropriations - \$236.0 million issued
- OPEB
- Employment Security advances from the US Treasury not anticipated to be paid from General Fund revenues.

Note: Although these liabilities may not constitute tax-supported debt, some are obligations of the State or various component units and the State’s General Fund, although not legally obligated to, could be called upon to service these obligations if necessary.

#### Debt Structuring Assumptions

The following assumptions were used in this year’s debt affordability model calculations:

- The State does not have any outstanding Variable Rate Debt and is not expected to issue any over the model horizon.
- The State will issue the Connect NC Bonds at fixed rates over the next four years with a 20-year level principal payment profile and a budgeted interest cost at 5.75%.
- The State does not currently have any authorized but unissued non-GO debt.
- Incremental model debt will be structured with a fixed rate 20-year maturity, a 6% interest rate, and an overall level debt service profile after the initial year.

#### Note on Issuance of the NC Connect Bonds

Although the NC Connect Bonds (\$2 billion) have not yet been approved by the voters, their issuance is incorporated into the model since no further action of the General Assembly is required and to omit them would distort the amount of debt capacity remaining to the State. Fiscal Research has provided preliminary estimates of the cash flow requirements for the authorized projects that will require issuance of the \$2 billion over the next four years, as follows:

July 2016      \$306.8 million  
 July 2017      \$705.5 million

July 2018      \$595.8 million  
 July 2019      \$391.9 million

**Note on Interest Rate Assumptions**

The DAAC model assumes consistency between the issuing assumptions used in the study and those used for budgetary planning. The issuance of the NC Connect Bonds may likely be at lower rates than those stated above, especially in the early years. Such savings are not expected to significantly impact the results of the Study.

**General Fund**

**10-Year Model Solutions**

**4% Debt Service/Revenue Target**

**Table 8**

General Fund										
Net Tax-Supported Debt Capacity using 4.0% debt service/revenues target ratio										
(In millions of dollars)										
Fiscal Year	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Total Additional Debt Capacity per Year *	\$621.6	\$0.0	\$0.0	\$455.6	\$853.6	\$789.7	\$631.0	\$893.5	\$1,895.8	\$1,361.9
Debt Capacity Available each and every Year	\$209.0	\$209.0	\$209.0	\$209.0	\$209.0	\$209.0	\$209.0	\$209.0	\$209.0	\$209.0

\* In addition to that already authorized but unissued. Assumes additional debt capacity is authorized and issued in stated fiscal year.

**4.75% Debt Service/Revenue Target**

**Table 9**

General Fund										
Net Tax-Supported Debt Capacity using 4.75% debt service/revenues target ratio										
(In millions of dollars)										
Fiscal Year	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Total Additional Debt Capacity per Year *	\$2,557.4	\$0.0	\$0.0	\$513.6	\$913.5	\$851.3	\$694.5	\$958.8	\$1,963.2	\$1,431.2
Debt Capacity Available each and every Year	\$768.0	\$768.0	\$768.0	\$768.0	\$768.0	\$768.0	\$768.0	\$768.0	\$768.0	\$768.0

\* In addition to that already authorized but unissued. Assumes additional debt capacity is authorized and issued in stated fiscal year.

## Appendix B

### Transportation Revenues and Liabilities and Debt Affordability Model 10-Year Solutions

The Transportation debt affordability model uses all state transportation revenues plus other revenue items deemed available to service debt for the most recent Fiscal Year. The following items are included:

#### State Transportation Revenues

- Motor Fuels Tax
- Highway Use Tax
- Motor Vehicle Revenues
  - Vehicle registration and title fees
  - Driver’s license fees
  - International registration plan fees
  - Penalties
  - Equipment inspection fees
  - Other
- Investment Income
- Other misc.
- *Federal Transportation Revenues are excluded*

#### Revenue Growth

Changes to revenue estimates have a significant impact on the calculation of available debt capacity. In consultation with NCDOT, Transportation revenue projections are assumed to be as follows:

**Table 10**

<b>Transportation Revenues (\$ millions)</b>					
	<b>Revenues</b>	<b>Growth</b>		<b>Revenues</b>	<b>Growth</b>
<b>Fiscal Year</b>	<b>(\$ millions)</b>	<b>Rate</b>	<b>Fiscal Year</b>	<b>(\$ millions)</b>	<b>Rate</b>
<b>2015</b>	\$3,248.2	2.2%	<b>2021</b>	\$3,682.0	4.8%
<b>2016</b>	3,260.3	0.4%	<b>2022</b>	3,712.0	0.8%
<b>2017</b>	3,328.9	2.1%	<b>2023</b>	3,773.0	1.6%
<b>2018</b>	3,395.0	2.0%	<b>2024</b>	3,852.0	2.1%
<b>2019</b>	3,451.0	1.6%	<b>2025</b>	3,890.5	1.0%
<b>2020</b>	3,513.0	1.8%	<b>2026</b>	3,929.4	1.0%

\* Revenue amounts per NC Department of Transportation (excluding federal revenues).  
Fiscal Year 2015 is actual.

## **Transportation Liabilities**

The model uses the debt service from all outstanding Highway Bonds and includes transportation-related capital lease obligations and installment purchase contracts if appropriate. There is no currently authorized but unissued transportation-related debt to include, but the model would count such debt and the resulting debt service as part of Transportation Liabilities if there were. Debt Service arising from the State's GARVEE program is not included as a State Transportation Liability because the GARVEEs are supported solely by federal transportation revenues.

The General Assembly has authorized funding to "pay debt service or related financing costs" for various series of revenue bonds issued by the North Carolina Turnpike Authority. The funds so appropriated are legally pledged to support the bonds and bondholders will depend upon the appropriations continuing. Therefore, the model treats the gap funding as the equivalent of debt service since it represents ongoing Highway Trust Fund support of debt. \$49 million of GAP funding is treated as debt service for each year over the 10-year model horizon. NCDOT has also pledged certain operating and maintenance funds to secure debt, if necessary to provide adequate coverage levels. At the present, it appears that such funding will not be required. However, these funds would be treated as additional gap funding for model purposes if NCDOT were to be required to make such payments.

### Availability Payments

The model counts "availability payments" as debt-like obligations. These payments are contractually owed to the contractor or other service provider on a delayed schedule that stretches beyond the standard construction period. Sometimes entered into as part of Public Private Design/Build/Finance and/or other arrangements, the delayed payments represent debt service for contractor-provided financing. The debt-like characteristics of availability payments (even if "subject to appropriation") mean that the payments are treated as a liability for the purposes of the model. NCDOT has entered into such arrangements that are projected to require availability payments of approximately \$5.6 million in FY 2016.

### Developer Ratio Adjustment Mechanism (DRAM) payments

In connection with the I-77 P3 project, DOT has agreed to make certain payments over time to support the project. The maximum amount of such payments may not exceed \$12 million annually or \$75 million in the aggregate. The actual amounts will be subject to the actual performance of the project. However, the amounts projected to be needed provided by DOT using relatively conservative assumptions are included in the model. This is consistent with rating agency treatment. In 2014 Moody's stated that "States...have entered into P3 projects that incorporate a long-term contractual obligation of the state to make availability payments or other types of contractual payments to the private partner that supports the debt service of the project." "[W]e view this contractual obligation as another form of general state debt...".

## **Debt Issuance Assumptions**

The following assumptions were used in this year's debt affordability model calculations:

- There is no remaining authorized but unissued GO or non-GO debt.
- Incremental model debt will be structured with a fixed rate 25-year maturity, a 6.15% interest rate and an overall level debt service profile after the first year.

It is the Committee’s determination that a 25-year structure, with a correspondingly higher interest rate, can be justified for analyzing debt that will be used to finance long-lived transportation infrastructure projects.

## Transportation

### 10-Year Model Solution

**Table 11**

<b>Transportation</b> <b>Net Tax-Supported Debt Capacity using 6.0% debt service/revenues target ratio</b> <b>(In millions of dollars)</b>										
Fiscal Year	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
<b>Total Additional Debt Capacity per Year *</b>	\$1,130.8	\$99.6	\$0.0	\$0.0	\$890.4	\$0.0	\$0.0	\$42.1	\$0.0	\$45.2
<b>Debt Capacity Available each and every Year</b>	\$240.3	\$240.3	\$240.3	\$240.3	\$240.3	\$240.3	\$240.3	\$240.3	\$240.3	\$240.3

\* In addition to that already authorized but unissued. Assumes additional debt capacity is authorized and issued in stated fiscal year.

## Appendix C

### Public Private Partnerships Review of Recent Debt-Related Legislation Recommendations-Discussion

#### Public Private Partnerships-Debt

As the State enacts laws that permit the procurement and financing of assets through the use of Public Private Partnerships (“P3’s”), care should be taken to ensure that sound debt management and authorization practices are in place in the review and approval process. The term P3 can describe a wide variety of arrangements in which a private sector entity plays a key role in the acquisition of an asset and/or the provision of a service. While P3s may appear to provide a new source of funds in a time of diminished revenues and debt capacity, such agreements often contain financing arrangements with the private entity that results in that entity incurring debt or obligations secured, directly or indirectly by governmental payments or charges to the citizens of that government. *Governing Magazine* notes in an article from the November 2013 issue concerning P3s that “capital often comes at a cost that can exceed the expense of a typical municipal borrowing”. More states are coming to this realization. In the summer of 2014, the state of Nevada dropped plans for a highway widening project using a P3 after “discovering it would cost less for the state to manage the project itself and issue municipal bonds” according to an August 25, 2014 article in the *Bond Buyer*. In times of diminished resources governments should compare the costs of financing under a P3 arrangement with the issuance of more typical municipal debt when determining the preferable means of financing the acquisition of an asset. S&P noted in 2015 that “the debt of P3s faces an inherent disadvantage compared with debt service on tax-exempt bonds, which states traditionally issue.”

P3s do not create additional debt capacity although it may appear so if you do not view the agreements as debt or debt-like obligations. However, these are often a commitment of funds in order to acquire an asset and that must be treated like debt when determining debt capacity. Failure to make the contractual payments could result in loss of the asset and create a default of a contractual liability to another party, and would typically impact the credit rating of the government. The rating agency treatment is clear: when a state’s payments are used to support or secure debt issued by a private party, other public entity, and conduit issuer or through a lease arrangement, such debt will be counted toward the state’s debt burden. Sponsoring agencies whose mission is to provide a particular service or asset are not in the best position to make decisions that prioritize the use of a state’s debt capacity or require a state to enter into debt-like arrangements. That decision should be made by the state’s legislative body which represents all the citizens of the state and is equally responsible for providing all services to all citizens.

Centralized debt authorization, issuance and management are considered one of North Carolina’s credit strengths. As stated by Fitch the “Issuance and management of all North Carolina debt is centralized” and “Centralized management of debt in North Carolina is a credit strength” further noting that the “treasurer approves execution of each financing”. In the Committee’s view, the prioritization of capital projects and the issuance of obligations that increase the State’s debt burden should remain the prerogative of the General Assembly.



## **Review of Recent Debt-Related Legislation**

### The Connect NC Bond Act of 2015

Session Law (“S.L.”) 2015-280 (the “Connect NC Bond Act of 2015”) became law on October 21, 2015. The act provides for the issuance by the State of up to \$2,000,000,000 in general obligation bonds if such bonds are approved by a majority of voters at a referendum to be held on March 15, 2016. The proceeds of the proposed bonds would be used to fund capital improvements and new facilities for the State, particularly for the University of North Carolina System, the North Carolina Community College System, local government water and sewer systems, the State’s National Guard, the State’s Department of Agriculture and Consumer Services, parks and tourism-related facilities and the State’s Department of Public Safety. The act provides that the State will not issue the proposed bonds in an amount or in a year where the issuance of the bonds would violate the State’s Debt Affordability Advisory Committee’s recommendations. After consultation with Fiscal Research regarding issuance assumptions, the Bonds have been fully incorporated into this year’s DAAC model. Please see Appendix A for the assumptions used.

### Limitation on Special Indebtedness

S.L. 2013-78 limits the amount of Special Indebtedness that the State may incur. According to this law, Special Indebtedness authorized by legislation enacted after January 1, 2013 cannot exceed 25 percent of the total bond indebtedness of the State supported by the General Fund that was authorized pursuant to legislation enacted after January 1, 2013. As a result of the authorization of GO Bonds in 2014 and 2015, the State now has the ability to authorize an additional \$576.7 million of Special Indebtedness.

### Debt Issuance Accountability Act

Pursuant to the recommendations contained in the 2015 Debt Affordability Study, the Treasurer’s office prepared legislation to limit the ability of State agencies to enter into debt or debt-like arrangements without legislative authority (2015 Session, HB 592). Certain provisions in the bill were subsequently incorporated into the Appropriations Act (S.L. 2015-241) requiring capital leases or other State-supported financing arrangements entered into in connection with P3 projects supported by either the General Fund, Highway Fund or Highway Trust Fund to be subject to the approval requirements of other Special Indebtedness Projects unless otherwise authorized.

### Refunding Savings to Benefit the Savings Reserve Fund

S.L. 2014-241 directs that a portion of refunding savings be transferred to the Savings Reserve Account beginning July 1, 2017.

## **Recommendations-Further Discussion**

### **Control of Debt Authorization Authority**

As an alternative to traditional debt structures, various agencies have proposed “off balance sheet” types of arrangements and/or specialized financing structures to provide funding for capital projects, including various lease structures and other agreements arranging for payments made over time subject to the availability of funds. Not only do such structures typically result in more expensive financing and issuing costs, they also circumvent the State’s historically conservative debt management practices. The Committee continues to strongly recommend that the State of North Carolina maintain its historically conservative debt management practices with regard to (1)

centralized debt authorization, (2) centralized debt management and issuance and (3) classification of debt and debt-like obligations when determining the debt burden. These practices are among those considered by the rating agencies when assigning their “triple A” ratings to the State and ultimately allow the State to maintain a healthy financial position.

Centralized debt authorization, issuance and management are considered one of North Carolina’s credit strengths. As stated by Fitch the “Issuance and management of all North Carolina debt is centralized” and “Centralized management of debt in North Carolina is a credit strength” further noting that the “treasurer approves execution of each financing”. The Committee believes that centralized debt management is a key best financial management practice and should be embraced by the State as a matter of policy.

### **State Aid Intercept**

In a number of recent legislative sessions, there has been legislation discussed and/or proposed that would provide for the timely payment of special obligation bonds issued for the constituent institutions of the University of North Carolina by requiring the State to “intercept” General Fund appropriations to those entities in order to make debt service payments on “self-liquidating” indebtedness issued pursuant to G.S. 116D. Similar proposals have been discussed and put forth by other State entities. In essence, this back-stop of debt service obligations by the State’s General Fund provides a form of bond insurance resulting in higher credit ratings and provides the issuer with debt service savings.

The Committee strongly opposes on policy grounds providing credit support for debt issues whose source of repayment was and is represented to be project revenues. The use of State appropriations is not currently permitted to be used to pay debt service on such debt issues. In addition, the proposals have not provided for appropriate levels of State oversight and control for debt issues that may potentially utilize the State’s debt capacity and increase its debt burden. S.L. 2015-241, section 31.13 mandates a debt affordability study process for the constituent institutions of the UNC system that will serve to increase transparency and accountability. The first study is due by February 1 and will be presented to OSBM, the Joint Legislative Commission on Governmental Operations, the State Treasurer and UNC General Administration.

### **Consider General Obligation Bonds as the preferred financing method**

The Committee notes that the State has recently relied extensively, although not exclusively, on the authorization of Special Indebtedness to finance capital projects. Due to the potential debt service savings and increased transparency, the Committee believes that General Obligation bonds should be considered the preferred, but not the exclusive, method to debt finance the State’s capital needs.

### **Structural Budget Balance and Reserve Replenishment**

The Committee confirms its view that North Carolina’s priorities of achieving structural budgetary balance and rebuilding the State’s reserve funds are strong evidence of financial stability and flexibility. The Committee also recognizes that past legislative action targeting an 8% level of reserves in the State’s Budget Stabilization Fund (also known as the “Rainy Day Fund”) should serve the State well in the event of future economic downturns, and that the Rainy Day Fund has continued to be replenished after being severely depleted during the recession. The Committee recognizes that long term budgetary stability and reserve fund replenishment are key factors in maintaining our “triple A” bond rating. In its 2015 report, Moody’s states that a “Return of structural imbalance, evidenced by...recurring general fund spending outpacing recurring general fund revenues...” could result in a reduction in North Carolina’s bond rating.