M e m o r a n d u m

TAB 15

To: CHAIR AND COMMISSIONERS

CTC Meeting: June 25, 2014

Reference No.: 4.13
Information

From: ANDRE BOUTROS
Executive Director

Subject: **ANNUAL ANALYSIS OF GARVEE BONDING CAPACITY**

SUMMARY

Government Code Section 14553(b) requires the Commission to prepare, in conjunction with the State Treasurer's Office, an annual analysis of California's bonding capacity for issuing Federal Grant Anticipation Revenue (GARVEE) bonds. Staff recommends the Commission assume a State Highway Operation and Protection Program (SHOPP) GARVEE capacity of $3.5 billon based on the SHOPP program level of $2.3 billion forecast in the 2014 Fund Estimate, a 12 year maturity, and assuming a 2.67% interest rate.

DISCUSSION

The State Treasurer determined that, based on the consecutive 12-month period with the highest deposits ($3.921 billion) over the 24 month period ending December 2013, the 15% limitation on GARVEE debt service is $588.2 million. After taking into account the current maximum annual debt service of the Series 2004A Bonds and Series 2008A Bonds ($84.3 million in 2014-15), the remaining annual debt service capacity is $503.9 million. The base case scenario, assuming a 12-year final maturity and 2.67% interest rate for the issuance, provides the highest bonding capacity of approximately $5.12 billion.

The State Treasurer's analysis of GARVEE bonding capacity is calculated as prescribed in statute. However, a review of the federal deposits into the SHA ignores the fact that not all federal funds are available to fund Department-administered projects. Additionally, because the majority of federal funds available for programming are programmed in the SHOPP, the Commission has, as a matter of practice, limited the use of GARVEE bonds after the Series 2004A bonds to SHOPP projects. Therefore staff recommends that the Commission apply a GARVEE capacity based on 15% of the federal funds estimated to be available annually for SHOPP projects in the 2014 Fund Estimate ($2.3 billion). This level of federal funding, assuming a 12 year maturity and 2.67% interest rate, yields a $3.503 billion SHOPP GARVEE bond capacity.

GARVEE Capacity ($ in millions)	Federal Deposits	SB 1507 Limit	Debt Service (2.67% Interest)	12-Year Bond Proceeds
Total GARVEE Capacity	$3,921	15%	$588	**---**
Existing Debt Service	---	---	($84)	**---**
Available Debt Service Capacity	---	---	**$504**	**$5,116**
Proposed SHOPP Debt Service Level				
Federal Funding for the SHOPP **(per 2014 Fund Estimate)**	$2,300	15%	**$345**	**$3,503**

BACKGROUND

Government Code Section 14553.4 states that the Treasurer may not authorize the issuance of additional bonds if annual debt service on all outstanding GARVEE obligations would exceed 15% of the total amount of federal transportation funds deposited into the State Highway Account for any consecutive 12-month period within the preceding 24 months.

The Commission approved the issuance of GARVEE notes twice, once for State Transportation Improvement Program (STIP) projects and once for SHOPP projects. On March 10, 2004, the State issued $614.85 million of GARVEE Bonds (Series 2004A Bonds) for STIP projects. The Series 2004A Bonds are structured with serial maturities from 2005 through 2015. On October 16, 2008, the State issued a second set of GARVEE Bonds (Series 2008A Bonds) $97.635 million for SHOPP projects. The Series 2008A Bonds are structured with serial maturities from 2009 through 2020.

Attachment

Analyses of GARVEE Bonding Capacity 2014

Analyses for the
California Transportation Commission
April 2014

State Treasurer Bill Lockyer

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Executive Summary

These analyses are provided to the California Transportation Commission (“Commission”) to assist in its compliance with the provisions of Government Code Sections 14550 through 14555.9 requiring the Commission to prepare, in conjunction with the State Treasurer’s Office (“STO”), an annual analysis of California’s bonding capacity for issuing Grant Anticipation Revenue Vehicles (“GARVEE”) bonds and notes. GARVEE bonds are capital market borrowings which are repaid from federal transportation funds that are deposited into the State Highway Account. The bonding capacity takes into account the current maximum annual debt service of the Series 2004A Bonds and Series 2008A Bonds.

Legislation was enacted to ensure California had the necessary state legislative authority to make use of this financing tool for accelerating high priority transportation projects. The legislation became effective January 1, 2000, and was further amended by AB 438 (Chapter 113, Statutes of 2001), AB 3026 (Chapter 438, Statutes of 2002), SB 1098 (Chapter 212, Statutes of 2004), and SB 1507 (Chapter 793, Statutes of 2004).

The issuance of additional GARVEE bonds is subject to Government Code Section 14553.4, which states that the Treasurer may not authorize the issuance of additional bonds if the annual debt service on all outstanding GARVEE obligations would exceed 15 percent of the total amount of federal transportation funds deposited into the State Highway Account in the State Transportation Fund for any consecutive 12-month period within the preceding 24 months. Thus, current and future bonding capacity analyses must take place in the context of this “statutory cap.”

There are other factors which also affect bonding capacity, such as maturity structures, interest rates, and policy decisions. Accordingly, these analyses continue the approach of prior analyses by providing “sensitivity analyses” under different scenarios, with varying assumptions for maturity dates and interest rates. This method should continue to assist the Commission in examining and responding to future applications under the context of alternative scenarios.

As of April 1, 2014, there was $69,475,000 principal amount of State of California (California Department of Transportation) Federal Highway Grant Anticipation Bonds (“GARVEE Bonds”) Series 2004A (“Series 2004A Bonds”) outstanding and $57,930,000 principal amount of GARVEE Bonds, Series 2008A (“Series 2008A Bonds”) outstanding. The maximum annual debt service of the outstanding Series 2004A and Series 2008A Bonds is $84,289,000 in Fiscal Year 2014-15. The Series 2004A and Series 2008A Bonds carry underlying ratings of ‘A1’ from Moody’s Investors Service, ‘AA’ from Standard & Poor’s, and ‘A+’ from Fitch Ratings, which are the ratings for the bonds without consideration of insurance.

The analyses for 2014 show a bonding capacity ranging from a low of approximately $2.77 billion to a high of approximately $5.12 billion under varying market conditions and amortization periods. The $2.77 billion bonding capacity level results from a 6-year amortization with an assumed interest rate of 2.51 percent under a Market Sensitivity Case scenario, and the $5.12 billion bonding capacity level results from a 12-year amortization with an assumed interest rate of 2.67 percent under a Base Case scenario.

The 2014 analyses show that the bonding capacity has decreased by approximately 9.6 percent for a 6-year final maturity amortization period when compared to the same analyses of 2013, and has decreased by approximately 13.0 percent for a 12-year final maturity amortization period when compared to the same analyses of 2013. Primary factors contributing to the decrease in bonding capacity from 2013 are: 1) lower federal deposits and 2) increases to the assumed weighted average interest rates used for this year's analyses. Federal deposits to the State Highway Account were $233.6 million lower than those for last year's analyses. Due to the potential federal payment interruptions, one of the rating agencies took action to downgrade the bonds to the 'A' investment grade level on February 18, 2014. This rating action changed the weighted average interest rates used in the 6-year amortization analyses by 40.5 basis points over the prior year. Furthermore, the weighted average interest rates used in the 12-year amortization analyses are 89 basis points higher than the rates used previously. These differences also reflect a steepening of the yield curve in the 6- to 12-year range when compared to last year's analyses.

During Fiscal Year 2009 and Fiscal Year 2010, the California Department of Transportation ("Department") accelerated the construction of many federally eligible projects, which resulted in a significant increase of federal receipts beginning in calendar year 2011. Given that this increase in federal deposits is expected to last only through 2014, secondary analyses of bonding capacity were conducted based on the assumption that federal receipts were $2.70 billion, which is the historical level of deposits prior to 2011 and the level that is expected after 2014. The analyses under these assumptions, of course, show much lower ranges of bonding capacity than is shown when using the actual 2013 federal aid receipts.

These analyses demonstrate that a wide range of circumstances, including policy, revenues, and market factors, can affect the existing capacity for future State GARVEE financings. Therefore, the analyses should be used as a tool for understanding the implications of alternative project applications and the related potential GARVEE bond structures that the Commission may be asked to consider over the coming year.

I. Purpose of Analyses

The following analyses are provided to assist the Commission in meeting the requirements of SB 928 (Chapter 862), sponsored by the STO to ensure that California has the necessary state legislative authority to make use of this financing tool for accelerating high priority transportation projects. The analyses relate specifically to the requirements in Section 14553(b) of the Government Code, pursuant to which the Commission and the STO shall annually prepare an analysis of the bonding capacity of federal transportation funds deposited in the State Highway Account in the State Transportation Fund. The analyses have been performed consistent with the GARVEE bonds bonding capacity guidelines provided in Government Code Section 14553.4, whereby the STO may not authorize the issuance of additional GARVEE bonds if the annual debt service on all outstanding GARVEE obligations in any fiscal year would exceed 15 percent of the total amount of federal transportation funds deposited into the State Highway Account in the State Transportation Fund for any consecutive 12-month period within the preceding 24 months.

The following analyses are intended to measure the capacity of the State Highway Account to support future issuance of GARVEE bonds, given:

1. the historical record of federal deposits to the State Highway Account (we examine only deposits of pledged funds);
2. requirements preceding any issuance of additional bonds under the Master Trust Indenture; and
3. the "statutory cap" on total outstanding GARVEE bonds.

II. The 2004 and 2008 GARVEE Financings

The Series 2004A Bonds are secured by a Master Trust Indenture dated February 1, 2004, as amended and supplemented by a First Supplemental Indenture dated February 1, 2004, by and among the Treasurer, the Commission and the Department. The Series 2008A Bonds are secured by the Master Trust Indenture dated February 1, 2004, as amended and supplemented by a Second Supplemental Indenture dated October 1, 2008, by and among the Treasurer, the Commission and the Department. The Series 2004A and Series 2008A Bonds and all future bonds and obligations issued under the Master Trust Indenture are secured solely by the Trust Estate, as defined in the Master Trust Indenture, which consists solely of federal transportation funds. The primary source of federal transportation funds is the amount appropriated to the State by the federal government pursuant to Federal Aid Authorization, pursuant to Title 23 of the U.S. Code authorizing federal funding of state transportation projects.

The Department entered into a Memorandum of Agreement with the Federal Highway Administration ("FHWA") in anticipation of reimbursement by FHWA for debt service and other bond-related costs associated with the federal-aid projects approved by the FHWA.

The Master Trust Indenture provides for the issuance of additional bonds on parity with the Series 2004A Bonds. Any additional parity bonds or other bonds issued on a basis subordinate to the Series 2004A Bonds must comply with the "statutory cap."

The $657,713,000 of Series 2004A bond proceeds were generated to pay a portion of the costs of acquisition of right-of-way and/or construction costs for eight federal-aid State Transportation Improvement Program ("STIP") projects approved by the Commission. All eight projects have been completed.

The $98,000,000 of Series 2008A bonds proceeds were generated to pay for the construction of two federal-aid State Highway Operation and Protection Program ("SHOPP") projects approved by the Commission: Placer County – Interstate 80 Pavement Rehabilitation and Nevada and Sierra Counties – Interstate 80 Pavement Rehabilitation. Both projects have been completed.

III. Need for Sensitivity Analyses

There are multiple factors that will influence the State's future capacity to issue GARVEE bonds. These factors include the final maturity, interest rates and the available revenues for the additional bonds test. For this reason, no single bonding capacity analysis is sufficient for purposes of guiding the Commission's evaluation of the potential for future use of GARVEE bonds. In order to facilitate an informed consideration of future applications with structures and terms not yet known to the Commission, we have performed a series of "sensitivity analyses" under alternative scenarios. The final maturity of the bonds and the assumed interest rates are the primary variable factors that are incorporated into our sensitivity analyses.

IV. Information Sources

Pledged Revenues:

In performing these bonding capacity analyses, the STO is using data obtained from the Department regarding deposits into the State Highway Account in the State Transportation Fund from federal transportation funds. The amounts provided by the Department represent federal funds that can be legally pledged under the Master Trust Indenture for payment of the Bonds. The federal transportation funds that are legally available for payment of debt service include those derived from Federal Aid Authorization under Title 23, including apportioned funds (i.e., National Highway System, bridges and the federal surface transportation programs, and amounts available under minimum guarantees) with corresponding Obligation Authority.

Starting with the 2009 bonding capacity report, to be consistent with Section 14553.4 of the Government Code, the total annual federal aid receipts, without exceptions, have been used to calculate the annual GARVEE bonding capacity. This information was provided on a monthly basis for the period of January 2012 through December 2013. See **Attachments A-1 and A-2** for the monthly deposits data and related calculations. The additional bonds test is based on the highest consecutive 12 months of pledged revenue deposits during the prior 24-month period. These historic annual deposits are a known quantity at any given point in time, but are clearly subject to change over time, and must be re-examined at the time of each potential GARVEE bond issuance.

Final Maturities:

The analyses in the report assume that any additional GARVEE bonds issued in 2014 will have final maturities in 2020 and 2026.

Interest Rate Assumptions:

Estimates of potential interest costs under various scenarios were developed by the STO based on the ‘A’ index published by Municipal Market Data (“MMD”), a widely used industry benchmark. The interest rate assumptions used for the analyses are based on the weighted average coupon, using a level debt solution for each final maturity (or amortization period), which reflects the structure of the Series 2004A and Series 2008A Bonds.

V. Summary of Alternative Assumptions

For the 2014 bonding capacity analyses, we used the MMD ‘A’ interest rate scale. For prior analyses, we used the MMD ‘AA’ scale which corresponded to the majority of the underlying ratings of the Series 2004A and Series 2008A Bonds. However, in September 2012 Fitch Ratings downgraded the underlying ratings of these bonds to ‘A+’, and in January 2014 Moody’s Investors Service downgraded the underlying ratings to ‘A1’. Both rating agencies reported that the Highway Trust Fund expenditures exceeding federal gasoline tax revenues over the past several years contributed to the downgrades. Thus, we have assumed that a new issuance of GARVEE Bonds in the current environment would also carry underlying ratings that are split among the ‘A’ and ‘AA’ grades.

The two alternative scenarios for market conditions used in these analyses are as follows:

1. **Base Case:** Based on the February 28, 2014 MMD ‘A’ interest rate scale.
2. **Market Sensitivity Case:** Base Case plus 100 basis points.

Many observers believe that over time interest rates could increase from the current levels. For this reason, and based on the expected short-term maturity structure of the State’s current and future GARVEE obligations, a 100 basis point increase in interest rates is used for the market sensitivity analyses.

Two alternatives for the final maturity of the bonds were analyzed for each case. The table below summarizes the range of assumptions for the sensitivity analyses. The different scenarios for each factor combine for a total of four different analyses.

Factors	Range of Assumptions
Final Maturity	Two scenarios: at 6 and 12 years from date of issuance
Assumed Interest Rates	Two scenarios: one at ‘A’ MMD market rates on February 28, 2014 and one at 100 basis points above the February 28, 2014 ‘A’ MMD market rates

See **Attachment B** for the detailed assumptions used in each sensitivity analysis.

It should also be noted that the current analyses, by necessity, require significant simplification as compared to the myriad of structuring nuances that would be involved in actual bond sales. As a result, certain ambiguities or alternative interpretations could lead to somewhat differing results in practice. One example of a simplification, common to all scenarios, is the assumption that all GARVEE bonds within the capacity of a given scenario would be issued in a single year and not staggered over multiple years, as typically would be expected in a bonding program of significant magnitude.

If, instead, such bonds were staggered <u>and</u> this financing structure was assumed to have a fixed “end date” represented by the assumed final maturity used in each scenario, each resulting measure of maximum bonding capacity would have to be adjusted downward. This would be necessary because the GARVEE bonds issued in subsequent years would have a shorter period during which to amortize principal before the fixed end date. This would increase the annual debt service necessary for a given par amount of bonds, causing a reduction in total bonding capacity, assuming a fixed amount of annual revenues for each scenario.

Alternatively, this simplification would not have this constraint on capacity if future financings were assumed to be structured on a “rolling maturity” basis; that is, with each GARVEE bond issued in subsequent years within each scenario having exactly the same underlying terms, such as total years to maturity and interest rate, regardless of the timing of any future bond issuance. This latter simplification would also assume a fixed amount of annual revenues for each scenario.

This discussion is offered as an example, which is by no means exhaustive, of the implications of the necessary simplifications involved in any analysis of bonding capacity given current uncertainty about the actual conditions that will exist at the time of any future issuance of GARVEE bonds or obligations. Therefore, care should be exercised in using these analyses to avoid erroneous interpretations or conclusions.

VI. Summary of Results

Due to an increase in the weighted average interest rates used for this year's analyses coupled with a $233 million decline in federal aid receipts, the current analyses resulted in a lower bonding capacity than last year's results. As of February 28, 2014, the weighted average interest rate for 'A' rated bonds with a 6-year final maturity was 1.51 percent (an increase of 0.405 percent compared to last year's level) and with a 12-year final maturity was 2.67 percent (an increase of 0.89 percent compared to last year's level). The variation between maturities is attributable to a steeper MMD yield curve in the 6- to 12-year range compared to last year. However, due to the significant increase of federal receipts beginning in calendar year 2011, these analyses continue to indicate a much higher bonding capacity than in the years prior to the federal receipts increases. The Department projects that the annual federal receipts will decrease toward the $3.2 billion level in 2014 and then toward the $2.7 billion level thereafter, which was the approximate level of deposits prior to 2011.

The analyses show that a bond issuance with a 6-year maturity corresponds to a bonding capacity ranging from approximately $2.77 billion (Market Sensitivity Case) to approximately $2.87 billion (Base Case). These levels represent a decrease of approximately $292.95 million and $303.79 million, respectively, compared to 2013, or a decrease of approximately 9.6 percent for a 6-year maturity compared to last year's levels.

The Commission policy established 12 years as the maximum maturity for GARVEE bonds. If future bond issues are structured with a 12-year amortization period consistent with the current Commission policy and at current interest rate levels, the remaining capacity for issuance of GARVEE bonds would be from approximately $4.82 billion (Market Sensitivity Case) to approximately $5.12 billion (Base Case). These levels represent a decrease of approximately $722.03 million and $775.18 million, respectively, compared to 2013, or a decrease of approximately 13.0 percent for a 12-year maturity compared to last year's levels.

Given that the federal deposits into the State Highway Account is expected to trend downward in 2014 and then return to their pre-2011 levels thereafter, additional analyses of bonding capacity were conducted based on the assumption that federal receipts were $2.70 billion. To provide specific ranges under this assumption, the 2014 capacity was calculated using two methods:

1) **Based on total receipts in 2013 being $2.70 billion** and assuming that the receipts are allocated each month at the same percentages as the actual 2013 receipts in order to get a new highest consecutive 12-month total within the preceding 24 months. This assumption shows a bonding capacity ranging from $2.77 billion (6-year amortization, Market Sensitivity Case) to $5.12 billion (12-year amortization, Base Case). This result is no different from the results presented above, since the highest consecutive 12-month total revenues deposited within the previous 24 months occurs in the period January 2012 – December 2012 under both scenarios.

2) **Based on the highest consecutive 12-month total within the preceding 24 months being $2.70 billion** (under assumption #1, the highest consecutive 12-month total within the preceding 24 months is $3.92 billion). Assumption #2 shows a bonding capacity ranging from $1.77

billion (6-year amortization, Market Sensitivity Case) to $ 3.26 billion (12-year amortization, Base Case).

Under the current analyses, a longer amortization period would increase the additional bonding capacity. If the Commission policy changes to allow a longer maximum maturity, the bonding capacity would change accordingly.

The following table summarizes key results of our analyses based on the actual federal aid receipts deposited into the State Highway Account in 2013. Detailed worksheets supporting the results can be found in **Attachments C, D-1, and D-2**.

Summary of Results for GARVEE Bonding Capacity Sensitivity Analyses		
Final Maturity Amortization Period	**Base Case February 28, 2014 'A' MMD Scale**	**Market Sensitivity Case Base Case plus 100 Basis Points**
6 years	$2.87 billion	$2.77 billion
12 years	$5.12 billion	$4.82 billion

VII. California Transportation Commission Policy

The Commission adopted a GARVEE policy in December 2003. This policy extends through the next Federal Transportation Reauthorization Act. The current transportation reauthorization act has been extended through September 30, 2014.

The policy, contained in Commission Resolution No. G-03-21, is as follows:

- Debt Limit. The Commission limits annual GARVEE debt service to 15 percent of qualifying federal revenues. This limit will be calculated on the basis described in Section 14553.4 of the Government Code (i.e., 15 percent of the total amount of federal transportation funds deposited in the State Highway Account for any consecutive 12-month period within the preceding 24 months). In 2004, SB 1507 amended the statutory cap from a 30 percent limit to a 15 percent limit, which aligned it with the Commission's policy.

- Term. Each bond is structured for debt service payments over a term of no more than 12 years.

- Project Selection. The Commission selects projects for accelerated construction through the use of GARVEE bonding. The selection will be made through the programming process for the STIP and the SHOPP. The Commission will select projects that are major improvements to corridors and gateways for interregional travel and goods movement. Major improvements include projects that increase capacity, reduce travel time, or provide long-life rehabilitation of key bridges or roadways.

VIII. Recent Events

The Department does not anticipate any new GARVEE bond issuance in the near future.

IX. Conclusion

As the above analyses show, the ultimate capacity existing for the State's future GARVEE financings will depend on a wide range of circumstances over time, including market conditions, maturity structures, revenues, and other factors that may be considered by the Commission.

We are hopeful that these analyses will be useful in considering the structuring options that are available for GARVEE financings, in addition to meeting the immediate goal of assisting the Commission in preparing its annual report.

ATTACHMENT A-1

FEDERAL DEPOSITS INTO THE STATE HIGHWAY ACCOUNT

Cumulative 12-Month
Federal Deposits into the State Highway Account
Over 24-Month Period, ending December 31, 2013

Period Covered	12-Month Total Revenues Deposited	
Jan 12 - Dec 12	**$3,921,298,254.00**	**Highest 12-Month Total**
Feb 12 - Jan 13	**$3,898,161,962.82**	
Mar 12 - Feb 13	**$3,884,177,918.91**	
Apr 12 - Mar 13	**$3,724,439,131.44**	
May 12 - Apr 13	**$3,833,334,246.82**	
Jun 12 - May 13	**$3,790,679,079.01**	
Jul 12 - Jun 13	**$3,806,599,946.11**	
Aug 12 - Jul 13	**$3,718,753,314.86**	
Sep 12 - Aug 13	**$3,611,473,461.40**	
Oct 12 - Sep 13	**$3,573,078,413.26**	**Lowest 12-Month Total**
Nov 12 - Oct 13	**$3,655,130,074.74**	
Dec 12 - Nov 13	**$3,626,622,411.92**	
Jan 13 - Dec 13	**$3,687,684,103.76**	
	$3,748,571,716.85	**Average 12-Month Total**

Source: California Department of Transportation

ATTACHMENT A - 2

FEDERAL DEPOSITS INTO THE STATE HIGHWAY ACCOUNT

	Monthly Deposits of Legally Pledged Federal Transportation Fund				
	2009	2010	2011	2012	2013
Month	**Deposit Amount**	**Deposit Amount**	**Deposit Amount**	**Deposit Amount**	**Deposit Amount**
January	$248,068,100.96	$234,302,379.53	$389,063,404.04	$289,148,449.88	$266,012,158.70
February	$85,502,982.39	$130,134,373.39	$155,558,369.65	$213,989,165.30	$200,005,121.39
March	$269,024,485.16	$213,127,122.15	$236,920,034.82	$438,321,351.25	$278,582,563.78
April	$159,570,185.02	$172,566,406.90	$185,631,604.91	$231,244,325.22	$340,139,440.60
May	$170,883,515.71	$130,817,619.08	$399,251,077.85	$312,928,985.45	$270,273,817.64
June	$297,052,028.78	$300,743,391.19	$303,302,807.89	$269,369,114.62	$285,289,981.72
July	$327,450,638.69	$273,125,617.57	$183,338,941.67	$450,815,965.63	$362,969,334.38
August	$267,037,277.08	$263,609,660.26	$582,687,851.42	$403,368,240.18	$296,088,386.72
September	$100,134,952.10	$314,225,529.17	$315,712,808.68	$406,397,077.43	$368,002,029.29
October	$328,171,254.52	$195,447,409.45	$414,379,161.36	$398,397,382.31	$480,449,043.79
November	$115,307,706.41	$242,323,185.78	$456,066,414.04	$284,658,403.31	$256,150,740.49
December	$318,173,222.40	$323,798,884.94	$251,221,938.27	$222,659,793.42	$283,721,485.26
TOTAL	$2,686,376,349.22	$2,794,221,579.41	$3,873,134,414.60	$3,921,298,254.00	$3,687,684,103.76
Monthly Average	$223,864,695.77	$232,851,798.28	$322,761,201.22	$326,774,854.50	$307,307,008.65

Source: California Department of Transportation.

ATTACHMENT B

DETAILED ASSUMPTIONS
FOR SENSITIVITY ANALYSES

Summary of Assumptions for GARVEE Bonding Capacity Sensitivity Analyses

Base Case – Current Market Conditions

	Factors	Assumptions	Comments
	Final Maturity	6 and 12 years	Analyses run at each final maturity listed at left.
	Interest Rates	1.51% and 2.67%	Rates indicated relate to each respective final maturity above; listed rates represent the weighted average coupon for a bond issue sizing with level annual debt service.
	Annual Revenues	$3,921,298,254.00	The Treasurer may not authorize the issuance of the bonds if the annual debt service on all outstanding GARVEE obligations would exceed 15 percent of the State's historical annual deposits in the State Highway Account from federal funding.

Market Sensitivity Case – Alternative Market Conditions

	Factors	Assumptions	Comments
	Final Maturity	6 and 12 years	Analyses run at each final maturity listed at left.
	Interest Rates	2.51% and 3.67%	Rates indicated relate to each respective final maturity above; listed rates represent the weighted average coupon for a bond issue sizing with level annual debt service.
	Annual Revenues	$3,921,298,254.00	The Treasurer may not authorize the issuance of the bonds if the annual debt service on all outstanding GARVEE obligations would exceed 15 percent of the State's historical annual deposits in the State Highway Account from federal funding.

ATTACHMENT C

DETAILED WORKSHEET
FOR SENSITIVITY ANALYSES

OVERVIEW OF GARVEE BONDING CAPACITY ANALYSES	
The bond test requires that the annual payment obligations of all outstanding notes in any fiscal year do not exceed 15 percent of the total amount of Federal Transportation Funds deposited into the State Highway Account for the highest consecutive 12-month period within the preceding 24 months. The maximum Annual Debt Service on the outstanding Bonds has been subtracted from the highest 12 consecutive months of deposits during the preceding 24 months in order to calculate the remaining Additional Debt Capacity.	
	(Dollars in Thousands)
Base Case	
Maximum Par Amount of Bonding Capacity	$2,869,701
Interest rate	1.51%
Maximum Assumed Annual Debt Service *	$503,906
Term of Bond Issue	**6**
Market Sensitivity	
Maximum Par Amount of Bonding Capacity	$2,774,489
Interest rate	2.51%
Maximum Assumed Annual Debt Service *	$503,906
Term of Bond Issue	**6**
Base Case	
Maximum Par Amount of Bonding Capacity	$5,116,485
Interest rate	2.67%
Maximum Assumed Annual Debt Service *	$503,906
Term of Bond Issue	**12**
Market Sensitivity	
Maximum Par Amount of Bonding Capacity	$4,821,365
Interest rate	3.67%
Maximum Assumed Annual Debt Service *	$503,906
Term of Bond Issue	**12**
*15% of legally-pledged Federal Transportation Funds deposited into the State Highway Account less maximum annual debt service for the Series 2004A Bonds and Series 2008A Bonds.	
(white / non-shaded)	= Base Case Scenarios based on February 28, 2014 'A' MMD Scale
(yellow / shaded)	= Market Sensitivity Case Scenarios based on February 28, 2014 'A' MMD Scale Plus 100 Basis Points

ATTACHMENT D-1

DETAILED SUMMARY TABLES
FOR SENSITIVITY ANALYSES

GARVEE BONDING CAPACITY

Base Case

Highest 12-Month Revenue ($ in 000's)	**$3,921,298**
Debt Service Test (15% of Revenue)	**$588,195**
Less: Existing Maximum Annual Series 2004A & 2008A D/S	**-$84,289**
Remaining Maximum Annual Debt Service Capacity	**$503,906**

(Dollars in Thousands)

	6 Years	12 Years
Assumed Date of Issuance	2014	2014
Assumed Final Maturity	2020	2026
Assumed Interest Rate[1]	1.51%	2.67%
Par Capacity	**$2,869,701**	**$5,116,485**
Annual Debt Service Required	$503,906	$503,906

[1] The assumed interest rates are based on the February 28, 2014 'A' MMD bond scale. The rates used are the weighted average coupon for a level debt service bond sizing based upon the final maturity in each scenario.

ATTACHMENT D-2

DETAILED SUMMARY TABLES
FOR SENSITIVITY ANALYSES

GARVEE BONDING CAPACITY

Market Sensitivity Case

Highest 12-Month Revenue ($ in 000's)	**$3,921,298**
Debt Service Test (15% of Revenue)	**$588,195**
Less: Existing Maximum Annual Series 2004A & 2008A D/S	**-$84,289**
Remaining Maximum Annual Debt Service Capacity	**$503,906**

(Dollars in Thousands)

	6 Years	**12 Years**
Assumed Year of Issuance	2014	2014
Assumed Final Maturity	2020	2026
Assumed Interest Rate[(1)]	2.51%	3.67%
Par Capacity	**$2,774,489**	**$4,821,365**
Annual Debt Service Required	$503,906	$503,906

(1) The assumed interest rates are based on the February 28, 2014 'A' MMD bond scale (increased by 100 basis points (1%) for market fluctuations). The rates used are the weighted average coupon for a level debt service bond sizing based upon the final maturity in each scenario.

M e m o r a n d u m

To: CHAIR AND COMMISSIONERS
CALIFORNIA TRANSPORTATION COMMISSION

CTC Meeting: June 25, 2014

Reference No.: 4.13
Information Item

From: NORMA ORTEGA
Chief Financial Officer

Prepared by: Steven Keck
Chief, Division of Budgets

Subject: **ANNUAL GARVEE BONDING CAPACITY ANALYSIS BY STATE TREASURER**

SUMMARY:

These analyses are provided to the California Transportation Commission (Commission) to assist in its compliance with the provisions of Senate Bill (SB) 928 (Burton) (Chapter 862, Statutes of 1999) requiring the Commission to prepare, in conjunction with the State Treasurer's Office, an annual analysis of California's bonding capacity for issuing Grant Anticipation Revenue Vehicles (GARVEE) bonds and notes. GARVEE bonds are capital market borrowings repaid by federal transportation funds deposited in the State Highway Account.

These analyses demonstrate that a wide range of circumstances, including policy, revenues, and market factors, can affect the existing capacity for future State GARVEE financings. Therefore, the analyses should be used as a tool for understanding the implications of alternative project applications and the related potential GARVEE bond structures that the Commission may be asked to consider over the coming year.

BACKGROUND:

The State's authority for issuance of GARVEE obligations derives both from federal legislation and from the passage of SB 928 in 1999, which established Government Code Sections 14550 through 14555.9. The bill was sponsored by the State Treasurer's Office to ensure California had the necessary state legislative authority to make use of this new financing tool for accelerating high priority transportation projects. SB 928 became effective January 1, 2000, and was further amended by Assembly Bill (AB) 438 (Chapter 113, Statutes of 2001), AB 3026 (Chapter 438, Statutes of 2002), SB 1098 (Chapter 212, Statutes of 2004), and SB 1507 (Chapter 793, Statutes of 2004.

The California Department of Transportation issued the Series 2004A GARVEE bonds in the amount of $614,850,000 and the Series 2008A GARVEE bonds in the amount of $97,635,000. As of December 31, 2013, approximately $202 million of the total $712.485 million bond principal was outstanding.

Attachments

Analyses of GARVEE Bonding Capacity 2014

Analyses for the
California Transportation Commission
April 2014

State Treasurer Bill Lockyer

Table of Contents

Executive Summary

These analyses are provided to the California Transportation Commission ("Commission") to assist in its compliance with the provisions of Government Code Sections 14550 through 14555.9 requiring the Commission to prepare, in conjunction with the State Treasurer's Office ("STO"), an annual analysis of California's bonding capacity for issuing Grant Anticipation Revenue Vehicles ("GARVEE") bonds and notes. GARVEE bonds are capital market borrowings which are repaid from federal transportation funds that are deposited into the State Highway Account. The bonding capacity takes into account the current maximum annual debt service of the Series 2004A Bonds and Series 2008A Bonds.

Legislation was enacted to ensure California had the necessary state legislative authority to make use of this financing tool for accelerating high priority transportation projects. The legislation became effective January 1, 2000, and was further amended by AB 438 (Chapter 113, Statutes of 2001), AB 3026 (Chapter 438, Statutes of 2002), SB 1098 (Chapter 212, Statutes of 2004), and SB 1507 (Chapter 793, Statutes of 2004).

The issuance of additional GARVEE bonds is subject to Government Code Section 14553.4, which states that the Treasurer may not authorize the issuance of additional bonds if the annual debt service on all outstanding GARVEE obligations would exceed 15 percent of the total amount of federal transportation funds deposited into the State Highway Account in the State Transportation Fund for any consecutive 12-month period within the preceding 24 months. Thus, current and future bonding capacity analyses must take place in the context of this "statutory cap."

There are other factors which also affect bonding capacity, such as maturity structures, interest rates, and policy decisions. Accordingly, these analyses continue the approach of prior analyses by providing "sensitivity analyses" under different scenarios, with varying assumptions for maturity dates and interest rates. This method should continue to assist the Commission in examining and responding to future applications under the context of alternative scenarios.

As of April 1, 2014, there was $69,475,000 principal amount of State of California (California Department of Transportation) Federal Highway Grant Anticipation Bonds ("GARVEE Bonds") Series 2004A ("Series 2004A Bonds") outstanding and $57,930,000 principal amount of GARVEE Bonds, Series 2008A ("Series 2008A Bonds") outstanding. The maximum annual debt service of the outstanding Series 2004A and Series 2008A Bonds is $84,289,000 in Fiscal Year 2014-15. The Series 2004A and Series 2008A Bonds carry underlying ratings of 'A1' from Moody's Investors Service, 'AA' from Standard & Poor's, and 'A+' from Fitch Ratings, which are the ratings for the bonds without consideration of insurance.

The analyses for 2014 show a bonding capacity ranging from a low of approximately $2.77 billion to a high of approximately $5.12 billion under varying market conditions and amortization periods. The $2.77 billion bonding capacity level results from a 6-year amortization with an assumed interest rate of 2.51 percent under a Market Sensitivity Case scenario, and the $5.12 billion bonding capacity level results from a 12-year amortization with an assumed interest rate of 2.67 percent under a Base Case scenario.

The 2014 analyses show that the bonding capacity has decreased by approximately 9.6 percent for a 6-year final maturity amortization period when compared to the same analyses of 2013, and has decreased by approximately 13.0 percent for a 12-year final maturity amortization period when compared to the same analyses of 2013. Primary factors contributing to the decrease in bonding capacity from 2013 are: 1) lower federal deposits and 2) increases to the assumed weighted average interest rates used for this year's analyses. Federal deposits to the State Highway Account were $233.6 million lower than those for last year's analyses. Due to the potential federal payment interruptions, one of the rating agencies took action to downgrade the bonds to the 'A' investment grade level on February 18, 2014. This rating action changed the weighted average interest rates used in the 6-year amortization analyses by 40.5 basis points over the prior year. Furthermore, the weighted average interest rates used in the 12-year amortization analyses are 89 basis points higher than the rates used previously. These differences also reflect a steepening of the yield curve in the 6- to 12-year range when compared to last year's analyses.

During Fiscal Year 2009 and Fiscal Year 2010, the California Department of Transportation ("Department") accelerated the construction of many federally eligible projects, which resulted in a significant increase of federal receipts beginning in calendar year 2011. Given that this increase in federal deposits is expected to last only through 2014, secondary analyses of bonding capacity were conducted based on the assumption that federal receipts were $2.70 billion, which is the historical level of deposits prior to 2011 and the level that is expected after 2014. The analyses under these assumptions, of course, show much lower ranges of bonding capacity than is shown when using the actual 2013 federal aid receipts.

These analyses demonstrate that a wide range of circumstances, including policy, revenues, and market factors, can affect the existing capacity for future State GARVEE financings. Therefore, the analyses should be used as a tool for understanding the implications of alternative project applications and the related potential GARVEE bond structures that the Commission may be asked to consider over the coming year.

I. Purpose of Analyses

The following analyses are provided to assist the Commission in meeting the requirements of SB 928 (Chapter 862), sponsored by the STO to ensure that California has the necessary state legislative authority to make use of this financing tool for accelerating high priority transportation projects. The analyses relate specifically to the requirements in Section 14553(b) of the Government Code, pursuant to which the Commission and the STO shall annually prepare an analysis of the bonding capacity of federal transportation funds deposited in the State Highway Account in the State Transportation Fund. The analyses have been performed consistent with the GARVEE bonds bonding capacity guidelines provided in Government Code Section 14553.4, whereby the STO may not authorize the issuance of additional GARVEE bonds if the annual debt service on all outstanding GARVEE obligations in any fiscal year would exceed 15 percent of the total amount of federal transportation funds deposited into the State Highway Account in the State Transportation Fund for any consecutive 12-month period within the preceding 24 months.

The following analyses are intended to measure the capacity of the State Highway Account to support future issuance of GARVEE bonds, given:

1. the historical record of federal deposits to the State Highway Account (we examine only deposits of pledged funds);
2. requirements preceding any issuance of additional bonds under the Master Trust Indenture; and
3. the “statutory cap” on total outstanding GARVEE bonds.

II. The 2004 and 2008 GARVEE Financings

The Series 2004A Bonds are secured by a Master Trust Indenture dated February 1, 2004, as amended and supplemented by a First Supplemental Indenture dated February 1, 2004, by and among the Treasurer, the Commission and the Department. The Series 2008A Bonds are secured by the Master Trust Indenture dated February 1, 2004, as amended and supplemented by a Second Supplemental Indenture dated October 1, 2008, by and among the Treasurer, the Commission and the Department. The Series 2004A and Series 2008A Bonds and all future bonds and obligations issued under the Master Trust Indenture are secured solely by the Trust Estate, as defined in the Master Trust Indenture, which consists solely of federal transportation funds. The primary source of federal transportation funds is the amount appropriated to the State by the federal government pursuant to Federal Aid Authorization, pursuant to Title 23 of the U.S. Code authorizing federal funding of state transportation projects.

The Department entered into a Memorandum of Agreement with the Federal Highway Administration (“FHWA”) in anticipation of reimbursement by FHWA for debt service and other bond-related costs associated with the federal-aid projects approved by the FHWA.

The Master Trust Indenture provides for the issuance of additional bonds on parity with the Series 2004A Bonds. Any additional parity bonds or other bonds issued on a basis subordinate to the Series 2004A Bonds must comply with the “statutory cap.”

The $657,713,000 of Series 2004A bond proceeds were generated to pay a portion of the costs of acquisition of right-of-way and/or construction costs for eight federal-aid State Transportation Improvement Program ("STIP") projects approved by the Commission. All eight projects have been completed.

The $98,000,000 of Series 2008A bonds proceeds were generated to pay for the construction of two federal-aid State Highway Operation and Protection Program ("SHOPP") projects approved by the Commission: Placer County – Interstate 80 Pavement Rehabilitation and Nevada and Sierra Counties – Interstate 80 Pavement Rehabilitation. Both projects have been completed.

III. Need for Sensitivity Analyses

There are multiple factors that will influence the State's future capacity to issue GARVEE bonds. These factors include the final maturity, interest rates and the available revenues for the additional bonds test. For this reason, no single bonding capacity analysis is sufficient for purposes of guiding the Commission's evaluation of the potential for future use of GARVEE bonds. In order to facilitate an informed consideration of future applications with structures and terms not yet known to the Commission, we have performed a series of "sensitivity analyses" under alternative scenarios. The final maturity of the bonds and the assumed interest rates are the primary variable factors that are incorporated into our sensitivity analyses.

IV. Information Sources

Pledged Revenues:

In performing these bonding capacity analyses, the STO is using data obtained from the Department regarding deposits into the State Highway Account in the State Transportation Fund from federal transportation funds. The amounts provided by the Department represent federal funds that can be legally pledged under the Master Trust Indenture for payment of the Bonds. The federal transportation funds that are legally available for payment of debt service include those derived from Federal Aid Authorization under Title 23, including apportioned funds (i.e., National Highway System, bridges and the federal surface transportation programs, and amounts available under minimum guarantees) with corresponding Obligation Authority.

Starting with the 2009 bonding capacity report, to be consistent with Section 14553.4 of the Government Code, the total annual federal aid receipts, without exceptions, have been used to calculate the annual GARVEE bonding capacity. This information was provided on a monthly basis for the period of January 2012 through December 2013. See **Attachments A-1 and A-2** for the monthly deposits data and related calculations. The additional bonds test is based on the highest consecutive 12 months of pledged revenue deposits during the prior 24-month period. These historic annual deposits are a known quantity at any given point in time, but are clearly subject to change over time, and must be re-examined at the time of each potential GARVEE bond issuance.

Final Maturities:

The analyses in the report assume that any additional GARVEE bonds issued in 2014 will have final maturities in 2020 and 2026.

Interest Rate Assumptions:

Estimates of potential interest costs under various scenarios were developed by the STO based on the 'A' index published by Municipal Market Data ("MMD"), a widely used industry benchmark. The interest rate assumptions used for the analyses are based on the weighted average coupon, using a level debt solution for each final maturity (or amortization period), which reflects the structure of the Series 2004A and Series 2008A Bonds.

V. Summary of Alternative Assumptions

For the 2014 bonding capacity analyses, we used the MMD 'A' interest rate scale. For prior analyses, we used the MMD 'AA' scale which corresponded to the majority of the underlying ratings of the Series 2004A and Series 2008A Bonds. However, in September 2012 Fitch Ratings downgraded the underlying ratings of these bonds to 'A+', and in January 2014 Moody's Investors Service downgraded the underlying ratings to 'A1'. Both rating agencies reported that the Highway Trust Fund expenditures exceeding federal gasoline tax revenues over the past several years contributed to the downgrades. Thus, we have assumed that a new issuance of GARVEE Bonds in the current environment would also carry underlying ratings that are split among the 'A' and 'AA' grades.

The two alternative scenarios for market conditions used in these analyses are as follows:

1. **Base Case:** Based on the February 28, 2014 MMD ‘A’ interest rate scale.
2. **Market Sensitivity Case:** Base Case plus 100 basis points.

Many observers believe that over time interest rates could increase from the current levels. For this reason, and based on the expected short-term maturity structure of the State’s current and future GARVEE obligations, a 100 basis point increase in interest rates is used for the market sensitivity analyses.

Two alternatives for the final maturity of the bonds were analyzed for each case. The table below summarizes the range of assumptions for the sensitivity analyses. The different scenarios for each factor combine for a total of four different analyses.

Factors	Range of Assumptions
Final Maturity	Two scenarios: at 6 and 12 years from date of issuance
Assumed Interest Rates	Two scenarios: one at ‘A’ MMD market rates on February 28, 2014 and one at 100 basis points above the February 28, 2014 ‘A’ MMD market rates

See **Attachment B** for the detailed assumptions used in each sensitivity analysis.

It should also be noted that the current analyses, by necessity, require significant simplification as compared to the myriad of structuring nuances that would be involved in actual bond sales. As a result, certain ambiguities or alternative interpretations could lead to somewhat differing results in practice. One example of a simplification, common to all scenarios, is the assumption that all GARVEE bonds within the capacity of a given scenario would be issued in a single year and not staggered over multiple years, as typically would be expected in a bonding program of significant magnitude.

If, instead, such bonds were staggered and this financing structure was assumed to have a fixed “end date” represented by the assumed final maturity used in each scenario, each resulting measure of maximum bonding capacity would have to be adjusted downward. This would be necessary because the GARVEE bonds issued in subsequent years would have a shorter period during which to amortize principal before the fixed end date. This would increase the annual debt service necessary for a given par amount of bonds, causing a reduction in total bonding capacity, assuming a fixed amount of annual revenues for each scenario.

Alternatively, this simplification would not have this constraint on capacity if future financings were assumed to be structured on a “rolling maturity” basis; that is, with each GARVEE bond issued in subsequent years within each scenario having exactly the same underlying terms, such as total years to maturity and interest rate, regardless of the timing of any future bond issuance. This latter simplification would also assume a fixed amount of annual revenues for each scenario.

This discussion is offered as an example, which is by no means exhaustive, of the implications of the necessary simplifications involved in any analysis of bonding capacity given current uncertainty about the actual conditions that will exist at the time of any future issuance of GARVEE bonds or obligations. Therefore, care should be exercised in using these analyses to avoid erroneous interpretations or conclusions.

VI. Summary of Results

Due to an increase in the weighted average interest rates used for this year's analyses coupled with a $233 million decline in federal aid receipts, the current analyses resulted in a lower bonding capacity than last year's results. As of February 28, 2014, the weighted average interest rate for 'A' rated bonds with a 6-year final maturity was 1.51 percent (an increase of 0.405 percent compared to last year's level) and with a 12-year final maturity was 2.67 percent (an increase of 0.89 percent compared to last year's level). The variation between maturities is attributable to a steeper MMD yield curve in the 6- to 12-year range compared to last year. However, due to the significant increase of federal receipts beginning in calendar year 2011, these analyses continue to indicate a much higher bonding capacity than in the years prior to the federal receipts increases. The Department projects that the annual federal receipts will decrease toward the $3.2 billion level in 2014 and then toward the $2.7 billion level thereafter, which was the approximate level of deposits prior to 2011.

The analyses show that a bond issuance with a 6-year maturity corresponds to a bonding capacity ranging from approximately $2.77 billion (Market Sensitivity Case) to approximately $2.87 billion (Base Case). These levels represent a decrease of approximately $292.95 million and $303.79 million, respectively, compared to 2013, or a decrease of approximately 9.6 percent for a 6-year maturity compared to last year's levels.

The Commission policy established 12 years as the maximum maturity for GARVEE bonds. If future bond issues are structured with a 12-year amortization period consistent with the current Commission policy and at current interest rate levels, the remaining capacity for issuance of GARVEE bonds would be from approximately $4.82 billion (Market Sensitivity Case) to approximately $5.12 billion (Base Case). These levels represent a decrease of approximately $722.03 million and $775.18 million, respectively, compared to 2013, or a decrease of approximately 13.0 percent for a 12-year maturity compared to last year's levels.

Given that the federal deposits into the State Highway Account is expected to trend downward in 2014 and then return to their pre-2011 levels thereafter, additional analyses of bonding capacity were conducted based on the assumption that federal receipts were $2.70 billion. To provide specific ranges under this assumption, the 2014 capacity was calculated using two methods:

1) **Based on total receipts in 2013 being $2.70 billion** and assuming that the receipts are allocated each month at the same percentages as the actual 2013 receipts in order to get a new highest consecutive 12-month total within the preceding 24 months. This assumption shows a bonding capacity ranging from $2.77 billion (6-year amortization, Market Sensitivity Case) to $5.12 billion (12-year amortization, Base Case). This result is no different from the results presented above, since the highest consecutive 12-month total revenues deposited within the previous 24 months occurs in the period January 2012 – December 2012 under both scenarios.

2) **Based on the highest consecutive 12-month total within the preceding 24 months being $2.70 billion** (under assumption #1, the highest consecutive 12-month total within the preceding 24 months is $3.92 billion). Assumption #2 shows a bonding capacity ranging from $1.77

billion (6-year amortization, Market Sensitivity Case) to $ 3.26 billion (12-year amortization, Base Case).

Under the current analyses, a longer amortization period would increase the additional bonding capacity. If the Commission policy changes to allow a longer maximum maturity, the bonding capacity would change accordingly.

The following table summarizes key results of our analyses based on the actual federal aid receipts deposited into the State Highway Account in 2013. Detailed worksheets supporting the results can be found in **Attachments C, D-1, and D-2**.

Summary of Results for GARVEE Bonding Capacity Sensitivity Analyses		
Final Maturity Amortization Period	**Base Case February 28, 2014 'A' MMD Scale**	**Market Sensitivity Case Base Case plus 100 Basis Points**
6 years	$2.87 billion	$2.77 billion
12 years	$5.12 billion	$4.82 billion

VII. California Transportation Commission Policy

The Commission adopted a GARVEE policy in December 2003. This policy extends through the next Federal Transportation Reauthorization Act. The current transportation reauthorization act has been extended through September 30, 2014.

The policy, contained in Commission Resolution No. G-03-21, is as follows:

- Debt Limit. The Commission limits annual GARVEE debt service to 15 percent of qualifying federal revenues. This limit will be calculated on the basis described in Section 14553.4 of the Government Code (i.e., 15 percent of the total amount of federal transportation funds deposited in the State Highway Account for any consecutive 12-month period within the preceding 24 months). In 2004, SB 1507 amended the statutory cap from a 30 percent limit to a 15 percent limit, which aligned it with the Commission's policy.

- Term. Each bond is structured for debt service payments over a term of no more than 12 years.

- Project Selection. The Commission selects projects for accelerated construction through the use of GARVEE bonding. The selection will be made through the programming process for the STIP and the SHOPP. The Commission will select projects that are major improvements to corridors and gateways for interregional travel and goods movement. Major improvements include projects that increase capacity, reduce travel time, or provide long-life rehabilitation of key bridges or roadways.

VIII. Recent Events

The Department does not anticipate any new GARVEE bond issuance in the near future.

IX. Conclusion

As the above analyses show, the ultimate capacity existing for the State's future GARVEE financings will depend on a wide range of circumstances over time, including market conditions, maturity structures, revenues, and other factors that may be considered by the Commission.

We are hopeful that these analyses will be useful in considering the structuring options that are available for GARVEE financings, in addition to meeting the immediate goal of assisting the Commission in preparing its annual report.

ATTACHMENT A-1

FEDERAL DEPOSITS INTO THE STATE HIGHWAY ACCOUNT

Cumulative 12-Month Federal Deposits into the State Highway Account Over 24-Month Period, ending December 31, 2013

Period Covered	12-Month Total Revenues Deposited	
Jan 12 - Dec 12	**$3,921,298,254.00**	**Highest 12-Month Total**
Feb 12 - Jan 13	**$3,898,161,962.82**	
Mar 12 - Feb 13	**$3,884,177,918.91**	
Apr 12 - Mar 13	**$3,724,439,131.44**	
May 12 - Apr 13	**$3,833,334,246.82**	
Jun 12 - May 13	**$3,790,679,079.01**	
Jul 12 - Jun 13	**$3,806,599,946.11**	
Aug 12 - Jul 13	**$3,718,753,314.86**	
Sep 12 - Aug 13	**$3,611,473,461.40**	
Oct 12 - Sep 13	**$3,573,078,413.26**	**Lowest 12-Month Total**
Nov 12 - Oct 13	**$3,655,130,074.74**	
Dec 12 - Nov 13	**$3,626,622,411.92**	
Jan 13 - Dec 13	**$3,687,684,103.76**	
	$3,748,571,716.85	**Average 12-Month Total**

Source: California Department of Transportation

ATTACHMENT A - 2

FEDERAL DEPOSITS INTO THE STATE HIGHWAY ACCOUNT

	Monthly Deposits of Legally Pledged Federal Transportation Fund				
	2009	2010	2011	2012	2013
Month	**Deposit Amount**	**Deposit Amount**	**Deposit Amount**	**Deposit Amount**	**Deposit Amount**
January	$248,068,100.96	$234,302,379.53	$389,063,404.04	$289,148,449.88	$266,012,158.70
February	$85,502,982.39	$130,134,373.39	$155,558,369.65	$213,989,165.30	$200,005,121.39
March	$269,024,485.16	$213,127,122.15	$236,920,034.82	$438,321,351.25	$278,582,563.78
April	$159,570,185.02	$172,566,406.90	$185,631,604.91	$231,244,325.22	$340,139,440.60
May	$170,883,515.71	$130,817,619.08	$399,251,077.85	$312,928,985.45	$270,273,817.64
June	$297,052,028.78	$300,743,391.19	$303,302,807.89	$269,369,114.62	$285,289,981.72
July	$327,450,638.69	$273,125,617.57	$183,338,941.67	$450,815,965.63	$362,969,334.38
August	$267,037,277.08	$263,609,660.26	$582,687,851.42	$403,368,240.18	$296,088,386.72
September	$100,134,952.10	$314,225,529.17	$315,712,808.68	$406,397,077.43	$368,002,029.29
October	$328,171,254.52	$195,447,409.45	$414,379,161.36	$398,397,382.31	$480,449,043.79
November	$115,307,706.41	$242,323,185.78	$456,066,414.04	$284,658,403.31	$256,150,740.49
December	$318,173,222.40	$323,798,884.94	$251,221,938.27	$222,659,793.42	$283,721,485.26
TOTAL	$2,686,376,349.22	$2,794,221,579.41	$3,873,134,414.60	$3,921,298,254.00	$3,687,684,103.76
Monthly Average	$223,864,695.77	$232,851,798.28	$322,761,201.22	$326,774,854.50	$307,307,008.65

Source: California Department of Transportation.

ATTACHMENT B

DETAILED ASSUMPTIONS
FOR SENSITIVITY ANALYSES

Summary of Assumptions for GARVEE Bonding Capacity Sensitivity Analyses

Base Case – Current Market Conditions

	Factors	Assumptions	Comments
	Final Maturity	6 and 12 years	Analyses run at each final maturity listed at left.
	Interest Rates	1.51% and 2.67%	Rates indicated relate to each respective final maturity above; listed rates represent the weighted average coupon for a bond issue sizing with level annual debt service.
	Annual Revenues	$3,921,298,254.00	The Treasurer may not authorize the issuance of the bonds if the annual debt service on all outstanding GARVEE obligations would exceed 15 percent of the State’s historical annual deposits in the State Highway Account from federal funding.

Market Sensitivity Case – Alternative Market Conditions

	Factors	Assumptions	Comments
	Final Maturity	6 and 12 years	Analyses run at each final maturity listed at left.
	Interest Rates	2.51% and 3.67%	Rates indicated relate to each respective final maturity above; listed rates represent the weighted average coupon for a bond issue sizing with level annual debt service.
	Annual Revenues	$3,921,298,254.00	The Treasurer may not authorize the issuance of the bonds if the annual debt service on all outstanding GARVEE obligations would exceed 15 percent of the State’s historical annual deposits in the State Highway Account from federal funding.

ATTACHMENT C

DETAILED WORKSHEET
FOR SENSITIVITY ANALYSES

OVERVIEW OF GARVEE BONDING CAPACITY ANALYSES	
The bond test requires that the annual payment obligations of all outstanding notes in any fiscal year do not exceed 15 percent of the total amount of Federal Transportation Funds deposited into the State Highway Account for the highest consecutive 12-month period within the preceding 24 months. The maximum Annual Debt Service on the outstanding Bonds has been subtracted from the highest 12 consecutive months of deposits during the preceding 24 months in order to calculate the remaining Additional Debt Capacity.	
	(Dollars in Thousands)
Base Case	
Maximum Par Amount of Bonding Capacity	$2,869,701
Interest rate	1.51%
Maximum Assumed Annual Debt Service *	$503,906
Term of Bond Issue	**6**
Market Sensitivity	
Maximum Par Amount of Bonding Capacity	$2,774,489
Interest rate	2.51%
Maximum Assumed Annual Debt Service *	$503,906
Term of Bond Issue	**6**
Base Case	
Maximum Par Amount of Bonding Capacity	$5,116,485
Interest rate	2.67%
Maximum Assumed Annual Debt Service *	$503,906
Term of Bond Issue	**12**
Market Sensitivity	
Maximum Par Amount of Bonding Capacity	$4,821,365
Interest rate	3.67%
Maximum Assumed Annual Debt Service *	$503,906
Term of Bond Issue	**12**
*15% of legally-pledged Federal Transportation Funds deposited into the State Highway Account less maximum annual debt service for the Series 2004A Bonds and Series 2008A Bonds.	
(white / non-shaded)	= Base Case Scenarios based on February 28, 2014 'A' MMD Scale
(yellow / shaded)	= Market Sensitivity Case Scenarios based on February 28, 2014 'A' MMD Scale Plus 100 Basis Points

GARVEE BONDING CAPACITY

Base Case

Highest 12-Month Revenue ($ in 000's)	**$3,921,298**
Debt Service Test (15% of Revenue)	**$588,195**
Less: Existing Maximum Annual Series 2004A & 2008A D/S	**-$84,289**
Remaining Maximum Annual Debt Service Capacity	**$503,906**

(Dollars in Thousands)

	6 Years	**12 Years**
Assumed Date of Issuance	2014	2014
Assumed Final Maturity	2020	2026
Assumed Interest Rate[1]	1.51%	2.67%
Par Capacity	**$2,869,701**	**$5,116,485**
Annual Debt Service Required	$503,906	$503,906

[1] The assumed interest rates are based on the February 28, 2014 'A' MMD bond scale. The rates used are the weighted average coupon for a level debt service bond sizing based upon the final maturity in each scenario.

ATTACHMENT D-2

DETAILED SUMMARY TABLES
FOR SENSITIVITY ANALYSES

GARVEE BONDING CAPACITY

Market Sensitivity Case

Highest 12-Month Revenue ($ in 000's)	**$3,921,298**
Debt Service Test (15% of Revenue)	**$588,195**
Less: Existing Maximum Annual Series 2004A & 2008A D/S	**-$84,289**
Remaining Maximum Annual Debt Service Capacity	**$503,906**

(Dollars in Thousands)

	6 Years	12 Years
Assumed Year of Issuance	2014	2014
Assumed Final Maturity	2020	2026
Assumed Interest Rate[1]	2.51%	3.67%
Par Capacity	**$2,774,489**	**$4,821,365**
Annual Debt Service Required	$503,906	$503,906

[1] The assumed interest rates are based on the February 28, 2014 'A' MMD bond scale (increased by 100 basis points (1%) for market fluctuations). The rates used are the weighted average coupon for a level debt service bond sizing based upon the final maturity in each scenario.