

PROPOSAL FOR ACCELERATION AND EXPANSION OF TURNPIKE CAPITAL PROGRAM

EXISTING TURNPIKE SYSTEM

EXISTING TOLL STRUCTURE

CURRENT MAJOR TURNPIKE CAPITAL PROJECTS

ACCELERATION & EXPANSION OF TURNPIKE CAPITAL PROJECTS

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EXISTING TURNPIKE SYSTEM The existing Turnpike System is 89 miles long and consists of 3 segments: Blue Star Turnpike (I-95), Spaulding Turnpike (NH 16) and F.E. Everett Turnpike (US3, I-293 & I-93). The system is comprised of 656 lane miles, 49 interchanges, 170 bridges, 9 toll plazas, 3 rest areas, 5 maintenance facilities, 6 park'n'rides, and a recreational park. In accordance with state statutes and bond covenants, the Turnpike Fund is an enterprise fund, where all Turnpike revenue generated on or by the system must be used on the Turnpike System.

Turnpike revenue pays for the operation and maintenance costs (i.e. toll operation, E-ZPass, bridge and highway maintenance, winter maintenance, state police enforcement, welcome center operation, etc.), debt service on the \$401M of outstanding bonds (secured to finance construction of various segments of the Turnpike over the last 25 years), Renewal & Rehabilitation (TRR) program to ensure the system is generally in good working order, and for capital improvements undertaken on the system.

In FY17, there were 120.2M toll transactions generated on the Turnpike System that resulted in the collection of \$128.1M in toll revenue. It is interesting and important to note that 55% or \$70.1M of the total toll revenue collected in FY17 is from out-of-state travelers.

EXISTING TOLL STRUCTURE The table below lists the current toll structure for Class 1 passenger vehicles and class 5 commercial vehicles.

	Class 1 Toll Rates		Class 5 Toll Rates	
	Current Rates		Current Rates	
	*Effective Oct 22, 2007		*Effective Oct 22, 2007	
	Cash Toll Rate	**NH E-ZPass	Cash Toll Rate	**NH E-ZPass
Hooksett Main Line	\$1.00	\$0.70	\$2.00	\$1.80
Hooksett Ramp	\$0.50	\$0.35	\$1.00	\$0.90
Bedford Main Line	\$1.00	\$0.70	\$2.00	\$1.80
Merrimack - Exit 10 Ramp	\$0.50	\$0.35	\$1.00	\$0.90
Merrimack - Exit 11 Ramp	\$0.50	\$0.35	\$1.00	\$0.90
*Hampton Main Line	\$2.00	\$1.40	\$4.00	\$3.60
Hampton Side	\$0.75	\$0.53	\$1.50	\$1.35
Dover Main Line	\$0.75	\$0.53	\$1.50	\$1.35
Rochester Main Line	\$0.75	\$0.53	\$1.50	\$1.35
* Hampton Main Line toll rates were increased on July 1, 2009 from \$1.50 to \$2.00 (class 1 toll)				
** Passenger Vehicles (Class 1 -4) receive a 30% toll discount with NHE-ZPass transponder				
** Commercial Vehicles (Class 5 -12) receive a 10% toll discount with NHE-ZPass transponder				

A system wide toll increase was passed by the Executive Council effective October 22, 2007 to support the then \$420M capital program, which focused on red list bridges and safety and congestion improvements on the Turnpike System. A toll increase focused solely at the Hampton Mainline Plaza was passed by the Executive Council effective July 1, 2009 to fund the acquisition of the 1.6-mile segment of I-95 from the Portsmouth Circle to the State line, Open Road Tolling at the Hampton Mainline Plaza, capacity improvements on NH107 bridge in Seabrook and construction of noise barrier along I-95 in Portsmouth as part of HB 391 (2009 session).

CURRENT MAJOR TURNPIKE CAPITAL PROJECTS The current draft TYP (dated August 23, 2017) contains the following major Turnpike capital projects with construction timeframes that can be progressed under the current toll structure.

- Construction Dover End & GSB Rehabilitation (\$79M): **2019 - 2022**
- Nashua-Bedford FEET Widening (\$127M): **2022 - 2026**
- Manchester Exit 7 Reconstruction (\$52M): **2024 - 2026**
- Manchester Exit 6 Improvements & FEET Widening (\$99M): **2026 - 2029**
- Bow-Concord: I-93 Widening (I-89 to I-393) (\$132M)*: **2027 – 2033**

***Only includes Tpk. portion (south of Exit 14), does not include Federal portion, which has an estimated cost of \$178M with construction completion in 2033 contingent on average \$27M per year in federal funds being committed to the project's construction in years 2029 – 2033.**

The Dover end (or Exit 6) construction is the second to last construction contract underway as part of the overall 3.6-mile Newington-Dover Spaulding Turnpike improvements and Little Bay Bridge widening project. This construction contract will complete the Spaulding Turnpike and Little Bay Bridge work, which expands the Turnpike from 2-lanes in each direction to 4 lanes over the Little Bay Bridges and between Exits 3 and 6. Construction completion for the Dover contact is Fall 2020.

The last Newington-Dover construction contract involves the rehabilitation of the General Sullivan Bridge to provide a bicycle, pedestrian and alternative modes connection across Little Bay. Due to the condition of the historic General Sullivan Bridge and increased cost of rehabilitation, the Department is reviewing rehabilitation options, taking into consideration the cultural significance of the bridge, as well as its functionality, durability, and maintenance requirements to ensure a cost-effective solution is advanced to final design and construction. Presently, the estimated cost of the rehabilitation is \$31.5M and involves major truss rehabilitation/replacement atop the existing substructure with construction from 2019 through 2022.

The Nashua to Bedford FEET widening project involves widening three segments of the Turnpike from 2-lanes in each direction to 3-lanes in each direction to provide a consistent 6-lane facility from Nashua to NH101 in Bedford. The project is in the preliminary engineering phase with a selected alternative nearly identified and Public Hearing targeted for spring of 2018. The estimated construction cost is \$127M. Based on the current toll structure, construction cannot begin until 2022 and cannot be completed until 2026.

The Manchester Exit 6 & 7 Interchange Reconstruction and FEET widening project involves addressing the serious safety, capacity and access related deficiencies along a 3.5-mile segment of the FEET (I-293) between Exit 5 and north of Exit 7 in Manchester. The project is in the preliminary engineering phase with a selected alternative nearly identified and Public Hearing targeted for summer of 2018. The estimated construction cost is \$151M. Based on the current toll structure, construction cannot begin until 2024 and cannot be completed until 2029. The consultant for this project has completed an assessment of the existing conditions noting many deficiencies and has compiled crash data for the study area. In total 549 crashes were reported for the 7-year period of 2009-2015 with high crash locations noted at the ramp junctions, major intersections and along the FEET between Exits 5 and 6 and at Exit 7. Two fatal crashes were reported in 2009, one just north of the Exit 5 on-ramp merge and the other between the Exit 6 off and on-ramps. Also concerning is that the crash rate is

increasing with 35% more crashes in the 3-year period from 2013-2015 as compared with the 3-year period from 2009-2011.

The Bow-Concord I-93 Improvements project involves widening I-93 from I-89 to north of Exit 15 (I-393) to add an additional lane in each direction and collector/distributor roads, as well as reconstruct/modify five interchanges (I-89/I-93 including Exit 1, Exit 12, Exit 13 NB off-ramp, Exit 14, and Exit 15). Presently, the physical limit of the Turnpike ends on I-93 at the northern end of the Exit 14 Bridge, which results in this project being funded with federal and turnpike funds. The project is in the preliminary engineering phase with a selected alternative nearly identified and Public Hearing targeted for spring of 2018. The estimated construction cost of the project is \$290M. Based on the current toll structure, construction cannot start until 2026 with the Turnpike portion (south of Exit 14) not completed until 2031 and federal portion not completed until 2033 (under the presumption that an average of \$27M per year of federal funds are committed to the project's construction in 2029 thru 2033).

Travel time data is being collected for the 10-mile segment of I-93 from the Hooksett toll plaza to Exit 15 in Concord. Probe data shows travelers experience an average 15-minute peak delay on Fridays in the late afternoon to early evening during the weeks from Memorial Day to Columbus Day. This delay is expected to grow significantly by the completion date of 2033. This corresponds to a cost of \$5.36 to the individual driver experiencing the average peak delay of 15 minutes. In total, delays alone on Fridays cost users of the corridor \$1.6M annually. This has a negative effect on the state's economy and tourism, where travelers may decide to shorten their travel route or pick another area to visit, should delay and congestion continue to grow and become intolerable.

ACCELERATION & EXPANSION OF TURNPIKE CAPITAL PROJECTS The following major Turnpike capital projects can be accelerated and additional projects/programs added under the timeframes listed below with a toll increase and \$50M Bond (FY22), where the users of the facilities would benefit from and pay for the improvements to the system. Total capital investment of \$754M over Ten Year Plan period.

➤ Construction Dover End & GSB Rehabilitation (\$79M):	2019 - 2022
➤ Construction of FEET Widening , Nashua-Bedford (\$122M):	2020 – 2023 (completed <u>3 yrs</u> sooner)
➤ Manchester Exit 7 Reconstruction (\$49M):	2021 – 2023 (completed <u>3 yrs</u> sooner)
➤ Manchester Exit 6 Improvements & FEET Widening (\$90M):	2023 – 2025 (completed <u>4 yrs</u> sooner)
➤ *Bow-Concord: I-93 Widening (I-89 to I-393) (\$261M):	2022 – 2027 (completed <u>6 yrs</u> sooner)
➤ Dover-Rochester-Somersworth Feasibility Study (\$2M):	2020 (advanced 2 years)
➤ **Dover & Rochester AET mainline plazas (\$12M):	2020-2023 (advanced 1 year)
➤ **Bedford AET mainline plaza (\$7.3M):	2020-2023 (advanced 1 year)
➤ Type II Soundwall Program (\$4M/year, total \$36M):	2020-2028 (new program)
➤ Hampton ORT expansion to 6 lanes (\$7.3M):	2021 (new project)
➤ **Hooksett Ramp AET project (\$2M):	2020 (new project)
➤ Merrimack Exit 10 & Exit 11 Toll Removal (\$1.2M):	2021 (new project)
➤ Manchester I-293 Widening Feasibility Study (\$2.0M):	2021 (new project)
➤ Portsmouth I-95 HL Bridge Widening Feasibility Study (\$2.0M):	2021 (new project)
➤ Dover Spaulding Turnpike Exit 6 to 9 Feasibility Study (\$2.0M):	2021 (new project)
➤ Concord I-93 Merrimack River Bridges Rehabilitation (\$32M):	2027-2028 (new project)
➤ Transportation Demand Management (\$3M/year, total \$27M):	2020-2028 (new program)

***Legislative authorization (similar to authorization for the I-95 extension completed in 2009) is needed to extend the Turnpike from Exit 14 to the northern end of the I-93 Merrimack River Bridge to encompass the Bow-Concord project and convert the Merrimack River Bridges to be turnpike funded.**

****Legislative authorization required to install All Electronic Tolling (AET) plaza.**

NEW TOLL STRUCTURE (TOLL INCREASE) The table below lists the current toll rates and proposed toll rates effective March 1, 2018 to provide the additional revenue needed to accelerate the major Turnpike capital projects and fund the additional capital investments listed in the previous section.

Class 1 Toll Rates	Current Rates		Proposed Rate Increase	Proposed Toll Increase		Estimated Additional Annual Toll Revenue (millions)
	*Effective Oct 22, 2007			Effective March 1, 2018		
	Cash Toll Rate	NH E-ZPass	Cash Toll Rate	NH E-ZPass		
Hooksett Main Line	\$1.00	\$0.70	\$0.50	\$1.50	\$1.05	\$11.1
Hooksett Ramp	\$0.50	\$0.35	\$0.25	\$0.75	\$0.53	\$0.6
Bedford Main Line	\$1.00	\$0.70	\$0.50	\$1.50	\$1.05	\$6.9
Merrimack - Exit 10 Ramp	\$0.50	\$0.35		\$0.50	\$0.35	
Merrimack - Exit 11 Ramp	\$0.50	\$0.35		\$0.50	\$0.35	
Hampton Main Line	\$2.00	\$1.40	\$0.50	\$2.50	\$1.75	\$11.7
Hampton Side	\$0.75	\$0.53	\$0.25	\$1.00	\$0.70	\$3.0
Dover Main Line	\$0.75	\$0.53	\$0.25	\$1.00	\$0.70	\$2.9
Rochester Main Line	\$0.75	\$0.53	\$0.25	\$1.00	\$0.70	\$2.0

* Hampton Main Line toll rates were increased on July 1, 2009 from \$1.50 to \$2.00

** Class 5 commercial toll rate is twice class 1 passenger rate. Commercial NHE-ZPass discount is 10%.

Additionally, a frequent user/commuter plan (effective July 1, 2018) would be implemented with the intent to soften the impact of the toll increase on commuters that travel through multiple plazas and pay relatively high monthly tolls. The plan would be NH transponder based and require a valid NH E-ZPass account for the entire month to qualify. Ten additional free trips (transactions) would be provided monthly to commuters that make 40 trips (transactions) monthly. (For example, a NH E-ZPass customer would pay for E-ZPass toll transactions 1 through 40 at the E-ZPass discount toll rate, receive subsequent transactions 41 through 50 free, and pay for subsequent transactions 51 and higher at the E-ZPass discount toll rate based on a calendar month). Transactions do not roll over into subsequent month.

This new toll rate structure with frequent user/commuter plan represents an approximate 27% increase in toll revenue and would generate an estimated \$36M in additional toll revenue per year. \$50M of additional bonding (10-year duration) would be required in FY22 to advance the projects on the schedule shown on the preceding page (this additional \$50M of bonding would utilize the remaining authorized and un-issued bonding authority, which is statutorily set at \$766,050,000). All of the increased revenue would be directed towards capital work on the Turnpike System. Toll increase would be paid by the users of the system with an estimated \$19.6M per year or 54% of the toll increase paid by the out-of-state users of the system.

BENEFITS OF TOLL INCREASE & ACCELERATION OF MAJOR TURNPIKE CAPITAL PROJECTS

- All of the increased revenue would be directed towards capital work on the Turnpike System.
- Toll increase would be paid by the users of the system.
- Users directly benefit from the capital investments made of the system.
- \$19.6M per year or 54% of the toll increase would be paid by the out-of-state users of the system.
- Travel time, reliability of travel, and safety would significantly improve on those segments of the Turnpike System
- The construction industry would see a significant increase in Turnpike Capital spending resulting in increased job creation.
- Funding for a much needed Type II Soundwall program at \$4M per year (\$36M in this TYP period would address nearly 14 miles or roughly 15 priority locations along the Turnpike System)
- Funding for feasibility studies to identify potential problems and conceptual solutions to the next wave of Turnpike needs such as potential improvements to the FEET in Manchester from NH101 to

Exit 5 that is currently at capacity during peak hours of the weekday; potential expansion possibilities for the I-95 High Level Bridge that is at capacity during summer weekends; potential improvements to the Spaulding Turnpike in Dover between Exits 6 and 9.

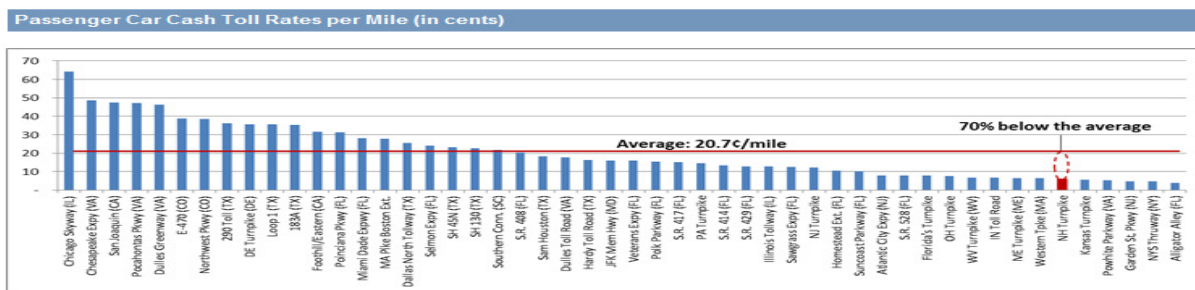
- Funding for a transportation demand management program at \$3M per year for projects that reduce future travel demand on the Turnpike System (i.e. alternative modes of travel such as transit, bike, rail).
- Extension of the Turnpike System to the northern end of the Merrimack River Bridges in Concord to encompass the northern end of the Bow-Concord project would complete the entire Bow-Concord project by 2027 and free up nearly \$180M in future federal funds to be used elsewhere across the state. Also allow federal funds in the amount of \$32M presently dedicated to Merrimack River Bridges project in Concord (project #41468) to be used elsewhere across the state to address an additional 11 Red List bridges and effectively reduce the state’s red list bridge total.

STEPS TO ENACT TOLL INCREASE & ASSOCIATED LEGISLATIVE AUTHORIZATIONS NEEDED TO ACCELERATE MAJOR PROJECTS

- Resolution from the Department to the Executive Council to increase tolls (effective March 1, 2018) for council approval in early December to fund accelerated projects and the new projects and programs that will be shown in the draft Ten Year Plan submitted from GACIT to Governor.
- Transmittal of the draft Ten Year Plan submitted from GACIT to Governor at the December 20th GACIT meeting. Accelerated projects and new projects and programs shown in the revised draft TYP.
- Legislative authorization as part of TYP bill for:
 - Extension of Turnpike limits on the FEET (I-93) from Exit 14 bridge to southern limit of I-93 Bridges over the Merrimack River in Concord. Sale of the 1.4-mile segment at the presently estimated value of \$18.5M to the Turnpike System would be consummated in FY19 with funds deposited into the Highway Fund.
 - Implementation of a frequent user / commuter plan (40-trip plan providing additional 10 free trips per month)
 - AET at Dover, Rochester, Bedford and Hooksett ramp
 - Appropriations for advanced construction projects and new projects
 - Appropriations for Type II Soundwall Program and TDM Program

NEW HAMPSHIRE TOLL RATES ARE ECONOMICAL and a great value when compared to toll rates across the country. NH toll rates (6.2 cents per mile overall cash rate) are well below the national average and lower than rates in the neighboring states.

Compared to its peers, NH Turnpike toll rates are below the national average



New Hampshire Toll Plaza	Current Car Cash / NH E-ZPass Rates
Hooksett Ramp, Merrimack Exit 10, Exit 11	\$0.50 / \$0.35
Dover, Rochester, Hampton Side	\$0.75 / \$0.53
Hooksett Main, Bedford Main	\$1.00 / \$0.70
Hampton Main	\$2.00 / \$1.40

Cash rates shown. NH E-ZPass account holders receive a 30% discount on the passenger rate at NH Turnpike plazas. Toll Rate Source: Jacobs Engineering, October 30, 2017.

APPENDIX**Out-of-State Revenue at each Toll Plaza (FY 2017)**

RANKING OF TRAFFIC & REVENUE REPORT							
Fiscal Year 2017							
Plaza	Traffic	Revenue	%	*Out-of-State Revenue	%		
Hampton Main	25,314,562	\$ 54,061,236	42.2 %	\$ 41,943,990	77.6%		
Hooksett Main	27,923,121	\$ 26,118,578	20.4 %	\$ 10,716,522	41.0%		
Bedford	17,544,243	\$ 16,021,316	12.5 %	\$ 5,725,476	35.7%		
Hampton Side	15,097,099	\$ 10,924,831	8.5 %	\$ 4,644,833	42.5%		
Dover Plaza	15,001,042	\$ 10,033,682	7.8 %	\$ 3,084,260	30.7%		
Rochester	10,293,994	\$ 6,850,613	5.3 %	\$ 2,705,318	39.5%		
Merrimack Exit 11	3,254,343	\$ 1,329,542	1.0 %	\$ 287,665	21.6%		
Merrimack Exit 12 (Bedford)	0	\$ 98	0.0 %	\$ -	0.0%		
Hooksett Ramp	2,983,301	\$ 1,498,005	1.2 %	\$ 313,328	20.9%		
Merrimack Exit 10	2,761,679	\$ 1,302,525	1.0 %	\$ 706,223	54.2%		
	120,173,384	\$128,140,427		\$ 70,127,614	55%		
*Estimated cash revenue for NH and out-of-state customers is based on the percentage of E-ZPass NH and out-of-state transactions, which correlate well with the license plate survey information contained in the Technical Memorandum completed by Vollmer Associates dated 9/25/03.							
**Bedford Road closed July 18, 2014							

Historic Toll Rates (1989 – Current)

NH BUREAU OF TURNPIKES									
TOLL RATES - PASSENGER VEHICLES (1989 - CURRENT)									
	1989	1990	2005	2007	2009	Current	Turnpike Length (Miles)	*CPI Adjusted Toll Rate from 1989 (1.99 Factor)	Potential New Toll Rate
Central Turnpike							39.5		
Hooksett Mainline Plaza	\$0.75	\$0.75	\$0.75	\$1.00	\$1.00	\$1.00		\$1.49	\$1.50
Hooksett Ramp Plaza	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50		\$1.00	\$0.75
Bedford Mainline Plaza	\$0.75	\$0.75	\$0.75	\$1.00	\$1.00	\$1.00		\$1.49	\$1.50
Merrimack Exit 10 Ramp Plazas	-	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50		\$1.00	\$0.50
Merrimack Exit 11 Ramp Plazas	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50		\$1.00	\$0.50
Merrimack Exit 12 Ramp Plazas	-	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50		\$1.00	\$0.00
Blue Star Turnpike							16.2		
Hampton Mainline Plaza	\$1.00	\$1.00	\$1.00	\$1.50	\$2.00	\$2.00		\$1.99	\$2.50
Hampton Side Plaza	\$0.50	\$0.50	\$0.50	\$0.75	\$0.75	\$0.75		\$1.00	\$1.00
Spaulding Turnpike							33.2		
Dover Mainline Plaza	\$0.50	\$0.50	\$0.50	\$0.75	\$0.75	\$0.75		\$1.00	\$1.00
Rochester Mainline Plaza	\$0.50	\$0.50	\$0.50	\$0.75	\$0.75	\$0.75		\$1.00	\$1.00
Average Toll Rate per Mile	\$0.039	\$0.039	\$0.039	\$0.056	\$0.062	\$0.062	88.9	\$0.078	\$0.084
	50%	50%	30%	30%	30%	30%			
	Discount on Tokens	Discount on Tokens	E-ZPass Discount	E-ZPass Discount	E-ZPass Discount	E-ZPass Discount			

*Consumer Price Index (CPI-U) data is provided by the U.S. Department of Labor Bureau of Labor Statistic. CPI calculated from consumer price index data from 1989 to 2017 located at <http://www.usinflationcalculator.com/inflation/consumer-price-index-and-annual-percent-changes-from-1913-to-2008/>

Commuter / Frequent User Plan

40 Transactions per Month Program (10 free trips/month after 40)

- Transponder based, passenger vehicles (Class 1)
 - Image tolls (based on a license plate reads will not count)
 - Class mismatches will not count (i.e. vehicle pulling a trailer)
- 40 transactions per month systemwide, 41st thur 50th will be free
- Revenue impact is 1.0% of total revenue or **\$1.7M**
- **30% Discount equates to roughly 12% of total revenue (or \$15.6M based on current toll rate structure)**

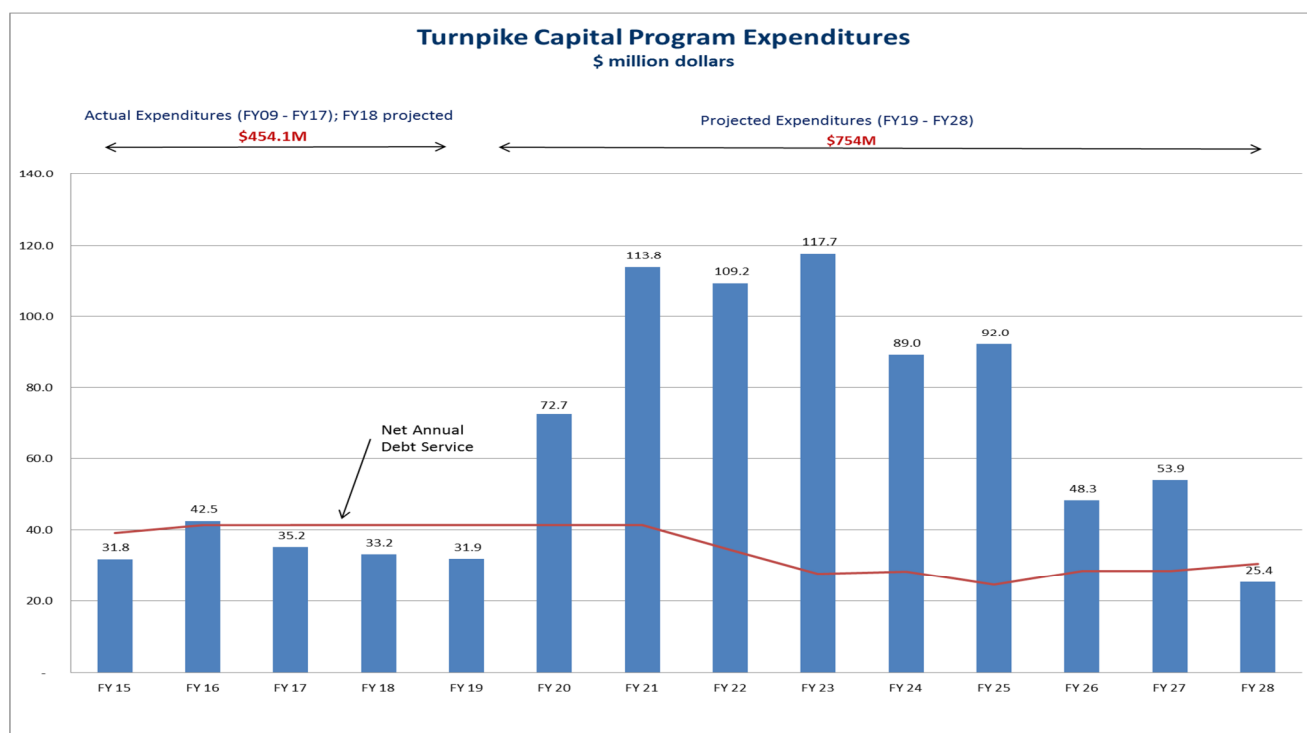
Implement Commuter / Frequent User Program subsequent to toll increase (eff. 7/1/18)

- Commuter/Frequent User Program would soften the impact of the toll increase on everyday commuters, and those that travel through multiple plazas
- Based on Jacobs Study
 - 680,000 transponders (April 2016)
 - 61% or 415,000 are used less than 2x/month
 - **3.5% or 24,000 passenger tags are used more than 40x/month**

Commuter Chart Thru Multiple Plazas (based on 20 days per month of commuting with no other trips on the Turnpike)

	Current E-Zpass Toll Rate	Current E-Zpass Monthly Cost	Proposed E-Zpass Toll Rate	Proposed E-Zpass Monthly Cost	
Two ML Plazas (i.e. Hooksett & Bedford)	\$1.40	\$56.00	\$2.10	\$73.50	31% ↑
Two ML Plazas (i.e. Dover & Rochester)	\$1.05	\$42.00	\$1.40	\$49.00	17% ↑

Accelerated & Expanded Capital Program Expenditures Under Toll Increase Proposal



Capital Program annual expenditures more than double in FY20 over previous years and exceed \$100M per year in FY21 through FY23 when all three major Turnpike capital projects (i.e Nashua-Bedford FEET Widening Manchester Exit 6/7, Bow-Concord I-93 Widening & Improvements). Total projected capital expenditures over Ten Year Plan period (2019-2028) is \$754M.