

PRHTA Final Fiscal Plan 2018 - 2023



DRAFT – April 5, 2018



GOVERNMENT OF PUERTO RICO
Puerto Rico Highways and Transportation Authority

Disclaimer

A final fiscal plan is subject to the approval of the Board of Directors of the Puerto Rico Highways and Transportation Authority as per Law 74 June 23, 1965 as amended and the PRHTA Bylaws.

The Puerto Rico Fiscal Agency and Financial Advisory Authority (“AAFAF”), the Puerto Rico Highways and Transportation Authority (“HTA”), the Government of Puerto Rico (the “Government”), and each of their respective officers, directors, employees, agents, attorneys, advisors, members, partners or affiliates (collectively, with AAFAF, PRHTA and the Government instrumentalities the “Parties”) make no representation or warranty, express or implied, to any third party with respect to the information contained herein and all Parties expressly disclaim any such representations or warranties.

The Parties do not owe or accept any duty or responsibility to any reader or recipient of this presentation, whether in contract or tort, and shall not be liable for or in respect of any loss, damage (including without limitation consequential damages or lost profits) or expense of whatsoever nature of such third party that may be caused by, or alleged to be caused by, the use of this presentation or that is otherwise consequent upon the gaining of access to this document by such third party.

This document does not constitute an audit conducted in accordance with generally accepted auditing standards, an examination of internal controls or other attestation or review services in accordance with standards established by the American Institute of Certified Public Accountants or any other organization. Accordingly, the Parties do not express an opinion or any other form of assurance on the financial statements or any financial or other information or the internal controls of the Government and the information contained herein.

Any statements and assumptions contained in this document, whether forward-looking or historical, are not guarantees of future performance and involve certain risks, uncertainties, estimates and other assumptions made in this document. The economic and financial condition of the Government and its instrumentalities is affected by various financial, social, economic, environmental and political factors. These factors can be very complex, may vary from one fiscal year to the next and are frequently the result of actions taken or not taken, not only by the Government and its agencies and instrumentalities, but also by the Financial Oversight and Management Board for Puerto Rico and other third party entities such as the government of the United States. Examples of these factors include, but are not limited to:

- *The amount and timing of receipt of any distributions from the Federal Emergency Management Agency and private insurance companies to repair damage caused by Hurricanes María and Irma;*
- *The amount and timing of receipt of any amounts allocated to Puerto Rico and provided under the Community Disaster Loans Program;*
- *The amount and timing of receipt of any additional amounts appropriated by the United States government to address the funding gap described herein;*
- *The impact of the resolution of any pending litigation in the Title III cases*

Because of the uncertainty and unpredictability of these factors, their impact cannot be included in the assumptions contained in this document. Future events and actual results may differ materially from any estimates, projections, or statements contained herein. Nothing in this document should be considered as an express or implied commitment to do or take, or to refrain from taking, any action by AAFAF, the PRHTA, the Government, or any government instrumentality in the Government or an admission of any fact or future event. Nothing in this document shall be considered a solicitation, recommendation or advice to any person to participate, pursue or support a particular course of action or transaction, to purchase or sell any security, or to make any investment decision.

By accepting this document, the recipient shall be deemed to have acknowledged and agreed to the terms of these limitations. This document may contain capitalized terms that are not defined herein, or may contain terms that are discussed in other documents or that are commonly understood. You should make no assumptions about the meaning of capitalized terms that are not defined, and you should consult with advisors of AAFAF should clarification be required.



Table of Contents

- I. Executive Summary**
- II. Description of PRHTA**
- III. Infrastructure Agenda**
- IV. Current Situation with Baseline Financial Projection**
- V. Fiscal Measures with Financial Projections**
- VI. Liquidity Situation**
- VII. Debt Sustainability**
- VIII. Implementation Plan**

Appendix:

- Transformation Plan (Structure, Revenues, Expenses)**
- FHWA MOU**
- Summary Fiscal Plan Bridges to July 2017**



I. Executive Summary



Executive Summary

- The Puerto Rico Highways and Transportation Authority (PRHTA or HTA) is a public corporation responsible for developing, operating and maintaining Puerto Rico's toll roads, highway network, and mass transportation facilities. The current Administration has developed an aggressive plan to obligate \$138.8 million annually from Federal Highway Administration (FHWA) and \$20 million from Federal Transit Administration (FTA) in addition to local funds and potentially other federal grants, to projects meeting four key objectives including: (a) transit security and safety projects, (b) improvement of existing transportation infrastructure, (c) complete highway systems, and (d) congestion mitigation.
- Like most of Puerto Rico, HTA was severely impacted by Hurricane Maria, and has identified to date more than \$700 M in damages, and remains in recovery mode.
- In order to maintain its assets in a state of good repair and continue normal operations, HTA estimates that it will need \$3.1 billion of capital expenditures from FY18 to FY23, including \$2.25 billion for highway-related CIP, \$652 million for Maria-related emergency repair, and \$146 million for HTA's transit-related CIP.
- HTA's pre-debt service financial gap over the six years, without considering fiscal plan measures or central government transfers, is \$1.45 billion (pre-retained revenues, HTA would have achieved a \$2.0 billion *surplus*).
- HTA proposes six key fiscal measures that will facilitate organizational transformation, enhance revenue, and reduce expenditures. These measures, which include key contract renegotiations and voluntary transition, total an estimated financial opportunity of \$88 million over six years. Post-fiscal measures, with HTA's expected central government transfer, HTA will average a surplus of \$5 per year over six years pre-debt service (plus HTA's allocation from the Commonwealth's CAPX Fund to support the former's emergency reconstruction (including resiliency measures), state of good repair, congestion management, completion of the strategic network, and P3-related expenditures).
- HTA is committed to establish a governance structure and program management office to facilitate it achieving its financial targets and operational improvement objectives, including congestion management. HTA will measure progress using KPI's.
- PROMESA establishes a process for the restructuring of debt (voluntary or involuntary) towards sustainable levels but not before the certification of its Fiscal Plan by the Oversight Board, among other requirements. The Government of Puerto Rico and its instrumentalities (including HTA) expect to continue this process in order to strengthen its financial capacity. HTA will also continue to work with all the federal agencies (including FTA & FHWA) as Partners throughout this process in order to achieve our common financial and operational objectives.

II. Description of PRHTA



GOVERNMENT OF PUERTO RICO
Puerto Rico Highways and Transportation Authority

Puerto Rico Highways and Transportation Authority

Mission

Lead Puerto Rico towards economic development through an efficient transportation system, safely and in accord with the environment, while procuring the delivery of excellent service

Vision

Develop and promote an integrated transportation system that, along with a highway infrastructure and service delivery, will facilitate the economic development of Puerto Rico in harmony with the environment

About PRHTA

- HTA is a public corporation founded with the purpose of continuing the government's effort of providing the public with the best highways, easing the flow of vehicles, and minimizing the risks and inconveniences that traffic congestions may cause.
- HTA is charged with constructing, operating, and maintaining Puerto Rico's toll road network, major highways and mass transportation facilities, which are financed by revenue bonds, federal grants and specified tax revenues.
- The Puerto Rico State Highway System consists of a total of **4,605 miles**:

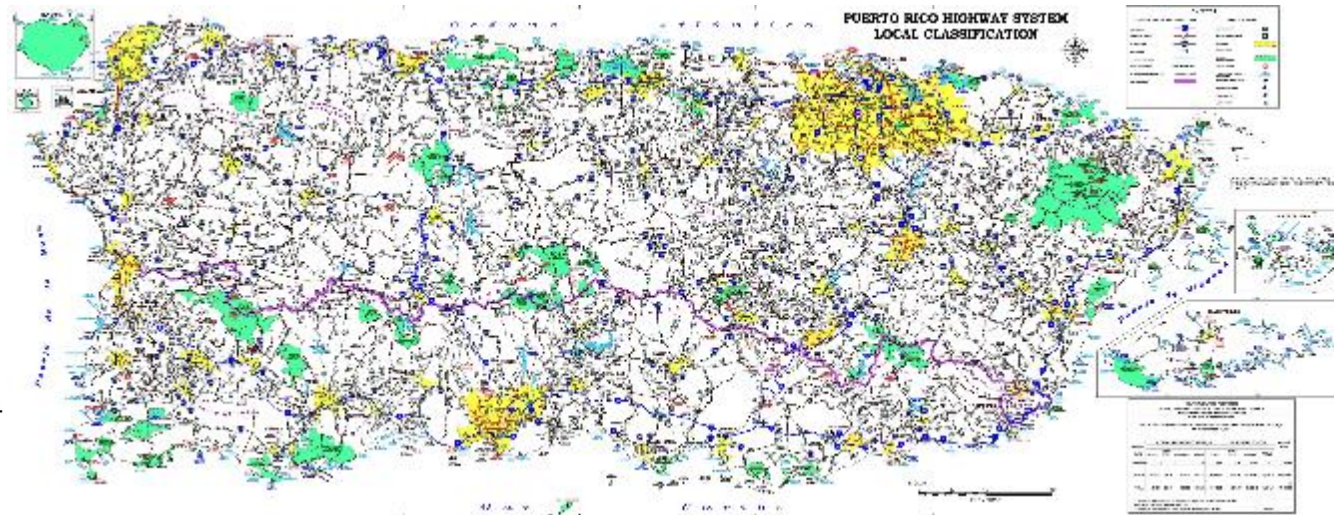
Breakdown by type of Road:

Toll Roads (incl. PR 22 & 5) – 185.6 miles

Primary Roads (incl. Urban) – 986 miles

Secondary & Tertiary Roads – 3,434 miles

Total = 4,605 Miles



HTA: An Evolving Mission

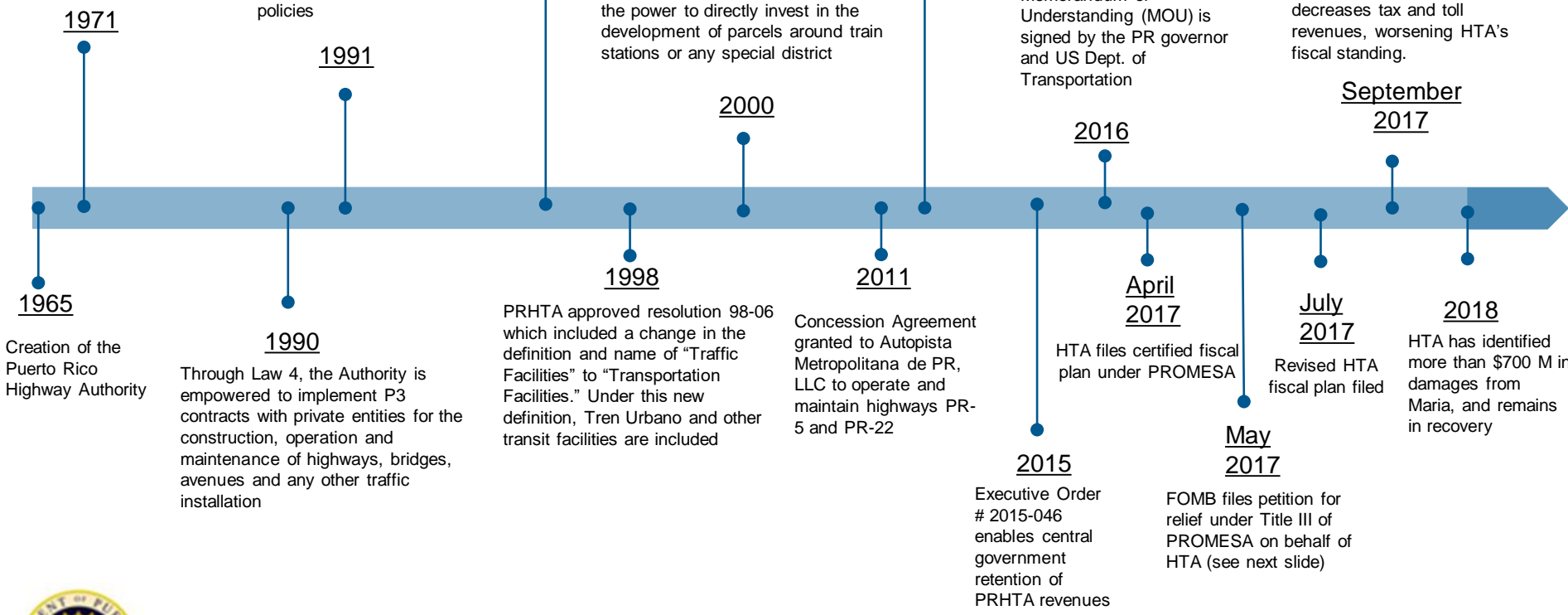
- HTA falls under DTOP's umbrella through the Reorganization Plan Num 6, conceding its powers and duties to the Secretary
- Integration of the mass transportation sector through the successful establishment of exclusive lanes project for AMA buses is put in place

The Secretary of DTOP grants the name **Highways and Transportation Authority** through Law 1, becoming the principal promoter and administrator of mass transportation public policies

The construction of Teodoro Moscoso Bridge is completed, becoming the first highway privatization project in PR and the US with an investment of \$126M

- Toll Credits were implemented to benefit HTA by using the credits to substitute the required local share on future Federally aided projects
- Law 41-2014 amended the Organic Act of PRHTA to vest its powers in a Board of Directors

- Hurricane Maria hits Puerto Rico, causing widespread damage to infrastructure, including prolonged power outages, damage to toll facilities, roads, and bridges.
- Economic impact of Maria decreases tax and toll revenues, worsening HTA's fiscal standing.



Source: http://www.dtop.gov.pr/carretera/det_content.asp?cn_id=217

Financial Sustainability, Federal Agencies & PROMESA

- The **Puerto Rico Oversight, Management, and Economic Stability Act (PROMESA)** establishes a process for the restructuring of debt (voluntary or involuntary) towards sustainable levels but not before the certification of its Fiscal Plan by the Oversight Board. HTA has filed for Title III protections under PROMESA and will continue to work with all the federal agencies (including FTA & FHWA) as partners throughout the Title III process in order to achieve our common objectives.
- HTA receives about \$158.8 million per year from FTA and FHWA. This funding requires that the grantee demonstrates specific and well-defined technical, financial and organizational capabilities. If the grantee does not meet these capabilities, there is a substantial risk that federal funds will not be allocated.
- FTA and FHWA agreements require continued operation of grant-funded assets, limiting HTA's options for reducing operating costs of systems which relied on central government revenue which has since been retained.
- HTA relies on a large surplus of toll credits to meet the non-federal share of FHWA grant-funded projects, allowing the Authority to continue developing infrastructure despite cash limitations associated with retention of revenue and Title III status.



HTA as a grantee of the Federal Government

HTA receives federal funds from two agencies, the Federal Transit Administration (FTA) and the Federal Highway Administration (FHWA). This funding requires a grantee to demonstrate that it has specific and well-defined technical, financial, and organizational capabilities. If the grantee does not meet these requirements, federal funds will not be allocated.

FHWA

FTA

Agency Description

Agency within the U.S Department of Transportation responsible for administering the federal-aid highway program and highway transportation programs of the Department of Transportation.

Provides financial and technical assistance to local public transit systems, including buses, subways, light rail, commuter rail, trolleys and ferries. The FTA also oversees safety measures and helps develop next-generation technology research.

Grantee Compliance Requirements

According to 23 U.S.C. § 302 and Title 23 of the Code of Federal Regulations, any state needs to be suitably equipped and organized to discharge to the satisfaction of the Secretary the duties required by this title. In the following areas:

- Payment procedures- Chapter 1, subchapter 8
- Planning/Environmental- Section 135, Chapter I, Subchapter E
- Design- Highway Standard/ Design Criteria- Section 109, Chapter I, Subchapter G
- Construction and Contracting Procedures- Chapter I, Subchapter G
- Transportation Infrastructure Management- Chapter I, Subchapter F
- Maintenance- Properly Maintenance all Roads- Section 116
- Highway Safety- Section 402, Chapter I, Subchapter II
- Right of Way and Environment- Chapter I, Subchapter H

To become a grantee of FTA, HTA is required to meet the following minimum criteria:

- Legal Capacity
- Technical Capacity
- Proven Financial Capacity
- Disadvantage Business Enterprise
- American with Disabilities Act Compliance
- Title IV (Civil Rights) 48 U.S.C §5301 *et seq.*

Risks of Non-Compliance

Non-compliance with federal laws and regulations or diversion of highway revenues may result in:

- **Suspension of funding**
- Lack of maintenance and essential services that will cause **highways to deteriorate**
- **Transportation of goods and emergency services will be hindered**
- **HTA and FHWA are currently operating under an MOU which stipulated requirements to maintain funding – for additional information, see MOU slides in the Appendix.**

The default of HTA with any of its obligations (mainly bond debt) may trigger questions as to its financial capacity leading to **a potential loss of federal funds**. If, during the useful life of the property, the recipient unreasonably delayed or failed to use the federally assisted property for its originally intended purpose, recipients may be required to **return the entire amount of federal assistance spent on the award or federally-assisted property**. However, **this Fiscal Plan is designed to mitigate this risk** by closing any operational financial gap for the six-year period, subject to the realization of projected revenues, fiscal measures, and fund transfers from both Federal and PR Governments.

Max Available Funding*

\$138.8 million/year*

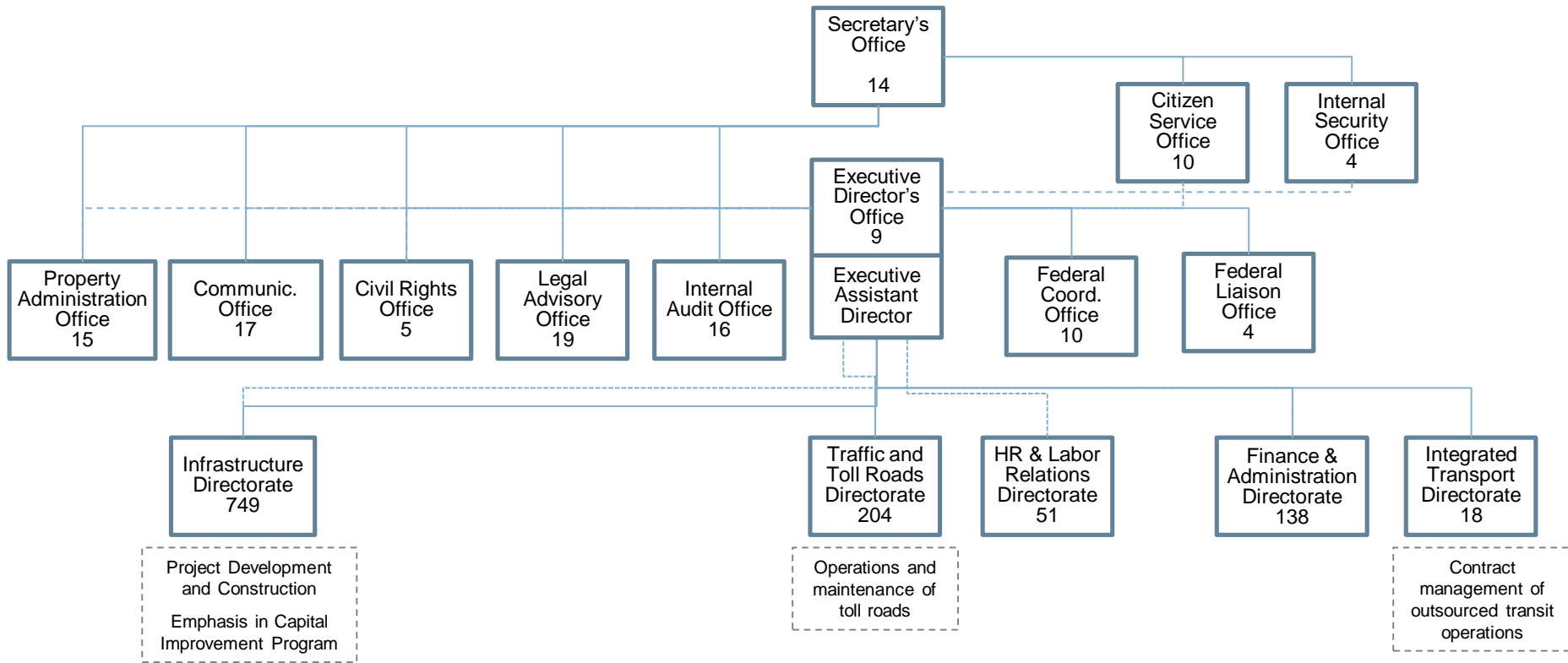
\$20 million/year*



GOVERNMENT OF PUERTO RICO
Puerto Rico Highways and Transportation Authority

* Maximum available funding represents recurring annual payments and does not include emergency reconstruction grants. Maximum available funding may not equal that of obligated funds and/or actual expenditures. Amounts include penalties and \$3.8M return from PR Transit Safety Commission. Source: USC 23; Title 23 CFR

HTA's current organization has a total head count of 1,283



- - - Special relation between advisory offices that directly report to the Secretary and, at the same time, provide services and advice to the Executive Director
- - - - Special relationship of counseling and coordination between offices or areas
- . - Special relation between administrative and finance phases



Impact of Hurricane Maria on PRHTA Operations and Finances

- **Infrastructure Damage:** Roads, bridges, were damaged in the hurricane, and major projects were delayed due to the temporary realignment of resources towards recovery. HTA was unable to execute planned capital improvements, focusing instead on emergency repairs to bring infrastructure back online.
- **Public Transit Damage:** Several Tren Urbano (TU) stations were damaged by Maria, with limited service returning in late December.
- **Revenue:** Revenue from operations were severely depleted in the wake of Hurricane Maria. Toll plazas were damaged or left without power, TU and several bus lines were left temporarily inoperable, and both traffic and ridership were greatly reduced.
- **Economy:** Hurricanes contributed to greater-than-anticipated economic decline, leading to a long-term reduction in revenue, traffic, and ridership.
- **Insurance and Aid:** FEMA grants and insurance proceeds are expected to partially finance some capital improvement projects necessitated by Maria's damage, and offset some of the negative economic impact of the storm.



The Cost of Hurricane Damage: 1 of 2, Non-Highway

- HTA's direct loss assessment to-date indicate that Maria caused \$71 M in direct losses to the agency, **excluding damage to the highway network estimated at \$652 M**
- HTA estimates that the vast majority of the direct costs outlined in the table to the right will be covered by emergency funds and insurance payments
- Many indirect costs, including lost revenues may not be covered
- This estimate is as of February 22, and accounts for 62% of the related categories. Additional loss estimates are likely.

PW Assistance Project - PW Listing
PR Highway and Transportation Authority (PRHTA)

Category	Sub-Category	Costs
Force Account Labor and Equipment	Force Labor Account Payroll	184,111
	Total	184,111
Emergency Protective Measures	First Transit Buses for Military Personnel	44,686
	First Transit Buses use during Emergency	29,236
	Security Protection for Toll System Facilities	21,392
	Health & Safety Inspections Facilities	3,500
	Provision of Foods, Water and Other Essential Items to COE (Central Operacional de Emergencia)	20,287
	First Transit Security Protection	63,000
	Direct Administrator Cost	17,078
	Temporary Generators Facilities Rental (including Maintenance and Diesel)	346,691
	Vehicle Rentals, Equipment, Parts	213,829
	Total	759,699
Emergency Road Repairs	Emergency Road Repairs	1,800
	Total	1,800
Building and Equipment Damages	PRHTA Offices Damages and Repairs	1,508,049
	PRHTA - Toll System Equipment Damages and Repairs	97,191
	PRHTA- 2% Mapfre Insurance Deductible	958,687
	PRHTA Vehicles Damages and Repairs	18,311
	First Transit Bus Damages	16,142
Total	2,598,380	
Debris, Emergency Protective Measures & Building and Equipment Damages	Debris, Emergency Protective Measures & Building and Equipment Damages	67,668,704
	Total	67,668,704
Total		71,212,694

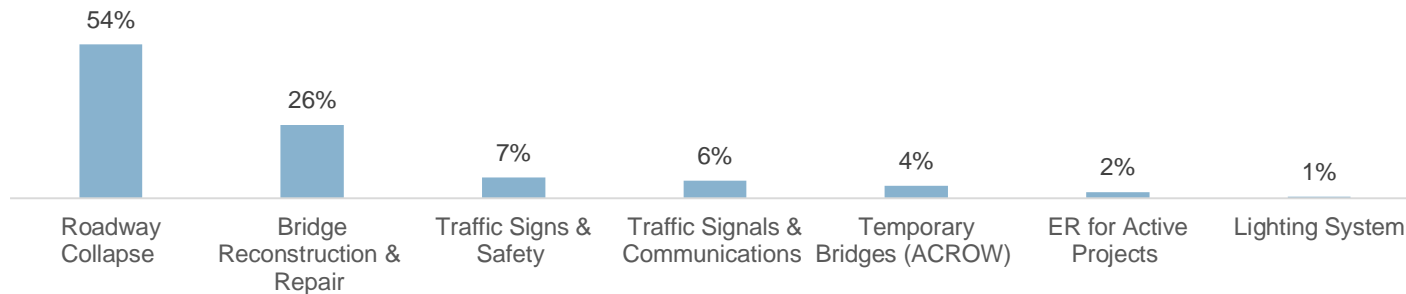
Preliminary Damage Estimates. Subject to Change / Finalization



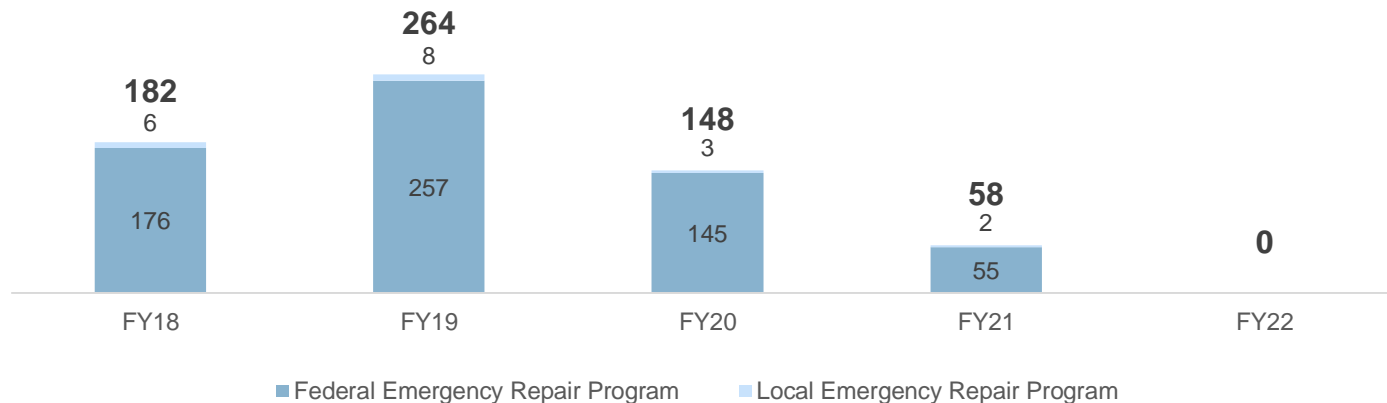
The Cost of Hurricane Damage: 2 of 2, Highway

Puerto Rico's highway system suffered significant damages following Hurricane Maria. As of February 19, HTA estimated that repairs would cost a total of **\$652 M**. Of this total, **\$20 M** is projected to come from local funds assuming a 100% federal match for all FHWA expenses¹ and some local spending for design management and a share of FEMA expenses. Over half of the total spend will go towards repairing collapsed roads, with another 26% going towards bridge repair and reconstruction.

Percent of Budgeted Repair Cost by Category

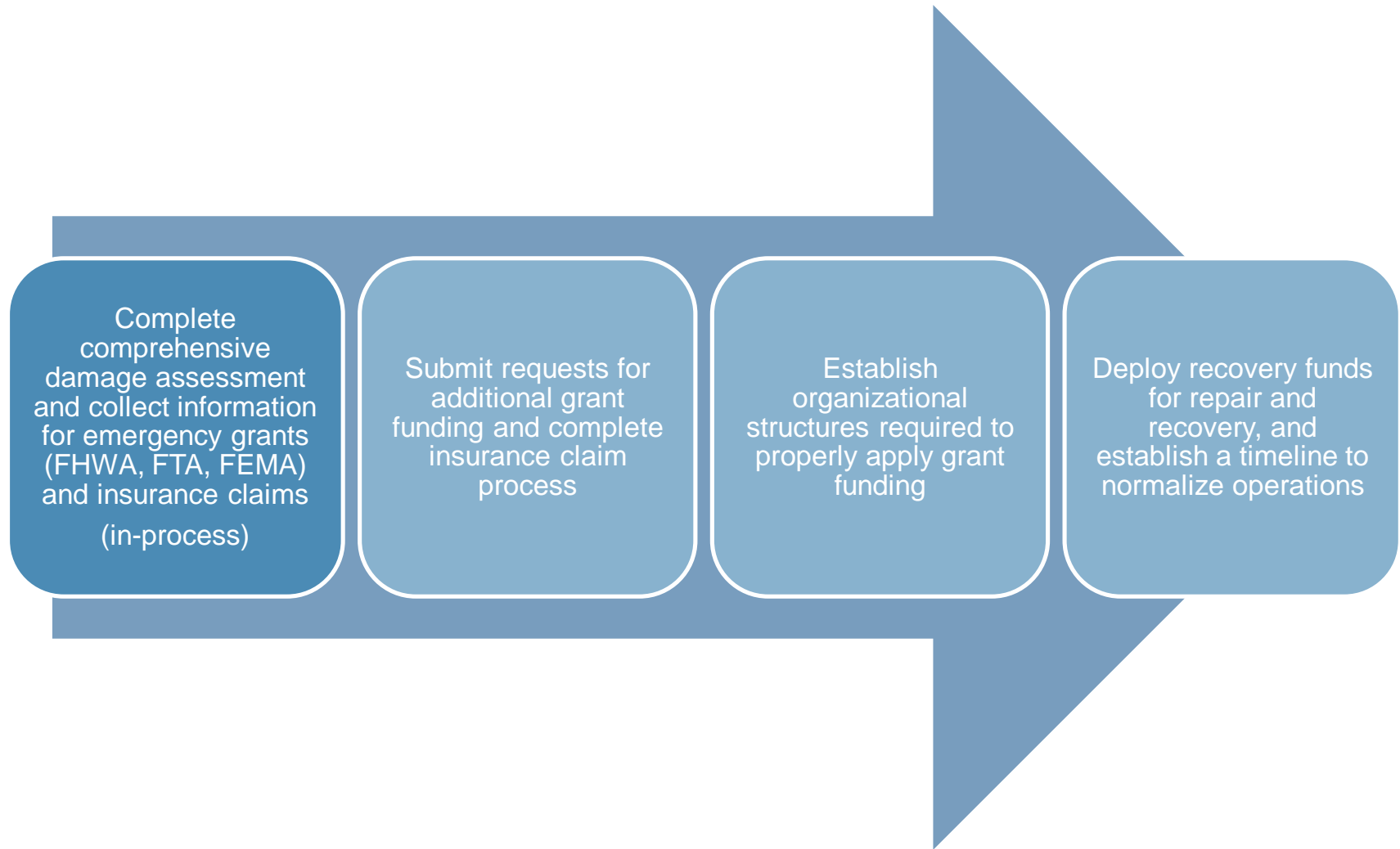


Total Spend by Federal and Local Funds (\$ millions)



¹ Bipartisan Budget Act of 2018, 115th Cong., 2d Sess. (2018). Page. 88; line 8.

Next Steps for Hurricane Recovery



III. INFRASTRUCTURE AGENDA



GOVERNMENT OF PUERTO RICO
Puerto Rico Highways and Transportation Authority

HTA Infrastructure Agenda

HTA has established an infrastructure agenda to maximize federal funds obligated from FHWA¹ and FTA¹ and improve economic growth. Puerto Rico has a six-year Capital Improvement Plan (CIP). The six-year CIP is comprised of the 2017-2020 Statewide Transportation Improvement Plan (STIP) which are planned projects, active projects not included in the STIP, and projections beyond the STIP to maintain the system in a state of good repair.

Strategy:

- Focus CIP on maintaining the existing highways asset in an adequate operating condition
- Continue aggressive plan to maximize funds and develop best-in-class infrastructure
- Expedite project delivery:
 - Engage expedited design services to accelerate preliminary designs and obligate funds
 - Increase project supervision through additional qualified resources
- Utilize P3's and outsourcing as strategies to achieve a more efficient and modern infrastructure, in accordance with Puerto Rico's government public policies

Focus:

- Planned projects for the next six years will mainly focus on:
- Highway Safety Projects
 - Improvement of existing transportation infrastructure, including: pavement reconstruction and preservation; bridge repairs and preservation; and the upgrade of traffic signals.
 - Congestion Mitigation
 - For the Transit Asset, the CIP will focus on the replacement and upgrades of buses and the TU train system

Funds:

- Obligate as much Federal Funds as possible to support economic growth
- Current federal match is 80.25% of project costs for eligible projects, with the state matching 19.75% (exception: 100% for emergency relief).
- Currently, HTA uses toll credits to cover the spend requirements of the state match.

Projects and Execution:

- The current CIP has been developed to maximize the deployment of already-assigned federal funding on existing projects and optimize the use of future funding by prioritizing infrastructure needs in order to keep the road network in a safe operating condition.
- As part of a Memorandum of Understanding (MOU) between the HTA and the FHWA, HTA is undergoing a transformation geared at revamping its project and program delivery capabilities to eliminate its project backlog. HTA feels confident that it will be able to deliver the described CIP in this fiscal plan, once this transformation is completed.
- HTA has included in the fiscal plan a CIP for the Transit Assets at \$5M per year to ensure availability of funds to overhaul any bus units and train system components in disrepair.



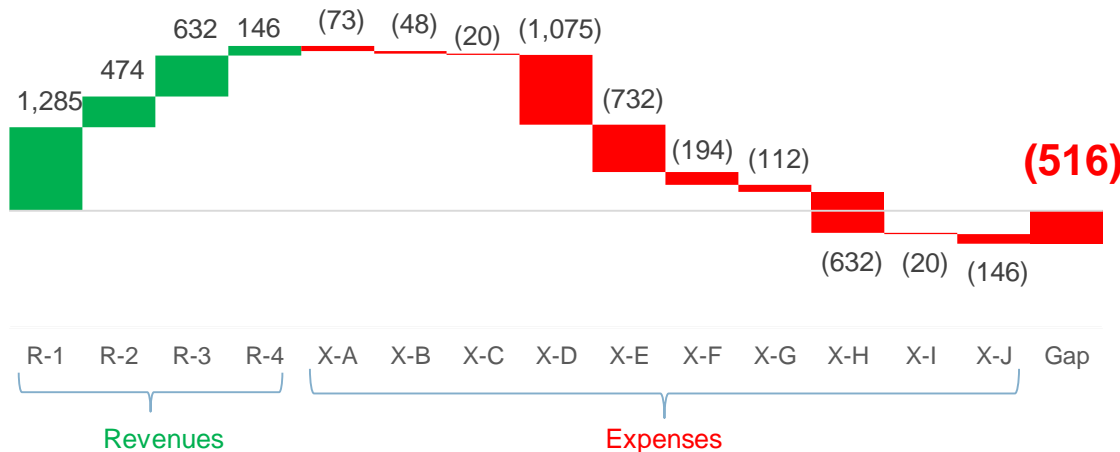
HTA CIP Summary

In order to maintain its assets in a state of good repair and continue normal operations, HTA estimates that it will need **\$3.1 B** of capital expenditures from FY18 to FY23, of which:

- \$2.25 B is for HTA’s Highway-related Capital Improvement Plan (see slide 21 for details).
- \$652 M is for Hurricane Maria-related emergency repair expenditures to occur over the next four years (see slide 14 for details)
- \$146 M is for HTA’s Transit-related Capital Improvement Plan (see slide 22 for details)

During the six-year period, HTA’s CIP expenses exceed capital revenues by **\$516 M**. **This gap will need to be funded by operating revenues or allocations from Central Government.**

FY18 to FY23 CIP: Revenue and Expenses



Abr.	Revenue Category
R-1	FHWA Funds
R-2	State Funds Earmarked for CapEx
R-3	Federal Emergency Revenues
R-4	FTA Funds

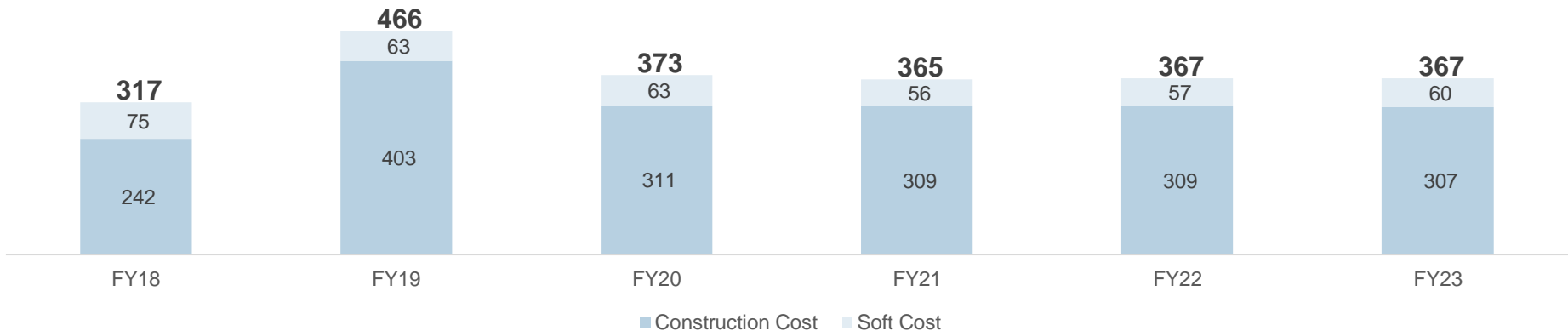
Abr.	Expense Category
X-A	Construction Local
X-B	Design
X-C	ROW
X-D	FHWA Construction Spend Projects[1]
X-E	Non-Federal Construction Projects
X-F	FHWA Construction Soft Costs
X-G	Non-Federal Construction Soft Costs
X-H	Federal Emergency Repair Program
X-I	Local Emergency Repair Program
X-J	Transit CIP



[1] Includes both construction hard cost and the associated soft costs

Highways Asset Optimized CIP* for Fiscal Plan Period

HTA expects its steady-state CIP for highways will be \$261.8 M in state of good repair construction costs, with slightly fluctuating needs over the next few years based on the state of current projects and expected completion date. Current projects programmed in the STIP include state of good repair and strategic projects such as the PR-52 Dynamic Toll Lane (DTL). HTA will also receive an additional \$50 M annually from Central Government which will be spent on strategic projects that, like the PR-52 DTL, will help reduced congestion and encourage economic development.



Main Assumptions:

Construction Assumptions:

- Federal and local construction costs for FY18-FY21 were developed using project-specific costs provided by HTA for active projects, STIP projects (State Transportation Improvement Program), federal projects, and projected expenditures on dynamic toll lanes.
- FY22-23 estimates were developed using CIP projections (**\$261.8 M per year**) produced by HTA and its consultants, and projects the total spending needed per year to keep the highway network in a state of good repair.

Soft-Cost Assumptions:

- Includes \$65 M in soft cost backlog. Assumes 10% of construction costs for 2018 and 2019, 15% for 2020 and 2021, and 18.5% of construction costs for Years 2022 to 2023. Soft cost assumptions by year were provided by HTA and its engineering consultants.

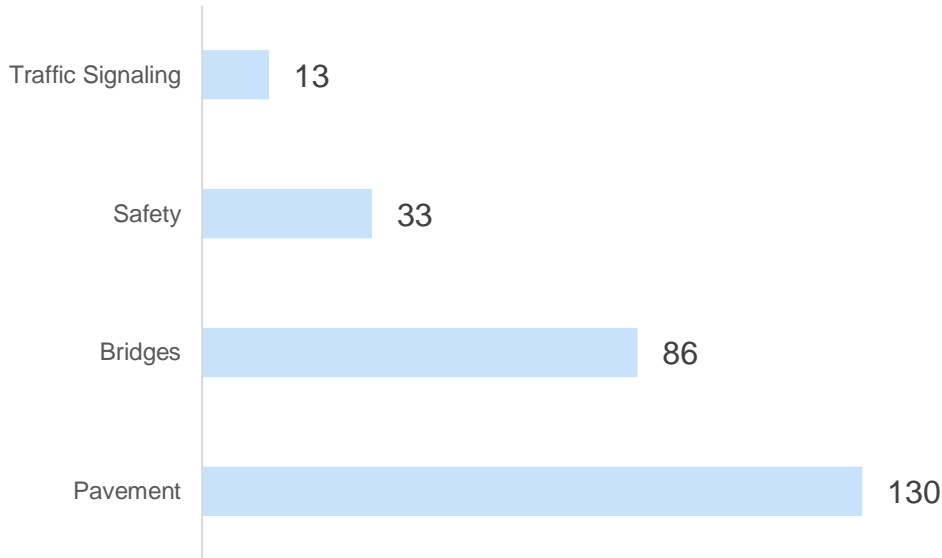


[1] Some of FY21's total construction spend was also developed with inputs from the CIP

* Includes both construction and soft costs but does NOT include CIP for Transit Asset

Highways Asset Optimized CIP* by Type of Work

Steady State Expenses By Type of Work (\$ in millions):



HTA's estimated steady state CIP is \$261.8 M in hard costs per year [1]

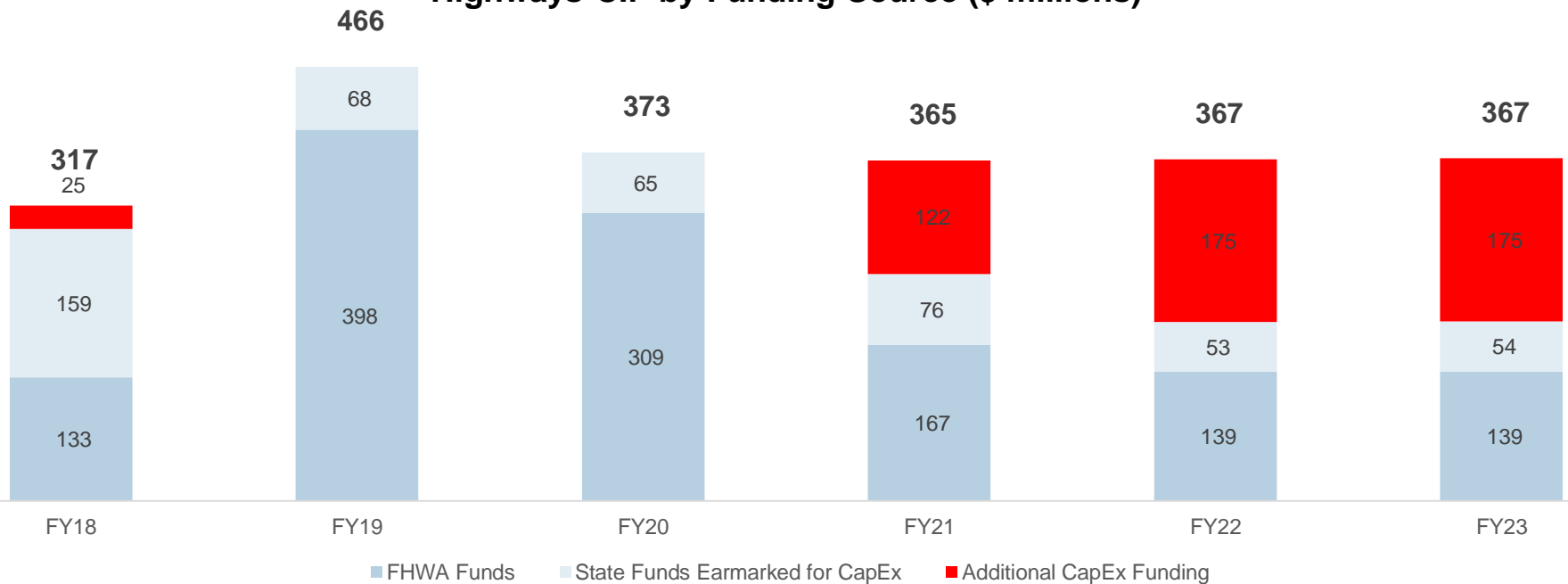
[1] HTA developed a long-term, steady-state CIP for its highway infrastructure it believes it needs to keep the highway system in a state of good repair and critical to HTA receiving full federal funds. To develop these funding levels, HTA used available data on asset condition, lifecycle, and historical costs. Following its initial analysis, HTA hired an outside engineering consultant to conduct a validation the CIP. After integrating the results of the external study, PRHTA estimates a steady-state CIP of \$261.8 M per year.



Highways Asset Optimized CIP* for Fiscal Plan Period by Sources of Funds

HTA has developed its Highways CIP with the goal of maintaining the highway network in a state of good repair at an expected cost of \$2,254 M. HTA has identified **\$1,758 M** over the six-year period in capital funding. In order to implement its CIP, **\$496 M** in additional funding will be required from operations, fiscal measures, or appropriations from Central Government.

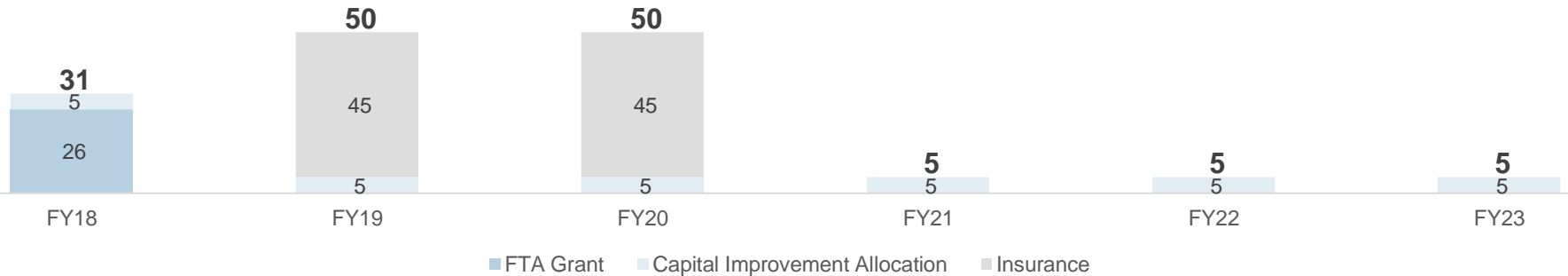
Highways CIP by Funding Source (\$ millions)



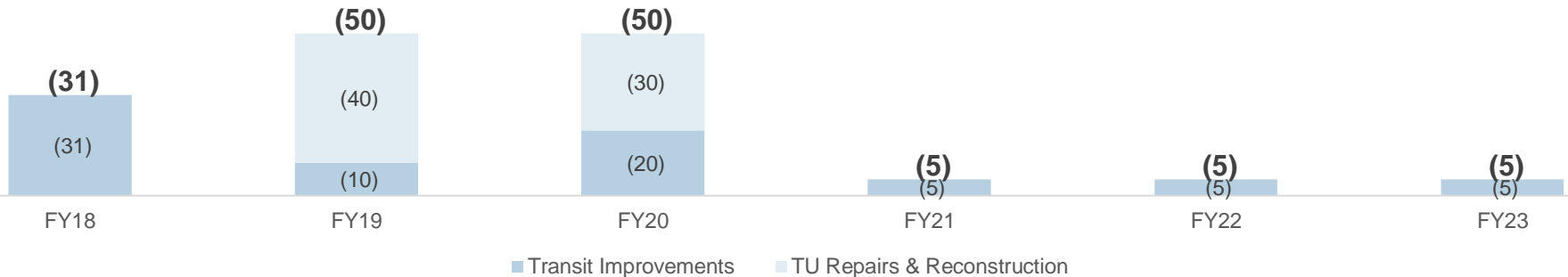
*Includes both construction and soft costs and does NOT include CIP for Transit Asset
 ** Allocation for the PRHTA for infrastructure improvements from the FY 2018 Central Govt Budget
 *** In years without a funding gap, state funds earmarked for capex have been applied in the next year with a funding gap

Transit Asset Estimated CIP* for Fiscal Plan Period

Transit Capital Revenues (\$ millions)



Transit Capital Expenses (\$ millions)



Main Assumptions:

Transit CIP – Overhaul of Bus and Train System Units, as needed.



Infrastructure Agenda: Strategic Projects

- HTA will prioritize the following Strategic projects if additional funding becomes available. These priority projects are aligned with HTA's strategic goals to promote economic development and reduce congestion.
- Strategic Projects emphasize extensions of existing toll roads, and dynamic toll lanes/flyovers which would include new revenue to enhance private sector participation through Participative P3's.
- HTA is currently exploring executing these projects under a P3 model. Further study will be needed to determine which project will be pursued, but HTA will prioritize the project with the highest socioeconomic benefit to Puerto Rico.
- Planning for these projects is currently preliminary and further work will be needed to determine which one HTA will pursue.

	Project Cost ^[2]	Project revenue
1 Extension of PR-22 from Hatillo to Camuy	\$200 MM	\$5 MM / year
2 PR-5 Extension Toa Alta- Bayamón	\$170 MM	\$8 MM / year
3 Dynamic Toll Flyovers - Efficient Peak Period Congestion Relief in Critical Intersections	\$250 MM – based on 10 intersections at \$25 MM per intersection	\$15 MM / year



Note: Numbers revised as per Northwestern Corridor: Desirability and Convenience Final Report, April 2016.
 Source: STIP 2017-2020; HTA Management Assessment

Providing Better Construction Results through Innovative Project Execution

Historically, HTA has experienced cost overruns averaging approximately 30% more than initial cost estimates.¹ Through the implementation of outsourcing and improved project delivery methods via the Voluntary Transition Program and “MOU” initiatives, HTA believes it can reduce cost overruns by 15%, which is in-line with industry standards.²

Historical Project Execution:

- Highway projects have historically been delivered using a design-bid-build process, where construction contracts have been structured on a per-unit-price basis.
- Because the bidding process (via RFP) has been typically based on unit price contracts, contractors have not been incentivized to present bids with the lowest possible costs to adequately complete a project. Instead, contractors provide unbalanced bids that result in higher prices at project completion. This problem has been extensively discussed in the construction management literature.
- Additionally, because construction has been predominately managed in-house, personnel costs have not declined commensurately with less construction spend, nor were in-house managers’ appropriately incentivized to adhere to project goals.
- These methods of project execution have resulted in cost overruns averaging 30% and significant completion delays.¹
- Some historical projects have seen better success - such as PR-66 which experienced just 5% cost overruns when it utilized outsourcing and innovative contracting to improve project execution.³ *See the following page for additional discussion on the results of PR-66.*



Target Project Execution:

- HTA has already begun transforming its project delivery capabilities in an attempt to eliminate its project backlog. These transformations have begun via compliance with the Memorandum of Understanding (“MOU”) between the HTA and the FHWA.⁴ *See the Appendix for more information on the MOU.*
- HTA forecasts that by complying with the objectives specified in the MOU, and more widely implementing an outsourcing model and innovative contracting methods, the organization can reduce cost overruns by half, or 15%, on average.³
- Implementing the outsourcing and innovative contracting models will better align contract managers’ incentives with on time/on budget project delivery, improve HTA’s ability to scale staff to properly implement construction spend, and align contractors’ incentives for more cost-conscious competitive bidding, among other benefits.
- The current fiscal plan already includes project execution improvements and estimates 15% cost contingencies, consistent with industry standards used for planning future construction costs.
- **If HTA continued with 30% cost overruns, the CIP would be \$489M higher than currently forecasted. These savings have not been factored as its own fiscal measure due to how the CIP prepared.**



¹ Historical cost overruns estimate provided by HTA Management.

² Industry standard cost overruns provided by HTA construction office.

³ 2016 Case Study on PR-66 base on published technical papers. González Quevedo, Sergio L., Effective Competitive Procurement and Financing with Innovative Contracting: The Solution to Transportation Infrastructure Construction, Operations and Maintenance in the 21st Century, Key Note Speaker in CRC 2016, June 2016

⁴ MOU signed by the government of Puerto Rico and Federal Highway Administration. Source: MOU-PR2016-02-29-094734

Providing Better Construction Results through Innovative Project Execution

Case Study: PR-66*

During construction of PR-66, HTA used various methods to implement each stage of the project over various periods from 1998 through 2012. In Phase II (2011-2012), HTA utilized a combination of innovative contracting and outsourcing to reduce cost overruns and project delays.^{1*}

Case Study: PR-66^{1, *}

During construction of Phase II of PR-66, HTA utilized (i) innovative contracting, such as simplifying the RFP process by prequalifying bidders and granting early completion bonuses, and, (ii) outsourcing, to unlock future savings from value engineering to reduce cost overruns to 5% and project duration to just 6% over schedule.¹

Previous phases of PR-66 were delivered via design-bid-build using a unit-price contract. These phases had average cost overruns of 33.1% and average project delays of 60%.¹

Notably, cost and project duration savings occurred once HTA fully utilized both innovative contracting and outsourcing.

Some Benefits seen during PR-66 Phase II:*

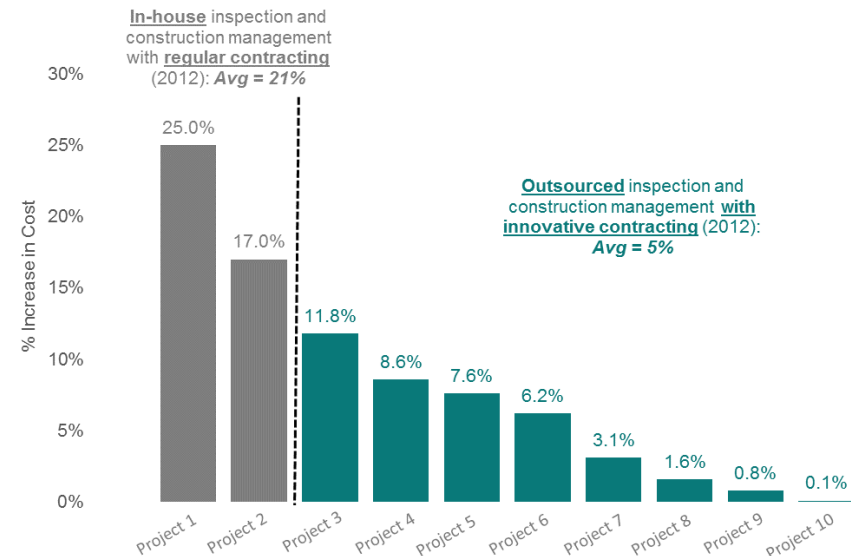
Outsourcing

- Increased flexibility to hire specialized support for projects
- Increased usage of value engineering
- Increased ability to scale staff to properly implement the funding
- Better aligned managers' incentives with on time/on budget project delivery

Innovative Contracting

- Streamlined RFP process (such as prequalified bidders), thus reducing process duration
- More competitive bidding process drove costs down
- Better structured contracts aligned incentives with project goals (e.g. early completion bonuses)

Sample PR-66 Project Results: Project Execution Methods Lead to Cost Differences²



Out of ten sample PR-66 projects in 2012, two projects used historical execution methods which resulted in 21% cost overruns. When innovative contracting and outsourcing was used, the projects averaged just 5% overruns. Over the course of the entire PR-66 project, cost overruns averaged 33.1%.¹

* **Note:** PR-66's Phase II results were very successful in reducing costs and increasing project delivery speed. Such success is the target for HTA, but not fully achievable in the short term as it will take years to completely transform project execution. For example, HTA cannot recognize savings from innovative contracting methods in the current CIP for projects already contracted (i.e. RFP process is complete). HTA will, however, be able to reduce costs through outsourcing and better project management.



GOVERNMENT OF PUERTO RICO
Puerto Rico Highways and Transportation Authority

¹ 2016 Case Study on PR-66 base on published technical papers. González Quevedo, Sergio L., Effective Competitive Procurement and Financing with Innovative Contracting: The Solution to Transportation Infrastructure Construction, Operations and Maintenance in the 21st Century, Key Note Speaker in CRC 2016, June 2016

² González Quevedo, Sergio L., J.J Fontán et al. Use of Hybrid bidding method for costs and risks reductions in highway construction. Construction Research Congress. 2016, pp. 759-769. 2016

IV. CURRENT SITUATION WITH BASELINE FINANCIAL PROJECTION



GOVERNMENT OF PUERTO RICO
Puerto Rico Highways and Transportation Authority

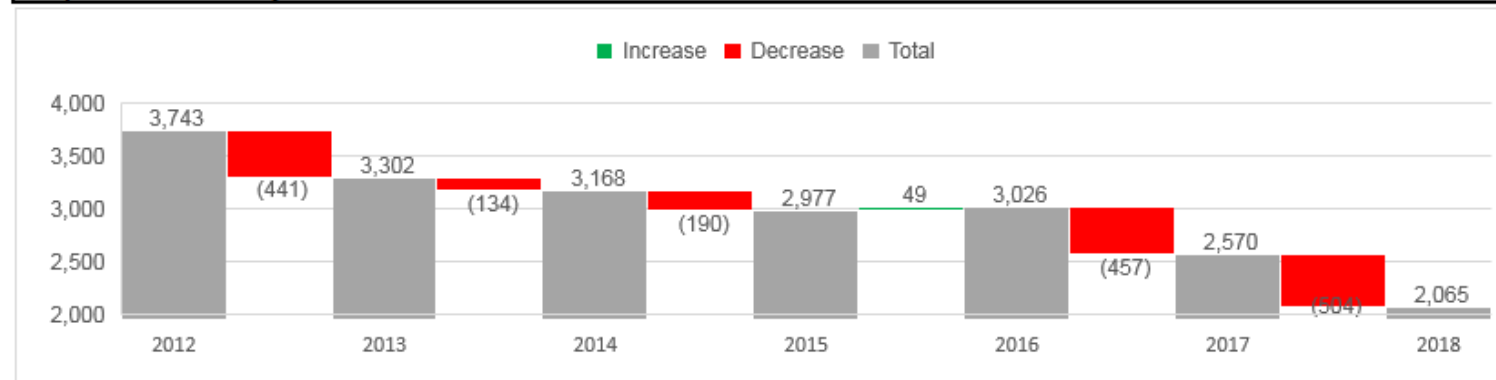
HTA's current fiscal situation with revenue retention impact

HTA's fiscal situation continues to be dire, as the Authority continues to struggle with the loss of **retained revenues previously transferred** to the Authority. These revenues are now used within the Government of Puerto Rico. **Government of Puerto Rico will collect an estimated \$456 million during FY18.**

Statement of Revenues and Expenses, and Changes in Net position [1]

\$ millions

Statement of Revenues and Expenses	2012	2013	2014	2015	2016	2017
	AUDITED	AUDITED	AUDITED	AUDITED	UNAUDITED	PRELIMINARY
Total operating revenues	202	185	214	229	212	205
Total operating expenses	(275)	(314)	(392)	(189)	(192)	(190)
Depreciation and amortization	(438)	(432)	(448)	(449)	(452)	(453)
Operating Loss	(512)	(562)	(626)	(408)	(432)	(438)
Non-operating revenues	293	293	532	518	280	165
Non-operating expenses	(528)	(294)	(325)	(419)	(350)	(347)
Loss before capital contribution	(748)	(563)	(419)	(275)	(503)	(620)
Transfers and Capital contributions	307	429	228	324	46	115
Change in net position	(441)	(134)	(190)	49	(457)	(504)
Net position at end of year	3,302	3,168	2,978	3,026	2,570	2,065



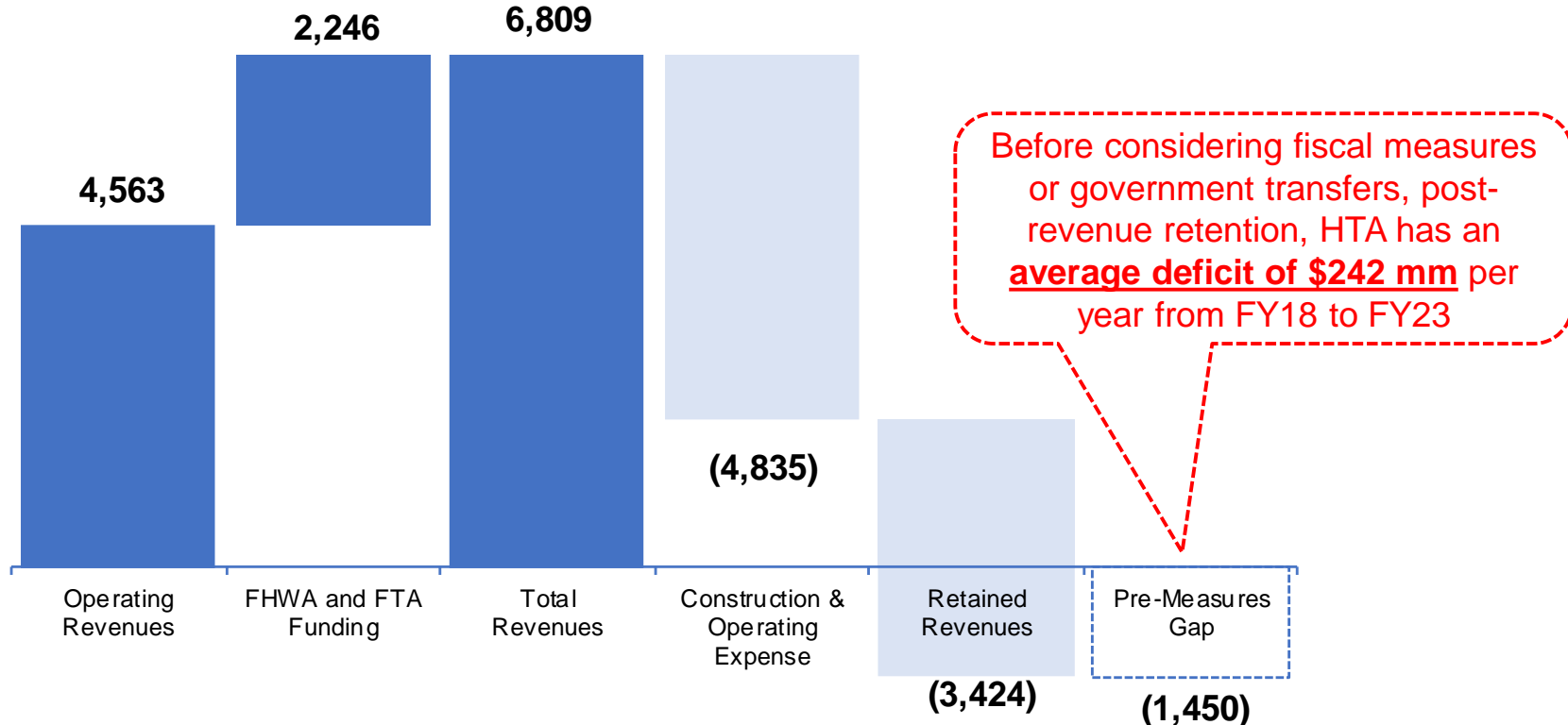
GOVERNMENT OF PUERTO RICO
Puerto Rico Highways and Transportation Authority

[1] "Non-operating expenses" may include operating expenses capitalized for accounting reasons
Source: 2015 PRHTA audited, 2016 draft audited, and 2017 preliminary financial statements

HTA's projected fiscal situation without considering fiscal measures: Summary

HTA's total financial gap over the six years, without considering fiscal plan measures or central government transfers, is \$1.45 billion

Total financial gap without fiscal measures, FY18-FY23 in \$ millions



HTA's projected fiscal situation without considering fiscal measures: Detail

In \$ thousands	2017-18 P	2018-19 P	2019-20 P	2020-21 P	2021-22 P	2022-23 P	6 Yr Total: FY18-FY23
Toll fares	108,250	127,230	131,100	134,000	134,400	134,810	769,790
Gasoline Tax	171,500	161,280	165,000	165,000	165,000	165,000	992,780
Diesel Tax	20,140	16,000	16,370	16,370	16,370	16,370	101,620
Petroleum Products Tax	323,270	285,540	265,000	265,000	265,000	265,000	1,668,810
Cigarettes taxes	20,000	20,000	20,000	20,000	20,000	20,000	120,000
Motor Vehicle License Fees	29,092	31,030	31,939	32,568	33,010	33,227	190,865
Act 30 - Licenses Fees Transferred to Act	53,269	56,818	58,482	59,634	60,443	60,841	349,487
Transit Revenues	28,909	29,308	29,580	29,769	29,902	29,967	177,435
Electronic Toll Fines	27,177	25,265	26,005	26,517	26,877	27,053	158,893
Other income	4,618	5,487	5,648	5,759	5,838	5,876	33,227
Operating Revenue	786,225	757,957	749,124	754,618	756,839	758,144	4,562,907
FHWA Funds	132,766	397,945	308,644	167,497	138,830	138,830	1,284,512
State Funds Earmarked for CapEx	75,000	-	-	-	-	-	75,000
Federal Emergency Revenues	175,553	256,565	145,201	55,135	-	-	632,454
FTA Funds	31,000	50,000	50,000	5,000	5,000	5,000	146,000
Hurricane Loss Assessment - Insurance and FEMA Revenue	27,002	54,004	27,002	-	-	-	108,007
Capital Contribution	441,320	758,514	530,847	227,632	143,830	143,830	2,245,973
Total Revenues After Federal Fund Transfers	1,227,546	1,516,471	1,279,971	982,250	900,669	901,974	6,808,880
Right of Way	(3,300)	(3,300)	(3,300)	(3,300)	(3,300)	(3,300)	(19,800)
Design	(23,000)	(5,000)	(5,000)	(5,000)	(5,000)	(5,000)	(48,000)
Construction Local	(23,160)	(10,000)	(10,000)	(10,000)	(10,000)	(10,000)	(73,160)
Salaries and related benefits	(47,077)	(47,241)	(47,003)	(46,793)	(46,570)	(46,417)	(281,101)
PayGo Retirement Impact	(13,536)	(14,489)	(14,489)	(14,489)	(14,489)	(14,489)	(85,982)
Litigation Reserve	(6,519)	(8,607)	(9,922)	(10,879)	(11,643)	(11,198)	(58,769)
Right of Way Payments	(16,626)	(13,736)	(7,068)	(1,900)	-	-	(39,330)
Other program expenses	(1,471)	(1,471)	(1,471)	(1,471)	(1,471)	(1,471)	(8,828)
FHWA Construction Spend Projects	(96,242)	(343,623)	(255,951)	(142,505)	(120,009)	(117,156)	(1,075,486)
Non-Federal Construction Projects	(121,717)	(48,886)	(43,804)	(155,505)	(177,855)	(178,459)	(726,226)
FHWA Construction Soft Costs	(36,524)	(49,773)	(48,333)	(22,678)	(17,122)	(19,818)	(194,248)
Non-Federal Construction Soft Costs	(12,672)	(4,944)	(7,090)	(26,316)	(33,267)	(33,561)	(117,851)
Federal Emergency Repair Program	(175,553)	(256,565)	(145,201)	(55,135)	-	-	(632,454)
Local Emergency Repair Program	(6,496)	(7,780)	(3,240)	(2,484)	-	-	(20,000)
Transit CIP	(31,000)	(50,000)	(50,000)	(5,000)	(5,000)	(5,000)	(146,000)
Hurricane Loss Assessment - Local Funding Needs	(1,552)	(3,104)	(1,552)	-	-	-	(6,209)
Hurricane Loss Assessment - Insurance / FEMA Covered	(27,002)	(54,004)	(27,002)	-	-	-	(108,007)
Total Construction	(643,447)	(922,524)	(680,427)	(503,456)	(445,726)	(445,870)	(3,641,451)
Salaries and related benefits	(40,226)	(40,800)	(40,631)	(40,481)	(40,321)	(40,212)	(242,671)
PayGo Retirement Impact	(4,423)	(4,734)	(4,734)	(4,734)	(4,734)	(4,734)	(28,094)
Toll highways administration and maintenance	(37,189)	(41,990)	(37,229)	(38,096)	(38,923)	(39,520)	(232,947)
Train operating and maintenance costs	(66,587)	(68,183)	(67,902)	(70,011)	(69,754)	(72,259)	(414,696)
Integrated transportation system	(14,603)	(14,959)	(15,324)	(16,697)	(16,080)	(16,472)	(93,134)
Other operating expenses	(32,518)	(34,596)	(31,655)	(29,655)	(27,755)	(25,708)	(181,885)
Total operating expenses	(195,545)	(205,262)	(197,474)	(198,674)	(197,567)	(198,905)	(1,193,427)
Total expenses	(838,992)	(1,127,786)	(677,901)	(702,130)	(643,294)	(644,775)	(4,834,878)
Total Fin. Gap Pre-Measures before Rev Retention & Gov. Funding	388,554	388,684	402,070	280,120	257,375	257,199	1,974,003
Retained Revenues to Central Government	(617,271)	(570,668)	(556,791)	(558,572)	(559,823)	(560,438)	(3,423,563)
Total Fin. Gap Pre-Measures post-Rev Retention & pre-Gov. Funding	(228,717)	(181,983)	(154,721)	(278,453)	(302,448)	(303,239)	(1,449,560)

HTA's projected fiscal position, pre-measures: Revenue snapshot

HTA projects total revenue over the six years of \$4.6 billion, including operating revenue of \$1.1 billion and tax and fee revenue of \$3.4 billion.

Revenue

\$ in millions	FY18	FY19	FY20	FY21	FY22	FY23	FY18-FY23 Total	
Toll Revenue	108	127	131	134	134	135	770	[A]
Transit Revenue	29	29	30	30	30	30	177	[B]
Toll Fines	27	25	26	27	27	27	159	[C]
Other Income	5	5	6	6	6	6	33	[D]
Operating Revenue	169	187	192	196	197	198	1,139	
Gasoline Tax	172	161	165	165	165	165	993	[E]
Diesel Tax	20	16	16	16	16	16	102	[E]
Petroleum Products Tax	323	286	265	265	265	265	1,669	[E]
Cigarettes taxes	20	20	20	20	20	20	120	[E]
Motor Vehicle License Fees	29	31	32	33	33	33	191	[F]
Act 30 - Licenses Fees Transferred to Act	53	57	58	60	60	61	349	[F]
Tax and Fee Revenue	617	571	557	559	560	560	3,424	
Total Revenue	786	758	749	755	757	758	4,563	

[A] Based on Dr. Jorge Freyre's draft results received on 3/21/18 regarding Table II. The accompanying draft report is expected later on, and the estimates and / or interpretations are subject to change.

[B] FY18 projected based on annualized Tren Urbano and Metro Bus actuals. FY19 is the average of FY17 and FY18; FY20 onward uses Real GNP projections as of Apr. 2018. Includes FTA funding.

[C] FY18 is the average between annualized FY18 YTD December and FY17 actuals. FY19 is the average of FY17 and FY18; FY20 onward uses Commonwealth's Real GNP projections as of Apr. 2018

[D] FY18 projected based on annualized actuals. FY19 is the average of FY17 and FY18; FY20 onward uses Commonwealth's Real GNP projections as of Apr. 2018

[E] Based on Dr. Jorge Freyre's Table II draft results received on 3/21/18. The accompanying draft report is expected later on, and the estimates and / or interpretations are subject to change.

[F] Considers FY17 actuals as a baseline for projections according to Apr. 2018 Real GNP



HTA's projected fiscal position, pre-measures: CIP snapshot

Total CIP expenses are \$3.1 billion and total revenues are \$2.5 billion over the six-year period.

Capital Expenses

\$ in millions	FY18	FY19	FY20	FY21	FY22	FY23	FY18-FY23 Total	Notes
FHWA Funds	133	398	309	167	139	139	1,285	[A]
State Funds Earmarked for CapEx	159	82	67	59	53	54	474	[B]
Federal Emergency Revenues	176	257	145	55	-	-	632	[C]
FTA Funds	31	50	50	5	5	5	146	[D]
Total Revenues	498	787	571	287	197	198	2,537	
Construction Local	(23)	(10)	(10)	(10)	(10)	(10)	(73)	[E]
Design	(23)	(5)	(5)	(5)	(5)	(5)	(48)	[F]
ROW	(3)	(3)	(3)	(3)	(3)	(3)	(20)	
FHWA Construction Spend Projects	(96)	(344)	(256)	(143)	(120)	(117)	(1,075)	[G]
Non-Federal Construction Projects	(122)	(49)	(44)	(156)	(178)	(178)	(726)	
FHWA Construction Soft Costs	(37)	(50)	(48)	(23)	(17)	(20)	(194)	[H]
Non-Federal Construction Soft Costs	(13)	(5)	(7)	(26)	(33)	(34)	(118)	
Federal Emergency Repair Program	(176)	(257)	(145)	(55)	-	-	(632)	[I]
Local Emergency Repair Program	(6)	(8)	(3)	(2)	-	-	(20)	
Transit CIP	(31)	(50)	(50)	(5)	(5)	(5)	(146)	[J]
Total Expenses	(530)	(780)	(572)	(428)	(372)	(372)	(3,053)	
Net Capital Expenses	(31)	7	(1)	(141)	(175)	(175)	(516)	

[A] PRHTA receives \$138.8 M (net of penalties) in federal funds per year. FY 18-21 is based on obligated Federal Funds and exceeds 138.8 M in some years as a result of backlogged projects. FY22 onwards assumes PRHTA receives its historical allocation from FHWA of \$138.8 M.

[B] PRHTA receives an annual appropriation from the Commonwealth for capital expenses.

[C] Assumed that FHWA match of emergency repair spending was 100% per the Bipartisan Budget Act of 2018, 115th Cong., 2d Sess. (2018). Page. 88; line 8.

[D] Provided by PRHTA leadership.

[E] Earmarked funding for annual local construction needs.

[F] Earmarked funding for annual design needs.

[G] Federal and local construction costs for FY18-21 were developed using project specific costs provided by PRHTA for active projects, STIP projects, Federal earmark projects, and projected spend on dynamic toll lanes. FY22-27 were developed using long-term CIP projections produced by PRHTA and its consultants and projects the total spend needed by year to keep the highway network in a state of good repair.

[H] Includes \$65 M in soft cost backlog. Assumes 10% of construction costs for 2018 and 2019, 15% for 2020 and 2021, and 18.5% of construction costs for Years 2022 to 2027. Soft cost assumptions by year were provided by PRHTA and its engineering consultants.

[I] Developed using current damage estimates prepared as of February 19th, 2018. Local emergency repair costs include the local share of FEMA emergency repair and 12 M for local design management not eligible for FHWA reimbursement.

[J] Provided by PRHTA leadership.



HTA's projected fiscal position, pre-measures: Operating Expenses snapshot

Total FY18 budgeted Opex is \$1.7 billion over six years, with almost 40 percent of the expected costs from personnel (salary/benefits, including PayGo retirement)

Operating Expenses

in \$ millions	FY18	FY19	FY20	FY21	FY22	FY23	FY18-FY23	Notes
							Total	
Salaries and related benefits	(47.1)	(47.2)	(47.0)	(46.8)	(46.6)	(46.4)	(281.1)	[A]
PayGo Retirement Impact	(13.5)	(14.5)	(14.5)	(14.5)	(14.5)	(14.5)	(86.0)	[B]
Litigation Reserve	(6.5)	(8.6)	(9.9)	(10.9)	(11.6)	(11.2)	(58.8)	[C]
Right of Way Payments	(16.6)	(13.7)	(7.1)	(1.9)	-	-	(39.3)	[D]
Other program expenses	(1.5)	(1.5)	(1.5)	(1.5)	(1.5)	(1.5)	(8.8)	[E]
Subtotal, Construction Support	(85.2)	(85.5)	(80.0)	(75.5)	(74.2)	(73.6)	(474.0)	
Salaries and related benefits	(40.2)	(40.8)	(40.6)	(40.5)	(40.3)	(40.2)	(242.7)	[F]
PayGo Retirement Impact	(4.4)	(4.7)	(4.7)	(4.7)	(4.7)	(4.7)	(28.1)	[G]
Toll highways administration and maintenance	(37.2)	(42.0)	(37.2)	(38.1)	(38.9)	(39.5)	(232.9)	[H]
Train operating and maintenance costs	(66.6)	(68.2)	(67.9)	(70.0)	(69.8)	(72.3)	(414.7)	[I]
Integrated transportation system	(14.6)	(15.0)	(15.3)	(15.7)	(16.1)	(16.5)	(93.1)	[J]
Other operating expenses	(32.5)	(34.6)	(31.7)	(29.7)	(27.8)	(25.7)	(181.9)	[K]
Subtotal, Operating Expenses	(195.5)	(205.3)	(197.5)	(198.7)	(197.6)	(198.9)	(1,193.4)	
Total	(280.8)	(290.8)	(277.4)	(274.2)	(271.7)	(272.5)	(1,667.4)	

[A] Salary: # of FY18 employees times their average salary. Assume salaries remain flat over period; Benefits: FY18: based on average of annualized FY18 YTD actuals through Dec 2017 and FY18 budget and is assumed to grow at 0.5% per year (FY16-FY18 CAGR). Other FY18 benefits based on share of salary and assumed flat over period. Law 70 and 211: Early Retirement based on by-person schedules

[B] FY18: based on Department of Treasury's invoice; Assumed Milliman's actuarial estimates projected at \$36mm / year as of FY19

[C] Considers FY17 actuals as baseline and splits it into construction (93%) and non construction (7%). The construction component varies according to capital expenditure growth.

[D] Based on a specific payment schedule for active cases - trails off as no expected new construction in near-term to drive ROW

[E] FY18 vehicle lease and plotters: based on expected payments (\$585K) this fiscal year; all other (rent, security and others): assumed flat with FY17 actuals

[F] Salary: # of FY18 employees times their average salary. Assume salaries remain flat over period; Benefits: FY18: based on average of annualized FY18 YTD actuals through Dec 2017 and FY18 budget and is assumed to grow at 0.5% per year (FY16-FY18 CAGR). Other FY18 benefits based on share of salary and assumed flat over period. Law 70 and 211: Early Retirement based on by-person schedules

[G] FY18: based on Department of Treasury's invoice; no additional information available, assumed flat during period

[H] FY18 Toll Operator (GILA) estimates based on the 12 months pre-Hurricane (Sep 2016 to Aug 2017); split 40% fixed and 60% variable - variable based on expected traffic volume. Both costs escalated at 2% / year. Vehicles and maintenance based on expected traffic; insurance based on specific post-Hurricane Maria estimates (if not other hurricanes, insurance will regress to pre-Maria levels starting in FY23); all other variables constant with FY17 actuals

[I] Tren Urbano operating contract (\$53mm in FY18) based on contract requirements and projected hour and mile rates (about 1% increase per year); insurance based on specific post-Hurricane Maria estimates; all other variables (lighting, etc.) assumed constant with FY17 actuals

[J] Bus operating estimates based on recent contract trends (2.4% per year) extended for all years of period

[K] Professional Services, which includes FOMB consulting providers (represents 79% of all providers) is expected to decrease during the period. All other variables (rent, lighting, etc.) assumed constant with FY17 actuals



Key Base Case Scenario Assumptions – Operating Revenue

• Operating Revenue

- Toll revenues were estimated using Dr. Jorge Freyre’s table II draft results received on 3/21/18. The accompanying draft report is expected later on, and the estimates and / or interpretations are subject to change.
 - There is currently no plan in place to increase toll rates
- Toll Fine Revenue is based on toll operations-related violations, which include a \$15 fine plus the cost of the unpaid toll transactions. FY18 was estimated at ~\$27 million based on the average of the FY17 actuals and annualized FY18 YTD data (to account for post-Maria impact as well as expected return to steady state). For FY19 through FY23, this line item varies with Commonwealth’s Real GNP assumptions as of March 2018. **These projections assume that HTA will receive both payments made to it directly as well as through Hacienda / Treasury, and that these pass-through receipts from Hacienda are not deducted from the central government’s transfer to HTA.**
- Transit Revenues are composed of Tren Urbano and Metrobus income and are estimated at ~\$8 million for FY18 based on the average of FY17 actuals and annualized FY18 YTD data. For FY19 through FY23, this line item varies with Commonwealth’s Real GNP assumptions as of March 2018. In addition, transit revenues includes FTA funding at ~\$20 million / year.
- Other Income for FY18 is estimated at \$4.6 million, of which over 80% consists of income from rent and lease, Import Levy Tax fees and income improvements. For FY19 through FY23, this line item varies with Commonwealth’s Real GNP assumptions as of March 2018.

• Tax and Fee Revenue

- Gasoline taxes, Diesel taxes, Petroleum Products taxes, Cigarette taxes and Vehicle License Fees (note: all these are retained by the central government) were estimated consistent with the Commonwealth’s Fiscal Plan projections and Dr. Jorge Freyre’s table II draft results for years FY18 through FY23.
 - Gasoline, diesel and petroleum products taxes are assumed to be consistent with historical years, however depending on the Puerto Rico Electric Power Authority repair and recovery from the hurricanes it will effect the taxes through consumers usage of gas and electrical power generators.
 - Revenues from Motor Vehicles License Fees and License Fees Transferred to ACT considers FY17 as the baseline for Real GNP variation



Key Base Case Scenario Assumptions – CIP (1 of 2)

• Construction Costs

- Federal and local construction costs for FY18-21 were developed using project specific costs provided by PRHTA for active projects, STIP projects, Federal earmark projects, and additional locally funded projects.
 - A previously budgeted \$23 M was allocated to the Construction Local line item.
- FY21-23 construction costs were developed using long-term CIP projections produced by PRHTA and its consultants and validated by an external engineering firm and projects the total spend needed by year to keep the highway network in a state of good repair.
 - FY21 is the first year where long-term CIP costs are incurred. Per PRHTA consultants, only 20% of steady-state FHWA long-term CIP costs can be incurred in the first year due to additional standard delay in obligating federal funds. The remaining portion of costs in this year are contributed from STIP-programmed and current active projects.
 - \$10 M per year of the FY22+ non-federal spend has been allocated to the local construction line item as an earmark for annual needs.
- All years incorporate additional costs based on the long-term CIP projections to achieve adequate levels of state of good repair spending.

• Soft Costs

- Includes \$65 M in soft cost backlog. Assumes 10% of construction costs for 2018 and 2019, 15% for 2020 and 2021, and 18.5% of construction costs for Years 2022 to 2023. Soft cost assumptions by year were provided by PRHTA and its engineering consultants
 - A previously budgeted \$23 M was allocated to the Construction Local line item.
 - For FY19 onwards, \$5 M was deducted per year from the total soft cost and allocated to the design line item to ensure funding for annual needs.



Key Base Case Scenario Assumptions – CIP (2 of 2)

- **Funding**
 - PRHTA receives \$138.8 M (net of penalties) in federal funds per year. Total FHWA funds for FY18-21 is based on obligated Federal Funds and exceeds 138.8 M in some years as a result of backlogged projects. FY22 onwards assumes PRHTA receives its historical allocation from FHWA of \$138.8 M.
 - PRHTA had previously received a capex allocation from central government of \$75 M which is currently allocated for FY18. PRHTA is also set to receive additional Capex funds of \$399 M. This amount will fund emergency reconstruction as well as allow HTA to meet its capital requirements to maintain a state of good repair and fund additional strategic projects.
- **Emergency Repair**
 - Assumed that FHWA match of emergency repair spending was 100% per the Bipartisan Budget Act of 2018, 115th Cong., 2d Sess. (2018). Page. 88; line 8.
 - Developed using current damage estimates prepared as of February 19th, 2018. Local emergency repair costs include the local share of FEMA emergency repair and 12 M for local design management not eligible for FHWA reimbursement
- **Transit CIP**
 - Developed on a line item basis by CIP leadership. Includes costs and revenues associated with reconstruction and repair following Hurricane Maria.



Key Base Case Scenario Assumptions – Operational Expenses (1 of 3)

• Salaries and related benefits

- Salaries and related benefits consider the latest HTA roster, and each employee's costs at the average current salary. Additional benefits such as overtime, pension, social security and Medicare are calculated as a proportion of the base salary. HTA has not increased salaries in the last nine years, so we assumed no increase over this period. HTA is self-insured, and over the last two years has experienced a 0.5% CAGR in health care costs, which we assumed will extend for the remaining fiscal years.
- Law 70 Early Retirement Program went into effect prior to HTA's fiscal plan period, and its costs are based on the known payout schedule for the program's participants. As expected, the program costs trails off as participants age and are removed from the program.
- Law 211 Early Retirement Program went into effect at the beginning of FY18, and our baseline considers participants at their then-current costs at the time of their 6/30/17 separation (note: savings from this measure is captured and represented as a fiscal measure).

• PayGo Retirement

- HTA received an invoice from the Puerto Rico Treasury Department for \$34 million related to FY18, the first year when PayGo went into effect. For forecasts from FY19 through FY23, HTA used Milliman's PayGo-related actuarial estimates projected at \$36 million per year.

• Litigation Reserve

- HTA considered litigation case-by-case breakdown for FY17 and split between construction and non construction. Non construction component (7%) assumed constant while construction component (93%) reflects variation in capital expenditure.

• Right of Way Payments

- HTA built a by-case projection based on specific litigation cases and their expected payments. These expenses are expected to gradually decrease until reaching zero by FY22, as HTA's new construction activity reduces.



Key Base Case Scenario Assumptions – Operational Expenses (2 of 3)

- **Other program expenses**

- Consists of additional expense related to construction support. Equipment rental is the largest item within this category and is due primarily to car leases to support transportation within construction sites. This item is expected to increase to support increased construction activity in the next few years. Other remaining expenses such as building rent and security considers FY17 actuals and is expected to remain flat.

- **Toll highways administration and maintenance**

- Electronic toll collection, the cost of HTA's toll operator third-party service provider, has been split into variable (costs driven by traffic volume) and fixed (fixed costs). To get a good steady state estimate, FY18 considers the last twelve months prior to Hurricane Maria Sep 2017 to Aug 2018); for future years, this line item varies based on real GNP plus a small per year contractor cost escalation.
- Highway Repair and maintenance, which supports HTA's highways, consists of several components (e.g. green area contracts; repavement) that total \$10 million per year for FY18 and FY19. As of FY20 this line item includes a small per year contractor cost escalation.
- Vehicle maintenance and repair, which supports HTA's highway operations, assumes FY18 is consistent with FY17, and future years include small per year contractor cost escalation.
- Insurance and maintenance, for HTA's highways operations, considers actual insurance policy costs for years FY18 and FY19. Insurance costs are estimated to remain steady until FY22 and then gradually decline back to FY18 levels (assuming no Maria-like events will recur).
- All other line items such as lighting, security, rent, etc. use FY17 actuals for projections for each year through FY23.

- **Train operating and maintenance costs**

- Tren Urbano's operating contract represents approx. 80% of this line item. Between FY18 and FY23, projections have been made on a detailed, per-year estimate consisting of the FY18 to FY23 contracted base compensation, price / mile, price per hour, estimated miles, estimated hours and an annual allowance in order to reach the total expected contract costs. CAGR is approx. 1% over the six years.
- Insurance and maintenance, for Tren Urbano operations, considers a actual insurance policies for years FY18 and FY19. Insurance costs are estimated to remain steady until FY22 and then gradually decline back to FY18 levels.
- All other line items such as lighting, security, rent, etc. use FY17 actuals for projections for each year through FY23.



Key Base Case Scenario Assumptions – Operational Expenses (3 of 3)

- **Integrated transportation system**

- The bus system that flows into Tren Urbano is operated by a third-party provider and the budget information is based off on the existing operating contract. Based on the contract pricing, a CAGR of approximately 2% is expected through FY23.

- **Other operating expenses**

- Professional services represent approximately 80% of this line item. Professional services includes FOMB support, which is almost 80% of this subtotal. In addition, services includes Title III consulting, accounting, law and financial services consulting. Professional services is expected to gradually decline over the years from approximately \$26 million in FY18 to approximately \$18 million in FY23, mostly related to a decline in FOMB services and Title III support.
- Insurance and maintenance regarding operating and overhead, considers actual insurance policies for years FY18 and FY19. Insurance costs are estimated to remain steady until FY22 and then gradually decline back to FY18 levels.
- All other line items such as lighting, security, rent, etc. use FY17 actuals for projections for each year through FY23.



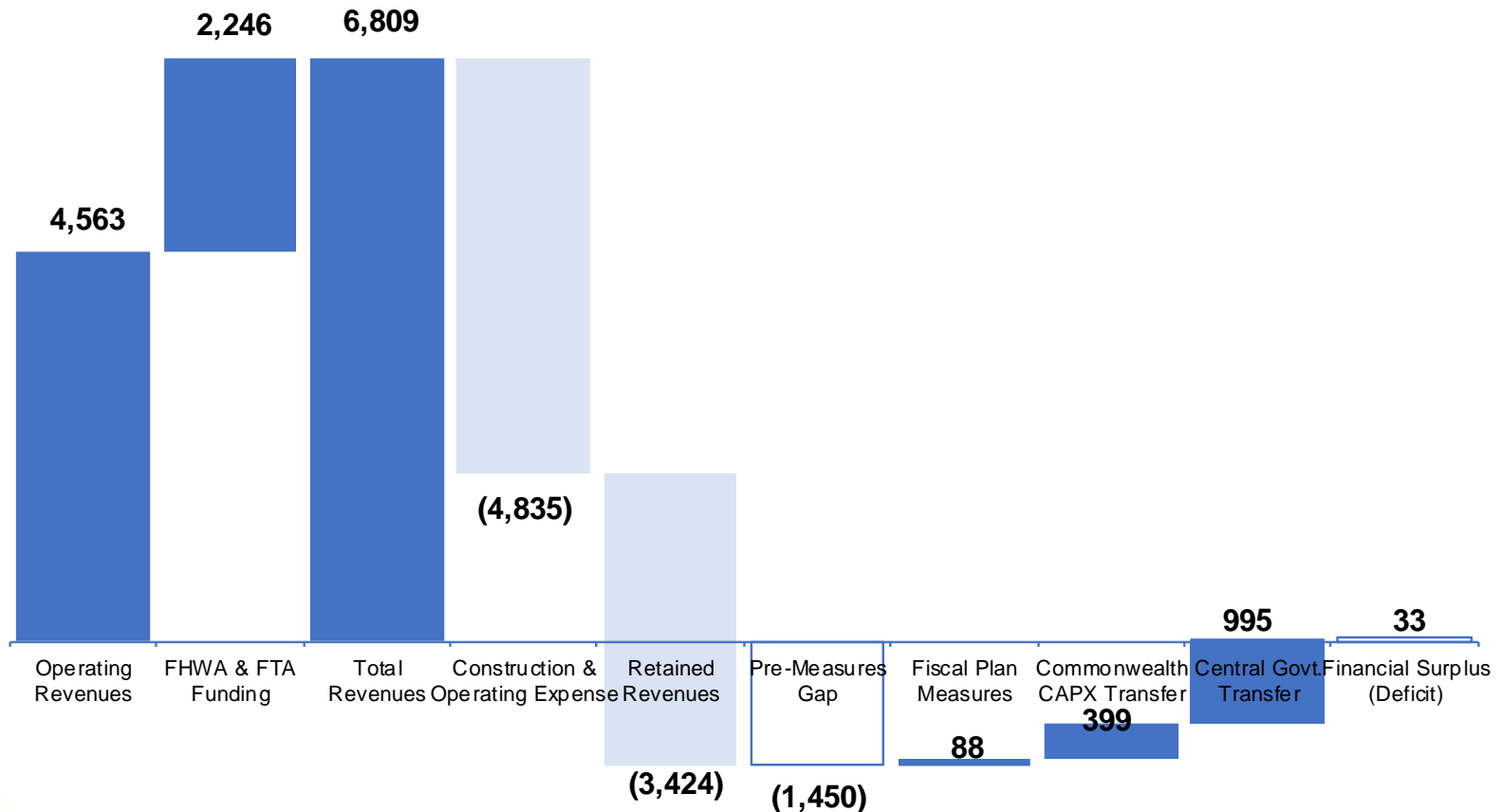
V. FISCAL MEASURES WITH FINANCIAL PROJECTIONS



HTA's projected fiscal situation with fiscal measures: Summary

After retained revenues, Central Government transfers, and fiscal plan measures, HTA's pre-debt fiscal surplus is **\$33 million** from FY18-FY23

Total financial gap with fiscal measures, FY18-FY23 in \$ millions



HTA's projected fiscal situation with fiscal measures: Detail

In \$ thousands	2017-18 P	2018-19 P	2019-20 P	2020-21 P	2021-22 P	2022-23 P	6 Yr Total: FY18-FY23
Toll fares, includes [4] and [5]	111,750	128,710	134,784	136,109	134,813	141,953	788,119
Gasoline Tax	171,500	161,280	165,000	165,000	165,000	165,000	992,780
Diesel Tax	20,140	16,000	16,370	16,370	16,370	16,370	101,620
Petroleum Products Tax	323,270	285,540	265,000	265,000	265,000	265,000	1,668,810
Cigarettes taxes	20,000	20,000	20,000	20,000	20,000	20,000	120,000
Motor Vehicle License Fees	29,092	31,030	31,939	32,568	33,010	33,227	190,865
Act 30 - Licenses Fees Transferred to Act	53,269	56,818	58,482	59,634	60,443	60,841	349,487
Transit Revenues	28,909	29,308	29,580	29,769	29,902	29,967	177,435
Electronic Toll Fines, includes [4]	27,177	18,948	19,503	19,888	20,158	20,290	125,964
Other income	4,618	5,487	5,648	5,759	5,838	5,876	33,227
Operating Revenue	789,725	753,121	746,307	750,097	750,532	758,524	4,548,307
FHWA Funds	132,766	397,945	308,644	167,497	138,830	138,830	1,284,512
State Funds Earmarked for CapEx	75,000	-	-	-	-	-	75,000
Federal Emergency Revenues	175,553	256,565	145,201	55,135	-	-	632,454
FTA Funds	31,000	50,000	50,000	5,000	5,000	5,000	146,000
Hurricane Loss Assessment - Insurance and FEMA Revenue	27,002	54,004	27,002	-	-	-	108,007
Capital Contribution	441,320	758,514	530,847	227,632	143,830	143,830	2,245,973
Total Revenues After Federal Fund Transfers	1,231,046	1,511,634	1,277,154	977,730	894,362	902,354	6,794,280
Right of Way	(3,300)	(3,300)	(3,300)	(3,300)	(3,300)	(3,300)	(19,800)
Design	(23,000)	(5,000)	(5,000)	(5,000)	(5,000)	(5,000)	(48,000)
Construction Local	(23,160)	(10,000)	(10,000)	(10,000)	(10,000)	(10,000)	(73,160)
Salaries and related benefits, includes [2] and [3]	(46,448)	(50,650)	(41,943)	(33,747)	(31,237)	(28,192)	(232,217)
PayGo Retirement Impact	(13,536)	(14,489)	(14,489)	(14,489)	(14,489)	(14,489)	(85,982)
Litigation Reserve	(6,519)	(8,607)	(9,922)	(10,879)	(11,643)	(11,198)	(58,769)
Right of Way Payments	(16,626)	(13,736)	(7,068)	(1,900)	-	-	(39,330)
Other program expenses, includes [2]	(1,471)	(2,538)	(5,908)	(7,485)	(9,070)	(10,596)	(37,068)
FHWA Construction Spend Projects	(96,242)	(343,623)	(255,951)	(142,505)	(120,009)	(117,156)	(1,075,486)
Non-Federal Construction Projects	(121,717)	(48,886)	(43,804)	(155,505)	(177,855)	(178,459)	(726,226)
FHWA Construction Soft Costs	(36,524)	(49,773)	(48,333)	(22,678)	(17,122)	(19,818)	(194,248)
Non-Federal Construction Soft Costs	(12,672)	(4,944)	(7,090)	(26,316)	(33,267)	(33,561)	(117,851)
Federal Emergency Repair Program	(175,553)	(256,565)	(145,201)	(55,135)	-	-	(632,454)
Local Emergency Repair Program	(6,496)	(7,780)	(3,240)	(2,484)	-	-	(20,000)
Transit CIP	(31,000)	(50,000)	(50,000)	(5,000)	(5,000)	(5,000)	(146,000)
Hurricane Loss Assessment - Local Funding Needs	(1,552)	(3,104)	(1,552)	-	-	-	(6,209)
Hurricane Loss Assessment - Insurance / FEMA Covered	(27,002)	(54,004)	(27,002)	-	-	-	(108,007)
Total Construction	(642,818)	(927,000)	(679,803)	(496,423)	(437,992)	(436,771)	(3,620,807)
Salaries and related benefits, includes [2] and [3]	(39,780)	(46,412)	(35,391)	(24,752)	(21,843)	(18,123)	(186,301)
PayGo Retirement Impact	(4,423)	(4,734)	(4,734)	(4,734)	(4,734)	(4,734)	(28,094)
Toll highways administration and maintenance, includes [4]	(35,278)	(34,541)	(33,455)	(33,084)	(34,295)	(33,558)	(204,211)
Train operating and maintenance costs, includes [1]	(66,587)	(68,183)	(67,902)	(70,011)	(59,357)	(61,326)	(393,366)
Integrated transportation system, includes [1] and [5]	(14,603)	(11,538)	(11,834)	(12,326)	(12,851)	(13,196)	(76,346)
Other operating expenses, includes [2] and [6]	(32,518)	(36,549)	(38,201)	(38,350)	(38,610)	(38,643)	(222,870)
Total operating expenses	(193,188)	(201,956)	(191,517)	(183,257)	(171,690)	(169,581)	(1,111,188)
Total expenses	(836,006)	(1,128,956)	(871,319)	(679,680)	(609,682)	(606,351)	(4,731,994)
Total Fin. Gap Post-Measures before Rev Retention & Gov. Funding	395,040	382,678	405,835	298,049	284,681	296,002	2,062,285
Retained Revenues to Central Government	(617,271)	(570,668)	(556,791)	(558,572)	(559,823)	(560,438)	(3,423,563)
Total Fin. Gap Post-Measures post-Rev Retention & pre-Gov. Funding	(222,231)	(187,990)	(150,956)	(260,523)	(275,142)	(264,435)	(1,361,277)
Expected HTA Allocation from Commonwealth CAPX Fund	84,000	82,073	67,334	59,067	53,020	53,761	399,256
Transfer from Government of PR	138,100	97,300	73,900	222,400	238,000	224,900	994,600
Total Fin. Gap Post-Measures after Rev Retention & Gov. Funding	(131)	(8,616)	(9,723)	20,944	15,878	14,226	32,578

Fiscal Plan Measures - Organizational Transformation

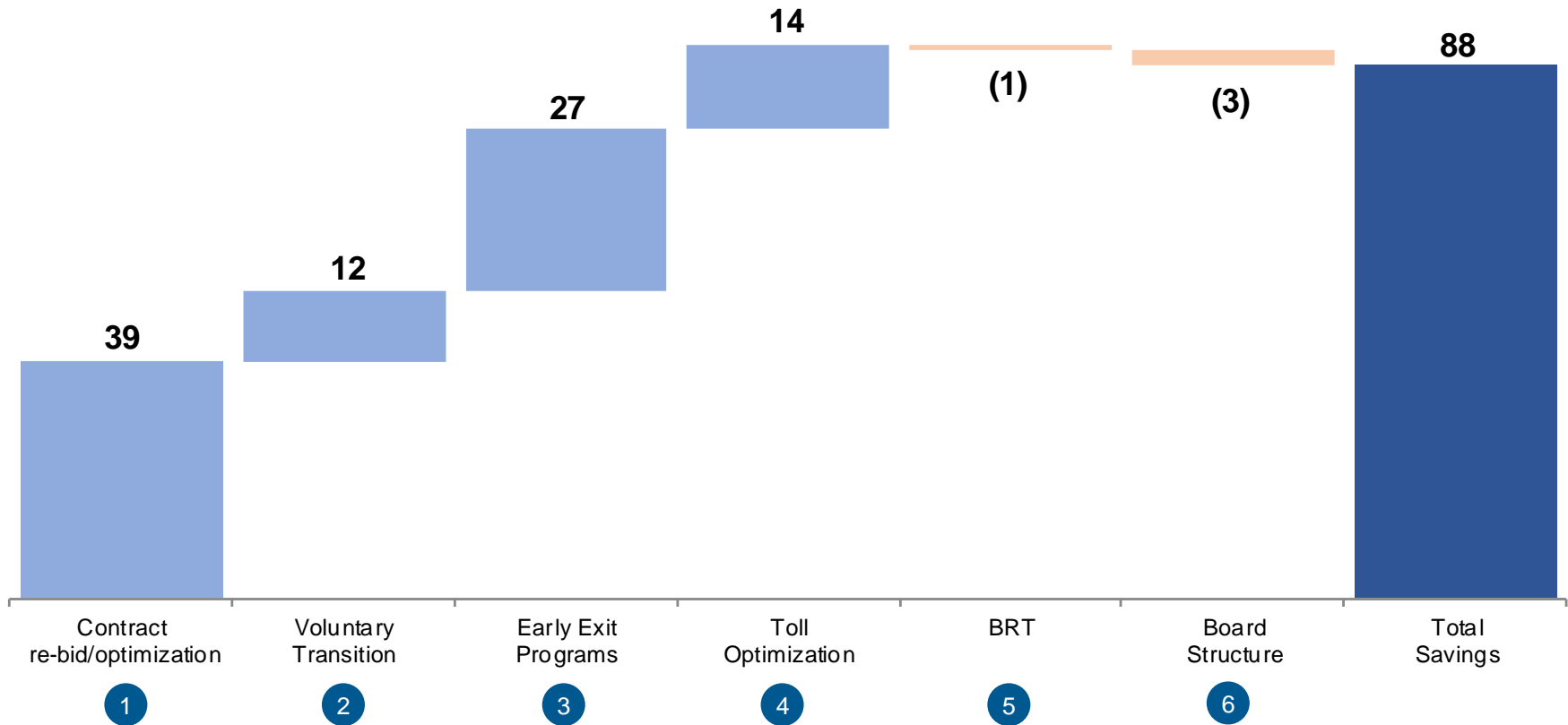
		Saving Results \$ millions		
		Avg/ Year	Final Year (FY 23)	6 Years (FY18-23)
1	<u>Operating Contract Re-Bid and Optimization</u> HTA will utilize Title III leverage to re-bid operating contracts and negotiate with vendors to align contract with current needs and reduce overall costs	6.5	14.6	39.1
2	<u>Outsourcing and Workforce Voluntary Transition</u> HTA will reduce overall workforce from and contract with specialized vendors to provided critical services at reduced costs. Payroll savings will be achieved net of outsourcing costs and separation incentives	2.0	11.6	11.8
3	<u>Early Exit Program</u> HTA has executed retirement incentivization under Law 211 “Pre-Retirement Voluntary Program Act” for 162 personnel and an early termination incentive program for 14 more	4.5	7.2	26.7
4	<u>Toll Optimization</u> HTA will make improvements to processes and controls to collect owed revenue and reduce operating costs on existing toll roads	2.4	6.3	14.1
5	<u>Bus Rapid Transit Implementation</u> HTA will implement Bus Rapid Transit lanes in accordance with HTA funding agreement, to drive increased traffic to Tren Urbano with 75% farebox recovery ratio	(0.2)	(0.4)	(1.0)
6	<u>Organizational Governance Improvements</u> Beginning in FY 2020, HTA will operate under the control of a new board, which includes four industry expert board members, this small increase in cost will enable the authority to commit to necessary reform	(0.4)	(0.5)	(2.5)
Total		14.7	38.8	88.3



Summary of Fiscal Plan Measures

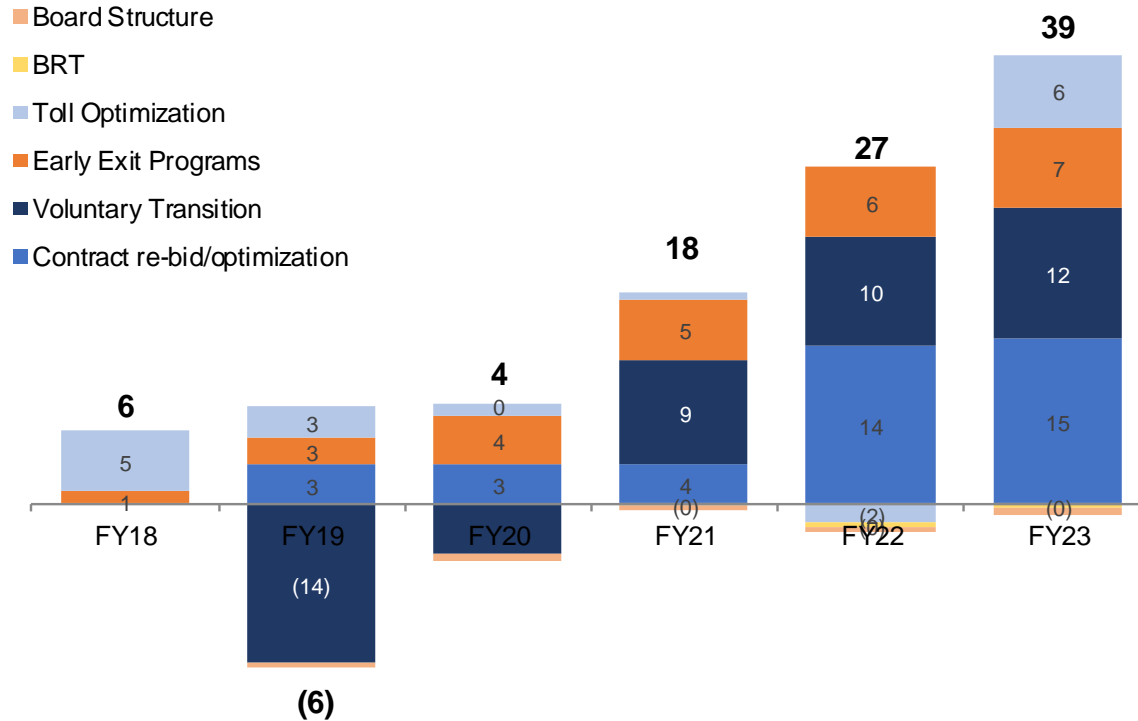
The expected impact of HTA's fiscal measures is \$88 million over the six-year period

Fiscal Measures, FY18-FY23 in \$ millions



Summary of Fiscal Plan Measures by Year

Fiscal Measures by initiative, FY18-FY23 in \$ millions



In \$ millions

	FY18	FY19	FY20	FY21	FY22	FY23	FY18-FY23 Total
Cost Savings	3	(1)	7	22	34	38	103
Revenue Enhancement	4	(5)	(3)	(5)	(6)	0	(15)
Total	6	(6)	4	18	27	39	88



1 Operating Contract Re-bid / Optimization

Background

- HTA's operating budget includes major, long-term operating contracts, including those supporting transit, design and construction, and other long-outsourced functions
- Many HTA contracts operate on longstanding contracts which have been extended or modified and are currently overpriced due to:
 - Not reflecting HTA's current operating environment
 - Including fuel costs from earlier eras in which fuel costs were much higher
 - Pricing in risk of non-payment
- Contracts in many cases exceed cost benchmarks from reputable national data sets, past procurements, and other performance metrics.

Proposed Changes

- In accordance with HTA's status under Title III of PROMESA, the terms of individual contracts, and changes in cost drivers including fuel, HTA has sufficient leverage to request improved terms from contracting partners, or recomplete outdated contracts through solicitation.
- As HTA's financial operations improve in accordance with MOU requirements and this Fiscal Plan, HTA will strengthen the case for reduced cost of risk
- HTA re-compete contracts and negotiate with vendors to improve contract terms to reflect current circumstances



Outsourcing and Workforce Voluntary Transition

- HTA currently operates as an in-house infrastructure developer and has 1,283 employees.
- HTA's headcount has not reduced commensurately with the reduction in construction investment. From 2004 to 2017, the compound annual growth rate of construction investment has declined by 10% while headcount has only declined by 4%.
- Outsourcing and a voluntary workforce transition will therefore align headcount with construction spend; aiding the transition to a lean, contract management organization. The transformed organization will have fewer internal staff and will provide opportunities for cost-effective outsourcing of various functions.
- By outsourcing key functions, HTA:
 - Obtains efficiencies to allow for an effective program management
 - **Can adjust the organization to adequate size** and **provides flexibility** to adjust resources to achieve future CIP or projects
 - **Enhances functions** and services to **effectively meet** best practices and updated requirements
- Historically, HTA's experience with outsourcing has been positive. Outsourcing has resulted in improved road conditions as well as reduced construction project duration and cost overruns, as demonstrated with HTA's experience with PR-22, and PR-66.
- HTA's operational transformation relies on the successful implementation of the voluntary incentivized employee separation. Because of the risks associated with the program, HTA is in the process of developing a Pilot Program to gauge initial interest of voluntary separation and to identify any unforeseen risks of outsourcing.
- Upon a successful Pilot Program, HTA will implement the remaining outsourcing and workforce transition over a period of five years. Should the Pilot Program fail to attract enough participants, HTA will not continue construction inspection outsourcing as it cannot risk losing federal funds and/or not complying with the MOU. In this case, HTA still plans to optimize the construction value chain to the extent possible (see slide 74).
- HTA has already begun taking steps to comply with a Memorandum of Understanding ("MOU")¹ with the FHWA. The MOU's goals overlap with HTA's transformation to a contract manager from an in-house developer. Under the MOU, HTA is working to, among other things, streamline the project billing process, project delivery process, and contracting procedures. See Appendix for further discussion on the MOU initiatives.



3 Voluntary Exit Programs: Law 211 and Early Termination Program

Background

- **Law 211**
 - The article 211-2015 “Pre-Retirement Voluntary Program Act” is a retirement incentive program that was passed on December 28, 2015.
 - To qualify for the Law 211 incentive program, HTA employees had to be less than 61 years old and have a minimum of 20 years of service
 - Employees who met the criteria and chose to participate would receive 60% of base salary (average of the 3 highest salaries)
 - 162 HTA employees chose to participate in this retirement incentive program: Group A: 131 participants; Group B: 31 participants
 - Program participants’ employment ended with HTA on June 30, 2017 (the end of FY17) and therefore the only additional ongoing cost related to those employees was the amount they were owed under the retirement incentive program parameters
 - The savings to HTA is the difference between those payments and the ongoing salary and benefits that HTA would have paid those employees had they remained employed at HTA
- **Early Termination Incentive Program**
 - The Early termination program was initiated in February 2018 with 14 participants enrolled for termination from HTA as of 2/28/18 (deadline to enter the program is 3/15/18).
 - Each participant will receive full base salary until June 30, 2018 in addition to health insurance, at a cost of \$100 / participant
 - As of June 30, 2018 HTA will not incur any additional Early Termination program costs

Proposed Changes

- No further changes needed: HTA executed this retirement incentive plan as of June 30, 2017.
- Since July 1, 2017, HTA has been receiving salary and benefits savings from Law 211 program.
- As of July 1, 2018, HTA starts benefiting from the Early Termination program.



3 Voluntary Exit Programs: Law 211 and Early Termination Program

Analysis of Opportunity

Voluntary Exit Programs

	Group A	Group B	Total
Law 211 participants	131	31	162 [A.1]
Early Termination Incentive Program	14	-	14 [A.2]
Average salary at time of retirement	44,548	44,548	[B]
Average benefits at time of retirement	17,151	17,151	[C]
Average salary + benefits	\$61,699	\$61,699	[D] = [B] + [C]
Total cost per year at time of retirement	\$8,946,413	\$1,912,681	\$10,859,095 [E] = ([A.1]+[A.2]) * [D]
Total cost (FY18 - FY23)			\$65,154,568 [F] = [E] * 6
less: payouts to Law 211 participants			\$38,160,471 [G]
less: payouts to Early Termination Incentive Program			\$260,448 [H]
Savings from voluntary exit measure			\$26,733,649 [I] = [F] - [G] - [H]

[A.1]: Per participant list from HTA's finance team

[A.2]: Per participant list from HTA's finance team

[B]: Average salary of 131 Group A participants - assumed same for other participants

[C]: Applying a 38.5% benefit factor based on FY18's relative ratio of benefits / salary

[D]: Calculation

[E]: Calculation

[F]: Calculation

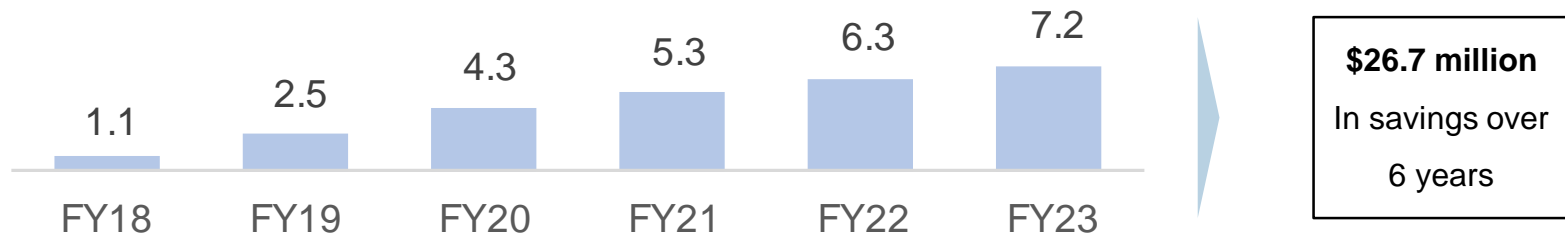
[G]: Based on detailed payout schedule provided by HTA's finance team

[H]: 14 Participants * 5 months of base salary (until June 30th 2018)
plus 5 months of health insurance at \$100/participant/month

[I]: Calculation

Implementation timeline and expected annual savings

Savings from Voluntary Exit Programs, FY18-FY23 (\$ in millions)



GOVERNMENT OF PUERTO RICO
Puerto Rico Highways and Transportation Authority

Background

- **System Improvements and Vendor Enhancements**

- Open Road Toll (ORT) System Enhancement: Improve legacy system's ORT hardware (lasers, cameras, antennas and sensors) and software that will allow HTA to reduce leakage, improving TAG (Auto Expresso) and License Plate transaction data and increased accuracy and reliability of vehicle classification.
- Toll Operator Improvement: Upgrade system to improve toll transaction life cycle and user accounts recharge channels, decrease gross Violations (better violation management and violation letter bundling), provide consistent reporting, improved system monitoring, minimize redundancy and reduce current revenue leakage. In addition, HTA expects improved customer service.
- Violation Avoidance: Create automatic registration functionality, based on Autoexpreso traffic records, between the user's tag code (AutoExpreso) and the user's vehicle license plate number, allowing HTA to charge vehicles based on license plate, when the tag code is not available. This functionality will reduce the amount of violations as those transactions will be charged to the Autoexpreso user rather than becoming a Violation, in addition to reducing the current Violations Management cost supported by PRHTA.
- Improved Void Accountability: Map all types of "void" transactions (those that are not pursuable due to data quality) and define which void transactions HTA should not be paying for. (Currently, HTA pays for all void transactions).

- **New Initiatives**

- ORT Conversion: Convert existing (canalized) lanes into ORT lanes. HTA expects the latter to be more accurate, have lower leakage as well as better classification.
- Web Maria: Collect post-Hurricane Maria toll fares that could not be collected in the weeks following the hurricane.



Analysis of Opportunity

in \$ millions	FY18	FY19	FY20	FY21	FY22	FY23	FY18-FY23 Total
ORT System Enhancement	1.9	4.6	1.3	1.3	1.3	1.3	11.7 [A]
Toll Operator Improvement	-	-	1.8	5.4	5.4	5.4	17.9 [B]
Violation Avoidance	-	(3.8)	(3.9)	(4.1)	(4.2)	(4.2)	(20.1) [C]
Improved Void Accountability	-	1.8	1.8	1.8	1.8	1.8	8.9 [D]
System Improvements and Vendor Enhancements	1.9	2.6	1.0	4.4	4.3	4.2	18.4
ORT Conversion	-	-	-	(3.9)	(6.0)	2.1	(7.8) [E]
Web Maria	3.5	-	-	-	-	-	3.5 [F]
New Initiatives	3.5	-	-	(3.9)	(6.0)	2.1	(4.3)
Total Savings	5.4	2.6	1.0	0.5	(1.7)	6.3	14.1

[A]: ORT System Enhancement: HTA's vendor negotiations will produce cost savings of \$6.5mm over 17 months in FY18 and FY19.

[A]: ORT System Enhancement: based on toll operator experience, HTA expects upgrades of the current system will reduce revenue leakage by around 1%, or \$13mm/year.

[B]: Toll Operator Improvement: based on toll operator experience, HTA expects improving operator capability to increase revenue by 2% (reduced leakage) and reduce cost by 20%; needed CAPX = \$3.5 mm, starts FY19.

Includes Eclipse \$500k / year and a one-time \$50K RFP cost

[C]: Violation Avoidance: based on toll operator experience, HTA expects adding automated license plate / AutoExpreso tags will help HTA to reduce violations (currently 600K / month) by 25%, at \$0.60 cost per letter, savings achieved are about \$1.1mm / year.

[C]: Violation Avoidance: based on toll operator experience, by adding automated license plate / AutoExpreso tags, HTA will be able to reduce its violations by 25%. Accordingly, it will automatically collect the average toll fare of \$106 versus the \$0.23 on average that it collects currently on each violation letter sent (due to its 22% violation collection rate). Reducing the 600K violations letters it sends each month by 25% leads HTA to send 150K fewer violation letters. The difference of \$0.83 collected per instance for 150K instances per month is \$125K additional revenue per month, or \$1.5 mm per year.

[C]: Violation Avoidance: as noted above, based on toll operator experience, HTA expects to reduce its violations by 25%. Without this change, HTA's baseline projection is to receive about \$26.6 mm per year in toll violations. Reducing violation instances by 25% would have a proportional impact on HTA's violation revenue, or an average reduction of about \$6.7 mm per year.

[D]: Improved void accountability: based on toll operator experience, HTA expects a decrease of 140K voids per month that HTA is currently paying for (or about 4% of the total gross violations). For each of 140K voids per month, HTA no longer will pay the average toll fare of \$106, and will save about \$150K per month, or about \$1.8 mm per year.

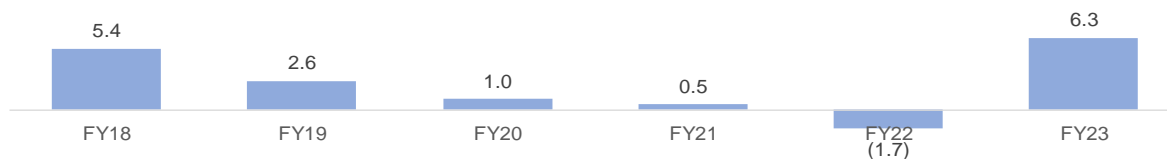
[E]: ORT Conversion: based on toll operator experience, at select plazas, HTA expects 5% revenue gain from increased traffic bi-directionality. The current revenue baseline for those plazas is \$47 mm, so a 5% increase would lead to a \$2.3 mm per year revenue increase (starting in FY20). The CAPX needed to support this investment is \$21mm.

[E]: ORT Conversion: based on toll operator experience, at select plazas (rolled out in three phases CAPX \$18 mm), HTA expects 2% revenue gain from ORT based on reduced leakage. The revenue baseline for those plazas (for all three phases) is \$96 mm, so a 2% increase would lead to a \$1.9 mm per year revenue increase once all the phases are complete. Similarly, HTA expects 3% cost reduction mostly from lower maintenance costs. On a cost baseline of \$12 mm, a 3% reduction would lead to savings of \$0.4 mm per year.

[F]: Web Maria: estimate of how much of the \$7 mm revenue HTA can recover (assumed 50% recovery) from those drivers not able to pay their tolls for weeks following Hurricane Maria.

Implementation timeline and expected annual savings

Savings from Toll Collection Optimization, FY18-FY23 (\$ in millions)



\$14.1 million
in savings over
6 years



5 Bus Rapid Transit Lanes (PR52)

Background

- HTA currently operates the Caguas-to-San Juan stretch of PR-52 as a toll road on a fee basis
- HTA has received \$175 million in FTA project funding to support develop Bus Rapid Transit (BRT) lanes, and construction is scheduled to begin in FY18, and complete in FY20
- HTA will establish a work day Bus Rapid Transit line from Caguas to the TU Centro Medico station in accordance with the HTA agreement, providing a more-convenient option for reaching the TU system, offsetting roughly 75% of the BRT operating costs.

Proposed Changes

- HTA will meet its commitment to FTA and operate the Bus Rapid Transit Systems operating at an estimated 75% farebox recovery ratio, exceeding most HTA bus operation standards



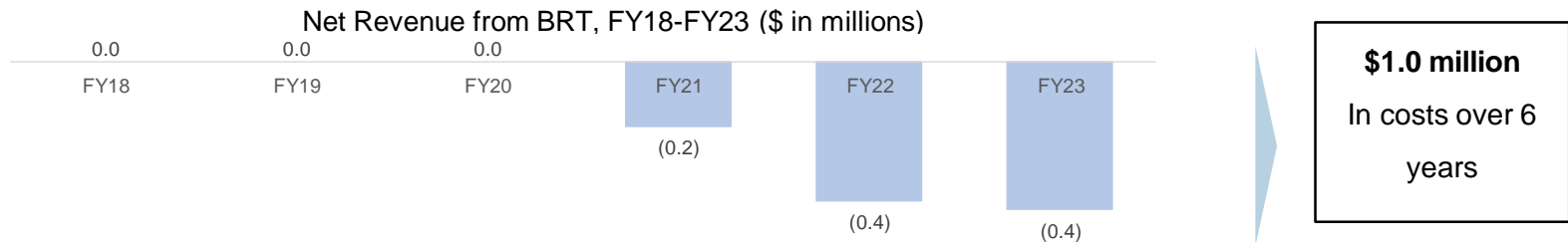
5 Bus Rapid Transit Lanes (PR52)

Analysis of Opportunity

PR 52 - Bus Rapid Transit Analysis (\$, millions)			
Fiscal Year	Cost	Revenue	Net
2018	-	-	-
2019	-	-	-
2020	-	-	-
2021	0.6	0.4	(0.2)
2022	1.3	0.9	(0.4)
2023	1.3	0.9	(0.4)
	3.2	2.2	(1.0)

- \$175 million in total capital costs are being invested in FY19-22, funded entirely with federal funding (FTA)
- Surplus buses from the Bayamon BRT can support Caguas needs
- Operating costs for Bus Rapid Transit (contracted operation with ATI vendor) begin in 2021 at \$1.3 million
- BRT revenue of \$2 per-person with 2k estimated riders on 220 work days per year (~75% cost coverage)
- Additional potential revenue benefits of providing additional feeder traffic to Tren Urbano are not included within this analysis.

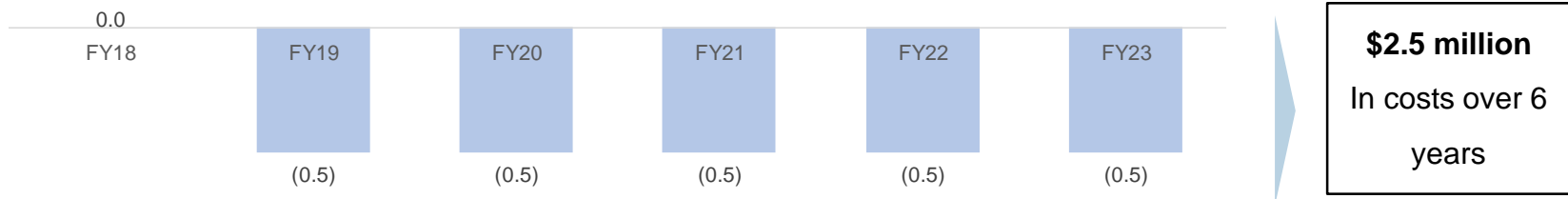
Implementation timeline and expected annual savings



6 Organizational Governance Improvements

New Board Structure Enables Change

- Beginning in Fiscal Year 2019 – PRHTA will operate under the control of a new board, which includes four industry expert board members
- In order to attract and retain board members with the desired qualification, HTA will need to compensate non-employee members in a manner similar to private board members.
- HTA intends to compensate each non-employee board member **\$75k per year**. Total direct compensation will total **\$300k per year**. Board members are payed salaries as stipends, and are not entitled to any payroll benefits.
- These professional board members will be identified by a search firm, at an estimated cost of 33% of board compensation, total search fees not to exceed **\$100k per year**.
- Each board member will be reimbursed for applicable office expenses and required board travel based on expenses incurred at a rate of **\$25k per year, or \$100k total per year**.
- In total, the new, professional board structure will **increase other operating expenses by \$500k per year**, and serve to enable the organization to operate as an objective corporate-like entity.



HTA's fiscal measure summary: by fiscal plan line item impact by year

\$ in thousands		FY18	FY19	FY20	FY21	FY22	FY23	FY18-FY23 Total
[4]	Toll Optimization	3,500	1,480	3,684	2,109	413	7,143	18,329
	Toll fares	3,500	1,480	3,684	2,109	413	7,143	18,329
[4]	Electronic Toll Fines	-	(6,316)	(6,501)	(6,629)	(6,719)	(6,763)	(32,929)
	Electronic Toll Fines	-	(6,316)	(6,501)	(6,629)	(6,719)	(6,763)	(32,929)
[3]	Early Exit	629	1,474	2,530	3,132	3,692	4,196	15,652
[2]	Voluntary Transition	-	(4,883)	2,531	9,915	11,641	14,028	33,232
	Salaries and related benefits (Construction Support)	629	(3,410)	5,060	13,046	15,333	18,225	48,884
[2]	Voluntary Transition	-	(1,066)	(4,437)	(6,013)	(7,598)	(9,125)	(28,239)
	Other program expenses	-	(1,066)	(4,437)	(6,013)	(7,598)	(9,125)	(28,239)
[3]	Early Exit	445	1,044	1,791	2,217	2,614	2,971	11,082
[2]	Voluntary Transition	-	(6,655)	3,449	13,512	15,865	19,118	45,288
	Salaries and related benefits (Opex)	445	(5,612)	5,240	15,729	18,478	22,089	56,370
[4]	Toll Optimization	1,912	7,449	3,774	5,012	4,627	5,961	28,736
	Toll highways administration and maintenance	1,912	7,449	3,774	5,012	4,627	5,961	28,736
[1]	Contract re-bid/optimization	-	-	-	-	10,397	10,933	21,331
	Train operating and maintenance costs	-	-	-	-	10,397	10,933	21,331
[1]	Contract re-bid/optimization	-	3,421	3,490	3,559	3,631	3,703	17,804
[5]	BRT	-	-	-	(188)	(401)	(427)	(1,017)
	Integrated transportation system	-	3,421	3,490	3,371	3,229	3,276	16,788
[2]	Voluntary Transition	-	(1,453)	(6,046)	(8,195)	(10,355)	(12,436)	(38,485)
[6]	Board Structure	-	(500)	(500)	(500)	(500)	(500)	(2,500)
	Other operating expenses	-	(1,953)	(6,546)	(8,695)	(10,855)	(12,936)	(40,985)
Total Fiscal Measures		6,486	(6,007)	3,765	17,930	27,305	38,804	88,283



VI. Liquidity Situation



13-Week Cash Flow Projection

	Actual (Act.) / Projected (Fcst.):	Fcst.	Fcst.	Fcst.	Fcst.	Fcst.	Fcst.	Fcst.	Fcst.	Fcst.	Fcst.	Fcst.	Fcst.	Fcst.		
	Week Ended:	3/16	3/23	3/30	4/6	4/13	4/20	4/27	5/4	5/11	5/18	5/25	6/1	6/8	13-Week	
(\$000's)																
Operating Receipts																
1	Net Toll Fares	1,569	2,479	-	4,527	1,500	2,370	699	4,632	1,535	2,425	715	4,632	1,575	28,657	[A]
2	Transit Revenues														-	[B]
3	HTA Collected Electronic Toll Fines	628	647	768	591	520	536	636	656	578	595	707	656	1,184	8,704	[C]
4	Other Income	54	49	79	39	71	47	59	54	49	61	52	50	20	684	[D]
5	Total Operating Receipts	2,251	3,175	847	5,157	2,091	2,953	1,394	5,342	2,161	3,081	1,474	5,338	2,779	38,045	
Intra- Government Receipts																
6	Transfer from Government of PR	-	-	1,567	-	-	-	1,567	-	-	-	1,567	-	-	4,700	[E]
7	Special State Grant	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
8	PR Gov. Infrastructure Funding	-	-	-	-	-	-	-	-	-	-	-	-	-	-	[F]
9	Total Intra- Government Receipts	-	-	1,567	-	-	-	1,567	-	-	-	1,567	-	-	4,700	
Other Receipts [Separate Federal Transfers by Program]																
10	Federal Aid - FHWA & Earmarked Projects	644	1,104	497	552	1,426	322	920	460	1,564	212	984	230	920	9,835	[G]
11	Federal Aid - FTA (Sec. 5307 & Sec. 5309)	-	-	-	-	1,383	1,383	1,383	1,383	1,383	1,383	1,383	1,383	1,383	12,450	[H]
12	Emergency Reconstruction Program	5,400	3,500	2,734	2,734	2,734	2,734	2,734	2,734	2,734	2,734	2,734	2,734	2,734	38,971	[I]
13	Total Other Receipts	6,044	4,604	3,231	3,286	5,543	4,439	5,037	4,577	5,681	4,329	5,101	4,347	5,037	61,256	
14	Total Receipts	8,295	7,779	5,645	8,443	7,634	7,392	7,998	9,919	7,842	7,410	8,142	9,685	7,816	104,001	
Operating Disbursements																
15	Payroll and Fringe Benefits	2,100	1,300	4,300		1,900	1,350	4,450	333	2,050	1,500	4,150	333	2,196	25,962	[H]
16	PayGo	-	2,764	-	-	-	2,764	-	-	-	2,764	-	-	-	8,292	[I]
17	Christmas Bonus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
18	Utilities	200	400	400	663	200	400	400	663	200	400	400	663	200	5,188	[J]
19	Contracted Services	2,703	2,929	3,993	-	2,500	2,875	4,250	-	2,350	2,700	4,575	-	3,645	32,520	[K]
20	Litigation Reserve/Right of Way	-	760	-	-	-	760	-	-	-	760	-	-	-	2,280	[L]
21	Transportation	47	18	15	51	47	18	20	51	47	18	20	20	31	403	[M]
22	Professional Services	380	521	503	375	480	380	265	450	400	275	375	250	375	5,029	[N]
23	Other Operating Expenses	-	-	-	395	1,070	-	686	-	-	-	-	1,534	1,792	5,477	[O]
24	Misc Expenses	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
25	Total Operating Disbursements	5,430	8,692	9,211	1,484	6,197	8,547	10,071	1,497	5,047	8,417	9,520	2,800	8,238	85,150	
Capex Disbursements																
26	CIP Federal	700	1,200	540	600	1,550	350	1,000	500	1,700	230	1,070	250	1,000	10,690	[P]
27	CIP State	220	235	249	270	166	100	168	304	150	100	150	-	150	2,262	[Q]
28	Emergency Reconstruction Program	5,400	3,500	2,734	2,734	2,734	2,734	2,734	2,734	2,734	2,734	2,734	2,734	2,734	38,971	[R]
29	Total Disbursements	11,750	13,627	12,734	5,087	10,647	11,731	13,973	5,035	9,631	11,481	13,474	5,784	12,122	137,073	
30	Net Cash Flow	(3,455)	(5,848)	(7,089)	3,356	(3,012)	(4,338)	(5,975)	4,885	(1,788)	(4,071)	(5,332)	3,901	(4,306)	(33,073)	
Unrestricted Bank Cash Balance Roll-Forward																
31	Beginning Cash Balance	98,140	94,685	88,837	81,748	85,104	82,091	77,753	71,778	76,663	74,875	70,804	65,472	69,373	82,053	
32	Net Cash Flow	(3,455)	(5,848)	(7,089)	3,356	(3,012)	(4,338)	(5,975)	4,885	(1,788)	(4,071)	(5,332)	3,901	(4,306)	(18,434)	
33	Other Inflows	-	-	-	-	-	-	-	-	-	-	-	-	-	8,524	[S]
34	Other Outflows	-	-	-	-	-	-	-	-	-	-	-	-	-	(7,076)	
35	Ending Bank Cash Balance	94,685	88,837	81,748	85,104	82,091	77,753	71,778	76,663	74,875	70,804	65,472	69,373	65,068	65,068	[T]

13-Week Cash Flow Assumptions

Footnote	Line	Assumptions
[A]	1	Toll fares estimated based on January and February 2018 Collections, and adjusted for seasonality based on FY17 Toll Collections per day in each month. Assumes no more than four toll collection transfers per-month.
[B]	2	These revenues are used as a credit in Tren Urbano operating expenses invoice (ACI).
[C]	3	Toll fares estimated based on January and February Collections, and adjusted for seasonality based on FY17 Violation Collections per day in each month. Toll fines collected by treasury are included within Line 6 - Transfer from Central Government
[D]	4	Monthly other income (including Tag, Impact Fee, Rent, etc.) estimated based on average of other income received during the months of January and February 2018 . Actuals reflect a \$1.2M sale of land in the week ending in 8/11, and a transfer of \$1.5M from investments the week of 2/16.
[E]	6	Total FY18 transfers will be \$120.0M.
[F]	8	No funds are expected to be received for the rest of the fiscal period.
[G]	10	Forecast for remainder of FY18 represents request of the 92% of funds disbursed (Line 26). Estimate based on actuals from FY16-17, Non-toll credit amount includes utilities and other grant ineligible expenses.
[H]	11	HTA Management Estimate for Approved Grant funding for Maint.& Operations for TU - exact amount to be confirmed based on Operator Invoices
[I]	12	Total revenues for emergency reconstruction programs are 47.2M - Construction Office Estimate, including HTA Management Estimate including \$8.9M underway in weeks ending 3/16 and 3/23.
[H]	15	Based on monthly payroll cost of 7.7M, including non-paygo retirement costs, plus \$1M expected to be disbursed related to Pre-Retirement Contributions
[I]	16	Based on once-monthly invoice of approximately 2.7M YTD.
[J]	18	Based on monthly utilities cost (HTA estimate based on FY17&18 historical) of 1M, plus TU electricity invoices delayed and expected to be paid before 6-30.
[K]	19	Based on monthly invoices of GILA (historical), ACI, First Transit and Other minor suppliers (as contracted) totaling approximately 9.6M.
[L]	20	Monthly payment of 760K was determined based on average of payments made during the months of January and February 2018 based on payment plan agreements. Cash basis estimate reflects reduced impact due to Title III status.
[M]	21	Monthly payment of 136K was determined based on average of payments made during the months of December 2017, January and February 2018. Employee Transportation
[N]	22	Monthly payment of 1.5M was determined based on average of payments made during the months of December 2017, January and February 2018 plus additional consulting invoices expected to be paid in the upcoming months.
[O]	23	Reflects \$6.7M in outstanding invoices scheduled to be paid by year-end, including 2-year payment to Department of Labor, TU Operator Arbitration Award, and past year unpaid operator invoices.
[P]	26	Monthly construction payments of 3.5M was determined based on average of payments made during the months of January and February 2018.
[Q]	27	Monthly construction payments of 704K was determined based on average of payments made during the months of January and February 2018.
[R]	28	Total funds expected to be disbursed for emergency reconstruction programs are 47.2M - Construction Office Estimate, including HTA Management Estimate including \$8.9M underway in weeks ending 3/16 and 3/23.
[S]	33	Line used to register transfers between bank accounts or passthrough funds.
[T]	35	Ending Cash Balance Includes \$20M in cash restrictions based on Federal Government requirements, \$75M approved by OMB for FY18 has not yet been received, but upon receipt would be considered restricted and used in FY2019

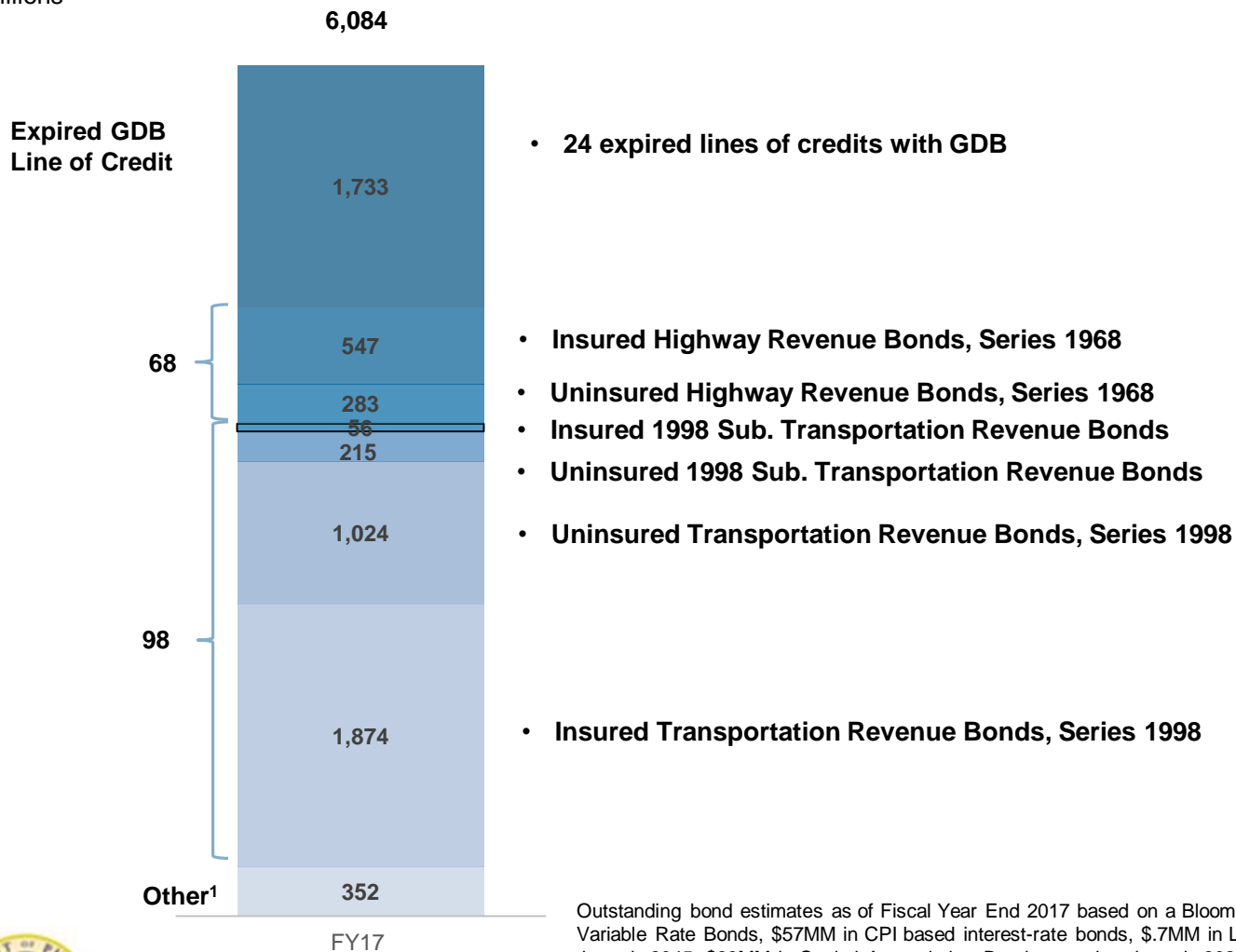
VII. DEBT SUSTAINABILITY



HTA Outstanding Debt

Current Debt Structure

\$ millions



- 24 expired lines of credits with GDB
- Insured Highway Revenue Bonds, Series 1968
- Uninsured Highway Revenue Bonds, Series 1968
- Insured 1998 Sub. Transportation Revenue Bonds
- Uninsured 1998 Sub. Transportation Revenue Bonds
- Uninsured Transportation Revenue Bonds, Series 1998
- Insured Transportation Revenue Bonds, Series 1998

Outstanding bond estimates as of Fiscal Year End 2017 based on a Bloomberg data extract. ¹ Other Includes: \$200MM in Variable Rate Bonds, \$57MM in CPI based interest-rate bonds, \$.7MM in LIBOR based interest rate bonds maturing through 2045, \$93MM in Capital Appreciation Bonds maturing through 2026. DGB line of debt based on HTA management estimates.



GOVERNMENT OF PUERTO RICO
Puerto Rico Highways and Transportation Authority

Debt Sustainability post-measures

As a result of revenue retention by the Government of Puerto Rico, HTA has minimal cash flows to service its debt, and entered Title III in May 2017

- A** After accounting for the retained revenues, HTA does not have sufficient positive cash flows to support its expenses and notable debt service, and has not made payments since July 2017
- B** Even after accounting for the incremental positive cash flows of fiscal plan measures, HTA will require support from the Government of Puerto Rico to maintain essential operations and expenses

\$ in millions	FY18	FY19	FY20	FY21	FY22	FY23	FY18-FY23 Total
Toll Revenues Including federal Funds	1,228	1,516	1,280	982	901	902	6,809
Retained Revenues to Central Government	(617)	(571)	(557)	(559)	(560)	(560)	(3,424)
Revenues net of Retained Revenues	610	946	723	424	341	342	3,385
A Total operating and CIP expenses	(839)	(1,128)	(878)	(702)	(643)	(645)	(4,835)
Expected HTA Allocation from Commonwealth CAPX Fund	84	82	67	59	53	54	399
B Transfer from Government of PR	138	97	74	222	238	225	995
Cash Flow available for Debt Service (pre-measures)	(7)	(3)	(13)	3	(11)	(25)	(56)
Total Measures	6	(6)	4	18	27	39	88
Cash Flow available for Debt Service (post-measures)	(0)	(9)	(10)	21	16	14	33



APPENDIX: Transformation Plan



GOVERNMENT OF PUERTO RICO
Puerto Rico Highways and Transportation Authority

Our goal is to transform HTA's towards a best-in-class infrastructure developer and operator

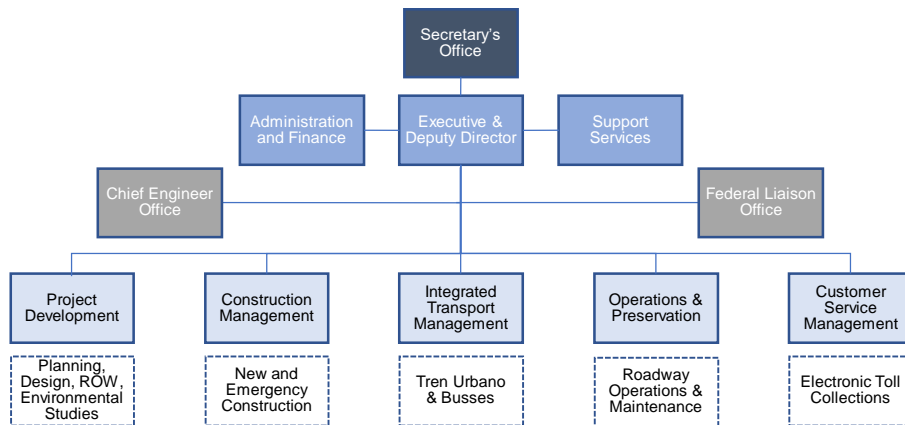
As previously mentioned, PRHTA is responsible of constructing, operating, and maintaining Puerto Rico's toll road network, major highways and mass transportation facilities. To properly meet its duty, the measures in this plan follow two main philosophies:

1. Transform the organization structure in order to gain synergies and position it for future effectiveness

Organize HTA into a world class infrastructure developer and operator moving it towards a contract management model, such as it is currently done today for design, land acquisition, construction and mass transit operations. HTA would manage third party contracts engaged through competitive bidding for each service required.

HTA envisioned structure

**For illustration purposes only*



- Competitiveness will be maintained by constantly evaluating current contracts and its performance and re-bidding to keep contracts costs and performance in-line with market expectations.

2. Streamline project execution and management by engaging the best resources available

Establish best-in-class project delivery process to assure federal compliance and efficiently deployment of resources available to maximize the infrastructure developed and maintained.

Project Delivery Phases



- The streamlined process will be complemented by having the adequately sized resources, visibility of important metrics to allow for accurate and timely decision making, as well as the correct people with the right motivators and capabilities.
- Project delivery methods will include Value Engineering analysis and innovative contract approaches¹ early in the planning phase to maximize the value of each project.
- Skilled teams in the management of design and construction activities will assure to meet objectives of reducing average change orders from 30% to 15%.²

¹ Case study of PR-18 & PR-66 procurement approach to be used as guideline for applicable projects.

² Federal funded projects budget allows for a maximum of 15% increase to projects



Vision for HTA

Create a comprehensive Transformation Plan to enable HTA to effectively operate under current fiscal constraints, optimize revenue and expenses with consideration of macroeconomic, socioeconomic and environmental impacts, and to exit Title III status, while providing high-quality management of Puerto Rico's integrated highway network to benefit its users / residents

Structure

Specialized roads and transit authority with enhanced governance, expert leaders, and a mission to sustainably improve roads and infrastructure

Lean entity to efficiently and sustainably deliver roads and infrastructure mission without internal rigidities

Revenue

Optimized toll roads with socio-economic and environmental impact of tolling and pricing considered

Real estate assets identified & monetization options considered to provide cash flows for reinvestment

Federal funds maximized, existing and future transit projects optimized to achieve higher fair box recovery

Concessions considered for all optimized assets including as an implementation mechanism that maintains adequate funding for the integrated highway network

Expenses

Scale workforce to meet current needs, and pursue cost-effective outsourcing, and margin optimization to right-size opex and generate cash flows

Optimized construction value chain, renegotiated operating contracts, and outsourced project-specific functions



Pursue guiding principles to address the financial gap and re-focus HTA towards its objectives

Establish an efficient organization

- Transform HTA into an organization in which resources are aligned to critical objectives and scale appropriately to available resources and planned investments.
- Engage best resources efficiently to move HTA agenda forward in a fiscally sustainable manner.

Strengthen partnership with federal agencies

- Maintain strong communication with FHWA & FTA, and move HTA forward towards full federal compliance
- Communicate Fiscal Plan to federal agencies and work together towards sustainable solutions
- Engage proactively with FHWA & FTA to re-position HTA's as a first-class federal grantee and infrastructure developer

Improve infrastructure towards new standards

- Focus infrastructure program on maintaining and improving existing road systems and mitigating congestion
- Implement data-driven process for project selection and prioritization based on asset condition, and safety
- Embrace best-in-class approaches for congestion management (see slides 66 through 68)
- Maximize deployment of federal funds and utilize toll credits to receive highest-possible federal share

Reach a sustainable debt structure

- Obtain a sustainable debt structure to allow for provision of services and realistic economic growth infrastructure
- Evaluate new funding structures used in other jurisdictions

Improve project delivery effectiveness

- Streamline project delivery and improve project times from planning to completion
- Maintain compliance with FHWA MOU and demonstrate improved project performance management
- Implement new contracting practices, such as CHICA¹ Contracts
- Improve internal controls and integrate lessons learned into ongoing and new projects

Sustain Financial Control Reform

- Establish a zero-based budget approach and develop the tools and culture required to sustain it
- Implement procurement process reform to improve timeliness, accountability, and cost-control



Developing a Performance Management Culture

New tools to track key performance indicators

- HTA is reshaping its organizational culture to emphasize accountability and performance through the use of industry best practice Key Performance Indicators (KPIs)
- HTA has developed performance management dashboarding capabilities for many of its key programs, including:
 - Construction Department Controls included within Fiscal Plan Assumptions
 - Pre-construction planning timeline and cost variance (Target <15%)
 - Bid price-to-completion variance (Target <15%)
 - Road Network Condition Improvements have been Targeted in the Capital Improvement Plan
 - Improve and Maintain Road Conditions to Federal Categories of Good and Fair (Target 95%)
 - Improve and Maintain NBI bridge conditions (deck area) to achieve and sustain a state of good repair (Target 95%)
 - Incident Response – HTA has developed an Incident Response Dashboard, tracking incident response time, average service time (tow and non-tow) and tracking progress towards mainland benchmarks, including:
 - Average Response Time Incidents & Service Patrol (Target < 15 minutes)
 - Average Roadway Clearance Time (Target < 90 minutes)
 - Incident Duration Classification (Targets TBD)
- HTA is developing systems to support performance management metrics
 - HTA is developing integrated Traffic Management Center reporting system (Sunguide) in collaboration with the Southwest Research Institute (SwRI).
 - HTA's Performance Management Information System (PMIS) will go live by the beginning of FY19, with additional modules coming online by Dec. 2019. HTA will utilize this system to support improved metrics collection, reporting and management, including:
 - Highway safety (accident and fatality rates)
 - Transit usage
 - Signal Conditions
 - Farebox Recovery Ratio
 - Environmental Impact
 - Urban Area Congestion



HTA will continue to implement high benefit-to-cost ratio solutions to manage congestion and positively impact economic recovery

Implement Traveler Information Systems

- Further Develop HTA's capability to provide real-time traveler information to major roadways in the San Juan – Caguas – Gurabo corridor, including:
 - Install Additional Intelligent Transportation Systems (ITS) field devices which allow HTA to provide real time information to the traveling public.
 - Utilize real-time data to provide roadside messaging and alerts to the traveling public
 - Support enhanced performance management through traffic data consolidation and analysis, and utilize congestion data to inform future capital investments
- Improve traveler alert capabilities with the inauguration of HTA's traffic management center and improvement of integrated capabilities

Enhanced Incident Management

- Improve efficiency of incident clearing by integrating services with Police and EMS on major roadways
- Facilitate expedited incident clearance (towing, patch and debris clearing) in high traffic corridors.

Improve Congestion Management Infrastructure

- Invest in improvements to traffic signaling hardware and software
- Consider the expansion of lane control and dynamic merge control to ease traffic during commuting hours, construction projects, and for special events w/ use of reversible lanes.
- Explore use of Active Traffic Management, including variable speed limits, shoulder use, and dynamic restrictions to improve efficiency of current highway networks

Electronic Toll Systems

- Optimize toll collection systems to improve traffic flow on major toll roads, increase compliance and improve revenue capture.
- Reduce reliance on toll plazas in favor of overhead tolling, decreasing labor costs and improving rate of travel



Congestion Management Projects as a Priority for HTA (1 of 2)

HTA continues to invest in congestion management through innovative technology and key infrastructure investments. HTA recognizes that effective congestion management will contribute to Puerto Rico's economic recovery.

HTA prioritizes congestion management within Capital Improvement Programs based on cost/benefit analysis which include economic impact on a project-specific basis, but has not conducted the econometric studies required to estimate impact on the Island's overall GNP.



PR-52 Traffic Management Center

Estimated Completion

PR-52
Traffic
Management
Center

Collect incident and traveler information and marshal resources to manage congestion

- Facility will house EMS, Police of P.R., PRHTA – Traffic Management and Freeway Operations, and Public Services Center
- Center will continue data collection practices in place since Jan 2016
- 100% Federally Funded

Dec. 2018

PR-66
Integrated
Traffic Incident
Management
Facility

Facilitate quicker responses to incidents

- Facility will house EMS, PRHTA, Police of P.R., and Public Services
- 100% Federally Funded

Oct. 2018

PR-18/26/30/52
Highway
Service Patrol

Expedite resolution of roadway incidents safely

- Implementation limited by independent contractors and regulatory issues
- Phase 1 started April 2017; Phase 2 (for PR-1/2/20) underway

May 2018



GOVERNMENT OF PUERTO RICO
Puerto Rico Highways and Transportation Authority

Congestion Management Projects as a Priority for HTA (2 of 2)

Estimated Completion

PR-52/18/30/1 Intersection Modernization

Reduce congestion in major intersection in Caguas, enable public transportation and lane capacity management through variable toll rates

- \$148 M total investment in congestion management, funded with regular Federal funds. An Infrastructure for Rebuilding America (INFRA) discretionary grant of \$118M is currently pending. HTA is not currently considering this grant in its baseline projections, but if the grant is received it would allow for redirection of resources to other projects.
- The DTL project facilitates PR-52 Bus Rapid Transit Implementation
- Phases I-III (PR-52/18/1) Replaces and improves Reversible Contraflow Lane Replacement providing two lanes with shoulders up to PR-18.
- Phases III-V (PR-52/30/1) Bridge Construction (connecting PR-52 and PR-30) for congestion management lanes, facilitating seamless transfer from highway to high-traffic surface road.

Dec. 2019
(Phase I-III)

Oct. 2020
(Phase III-V)

Congestion Managed Lanes

Dynamic Tolls

Reversible Lanes

PR-26 ITS

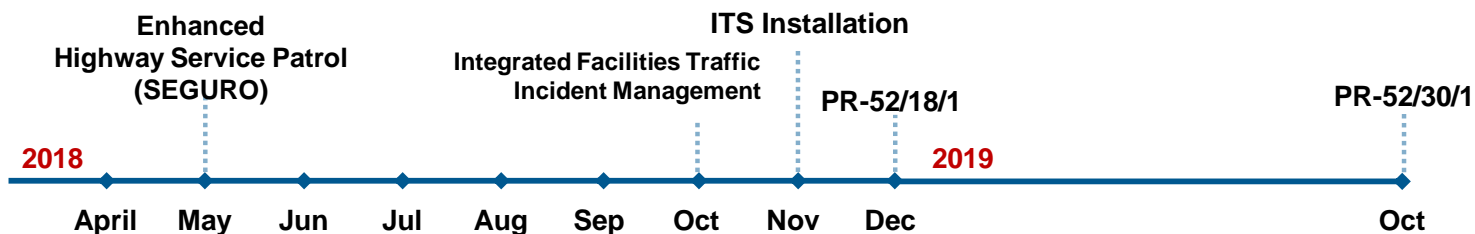
Install Intelligent Transportation System(ITS) Devices to gather traveler information

- Closed Circuit Television (CCTV) cameras; Bluetooth (travel time and origin/destination); Microwave Vehicle Detection Systems (MVDS) (speed and volume); Fiber Optics; and Dynamic Message Signs (DMS) (traveler communication) – a first in Puerto Rico

Nov. 2018

Devices and Traveler Information

Congestion Management Completion Timeline (select initiatives)



Reversible Contraflow Lane (PR-18)



Highway Service Patrol (PR-18, 26,30, 52)

PR-26 ITS Devices

PR-66 Integrated Incident Management Center



GOVERNMENT OF PUERTO RICO
Puerto Rico Highways and Transportation Authority

Governance and Organizational Structure Overview

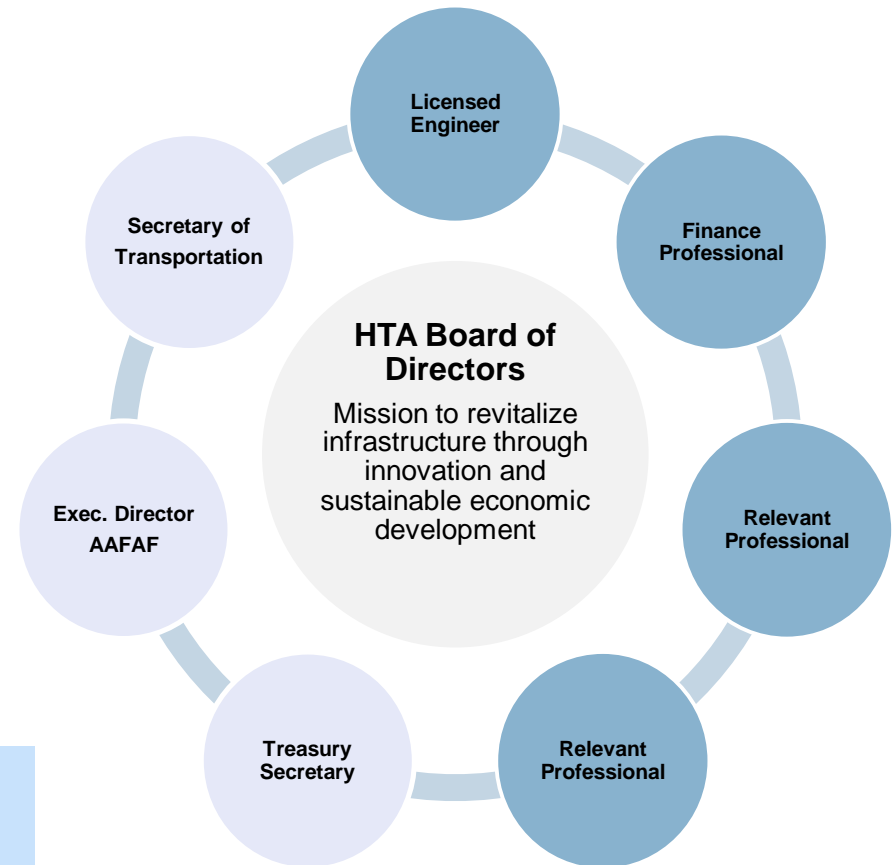
The new HTA structure will incorporate a Board of Directors comprised of both administration leaders and independent members to ensure effective governance over the organization and its six-year transformation plan.

Board Design Overview

1. Establish an independent governing body of 7 members with a minority (3) appointed by the Governor and a majority (4) identified by a private search firm from the private sector (and approved by the Governor).
2. Stagger membership tenure to further mitigate the risk of board disruption through political turnover.
3. Achieve desired expertise to maximize efficacy of long-term strategic planning and decision-making.
4. Apply strict conflicts of interest limitations and independence requirements to ensure that directors are correctly incentivized.
5. Appointment and removal of HTA leaders entrusted in the board, according to objective, merit-based standards, and pre-established KPIs

HTA board members will be held to the highest ethical standards, independent members can only be removed from roles before term expiration for a breach of the public trust

Board Composition



Industry experts will be identified by a professional search firm, approved by the Governor and serve staggered 2, 4, and 6 year terms, with 5 year terms following. Estimated cost of maintaining professional board is \$450K per year



HTA will reorganize into a more effective organization focused in gaining synergies and carrying out its specific goals

1. Governance

- New structure attenuated from future political cycles and influence.
- The Board of Directors will include independent directors with power to appoint/remove management with expertise in roads, infrastructure, revitalization, innovation, and private sector partnerships

2. Organization

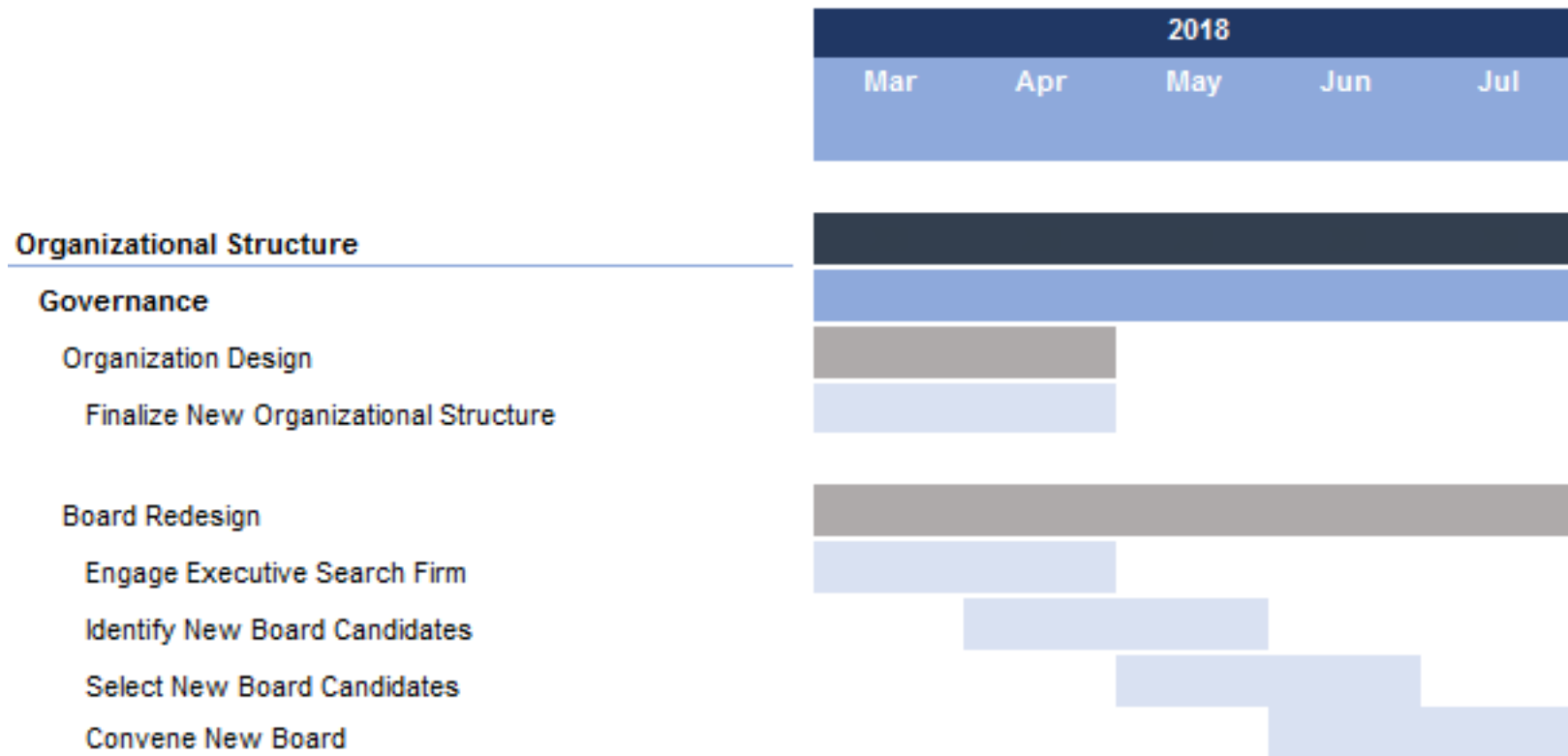
- Forward-thinking lean organizational strategy with best-in-class FTE efficiency achieved through voluntary transition
- Construction and O&M program internally overseen but optimized through outsourcing
- Build scalable contract management approach, which aligns resource levels with funding

3. Objective Decision-Making

- HTA will prioritize the following key design principles to create more effective governance and organization structures:
 - Maximize access to federal funding and, if possible, facilitate future access to capital markets
 - Deliver upon HTA mission to provide a safe and efficient transportation system
 - Move towards a contract management model to deliver excellent service at best value
 - Incorporate streamlined processes to deliver a lean and effective organization
 - Include public policy decisions as defined and measured input into cost-benefit analyses
- HTA will institute a performance based culture in which:
 - Project and program performance are evaluated based on industry standard KPIs
 - All employees evaluated on merit principle, with strict position control and cost-benefit analysis requirements for all new positions and promotions



Organizational Structure: Summary Timeline



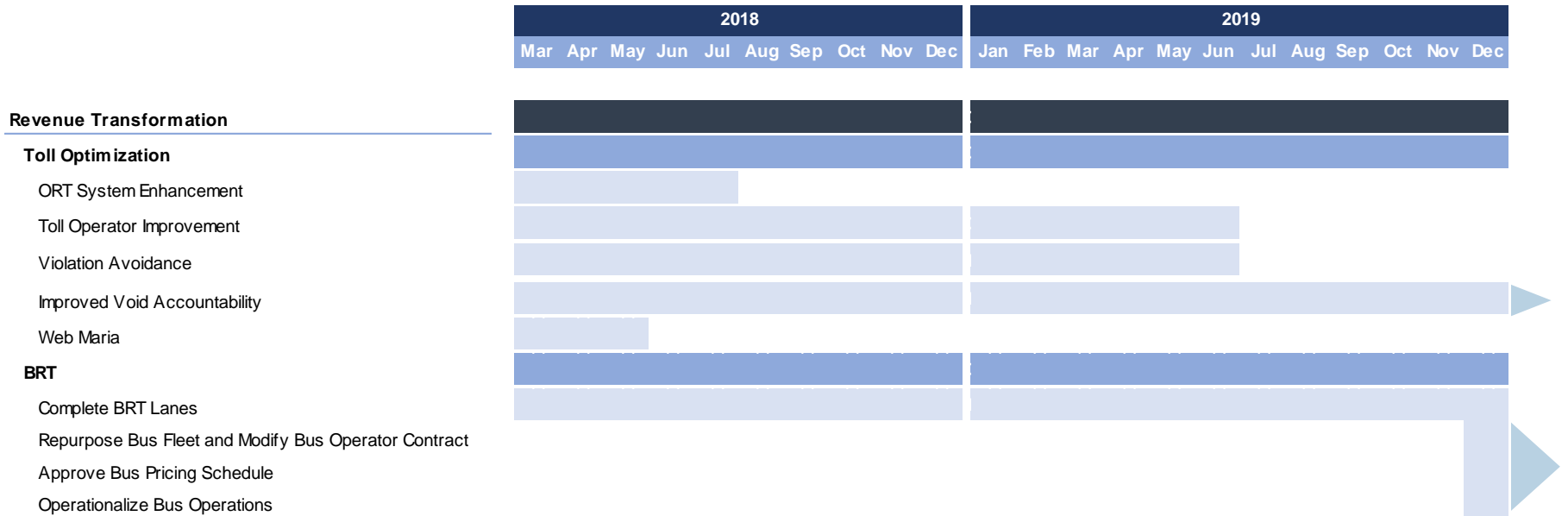
Revenue Transformation Plan: Other Opportunities

HTA expects that the specific revenue transformation opportunities identified within this plan account for a vast majority of revenue enhancement opportunities currently available, however HTA will continue to explore innovative ways to increase revenue, including:

- **Asset Monetization:** Identify opportunities to convert HTA real estate and other capital assets into revenue streams through sale, long-term lease, or Public Private Partnership.
- **Advertisement Maximization:** Identify opportunities for additional advertising revenue through highway and transit operations
- **Traffic Information Monetization:** Identify opportunities to monetize traffic information and continue to expand highway sensor network.
- **Right of Way / Utilities Infrastructure Rights:** Determine opportunity for monetizing unused right of way via utilizes and other infrastructure rights.
- **Other-Mobility Services:** Evaluate viability of increasing mobility services (park & ride / ride share) and develop an implementation plan as necessary.



Revenue Transformation Plan: Summary Timeline



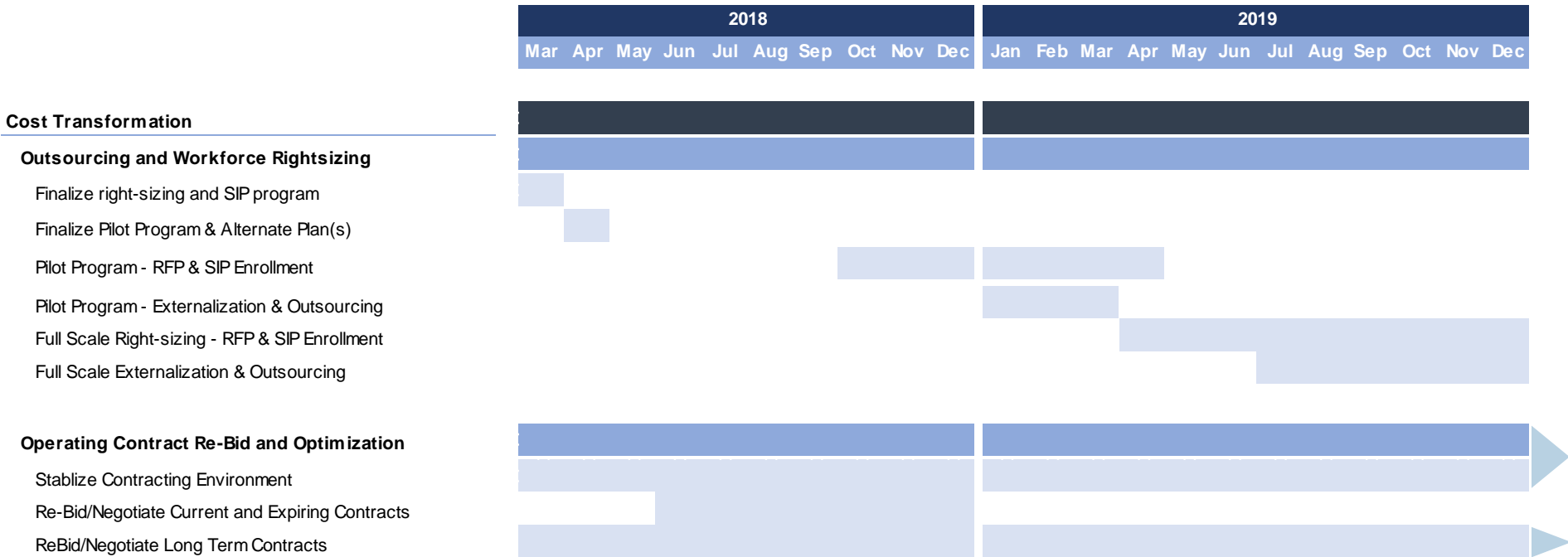
Cost Transformation Plan: Other Opportunities

HTA expects that the specific cost transformation opportunities identified within this plan account for a vast majority of cost reduction opportunities currently available, however HTA will continue to explore innovative ways to reduce costs, including:

- **Additional Operations Optimization:** Assess post-transformation workforce and contracting model, and identify areas for improvement and savings
- **Workforce modeling, hours and overtime control:** Associate workload drivers with each remaining FTE and develop zero-based staffing model to justify positions, hours, and overtime. Improve controls to reduce excess hours and eliminate overlapping positions.
- **Procurement Modernization:** Identify opportunities to consolidate purchasing across categories and use collaborative purchasing to leverage market power to pursue discounted prices from vendors not yet addressed through contract re-bid and optimization. Improve controls over operating contracts to improve collection of contractor and concessionaire penalties.
- **Enhance Internal Controls:** Continue efforts begun in compliance with MOU requirements to develop industry best internal controls over contracting, employee expenses, and other categories on operating expense not yet optimized within fiscal measures.
- **Optimize Construction Value Chain:** Along with the MOU initiatives, HTA plans to identify opportunities to optimize the construction process in (which would also be complemented by voluntary transition and organizational structure initiatives):
 - *Pre-construction:* Develop standardized decision tree to apply to the project bidding process in order to maximize competition of pre-qualified bidders. Develop best practices for contracting, such as standard term sheets to ensure consistent delivery.
 - *Construction:* Identify detailed short term and long term construction projects that should be outsourced to third party experts.
 - *Quality assurance:* Develop a quality assurance plan which includes standard procedures on appropriately adding incentive clauses to contracts in order to ensure contractors' goals are aligned with HTA's goals.

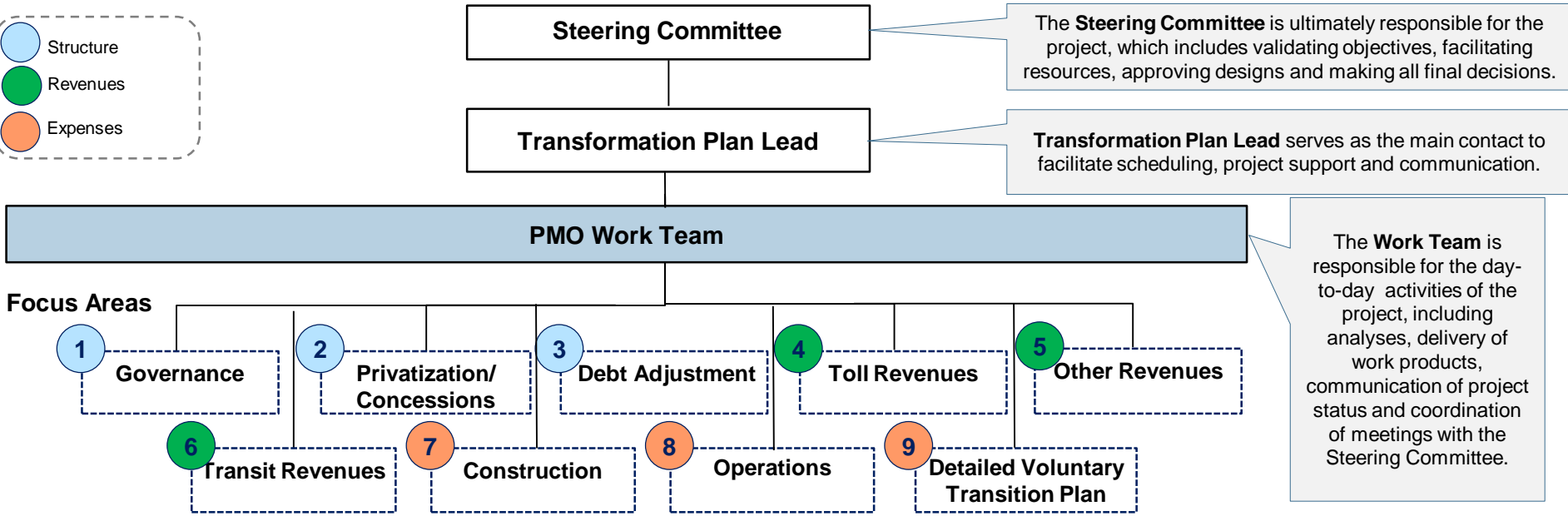
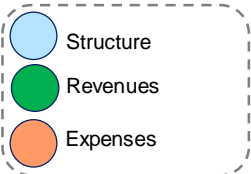


Cost Transformation Plan: Summary Timeline



Transformation Implementation Structure

Organizing for Results



The **Steering Committee** is ultimately responsible for the project, which includes validating objectives, facilitating resources, approving designs and making all final decisions.

Transformation Plan Lead serves as the main contact to facilitate scheduling, project support and communication.

The **Work Team** is responsible for the day-to-day activities of the project, including analyses, delivery of work products, communication of project status and coordination of meetings with the Steering Committee.

PMO Principles: HTA has established a PMO with the required organization and processes to implement the fiscal measures, initiatives and the reforms proposed within this plan.

<p>Strategy:</p> <p>PMO goals are aligned with HTA strategic objectives and that projects are correctly prioritized.</p>	<p>Governance:</p> <p>PMO has visibility and credibility by participating in all decision making forums (HTA and Central Government)</p>	<p>Risk and Audit:</p> <p>PMO identifies risks, their probability and implications through validated procedures while ensuring quality and adherence to HTA as well as with Central government key strategies</p>	<p>Monitoring and Reporting:</p> <p>PMO implements effective and comprehensive oversight and monitoring through adequate performance metrics, to the correct audience in the needed timeframe</p>
---	---	--	--



Transformation Office: Summary Timeline

Transformation Plan Submitted

- Detailed Transformation Plan consisting of:
 - Initiatives and steps of progression
 - Timeline of implementation and expected goals for Fiscal Measures
 - High-level milestones

Begin Transformational Changes

- Begin major organizational change initiatives, including
 - Outsourcing
 - Voluntary Transition
 - Concessions

Maintain Momentum for Organizational Transformation

- Realize results to build-in additional internal and external stakeholder buy-in critical for sustained transformation

March
2018

April
2018

May-June
2018

FY
2019

2019 +

Board Structure Changes

- Begin transition to new HTA board guiding transformation efforts:
 - Hire professional search firm
 - Commence recruitment of SME board members

Begin Receiving Majority of Expected Transformation Benefits

Pursue additional savings opportunities



APPENDIX: FHWA MOU



GOVERNMENT OF PUERTO RICO
Puerto Rico Highways and Transportation Authority

HTA's current operational situation and MOU Objectives

Following years of operational and organizational challenges to effectively and efficiently deploy federal funds in compliance for with Federal requirements, **PRHTA and FHWA signed a Memorandum of Understanding¹ on February 29, 2016 geared at revamping PRHTA's Project and Program Delivery capabilities.**

PRHTA Challenges







- More than \$400 million in available funding is not deployed due to delayed processes for project advancement, project completion and provider payments
- Outdated and non-standard documentation and requirements
- Lack of communication and feedback integration between planning and construction departments
- Increased project costs and overruns from original budgets
- Misalignment of current capabilities with needed core competencies

MOU between PRHTA and FHWA

- Establishes procedures, systems and project delivery objectives for the Puerto Rico Highway Program
- Identifies roles , responsibilities and actions for the PRHTA and the FHWA to accelerate the funding, planning, design and construction of various highway, bridge and transportation improvement projects
- Improves the economic vitality of the Government of Puerto Rico and serves as a catalyst for sustainable job growth associated with highway construction in Puerto Rico



MOU requirements and current status of initiatives

Initiative	Description	Status
Federal Aid Billing Procedures	<ul style="list-style-type: none"> Revise and submit to FHWA its billing process to ensure prompt payment to contractors as follow: <ul style="list-style-type: none"> Paying all contractors by EFT Paying all contractors within 40 days of receipt of invoices Tracking status of payments using electronic method acceptable to FHWA Paying all contractors on the first business day after funds are received from FHWA 	<p>Completed on Q2 2016. Tracking status of payments will be upgraded with E-Business Suite and Program Management Information System (PMIS)</p> 
Toll Credits	<ul style="list-style-type: none"> Validate that PRHTA's existing toll credit balance complies with current FHWA guidance (the current guidance at the time of execution of this Agreement is "Interim Guidance- Toll Credit for non-federal Share, Nov 20, 2015) Identify that amount of toll credits available for use by PRHTA, and Identify modifications that PRHTA must make to its processes for approving, tracking and reconciling toll credit usage 	<p>In Q1 2016 PRHTA validated compliance with FHWA guidance and identified the amount of toll credits available. The tracking status of toll credits will be upgraded with PMIS.</p> 
Organizational Capacity Development	<ul style="list-style-type: none"> Contract the services of a management consultant to assist the PRHTA to review and develop recommendations for streamline the PRHTA's project billing process, project delivery process, contracts standard language, training program, SOP's and applicable commonwealth laws or regulation. 	<p>Notice to Proceed (NTP) provided on 3/2017</p> <p>Consultant is conducting assessment and is expected to complete the recommendations by Q2 2018.</p> 
Expediting Project Delivery	<ul style="list-style-type: none"> Procure services to improve systems such as email communication, electronic project monitoring system, improvements to financial billing system in order to reduce the PRHTA's obligated but unexpended balances. Submit to the FHWA a report identifying the reasons for the delay of every project that the PRHTA has obligated, but for which less than 5% of funds have been expended since the date a recorded obligation existed Develop and Submit to the FHWA a schedule with milestones to accelerate obligation of its annual Federal-aid allocation to ensure all funds are properly obligated before redistribution of Federal-aid obligation limitation 	<p>The email migration was completed in 2/2017. Improvements of email communications was completed in July 2017.</p> <p>PMIS is on schedule with a go live date for core functionality Phases 1&2 to be completed Q2 2018. E-bidding and contract management will be complete in Q1 2019.</p> <p>E-Business Suite implementation Consultant has been awarded and expected NTP 3/2018.</p>   



MOU initiatives encompass all elements needed to create an effective organization

	Federal Aid Billing Procedures	Toll Credits	Organizational Capacity Development (LEAN)	Expediting Project Delivery
Processes	<ul style="list-style-type: none"> Develop an efficient billing process with specific goals to ensure on-time payment to contractors Ensure best practices and guarantee financial accuracy and consistency 	<ul style="list-style-type: none"> Identify improvements for the approval, tracking and reconciling of toll credit usage 	<ul style="list-style-type: none"> Implement a LEAN Project delivery and billing process that will result in higher quality projects, faster project completion and more efficient delivery 	<ul style="list-style-type: none"> Establish processes to provide continuous visibility to under performance projects and allow for effective development of action plans
Organization			<ul style="list-style-type: none"> Develop capacity analysis to correctly size the needed organization to support the process 	
Infrastructure	<ul style="list-style-type: none"> Establish measurable goals tied to the development of the agency's goals and objectives Tracking the status of payments with electronic methods 	<ul style="list-style-type: none"> Establish critical KPI's that are essential for auditing and validating compliance with FHWA guidance 	<ul style="list-style-type: none"> Establish measurable performance levels and KPI's to improve process visibility and track whether projects are achieving targets Develop an effective method for capturing voice of the client to support performance measurement and strategic decision making 	<ul style="list-style-type: none"> Implementation of systems for email and electronic monitoring to increase visibility and communication between areas
Culture		<ul style="list-style-type: none"> Train personnel on toll audit process to ensure compliance 	<ul style="list-style-type: none"> Promote collaborative culture and communication Establish agenda for workshops and trainings to develop core competencies and deliver business value 	



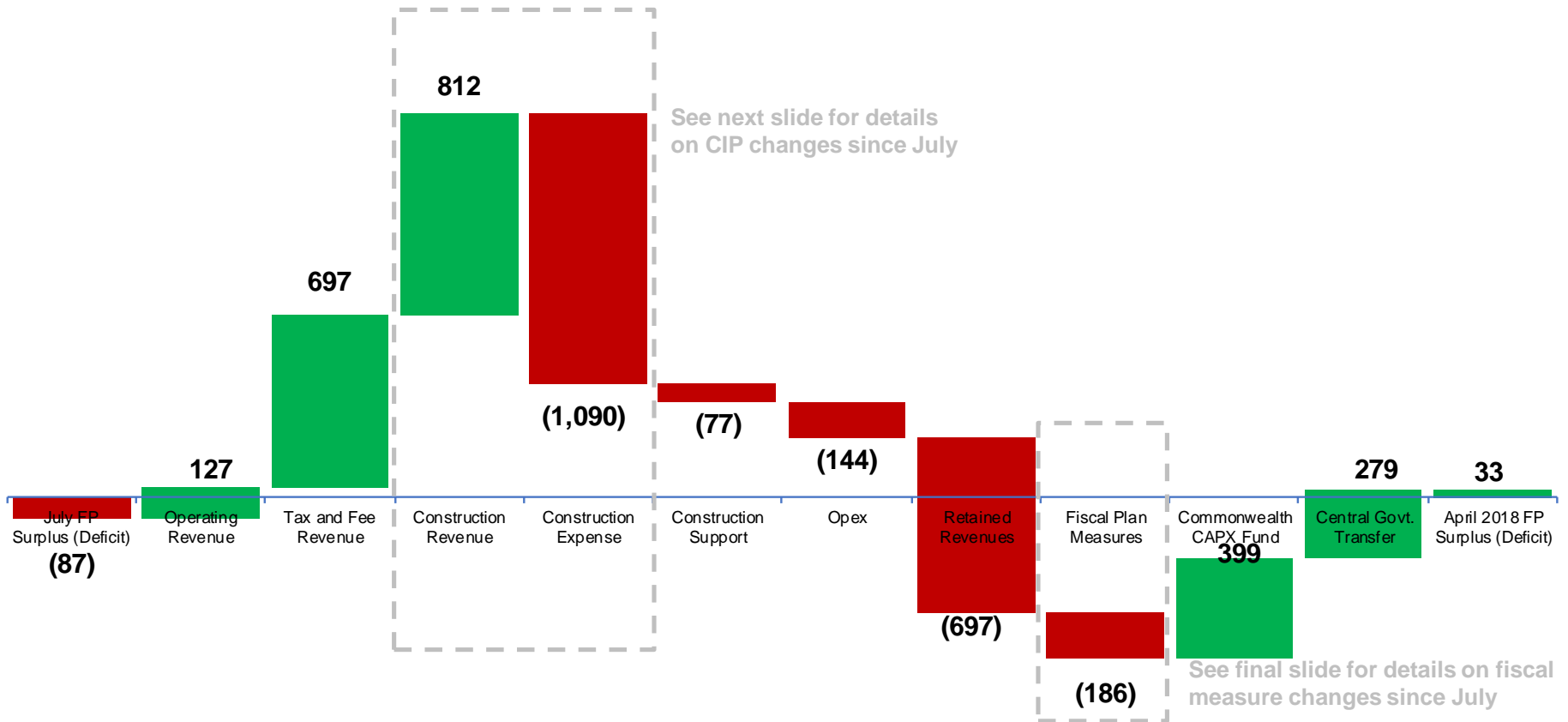
APPENDIX: Summary Fiscal Plan Bridges to July 2017



GOVERNMENT OF PUERTO RICO
Puerto Rico Highways and Transportation Authority

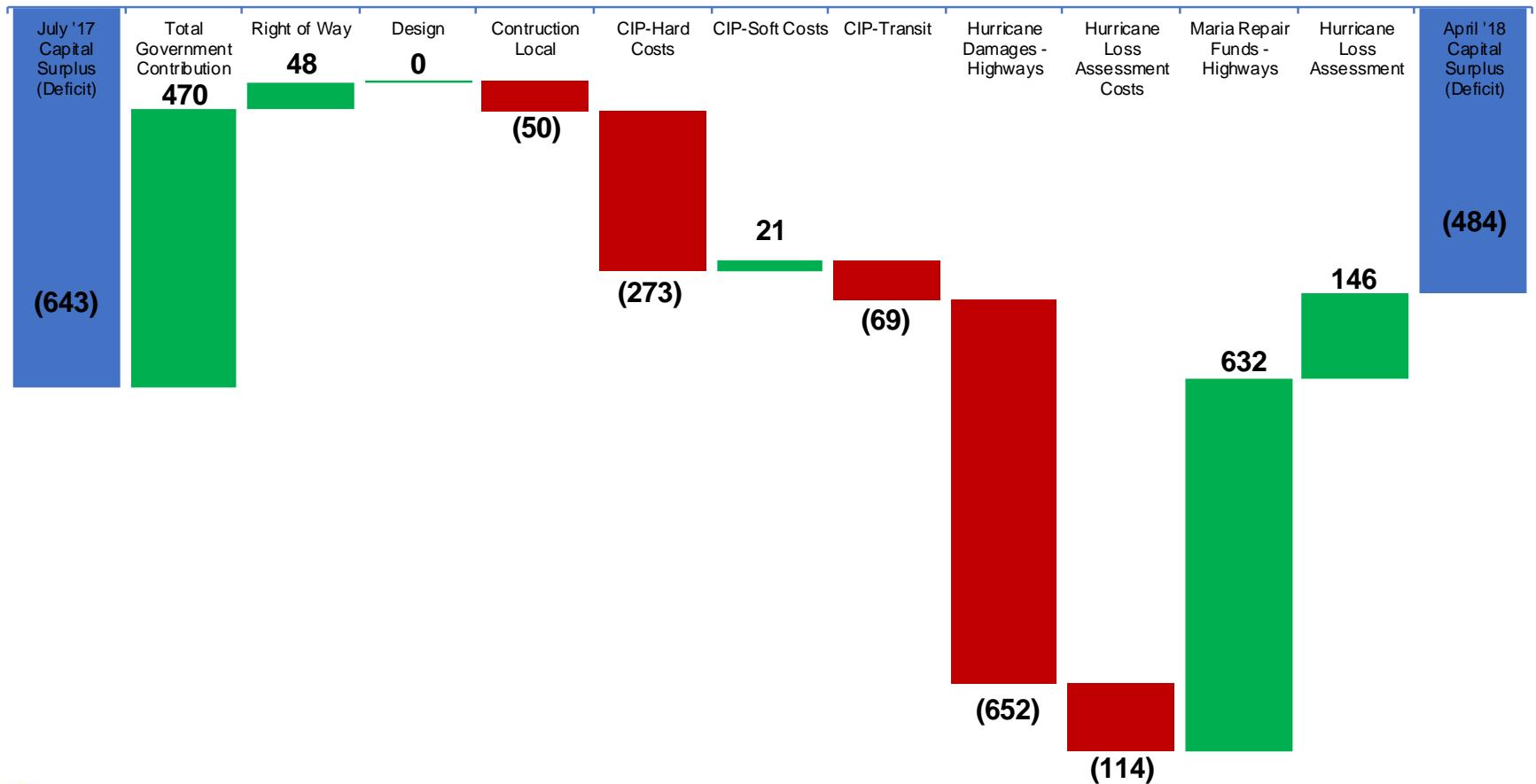
Fiscal Plan Bridge, July 2017 to Current: Summary

Delta between July 2017 Fiscal Plan Update and April 2018 Fiscal Plan Update, \$ in millions



Fiscal Plan Bridge, July 2017 to Current: Detail, Capital Program

Delta between July 2017 Capital Program Update and April 2018 Capital Program Update, \$ in millions



Fiscal Plan Bridge, July 2017 to Current: Detail, Fiscal Measures

The majority of the decrease in fiscal measures since July is the reduced estimate for voluntary transition, as a result of higher outsourcing costs than expected, lower overhead savings, and the introduction of a separation incentive plan to encourage employees to voluntarily separate from HTA

Delta between July 2017 and April 2018 Fiscal Measures, \$ in millions

