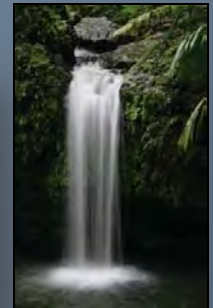


# Puerto Rico Land of Opportunities



Rubén A. Hernández Gregorat

Secretary / Executive Director

June 8, 2010



# PRHTA Background

- The Puerto Rico Highway and Transportation Authority is a public corporation created by Act. 74 of June 23, 1965

Pursuant to the Reorganization Plan No. 6 of 1971, the Secretary of Transportation and Public Works was solely vested with the powers and responsibilities of the PRHTA's Board of Directors

Through Act 4 of August 24, 1990, the PRHTA was authorized to contract with private entities for the construction, operation and maintenance of roads, bridges, avenues, highways and other transit facilities, through public-private partnerships



# Vision

- To develop and promote an integrated transportation system where roadway infrastructure, public works and outstanding customer service come together to facilitate Puerto Rico's economic development in harmony with the environment



PR-22 – José De Diego Expressway





# Mission

- To stimulate economic growth in Puerto Rico by executing innovative infrastructure and transportation plans, programs and projects that effectively facilitate the movement of people and goods while protecting our precious natural resources

Toll Road PR-66



Toll Road PR-52



# Potential P3 Projects

## Major objectives

- Substantially improve the conditions of the road network
- Increase efficiency and accelerate investment
- Expand the road network
- Create jobs and investment

## Projects

- Highway PR-22
- Highway PR-66
- Highway PR-52
- BRTs (to formulate master plan)



# The Vision





# **PR-22**

## **José De Diego**

### **Expressway**





# PR-22

## Jose de Diego Highway

### OBJECTIVE

- Establishing a long-term concession agreement for PR-22 (José De Diego Expressway)

### BACKGROUND

- PR-22 is Puerto Rico's most traveled highway, representing 41% of HTA toll revenues
- It spans 52 miles (83.7 kilometers) from east to west in northern Puerto Rico
- Consists of one continuous route from the City of San Juan (metro population of 2.4 million) to the city of Arecibo (population of 104,600)
- Runs through a prominent pharmaceutical and manufacturing corridor
- PR-22 has seven fare collection facilities (% of revenues)

• Buchanan	30%
• Toa Baja	19%
• Vega Alta	14%
• Manati	15%
• Arecibo	15%
• Arecibo Ramp	1%
• Hatillo Ramp	7%

- Some areas of this highway see AADT in excess of 200,000







# Location

## ROUTE

- Connects fast-growing western region with PR's largest metropolitan area (San Juan)
- It enjoys a strong traffic profile with long peak travel periods
- Connects with largest seaport in the Caribbean (12<sup>th</sup> largest in North America) – San Juan Port – with more than 1.97 TEU per year
- High concentration of manufacturers and pharmaceuticals from Dorado to Arecibo

**PR-22**



Brownfield Projects



Proposed Greenfield Extensions



# Demographic and Economic Base

## DEMOGRAPHIC / ECONOMIC BASE

- PR-22 runs directly through 12 municipalities with favorable demographics and a robust long-term projected population growth rate
- Vehicle Density in Puerto Rico (at 0.57 vehicles per capita) is greater than the US or Europe
- Robust economic base activity in the region will continue to complement traffic
- New upcoming hotel developments in Dorado will attract significant tourists base
- Adjacent municipalities of Toa Alta and Florida are expected to grow at almost 20%

Municipality	Population 2010	Population 2025	% Total Growth
Arecibo	104,955	107,348	2.3%
Barceloneta	23,391	24,434	4.5%
Bayamón	227,457	230,171	1.2%
Cataño	28,484	26,897	-5.6%
Dorado	36,563	38,502	5.3%
Guaynabo	103,537	104,803	1.2%
Hatillo	43,682	47,800	9.4%
Manatí	49,877	53,333	6.9%
Toa Baja	98,939	102,927	4.0%
Vega Alta	40,868	43,527	6.5%
Vega Baja	66,155	69,645	5.3%
<b>Total</b>	<b>823,908</b>	<b>849,387</b>	<b>3.1%</b>

### Economic Base Activity

Sector	Activity	
Retail Trade	Prime Outlets	
Manufacturing & Pharmaceuticals	Pfizer	Merck
	Procter & Gamble	Ortho McNeil
	Bristol-Myers Squibb	St. Jude Medical
	Abbott	Boston Scientific
Tourist Attractions	Arecibo Observatory	Synovis
	Camuy River Cave Park	
Hotels	Dorado Beach	Ritz Carlton Resort - TBD
	Embassy Suites	Fairmont - TBD

TBD = To be Developed



# Brownfield Component

- CONCESSION**
- A concession may provide more efficient operations while expanding capacity for capital improvements
  - The HTA has the long-term objective of completing a high-capacity comprehensive beltway around Puerto Rico
  - Significant revenue improvement opportunities through:
    - Leakage reduction – potentially up to 20% increase
    - Further increase of market penetration amongst users of *AutoExpreso*, Puerto Rico's high-speed electronic toll collection system
    - Optimization via new technology / congestion relief measures
  - Substantial recent capital improvements - \$148M from FY2001 to FY 2007





# Brownfield Component

## DESCRIPTION OF TOLLS

- Potential to capture more toll revenue through capturing leakage – possibly a 20% increase in revenues
- Further implementation of electronic tolling
- Current toll rates are shown in table below

Vehicle Classification Matrix							
Toll Plaza	2 Axle	Double Tire	3 Axle	4 Axle	5 Axle	6 Axle	7 Axle
Buchanan	\$1.00	\$2.00	\$2.50	\$3.00	\$3.50	\$4.00	\$4.50
Toa Baja	\$1.00	\$2.00	\$2.50	\$3.00	\$3.50	\$4.00	\$4.50
Vega Alta	\$1.00	\$2.00	\$2.50	\$3.00	\$3.50	\$4.00	\$4.50
Manatí	\$1.50	\$3.00	\$3.50	\$4.00	\$4.50	\$5.00	\$5.50
Arecibo	\$0.75	\$1.50	\$1.75	\$2.00	\$2.25	\$2.50	\$2.75
Arecibo Ramp	\$0.50	\$1.00	\$1.25	\$1.50	\$1.75	\$2.00	\$2.25
Hatillo Ramp	\$1.00	\$2.00	\$2.50	\$3.00	\$3.50	\$4.00	\$4.50
Total	\$6.75	\$13.50	\$16.50	\$19.50	\$22.50	\$25.50	\$28.50



# Greenfield Component

## **PR-22 EXTENSION**

- One of the transportation priorities of the HTA is completing the extension of the PR-22 from Arecibo to the city of Aguadilla
- Approximately a 27.8 mile extension
- Expected to save drivers a significant amount in travel time vs. existent PR-2
  - In combination with existing PR-22, total time savings will be 45 minutes
- Will substantially facilitate mobility around the Island
- Will attract significant traffic from the west region heading into San Juan



# Value Proposition / Business Case

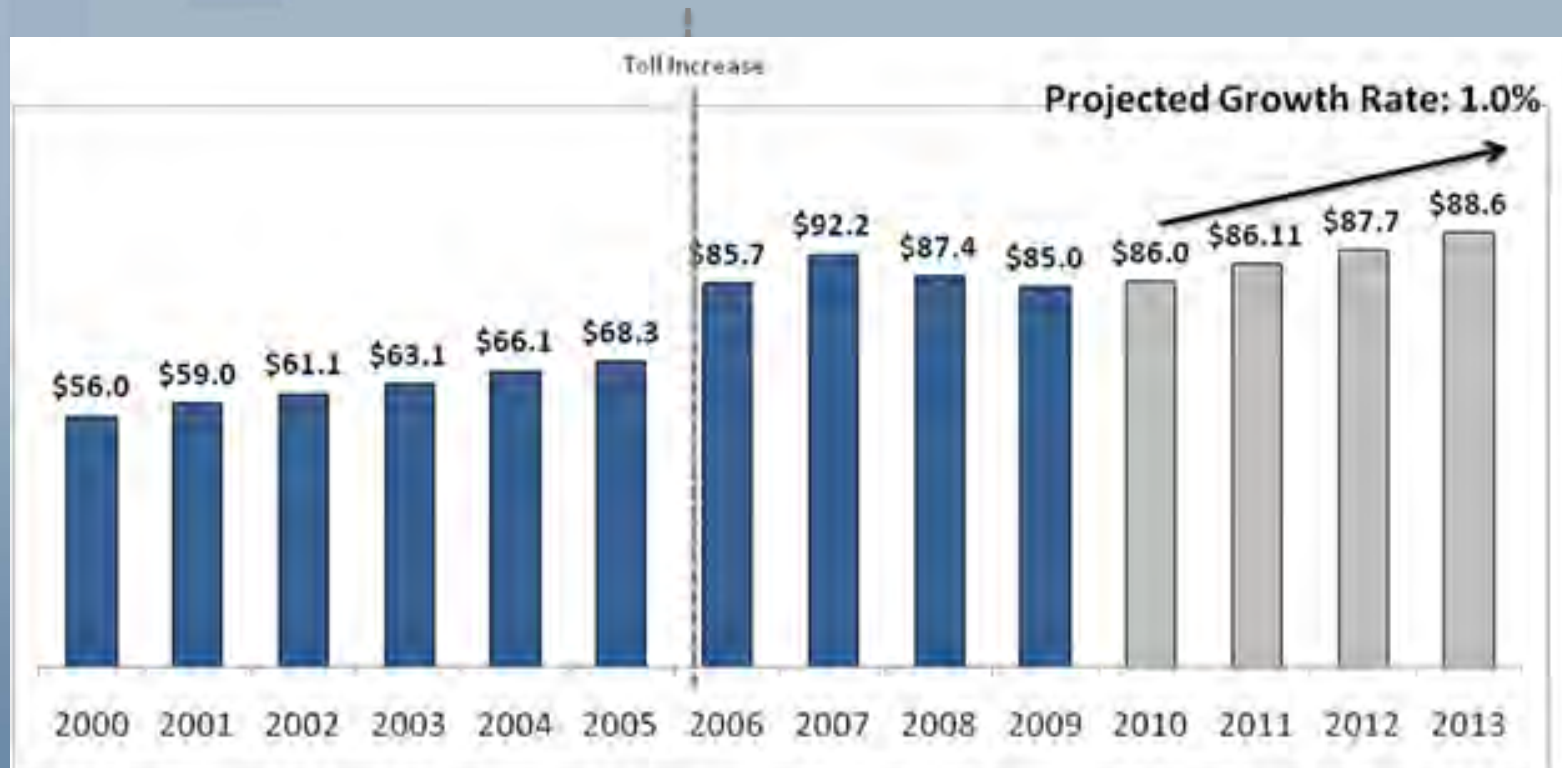
- PR-22 is essential component of Puerto Rico's Travel Network with strong, proven historical growth and track record
- High vehicle density in an area of high population density and commercial activity
- Ongoing modernization potential
- Substantial recent capex investment reducing near term capital burden
- Future synergies with Greenfield expansion
- Stable legal framework, with Concession already authorized





# PR-22 Historic/ Projected Revenues

- Favorable volume of toll revenues with a sustainable growth rate in the near term
- 2008 and 2009 revenue fall associated with global recession and record oil prices



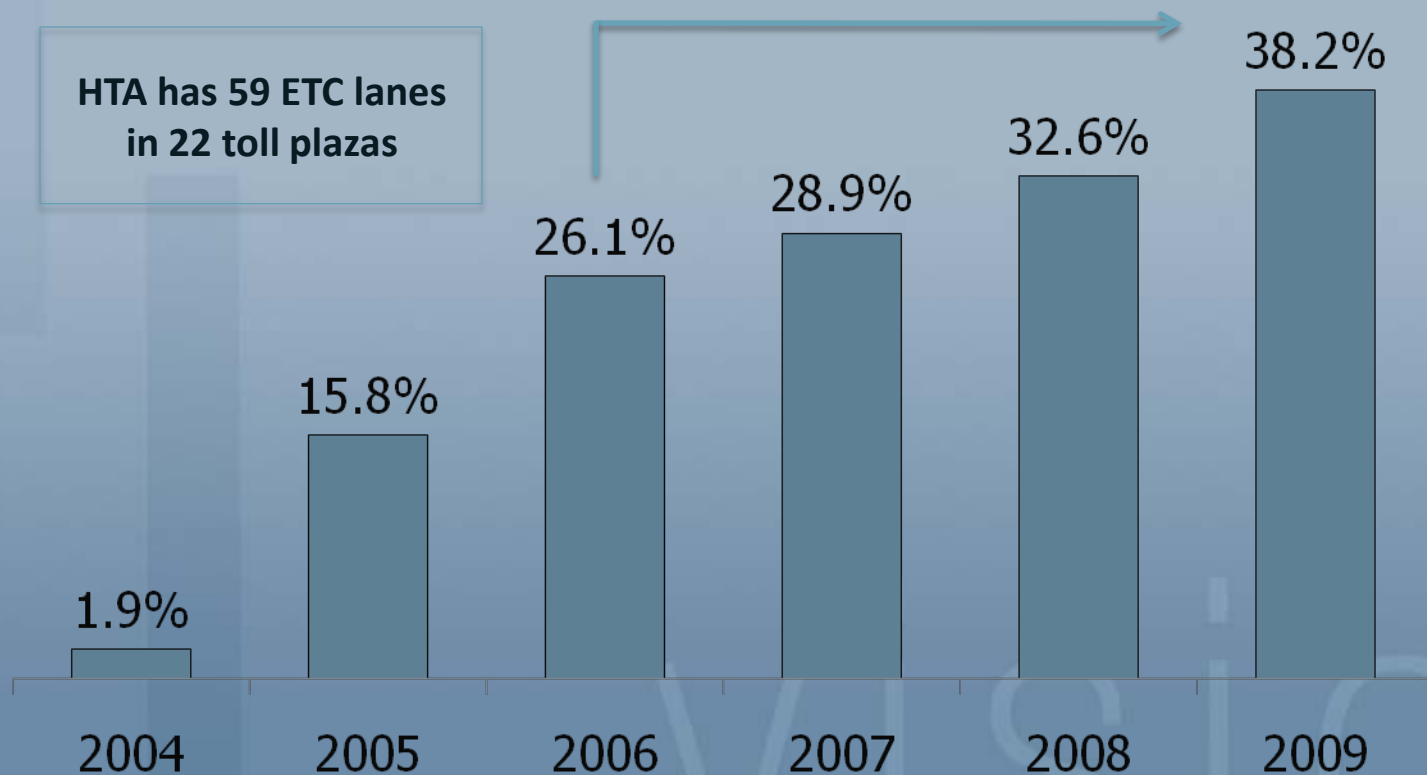


# Electronic Toll Collection as % of Revenues



HTA has 59 ETC lanes  
in 22 toll plazas

CAGR of 19.31% since FY2006





# **PR-66**

## **Roberto Sánchez Vilella Highway**





# PR-66

## Roberto Sánchez Vilella Expressway

### OBJECTIVE

- Better serve economic activity in the eastern region
- Facilitate connectivity to southeastern part of the Island
- Establish a hybrid long-term concession agreement that integrates the Brownfield and Greenfield components

### BACKGROUND

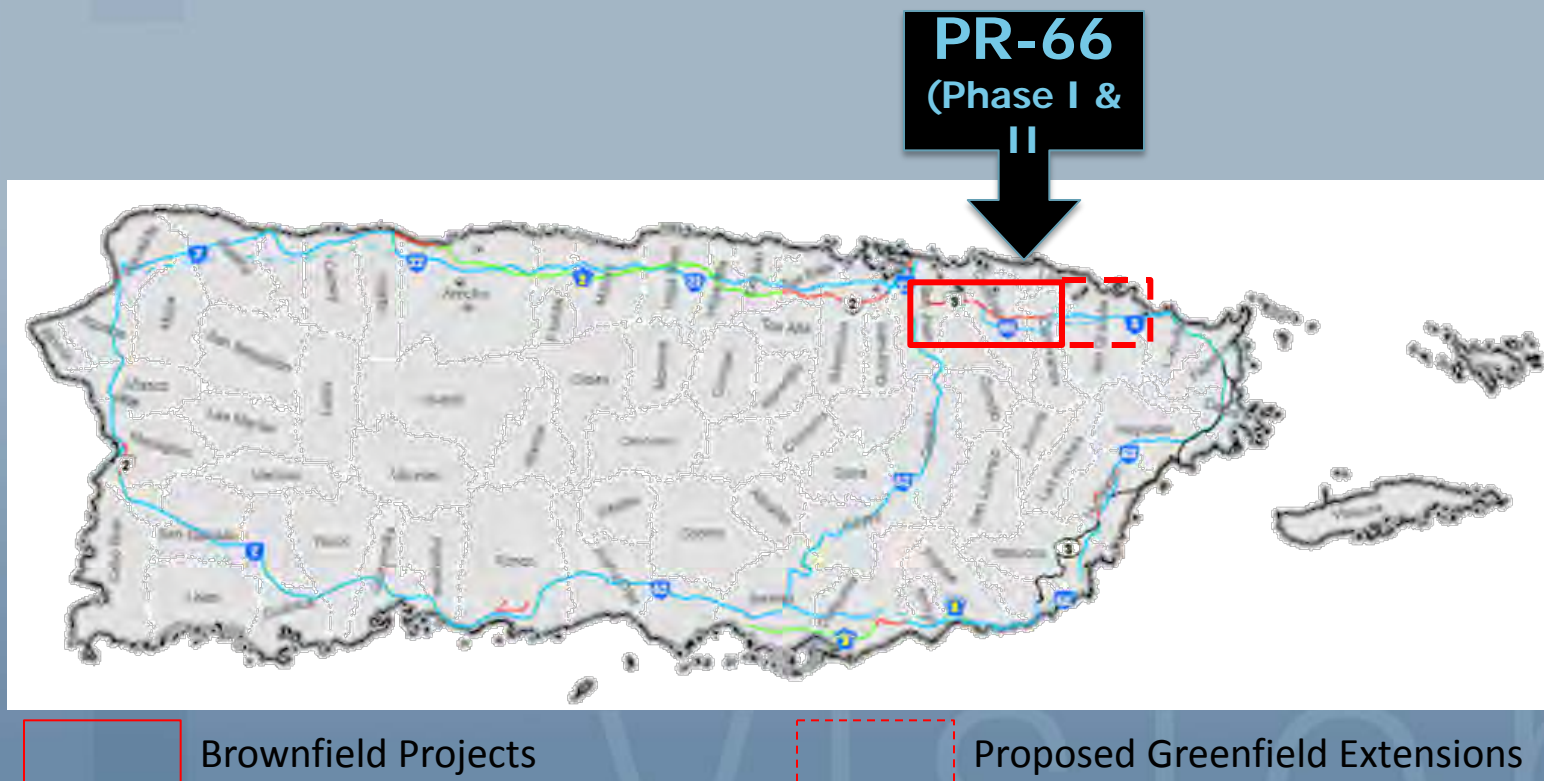


- The only expressway to the eastern region of the Island
- Has the widest bridges in Puerto Rico
- Runs parallel to PR-3, which suffers traffic lights and congestion
- Saves between 25 minutes to 1 hour of travel time relative to PR-3



# Location

- The only eastern corridor expressway
- Effectively connects San Juan with the eastern region





# Background

- PR-66 serves 5 municipalities without considering other farther out municipalities such as Humacao, Vieques and Culebra
- Important touristic region with world known hotels and attractions and large retail and manufacturing activity

## Demographic Base

Municipality	Population 2010	Population 2025	% Total Growth
Carolina	194,091	197,686	1.9%
Canovanas	47,796	51,856	8.5%
Loiza	35,928	39,944	11.2%
Río Grande	57,173	60,927	6.6%
Fajardo	42,964	44,739	4.1%
Luquillo	20,928	21,798	4.2%
<b>Total</b>	<b>398,880</b>	<b>416,950</b>	<b>4.5%</b>

## Economic Base

Sector	Activity
Retail Trade	Beltz Outlet
Manufacturing	Eli Lilly Wyeth
Tourist Attractions	El Yunque Culebra Beaches Vieques Beaches Puerto del Rey Marina Fajardo bioluminescent bay Horse track Camarero
Hotels	Westin Rio Mar St. Regis Trump El Conquistador





# Brownfield component

## Description Phase I: PR-66

- Construction began in 1997
- Completed at a total cost of \$187 MM
- Opened in April 2006
- 4 lanes of Access Controlled Highway
- Length: 9 miles
- Tolls: Carolina Plaza and Ramps
- Roundtrip toll: \$3.00
- Quasi-monopoly status due to alternative route

Source: Puerto Rico Highway and Transportation Authority  
and Steer Davies Gleave Traffic Study, Apr-2007





# Brownfield Component

## DESCRIPTION OF TOLLS

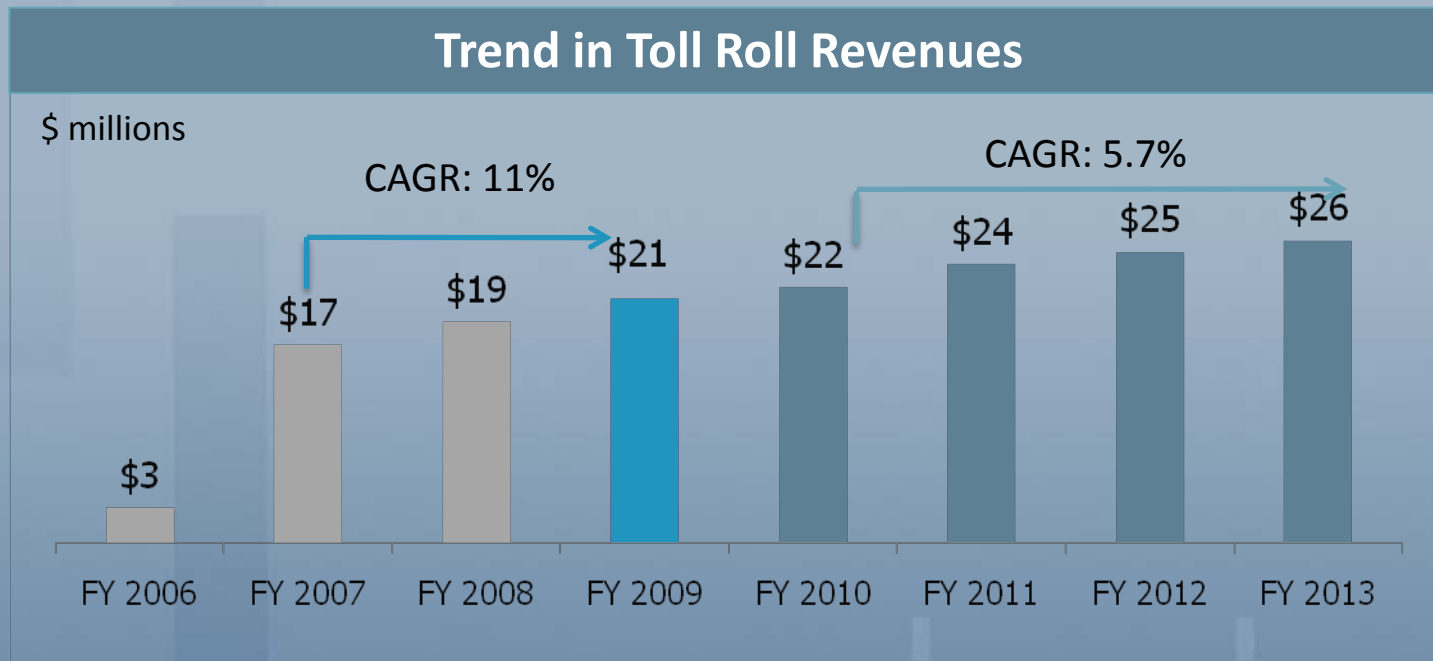
- Potential to capture more toll revenue through ending leakage
- Current toll rates are shown in table below

Vehicle Classification Matrix							
Toll Plaza	2 Axle	Double Tire	3 Axle	4 Axle	5 Axle	6 Axle	7 Axle
Carolina	\$1.50	\$3.00	\$3.25	\$3.50	\$3.75	\$4.00	\$4.25
Carolina Norte	\$0.75	\$1.50	\$1.75	\$2.00	\$2.25	\$2.50	\$2.75
Carolina Sur	\$0.75	\$1.50	\$1.75	\$2.00	\$2.25	\$2.50	
Pl. Rio Grande	\$1.50	\$3.00	\$3.25	\$3.50	\$3.75	\$4.00	
Rio Grande Ramp	\$0.75	\$1.50	\$1.75	\$2.00	\$2.25	\$2.50	\$4.50



# Brownfield component

- A consistent revenue stream averaging \$19 million per year
- Revenue forecast based on conservative bases of 5.7%



Source: Puerto Rico Highway and Transportation Authority.  
Projections from April 2009.



# Greenfield component

## Description Phase II: PR-66

- Length: 3.8 miles
- Additional Toll: Río Grande Plaza
- Toll Rate Roundtrip: \$3.0
- Est. Construction Period: 3 years
- Estimated Cost: \$223.0 million

Roadway	\$67.42
Lighting	\$4.78
PRASA Utilities	\$0.53
PREPA Utilities	\$1.73
Structures	\$85.81
Signaling and Pavement Markings	\$1.30
Traffic Signal System	\$0.48
Reforestation	\$1.64
Toll Plaza (Rio Grande)	\$6.00
Acquisition	\$51.30
Construction of Wetland Mitigation Area	\$2.00
<b>Total</b>	<b>\$222.99</b>





# Value Proposition / Business Case

Summary of Revenues (\$ millions)

Phase I - Brownfield	2006	2021 NORMAL	% CAGR
Carolina Plaza	\$14.86	\$31.5	5.1%
Carolina Ramps	\$3.41	\$2.7	-1.6%
<b>Phase I - Brownfield</b>	<b>\$18.27</b>	<b>\$34.1</b>	<b>4.3%</b>
Phase II - Greenfield	2006	2021 NORMAL	% CAGR
Río Grande Plaza	\$4.79	\$11.4	5.9%
<b>Total Project - Phase I + II</b>	<b>\$23.06</b>	<b>\$45.5</b>	<b>4.6%</b>

Source: Puerto Rico Highway and Transportation Authority and  
Steer Davies Gleave Traffic Study, Apr-2007



# Benefits

## PR Highway Authority

- Improve credit and rating of the HTA
- Accelerate and optimize investment in highways system
- Refocus on governance and oversight
- Expand HTA's capacity for complementary investments
- Risk transfers to concessionaire

## Concessionaire

- Potential hybrid Brownfield / Greenfield project
- Brownfield mitigates risks
- Major studies / permits completed
- Small-mid sized project
- Region with high potential for further economic base growth
- Identifiable and manageable risks



# Capital Improvements

- Presently, there are two improvements underway
  - Construction and improvement of The Outlets intersection in Canóvanas
  - Construction and improvement of intersection with PR-3 in Río Grande

**These improvements total \$41.1 million**



# **PR-52**

## **Luis A. Ferré Highway**





# PR-52

## Luis A. Ferré Highway

### OBJECTIVE

- Establishing a long-term concession agreement for PR-52 (Luis A Ferré Highway)

### BACKGROUND



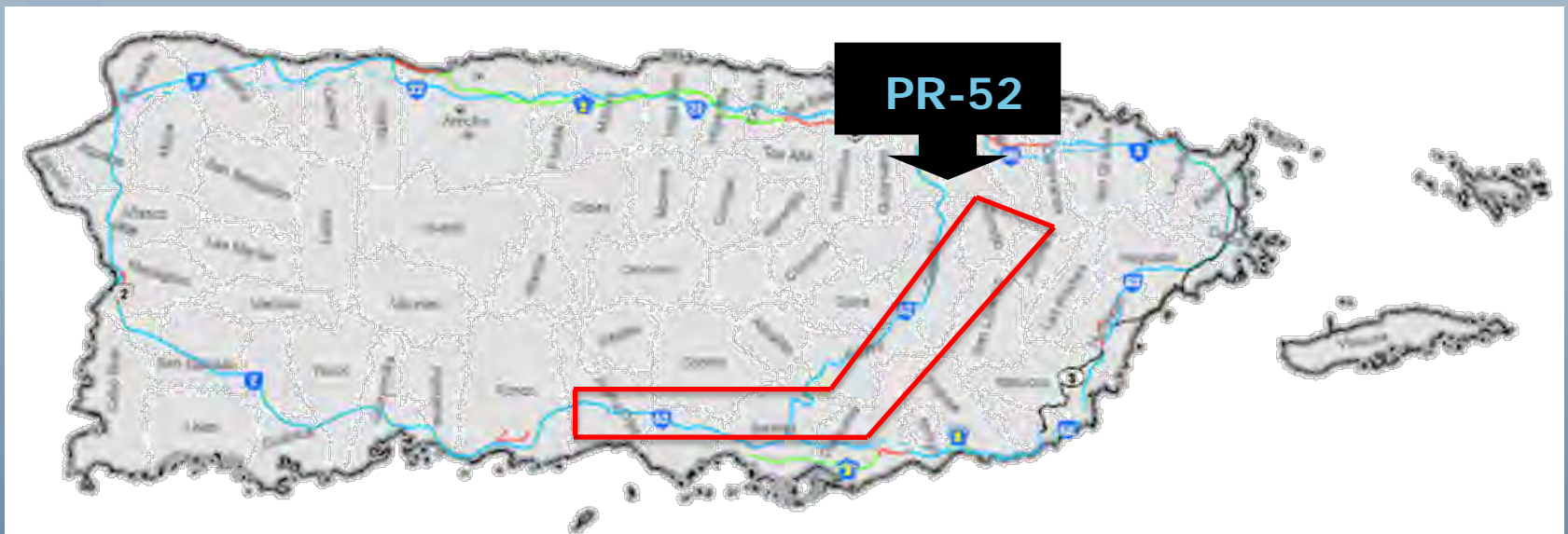
- PR-52 is Puerto Rico's longest toll road
- It spans 67 miles (108 kilometers) from northeast to southwest in Puerto Rico
- Consists of one continuous route from the City of San Juan (metro population of 2.4 million) to the city of Ponce, the second largest city in Puerto Rico
- Quasi monopoly route running North to South due to lack of alternative routes
- Contains 9 toll plazas and ramps, including Caguas Norte toll plaza, currently the highest tolled and highest revenue making toll plaza in the system
- PR-52 serves 15 municipalities with a population base of 1.2 million in 2010
- Represents 38% of all major highway traffic in Puerto Rico



# Location

## ROUTE

- Connects the two largest cities in Puerto Rico
- It enjoys a strong traffic profile with long peak travel periods
- Expansion of Southern port should further increase traffic volumes



Brownfield Projects



# Demographic and Economic Base

## DEMOGRAPHIC / ECONOMIC BASE

- PR-52 runs directly through 15 municipalities with favorable demographics and a robust long-term projected population growth rate
- Vehicle Density in Puerto Rico (at 0.57 vehicles per capita) is greater than the US or Europe
- Robust economic base activity in the region will continue to complement traffic
- New hotel and casino in Cayey will add to other tourist attractions already in the area
- Port of Americas growth will further increase traffic growth

vision



# Brownfield Component

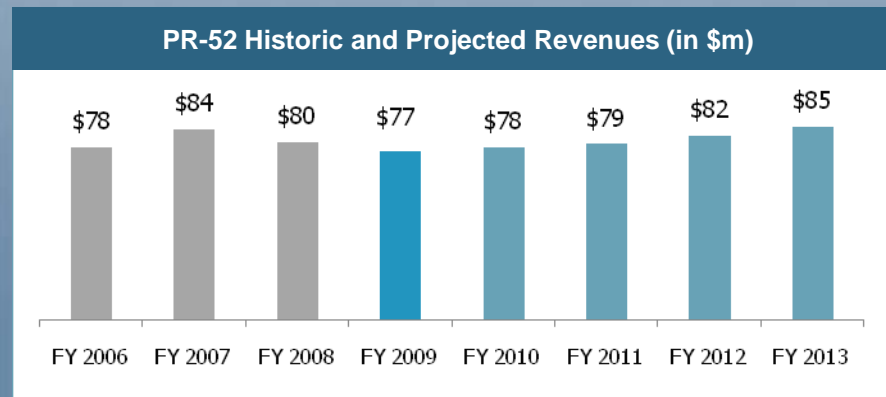
## CONCESSION

- A concession may provide more efficient operations
- Ability for more capital improvements

## DESCRIPTION OF TOLLS

- Capacity to reduce leakage
- Further increase of market penetration amongst users of *AutoExpreso*, Puerto Rico's high-speed electronic toll collection system
- Optimization via new technology / congestion relief measures

## CURRENT REVENUE POSITION







# Value Proposition / Business Case

- PR-52 is essential component of Puerto Rico's Travel Network with strong, proven historical growth and track record
- High vehicle density on the island
- Ongoing modernization potential
- Critical artery connecting North to South with little/ no alternative
- Stable legal framework, with Concession already authorized



# **Bus Rapid Transit**



# Surface Transportation Infrastructure

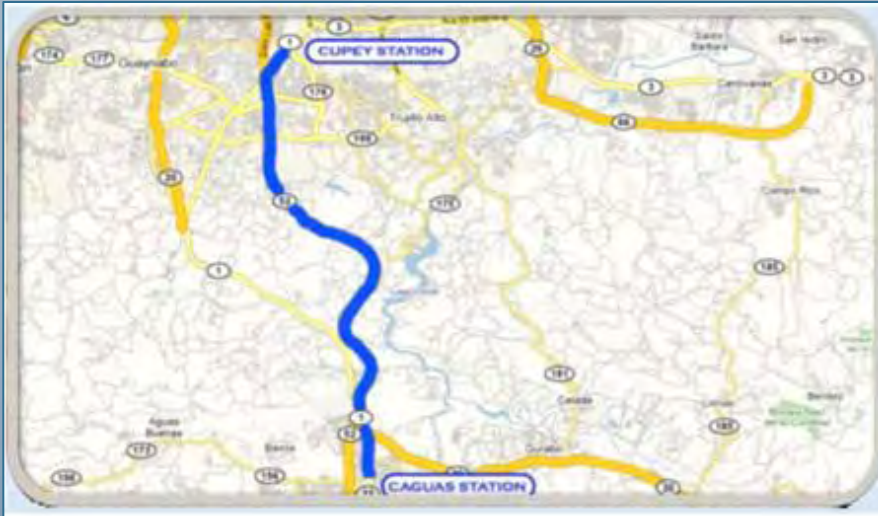
- The DTPW & PRHTA envision the development of surface transportation as a mean to develop
  - Better access and mobility infrastructure for people
  - Economic development, in order to build livable and sustainable places around the island



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# BRT San Juan / Caguas

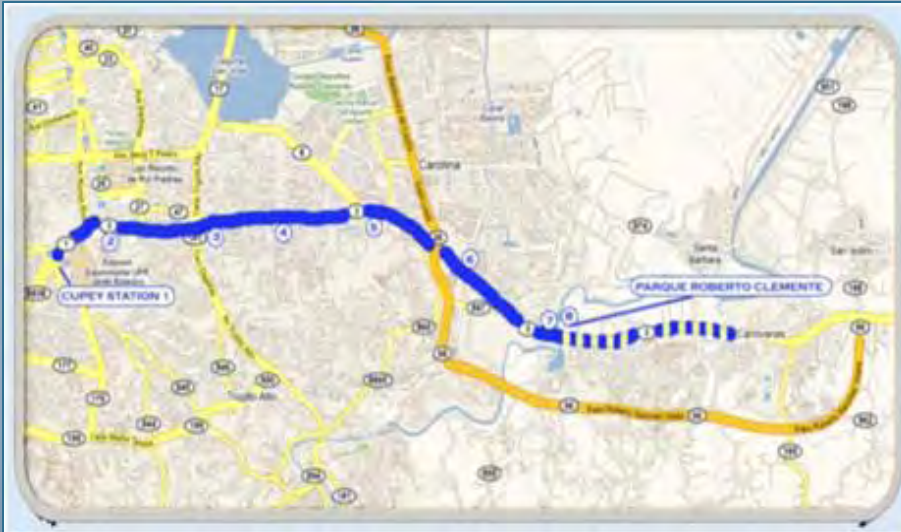


- Estimated Cost – \$365 M
- Estimated Ridership – 5,000





# BRT San Juan / Carolina



- Estimated Cost – \$400 M
- Estimated Ridership – 10,000



# San Juan Light Rail System



- Estimated cost - \$400 M
- Estimated Ridership – average of 15,000







# Feasibility Studies

- Government is interested in conducting a detailed a feasibility studies on the BRT's
  - Demand Analysis
  - Analyze potential ridership
  - Estimate patronage risk
  - Estimate user fees
  - Cost-benefit analysis
  - Potential financing structure
  - Estimate time for permitting
  - Other



# Puerto Rico Land of Opportunities

# Thank You

Rubén A. Hernández Gregorat, MEM,PE  
Secretary / Executive Director

June 8, 2010

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