

The National Academies of
SCIENCES • ENGINEERING • MEDICINE



TRANSPORTATION RESEARCH BOARD

TRB WEBINAR PROGRAM

Breaking Down Barriers: Funding and Finance Issues and Innovations in Public Transportation

Breaking Down Barriers:

Funding and Finance Issues and Innovations in Public Transportation

Not Your Father's Public-Private Partnership: Transit's Partnering with the Private Sector – Beyond the Mega Project

- **Karin DeMoors**, High Street Consulting Group

A Capital Improvement: FAST Act reforms to improve federal capacity to finance rail capital investments

- **Collin Peppard**, Office of U.S. Senator Tom Carper

Fair Use of Fares: Financing Chicago Transit Authority Facility Improvements with Fare Revenues

- **Sasha Page**, IMG Rebel

Small Starts: Finding the Local Match for BRT and Other Small-Scale Transit Projects

- **Lee Farmer**, City of Alexandria, Virginia
-

Webinar Speakers



Karin DeMoors, High Street Consulting Group

Collin Peppard, Office of U.S. Senator Thomas Carper

Sasha Page, IMG Rebel

Lee Farmer, City of Alexandria, Virginia

Learning Objectives

- List three innovative approaches to funding transit programs
 - Describe two approaches for financing transit programs
 - Explain new models of public private partnerships to deliver transit capital projects and programs
 - State the challenges encountered by project sponsors in implementing innovative funding/financing approaches
 - Apply the findings of the webinar to inform funding and financing decisions at state and local transit agencies
-



Not Your Father's Public Private Partnership

Transit's Partnering with the Private Sector Beyond the Mega-project

Karin DeMoors • January 13, 2016

High
Street
Consulting
Group



Presentation Overview

- What is a Public Private Partnership (P3)?
- Range of 'Partnerships' in Transit
- Examples

What is a Public Private Partnership (P3)?

- Definitions vary
- Common components:
 - Contract
 - Increased private role
 - Sharing of
 - Risk
 - Responsibility
 - Reward



Contractual agreements formed between a public agency and a private sector entity that allow for greater private sector participation in the delivery and financing of transportation projects.



National Council for P3s Definition



THE NATIONAL COUNCIL FOR
PUBLIC-PRIVATE
PARTNERSHIPS

Contractual arrangement between a public agency and a private sector entity. Through this agreement, the skills and assets of each sector are shared in delivering a service or facility for the use of the general public. In addition, each party shares in the risks and rewards potential in the delivery of the service and/or facility.



Mega Project Focus

- Headline grabbing
- New construction
- Big \$
- Often design build +
maintenance, operation, and/or finance



Dulles Corridor Metrorail Project

photo courtesy of www.dullesmetro.com

Range of 'Partnerships' in Transit

Financial

Advertising
Signage
Naming Rights
Sponsorships
Vending &
Concessions
Right of Way
Leases
Value Capture

Service Delivery

Sponsored
Service
Complementary
Transportation
Real Time
Information
Wireless/Wifi
Charging
Stations

Infrastructure Development

Design Build
Air Rights

Combinations

Design Build
Operate
Maintain
Design Build
Finance
DBFOM
Joint
Development

Many Non-Mega Partnerships

- Not as highly publicized
- Not what typically comes to mind when hear 'P3'
- Often result from problem solving with limited resources
- Can make real differences
- Every dollar counts

EXAMPLES: FINANCIAL PARTNERSHIPS

SEPTA (Philadelphia, PA)

Station Naming Rights



- **Hospital:** commuter rail station
- \$4M for 5 years
 - Optional 4 more years at \$3.4M
 - 85% to SEPTA & 15% to ad agency
- Hospital provides shuttle bus between hospital & station
- **AT&T:** subway station
 - \$5.4M for 5 years
 - Only wireless carrier underground along Broad Street and Market-Frankford lines



FRED (Fredericksburg, VA)

Partners Program

- \$25k/year = 'Major Partner'
 - Routing serves Partner's location
 - Free rides for employees, students
 - Free advertising
 - Advisory board invitation
 - Tailored annual report
- Under \$25k options, proffers, in kind arrangements
- Partner Program Revenues =
~4% of FRED's operating budget

Major Partners

- ✓ University of Mary Washington
- ✓ The Free Lance-Star
- ✓ Germanna Community College
- ✓ WFLS radio
- ✓ Mary Washington Healthcare
- ✓ Caroline County
- ✓ Spotsylvania County
- ✓ City of Fredericksburg
- ✓ Stafford County
- ✓ George Washington Regional Commission
- ✓ Virginia Dept. of Rail & Public Transportation

EXAMPLES: SERVICE PARTNERSHIPS

- **Apartment Complexes**

- Tenants receive bus pass with lease
- Apartment complex reimburses CATA per ride
- Pay wholesale fare (\$0.93 vs. \$1.75)
- 28% of CATA annual operating revenue

- **University Circulator**

- Free rides to all (not just students)
- University pays flat fee per hour of service
- Annual contract sets service and fee terms
- Increases overall ridership for federal funding consideration
- 35% of CATA annual operating revenue



DART (Dallas, TX)

Partnership with Uber



- Book Uber using DART's mobile ticketing app
- One stop shopping
- Facilitates solving “first mile-last mile” problem
- Tech integration limited; link opens Uber app
- Others following suit
 - Lyft also seeking such partnerships
 - MARTA has similar collaboration
 - Los Angeles and Minneapolis cover Uber trips as part of ‘guaranteed ride home’ programs

MTA (New York, NY)

Wireless Service Underground



- Voice & data service underground
- Partner pays 100% of project costs including MTA support staff
- MTA and partner split 50/50 carrier occupancy and sub-license fee revenue
- Partner pays MTA \$3.3M/year (min.) at full build



**Wi-Fi
HERE**

Check your
wireless device,
you can now
connect!

SSID:
FreeWiFibyHTCONE



EXAMPLES: INFRASTRUCTURE DEVELOPMENT PARTNERSHIPS

CTA (Chicago, IL)

Bus Shelter Concession




- 20 year bus shelter and street furniture contract
- No cost to City/CTA
- Partner designed, installed, maintains, and manages ad space on 2,200+ shelters
- CTA guaranteed \$200M+ in ad revenue
- Prior CTA bus shelters did not have ad space



CTA (Chicago, IL)

Fare Payment System



- Contactless open fare payment system
 - Payment with cards, tickets, debit or credit cards with chips  and (soon) mobile devices
 - Replaced separate fare systems of CTA, Pace Bus
- Private partner receives monthly fee
 - Base and variable (# of rides) components
- CTA saves \$
 - No longer purchases, maintains, supports fare collection equipment

EXAMPLES: COMBINATIONS

US 36 Managed Lane & Bus Rapid Transit Ph.2

- Alleviates congestion multi-modally
 - Bus Rapid Transit (BRT)
 - High Occupancy/Toll (HOT) lanes
 - Bikeway
 - Road and bridge reconstruction
- DBFOM P3 with 50 year agreement
- Project cost: \$208M
- Funding: Mix of federal, state, local, TIFIA, equity, private activity bonds, toll revenues



PennDOT (various transit agencies, PA) Compressed Natural Gas Fueling Stations



- CNG fueling stations at up to 37 transit agencies
- PennDOT
 - Enters CNG supply contract with partner
 - Enters CNG purchase agreements with transit agencies
 - Receives portion of fuel sales revenue
 - \$ returned to transit agencies for capital projects
- Private partner (selection pending)
 - DBFOM of fueling stations & other facility upgrades
 - Supplies CNG to transit agencies
 - Undertakes commercial CNG sales

Thank you

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A CAPITAL IMPROVEMENT

FAST Act reforms to improve federal capacity to finance rail capital investments

Colin F. Peppard

Policy Advisor for Transportation and Infrastructure
Office of U.S. Senator Thomas R. Carper

Rail Finance: A Quick History

- Railroad Revitalization and Regulatory Reform Act of 1976: Transition assistance for private rail carriers
- TEA-21: New focus on project finance leads to expansion and reforms
- SAFETEA-LU, etc: Expansion continues



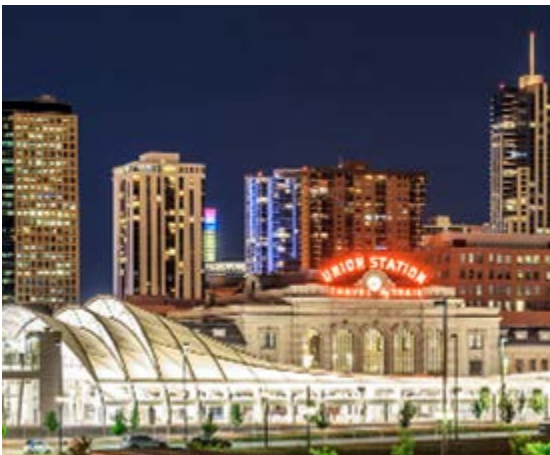
RRIF Today: The Current Program

- Housed at the Federal Railroad Administration, overseen by the Administrator, subject to DOT Credit Council (and OMB) review
- Investments by railroads to acquire, improve, or rehabilitate rail or intermodal equipment and facilities (e.g. track, bridges, yards, shops)
- \$35 billion obligation capacity to make direct loans and loan guarantees for up to 35 years



Key Benefits to Borrowers and Public

- Borrowers
 - Low interest financing with flexible terms that are tailored to the railroad industry's capital and borrowing needs
- The Public
 - Increased investments in transport options to reduce cost and increase options for shipping and travel.



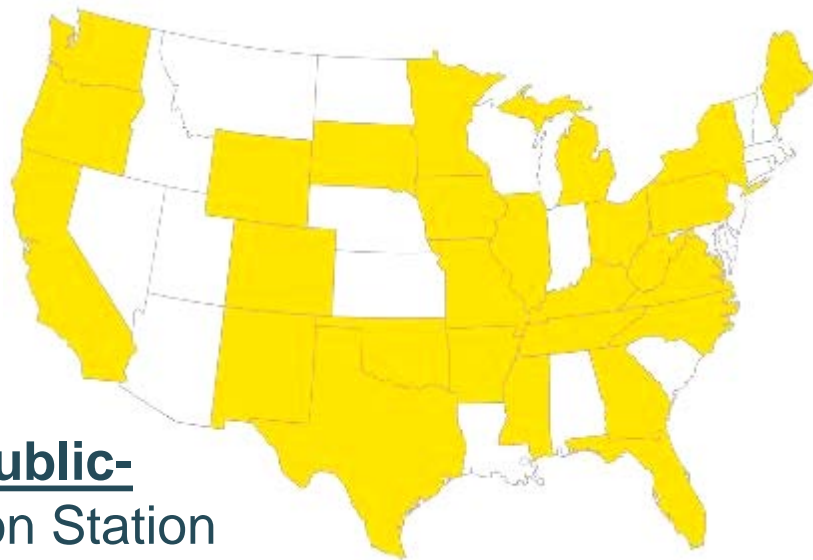
RRIF Loan Cost Comparison

<i>Type of Debt Instrument</i>	<i>Unsecured Bond Issuance</i>	<i>RRIF Loan</i>
Face/Loan Amount	\$100,000,000	\$100,000,000
Coupon/Loan Rate	4.40% ^a	2.92% ^b
Term (Years)	30	30
Underwriters Fee (@ 0.875%) ^a	\$875,000	N/A
Investigation Fee (@ 0.5%)	N/A	\$500,000
Credit Risk Premium (@ 2%) ^c	N/A	\$2,000,000
Subtotal Fees and Upfront Costs	\$875,000	\$2,500,000
Present Value (PV) Interest Cost ^d	\$66,490,499	\$41,467,563
Total PV of Fees and Costs	\$67,365,499	\$43,967,563

Source: DOT IG, 2014

RRIF: Key Program Stats

- Since 1998, 35 loans in 27 states have been executed with a total value of approximately \$2.7 billion, and includes one default
- Average 2.5 loans each year, averaging \$80 million each, ranging from \$56,000 to \$967 million
- Class II and III railroads make up 80 percent of executed loans
- 17 percent with public authorities (intercity, commuter, transit rail)
- 2002: First public agency to receive a RRIF loan was Amtrak electric locomotive procurement
- 2010: First RRIF loan to include a public-private partnership was Denver Union Station



Key Drawbacks Have Limited Success

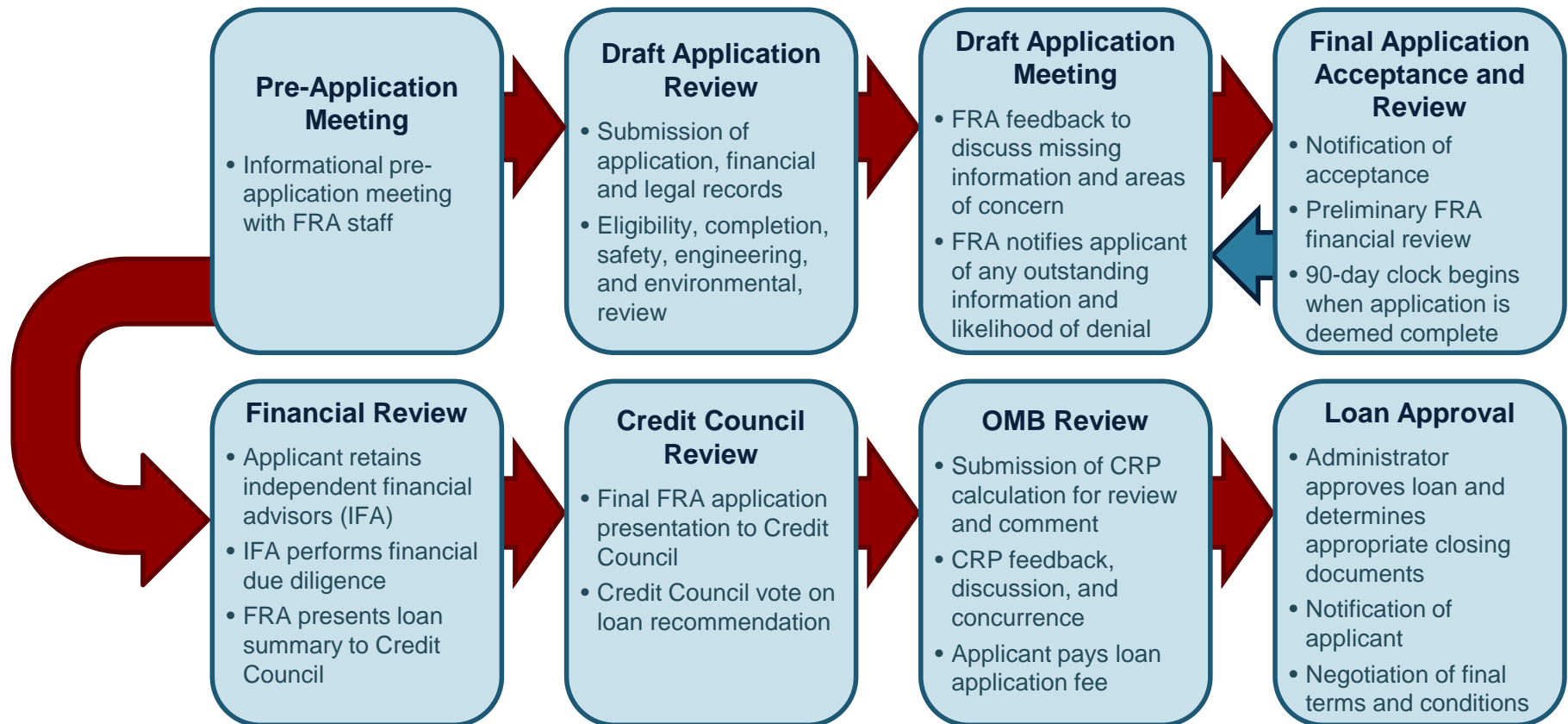
- Up front costs are higher than commercial financing
- Collateral for securing loans limited to “hard” assets
- Not well structured for private developers or project finance corporations

Higher Upfront Costs

<i>Type of Debt Instrument</i>	<i>Unsecured Bond Issuance</i>	<i>RRIF Loan</i>
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Investigation Fee (@ 0.5%)	N/A	\$500,000
Credit Risk Premium (@ 2%) ^c	N/A	\$2,000,000
Subtotal Fees and Upfront Costs	\$875,000	\$2,500,000
Present Value (PV) Interest Cost ^d	\$66,490,499	\$41,467,563
Total PV of Fees and Costs	\$67,365,499	\$43,967,563

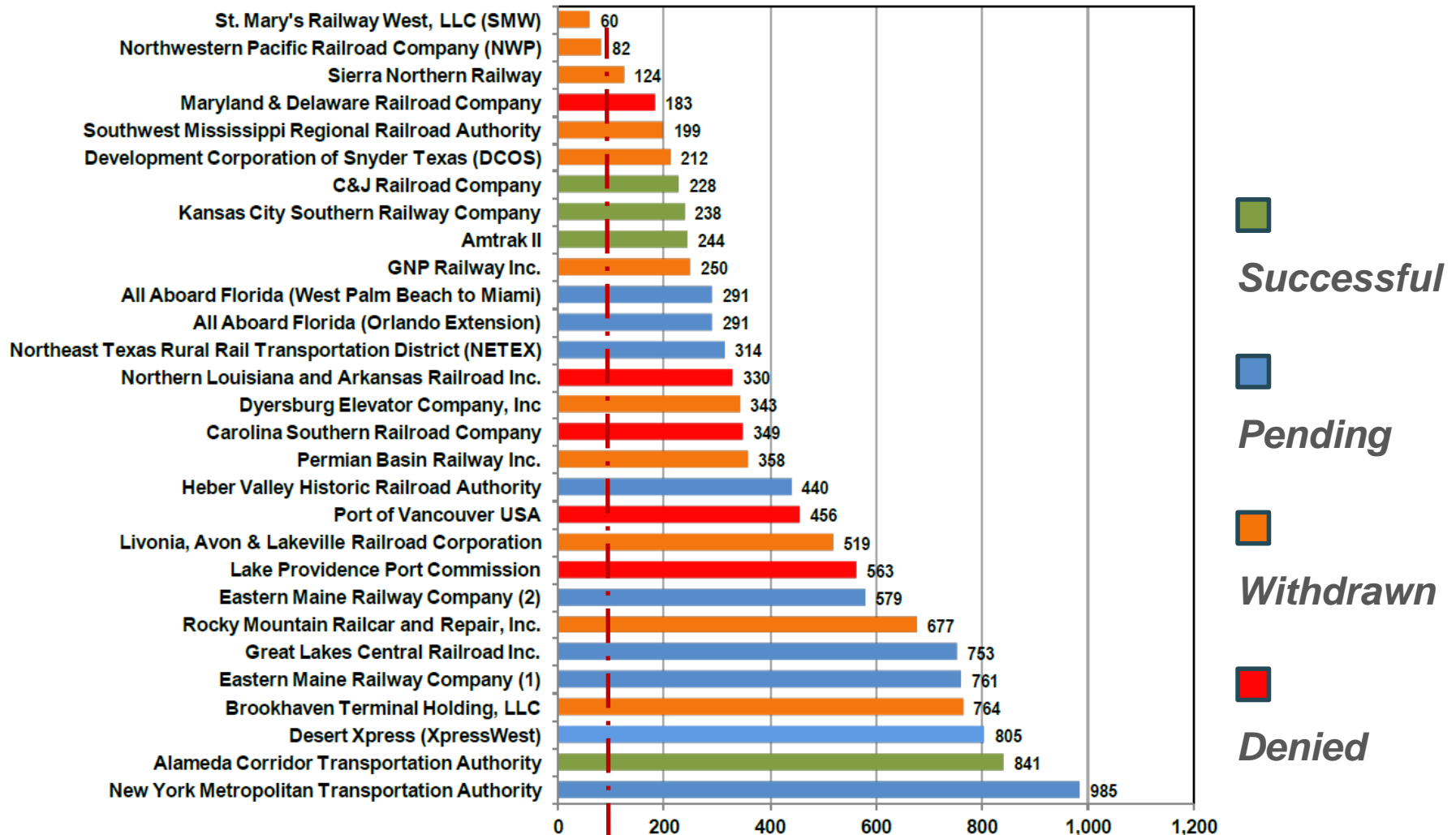
Source: DOT IG, 2014

It's All About the Process...



Applicants have consistently complained about the length, ambiguity, and complexity of the application process

Selected RRIF Loan Processing Time



FAST Act Reforms

Railroad Infrastructure Financing Improvement Act

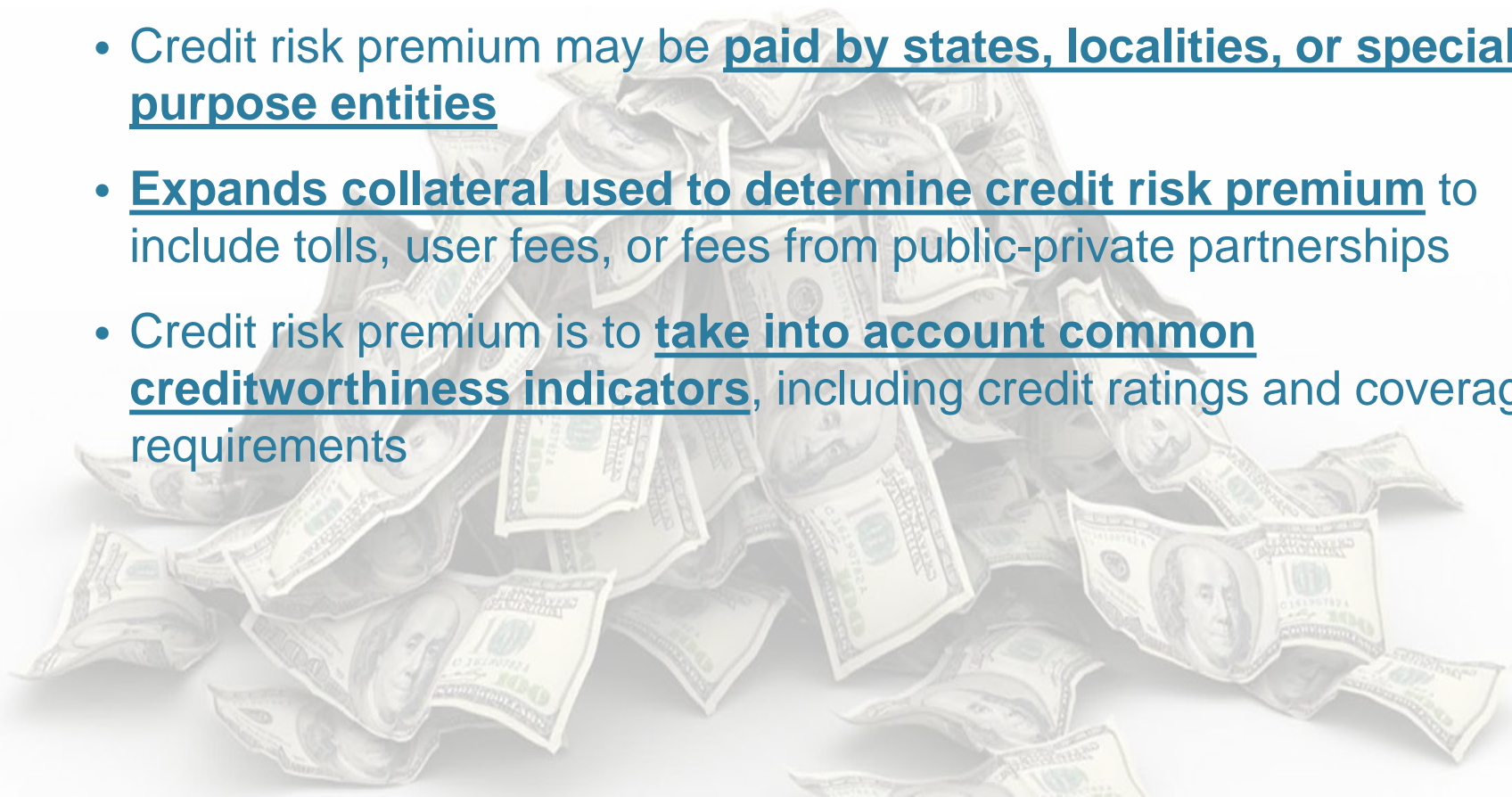
- Booker, Kirk, Carper, Heller
- Key areas of reform
 - Reduce up front costs for borrowers
 - Improve and streamline application and evaluation process
 - Increase flexibility of credit agreements and
 - Restructure to appeal to P3s and private investment



Reduce Up-Front Costs

Limiting up-front costs for borrowers will allow greater participation by a diverse group of stakeholders

- Credit risk premium may be paid by states, localities, or special-purpose entities
- Expands collateral used to determine credit risk premium to include tolls, user fees, or fees from public-private partnerships
- Credit risk premium is to take into account common creditworthiness indicators, including credit ratings and coverage requirements



Improve Application Process

Streamline the application process and improve transparency

- Require the Secretary to notify applicants within **30 days** whether their **application is complete**, or what information is missing
- **Approve or disapprove** an application within **60 days** of notifying an applicant that their application is complete
- Requires the **Office of Management and Budget** to take any actions within that 60-day limit
- Creates a dashboard for tracking status of all loan applications
- Requires creation of a **program guide**, a **standard term sheet**, and **specific timetables** for each action or phase

Restructure and Increase Flexibility

Standard loan characteristics have been restructured to increase flexibility, especially for P3s and private partners

- Maturity dates extended to 35 years after the date of “substantial completion” of the project
- Payment deferral available until 5 years after completion
- Expands the range of eligible borrowers, including private entities designated by a public sponsor
- Explicitly allows for special purpose vehicles receiving non-recourse financing
- Loans can finance development around station areas (TOD), with real estate developers eligible as borrowers
- Master Credit Agreements for “program of projects” (e.g. Amtrak Gateway program)

What Can We Expect from Reform?

- Shorter and more transparent application review and evaluation period, with fewer withdrawn or denied applications
- Larger average loan size and more annual loan closures
- Greater diversity of project types and borrowers
- Lower risk premiums for many borrowers



What Can We Expect from Reform?

- Greater utilization by passenger and commuter railroads, especially through public-private or joint ventures
- Increased use of state or local revenues or user fees to invest in projects that include a rail element
- Focus on economic development, value capture
- More frequent co-mingling of RRIF loans with other credit enhancements, as well as private debt and equity



Other Reforms will Tighten Credit

- Sharper focus on creditworthiness standards will tighten the program's lending criteria.
- Utilization of credit ratings will narrow the pool of eligible projects.
- “Springing lien” (non-subordination in the event of bankruptcy) will complicate combining RRIF loan with other project debt.

What Remains to Be Done?

- Appropriate funding to pay RRIF credit risk premiums, similar to TIFIA
- Allow payment of credit risk premiums using other federal funds (e.g. STP or TIGER)
- Authorize borrowers to implement passenger facility charges to secure RRIF financing

What Remains to Be Done?

- Allow for pre-qualification of borrowers and application development through letters of interest
- Reform program administration to ensure necessary staffing levels, including financial and legal consultants
- Provide planning and technical assistance grants

Thank You!

Colin F. Peppard

U.S. Senator Thomas R. Carper

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Thinking Outside The Farebox: Fares As An Alternative Financing Source

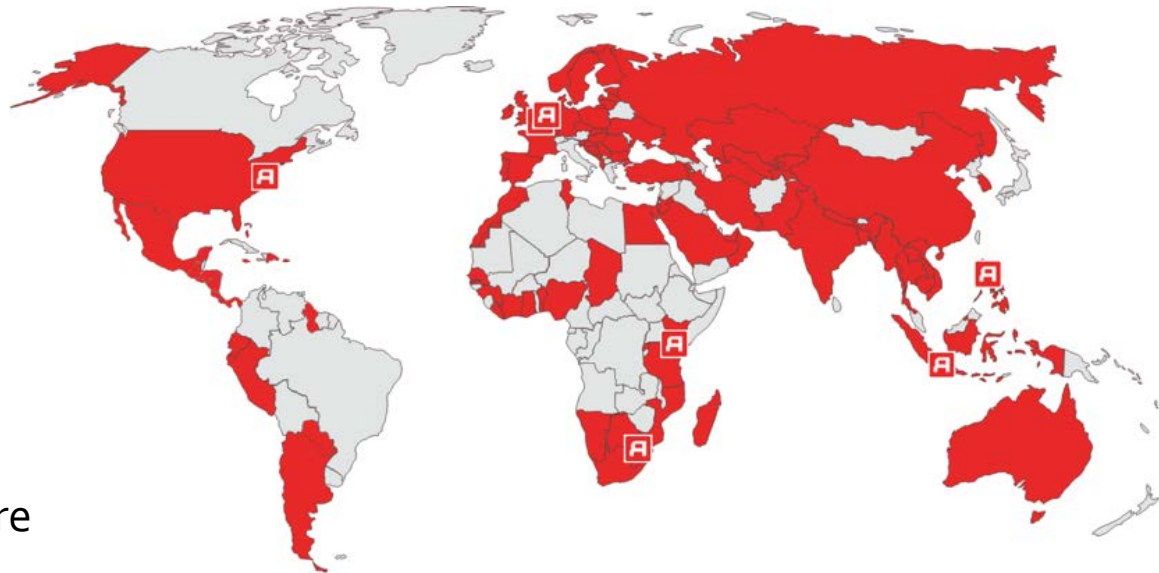
Sasha Page, IMG Rebel
Sunday, January 12, 2016

Tech, TIFIA, and Small Starts: Emerging Issues in Transit Finance, P16-1178

TEEBE
IMG
REBEL

IMG Rebel

- IMG Rebel specializes in improving finance, development, and management, of transportation, utility, and social infrastructure
- IMG Rebel's experienced staff is made up of more than 125 professionals, who mobilize expertise in public-private partnerships (P3), innovative funding and finance, transaction advisory, and capacity building (www.imgrebel.com)
- With U.S. headquarters in Bethesda, MD and worldwide headquarters in Rotterdam, the Netherlands, we have completed assignments in more than 80 countries



Overview

- Chicago Transit Authority (CTA) Recent Transactions
- New York Metropolitan Transportation Authority (MTA) Transportation Revenue Bonds
- Thoughts for Other Transit Agencies

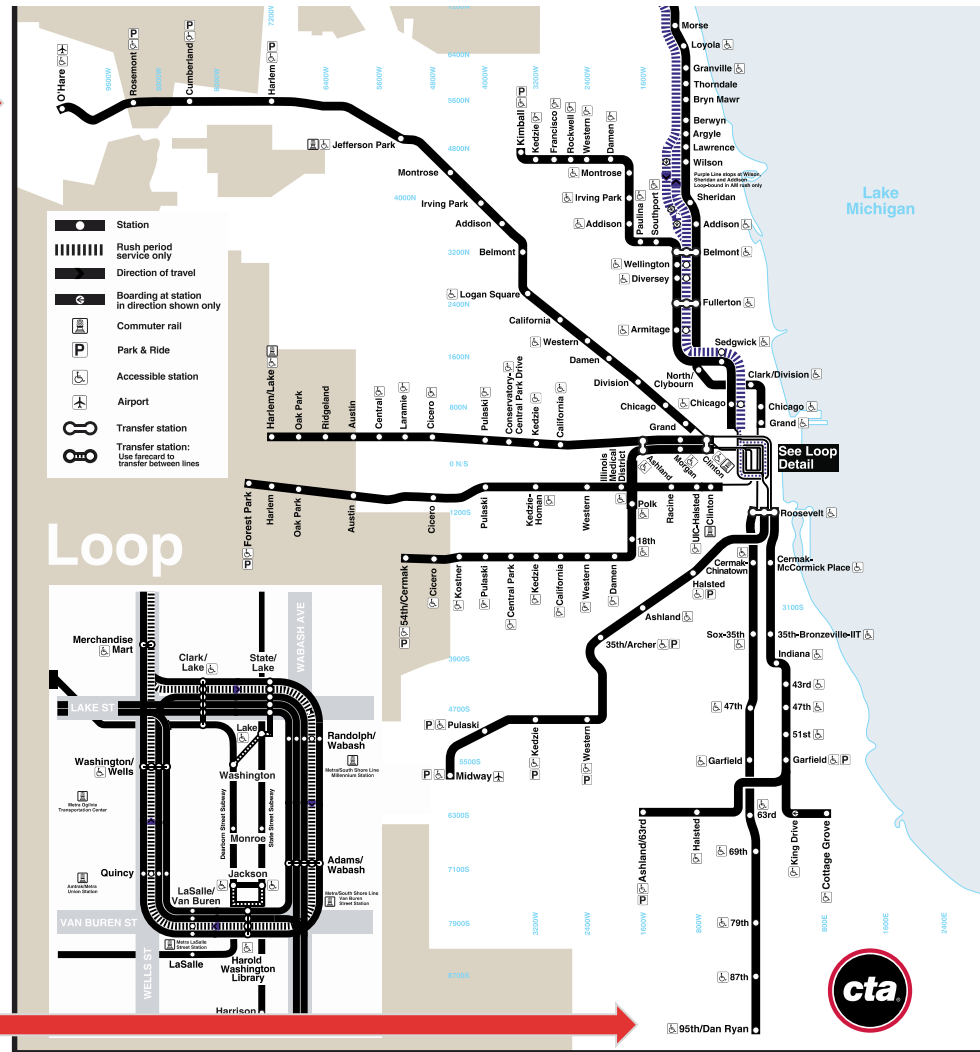
Chicago Transit Authority

CTA's Your New Blue line and 95th Terminal financed with farebox revenues

- Your New Blue



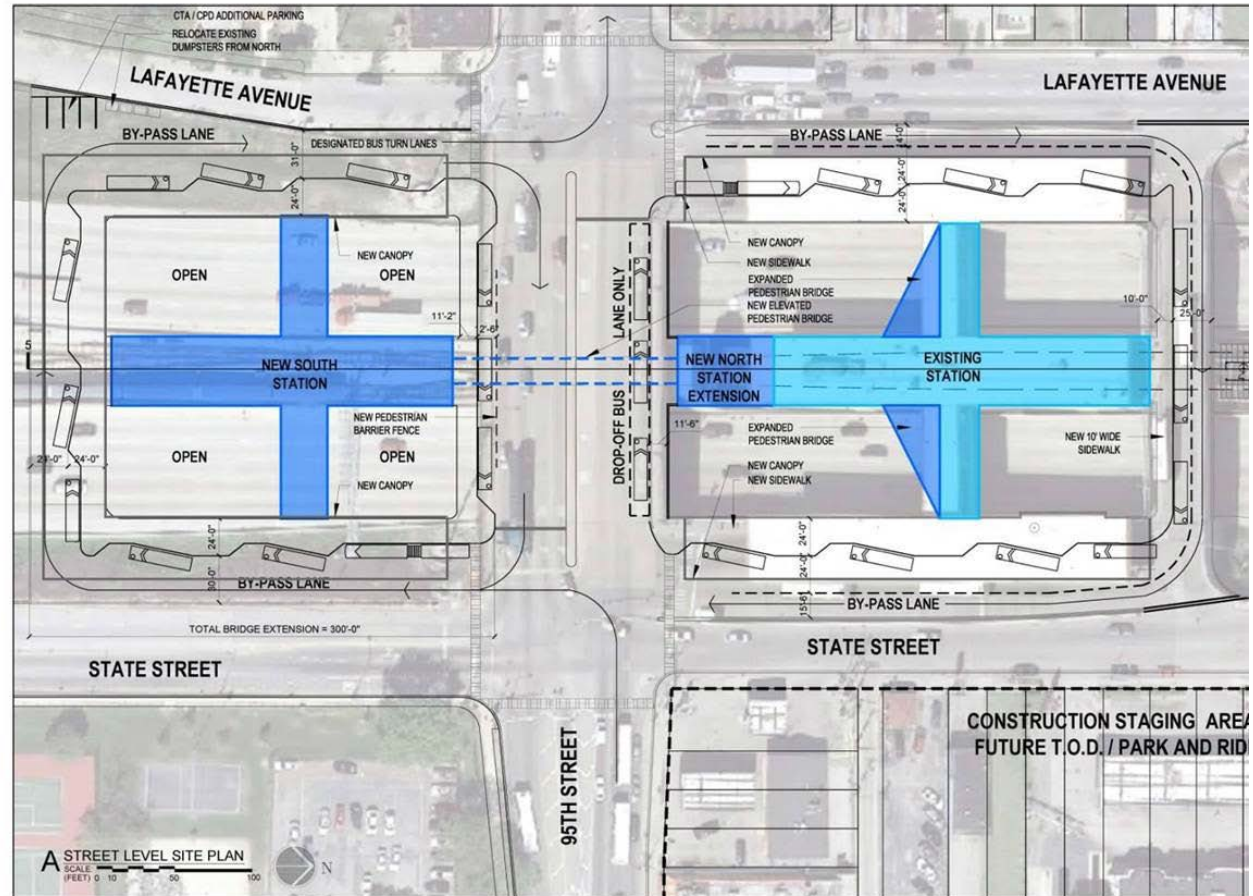
- 95th Street Terminal



nsit Authority, all rights reserved. Reproduction without permission is strictly prohibited. Visit transitchicago.com for latest version.

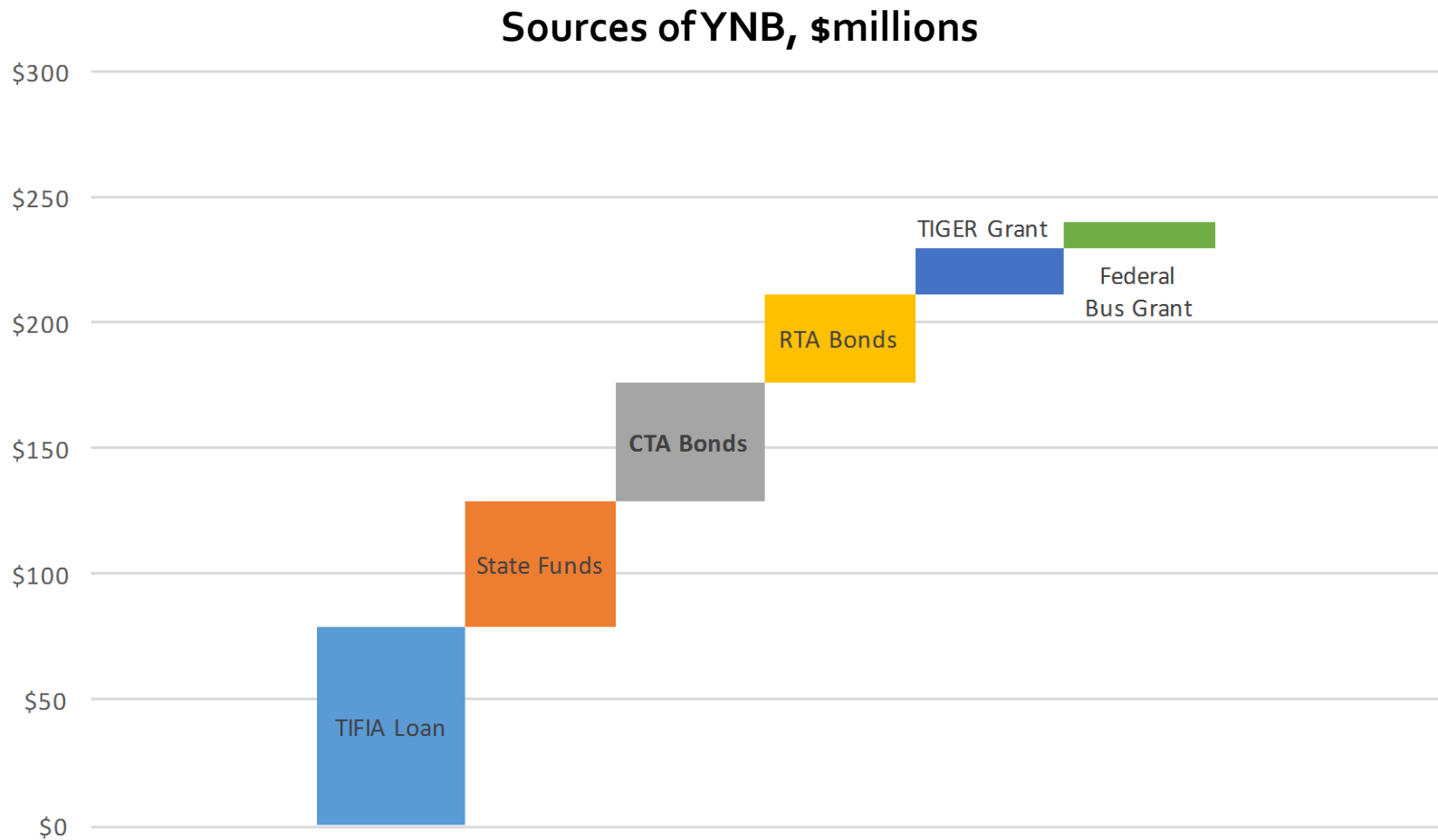
95th Street Terminal will rehabilitate existing station to provide more space, improving mobility & safety

- Expansion of N. Station, incl. retail
- Construction of new, 3-story S. Station
- Sidewalks and bus lanes expansions
- Traffic signal improvements



Source: TIFIA (95th Street Terminal)

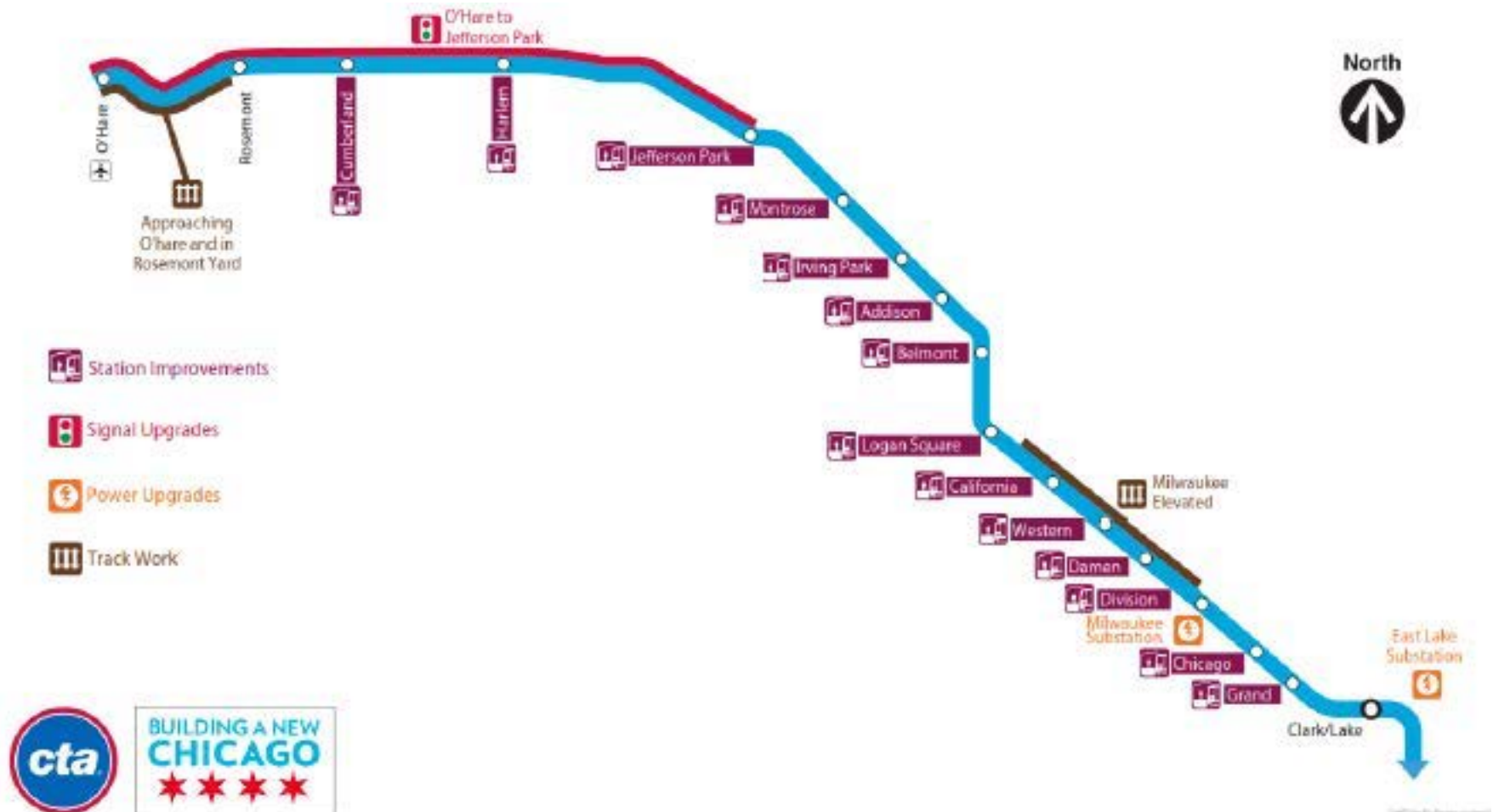
95th Street Terminal loan financed ca. 1/3 of project; rest from state, regional, & local monies



Source: TIFIA (95th Street Terminal)

Fares As An Alternative Financing Source

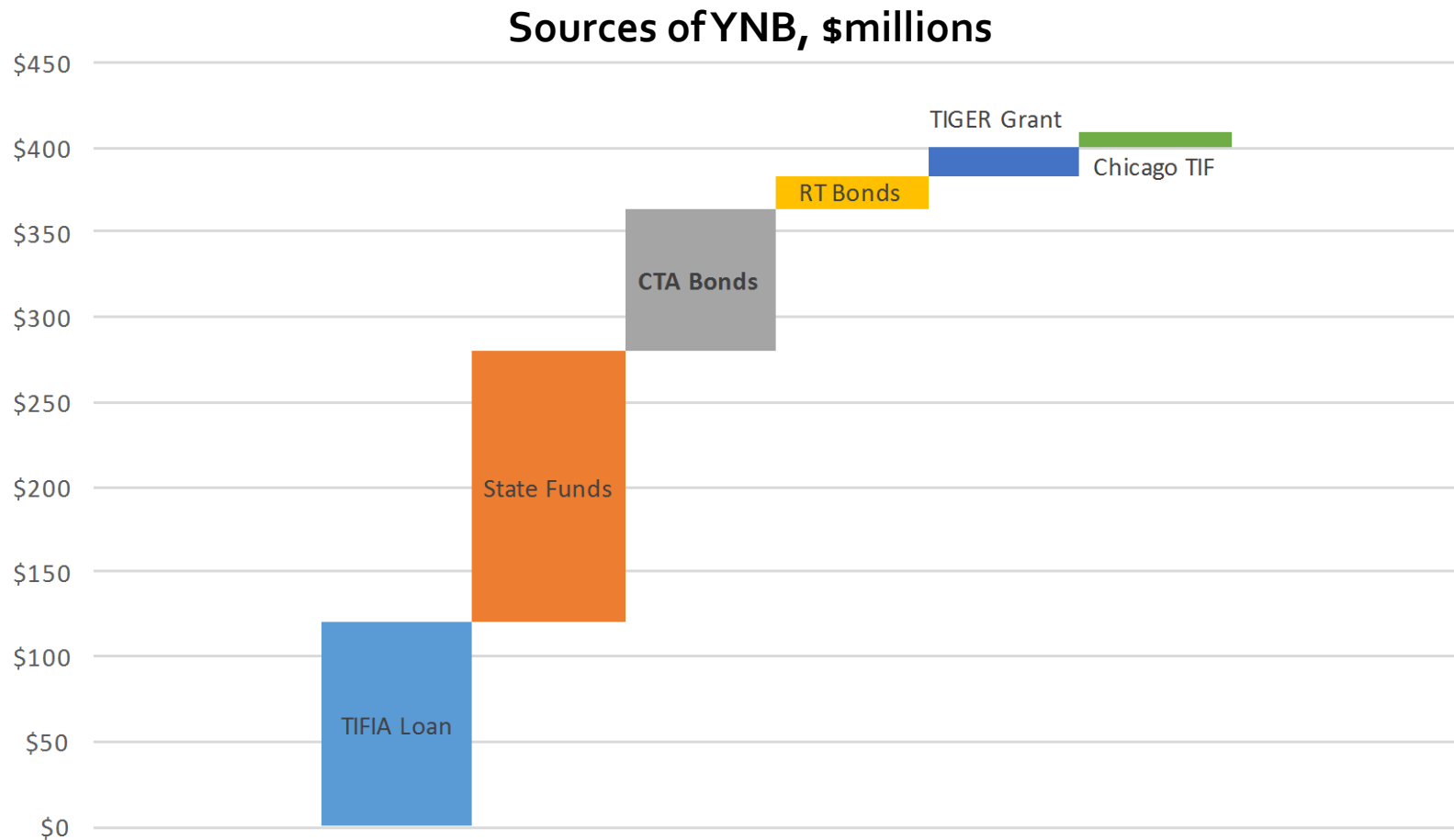
Your New Blue is 19-mile series of modernization projects between downtown Chicago & O'Hare Airport



Source: TIFIA (YNB)

Fares As An Alternative Financing Source

Your New Blue loan financed around 25% of project; rest from state, regional, and local monies



Source: TIFIA (YNB)

Fares As An Alternative Financing Source

Strong gross pledge AA- rating assumes diversity of other sources covering O&M

“... Given the essentiality of public transit systems across the country and the insufficiency of farebox revenues to independently support operations, **a variety of nonoperating publicly sourced revenues** are generally provided by the local and state level of government to subsidize operations. . . .

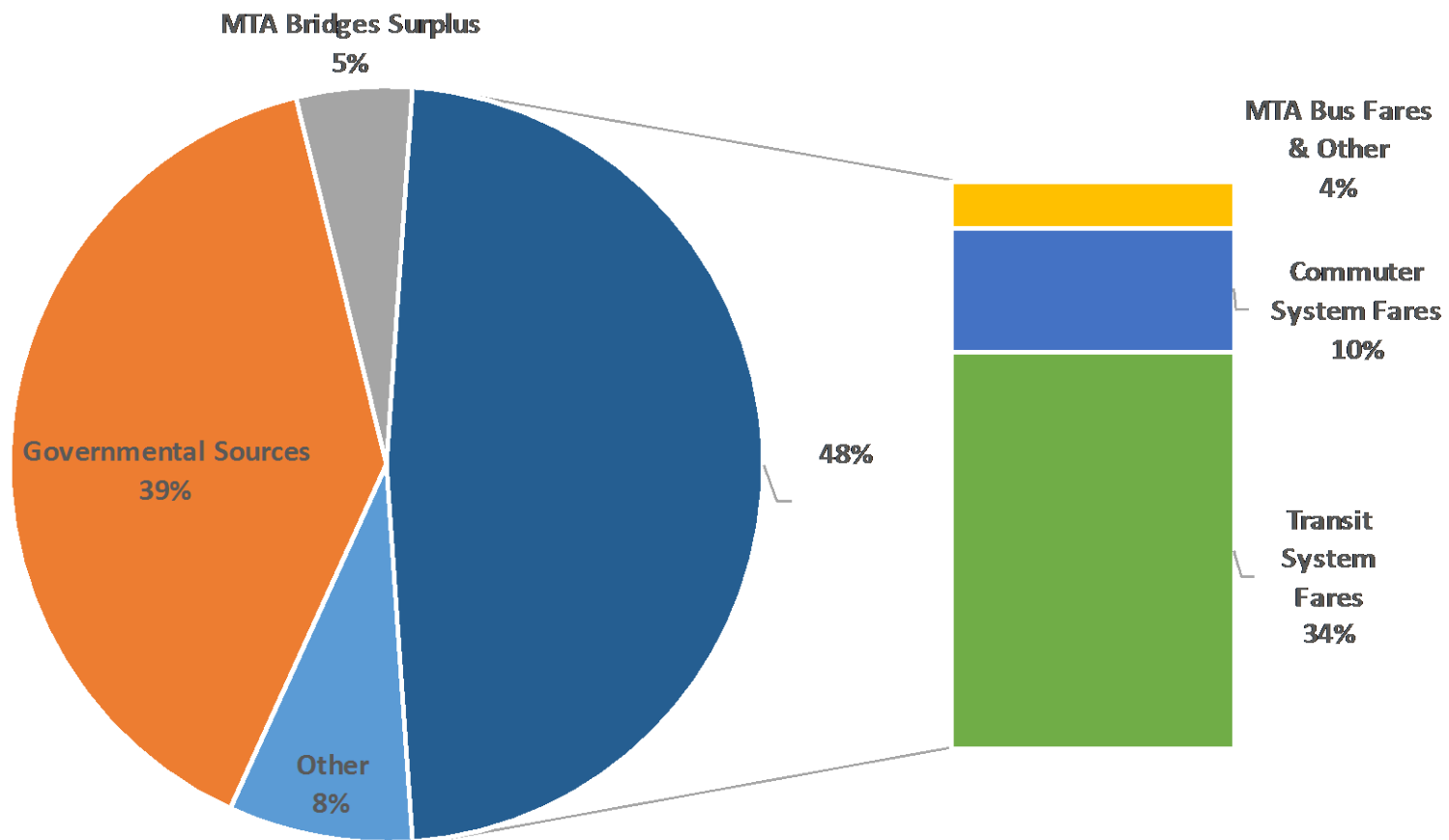
In a public transit system, **this diversified revenue structure lessens the concern that there will not be enough money to operate the system if debt service is paid first. . .**

Generally, debt service coverage calculated on a net revenue basis for these systems is around 1.0X, however, given the essential role and public support of these public transit systems, it can be expected that they will continue to operate and pay their obligations.” (Bold added)

Source: Kroll (2015)

Metropolitan Transportation Authority

NY Metropolitan Transportation Authority (MTA) pledges fares & other sources to transportation revenue bonds (TRB)



Source: MTA (2015)

Fares As An Alternative Financing Source

MTA TRBs benefit from high debt service coverage built on foundation of non-fare sources

- 2014 debt service coverage ratio of 9.5:
 - Fares/debt service: 4.5
 - Non-fare revenue/debt service: 4.9
- TRB rate covenant requires adequate fare revenue for:
 - TRB debt service and parity debt
 - Pay subordinated debt
 - O&M expenses
- Net coverage, i.e. all revenues/(debt service+ O&M), is 1.0:
 - No additional bonds test
 - Yet state limits and strong oversight of capital projects
- Strong ratings: Moody's A1 (10 July 2015); Kroll AA+ (May 2015)

TRBs are one of four distinct MTA credits

- Four major credits include:
 - Transportation Revenue Bonds (TRB)
 - Dedicated Tax Fund Bonds (DTF)
 - Triborough Bridge and Tunnel Authority (TBTA) Senior Resolution Bonds and
 - TBTA Subordinate Resolutions Bonds

Metropolitan Transportation Authority Credit Ratings

MTA Credit	Moody's	Standard & Poor's	Fitch	Kroll Bond Rating Agency
Transportation Revenue	A1	AA-	A	AA+
Dedicated Tax Fund	NAF	AA	AA	NAF
TBTA — Senior Resolution	Aa3	AA-	AA-	AA
TBTA — Subordinate Resolution	A1	A+	A+	AA-

Source: MTA (Ratings)

Summary

- Fare-based financing helps to diversify financing credits
- Such structure relies on well-managed operating cost and reliable non-fare funding sources
- Appropriate for large- and medium-sized agencies; less so for smaller agencies due to transaction costs and less diverse revenue sources
- TIFIA and municipal revenue bonds are potential financing instruments



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Endnote Sources

Note	Link
CTA (Map)	Referenced 1/1/16: http://www.transitchicago.com/assets/1/maps/ctatrainmap.png
Kroll (2015)	"Kroll Bond Rating Agency Assigns Long-Term Rating of AA- to the Chicago Transit Authority's Transportation Infrastructure Finance and Innovation Act (TIFIA) Loan." 2015-01-27. Referenced 1/1/16: https://www.krollbondratings.com/announcements/1084
MTA (Ratings)	"MTA Investor Information." Referenced 1/3/16: http://web.mta.info/mta/investor/investor_02.htm
MTA (2015)	"\$700,000,000 METROPOLITAN TRANSPORTATION AUTHORITY Transportation Revenue Bond Anticipation Notes, Series 2015B." Referenced 1/3/16: http://emma.msrb.org/EP892815-ER726066-ER1127483.pdf
TIFIA (Your New Blue)	CTA Blue Line Project. Referenced 1/1/16: https://www.transportation.gov/tifia/financed-projects/cta-blue-line-project
TIFIA (95 th Street)	CTA 95 th Street Terminal Improvement. Referenced 1/1/16: https://www.transportation.gov/tifia/financed-projects/cta-95th-street-terminal-improvement

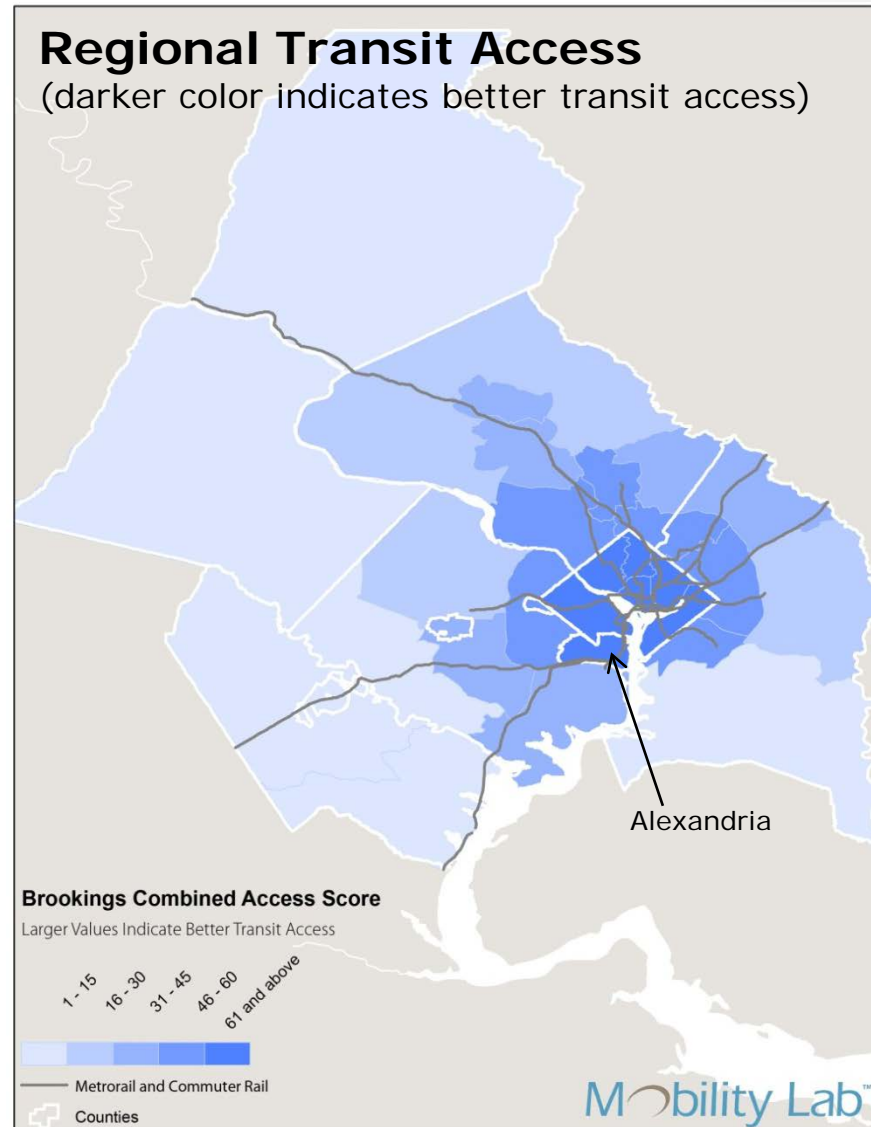


Funding and Financing Transit Projects: the Alexandria Experience

Transportation Research Board Annual Meeting
January 10, 2016

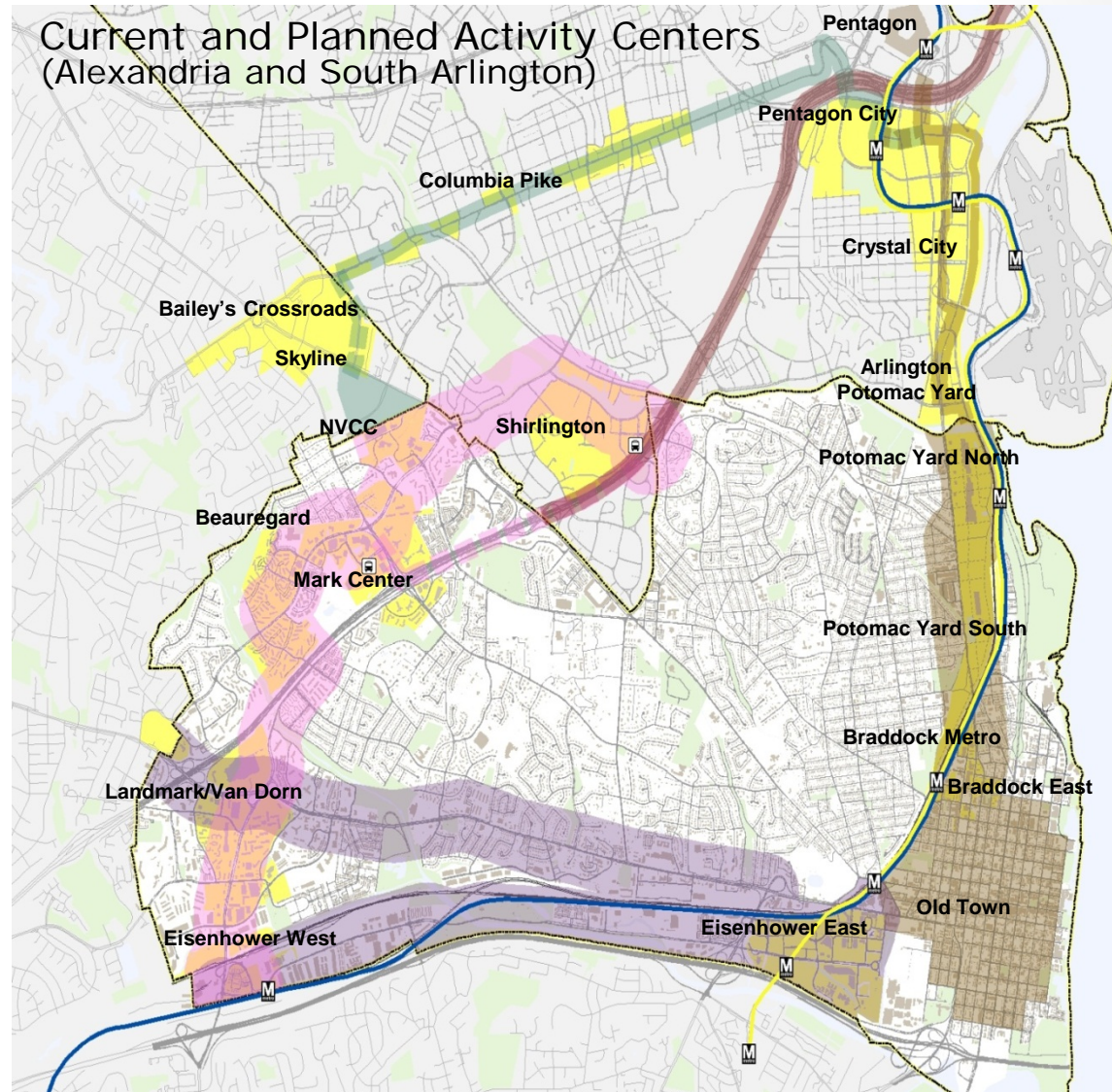
Alexandria in the Region

- 15.75 Square Miles
- Population 151,218
- Located in the core of the Washington region
- Continued regional growth = continued development pressure
- Accommodating regional growth by putting development near existing infrastructure



Linking Transportation & Land Use

- Redevelopment targeted to areas with existing or planned high-quality transit service
- Transit investments support redevelopment
- Density, urban design, and other policies that encourage travel on foot, via bike, or on transit



How Do We Pay For It?

- Federal
 - TIGER
 - Small Starts
 - New Starts
 - TIFIA
- State
 - Northern Virginia Transportation Authority (NVTA)
 - Virginia Transportation Infrastructure Bank (VTIB)
- Local
 - TIP
 - Developer Contributions
 - Value Capture

TIP

(Transportation Improvement Program)

- Reservation of real property tax revenues (2.2 cents), cash capital, and bond funding for transportation purposes
 - Operating and capital expenses
- Approved in FY 2012
- Generates approx. \$8 million/year

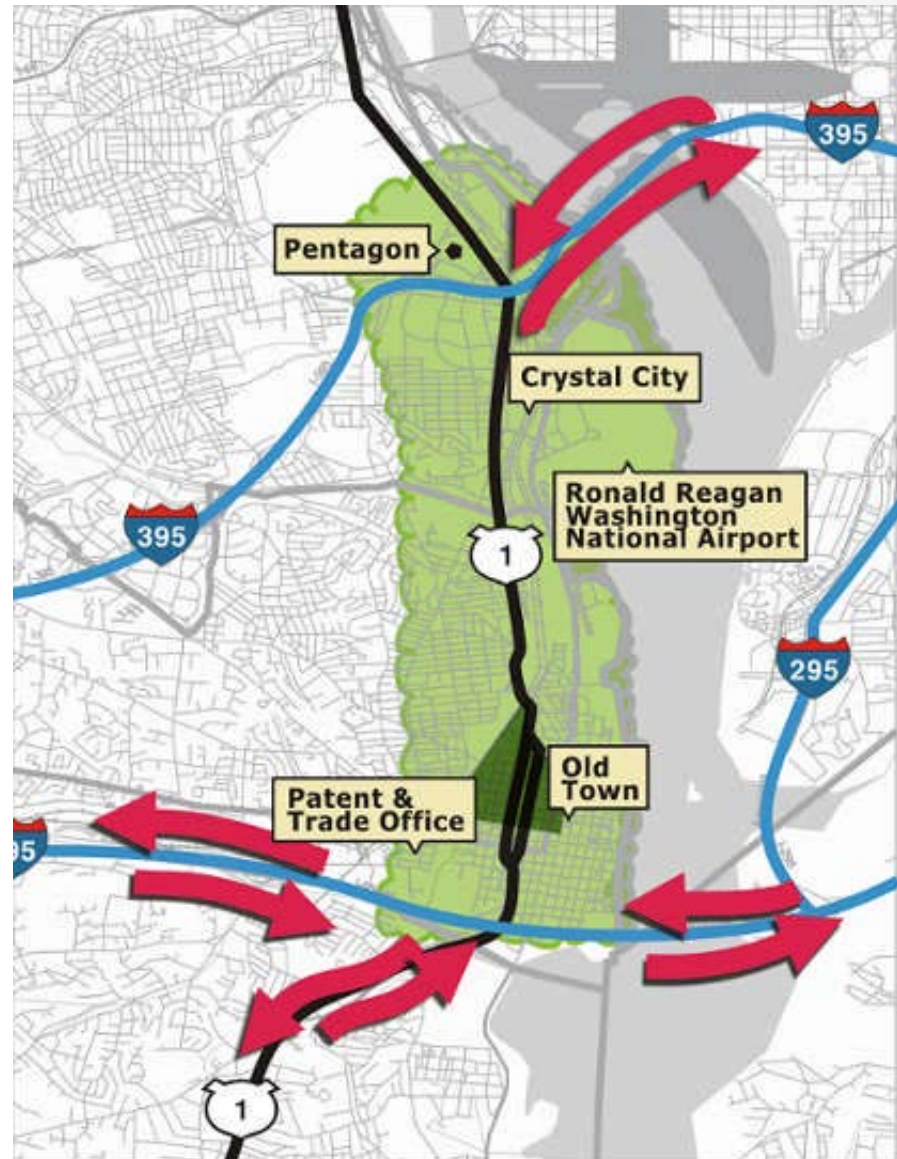
NVTA

(Northern Virginia Transportation Authority)

- Additional revenues generated in Northern Virginia through new taxes and fees
- Deposited into common fund
- Of the funds contributed by each jurisdiction:
 - 30% returned to jurisdiction for local transportation projects (approx. \$6.5 million/year in Alexandria)
 - 70% allocated for transportation projects of regional significance

Route 1 Corridor

- Important regional link
- Limited north-south travel options
- 40,000 AAWDT
- Traffic increases due to regional growth
- Future trips served by transit:
 - 3,500 daily (Transitway)
 - 11,000 daily (Metrorail)



Potomac Yard



Route 1 Transitway

(Crystal City/Potomac Yard Transitway)

- 5-mile corridor
- First 0.8 mile segment in Alexandria opened August 2014
 - 2-lane transit-only corridor with 12-ft landscaped medians on both sides
- Arlington segment anticipated to open Spring 2016

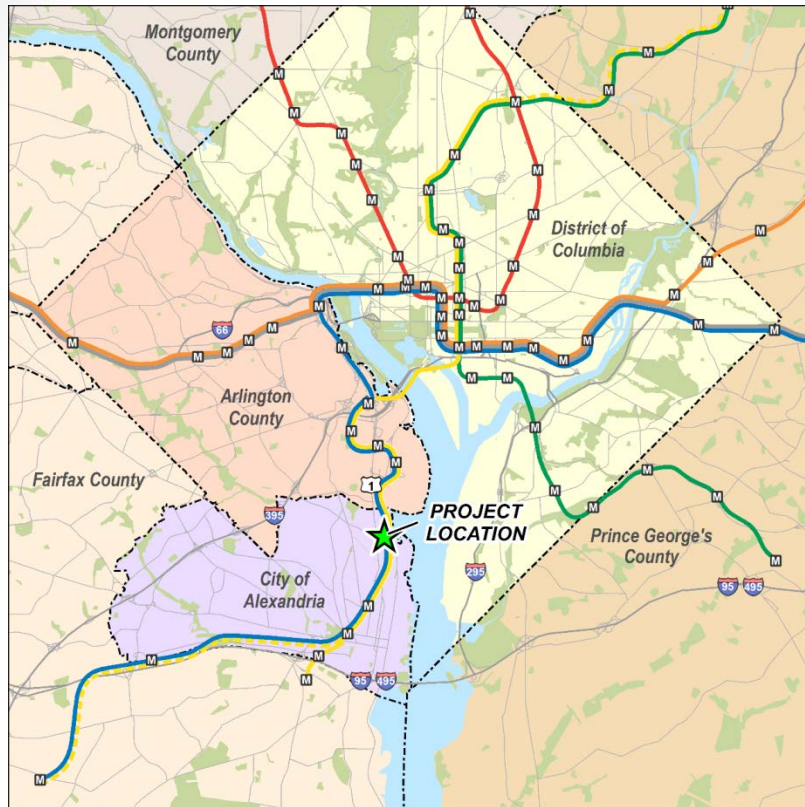


Route 1 Transitway Funding

Sources	Amount of Funds (millions)
TIGER	\$ 8.5
Other Federal & State Grants	\$ 6.9
Local TIP	\$ 5.2
Other Local Funds	\$ 0.3
Developer Contribution*	\$ 0.09
TOTAL	\$ 20.99

* In addition to cash contribution, developer of Potomac Yard provided land for and constructed new Route 1 northbound lanes

Potomac Yard Metrorail Station



- Proposed infill Metrorail station on the Yellow and Blue Lines
- Will support the redevelopment of Potomac Yard into a high-density mixed-use activity center



Potomac Yard Metrorail Station Funding Plan



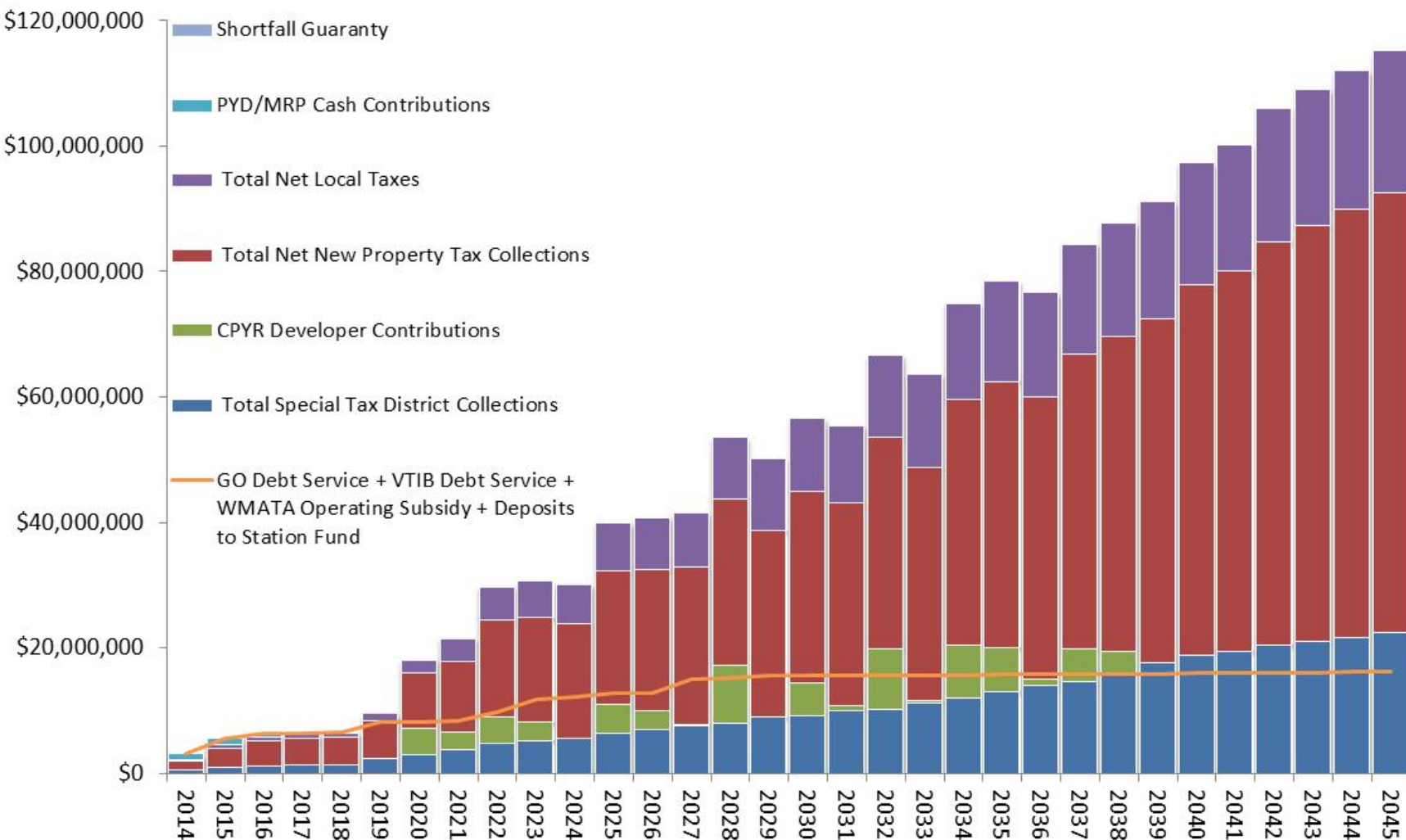
Sources	Amount of Funds (millions)
General Obligation Bonds + TIFIA Loan*	\$ 143.6
Virginia Transportation Infrastructure Bank Loan	\$ 50.0
Northern Virginia Transportation Authority Funds*	\$ 69.5
Other Sources	\$ 5.0
TOTAL	\$ 268.1

Bonds and loans repaid using:

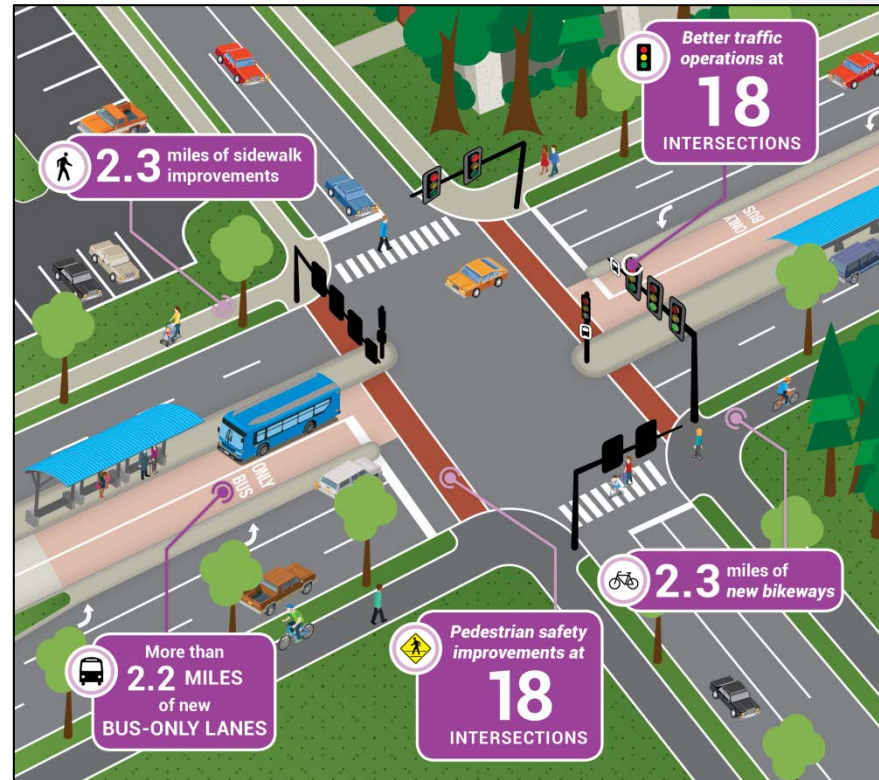
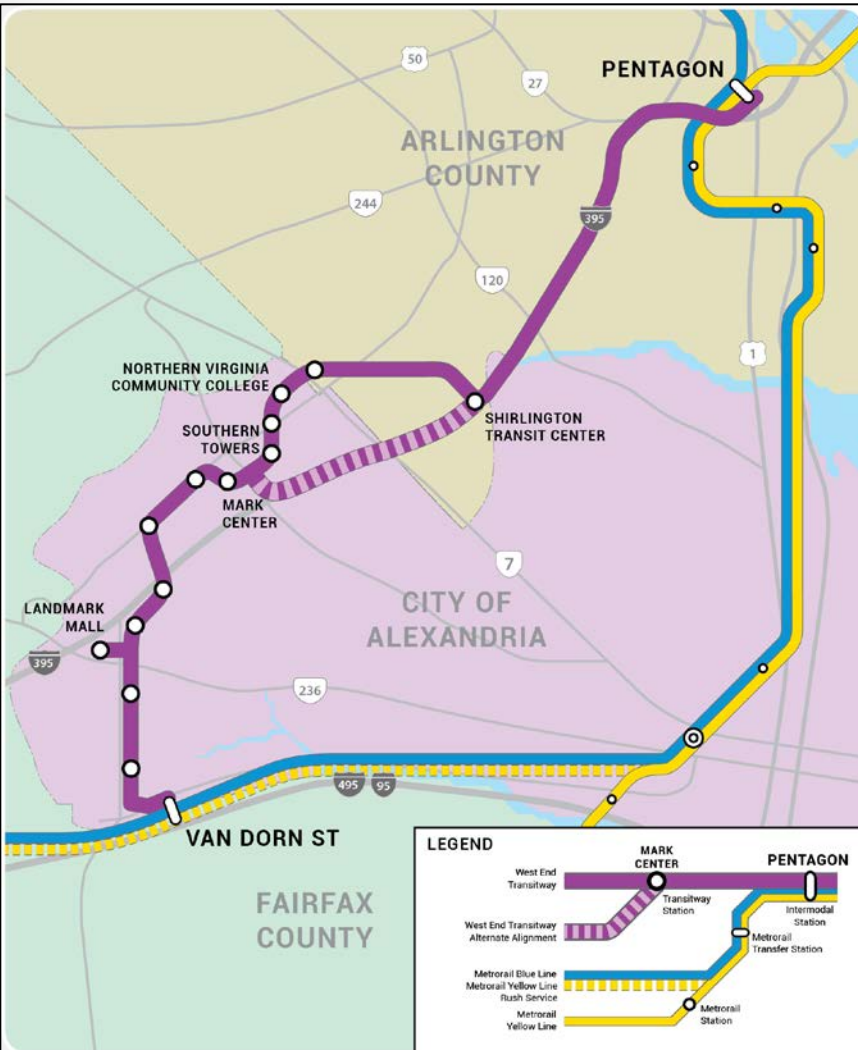
- Developer contributions
- Two special tax districts
- Net new tax revenues from the development of Potomac Yard

* Planned Request

Potomac Yard Metrorail Station Financing Plan



West End Transitway



West End Transitway Preliminary Funding Plan



Sources	Amount of Funds (millions)
Northern Virginia Transportation Authority Funds*	\$ 62.14
FTA (Small Starts)*	\$ 50.66
Private Capital Contributions	\$ 27.20
TOTAL	\$ 140.00

In addition to cash contribution, developers are contributing right-of-way for transitway construction

* Planned request



Thank You

For more information, visit:

www.alexandriava.gov/PotomacYard

www.alexandriava.gov/WestEndTransitway