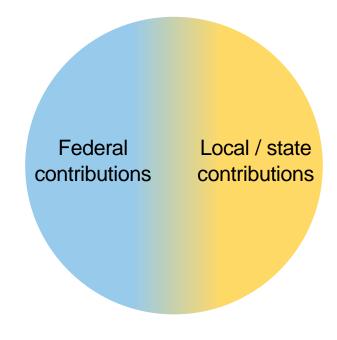
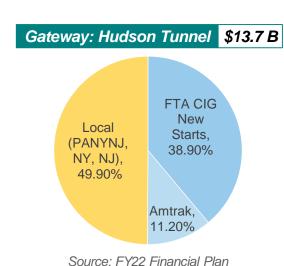
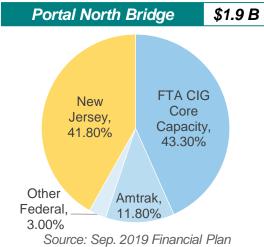
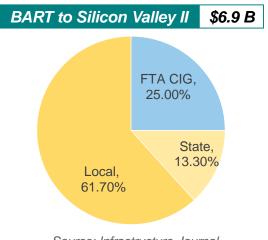


Cost Sharing Model for Large-Scale Rail Infrastructure Projects









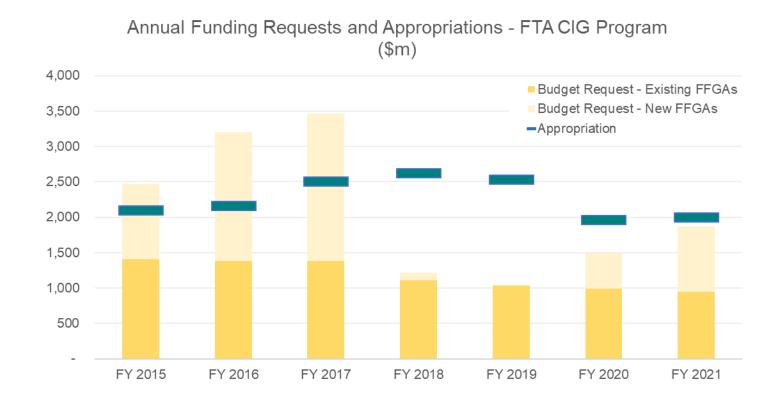
Source: Infrastructure Journal

CIG: Primary Federal Discretionary Program for Rail Projects

	Program Overview				
FTA Capital Investment Grants (CIG) Program					
CIG New Starts (NS)	 Projects that are new fixed guideway projects or extensions to existing systems with a total estimated capital costs of at least \$300m or requires a minimum CIG request of \$100m 				
	 By statute, maximum federal share is 60% under New Starts; per actual policy implementation, maximum federal share is 50% Federal share tends to decrease with an increase in project costs 				
CIG Core Capacity (CC)	 Projects that are substantial corridor-based capital investments in existing systems that increase capacity by not less than 10% of an at or near- capacity corridor 				
	By statute, maximum federal share is 80% under Core Capacity; per actual policy implementation, maximum federal share is 50% Federal share to de creace with an increace in project costs.				
	Federal share tends to decrease with an increase in project costs				

CIG Program Funding Availability

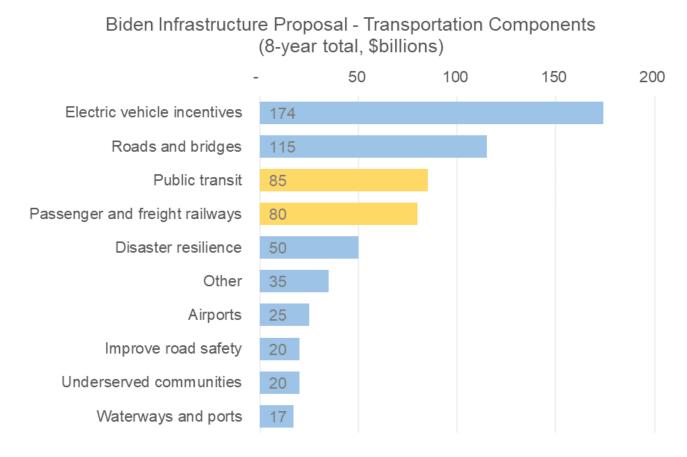
- Grant funds are distributed over multiple years due to limits on annual appropriations.
- Federal share tends to decrease as project costs increase due to appropriation limit and competition among projects.



Source: FY22 Financial Plan

President Biden's Infrastructure Proposal

- Proposes \$2 trillion total investment spread over eight years
- \$165 billion for public transit and railway, with an average annual spend of \$21 billion nationwide
- Not clear how much funding would be directed to existing versus new funding programs



CIG Program Mechanics and Timing

- Highly competitive and funding is subject to annual congressional appropriation
- Multi-year process, with final decisions on grant amounts not made until just prior to Construction phase (up to 6 years into the process)
- Process is designed to thoroughly vet project costs and risks prior to committing federal funding
- Local contributions must be identified and committed during earlier phases



^{*} Upon receipt of request to enter Project Development, after receiving all the information required from the project sponsor, Empire Station Complex Funding & Financing Considerations | Page 6 FTA will send a letter within 45 days indicating the sufficiency of the information for entry into Project Development.

Financing Considerations



Timing

- i. What federal grant programs would be available for the project and what are their timing and requirements?
- ii. What are the conditions precedent to financing? (e.g., approval of GPP, agreements with funding partners, property acquisition, sequencing of project components, etc.)
- iii. What are expectations for receipt of funds vs project spend?

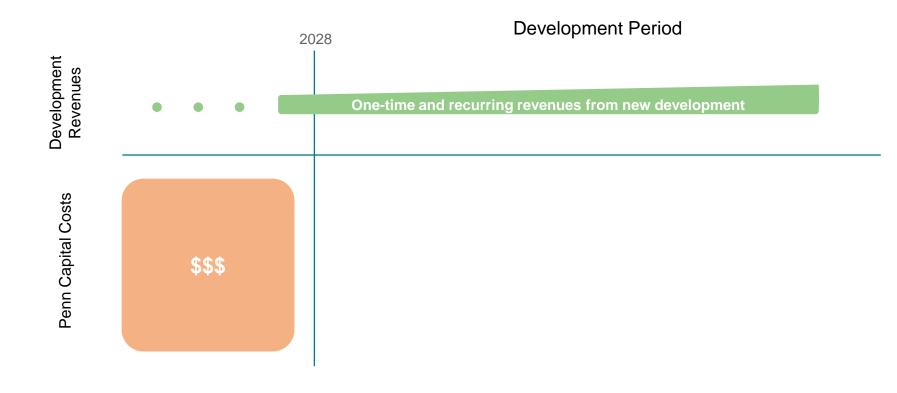


Revenue Profile

- i. How do the revenue streams and project uses impact debt capacity, taxability, funding agreements, and project delivery strategy?
- ii. What is the investment quality of the revenue streams; will the financing require credit enhancement to achieve investment-grade quality; and what are precedent structures for credit enhancing similar projects/revenue streams?

Timing Considerations

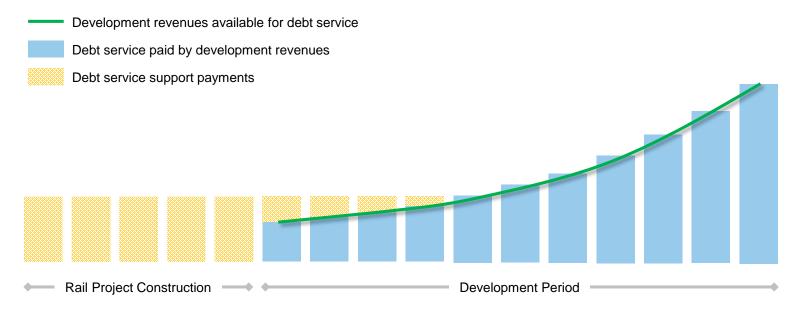
- Development-related revenues from the Empire Station Complex GPP sites can potentially serve as NY's share toward the Penn projects' capital costs.
- However, the timing differences between project spend and receipt of these revenues is the key consideration of any financing strategy.



Revenue Profile Considerations

- Tax revenues related to potential future development carry uncertainty around timing and amount.
- Credit enhancement mechanisms are usually required in order to address this uncertainty and achieve investment-grade ratings.
- E.g., financing for the No. 7 subway line extension relies upon Interest Support Payments from the City to bridge the timing gap between project needs and development-related tax revenues.

Illustrative diagram of credit enhancement requirement



Financing Tools for Local Contributions

	Program Description	Key Precedent
Transportation Infrastructure Finance and Innovation Act (TIFIA)	 Federal loan with favorable interest rates based on Treasury rates (plus 1 bp statutory margin) Flexible capitalization/amortization terms and 35-year term beyond project completion Caps loans at 33% of eligible project costs Federal government subsidizes credit risk; investment-grade rating required 	Moynihan Train Hall
Railroad Rehabilitation & Improvement Financing (RRIF)	 Federal loan with favorable interest rates based on Treasury rates (plus 1 bp statutory margin) Flexible capitalization/amortization terms and 35-year term beyond project completion Can finance 100% of eligible project costs Credit Risk Premium ranging between 0% and 5+%, depending on the credit risk of the project 	Gateway: Hudson Tunnel (plan)
Tax-Exempt Bonds	 Current low-yield environment helps to reduce overall financing costs Not subject to cap requirements Term of bonds limited by useful life of projects Financing must include public payments or public use 	Extension of the 7 Line

Case Study: Moynihan Train Hall



Key Takeaways:

- Newly opened rail station for Amtrak seen as first step in the redevelopment of the Empire Station Complex
- Project funded from multiple sources, including upfront and long-term developer payments, federal grants, federal loan and direct state contributions
- Despite strong developer and strong commercial incentives to complete, MTA backstop for debt service reserve needed to achieve investment-grade rating

Project Sources	\$m	Project Uses	\$m	
TIFIA loan	526.1	Moynihan Train Hall Phase 2	1,260.0	
ESD	475.3	Project Management & Other Costs	334.0	
Developer payment	230.0	DS Reserves / Financing Costs	24.4	
PANYNJ	150.0			
Amtrak	105.0			
Federal CMAQ & Resiliency	62.2			
MTA	54.9			
PILOT during construction	14.9			
Total	1,618.4	Total	1,618.4	

Development revenues committed to project:

- Recurring: PILOT
- One-time: Up-front lease payment

Case Study: Denver Union Station



Key Takeaways:

- Newly configured transit hub in Downtown Denver which included substantial real estate development on former freight rail yard
- Project funded by development-related revenues, grants and local stakeholder contributions
- TIFIA and RRIF financing structure utilized annual obligations from transit agency (RTD) and City of Denver contingent support to improve financing credit profile

Project Sources	\$m	Project Uses	\$m	
RRIF Ioan	155.0	Bus terminal	185.0	
TIFIA loan	146.0	Streets & public spaces	162.0	
Federal grants	79.0	Light rail	70.0	
RTD FasTracks	51.0	Commuter rail	64.0	
Land sale / other	29.0			
State grants	21.0			
Total	481.0	 Total	481.0	

Revenues committed to project:

- Recurring: FasTracks sales tax; District property taxes
- One-time: Property take downs

Case Study: Hudson Yards/7 Line Extension



Key Takeaways:

- Development-related revenue provided substantial funding for the extension of the 7 Line
- Revenue bonds issued for the project were backed by future development-related revenues, which necessitated credit support to appeal to investors
- Interest Support Payments (ISP) from the City provide support on interest payment shortfalls for the bonds (subject to annual appropriation).

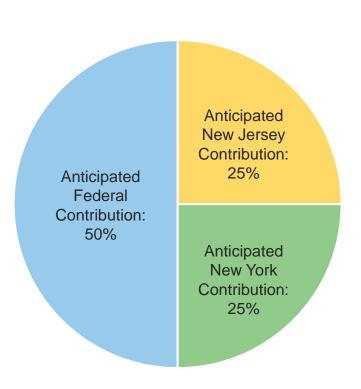
Project Sources *	\$m	Project Uses	\$m	
Tax-exempt bonds	3,000.0	7 Subway extension & amenities	2,879.4	
Bond premium	133.8	TDR purchase	200.0	
		Issuance costs	37.4	
		HYDC expenses	17.0	
Total	3,133.8	 Total	3,133.8	

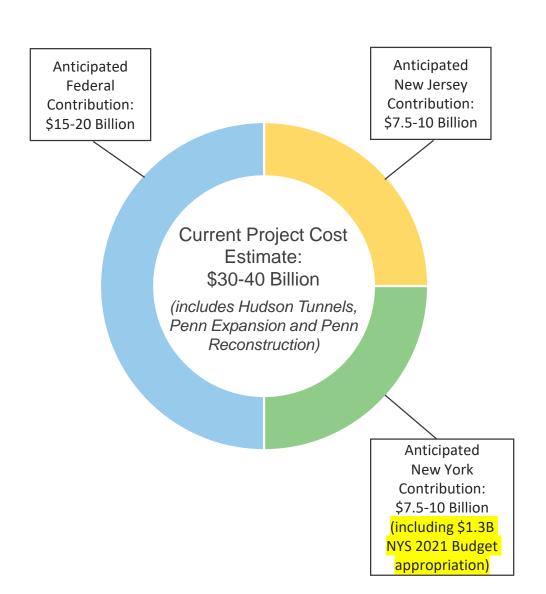
Development revenues committed to project:

- Recurring: PILOT, Tax Equivalency Payments (TEP)
- One-time: District Improvement Bonus (DIB), Transferable Development Rights (TDR) payment, PILOMRT

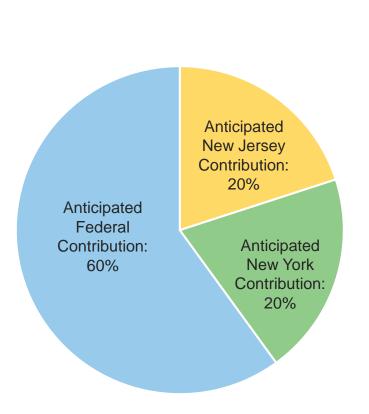
^{*} Sources & Uses table reflects consolidated project budget using 2007 and 2012 financing statements

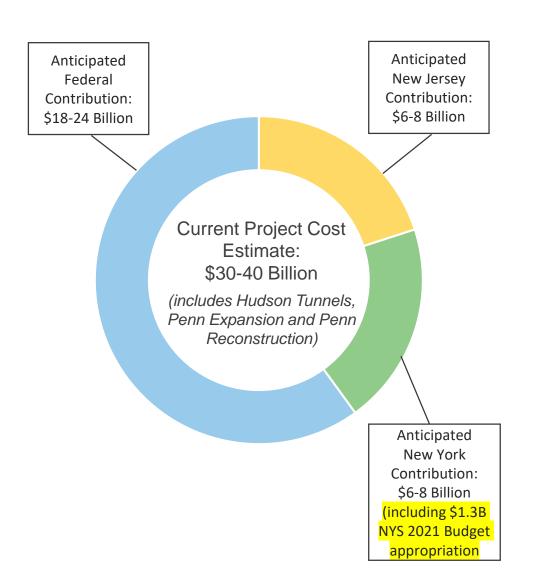
Projected Cost Sharing – Current Agreement





Projected Cost Sharing – CIG New Starts





Potential Development-Related Revenues for NY Contribution

The following categories of revenues could be used toward the required NY contribution to the Penn rail projects.

Land value payments: Upfront and/or periodic payments received through long-term lease agreements (Sites 1-3)

Additional development rights (ADR) value: Payments for additional development rights to be used on privately-owned sites (Sites 4-8)

Payments in lieu of taxes (PILOT): Ongoing payments in lieu of ad valorem property taxes (potentially all sites)

Payment in lieu of mortgage recording tax (PILOMRT): One-time payment in lieu of mortgage recording tax (potentially all sites)

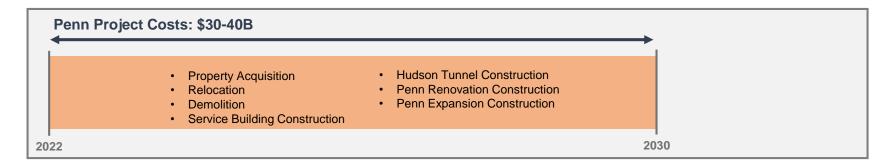
Payment in lieu of sales tax (PILOST): One-time payment in lieu of sales and use tax on construction materials for development (potentially all sites)

Proposed Construction Phasing

Project Component	Construction Start	Construction Finish
Reconstruction of Existing Penn Station	2021	2026
Demolition at Sites 1, 2, and 3	2024	2026
Site 7	2022	2028
Hudson River Tunnel	2019	2030
Expansion of Penn Station Below-Grade on Sites 1, 2, and 3	2024	2028
New Penn Station Service Building	2025	2026
Site 5	2029	2033
Site 1	2029	2033
Site 2 (East) – Building 1	2029	2035
Site 4	2030	2034
Site 6	2031	2037
Site 8	2033	2038
Site 3	2033	2038
Site 2 (West) – Building 2	2034	2038

Sources: Empire Station Civic and Land Use Improvement Project, Draft Environmental Impact Statement (DEIS), Chapter 20, Construction; Hudson Tunnel Project, DEIS and Draft Section 4(f) Evaluation, Chapter 3, Construction Methods and Activities

Challenge: Fully Funding New York's Share







Conclusions



Best case scenario: a portion, but not all, of the billions of dollars necessary for New York's share could be generated by ESC real estate by 2030, when the Penn Projects are projected to be completed.



A portion of these early funds will be dedicated to the GPP's transit and public realm improvements to support the Penn Projects.



The urgency of the GPP is highlighted by the timing gap between when funds are needed to construct the Penn Projects and when real estate revenues are generated.



The funding gap caused by this timing problem will be closed, at least in part, by financing against future revenues, particularly PILOT.