

Unifying Regional Commuter Rail via Through-Running at New York Penn Station in the First Half of This Century



Karim Ahmed
Dr. Robert Paaswell
Sam Turvey

High Speed Rail Alliance

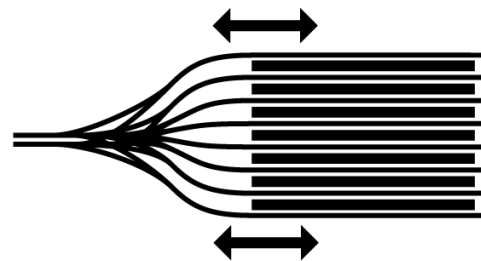
July 25, 2025

What is Through-Running?

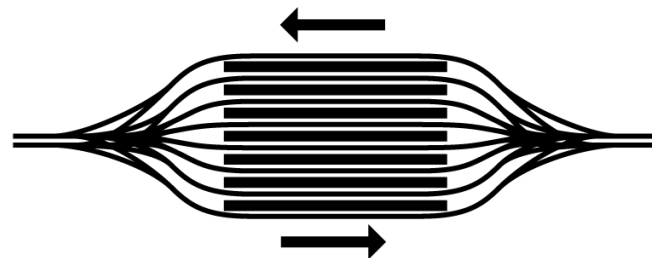
Through-running happens when commuter trains run through a center city location to centers of business activity on either side of the central city.

This happens in much the same ways as our subways run from the Bronx through Manhattan and on out to Brooklyn or Queens.

Through-running tracks provide more efficient operations and can handle a greater number of trains per hour than terminal tracks and are highly favored in our own Federal Rail Administration (FRA) guidelines.



TERMINAL STATION



THROUGH-RUNNING STATION

A Funny Thing Happened on the Way to This Forum



Photo Credit: Susan Marshall, Council of Chelsea Block Associations

A Funny Thing Happened on the Way to This Forum

“To make the point that he plans to do something big with his assignment, Byford said he had renamed the task, from *“reconstruction”* to *“transformation.”*

“Byford brought a piece of news that the coalition has been calling for. He revealed that *the Federal Railway Administration would conduct an independent review of how trains—trains belonging to both Amtrak and the commuter railroads—run in and out of the station, to see whether it is really necessary to physically expand the station to get the increased capacity the railroads say they need”.*

“An independent service-optimization study for New York Penn,” is how a spokesman for the FRA characterized what they planned to commission.

- Mike Oreskes, *‘Train Daddy’ Byford: “Hard Part Starts Now” in Penn Station Rebuild*, West Side Spirit, July 20, 2025

Why the Need for an Independent Review: The 48 Trains Per Hour Question and More

Preliminary points to discuss:

- We believe a fair review will show ReThinkNYC's plan can get to at least 48 trains per-hour under the Hudson and likely more. We are doubtful that the Railroad's terminal track model can accomplish this unless they add even more inefficient terminal tracks to an already bad plan which likely would require the taking of more property adjacent to the station.
- The Railroads have not come up with a configuration that gets their terminal track plan to 48 trains per-hour under the Hudson River post Gateway Tunnels (WSP, ARUP, FX Collaborative and others have worked on this), yet they look to disqualify our and other plans plan on this basis.
- The Railroads have not performed *dynamic* Railroad Traffic Controller (RTC) model simulations for their plans or ours as confirmed per a FOIA response. FX Collaborative and WSP have not used this software in their "opposition research" reports about through-running at Penn Station. This is truly inexplicable.
- Using less effective capacity technologies the Railroads have assigned ReThinkNYC's plan with capacity numbers which apparently range from 35 Trains Per hour to 48 Trains Per Hour (Peak), always with self serving caveats and no explanation for why RTC modelling isn't being utilized

Why the Need for an Independent Review: The 48 Trains Per Hour Question and More (Continued)

- The Railroads' plans to date do nothing about widening Penn Station's barely-legal, perilously narrow train platforms dating from 1910. That's ironic because it was the New York State Legislature's 2018 declaration that Penn Station and its means of ingress and egress were [“a clear public safety hazard”](#) (Part MMM, page 177) that set in motion the current efforts to upgrade the rail hub.
- Creating a terminal to the south of Penn Station with the aim of later implementing through-running or some style of regional metro rail has a \$70 to \$80 billion dollar price tag and can't happen until after 2080 as per Railroads. This allows “through-running deniers” and other folks the ability to say they support through-running intellectually as a concept but punt it to a later, much later, day sometime after 2080 which more likely will be in the next century if at all.

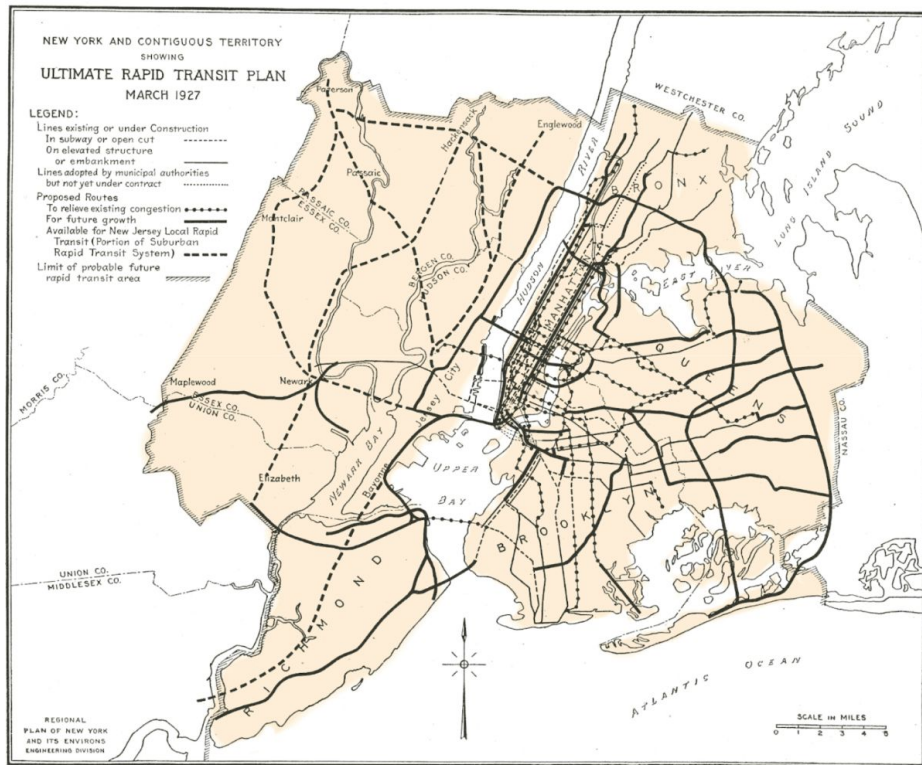
Why We Care?

This is About a Lot More Than a 48 Trains Per Hour Metric, a Lot More!

*Implementing through-running at Penn Station, while a transit solution that will all but immediately benefit many-including our 400,000 cross-regional commuters- **is likely the most important land use decision we will make in this century.***

It needs to be treated that way.

We Have Wanted a Regional Transit Plan for Over 100 Years (Although Some Recommend We Wait Another 100 Years).



A 1927 Map From the Regional Plan Association (RPA):

How many centuries must a regional plan be deferred.....? The answer is blowing in the wind.

The Gateway Tunnels, whereby 4 New Jersey/Hudson River Tunnels will now be symmetrical with 4 existing East River/New York City Tunnels make unifying our regional rail eminently doable as Thameslink did in London.

Instead, We Got Moses (Robert) and Monocentricity

MONOCENTRIC REGION



Commuter Trains Terminating at Midtown

POLYCENTRIC REGION



Through-Running at Penn Station
to Multiple Destinations

Moses (Robert) and Monocentricity- Continued

There's an affordability crisis in the region, and if we are serious about attacking it, through-running at Penn is needed.

Through-running at Penn Station will enable the region's evolution from a monocentric structure, dependent on an overburdened Midtown, to a more resilient polycentric model.

By integrating all commuter rail lines, the project will grant key hubs along the Northeast Corridor—particularly Newark and Western Queens—unprecedented access to the entire regional labor market. This shift will distribute economic activity more evenly, fostering lower commercial costs in parts of the region and relieving the immense pressure on Midtown. *A greater range of companies will be able to stay in the region instead of leaving, as many have.*

Moses (Robert) and Monocentricity-Continued

This "**High-Capacity Polycentric Model**," a proven strategy in global cities like London and Paris, also provides the foundation to vastly expand the region's housing stock.

Polycentric cities can better absorb population growth by increasing the supply of desirable, transit-connected housing across multiple centers.

By expanding economic and demographic capacity, the region's affordability crisis can be contained, and a vicious inflationary cycle can be replaced with benign growth.

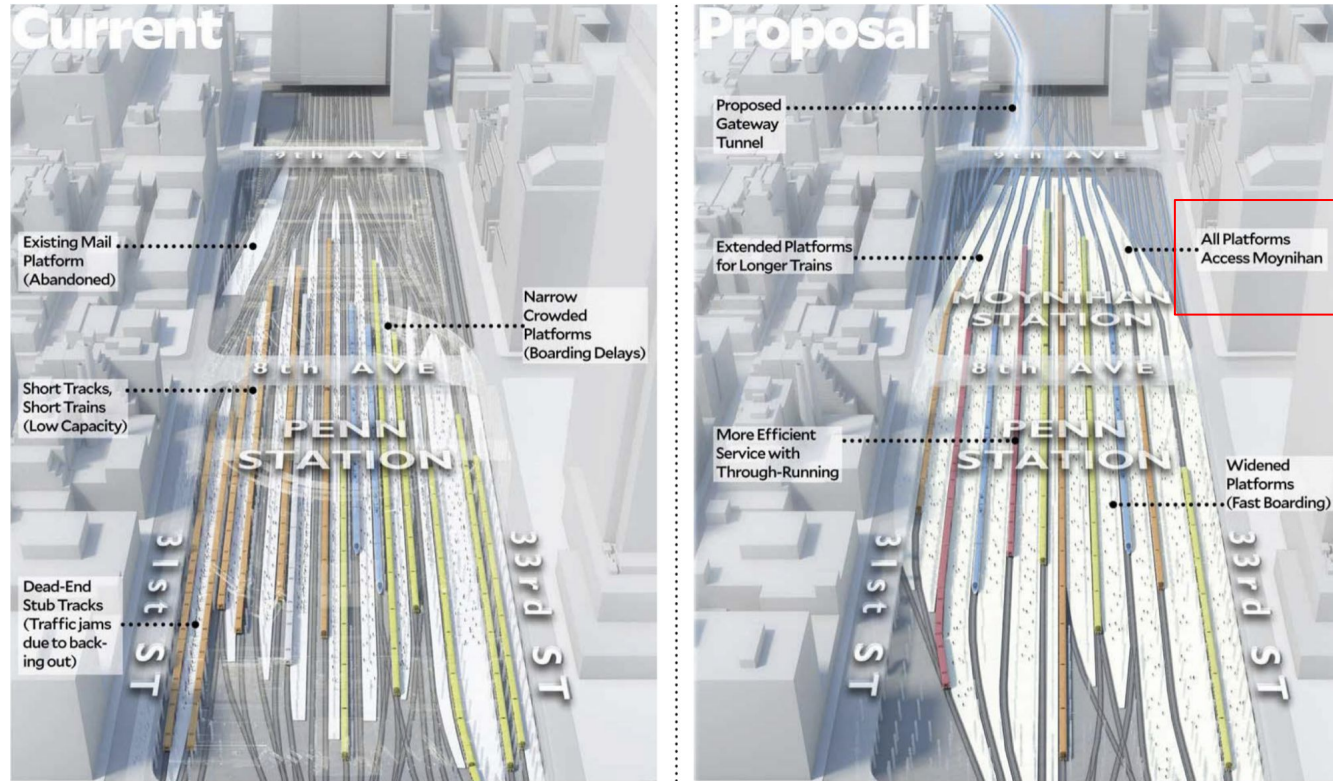
So, Given All This Do You Terminate a Neighborhood With Inefficient “Terminal Tracks” and Create Three Stations in One so Each Railroad Has Their Own Sandbox?



Photo: ESD, New York State

The expansion of the station to the southern blocks would allegedly expand transit capacity for a New Jersey Transit Terminal below 31st Street to double station capacity via terminal tracks to 48 Trains Per Hour. The expansion to the south is opposed by Governor Hochul, NY Assemblymember Tony Simone, NY City Councilmember Erik Bottcher, Manhattan Borough President Mark Levine and NY State Senator Brad Hoylman. Mercifully, Janno Lieber of the MTA recently expressed interest in exploring through-running options and, of course, Andy Byford will be evaluating it anew as well.

Or, Do You “ReThink”and Streamline Operations So That a Regional Unification Becomes Possible and the Neighborhood is Left Intact?



Today's Penn Station (left) and Penn Station/Moynihan with through-running (right), which allows for wider platforms, greater vertical circulation, and fewer tracks which translates to greater safety..

The Benefits Comparison? Hint, It is Not Even Close!

Through-Running (ReThinkNYC) can *cost effectively*:

- Connect 20 million plus regional residents
- Increase capacity for NJT (at least 48 peak TPH) and LIRR (6 peak TPH)
- Provide better safety as a result of greatly improved vertical circulation
- Provide a more equitable and sustainable growth pattern for the region, **including housing starts**, and expanding the region's core
- Relieve pressure to cannibalize midtown Manhattan for supertalls
- Be implemented contemporaneously with opening of Gateway (2040). Systems integration and other work can proceed while tunnels are being built
- Remove the need to demolish the neighborhood adjacent to Penn Station/More favorable impacts on embodied carbon release

Southern Penn Expansion (Amtrak MTA and NJ Transit) can, with undue expense and “deep cavern” tunnelling :

- Maybe Increase capacity for NJT (48 TPH). No increased capacity for LIRR. **At Present, No “Terminal Track” Plan of Railroads Accomplishes 48 Trains Per Hour and Railroads have not provided any number that their plans can achieve. Railroads have caveats to ReThinkNYC’s claimed number. MTA has recently expressed openness to through-running.**

We Can Move Into the 22nd Century Without “Losing” New York

Manhattan will not lose out as it will remain at the epicenter of a growing region where thoughtful, pan-regional development will thrive as seldom before. *The unwitting race for Manhattan to become Shanghai or Dubai* can come to an end and we can create great new civic spaces marked by an enlightened urbanism in locations across the entirety of Greater New York. A flood tide of economic growth including the creation of housing, can be anticipated for the entire region.

As the recently departed Nathan Silver, author of *Lost New York* rightly said:

“While cities must adapt if they are to remain responsive to the needs and wishes of their inhabitants, they need not change in a needless and suicidal fashion”

ReThinkNYC



Photo Credit: Mike Oreskes

We Should Not Throw Away “Our Shot!”



Alexander Hamilton overlooks the Great Falls in Paterson, New Jersey.

Paterson, New Jersey, like many other outlying cities, universities, hospitals, corporate parks, and centers of business activity would gain considerable economic relevance if through-running were adopted.

Passaic, Hackensack, Newark, Montclair, Morristown, Red Bank, Cranford, Long Island City, Jamaica, Garden City, Mineola, Port Morris, Yonkers, White Plains, Stamford, like cities and suburbs and our airports, universities, large hospital complexes, sports and entertainment venues would all benefit greatly from through-running.

North Carolina's vaunted research triangle-Raleigh/Durham/Chapel Hill-would pale with what could happen if people could effectively get across our region to our many university, research and medical facilities. It should not take three hours to go 20 plus miles from Hackensack Meridien in NJ to Downstate Medical Center in Brooklyn.

What's The Buz?

Dr. Robert Paaswell

“We Need a 21st Century Transit Plan That Looks to the 22nd. We Should not go in Reverse. We Should Already Have Through-Running and be Looking to HSR”



“Jane Jacobs is missing a hell of a fight”

These United States of America: Rail connectivity will be key to our quality of life, balanced growth and an environmentally sound future



A Modern Penn Station

- Penn Station must move into 22nd Century and leave the middle of the 20th Century.
- Must fully modernize, go digital, add world class way-finding and integrate:
 - Intercity
 - Regional
 - Local rail
- **Through running, together with modern info/control systems is a given and should be integrated across mobilities.**
- **HSR will make NYC competitive with other global financial capitals**
 - e.g., Shanghai, London

HSR Stations Globally: We Need to Catch Up and Stop Just Talking About It: Connectivity to HSR Network equals Economic Growth

- **London- St. Pancras:** centrally located, connected to major underground station and other domestic train operators
- **Major Cities in the EU are on the HSR network:** in planning is “Starline” to connect 39 cities and operate as seamlessly as a metro system
- **Shanghai** – Shanghai Station and Hongqiao station are the main HSR stations, Shanghai South and Songjiang serving some HSR destinations.
 - All are accessible by Metro and Bus

Status of High Speed Rail and Penn Station

There are currently no true high-speed rail services operating directly from New York City Penn Station. However, Penn Station serves as a major transportation hub for various regional and national rail services, including Amtrak, which operates several high-speed routes in other parts of the United States.

- Acela Express is Amtrak's fastest and most well-known high-speed rail service.
- Top speed of 150 mph (240 km/h), high by US standards *but low by global standards.*
- **Many of our peer international cities (London, Madrid, Tokyo, Shanghai, etc.) have had High Speed Rail for decades.**



Acela Express train leaving Newark Penn Station, a station on the Northeast Corridor

Status of High Speed Rail and Penn Station

Plans have been proposed to improve high-speed rail connections in the Northeast Corridor, including the Gateway Program, which aims to enhance rail capacity and reliability between New York City and Newark, New Jersey. Projects like Susquehanna bridge and Baltimore Tunnels are also being designed for faster speeds. Brightline West linking Las Vegas and the LA basin will likely be the first 186 mph line.



*Maglev train
in Shanghai,
China*

500 Mile Trips? We Need to Use Trains Far More Often Than Planes in the Future



Washington – Baltimore – Wilmington – Philadelphia – Newark – **New York** – Boston
(One of these stations is not like the others...)

**How ReThinkNYC's Plan Works,
How It Can Be Implemented Without Service Interruptions,
And What It Will Cost**

Karim Ahmed

Through-running Is a Technology Widely Used by the Railroads at Today's Penn Station, Even Today

Today - 56% of train traffic runs through Penn Station

- 100% Amtrak
- 46% LIRR through-running to yards and sit there, while 54% terminate at Penn
- 35% NJT through-running to yards and sit there, while 65% terminate at Penn

ReThinkNYC Vimeos/CrossRail 2 Video

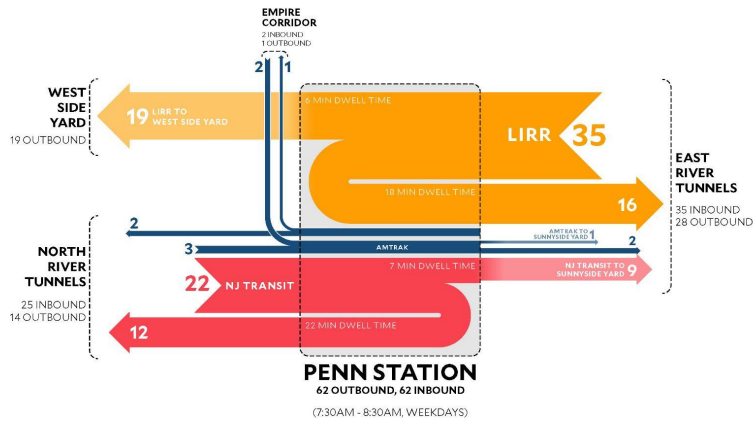
- "The Conceptual Basics of Through-Running as a Means to Create Unified Regional Rail in New York": [Link](#)
- "How Through-Running Would Operate at Today's Penn Station and Streamline Train Movements": [Link](#)
- "Expanding platform widths and vertical circulation capacity at Penn Station": [Link](#)
Caveat: We are not attached to the use of the "Spanish Solution" (boarding on one side while alighting on another simultaneously). While the Spanish Solution would minimize dwell time, our numbers don't rely on it, as there are instances where columns would interfere with its full implementation.
- "A Flyover of the New York Metropolitan Region Showing How Through-Running Would Connect New Jersey to Long Island and the Bronx": [Link](#)
- London's CrossRail 2 (Note emphasis on economic growth, access to housing, etc.): [Link](#)

You Should Watch All our Video/Vimeos:

**One Example: How Through-Running Would Operate at
Today's Penn Station and Streamline Train Movements [Link](#)**

Appendix B Excerpts: So How We Can Get From Today's Operations...?

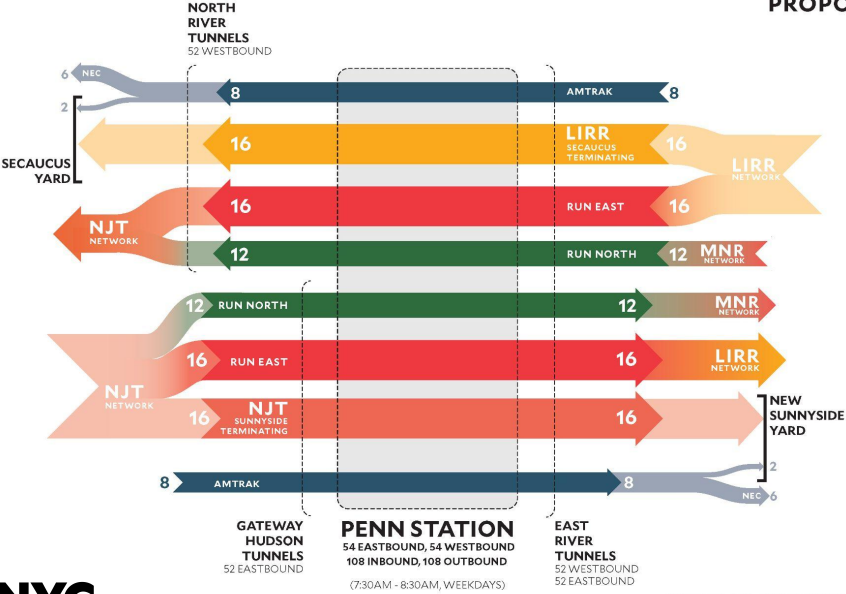
EXISTING



6 | PENN STATION THROUGH-RUNNING | RETHINKNYC DRAFT

To Tomorrow's!

PROPOSED



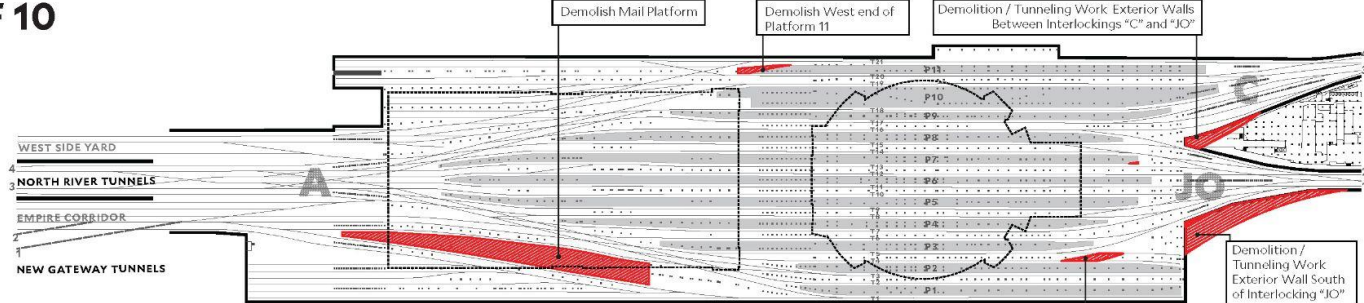
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PHASE 1 OF 10 PLAN

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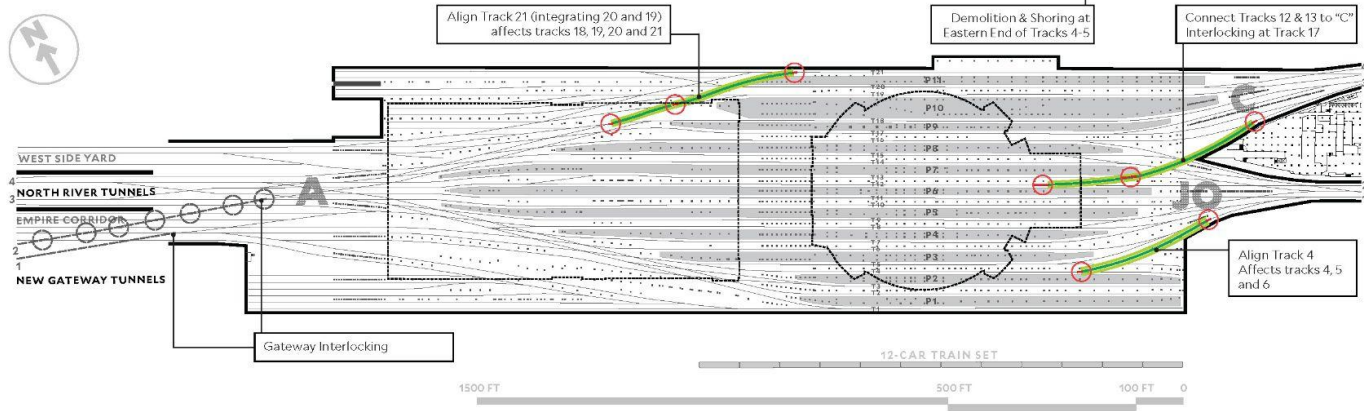
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B

CONSTRUCTION

Note: Completion of Phase 1 A & B to precede or coincide with operational status of all 4 Hudson River tunnels.



KEY

- Existing Platform
- Platform Work in Current Phase
- Platform Work (Vertical Circulation Only) (Maintains Service)
- Completed Platform
- Existing Track Center Line
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- Track Work from Previous Phase(s)
- Proposed Switch
- Proposed Switch on Non-Revenue Track
- Outline of Building Above
- Demolition
- Service Discontinued on Existing Track
- Amtrak Gateway

Platform	Original Area sq.ft	New Area sq.ft	% Change	# Existing + New Stairs & Escalators
1	16,235	16,235	0%	8
2	15,005	10,804	0%	8
3	17,051	17,051	0%	9
4	20,197	20,197	0%	9
5	26,932	26,932	0%	10
6	23,308	23,308	0%	10
7	26,322	26,322	0%	11
8	21,927	21,927	0%	11
9	14,829	14,829	0%	9
10	42,863	44,794	5%	9
11	17,348	16,371	-6%	8

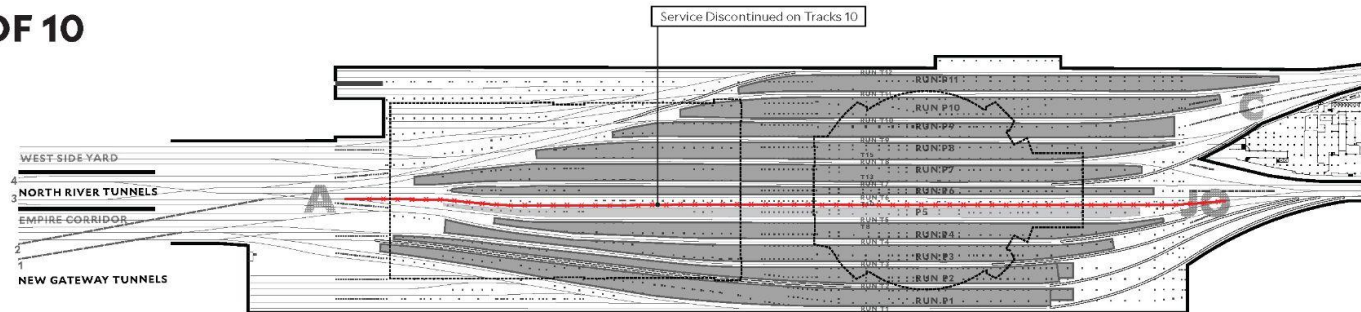
PHASE 10 OF 10

PLAN

SCALE 1:2500

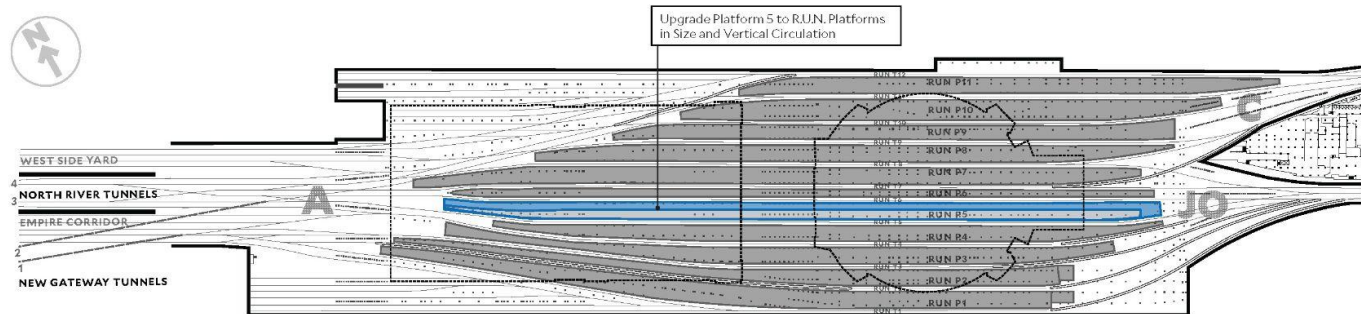
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CONSTRUCTION

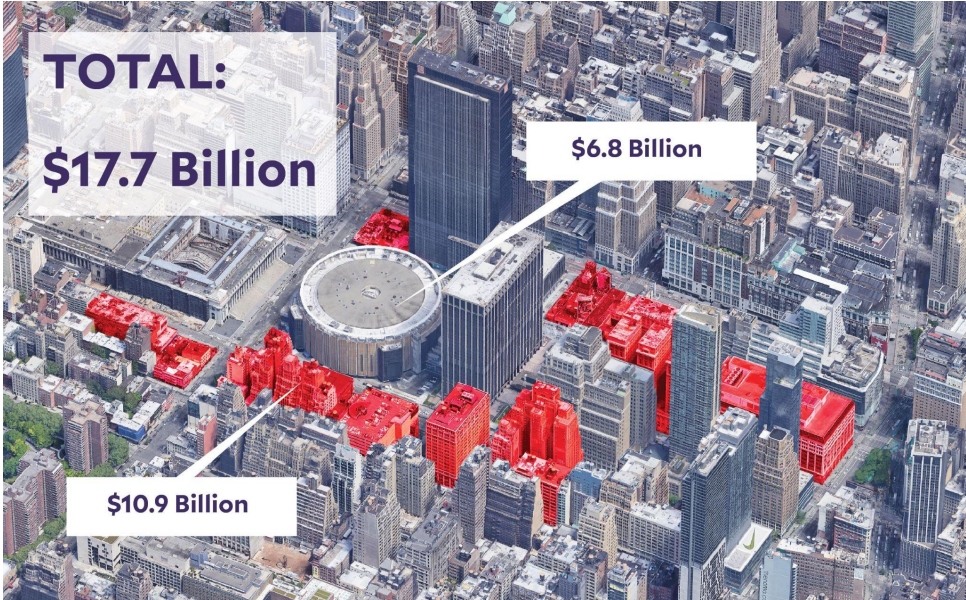


KEY



Platform	Original Area sq.ft	New Area sq.ft	% Change	# Existing + New Stairs & Escalators
1	16,235	49,595	+205%	20
2	15,005	34,419	+129%	20
3	17,051	39,173	+130%	20
4	20,197	39,487	+96%	20
5	26,932	51,933	+93%	10
6	23,308	23,308	0%	10
7	24,322	49,162	+87%	11
8	21,927	43,859	+100%	11
9	14,629	35,739	+144%	20
10	42,863	44,794	+5%	20
11	17,348	35,301	+103%	20

Empire Station Complex: Cost Analysis



Gateway: Penn Station Expansion	NY	\$9.15
Gateway: Penn Station Expansion Property Acquisition	NY	\$1.75
Penn Station New York: Reconstruction Master Plan	NY	\$6.53
Penn Station New York Reconstruction Master Plan Property Acquisition	NY	\$0.25

Source: ConNEct 2035, Northeast Corridor Commission, July 2021

Gateway Program Budget¹

Penn South

- Acquisition (\$1.75 Billion)
- Construction (\$9.15 Billion)
- **[May be \$17 Billion with new talk of larger Penn Station Southern Expansion]**

Empire Station Complex

- Acquisition (\$.25 Billion)
- Construction (\$6.53 Billion)

TOTAL: \$17.7 Billion

Hudson River Tunnels

- Hudson River Tunnels (\$11.6 Billion)

Other Systemic Improvements Included in the Gateway Program

- Highline Renewal and State of Good Repair (\$.24 Billion)
- Secaucus Station and Loop Tracks (\$1.62 Billion)
- Portal North and Portal South (\$5.57 Billion)
- Sawtooth Bridge (\$1.44 Billion)
- NJT Storage Yard (\$1.88 Billion)
- Dock Bridge Rehabilitation (\$.05 Billion)
- Harrison Fourth Track Phase 1 (\$.08 Billion)

TOTAL: \$10.88 Billion

Value for Budget

Penn South

- Acquisition (\$1.75 Billion)
- Construction (\$9.15 Billion)
- **[May be \$17 Billion with new talk of larger Penn Station Southern Expansion]**

Empire Station Complex

- Acquisition (\$.25 Billion)
- Construction (\$6.53 Billion)

TOTAL: \$17.7 Billion
39% Increase in Service

Through-Running Penn & Outside Work

- Improvements to Track Alignments and Platforms at NY Penn Station (\$3 Billion)
- New Sunnyside Station (\$0.075 Billion)
- New Station at Port Morris & Cross-Bronx Tunnel (\$1.5 Billion)
- East of NY Penn Yard (\$1.5 Billion)
- Other System Improvements beyond Gateway Program (20% allowance for adjustments to existing proposals¹ - \$2.175 Billion)

TOTAL: \$8.25 Billion
35% Increase in Service

1. Such as improvements to Rolling Stock Secaucus Junction & Loop, Yard that are proposed as part of the Gateway Program, but would need further scope beyond what is planned in order to accommodate through-running service.

Value for Budget

Penn South¹

- Acquisition (\$1.75 Billion)
- Construction (\$9.15 Billion)

Empire Station Complex

- Acquisition (\$.25 Billion)
- Construction (\$6.53 Billion)

TOTAL: \$17.7 Billion
39% Station Capacity Increase

Through-Running Penn & Outside Work (ReThink Proposal, full T.R. @ NY Penn Station)

- Improvements to Track Alignments and Platforms at NY Penn Station (\$4.5 Billion)
- New Sunnyside Station (\$0.075 Billion)
- New Station at Port Morris & Cross-Bronx Tunnel (\$1.5 Billion)
- East of NY Penn Yard (\$1.5 Billion)
- Other System Improvements beyond Gateway Program (20% allowance for adjustments to existing proposals² - \$2.175 Billion)

TOTAL: \$9.75 Billion
50% Station Capacity Increase

2. Such as improvements to Rolling Stock Secaucus Junction & Loop, Yard that are proposed as part of the Gateway Program, but would need further scope beyond what is planned in order to accommodate through-running service.

Representative, “Mildly Subversive”, Incredibly Shrinking Objections to ReThinkNYC’s Through-Running Proposals (8 of 10 Issued to Date. 2 More and a Second Series may Happen)



[10 Incredibly Shrinking Objections](#)

Incredible Shrinking Objections

Incredible Shrinking Objections

No. 1 Objection

"Through-running" would be too disruptive to regional train service and throughout the Northeast Corridor:

Incredible Shrinking Objections

No. 2 Objection

Through-running cannot generate enough capacity increase at Penn Station for projected commuter use.

Incredible Shrinking Objections

No. 3 Objection

Through-running at Penn Station would be too expensive as it would require building two new East River Tunnels and connections crosstown through two-thirds of Manhattan.

Incredible Shrinking Objections

No. 4 Objection

Amtrak, the MTA and NJ Transit (the Railroads) assert via a report they commissioned from FX Collaborative and WSP that "Platforms 1 and 2, serving Tracks 1-4, are not suitable for through-running service."

ReThinkNYC

Incredible Shrinking Objections

Incredible Shrinking Objections

No. 5/6 Objection

Objection Number 5: The Railroads say there is insufficient demand for reverse commuting to justify investing in through-running.

Objection Number 6: The Railroads claim that because European cities are polycentric (i.e., have many centers), through-running is relevant and effective there, but because New York is monocentric through-running does not fit the New York context.

Incredible Shrinking Objections

No. 7 Objection

Through-running would require "tearing apart" and rebuilding Moynihan Station, the West End Concourse, and Harold Interlocking.

Incredible Shrinking Objections

No. 8 Objection

Converting Penn Station's operating model for commuter rail to through-running would require that the region's transit network integrate disparate electric power systems. This would be prohibitively expensive, logistically daunting and all but impossible.

ReThinkNYC

Closing Thoughts

The Railroads' years long efforts to date to discredit through-running and defer New York's once-in-a-century opportunity until the 22nd Century – even as many of our peer cities are already enjoying through-running's compound benefits – will only serve to further compound the tragedy that started at Penn Station in 1963 and continues to the present.

Andy Byford has the opportunity to reverse this continuing tragedy at New York's most important crossroads and set Penn Station and an even greater New York area on a better course for the 21st century and the 22nd. It starts with through-running at Penn Station – sooner rather than later – and capping the revamped track layout with a station building worthy of what many of us still consider the greatest city on earth.



**A Closing Question: Think of All the Capital, Culture,
Diversity, Energy, Geography, Resilience and Talent in this
Region**

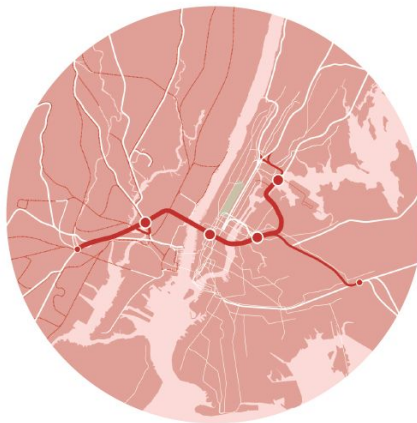
What if We Chose to Harness it Instead of Ignoring It?



Appendix A

ReThinkNYC Regional Unified Network 34

ReThinkNYC



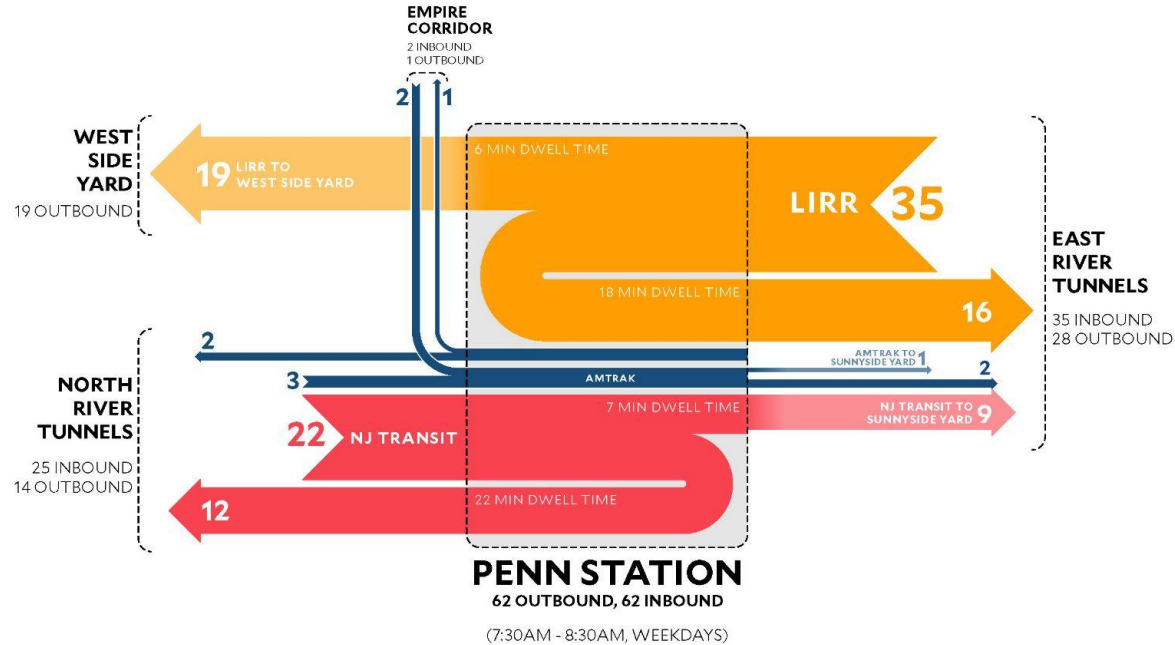
VOL. 1
FIRST STEPS

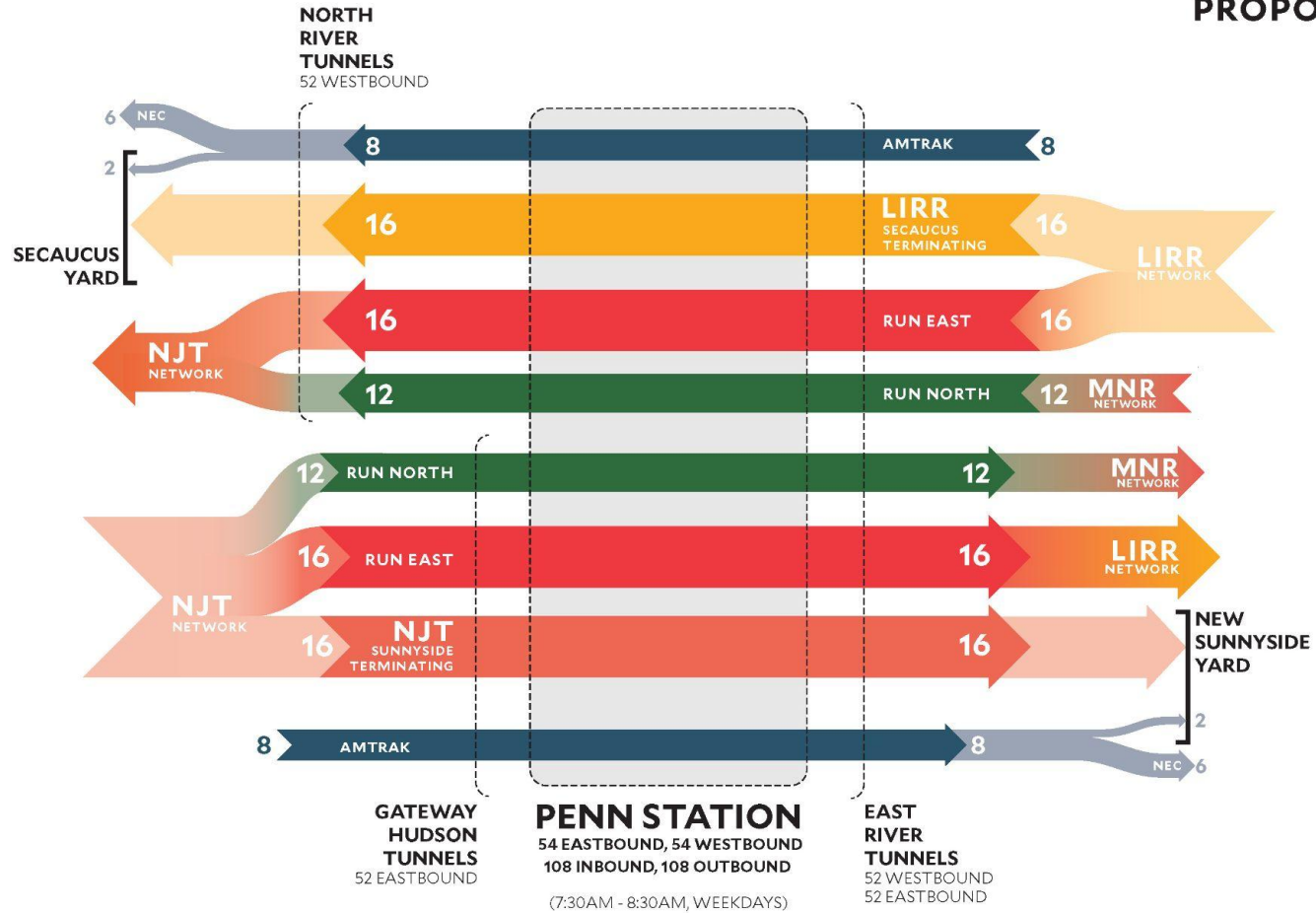
THE
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Appendix B

ReThinkNYC's Implementation Plan for Through-Running at Penn Station

EXISTING





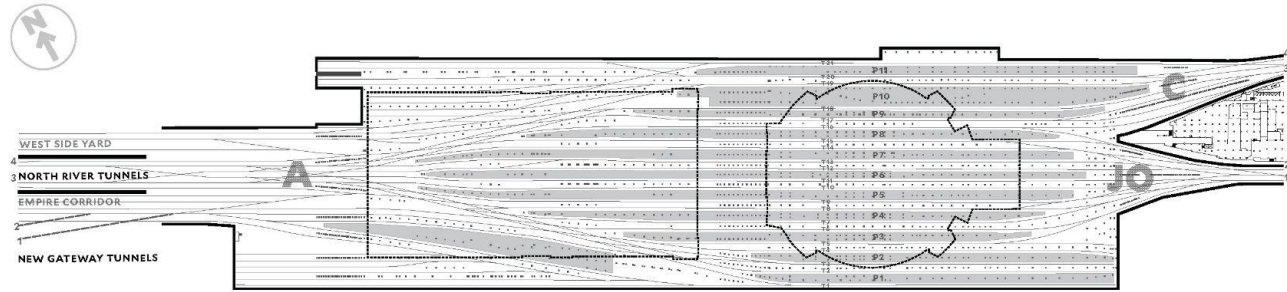
EXISTING CONDITIONS

SCALE 1:2500

Existing based on:

Penn Station Track System, Amtrak.
Retrieved: 6/29/2017.

MTA Board - Metro-North/LIRR
Committee Meeting - 04/24/2017.
Metropolitan Transportation
Authority, Retrieved: 6/29/2017



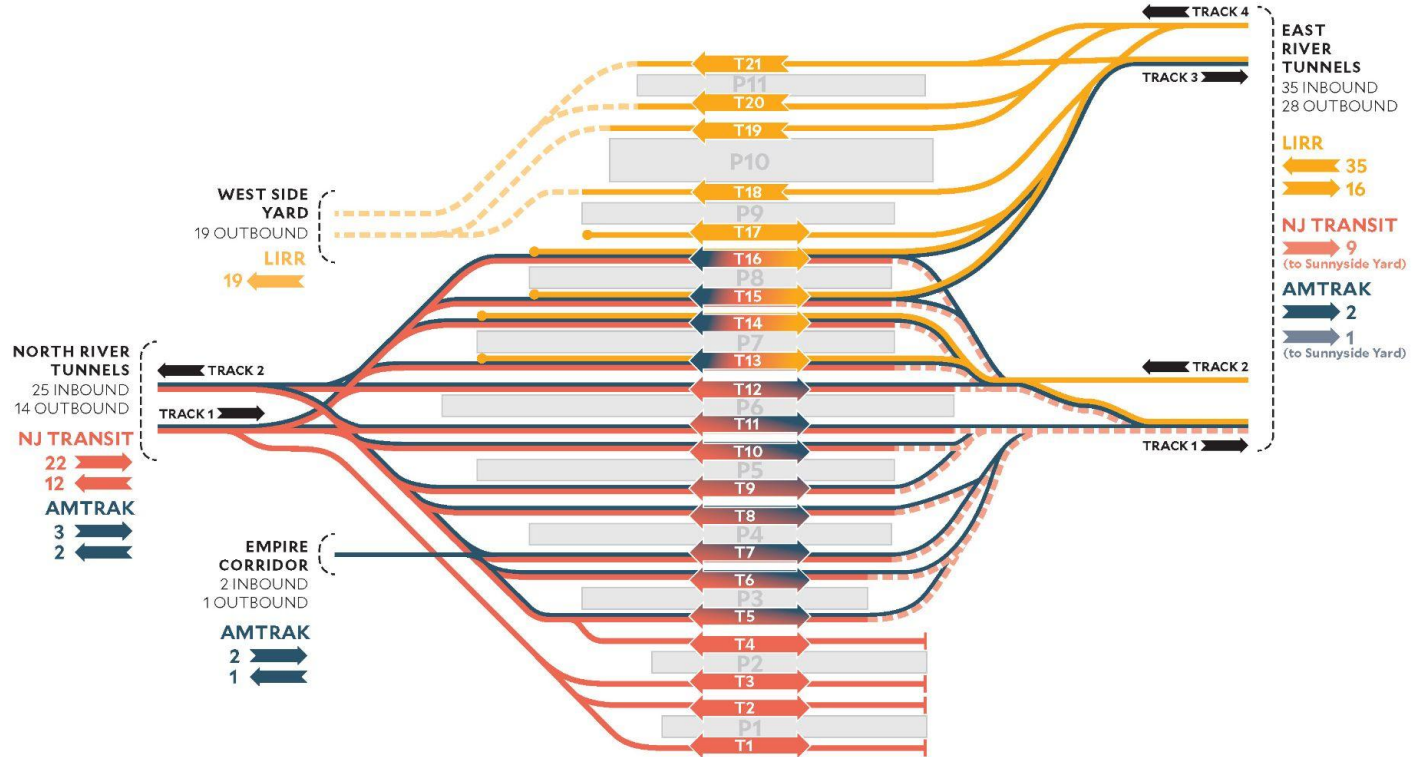
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2	15,005	10,604	0%	5
3	17,051	17,051	0%	9
4	20,197	20,197	0%	9
5	26,932	26,932	0%	10
6	23,308	23,308	0%	10
7	26,322	26,322	0%	10
8	21,927	21,927	0%	11
9	14,829	14,829	0%	5
10	42,863	42,863	0%	5
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OPERATIONS DIAGRAM

CAPACITY | STAGING | SERVICE



(7:30AM - 8:30AM, WEEKDAYS)

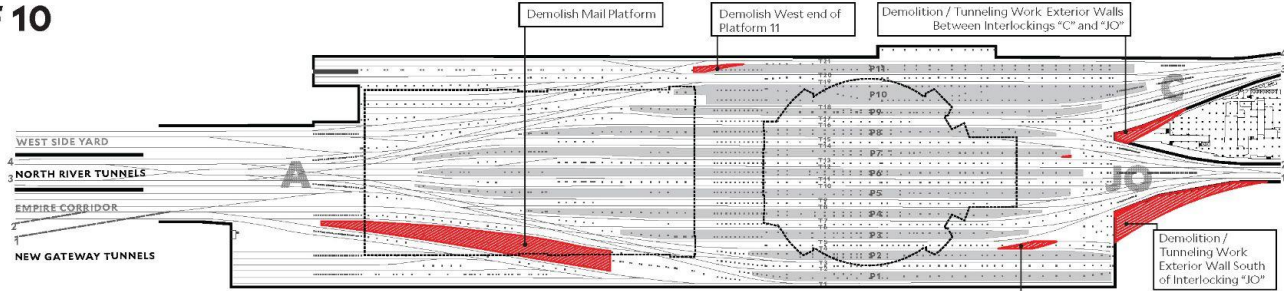
PHASE 1 OF 10

PLAN

SCALE 1:2500

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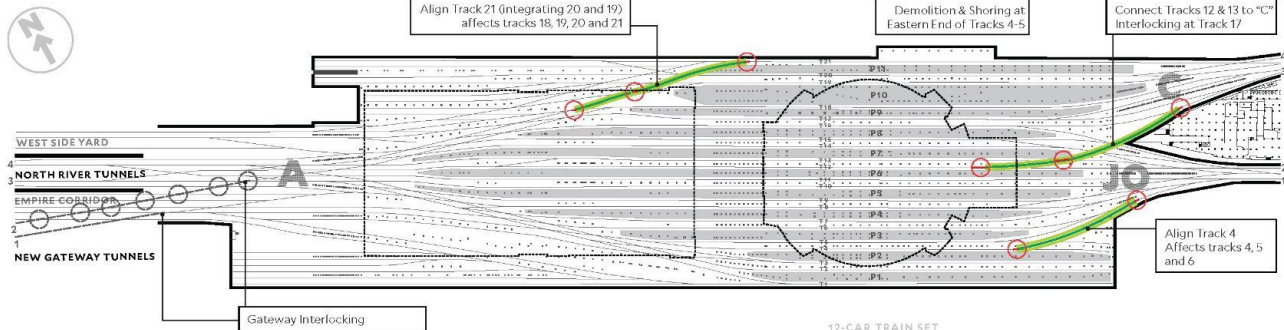
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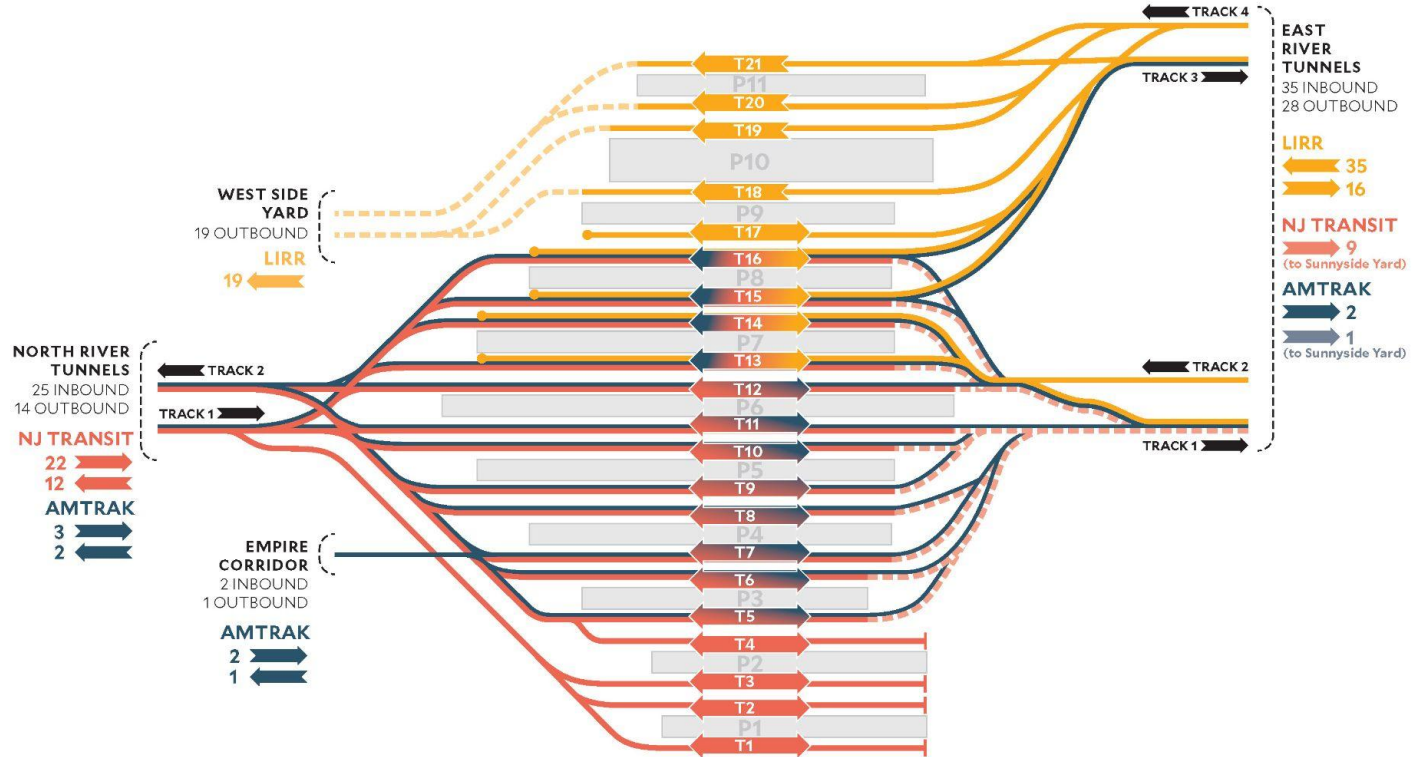
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3	17,051	17,051	0%	9
4	20,197	20,197	0%	9
5	24,937	24,937	0%	10
6	23,308	23,308	0%	10
7	26,322	26,322	0%	11
8	20,927	20,927	0%	11
9	14,629	14,629	0%	9
10	42,863	44,794	5%	9
11	17,348	16,371	-6%	8

OPERATIONS DIAGRAM

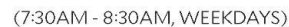
CAPACITY | STAGING | SERVICE



(7:30AM - 8:30AM, WEEKDAYS)

CAPACITY | STAGING | SERVICE

**EAST
RIVER
TUNNELS**
51 WESTBOUND
42 EASTBOUND



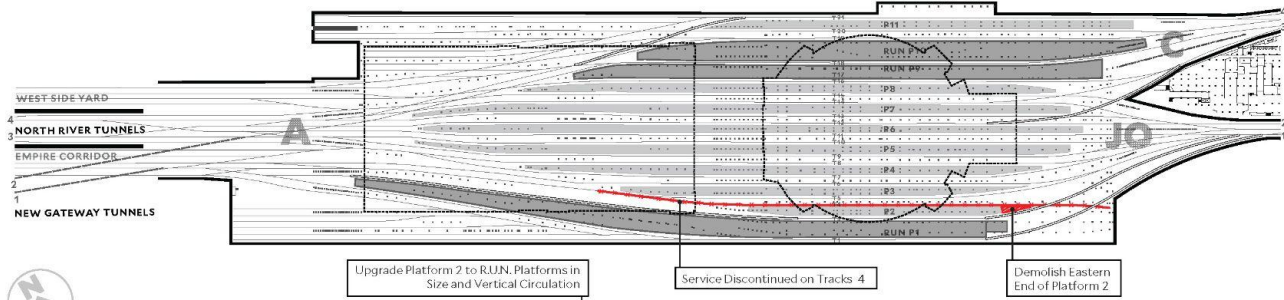
PHASE 3 OF 10

PLAN

SCALE 1:2500

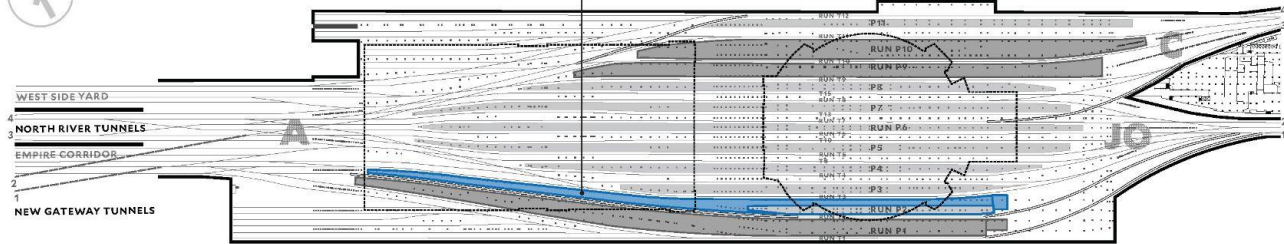
A

DEMO /
OUT OF SERVICE



B

CONSTRUCTION



KEY

- Existing Platform
- Platform Work in Current Phase
- Platform Work (Vertical Circulation Only) (Maintains Service)
- Completed Platform
- Existing Track Center Line
- New Track Work
- Track Work from Previous Phase(s)
- Proposed Switch
- Proposed Switch on Non-Revenue Track
- Outline of Building Above
- Demolition
- Service Discontinued on Existing Track
- Amtrak Gateway

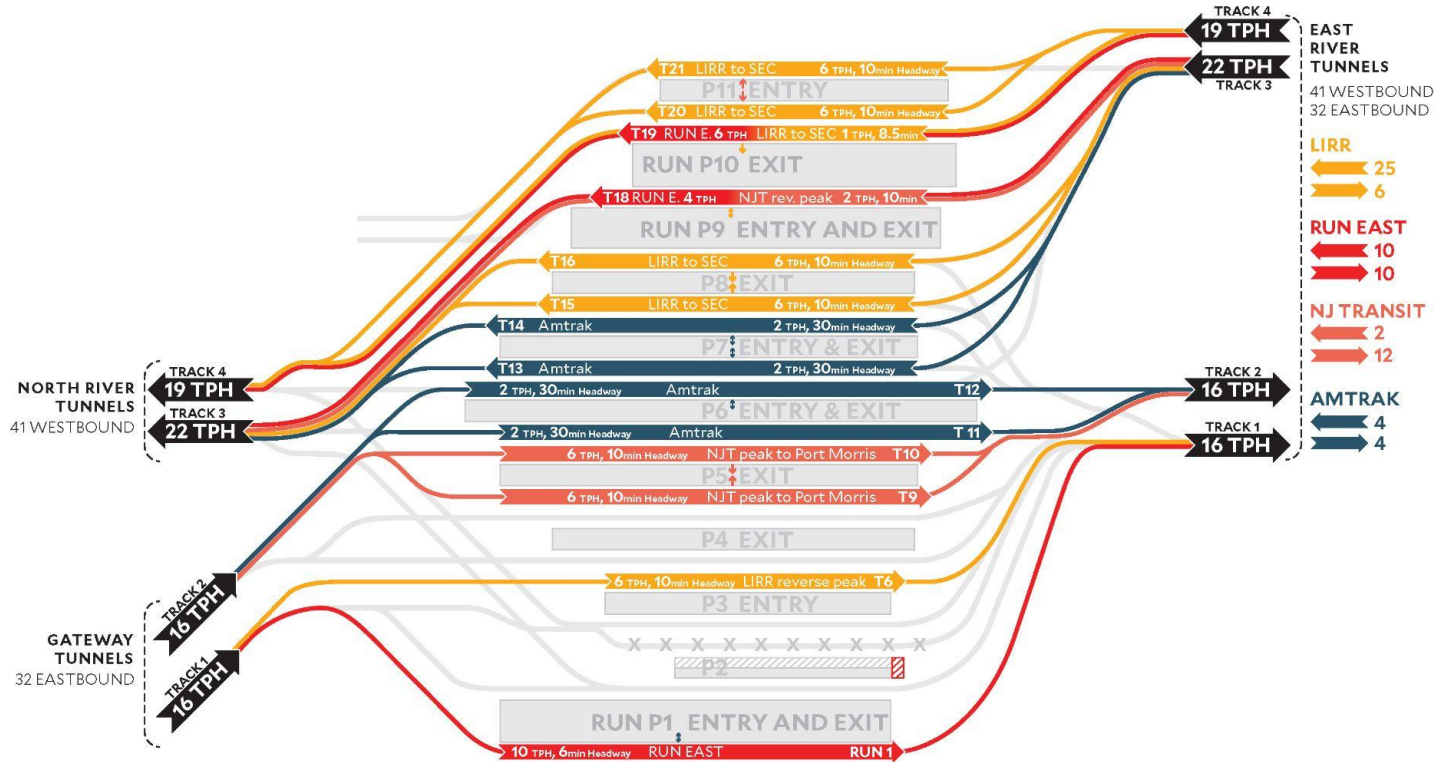


Platform	Original Area sq.ft	New Area sq.ft	% Change	# Existing + New Stairs & Escalators
1	16,235	49,995	+208%	20
2	15,005	34,419	+129%	20
3	17,051	17,051	0%	9
4	20,197	20,197	0%	9
5	26,937	26,932	0%	10
6	23,308	23,308	0%	12
7	26,322	26,322	0%	11
8	21,927	21,927	0%	11
9	14,625	35,739	+144%	20
10	42,863	44,794	+4%	20
11	17,349	16,371	-6%	8

OPERATIONS DIAGRAM

CAPACITY | STAGING | SERVICE

3/10



(7:30AM - 8:30AM, WEEKDAYS)

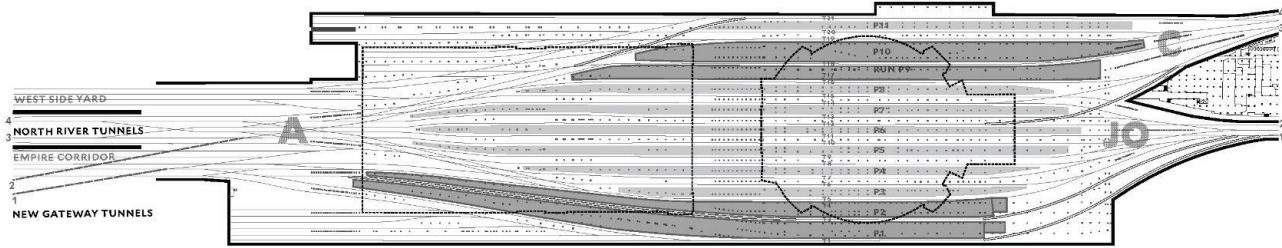
PHASE 4 OF 10

PLAN

SCALE 1:2500

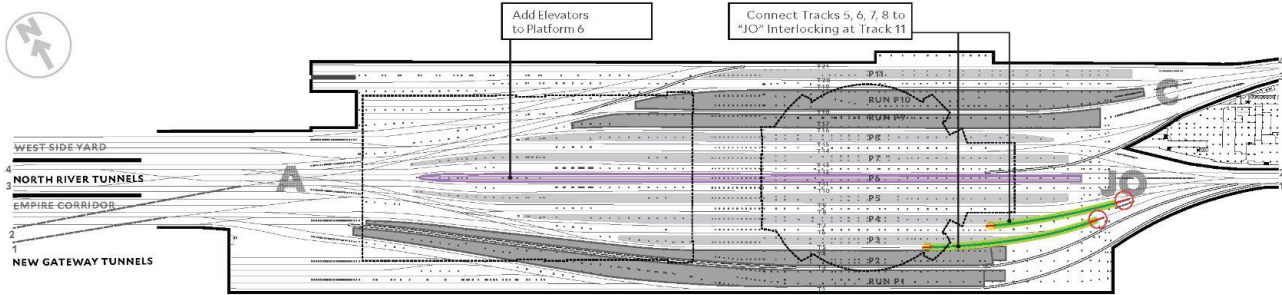
A

DEMO /
OUT OF SERVICE



B

CONSTRUCTION



KEY

- Existing Platform
- Platform Work in Current Phase
- Platform Work (Vertical Circulation Only) (Maintains Service)
- Completed Platform
- Existing Track Center Line
- New Track Work
- Track Work from Previous Phase(s)
- Proposed Switch
- Proposed Switch on Non-Revenue Track
- Outline of Building Above
- Demolition
- Service Discontinued on Existing Track
- Amtrak Gateway

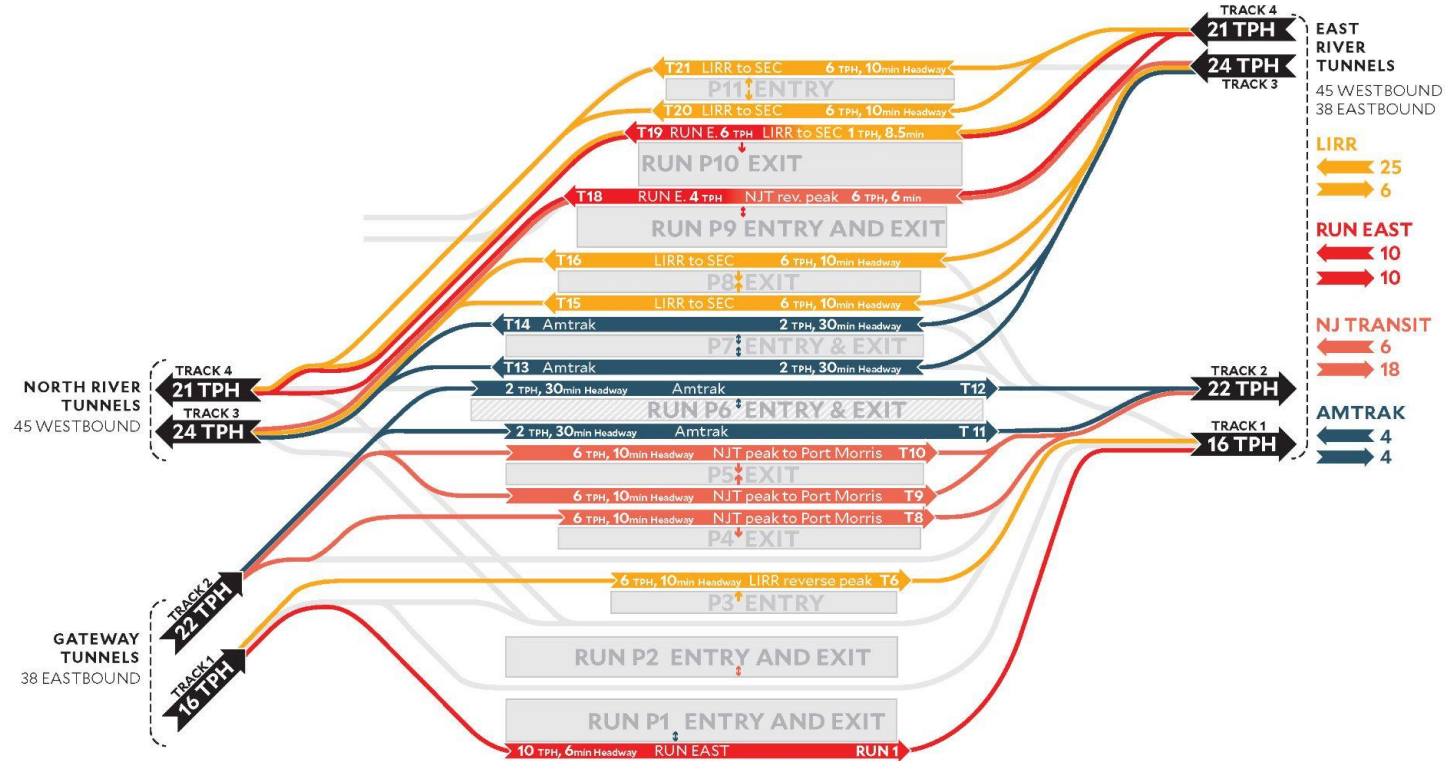


Platform	Original Area sq.ft	New Area sq.ft	% Change	# Existing + New Stairs & Escalators
1	16,235	49,595	+208%	20
2	15,035	14,419	-12%	20
3	17,051	17,051	0%	9
4	20,197	20,197	0%	9
5	26,937	26,937	0%	10
6	23,308	23,308	0%	10
7	26,322	26,322	0%	11
8	21,927	21,927	0%	11
9	14,620	35,739	+144%	20
10	42,863	44,794	+5%	20
11	17,348	16,371	-6%	20

OPERATIONS DIAGRAM

CAPACITY | STAGING | SERVICE

4/10



(7:30AM - 8:30AM, WEEKDAYS)

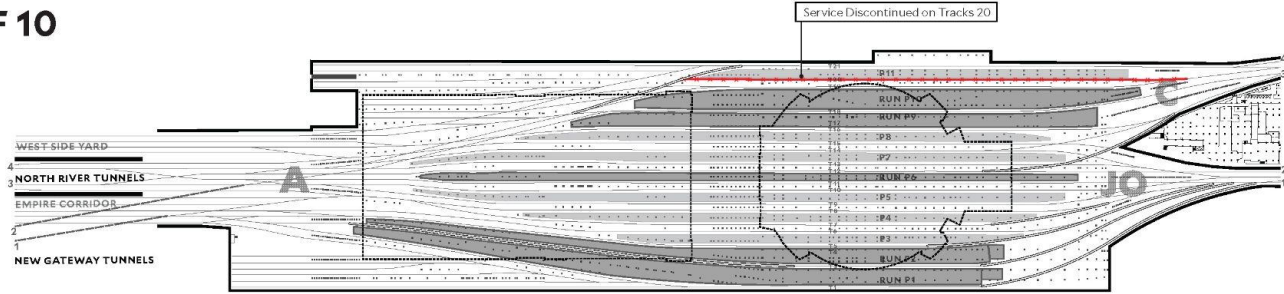
PHASE 5 OF 10

PLAN

SCALE 1:2500

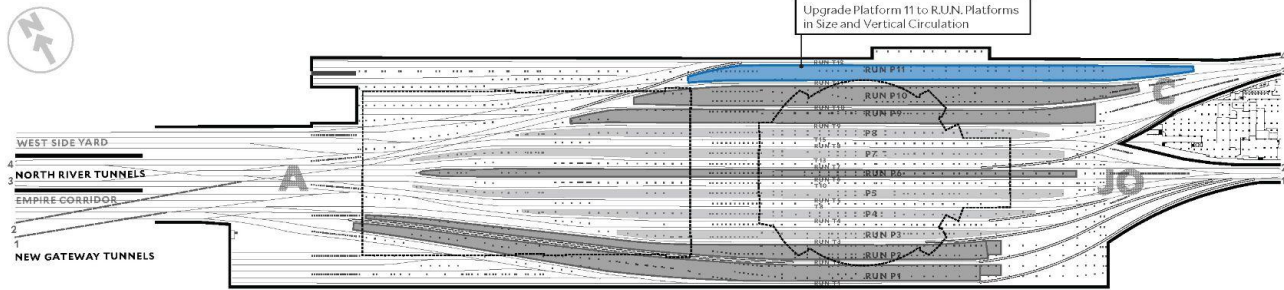
A

DEMO /
OUT OF SERVICE



B

CONSTRUCTION



KEY

- Existing Platform
- Platform Work in Current Phase
- Platform Work (Vertical Circulation Only) (Maintains Service)
- Completed Platform
- Existing Track Center Line
- New Track Work
- Track Work from Previous Phase(s)
- Proposed Switch
- Proposed Switch on Non-Revenue Track
- Outline of Building Above
- Demolition
- Service Discontinued on Existing Track
- Amtrak Gateway

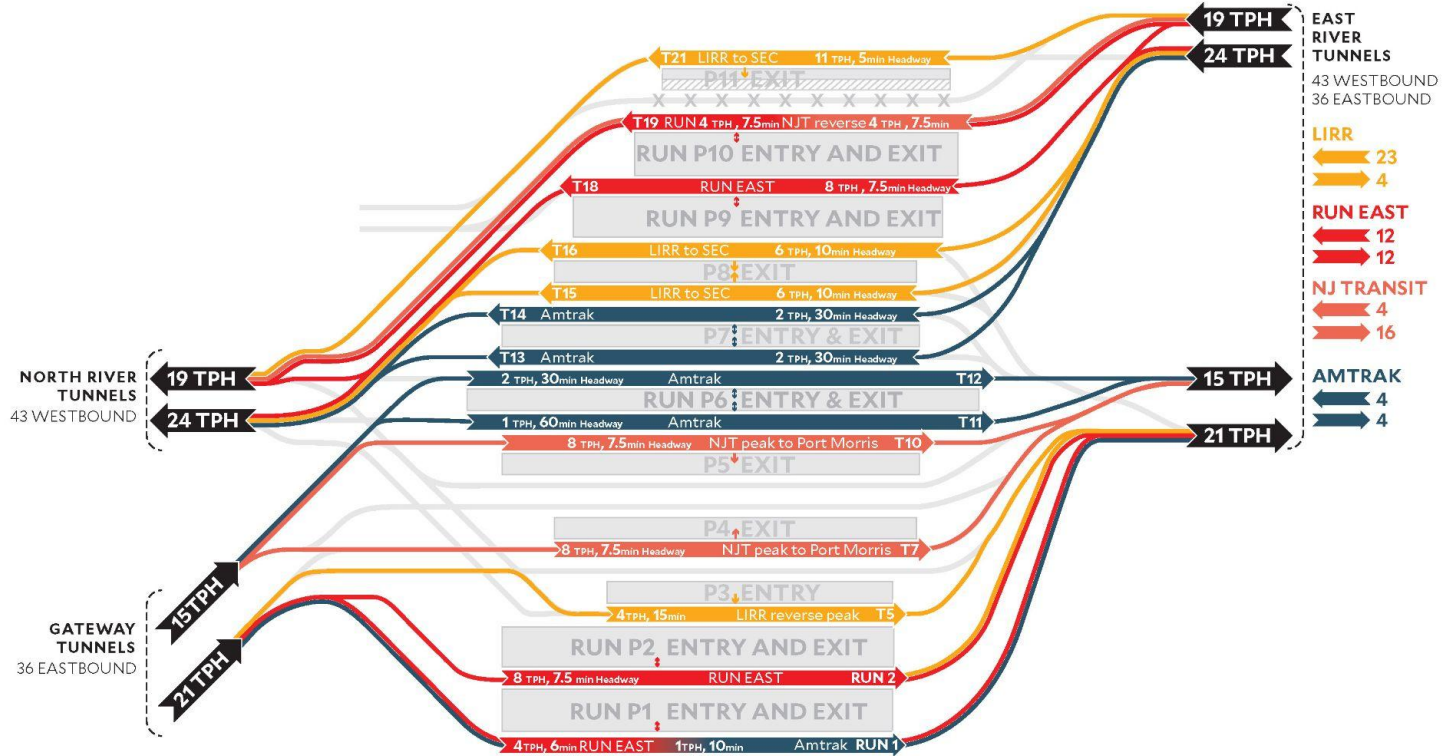


Platform	Original Area sq.ft	New Area sq.ft	% Change	# Existing + New Stairs & Escalators
1	16,235	49,595	+208%	20
2	15,055	14,433	-12%	20
3	17,051	17,051	0%	9
4	20,197	20,197	0%	9
5	26,937	26,937	0%	10
6	23,305	23,305	0%	12
7	26,322	26,322	0%	11
8	21,927	21,927	0%	11
9	14,625	41,322	+141%	20
10	42,863	47,642	+5%	20
11	17,348	35,301	+103%	20

OPERATIONS DIAGRAM

CAPACITY | STAGING | SERVICE

5/10



(7:30AM - 8:30AM, WEEKDAYS)

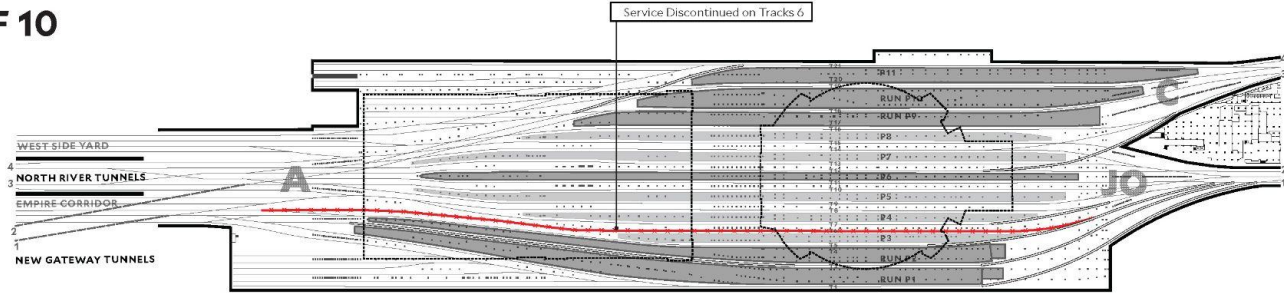
PHASE 6 OF 10

PLAN

SCALE 1:2500

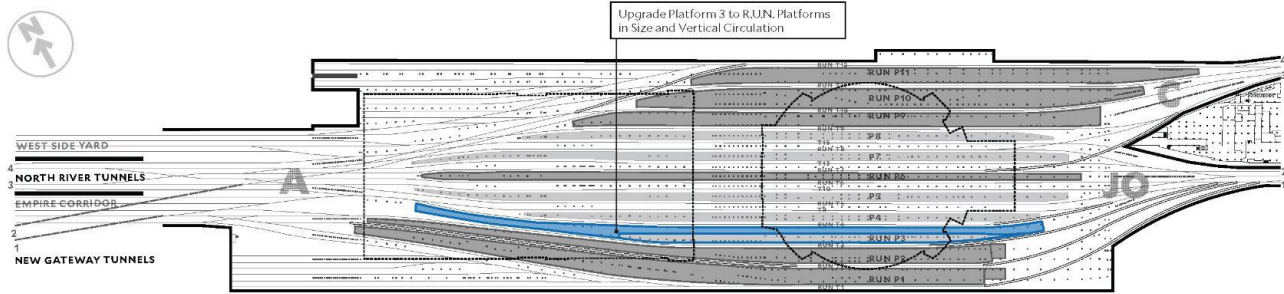
A

DEMO /
OUT OF SERVICE



B

CONSTRUCTION



KEY

- Existing Platform
- Platform Work in Current Phase
- Platform Work (Vertical Circulation Only) (Maintains Service)
- Completed Platform
- Existing Track Center Line
- New Track Work
- Track Work from Previous Phase(s)
- Proposed Switch
- Proposed Switch on Non-Revenue Track
- Outline of Building Above
- Demolition
- Service Discontinued on Existing Track
- Amtrak Gateway

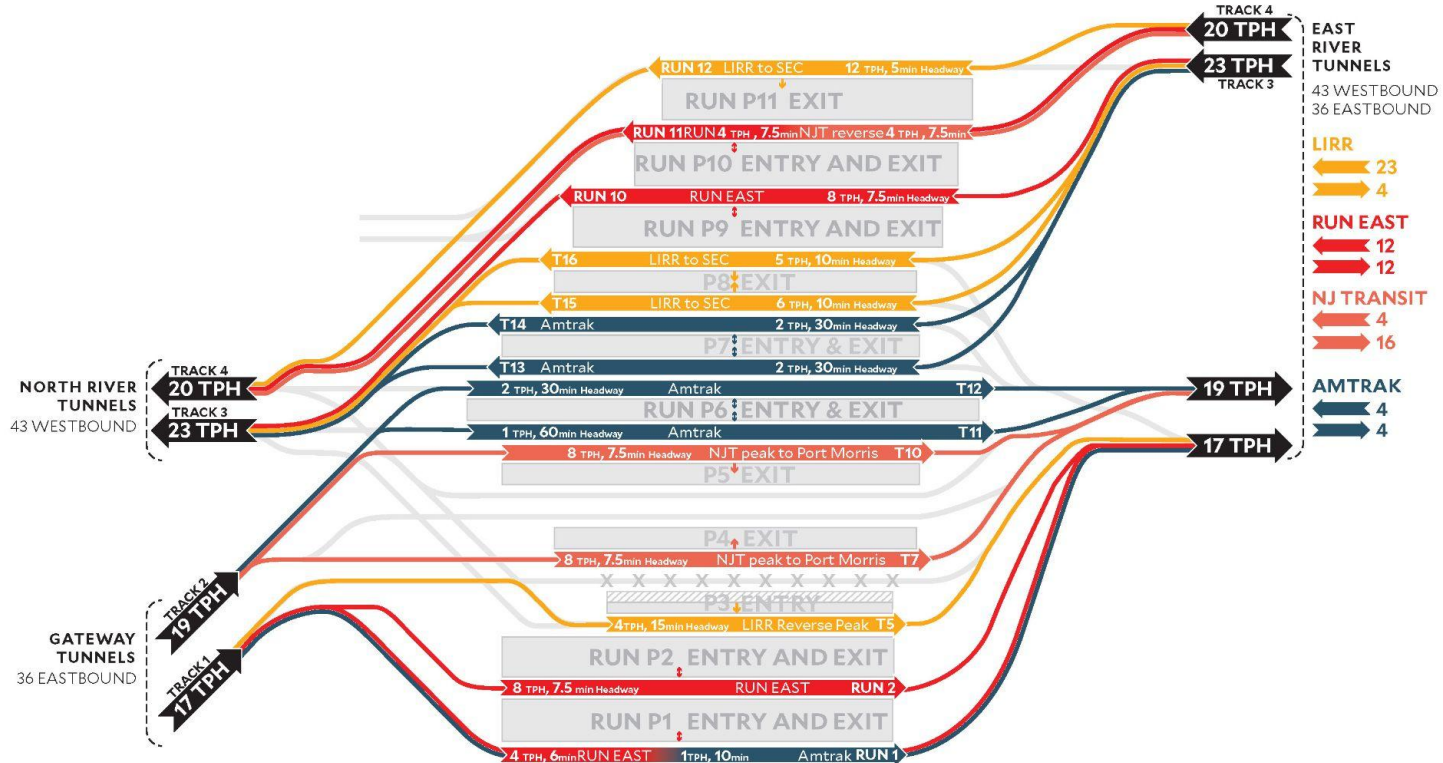


Platform	Original Area sq.ft	New Area sq.ft	% Change	# Existing + New Stairs & Escalators
1	16,235	49,595	+208%	20
2	15,005	34,419	+129%	20
3	17,051	39,173	+130%	20
4	20,197	20,197	0%	9
5	26,937	26,937	0%	10
6	23,309	23,309	0%	12
7	26,322	26,322	0%	11
8	21,927	21,927	0%	11
9	14,620	35,739	+149%	20
10	42,863	44,794	+5%	20
11	17,348	35,301	+103%	20

OPERATIONS DIAGRAM

CAPACITY | STAGING | SERVICE

6/10



(7:30AM - 8:30AM, WEEKDAYS)

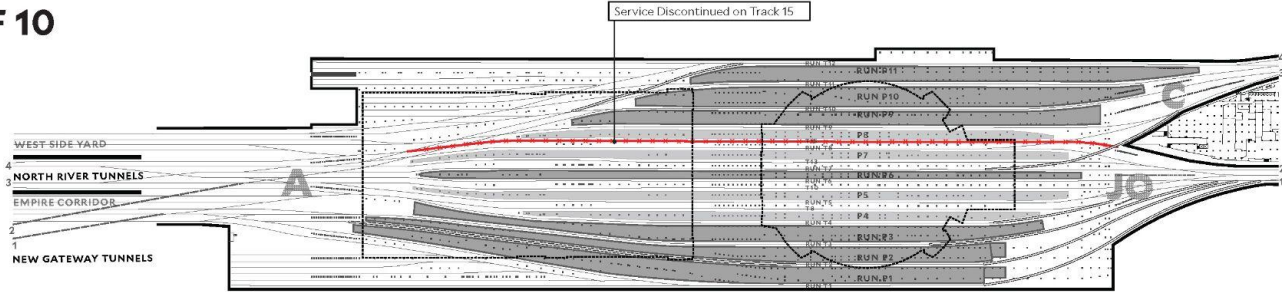
PHASE 7 OF 10

PLAN

SCALE 1:2500

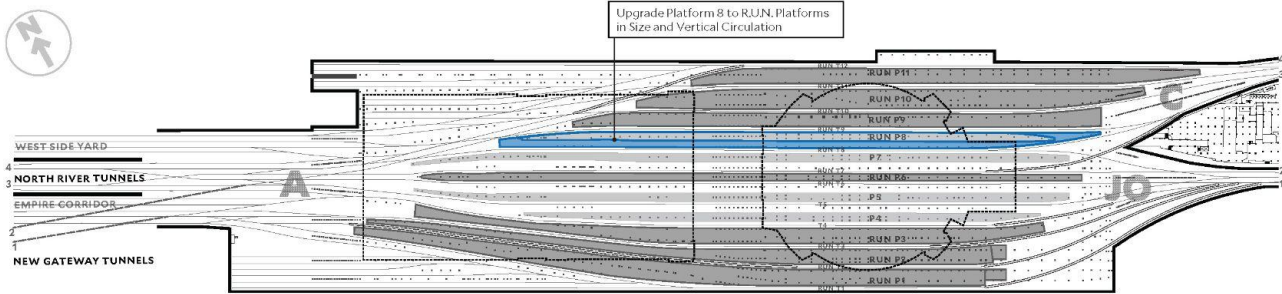
A

DEMO /
OUT OF SERVICE



B

CONSTRUCTION



KEY

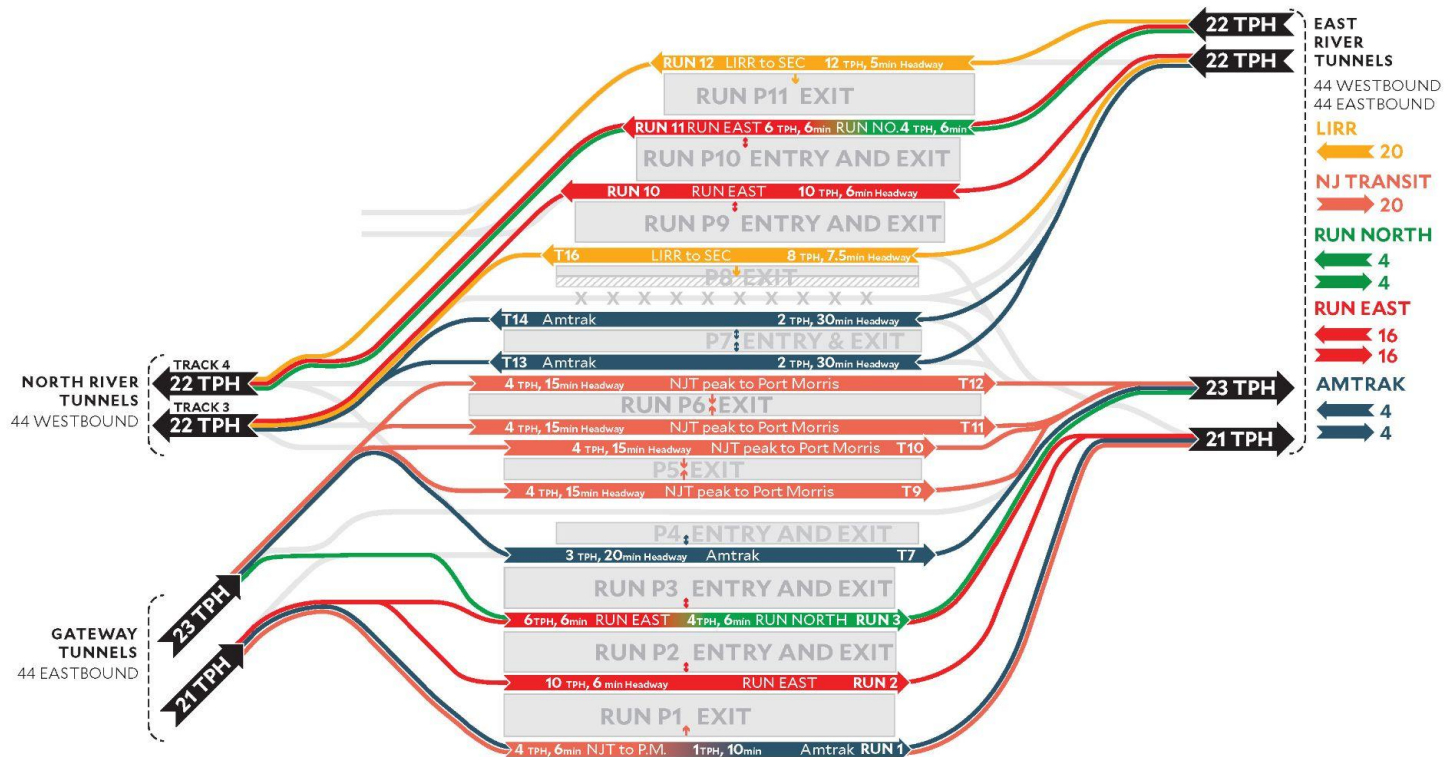
- Existing Platform
- Platform Work in Current Phase
- Platform Work (Vertical Circulation Only) (Maintains Service)
- Completed Platform
- Existing Track Center Line
- New Track Work
- Track Work from Previous Phase(s)
- Proposed Switch
- Proposed Switch on Non-Revenue Track
- Outline of Building Above
- Demolition
- Service Discontinued on Existing Track
- Amtrak Gateway



Platform	Original Area sq.ft	New Area sq.ft	% Change	# Existing + New Stairs & Escalators
1	16,235	49,595	+208%	20
2	15,055	15,419	+22%	20
3	17,051	39,173	+130%	20
4	20,197	20,197	0%	9
5	26,937	26,937	0%	10
6	23,308	23,308	0%	12
7	26,322	26,322	0%	11
8	21,927	43,859	+100%	11
9	14,625	35,739	+149%	20
10	42,863	44,794	+5%	20
11	17,348	35,301	+103%	20

CAPACITY | STAGING | SERVICE

7/10



(7:30AM - 8:30AM, WEEKDAYS)

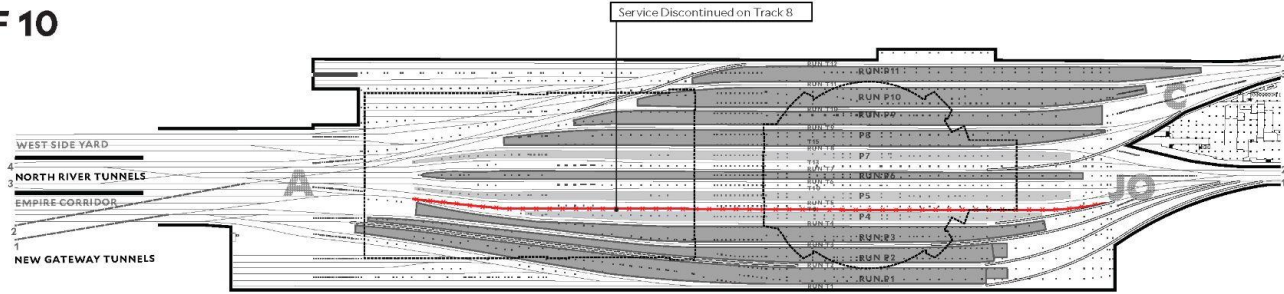
PHASE 8 OF 10

PLAN

SCALE 1:2500

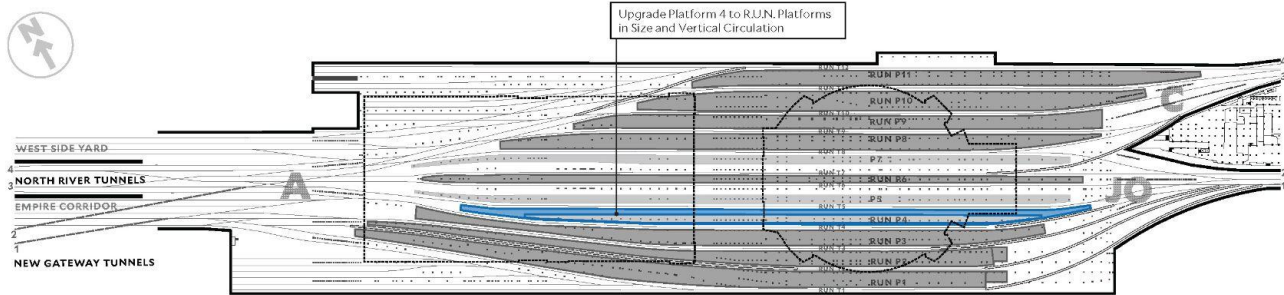
A

DEMO /
OUT OF SERVICE



B

CONSTRUCTION



KEY

- Existing Platform
- Platform Work in Current Phase
- Platform Work (Vertical Circulation Only) (Maintains Service)
- Completed Platform
- Existing Track Center Line
- New Track Work
- Track Work from Previous Phase(s)
- Proposed Switch
- Proposed Switch on Non-Revenue Track
- Outline of Building Above
- Demolition
- Service Discontinued on Existing Track
- Amtrak Gateway

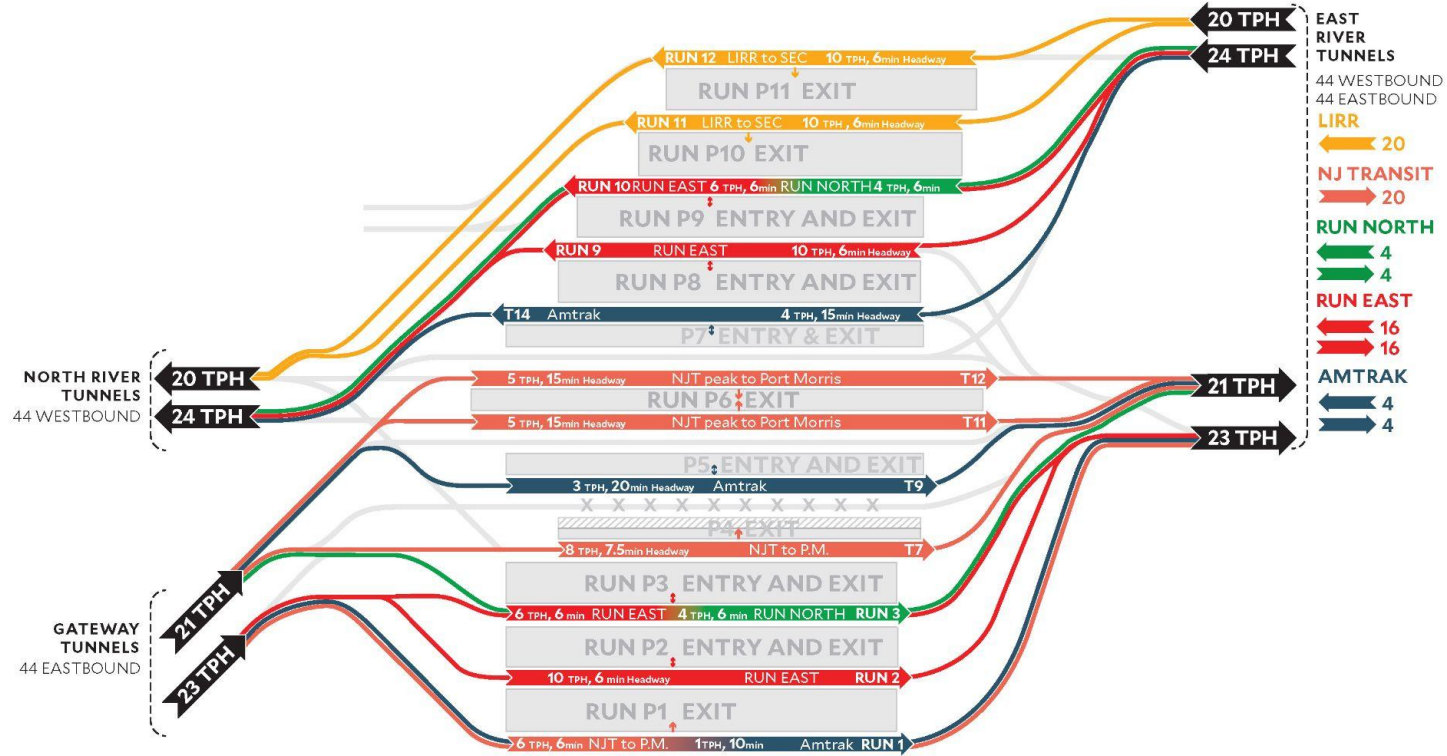


Platform	Original Area sq.ft	New Area sq.ft	% Change	# Existing + New Stairs & Escalators
1	16,235	49,595	+208%	20
2	15,035	15,419	+29%	20
3	17,051	39,773	+130%	20
4	20,197	39,487	+96%	9
5	26,937	26,932	0%	10
6	23,309	23,308	0%	12
7	26,322	26,322	0%	11
8	21,927	43,859	+100%	11
9	14,620	35,739	+144%	20
10	42,863	44,794	+5%	20
11	17,348	35,301	+103%	20

OPERATIONS DIAGRAM

CAPACITY | STAGING | SERVICE

8/10



(7:30AM - 8:30AM, WEEKDAYS)

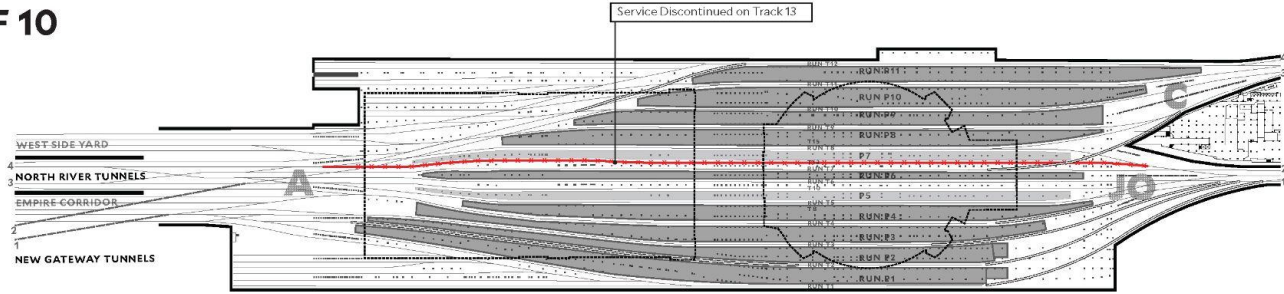
PHASE 9 OF 10

PLAN

SCALE 1:2500

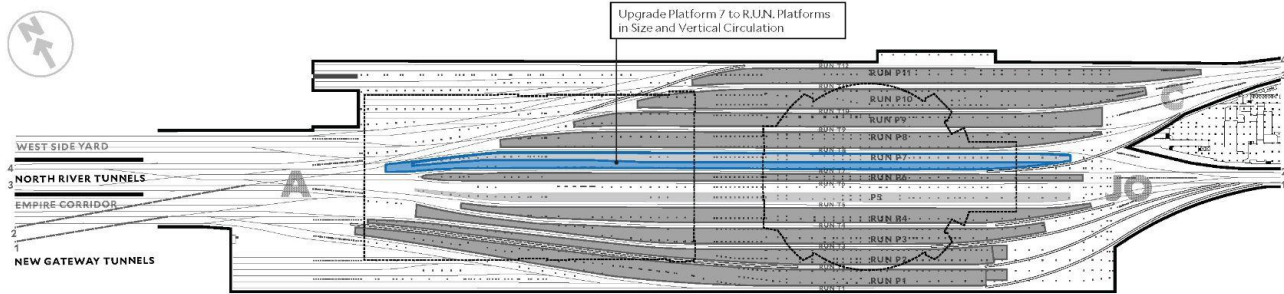
A

DEMO /
OUT OF SERVICE



B

CONSTRUCTION



KEY

- Existing Platform
- Platform Work in Current Phase
- Platform Work (Vertical Circulation Only) (Maintains Service)
- Completed Platform
- Existing Track Center Line
- New Track Work
- Track Work from Previous Phase(s)
- Proposed Switch
- Proposed Switch on Non-Revenue Track
- Outline of Building Above
- Demolition
- Service Discontinued on Existing Track
- Amtrak Gateway

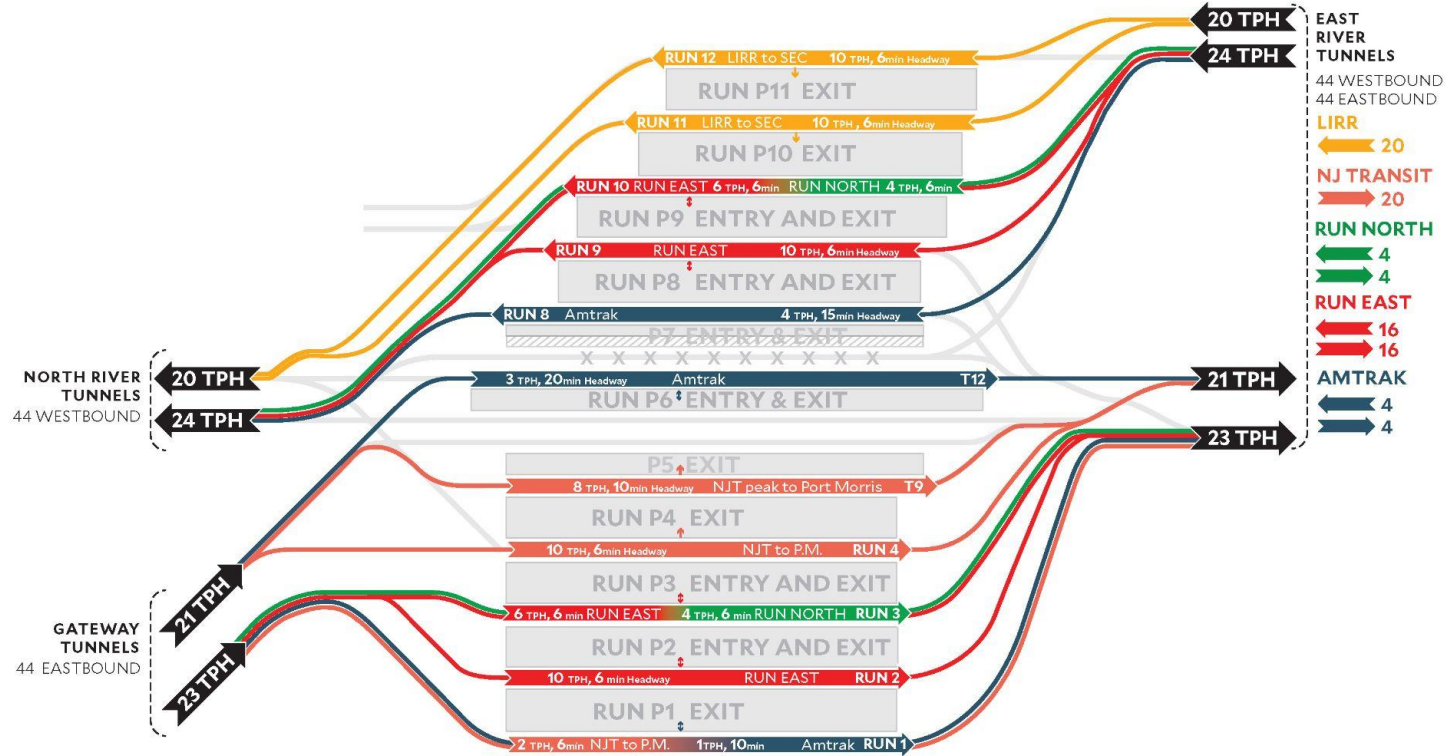


Platform	Original Area sq.ft	New Area sq.ft	% Change	# Existing + New Stairs & Escalators
1	16,235	49,595	+208%	20
2	15,055	15,419	+22%	20
3	17,051	39,173	+130%	20
4	20,197	39,487	+96%	9
5	26,937	26,932	0%	10
6	23,308	23,308	0%	10
7	26,322	49,162	+87%	11
8	21,927	43,859	+100%	11
9	14,620	35,739	+144%	20
10	42,863	44,794	+5%	20
11	17,348	35,301	+103%	20

OPERATIONS DIAGRAM

CAPACITY | STAGING | SERVICE

9/10



(7:30AM - 8:30AM, WEEKDAYS)

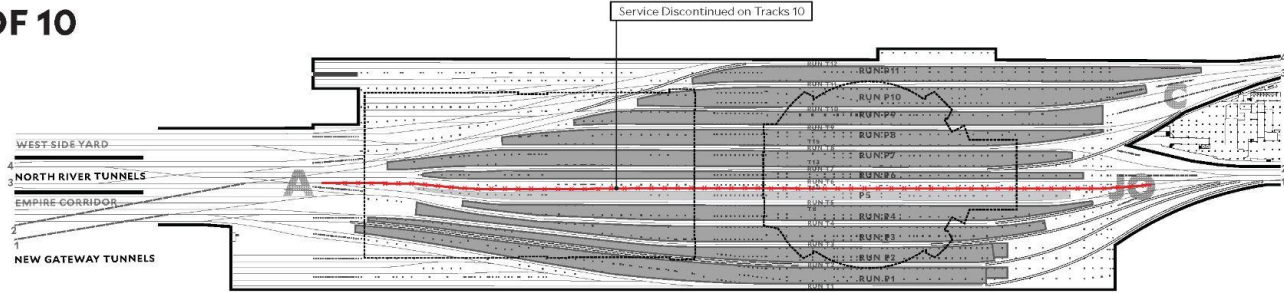
PHASE 10 OF 10

PLAN

SCALE 1:2500

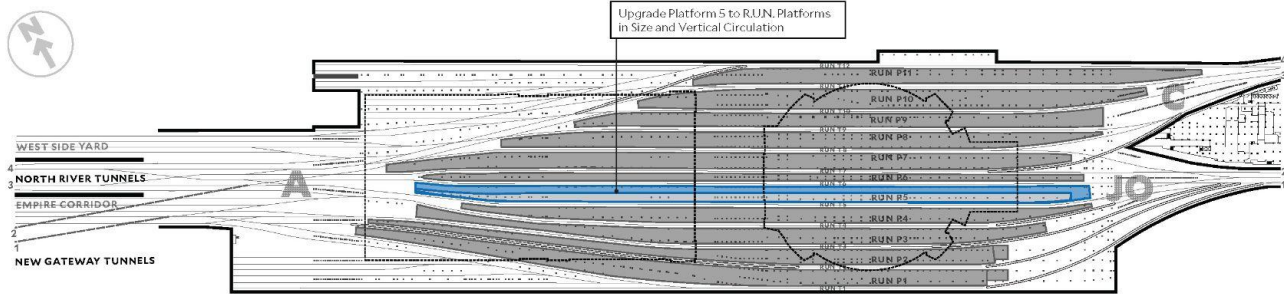
A

DEMO /
OUT OF SERVICE



B

CONSTRUCTION



KEY

- Existing Platform
- Platform Work in Current Phase
- Platform Work (Vertical Circulation Only) (Maintains Service)
- Completed Platform
- Existing Track Center Line
- New Track Work
- Track Work from Previous Phase(s)
- Proposed Switch
- Proposed Switch on Non-Revenue Track
- Outline of Building Above
- Demolition
- Service Discontinued on Existing Track
- Amtrak Gateway

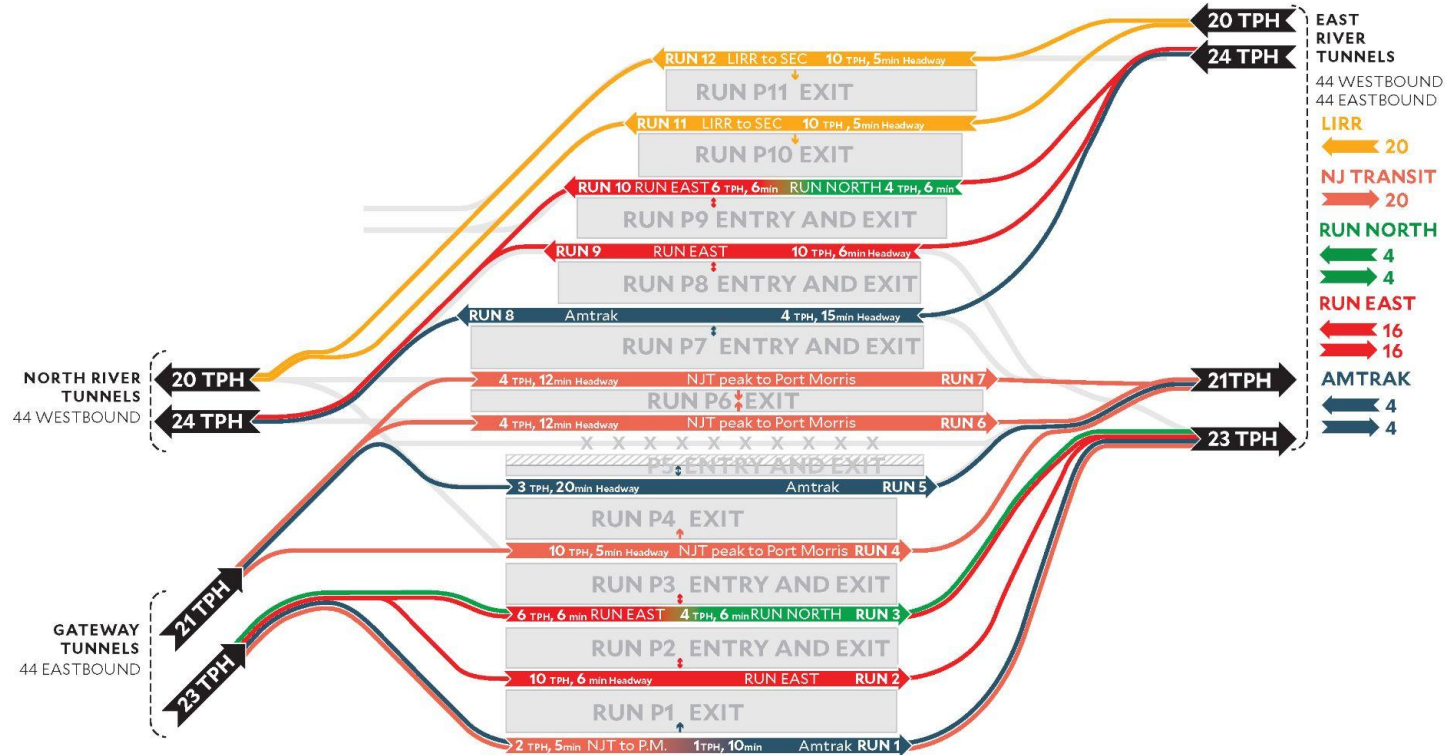


Platform	Original Area sq.ft	New Area sq.ft	% Change	# Existing + New Stairs & Escalators
1	16,235	49,595	+208%	20
2	15,005	34,419	+129%	20
3	17,051	39,173	+130%	20
4	20,197	39,487	+96%	9
5	26,932	51,933	+93%	10
6	23,308	23,308	0%	10
7	26,322	49,662	+87%	11
8	21,927	43,859	+100%	11
9	14,829	35,739	+141%	20
10	42,863	44,794	+5%	20
11	17,348	35,301	+103%	20

OPERATIONS DIAGRAM

CAPACITY | STAGING | SERVICE

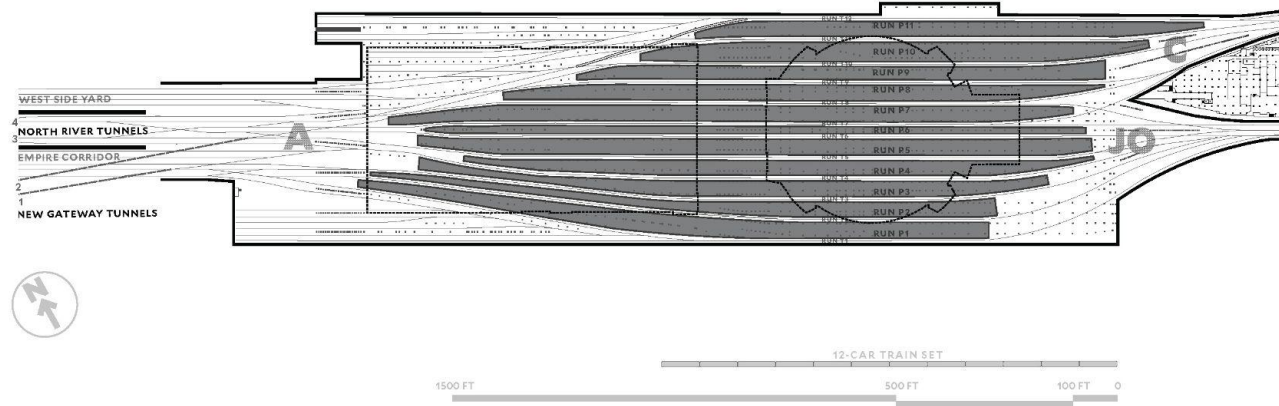
10/10



(7:30AM - 8:30AM, WEEKDAYS)

SCENARIO 1:

SCALE 1:2500



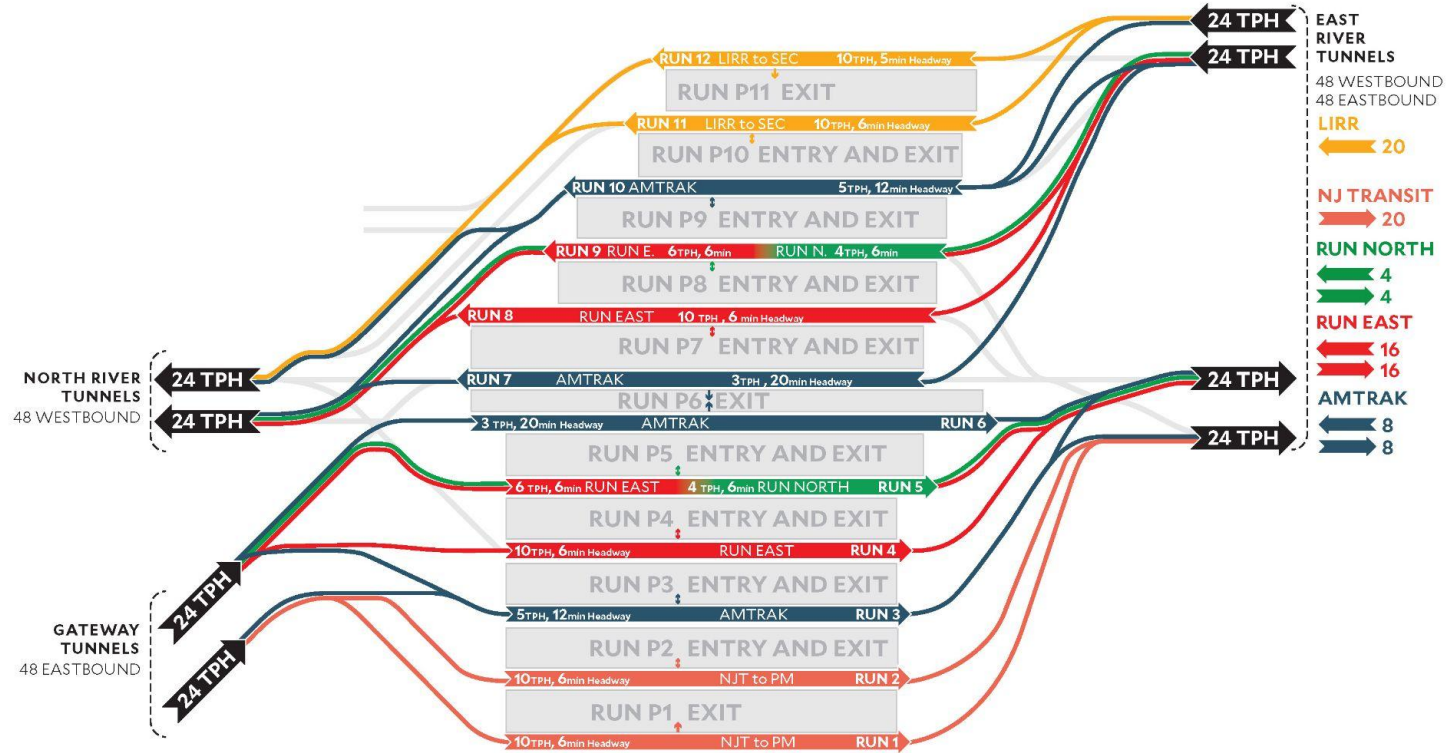
NOTES

- 24 TPH per Tunnel
- Minimum reverse peak service
- Minimal Metro-North Penn Station service
- Fewer universal rolling stock required

OPERATIONS DIAGRAM

CAPACITY | STAGING | SERVICE

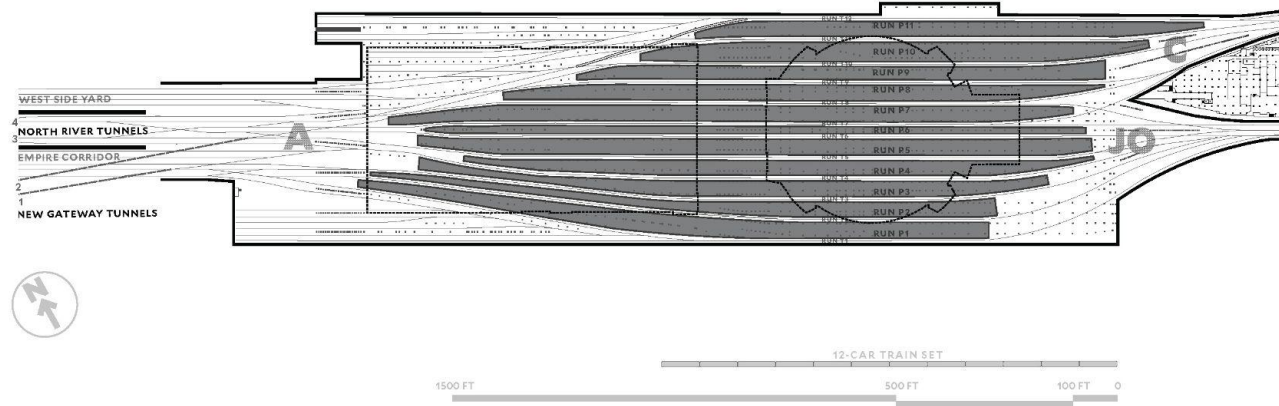
COMPLETE STATION



(7:30AM - 8:30AM, WEEKDAYS)

SCENARIO 2:

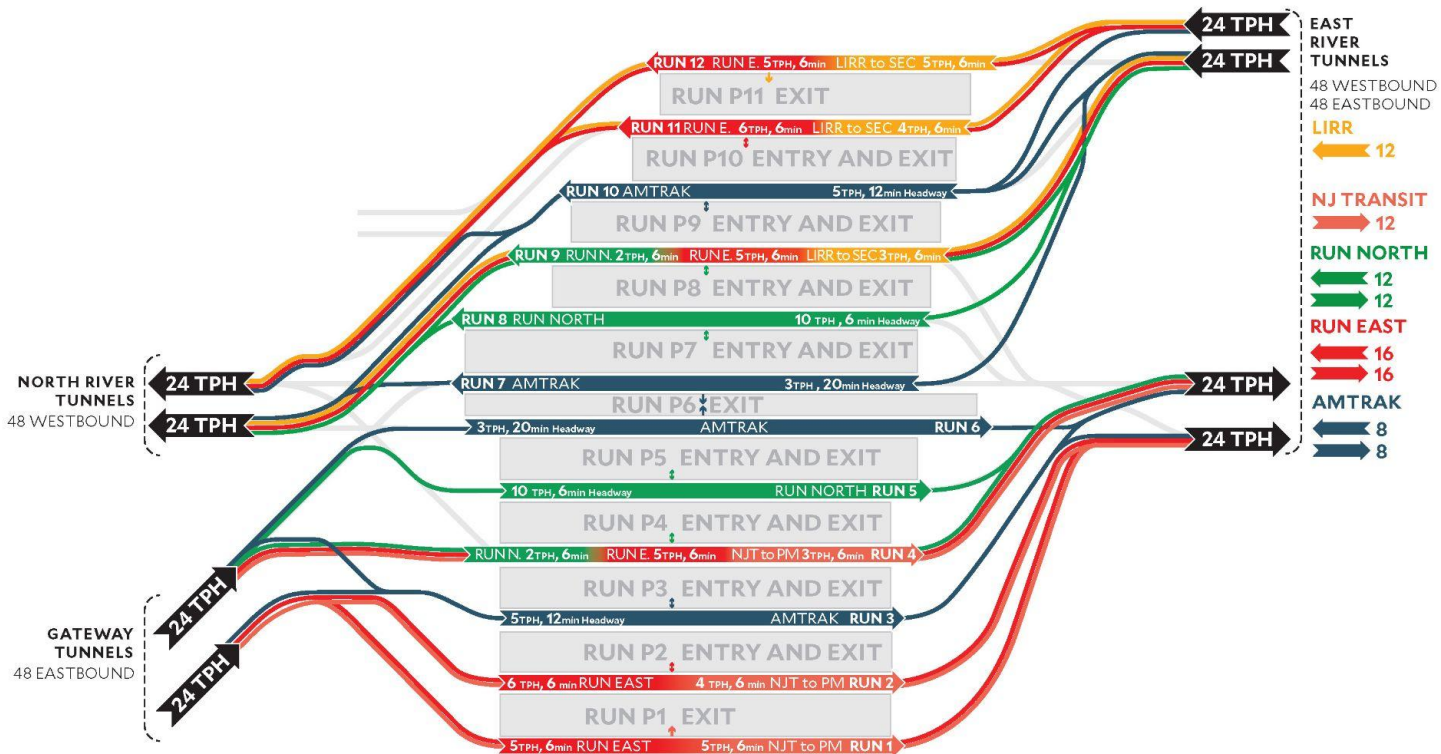
SCALE 1:2500



NOTES

- 24 TPH per Tunnel
- Reduced peak LIRR Penn service
- Increased Metro-North Penn service
- More universal rolling stock required

CAPACITY | STAGING | SERVICE



(7:30AM - 8:30AM, WEEKDAYS)

Editor's Addendum: We are One of Many Through-Running Proposals

There are other through-running proposals for Penn Station

There are other through-running proposals for Penn Station. Most of the plans would not require any neighborhood demolition at Penn Station. These include proposals by:

- Alon Levy and the Effective Transit Alliance,
- George Haikalis of the Institute for Rational Urban Mobility.
- Robert Previdi, Mysore Nagaraja and Howard Sackel
- Sanjeev Ramchandra.
- Tri-State Transportation Campaign (may require more limited demolition)

We encourage decision makers to learn of the other proposals as well. There is in these proposals a multitude of support to see through-running implemented at Penn Station in the first half of the twenty-first century and that unifying theme is welcome.