

# Now Arriving: *PATH Improvement Plan*

Adding Capacity  
Reducing Delays  
Enhancing Customer Experience

Thursday, June 20, 2019



**THE PORT AUTHORITY** OF NY & NJ



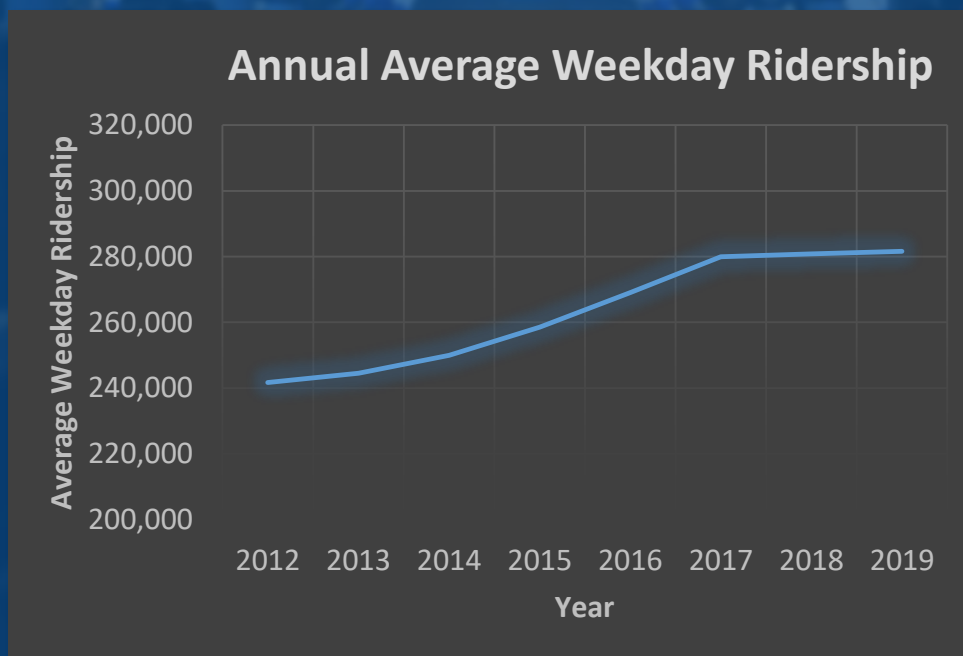
# ***PATH Improvement Plan***

## **Three Core Components**

1. Add Capacity
2. Reduce Delays
3. Enhance Customer Experience

# Add Capacity

**PATH Is Experiencing Record Ridership**  
driven by unprecedented growth in  
communities it serves



*\*2017 Ridership excluding impact of NJT summer cross-honoring*

# Add Capacity

## Goal: Increase Capacity During Rush Hours

### September 2019

Rush Hour Increase (6-10AM & 4-8PM)

- **10% Increase**
  - NWK-WTC
  - JSQ-33<sup>rd</sup>

### 4<sup>th</sup> Quarter 2022

Rush Hour Increase (6-10AM & 4-8PM)

- **40% Increase NWK-WTC**
  - ~18,000 Additional Passengers/Rush
- **20% Increase For Remaining Lines**



# Add Capacity: Phase 1

## September 2019: **10% Increase**

New Signal System Allows Trains to Run Closer Together

- Old System: Minimum of 4 minutes between trains
- New System: As few as 3 minutes between trains
- Constraint: Number of rail cars in system

## The 10% Increase Will Be Achieved By

- Adding two train sets from existing fleet into service during the AM/PM rush
- Additions on the two busiest lines (NWK-WTC & JSQ-33<sup>rd</sup>)

# Add Capacity: Phase 2

**4<sup>th</sup> Quarter 2022: \$1 Billion Investment**

## New Signal System

- \$752.6M Investment (*previously approved by board*)
- Ongoing implementation will be fully complete in 2022

## 72 New Rail Cars

- \$215.7M Investment (*previously approved by board*)
- Delivery Complete in 2022

## Station Modifications to Grove St. & Exchange Place to Enable 9-Car Trains on NWK-WTC Line

- \$80M in Capital Construction (*new recommendation to board*)
- Complete in 2022

# Add Capacity: Phase 2

**4<sup>th</sup> Quarter 2022: 40% Increase on NWK-WTC**

Every Train on NWK-WTC Will Be a 9-Car Train

3-Minute Headways During Busiest Times Will Be Maximized

Trains Will Run More Frequently Than Ever Before

Increased Service Will Phase-in Beginning in 2 Years – Mid-2021 – as New Rail Cars are Delivered



# Add Capacity: Phase 2

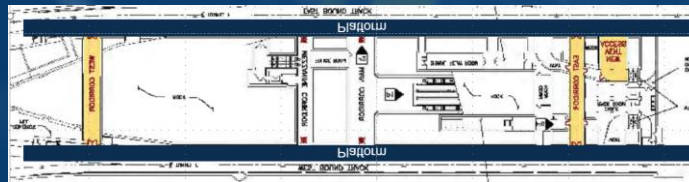
## Enabling 9-Car Operations – Grove Street

- Expand & Extend the Platform at the Marin Street End



## Enabling 9-Car Operations – Exchange Place

- Additional Cross-Corridors Creating New Exit Routes





# Add Capacity: Phase 2

**4<sup>th</sup> Quarter 2022: 20% Increase on Other Lines**

**20% Average Increase During Rush Hours for Rest of System**

- JSQ-33<sup>rd</sup>
- HOB-WTC
- HOB-33<sup>rd</sup>

**New Signal System + New Rail Cars**

- Signal System Enables Shorter Time Between Trains
- New Cars Deployed Across System
- Together Enable More Trains to Run During Rush Hours

# Add Capacity: Additional Plans

**As we phase in capacity increases, we also are funding the planning of 10-car trains to be positioned to expedite implementation in the future.**



# Reduce Delays

## Highly-Focused Plan Targeting Root Causes of Delays

- Early Impact Within Next 12-18 Months
- Full Impact Next 30 Months

Signal Issues

Switch  
Failures

Sick  
Passengers

Unattended  
Bags

Car  
Equipment  
Failures

Track  
Conditions

# Reduce Delays

## Signal Issues

- Repair Track Bed Conditions That Compromise Signal Equipment
- Continue Upgrades & Enhancements of Signal Software
- Enhanced Maintenance Procedures

## Switch Failures

- New Holistic Preventive Maintenance on Switch & Surrounding Environment Targeting Most Frequent Failures
- Cross-Disciplinary Inspections at an Increased Frequency
- Total Replacement of 43 Critical Switch Machines



# Reduce Delays

## Car Equipment Failures

- **Five Immediate Priority Initiatives to Address Root Causes of Disproportionate Amount of Delays**
  - Coupler pins, dust filters, compressed air lines, doors, HVAC
- **Car Overhaul Program**
  - 40% of fleet will be overhauled within 30 months
  - Entire fleet will complete overhaul by 2024
- **Enhanced Data Analysis to Develop Additional Maintenance Initiatives Targeted on Preventing Most Frequent Failures**

# Reduce Delays

## Track Conditions

- **Intensified Track & Structural Inspection Program**
- **Put into Service New State-Of-The-Art Ultrasonic Inspection Vehicle Within 90 Days**

Full analysis of every rail segment on quarterly basis

Identify internal/external rail defects undetectable by visual inspection

Examine track geometry to maintain track alignment, reducing adverse stress

Use infrared technology to identify “hot” joints, cables, and connections

- **Ensure Daily Visual Evaluations of Track and Track Bed Condition by Inspectors Walking the Track**
- **Create New Cross-Disciplinary Repair Teams to Promptly Respond to Issues Identified by Inspections**



# Reduce Delays

## Sick Passengers

- Twin Goals: Get Help to Passengers More Rapidly & Keep Trains Moving
- New Protocols for PATH, PAPD & EMS Personnel During Peak Periods
- PSA Campaign Aimed at Passengers Not Feeling Well – Stay on Platform Where Help is Readily Available

## Unattended Bags

- Must Be Cleared by Bomb-Sniffing PAPD K-9 Units
- Improve Protocols & Increase Availability of K-9 Units During AM Peak as Initial Pilot
- More Rapid Response Times

# Reduce Delays

## Data-Driven Maintenance

- Advanced Digital Systems Tracking of All Equipment Failures
- Focused Follow-Up to Identify Root Causes
- Real-Time Revisions of Maintenance Practices to Prevent Future Reoccurrence of Failure



# Reduce Delays

**PATH is Committed to  
Meaningful & Measurable Improvement**

**Developing Improvement Metrics & Will  
Begin Quarterly Publication in  
September**

# Enhance Customer Experience

## Crowding

- Active Platform Management
- Clear Protocols for Number of Passengers That Can Safely be on Platforms
- Visual Markers to Assist Monitoring
- Pilot Automated Crowd Counting Technology at Grove Street Station – 4Q 2019
- Platform Controllers at Busiest Stations During AM Rush
- Limit Passengers Passing Thru Turnstiles When Numerical Limit Reached Until Next Train Has Loaded to Ensure Platforms Remain Safe
- Modifying JSQ Turnstiles to Reduce Fare Zone Crowding



# Enhance Customer Experience

## New Fare Payment System: 2021/2022

- Capital Investment to Upgrade Fare Payment System
- Adopt MTA OMNY Technology
  - PATH becomes an “affiliate”
  - Financial, technical, and back office processing agreement with the MTA
  - Technology agreement with Cubic
  - Retrofit all PATH turnstiles
- Enable Mobile & Contactless Credit Cards Fare Payment
- Eliminate Need For Multiple Fare Cards
- SmartLink & Metrocard Remain Until 2023



# Enhance Customer Experience

## Elevate CX Function

- Place CX on Equal Footing as Operations & Capital Projects
- Establish Assistant Director of Passenger Communications & CX to Serve as Customer Advocate

## Provide Transparent, Timely & Actionable Information

- Improve In-Station and On-Train Announcements
- Revise PATHAlerts
- Revamp PATH Website & Continue to Enhance RidePATH App
- Display Real-Time Next Train Arrival Info on Every PATHVision Screen
- Digital Information Kiosks at Every Station



# *PATH Improvement Plan*

**Multi-Year Capital  
Investment to Enhance  
Capacity = \$1B**

**Reliability & CX Initiatives  
Total Investment Over  
Next 30 Months = \$50M**

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