

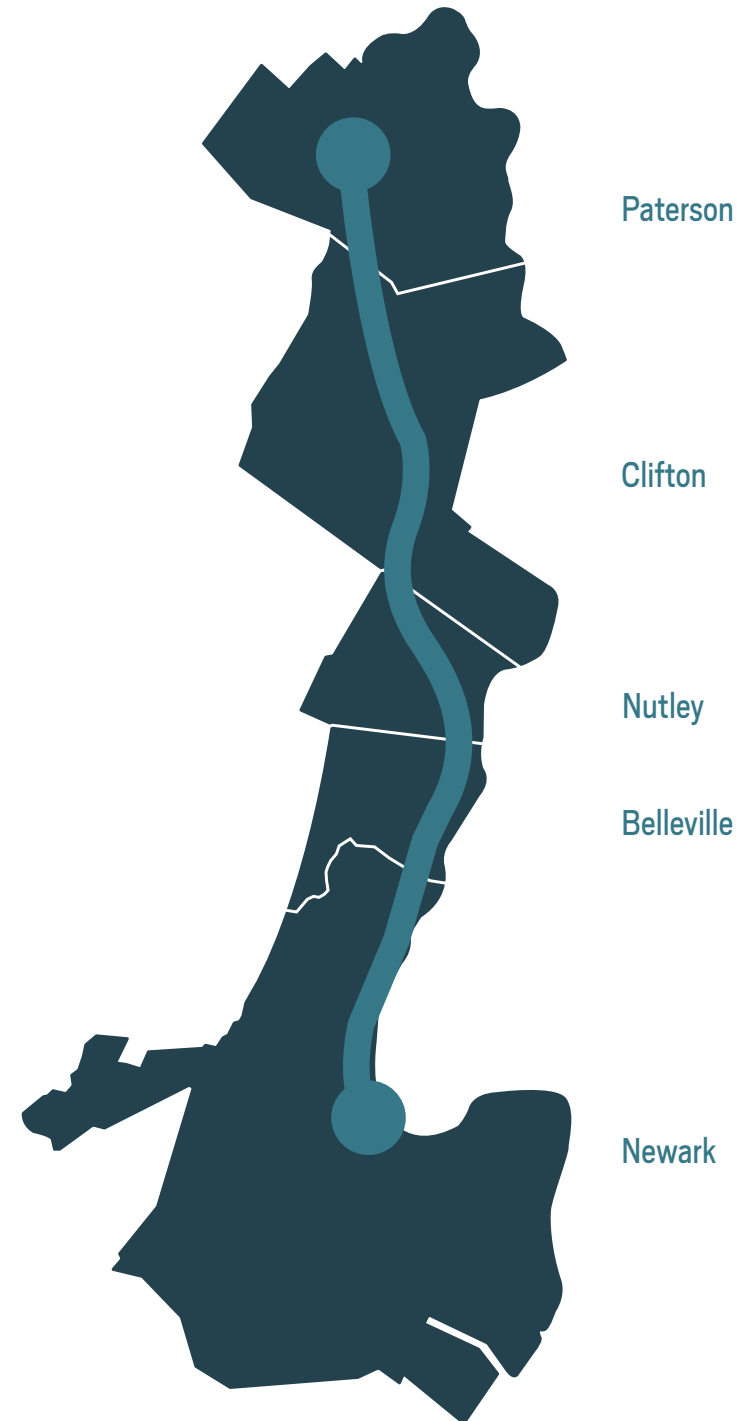
# Paterson-Newark Transit Market Study

Final Report - Executive Summary  
June 2020

Prepared for



Prepared by



# Study Partners and Organization

This report has been prepared as part of the North Jersey Transportation Planning Authority's (NJTPA) Subregional Studies Program with financing by the Federal Transit Administration and the Federal Highway Administration of the U.S. Department of Transportation. This document is disseminated under the sponsorship of the U.S. Department of Transportation in the interest of information exchange. The NJTPA is solely responsible for its contents.

The study was managed by Passaic County in partnership with Essex County. Additional guidance was generously provided by a Technical Advisory Committee, including members from each of the study area municipalities, NJ TRANSIT, New Jersey Department of Transportation (NJDOT), the NJTPA, and local stakeholders such as the Newark Alliance. Studies funded under the NJTPA's Subregional Studies Program conduct planning-level analysis.

Technical memoranda, additional reference documents, and a matrix of recommendations, timeframes, and responsible parties are housed at the NJTPA, Passaic County, and Essex County.

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# Executive Summary

The Paterson-Newark Transit Market Study is the first step in determining the feasibility and scope of implementing new, high-quality transit service between Paterson and Newark along the existing Newark Industrial Track (NIT) freight rail corridor. The goal of the study was to determine the market potential of such transit service in Passaic and Essex Counties. The objectives of the study were to:

- Provide an assessment of community characteristics, environmental justice concerns, existing infrastructure and transit service, and environmental constraints
- Identify potential station stops and alignment options connecting Paterson and Newark that serve key employment and activity centers
- Prepare projections of potential ridership (number of boardings on a train or bus), capacity, and preliminary capital/construction costs
- Provide a preliminary environmental screening and assessment
- Demonstrate economic development and value capture potential
- Integrate multimodal (bus/rail along with bicycle access) facility and travel opportunities
- Identify project development and funding opportunities

## Study Area

The study area is defined as a travel corridor between Paterson and Clifton in Passaic County and Nutley, Belleville, and Newark in Essex County. The study focuses on the area surrounding the NIT, an underused freight rail corridor,

## Study Area



and envisions the potential for eventual regional connections beyond the immediate area.

## Study Findings

The Paterson-Newark Transit Market Study demonstrates the potential benefits of a range of concepts for new, high-quality transit systems linking Paterson and Clifton in Passaic County to Nutley, Belleville, and Newark in Essex County. Transit systems such as bus rapid transit and light rail have the potential to affect mode shift from auto trips to transit and compare well with regional bus routes and commuter rail line ridership. Intersections with a wide array of multimodal travel options throughout the corridor underscore the importance of this north-south corridor and the opportunity to open up more regional travel options to a substantial ridership market.

Three conceptual alternatives were tested in NJ TRANSIT's Transit Demand Forecast Model, including two light rail (Options A and B) and Bus Rapid Transit (BRT). Technical study and ongoing conversations with partner agencies, municipalities, stakeholders, and the public provided the following takeaways:

- NJ TRANSIT's Demand Forecast Model reveals strong performance for each alternative
- Light rail and bus alternatives show ridership potential exceeding some regional rail lines
- Faster, more reliable transit between Paterson and Newark could improve travel times, job access, and regional connectivity
- The three modeled alternatives show potential to divert more than 3,000 daily automobile trips to transit by creating attractive, competitive service options
- Diverting auto trips to transit can reduce roadway and highway maintenance costs, reduce personal travel costs, mitigate regional

congestion and environmental impacts

- The alternatives herein stand to benefit environmental justice and traditionally disadvantaged populations in the corridor almost uniformly; no one alternative risks significantly higher impacts, nor do any alternatives fail to provide comparable opportunities for enhanced mobility
- Regional models such as Hudson-Bergen Light Rail, River LINE, and CTfastrak demonstrate potential for economic development and value capture surrounding transit stations
- Members of the public generally expressed support for enhanced transit options between Paterson and Newark, with a preference for light rail options over bus and desire for mixed-use, transit-supportive development along the corridor.

## Recommendations

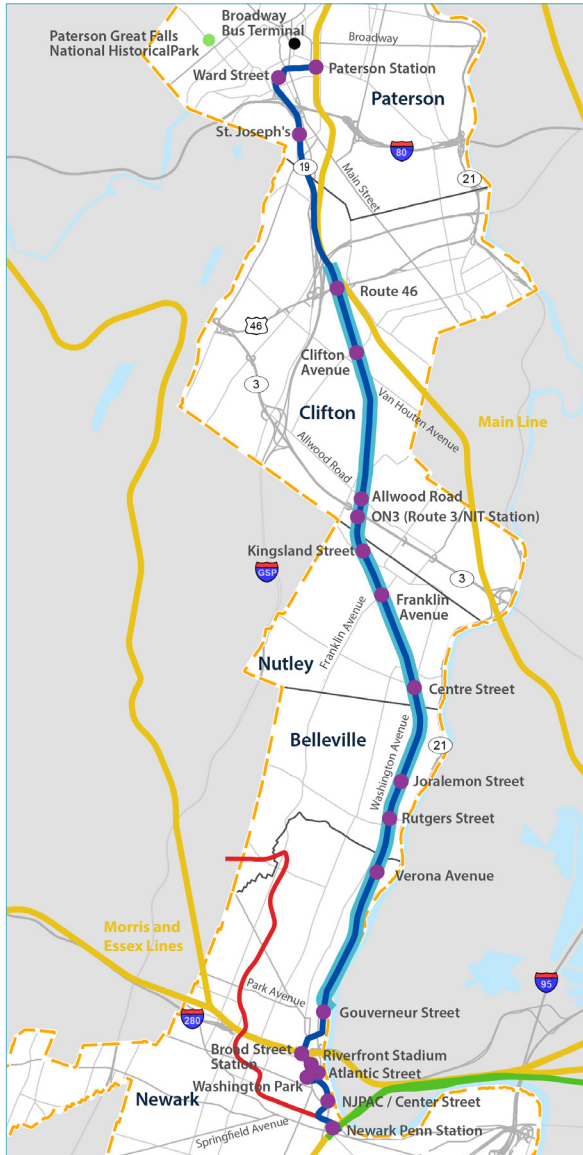
### 1 Preserve Rights-of-Way

A critical element to developing enhanced transit options in the corridor is the preservation of key right-of-way components, including the Newark Industrial Track (NIT), NJ Route 19, and local streets in Paterson and Newark in particular. Each of these rights-of-way offers the potential to prioritize transit, separate transit from general roadway congestion, and improve travel times for more cost-effective and customer-friendly service. Action should be taken now to ensure their potential use, through concerted local government and agency partnerships to plan for the next generation of transit systems.

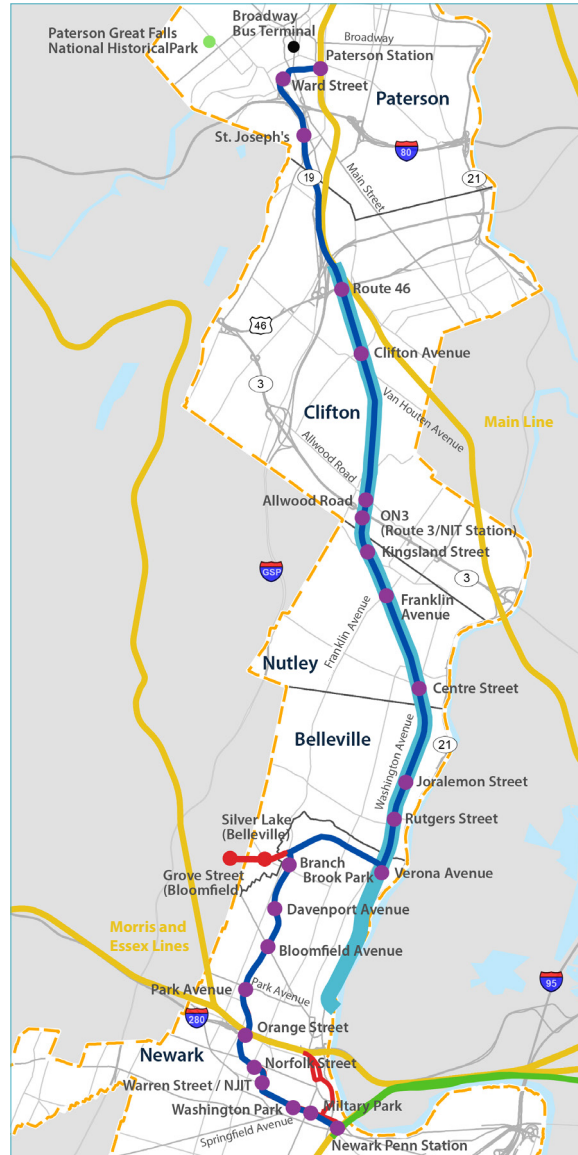
### 2 Advance to Detailed Study

This market study confirms the viability and market potential of a high-quality transit connection between Paterson and Newark. It does not

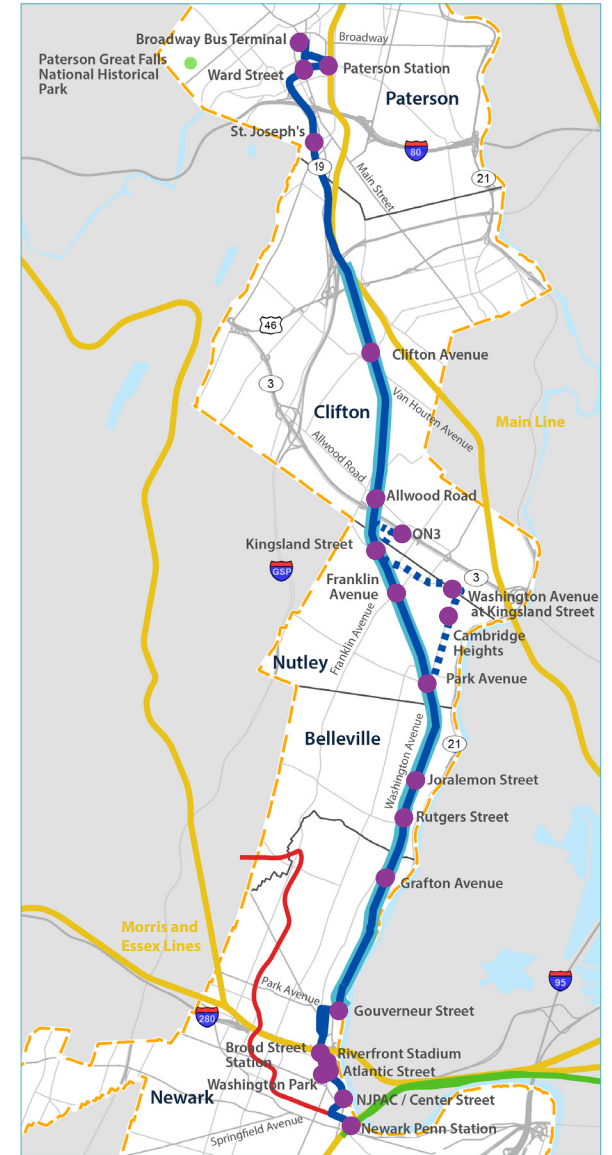
## Light Rail A



## Light Rail B



## Bus Rapid Transit



### Legend

- Alternative Alignment
- Hybrid BRT Alignment with diversion
- Newark Industrial Track
- Potential Stations
- Newark Light Rail
- NJ TRANSIT Commuter Rail
- PATH
- Study Area
- 0 0.5 1 Miles
-

provide detailed technical study of the many components of such a project. Therefore, establishing champions and a project lead to advance to more detailed technical assessments and concept development are the next steps towards advancing the concepts initially explored in this study. Detailed technical study would include:

- Alignments
- Mode choice and specification
- Station location and design
- Bicycle/pedestrian trails and greenway compatibility
- Service plan
- Maintenance and operation
- Capital and operating cost estimates
- Environmental review
- Funding and financing

### 3 Refine Demand Forecasts

As demand estimates are critical to demonstrating project potential, considerations for further enhancing ridership forecasts in future study phases include more specific station locations, parking supply and pricing, transit fares, and potential model enhancements to reflect BRT performance in other systems.

### 4 Phase Implementation

While full build of any new transit system will require significant planning, funding, and time for implementation,, initiative can be taken in the interim to expand transit connectivity and improve the performance of the existing

network. Transit signal priority and bus service enhancements are two important early actions to lay the groundwork for this project and improve regional transit travel.

### 5 Leverage Regional and Local Initiatives

The value of each individual transportation project is increased when demonstrably linked to other efforts, underway or planned, such as NJ TRANSIT's Passaic Bergen Hudson Transit Project. Transit-supportive zoning and land use at the local level sets the stage for sustainable transportation options, while local enhancements such as sidewalk network improvements provide complementary benefits including walk access to transit and increased safety and connectivity within communities.

### 6 Engage and Listen

Throughout the planning and design process (e.g., alternatives analysis, preliminary design studies, and environmental review), project partners will continue to engage the public, stakeholders, and elected officials to foster an inclusive, equitable, and beneficial investment program for local communities and the region.

## Public and Stakeholder Engagement

Thoughtful and effective engagement with the public, municipal and agency officials, and elected representatives is vital to creating a foundation of communication and trust in any planning project. Throughout the public engagement process, community members consistently expressed desire for faster, more direct transit options between Paterson and Newark and more reliable local bus service. The multi-pronged outreach effort included the following:

- **A Technical Advisory Committee** (TAC) comprised of municipal and county officials, the NJTPA, NJ TRANSIT, NJDOT, and organizations

including Newark Alliance and EZ Ride

- **Stakeholder meetings** offered opportunities for detailed technical discussions and sharing of local perspectives on the opportunities and potential concerns related to the study and associated mode and alignment options.
- **In-person public engagement** occurred early in the study. The project team held two rounds of pop-up outreach events in the vicinity of Newark Broad Street Station and Paterson City Hall in October 2019. Study team members held brief, informal conversations with transit users (and non-users) and administered a bilingual survey (English and Spanish).
- Passaic County created a **project website** with links to project materials such as summary presentations, TAC presentations, an e-survey and fact sheets. A comment box and contact information were included for public feedback.
- An **e-survey** identifying barriers and opportunities for transit in the corridor was administered from October 2019 until the conclusion of the study, including during pop-up events.
- In response to the COVID-19 pandemic, two in-person public meetings scheduled were replaced with a **virtual presentation** posted to the project website in May 2020. The presentation was available with English and Spanish subtitles. Public comments and questions were accepted for two weeks following the posting of the presentation by email, telephone, and the website comment box.

## Public and Stakeholder Comments

Members of the public and key stakeholders, including NJ TRANSIT and the Tri-State Transportation Campaign, submitted comments in response to the virtual presentation. Comments generally showed enthusiastic support for advancing one or more of the options and were consistent with project planning principles, if not necessarily the purview of this market study.

NJ TRANSIT indicated a preference for the Hybrid BRT Option, noted potentially high costs associated with light rail, and suggested that commuter rail be eliminated from consideration. Members of the public, however, preferred light rail options (especially Light Rail Option B) over bus options. Development potential near light rail stations was frequently mentioned by the public and stakeholders, and commenters suggested new development could help pay for and support new transit service.

Stakeholders and the public expressed expectations of continued engagement in the course of additional studies. Concerns were also raised about increased vehicular traffic around park and rides, with support voiced for bicycle/pedestrian paths alongside the transit alignment.

## Methodology

The study assessed current conditions (demographics, infrastructure, environment, and existing transit) developed a range of conceptual transit alternatives (light rail, commuter rail, bus), and screened these options to test market potential through NJ TRANSIT's demand forecast model. The study intent was not to identify a specific, locally preferred alternative, instead developing strong conceptual alternatives as a starting point for more detailed analysis and design.

Key data points from the model output included: year 2040 projected daily ridership by alternative (including existing and new transit segments), auto and transit trip diversions to new services, and access mode to stations. The NJ TRANSIT model produced ridership estimates for four scenarios, including the three selected alternatives and a 2040 No Build condition. The No Build is defined as future ridership on existing transit systems (bus and rail) without new transit service from Paterson to Newark. This study focused on the performance of the three modeled alternatives, with qualitative discussion of regional effects.

The following outputs are evaluated based on NJ TRANSIT's demand forecasting results:

## Ridership by Alternative (Average Daily Boardings)

Option	2040	2040	2040	2040
	No Build	Light Rail A	Light Rail B	Bus Rapid Transit
Existing Segments	20,340	27,100	23,740	N/A
New Segments	N/A	10,600	8,760	11,460
<b>Total Daily Boardings</b>	<b>20,340</b>	<b>37,700</b>	<b>32,500</b>	<b>11,460</b>

- Total ridership on proposed mode, including station estimates where appropriate
- Changes in total transit ridership in the corridor
- Shifts in mode, particularly auto trip diversions to transit
- Improved mobility in the corridor, including effects on environmental justice communities
- Throughout this study, attention was paid to potential impacts to environmental justice communities. All three transit alternatives would improve access to employment, education, and other key trip destinations in similar measure for existing environmental justice populations.

## Ridership by Alternative

Ridership is defined as passenger boardings, i.e., each time a person boards a transit vehicle. For each alternative, ridership is broken out by existing segments (in the case of the two light rail alternatives), new segments, and total daily ridership. Emphasizing the new segments associated with the three alternatives (i.e., excluding existing Newark Light Rail ridership), the three options perform comparably, and BRT exhibits the greatest new system ridership, as it does not explicitly include existing bus ridership in the corridor.

The increased ridership associated with each alternative relative to the 2040 No Build condition indicates the potential to increase overall transit usage in the corridor and to enhance ridership at existing stations on the Newark Light Rail system. Ridership includes diversions from existing transit and automobile trips, each of which offers opportunities to reallocate existing operating and maintenance resources and mitigate new project costs. The Newark Light Rail has its own well-established market base, yet stands to increase in utility as new connections are created.

## Next Steps

The study’s intent was not to recommend a specific transit project, instead developing strong conceptual alternatives as a starting point for more detailed analysis and design. Passaic and Essex Counties, along with state, regional and local partners, are encouraged to pursue an alternatives analysis to further explore design and operational considerations, impacts, and benefits of a new high-capacity transit service connecting study area municipalities. Open and ongoing engagement with the public and stakeholders is paramount.