Chapter 6: Recommendation of the Locally Preferred Alternative

6.0 INTRODUCTION

The Hudson-Bergen Light Rail (HBLR) Route 440 Extension Alternatives Analysis considers transit options to improve mobility in the western waterfront of Jersey City by providing convenient connections to the existing HBLR West Side Avenue Station. Consistent with Federal Transit Administration (FTA) requirements for its Major Capital Investments (New Starts/Small Starts) Program, the analysis identifies options for enhancing transit connectivity in the western waterfront area, evaluates potential alternatives, and is recommending a Locally Preferred Alternative (LPA).

The objective of the alternatives analysis is to identify the alternative that best meets the project's goals in order to select and advance it as the LPA. Given the redevelopment and planning efforts for the western waterfront and the mission of NJ TRANSIT, the goals were established to consider and balance the interests of all stakeholders. As shown in Chapter 1, "Background and Planning Context," the three goals are:

- Support existing and proposed development in the West Side community;
- Minimize effects on existing and proposed HBLR operations; and
- Minimize adverse effects on the built and natural environment.

An initial long list of alternatives was developed that included a Transportation Systems Management (TSM) Alternative, as required by the FTA process, and light rail alignments that extended northward, southward, and westward from the West Side Avenue Station to the Lincoln Park, Society Hill and Bayfront areas, respectively, of the western waterfront. The initial list was refined after analysis of traffic flows and operational issues on Route 440 indicated that alternatives that crossed this road at grade would be impractical and should be eliminated. The refined long list of alternatives also responded to public input by including an assessment of a new station located just east of Route 440.

The refined long list was narrowed based on the ability of each alternative to meet the project's goals. If an alternative did not at least partially meet all three goals, it was eliminated from further consideration. This analysis eliminated all alternatives extending to the north and south (terminating near Lincoln Park or Society Hill) based on inconsistency with local planning efforts, potential harm to HBLR operations, and potential substantial property impacts. Thus, six alternatives were discarded, and a short list of alternatives was advanced for further study.

The short list of alternatives consisted of:

- The TSM Alternative, a shuttle bus service between the West Side Avenue Station and the western waterfront, with stops at Society Hill (an existing residential development), the

New Jersey City University (NJCU) West Campus, and Bayfront. Shuttles would meet the arrival and departure of each HBLR train at West Side Avenue Station;

- Alternative 1A, which included a 0.7-mile, two-track extension on viaduct and an elevated center island platform terminal station at the northern end of the Bayfront site;
- Alternative 1C, which was very similar in alignment and profile to Alternative 1A, but included an intermediate station east of Route 440; and
- Alternative 1D, which did not extend to the Bayfront site but terminated at a new station just east of Route 440.

The evaluation of the short list of alternatives considered their consistency with the project's goals and with the objectives established for each goal. In order to select the LPA, the alternatives were compared to determine which best met all of the goals and their respective objectives. This analysis recommended Alternative 1A as the LPA and the elimination of the TSM Alternative and Alternatives 1C and 1D as summarized below.

- The TSM Alternative would have minimal infrastructure requirements and limited, if any, environmental impacts. It would also be far less costly to implement than the other alternatives on the short list. However, the TSM Alternative would provide, by far, the least robust improvement to transit service and would attract the fewest new riders to the HBLR system. At the same time, it would have the highest annual operating and maintenance costs and would not provide high-capacity, light-rail service to Bayfront, which is inconsistent with the City of Jersey City's approved plan for the area. Therefore, the TSM Alternative was not recommended as the LPA.
- Alternative 1C was not selected as the LPA for three main reasons: 1) it did not attract substantially more riders than Alternative 1A; 2) it had a greater impact on HBLR operations due to close spacing between stations and resultant acceleration/deceleration impacts on travel time; and 3) it was the most expensive of the four options considered in the short list.
- Alternative 1D was not selected for two main reasons: 1) it resulted in substantially fewer new riders than Alternative 1A; and 2) it did not accomplish the goals set forth in local redevelopment plans for Bayfront because it does not directly serve the proposed development, and as such, the development would not be allowed to achieve its maximum permitted density.

When all goals and objectives are considered, Alternative 1A performs better than the TSM Alternative or Alternative 1C or 1D. While Alternative 1A is more costly than the TSM Alternative and Alternative 1D, it directly serves Bayfront and generates substantially more new riders than these less costly alternatives. Alternatives 1A and 1C would have nearly the same benefits with respect to Project Goal 1 (Support existing and proposed development in the West Side community) and Project Goal 3 (Minimize adverse effects on the built and natural environment). While Alternative 1A attracts slightly fewer riders to the HBLR system than Alternative 1C, it poses less threat to the integrity of the HBLR operating plan and has lower capital, operating, and maintenance costs. Therefore, Alternative 1A fares more favorably with respect to Project Goal 2 (Minimize effects on existing and proposed HBLR operations). For these reasons, Alternative 1A is recommended as the LPA.

6.1 DESCRIPTION OF THE LOCALLY PREFERRED ALTERNATIVE

The LPA consists of a two track, 3,700-foot extension of the HBLR from West Side Avenue Station to a new Bayfront Station, which would be located west of Route 440 at the northern boundary of the Bayfront development. In addition, the LPA would result in modifications to the existing West Side Avenue Station and its parking lot. The elements of the LPA include:

- A two-track, viaduct extending 3,700 feet from the West Side Avenue Station to the west side of Route 440 at the northern boundary of the Bayfront development;
- A new Bayfront Station, consisting of a center-island platform and access and egress to and from street level;
- An interest in three properties for the proposed new right-of-way: 1) an area extending southwesterly through the Cookson Electronics site (bounded by Mallory Avenue, Culver Avenue, Route 440, and Claremont Avenue); 2) a small area within the southeast corner of parking lot of Hudson Nissan; and 3) an area extending westerly across the northern boundary of the Bayfront development (the right-of-way would also extend across the West Side Avenue Station parking lot, which is already owned by NJ TRANSIT, and over public streets);
- The replacement of the existing pedestrian bridge, stairway, and elevator that provide access across West Side Avenue between the parking lot and the West Side Avenue Station with a new structure that will include elevator and/or stairway access as well as a pedestrian walkway between the extended HBLR tracks;
- Modifications to the existing West Side Avenue Station to provide access to and from points east as well as possibly new ramp access consistent with the requirements of the Americans with Disabilities Act (ADA) on the east side of West Side Avenue; and
- Reconfiguration of the existing West Side Avenue parking lot to allow for the extension of the HBLR viaduct through it.

The estimated cost to construct the LPA, including final design, capital costs, property interests, environmental remediation, and contingencies, is $213.9 million in 2017 dollars (the estimated mid-point year of construction). The estimated annual operating and maintenance cost of the extension is $1.8 to $2.0 million in 2019 dollars (the estimated opening year).

6.2 BENEFITS OF THE LOCALLY PREFERRED ALTERNATIVE

The LPA would terminate at and provide transit access to the new development at Bayfront. Thus, the LPA would facilitate the development of Bayfront to the maximum permitted density of its approved plan. The LPA would also provide improved transit access to destinations north and south of the Bayfront development and would be consistent with plans for the NJCU West Campus. At the same time, the LPA would have minimal adverse effects on HBLR's operating schedule as well as on the built and natural environment.

The new Bayfront Station would serve 6,300 boardings on an average weekday. Absent the LPA, some of these riders would use the West Side Avenue Station, but most would be new trips diverted from automobiles or other transit modes. As shown in **Table 6-1**, there would be a net increase of 4,700 daily boardings with implementation of the LPA. The new Bayfront Station would also divert many customers from their automobiles. It is estimated that between

250 and 400 customers would no longer drive to the West Side Avenue Station and park and ride but rather would board at Bayfront. The LPA also has the potential to result in many more diversions from automobile as it would attract customers from Bayfront who might otherwise drive to their destination.

Table 6-1
Comparison of Station Boardings for the No Action Alternative and the Locally Preferred Alternative (Alternative 1A)

Mode of Travel	No Action Alternative	Locally Preferred Alternative (Alternative 1A)	Net Change
HBLR—West Side Avenue Station	4,400	2,800	▼ 1,600
HBLR—Bayfront Station	0	6,300	▲ 6,300
Total HBLR Boardings*	4,400	9,100	▲ 4,700

Note: * Total average weekday HBLR boardings at West Side Avenue and Bayfront Stations.

As noted above, based on the approved development plan, higher densities can be developed at Bayfront with direct light rail service than if no service is provided. However, FTA's forecasting methodology for its Major Capital Investments Program requires a comparison of alternatives based on a consistent baseline condition. In other words, the ridership forecasts for the No Action Alternative are higher than would actually be achieved since there may be nearly 50 percent less development at Bayfront if there is no direct HBLR service.

6.3 COST EFFECTIVENESS

NJ TRANSIT performed a preliminary analysis of transportation user benefits and annualized capital costs based on FTA's Standard Cost Categories. Resultant potential cost effectiveness indices (CEIs) for the LPA and Alternatives 1C and 1D were calculated. The CEI is a formula that measures the cost per passenger of building a project. It is created by dividing the project cost (capital and operating and maintenance costs) by the number of riders it will serve. Although not required at this stage of project development, NJ TRANSIT performed this analysis to assess the potential for any of the project alternatives to advance through FTA's Major Capital Investments (New Starts/Small Starts) Program. The analysis resulted in the following CEI results:

- Locally Preferred Alternative: $9.74
- Alternative 1C: $10.75
- Alternative 1D: $19.51

These calculations do not include small off-model user benefits adjustments for Alternatives 1C and 1D, which would slightly lower (improve) the CEI rating for these alternatives. These calculations also use the upper end of the operating cost estimate ranges for each alternative and thus show a slightly higher (worse) CEI than would otherwise be expected.

This analysis reinforces the findings of the alternatives analysis. Alternative 1D, although less expensive than the LPA and Alternative 1C, would have markedly fewer transportation benefits. Alternative 1C would be only slight less cost-effective than the LPA; however, it is

more costly. Furthermore, as described in Chapter 4, "Short List of Alternatives," impacts on existing HBLR operations make Alternative 1C less attractive.

NJ TRANSIT has performed its initial assessment of user benefits and cost effectiveness using New Starts criteria. NJ TRANSIT wished to assess, for its own purposes, the relationship between long-term capital and operating costs and long-term transportation benefits to identify the utility of advancing the Proposed Project. NJ TRANSIT's initial forecasting effort analyzed potential transit usage in 2035, the current planning horizon year for the North Jersey Transportation Planning Authority (NJTPA). Should FTA concur that the Small Starts program is appropriate for the Proposed Project, NJ TRANSIT would analyze user benefits based on alternative criteria that may be set forth by FTA and may include an earlier analysis year.

6.4 FUNDING AND FINANCING OPPORTUNITIES

NJ TRANSIT has investigated options to fund construction and operation of the LPA. As previously described, NJ TRANSIT has prepared this alternatives analysis to comply with requirements of FTA's Major Capital Investments (New Starts/Small Starts) Program. NJ TRANSIT is also looking into sources of local funds needed to match a federal grant.

6.4.1 NEW STARTS/SMALL STARTS FUNDING

FTA's Major Capital Investments (New Starts/Small Starts) Program provides capital funding for construction of new fixed guideway systems or extensions to existing fixed guideway systems. The Major Capital Investments (New Starts/Small Starts) Program is part of the federal transportation legislation that provides authorization for the federal-aid highway program, safety programs, and transit programs. The current program is funded through the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (Public Law 109-59; SAFETEA-LU) of 2005. SAFETEA-LU was set to expire in September 2009, but it has been extended several times and remains in effect. Congress is presently working on a new transportation reauthorization bill, which U.S. Transportation Secretary Ray LaHood expects to be signed in August 2011.[1] The new bill could propose modifications to the Major Capital Investments (New Starts/Small Starts) Program program.

By statute, the New Starts/Small Starts program presently requires a minimum 20 percent local match for funding. Thus, the federal government would provide 80 percent of a project's capital cost, while the applicant or an alternative local funding source would provide for 20 percent. However, FTA's rating criteria typically favor applicants with a local match of 40 percent or more.

6.4.2 LOCAL FUNDING

The New Jersey Transportation Trust Fund (TTF) has traditionally provided local match funds for transit projects in the state. Initially, the TTF was set up to provide pay-as-you-go funding for transportation projects, but in later years, the TTF Authority leveraged these revenues by issuing bonds to fund transit projects. Therefore, at the present time, virtually all TTF funding is dedicated to debt service payments, and for at least the next three years, any additional

[1] Crawley, John. "Transportation secretary optimistic about bill." *Reuters*. February 4, 2011; www.reuters.com. Accessed February 16, 2011.

available TTF funding will be committed to maintaining transit assets in a state of good repair and will not be available to fulfill the local match for establishment of new service.

As the TTF may not be available to provide a local match for the LPA, NJ TRANSIT has investigated alternative strategies to generate funds. Potential funding sources include:

- Toll Credits: The Federal Highway Administration (FHWA) permits states to effectively borrow the local match funds from the federal government with repayment through tolls collected on their highway facilities. New Jersey has leveraged these toll credits for highway and transit projects. Toll credits could be used for all or portions of a local match.
- Sale or Joint Development of Real Estate: NJ TRANSIT owns the West Side Avenue Station parking lot and would also require an interest in the Cookson Electronics site, which it may acquire through a purchase of the entire property. It is possible that NJ TRANSIT could sell portions of these properties not used for the HBLR right-of-way to a public developer or could enter into a joint development with a private developer. The sale or development of these properties could generate funds toward a local match.
- General Obligation Bonds: The City of Jersey City could issue bonds to fund the local match for an HBLR extension. The bonds would be leveraged against the future property and sales tax revenues of the Bayfront redevelopment.
- Tax Increment and Value Capture Approaches:
  - The Economic Redevelopment and Growth Grant (ERG) program administered by the New Jersey Economic Development Authority allows incremental receipts from a variety of revenue sources to be captured and rebated to a specific project in order to either fill a gap in the development pro forma (including gaps created by the need to pay for infrastructure improvements) or assure developer returns adequate for the project to proceed. In the case of the LPA, the additional borrowing capacity generated by the ERG program would allow the developer to make a substantial upfront payment toward the local match.
  - Redevelopment Area Bond (RAB): The New Jersey Redevelopment Area Bond Financing Law allows a municipality, New Jersey Economic Development Authority, or the New Jersey Redevelopment Authority to issue bonds (known as “RABs”) secured by payments in lieu of taxes (PILOTs) or special assessments for improvements in designated redevelopment areas. The PILOT is a lien against the property. The amount of bond proceeds is constrained by the PILOTs or special assessment charges associated with the phases of the redevelopment that are completed or under way.
  - Special Assessment District: The City of Jersey City has previously used supplemental assessments within a special assessment district to back infrastructure bonds financing (i.e., sewers and new street construction). The special assessment district offers the opportunity to charge the costs of providing infrastructure to those properties directly benefiting from that infrastructure. The supplemental assessment can be established as a lien against the property and can be securitized.
- Development Fees or Exactions: The City of Jersey City could impose development fees on new construction within and adjacent to the Bayfront site to fund the local match.

Similarly, the State of New Jersey could collect development fees to fund the extension through the establishment of a Transportation Development District.

- Miscellaneous Sources: NJ TRANSIT could investigate low-interest loans through the EB-5 (Immigrant Investor) Regional Center Program. NJ TRANSIT may also be able to fund capital or operating expenses through the sale of naming rights for the new HBLR station.

It is probable that NJ TRANSIT will need to layer several of the tools to fully fund the local match at the level necessary to compete for federal funding. A strategy that combines toll credits, sale or lease of excess land, upfront development fees, and securitization of future incremental tax revenues could be feasible for the LPA.

6.5 PUBLIC INVOLVEMENT

As described in Chapter 5, "Public Involvement," NJ TRANSIT has engaged in a robust public outreach effort throughout the alternatives analysis for the HBLR Route 440 Extension. The recommended LPA was presented at a Technical Advisory Committee meeting on February 1, 2011 and at a public open house on February 2, 2011. Comments on the analysis and the recommendation of an LPA were accepted for an additional two weeks following these presentations and were incorporated into this Final Alternatives Analysis Report. It should be noted that there was no major opposition to the findings of this analysis or the recommendation of the LPA.

6.6 NEXT STEPS

Following publication of the Final Alternatives Analysis Report, the NJ TRANSIT Board will vote to formally adopt the LPA in April 2011. Pending its Board's approval, NJ TRANSIT will present the LPA to NJTPA for inclusion in its fiscally-constrained long-range transportation plan. NJ TRANSIT will then coordinate with FTA to obtain environmental and design approvals and move forward on a financial plan and a formal application for the New Starts/Small Starts program. Assuming that the project is approved, NJ TRANSIT anticipates that the LPA will be operational in or about 2019.