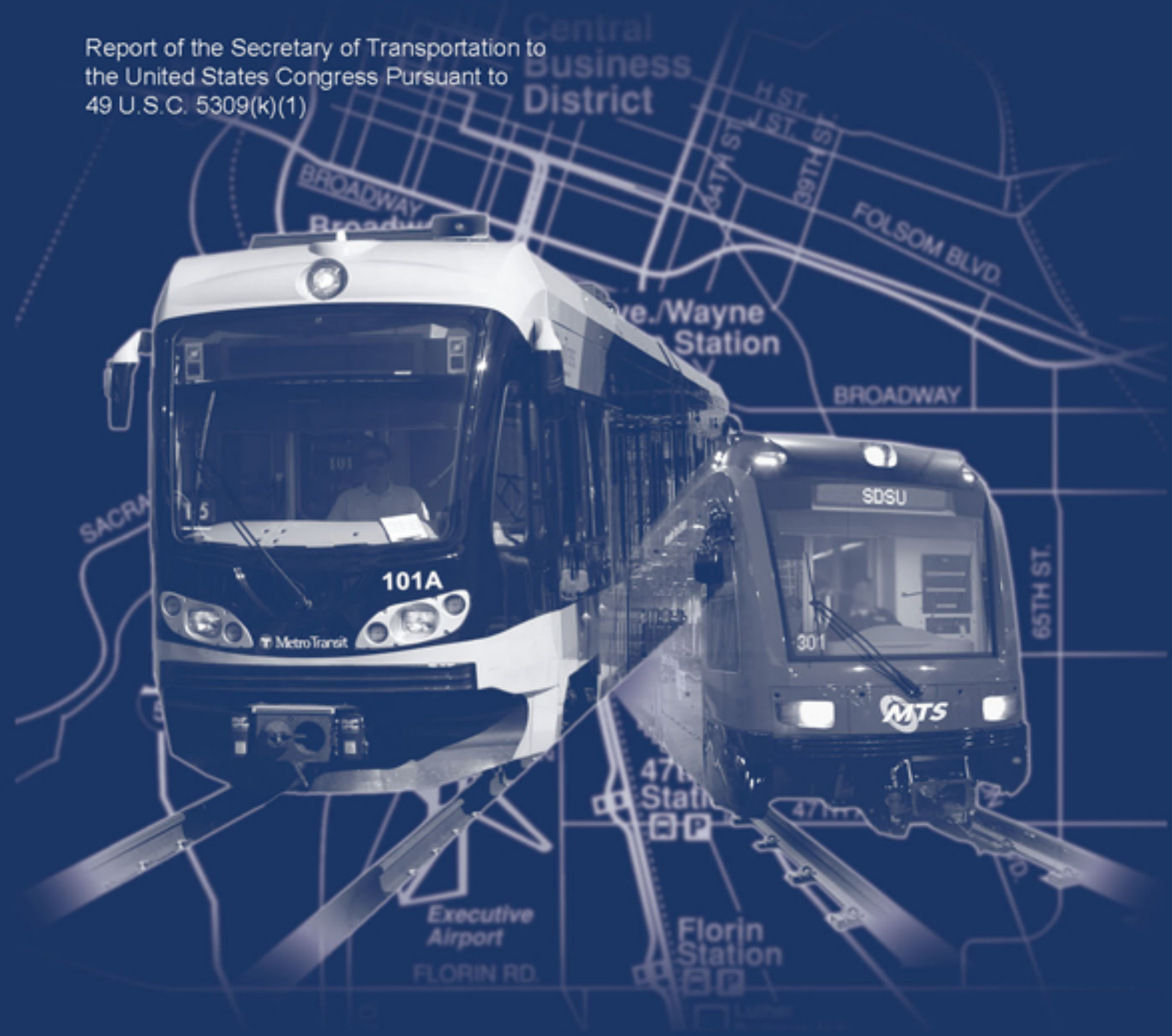
Annual Report on

New Starts

Proposed Allocations of Funds for Fiscal Year 2007

Report of the Secretary of Transportation to the United States Congress Pursuant to 49 U.S.C. 5309(k)(1)



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Federal Transit Administration

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Alphabetical List of Acronyms

Acronym	Name
AA	Alternatives Analysis
ANPRM	Advanced Notice of Proposed Rulemaking
BRT	Bus Rapid Transit
CBD	Central Business District
CMAQ	Congestion Mitigation and Air Quality
DOT	Department of Transportation
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
FONSI	Finding of No Significant Impact
FFGA	Full Funding Grant Agreement
FTA	Federal Transit Administration
FY	Fiscal Year
ISTEA	Intermodal Surface Transportation Efficiency Act of 1991
HRT	Heavy Rail Transit
LPA	Locally-Preferred Alternative
LRT	Light Rail Transit
MIS	Major Investment Study
MOS	Minimum Operable Segment
NEPA	National Environmental Policy Act
NPRM	Notice of Proposed Rulemaking
PE	Preliminary Engineering
PCGA	Project Construction Grant Agreement
ROW	Right-of-Way
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (2005)
TEA-21	Transportation Equity Act for the 21st Century (1998)
STP	Surface Transportation Program
USC	United States Code
YOE	Year of Expenditure

Executive Summary

This report provides the U.S. Department of Transportation's recommendations to Congress for the allocation of funds for the design and construction of fixed guideway New Starts and "Small Starts" capital investments for fiscal year (FY) 2007. These programs are part of the Capital Investment Grant Program provisions of 49 USC 5309, most recently reauthorized by the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) in August 2005. As required by SAFETEA-LU, this report also contains a summary of the allocation of funds made available to assist qualified projects under the Alternative Transportation in the Parks and Public Lands Program under 49 USC 5320.

The Federal Transit Administration's (FTA) discretionary New Starts program is the Federal government's primary financial resource for supporting locally-planned, implemented, and operated major transit capital investments. From heavy to light rail, from commuter rail to bus rapid transit systems, the New Starts program has helped to make possible hundreds of new or extended transit fixed guideway systems across the country. These rail and bus investments, in turn, have improved the mobility of millions of Americans, have helped to reduce congestion and improve air quality in the areas they serve, and have fostered the development of more viable, safe, and livable communities.

The President's Budget for FY 2007 proposes $1,466 million for the capital investment grant program under Section 5309. A total of $1,229.48 million is recommended for 16 existing, two pending, and five proposed Full Funding Grant Agreements (FFGA). A total of $101.86 million is proposed for four projects that are anticipated to be in final design by the Spring of 2006, pending resolution of outstanding issues, and for additional rail cars to be added to the completed Largo Metrorail Extension (metropolitan Washington D.C.) FFGA. A total of $100 million is recommended for the new Small Starts program. Finally, a total of $34.66 million is recommended for specific ferry projects, statutory funding to support the work of the Denali Commission, and New Starts oversight activities.

The pending and proposed FFGAs include projects that will likely be eligible and ready for an FFGA prior to or during FY 2007, and are presented below:

Pending FFGAs

- Long Island Rail Road East Side Access, New York, New York
- North Shore Light Rail Transit Connector, Pittsburgh, Pennsylvania

Proposed FFGAs

- West Corridor LRT, Denver, Colorado
- South Corridor I-205/Portland Mall LRT, Portland, Oregon
- Wilsonville to Beaverton Commuter Rail, Washington County, Oregon
- Northwest/Southeast LRT MOS, Dallas, Texas
- Weber County to Salt Lake City Commuter Rail, Salt Lake City, Utah

FTA proposes FY 2007 funding for five other projects. Four of these projects are not advanced to the point of being considered for an FFGA at this time, but demonstrate that they are making

progress towards consideration for an FFGA in the near future. Each of these four projects is rated *Medium* or higher; possesses a *Medium* or better cost effectiveness rating or is exempted from the requirement for a *Medium* cost effectiveness rating; and is expected to be in final design by the Spring of 2006, pending resolution of outstanding issues. These projects are as follows:

- Second Avenue Subway MOS, New York, NY
- Dulles Corridor Metrorail Project - Extension to Wiehle Avenue, Northern Virginia
- Norfolk LRT, Norfolk, VA
- University Link LRT Extension, Seattle, WA

The fifth project is the Largo Metrorail Extension, which completed an FFGA in FY 2005 and began revenue service in December 2004. Section 3043(a)(31) and 3043(j) of SAFETEA-LU authorizes the inclusion of an additional 52 rapid rail cars in the Largo Metrorail Extension FFGA. By this mandate, FTA has included the Largo Metrorail Extension in this funding category, even though the original FFGA has been completed and revenue service for this project has begun.

These project recommendations, as well as the funding reserved for Small Starts, ferry projects, the Denali Commission, and project management oversight, form the basis of the President's annual budget submission for the New Starts program. All funding for the New Starts program is subject to the annual Federal appropriations process.

SAFETEA-LU Section 3021(a), which added Section 5320 to title 49 of the United States Code, established a new program to fund alternative transportation projects in national parks and public lands. Section 5320 stipulates that the Secretary of Transportation annually submit a report on the allocation of amounts made available to assist qualified projects under this section, and that this information is to be included in the Annual Report on New Starts submitted under Section 5309(k)(1). In December 2005, Congress appropriated $22 million for the Alternative Transportation in the Parks and Public Lands program for FY 2006, consistent with funding levels authorized in SAFETEA-LU. At the time of this publication, the allocation of these funds was not yet determined by the Department of Transportation and the Department of the Interior. It is anticipated that the *FY 2008 Annual Report on New Starts* will include a report on the funds allocated under Section 5320 once projects have been selected.

Introduction

This report provides the U.S. Department of Transportation's recommendations to Congress for the allocation of funds for the construction of new fixed guideway systems and extensions (49 USC 5309(d) – Major Capital Investment Grants of $75,000,000 or More, or "New Starts," and 49 USC 5309(e) – Capital Investment Grants of Less Than $75,000,000 or "Small Starts") for fiscal year (FY) 2007. The *Annual Report on New Starts* for FY 2007 is a collateral document to the President's annual budget submission to Congress. It is important in the administration of the Federal transit assistance program, and improves the information exchange between the Executive and Legislative branches at the beginning of an appropriations cycle for the next fiscal year.

The mandate for the *Annual Report on New Starts* is a continuation of provisions first established by the Transportation Equity Act for the 21st Century (TEA-21) in 1998 and reauthorized by the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), signed into law on August 10, 2005. SAFETEA-LU made some changes to the New Starts program, including the creation of a new sister program (Small Starts) for capital investment grants of less than $75 million.

The President's Budget for FY 2007 proposes $1,466 million for the capital investment grant program under Section 5309. A total of $1,229.48 million is recommended for 16 existing, two pending, and five proposed Full Funding Grant Agreements (FFGA). A total of $101.86 million is proposed for four projects that are anticipated to be in final design by the Spring of 2006, pending resolution of outstanding issues, and for additional rail cars to be added to the completed Largo Metrorail Extension (metropolitan Washington D.C.) FFGA. A total of $100 million is recommended for the new Small Starts program. Finally, a total of $34.66 million is recommended for specific ferry projects, statutory funding to support the work of the Denali Commission, and New Starts oversight activities. See Table 1 on page 6 for funding details on these recommendations.

In addition to funding recommendations, Appendix A of the *FY 2007 Annual Report on New Starts* provides the status of 16 existing FFGA projects currently under construction; detailed results of FTA's evaluation of the merit and local financial commitment of 20 major capital investment projects in preliminary engineering (PE) and final design; and brief summaries of the status of four projects in PE or final design which are requesting less than $25 million in New Starts funding and therefore exempt from the New Starts evaluation process. Appendix B describes the measures, rating breakpoints, and overall process followed by FTA for evaluating projects currently in PE and final design which are pursuing an FFGA.

FTA is currently working with stakeholders and grantees to issue a joint Small Starts/New Starts Notice of Proposed Rulemaking in September 2006, with a Final Rule to be published in mid-2007. As a first step, FTA published in January 2006 policy guidance on the project evaluation process that FTA intends to follow for fiscal year 2008 budget recommendations. With input from stakeholders from around the country through both formal and informal listening sessions and discussions, FTA also published an Advanced Notice of Proposed Rulemaking (ANPRM) on the Small Starts subprogram in early 2006. The ANPRM acts as a testing document to raise pertinent issues for discussion with stakeholders. As rulemaking is still in progress at the time of publication of the President's FY 2007 annual budget, FTA has budgeted $100 million of the Small Starts funding authorized by Congress for FY 2007 without

recommending funding for any specific projects. If worthy Small Starts projects emerge over the next several months, FTA may make project-specific recommendations when Congress is considering its FY 2007 appropriations decisions.

Principles for Funding Recommendations

The funding recommendations in this report are the result of an extensive project development and evaluation process, which is described in detail in Appendix B to this report. To be eligible for an FTA funding recommendation, proposed New Starts projects must complete the appropriate steps in the planning and project development process and, per SAFETEA-LU, receive an overall project rating of *Medium* or higher.

SAFETEA-LU replaced the three-level project rating scale of "Highly Recommended," "Recommended," and "Not Recommended" established by TEA-21 with a five-level scale of "*High*," "*Medium-High*," "*Medium*," "*Medium-Low*," and "*Low*." SAFETEA-LU further requires that only those projects rated *Medium* or higher may be recommended for funding. However, it must be noted that project ratings are intended only to reflect the "worthiness" of each project, not the "readiness" of a project for an FFGA or other funding recommendation. Proposed projects that are rated *Medium* or higher will be eligible for multi-year funding recommendations in the President's budget if funding is available and the candidate project's proposed scope, cost estimate, and budget are considered final. In addition, notwithstanding their overall project rating, FTA will not generally recommend for funding any project which does not achieve a rating of at least *Medium* for cost effectiveness, unless the project has been exempted from this policy.

When recommending annual funding allocations among proposed New Starts projects, FTA applies the following general principles:

- Any project recommended for new funding commitments should meet the project justification, finance, and process criteria established by Sections 5309(e) and 5309(d) and be consistent with Executive Order 12893, *Principles for Federal Infrastructure Investments*, issued January 26, 1994.
- Existing FFGA commitments should be honored before any additional funding recommendations are made, to the extent that funds can be obligated for these projects in the coming fiscal year.
- The FFGA defines the terms of the Federal commitment to a specific project, including funding. Upon completion of an FFGA, the Federal funding commitment has been fulfilled. Additional project funding will not be recommended. Any additional costs beyond the scope of the Federal commitment are the responsibility of the grantee, although FTA works closely with grantees to identify and implement strategies for containing capital costs at the level included in the FFGA at the time it was executed.
- Funding for initial planning efforts such as alternatives analysis is no longer eligible for Section 5309 funding under SAFETEA-LU, but may be provided through grants under the Section 5303 Metropolitan Planning or Section 5307 Urbanized Area Formula programs or from the newly created Section 5339 Alternatives Analysis program.

- Firm funding commitments, embodied in FFGAs, will not be made until projects demonstrate that they are ready for an FFGA, i.e. the final design process has progressed to the point where the project scope, costs, benefits, and impacts are considered firm and final.
- Funding should be provided to the most worthy investments to allow them to proceed through the process on a reasonable schedule, to the extent that funds can be obligated to such projects in the upcoming fiscal year. Funding decisions will be based on the results of the project evaluation process and resulting finance, justification, and overall ratings.

FTA emphasizes that project evaluation and rating is an on-going process. As proposed New Starts projects proceed through the project development process, information concerning costs, benefits, and impacts is refined and the ratings may be reassessed to reflect new information.

A Word about Multi-Year Funding Grant Agreements

FTA and sponsors of New Starts projects enter into a multi-year contractual agreement that formally establishes the maximum level of Federal financial assistance and outlines the terms and conditions of Federal financial participation. For projects requiring $75 million or more in New Starts funding, the agreement is called a Full Funding Grant Agreement (FFGA). For projects requiring less than $75 million in New Starts funding with a total project cost of less than $250 million, the agreement is called a Project Construction Grant Agreement (PCGA). The FFGA/PCGA defines the project, including cost, scope, and schedule; commits to a maximum level of New Starts financial assistance (subject to appropriation); establishes the terms and conditions of Federal financial participation; defines the period of time for completion of the project; and helps FTA and the project sponsor manage the project in accordance with Federal law.

The FFGA/PCGA assures the grantee of predictable Federal financial support for the project (subject to Congressional appropriations), while placing a limitation on the amount of this support. Thus, an FFGA/PCGA limits the exposure of the Federal government to cost increases that may result if project design, engineering, and/or project management is not adequately performed at the local level. While FTA is responsible for ensuring that planning projections are based on realistic assumptions and that design and construction follow acceptable industry practices, it is the responsibility of project sponsors to properly manage, design, engineer and construct projects. FTA is not directly involved in the design and construction of New Starts/Small Starts projects but does utilize its Project Management Oversight Program to obtain independent feedback on project status and progress, including the establishment of scope, budget, and schedule, as well as provide guidance on management, construction, and quality assurance practices.

Additional information and guidance on developing FFGAs is contained in further detail in FTA Circular 5200.1A, Full Funding Grant Agreements Guidance, dated December 5, 2002, and the FTA Rule on Project Management Oversight (49 CFR Part 633). More details, as well as the opportunity to help FTA further define the Small Starts PCGA development process, will be provided in the coming months through the rulemaking process.

Table 1 - FY 2007 Funding for New Starts Projects

	Project	Area	Overall Project Rating	FY 2005 and Previous Funding	FY 2006 Enacted	FY 2007 Request	Remaining FFGA Funding	Total FFGA Funding
Totals by Phase								
Existing Full Funding Grant Agreements				$3,286,631,999	$733,667,899	$571,878,399	$849,211,557	$5,441,389,854
Pending FFGAs				349,520,939	387,139,500	355,000,000		
Proposed FFGAs				48,903,049	40,184,100	302,600,000		
Other Projects				468,345,947	53,905,500	101,861,601		
Small Starts				N/A	N/A	100,000,000		
Oversight Activities				14,380,000	11,659,273	14,660,000		
Ferry Capital Projects (AK or HI)				10,210,000	14,701,500	15,000,000		
Denali Commission				N/A	4,900,500	5,000,000		
GRAND TOTAL				**$4,177,991,934** (2)	**$1,246,158,272** (1, 2)	**$1,466,000,000**		
Existing Full Funding Grant Agreements								
AZ	Central Phoenix/East Valley Light Rail	Phoenix	FFGA	$132,659,097	$88,209,000	90,000,000	$276,331,903	$587,200,000
CA	Metro Gold Line Eastside Extension	Los Angeles	FFGA	76,785,449 (3)	78,408,000	100,000,000	235,506,551	490,700,000
CA	Mission Valley East LRT Extension	San Diego	FFGA	321,604,576	7,546,770	806,654	0	329,958,000
CA	Oceanside-Escondido Rail Corridor	San Diego	FFGA	139,448,939	11,967,021	684,040	0	152,100,000
CA	BART Extension to San Francisco Airport	San Francisco	FFGA	667,344,320	80,230,986	2,424,694	0	750,000,000
CO	Southeast Corridor LRT	Denver	FFGA	287,807,242	78,408,000	80,000,000	78,784,758	525,000,000
IL	Douglas Branch Reconstruction	Chicago	FFGA	274,274,810	44,251,515	1,573,675	0	320,100,000
IL	Ravenswood Line Extension	Chicago	FFGA	60,367,385	39,204,000	40,000,000	105,948,615	245,520,000
IL	Union-Pacific West Line Extension	Chicago	FFGA	66,476,249	13,029,773	1,255,978	0	80,762,000
MD	Central LRT Double-Track	Baltimore	FFGA	107,344,336	12,172,842	482,822	0	120,000,000
NC	South Corridor LRT	Charlotte	FFGA	68,290,435 (4)	53,905,500	70,744,065	0	192,940,000
NJ	Hudson-Bergen MOS-2	Northern NJ	FFGA	246,797,005	98,010,000	100,000,000	55,192,995	500,000,000
OH	Euclid Corridor Transportation Project	Cleveland	FFGA	57,225,487 (5)	24,281,500	693,013	0	82,200,000
OR	Interstate MAX LRT Extension	Portland	FFGA	239,207,450 (6)	17,749,610	542,940	0	257,500,000
PR	Tren Urbano	San Juan	FFGA	296,853,954 (7)	7,885,382	2,670,518	0	307,409,854
WA	Central Link Initial Segment	Seattle	FFGA	244,145,265	78,408,000	80,000,000	97,446,735	500,000,000
Total Existing Full Funding Grant Agreements				**$3,286,631,999**	**$733,667,899**	**571,878,399**	**$849,211,557**	**$5,441,389,854**
Pending Full Funding Grant Agreements								
NY	Long Island Rail Road East Side Access	New York	Medium	$254,532,826	$333,234,000	300,000,000		
PA	North Shore LRT Connector	Pittsburgh	Medium	94,988,113	53,905,500	55,000,000		
Total Pending Full Funding Grant Agreements				**$349,520,939**	**$387,139,500**	**355,000,000**		
Proposed Full Funding Grant Agreements								
CO	West Corridor LRT	Denver	Medium	$0	$4,900,500	35,000,000		
OR	South Corridor I-205/Portland Mall LRT	Portland	Medium	0	0	80,000,000		
OR	Wilsonville to Beaverton Commuter Rail	Washington County	Medium	16,561,727	14,701,500	27,600,000		
TX	Northwest/Southeast LRT MOS	Dallas	Medium	9,429,800	11,761,200	80,000,000		
UT	Weber County to Salt Lake City Commuter Rail	Salt Lake City	Medium	22,911,522	8,820,900	80,000,000		
Total Proposed Full Funding Grant Agreements				**$48,903,049**	**$40,184,100**	**302,600,000**		
Other Projects								
DC	Largo Metrorail Extension	Washington	--	$260,300,000 (8)	0			
NY	Second Avenue Subway MOS	New York	Medium	$8,915,549	$24,502,500			
VA	Dulles Corridor Metrorail Project-Extension to Wiehle Ave.	Northern Virginia	Medium	186,231,364	29,403,000			
VA	Norfolk LRT	Norfolk	Medium	12,899,034	0			
WA	University Link LRT Extension	Seattle	High	0	0			
Total Other Projects				**$468,345,947**	**$53,905,500**	**101,861,601**		
Total Small Starts				**$0**	**$0**	**100,000,000**		

Notes
1. Total does not reflect total FY 2006 Appropriations of $1,487,970,000 which includes projects not recommended for FY 2007 funding.
2. Funding for oversight has been deducted from each listed project in FY2006 and FY2005 and previous funding
3. Does not include $3,873,958 in prior year funds not included in FFGA.
4. Does not include $3,880,000 for MIS and funds used for North Corridor and Rock Hill to Charlotte
5. Does not include $2,500,000 in prior year funds not included in FFGA.
6. Does not include $5,958,137 in prior year funds not included in FFGA.
7. Does not include $4,962,500 in prior year funds not included in FFGA.
8. Project completed original FFGA funding in FY2005, however SAFETEA-LU authorized the inclusion of funding for additional rail vehicles.

FY 2007 Funding Allocations and Recommendations

The President's Budget for FY 2007 proposes $1,466 million for the capital investment grant program under Section 5309. A total of $1331.34 million is recommended for existing or pending Full Funding Grant Agreements (FFGAs), proposed FFGAs, and several other projects. In addition, $100 million is recommended for the new Small Starts program. Finally, $34.66 million is recommended for specific ferry projects, statutory funding to support the work of the Denali Commission, and New Starts program management oversight activities.

Existing FFGAs

Sixteen projects have existing FFGAs that commit FTA to request from Congress a specified level of major capital investment funding in a given fiscal year, based on the budget and schedule for the project. The schedule of Federal funding over the span of the FFGA is listed in Attachment 6 of these FFGAs. FTA has reviewed the progress of each of these 16 projects and is requesting $571.88 million, which is the full amount reflected in Attachment 6 for these projects for FY 2007. Descriptions of each of these projects can be found in Appendix A.

Pending FFGAs

Two projects are currently pending issuance of an FFGA: the Long Island Rail Road East Side Access project in New York, New York, and the North Shore Light Rail Transit (LRT) Connector in Pittsburgh, Pennsylvania. Both projects are rated *Medium*. For these two projects, FTA recommends a total of $355.00 million in New Starts funding in FY 2007. The funding recommendations for these projects reflect the proposed funding level in the unexecuted FFGAs as currently drafted. Appendix A provides a detailed description of both projects, including their most recent New Starts rating.

New York: New York, Long Island Rail Road East Side Access

The Metropolitan Transportation Authority (MTA) and the Long Island Rail Road (LIRR) propose to construct a new direct 3.5-mile commuter rail extension from LIRR's Main and Port Washington Branch Lines in Long Island and Queens, to Grand Central Terminal (GCT) on Manhattan's East Side. The project includes the construction of a new station in the Sunnyside area of Queens, and new tunnels beneath Sunnyside Yard connecting to the currently unused lower level of the 63rd Street Tunnel beneath the East River. In Manhattan, the project would continue west beneath 63rd Street and towards Park Avenue under the Lexington Avenue subway, turning south beneath the existing MTA-Metro North Railroad tracks under Park Avenue to a new LIRR passenger concourse in the lower level of GCT. At GCT, the project would provide new tracks, platforms, waiting areas, ticket windows, and other services.

The current highway system and East River crossings (bridges and tunnels) to Manhattan from Nassau/Suffolk (and parts of eastern Queens) are at capacity and subject to severe congestion and long delays. Expansion of the highway network is not feasible due to lack of available rights-of-way, high costs, and potentially adverse environmental impacts in a "severe" non-attainment area for ozone. The LIRR operates at capacity in this area with peak service of 37 trains per hour into its only Manhattan terminal at Penn Station. Nearly half of LIRR's 106,000 existing daily riders have destinations on Manhattan's East Side, and currently spend approximately 20 minutes "doubling back" from Penn Station on the island's West Side. Without the project, future LIRR trains to Penn Station will be severely congested, and are projected to operate at 27 percent over their passenger-carrying capacity. This level of crowding and discomfort would discourage or prevent new riders from using the LIRR to reach Manhattan.

By redirecting trains to GCT, this congestion would be relieved and added capacity for Amtrak and New Jersey Transit service would be created at Penn Station.

MTA/LIRR completed a Final Environmental Impact Statement (EIS) in March 2001, and FTA issued an environmental Record of Decision in May 2001. FTA approved the project into final design in February 2002. The project was recommended for an FFGA in the FY 2005 and 2006 President's Budgets. Execution of the FFGA was delayed because the MTA's 2005-2009 capital program did not include expected revenues for the project. MTA and State budget officials are currently solidifying financing strategies to implement the project, including the use of recently approved bond revenues. FTA expects to execute an FFGA for the project in FY 2006. Revenue operations for the project are planned to begin in 2012.

SAFETEA-LU Section 3043(b)(20) authorizes the New York Long Island Rail Road East Side Access project for final design and construction. The capital cost of the 3.5-mile East Side Access project is estimated to be $7,779.3 million, including $1,474.6 million in finance costs. MTA/LIRR is seeking $2,632.1 million, or less than 34 percent of total project costs, in New Starts funding. FTA notes that MTA's New Starts funding request is significantly higher than what has historically been provided by FTA to other major transit capital investment projects, but the New Starts share of 34 percent is significantly lower than most other proposed projects. Through FY 2006, Congress has appropriated $587.77 million in New Starts funding for this project. FTA recommends $300.00 million in New Starts funds for this project in FY 2007.

Pennsylvania: Pittsburgh, North Shore Light Rail Transit Connector

The Port Authority of Allegheny County (Port Authority) is proposing to design and construct a light rail transit (LRT) extension that would link the Golden Triangle area of downtown Pittsburgh across the Allegheny River to the rapidly developing North Shore and Strip District areas. The proposed project would be constructed primarily underground, extending 1.2 miles from the existing Gateway LRT station to the North Shore via two bored tunnels below the Allegheny River. This LRT line would continue through the North Shore area as a mix of below-grade and elevated alignments. The project as currently scoped also includes a 0.3-mile spur from the existing Steel Plaza LRT station in downtown Pittsburgh to the David L. Lawrence Convention Center. Four stations would be constructed as part of the total project: a reconfigured and expanded Gateway station to facilitate the tie-in to the existing system; two new stations on the North Shore; and the Convention Center station to be located underground at 11th Street near the Convention Center. Four new light rail vehicles would be procured through the project. Service would be provided at better than three-minute frequencies during peak periods.

Pittsburgh's North Shore is one of the fastest redeveloping areas in the city. Traffic congestion is prevalent in the area during peak commuter periods, weekends, and before and after events at PNC Park and Heinz Field, which reduces the speed, reliability, and effectiveness of bus transit. Physical barriers created by the Allegheny River and the surrounding terrain prohibit any feasible roadway expansion. The proposed project is designed to improve transit service in the area by providing quick, convenient, and reliable LRT connections between key downtown trip generators. The project is further intended to serve a variety of travel markets, including LRT riders now transferring to buses in the Golden Triangle to continue to the North Shore, commuters using fringe parking on the North Shore to travel to the Golden Triangle, and students of Allegheny County Community College located on the North Shore.

The Port Authority completed a Final EIS in April 2002; FTA issued the NEPA Record of Decision in July 2002 and approved the project's entry into final design in April 2003. The project was recommended for an FFGA in the President's FY 2006 Budget; congressional review of the agreement and attendant documents was completed in July 2005. Due to increases in project costs, the Port Authority is developing a revised project scope within the original FFGA baseline cost estimate for FTA consideration. FTA expects to execute an FFGA for the Pittsburgh North Shore LRT Connector project in FY 2006. Revenue operations are planned to begin in 2011.

SAFETEA-LU Section 3043(b)(26) authorizes the Pittsburgh North Shore Connector project for final design and construction. The capital cost estimate for the North Shore LRT Connector project is estimated to be $393.0 million, of which the Port Authority is seeking $217.7 million, or 55 percent, in New Starts funding. Through FY 2006, Congress has appropriated $148.89 million in New Starts funding for this project. FTA recommends $55.00 million in New Starts funds for this project in FY 2007.

Proposed FFGAs

In addition to the funding recommendations for existing and pending Federal commitments discussed above, FTA anticipates that five projects will be ready for new FFGAs before the end of FY 2007: the West Corridor LRT project in Denver, Colorado; the South Corridor I-205/Portland Mall LRT project in Portland, Oregon; the Wilsonville to Beaverton Commuter Rail project in Washington County, Oregon; the Northwest/Southeast LRT MOS project in Dallas, Texas; and the Weber County to Salt Lake City Commuter Rail project in Salt Lake City, Utah.

In anticipation of these commitments, FTA recommends that a total of $302.60 million be appropriated for these projects in FY 2007. These projects received project ratings of *Medium* or higher under the criteria specified by SAFETEA-LU, and have either a *Medium* rating for cost effectiveness or have been specifically exempted from the requirement for a *Medium* cost effectiveness rating. The $302.60 million funding recommendation is based on the anticipated capital needs of each of these projects in FY 2007. Each project was authorized in SAFETEA-LU for final design and construction. The summary descriptions provided in the following pages are presented alphabetically by State. More detailed descriptions of these projects are included in Appendix A.

Colorado: Denver, West Corridor LRT

The Regional Transportation District (RTD) is proposing the West Corridor project, a 12-station, 12.1-mile light rail transit (LRT) system extending from RTD's existing LRT line near Colfax Avenue and Interstate 25 (I-25), and following the former Associated Rail right-of-way and US 6, to US 6 / US 40 in Jefferson County, Colorado. The proposed project connects with the Central Platte Valley light rail extension and the Central Corridor light rail line at the existing Auraria station in downtown Denver. The West Corridor LRT would also provide connections to the second largest employment center in the Denver metropolitan area, the Denver Tech Center, via the Southeast Corridor light rail line currently under construction.

The West Corridor LRT parallels West 6th Avenue, which carries the second highest traffic volume in the region. Regional projections indicate that local traffic will increase 20 percent by 2025, and population and employment will increase by approximately one-third. Intended as a

high-capacity transit alternative to West 6th Avenue, the West Corridor LRT project is designed to improve transit travel times in the corridor and to increase transit connectivity to regional employment centers currently underserved by public transportation.

RTD completed a Final EIS in October 2003 and FTA issued a NEPA Record of Decision in April 2004. In November 2004, Denver-area voters passed RTD's FasTracks funding plan, which increases RTD's sales tax revenues and is anticipated to support the construction of over 100 miles of new rail transit (including the Denver West LRT project) and a 24 percent increase in local bus service. FTA approved the West Corridor LRT project into final design in August 2005. FTA expects to execute an FFGA for the project in late FY 2006 or 2007. Revenue operations are scheduled to begin in 2013.

SAFETEA-LU Section 3043(b)(7) authorizes the Denver West Corridor LRT project for final design and construction. The capital cost for the 12.1-mile West Corridor LRT project is estimated to be $593.0 million, of which RTD is seeking $290.6 million, or 49 percent, in New Starts funding. Through FY 2006, Congress has appropriated $4.90 million in New Starts funding for this project. FTA recommends $35.00 million in New Starts funds for this project in FY 2007.

Oregon: Portland/South Corridor I-205/Portland Mall LRT

The Tri-County Metropolitan Transportation District (TriMet) and Portland Metro, the region's metropolitan planning organization, are proposing to construct 8.3 miles of new light rail transit (LRT) guideway consisting of two segments connecting to the existing "MAX" LRT system along Interstate 84 (I-84). Long-range regional forecasts point toward increasing traffic congestion along the I-205 corridor, for trips both originating and terminating in the southeastern metropolitan Portland area. The intent of the South Corridor I-205/Portland Mall LRT project is to address increased travel demand in this rapidly growing corridor; to provide additional fixed guideway access between regional activity centers; and to help the Portland region achieve its land use, development, and growth management goals and objectives.

The first segment of the proposed project is a 6.5-mile double-track line that runs north/south and parallel to I-205, connecting the Clackamas Regional Center in southeast Portland with the Gateway Transit Center east of downtown on TriMet's existing LRT system. The second segment of the project is a 1.8-mile LRT spur which would begin at the existing Rose Quarter Transit Center and terminate at Portland State University in south downtown Portland. This new LRT alignment, which would run along the existing downtown bus mall on 5th and 6th Avenues, is needed because TriMet's existing downtown LRT line (to the region's west side) does not have the capacity to carry the additional eight trains per peak hour into the central business district (CBD) that will result from the I-205 extension.

Metro completed a Final EIS for the project in December 2004 and FTA issued a Record of Decision in February 2005. FTA approved the project into final design in October 2005. FTA expects to execute an FFGA for the project in late FY 2006 or 2007. Revenue operations are anticipated to commence in late 2009.

SAFETEA-LU Section 3043(b)(27) authorizes the South Corridor I-205/Portland Mall LRT project for final design and construction. The capital cost for the 8.3-mile project is estimated at $557.4 million, of which Tri-Met and Metro are requesting $334.4 million, or 60 percent, in New

Starts funding. Through FY 2006, Congress has not appropriated New Starts funding for this project. FTA recommends $80.00 million in New Starts funding for this project in FY 2007.

Oregon: Washington County/Wilsonville to Beaverton Commuter Rail

The Tri-County Metropolitan Transportation District of Oregon (TriMet), in conjunction with Portland Metro, the Oregon Department of Transportation, Washington and Clackamas Counties, and the cities of Wilsonville, Tualatin, Tigard, and Beaverton, is proposing to construct a 14.7-mile commuter rail line in the Wilsonville-Beaverton corridor. The proposed project would operate along portions of existing Union Pacific Railroad tracks and connect to TriMet's Westside MAX light rail transit (LRT) system at the Beaverton Transit Center.

Washington County is forecast to absorb a significant share of the Portland metropolitan area's growth over the next 20 years, resulting in increased travel demand throughout the county and for trips destined for other parts of the region. The physical geography of the corridor and adopted regional plans and policies limit the ability to significantly expand highway facilities. At the same time, the rail right-of-way that would be used by the project is underutilized, and provides the potential for additional transportation capacity. The Wilsonville to Beaverton Commuter Rail project is intended to connect rapidly growing suburban communities in western Washington County via a reliable guideway transit alternative that will offer travel-time savings as compared to local and express bus service. The project is further intended to shape future development in the corridor, consistent with local and regional land use goals and objectives.

FTA issued a Finding of No Significant Impact for the project in January 2001. FTA approved the project into final design in May 2004. FTA expects to execute an FFGA for the project in FY 2006. Revenue operations are scheduled to begin in 2008.

SAFETEA-LU Section 3043(b)(37) authorizes the Wilsonville to Beaverton Commuter Rail project for final design and construction. The capital cost for the 14.7-mile project is estimated to be $117.3 million, of which TriMet is seeking $58.7 million, or 50 percent, in New Starts funding, although this amount exceeds the amount requested at the time of final design approval and may be reduced prior to execution of the FFGA. Through FY 2006, Congress has appropriated $31.26 million in New Starts funding for this project. FTA recommends $27.60 million in New Starts funds for this project in FY 2007.

Texas: Dallas/Northwest/Southeast LRT MOS

Dallas Area Rapid Transit (DART) is proposing to construct a 21-mile, two-segment extension of its light rail transit (LRT) system. The Southeast (SE) segment extends 10.1 miles from the Dallas central business district (CBD) to Buckner Boulevard. The Northwest (NW) segment extends 10.9 miles from the existing Victory Station to the city of Farmers Branch. A locally-funded extension of the NW line to Frankford Road in Carrollton is also being advanced by DART. The NW and SE LRT alignments would be connected through the existing four-station CBD Transitway Mall.

The NW segment, which generally parallels Interstate 35 East (I-35 E) (a major north-south arterial), is a growing employment area and a major North American Free Trade Agreement cargo route. Traffic on I-35 E, adjacent to the NW segment, is projected to increase 45 percent by 2025. Truck traffic is estimated to increase nearly 80 percent by 2011 in the NW segment corridor. Approximately one-third of SE Corridor households are considered low-income; nearly 17 percent of households do not own a car, more than double the percentage of zero-car

households within Dallas County. By linking residents in the SE segment to the Dallas CBD and employment areas in the NW segment, the project is intended to provide a more reliable alternative than existing bus service, thereby ameliorating daily travel times in the entire NW/SE corridor, while improving mobility and accessibility throughout the corridor and in other parts of the region served by the DART LRT system.

DART completed separate EISs for each project in October 2003 (including the locally-funded NW segment extension). FTA issued Records of Decision for both projects in February 2004. FTA approved the Northwest/Southeast LRT MOS project into final design in June 2005. FTA expects to execute an FFGA for the project in FY 2006. Revenue operations are scheduled to begin in 2011.

SAFETEA-LU Section 3043(b)(5) authorizes the Dallas Northwest/Southeast LRT MOS for final design and construction. The capital cost of the 21-mile project is estimated to be $1,406.2 million, of which DART is seeking $700.00 million, or 50 percent, in New Starts funding. Through FY 2006, Congress has appropriated $21.19 million in New Starts funding for this project. FTA recommends $80.00 million in New Starts funds for this project in FY 2007.

Utah: Salt Lake City/Weber County to Salt Lake City Commuter Rail

The Utah Transit Authority (UTA) is proposing to construct the 43-mile Weber County to Salt Lake City Commuter Rail project. The project includes eight stations to serve the areas of Pleasant View, Ogden, Clearfield, Layton, Bountiful and downtown Salt Lake City. The commuter rail line would operate within an existing railroad corridor parallel to Interstate 15 (I-15), utilizing right-of-way (ROW) previously acquired by UTA under a rail corridor preservation plan with certain facilities already in place. Bus and light rail transit connections are intended to provide further service to other travel markets, including Weber State University, Hill Air Force Base, Freeport Center, the University of Utah, the Medical Center, and to the areas of Sandy and Draper in the southern part of Salt Lake City. The Weber County to Salt Lake City Commuter Rail project is the northern segment of a planned commuter rail system extending beyond downtown Salt Lake City to Provo.

Regional travel forecasts demonstrate that current levels of vehicle congestion on I-15 will continue in the future despite planned highway improvements. The Weber County to Salt Lake City Commuter Rail project is intended to be part of a multimodal solution to the problem of increased travel demand in the corridor. The project would improve the reliability and speed of transit service, thereby attracting more ridership and providing for expanded transportation capacity within the narrow I-15 corridor.

UTA completed the Final EIS in February 2005 and FTA issued a Record of Decision in April 2005. FTA approved the project into final design in June 2005. FTA expects to execute an FFGA for the project in FY 2006. Revenue operations are scheduled to begin in September 2008.

SAFETEA-LU Section 3043(b)(30) authorizes the Weber County to Salt Lake City Commuter Rail project for final design and construction. The capital cost for the 43-mile commuter rail project is estimated to be $611.7 million, of which UTA is seeking $489.3 million, or 80 percent, in New Starts funding. Division H of the Consolidated Appropriations Act, 2005, permits UTA

to count completed and future highway and transit expenditures to meet the local financial share requirements for the Weber County to Salt Lake City Commuter Rail project. UTA's latest financial plan therefore, proposes an 80 percent share of New Starts funding matched by the value of project ROW and local revenues.

Through FY 2006, Congress has appropriated $31.73 million in New Starts funding for this project. FTA recommends $80.00 million in New Starts funds for this project in FY 2007.

Other Projects

The President's Budget for FY 2007 includes five other projects for funding under the New Starts program. Four of these projects are not advanced to the point of being considered for an FFGA at this time, but demonstrate that they are making progress towards consideration for an FFGA in the near future. Each of these projects is rated *Medium* or higher; possesses a *Medium* or better cost effectiveness rating or is exempted from the requirement for a *Medium* cost effectiveness rating; and is expected to be in final design by the Spring of 2006, assuming satisfactory resolution of any outstanding issues. These projects include: the Second Avenue Subway MOS project in New York City, New York; the Norfolk LRT project in Norfolk, Virginia; the Dulles Corridor Metrorail Project – Extension to Wiehle Avenue in Northern Virginia; and the University Link LRT Extension project in Seattle, Washington. An additional project recommended for funding is the Largo Metrorail Extension, which completed an FFGA in FY 2005 and began revenue service in December 2004. Section 3043(a)(31) and 3043(j) of SAFETEA-LU authorizes the inclusion of an additional 52 rapid rail cars in the Largo Metrorail Extension FFGA. By this mandate, FTA has included the Largo Metrorail Extension in this category of funded projects, even though the original FFGA has been completed and revenue service for the project has begun.

A total of $101.86 million in New Starts funding is reserved in FY 2007 for these five projects. By reserving funds for this group of projects without specifying a specific amount for any single project at this time, project sponsors will be able to better align their project development process with the Congressional appropriations cycle. This will also allow FTA to take advantage of its project oversight and risk management activities to make project-specific recommendations when Congress is considering appropriations decisions. FTA notes that some of these projects must still complete the NEPA process; still others must address FTA-identified concerns related to capital costs and/or scope definition. Consequently, FTA acknowledges that one or more of these projects may not be ready for a specific funding recommendation in FY 2007. Summary descriptions of these five projects are presented alphabetically by state below. More detailed descriptions of all but the Largo Metrorail Extension project are provided in Appendix A.

Washington, D.C. Metropolitan Area: Largo Metrorail Extension

In FY 2005, FTA completed funding for the Largo Metrorail Extension project, which was constructed jointly between the Maryland Transit Administration (MTA) and the Washington Metropolitan Area Transit Authority (WMATA). The project began revenue service in December 2004.

The project extends the Blue Line of the Washington Metrorail system from the Addison Road station to Largo Town Center in Prince George's County, Maryland. The 3.1 mile, two-station extension is operated by WMATA as an integral part of the regional Metrorail system, providing access to downtown Washington, D.C. and surrounding counties in Maryland and Virginia. The

line follows an alignment through central Prince George's County that has been preserved as a rail transit corridor in the county's Master Plan. The two new stations are located at the Morgan Boulevard station, north of MD-214 (Central Avenue), and at the Largo Town Center just outside the Capital Beltway (Interstate-95/495).

Sections 3043(a)(31) and 3043(j) of SAFETEA-LU authorizes the inclusion of an additional 52 rapid rail cars in the Largo Metrorail Extension. FTA included the Largo Metrorail Extension in this proposed funding category even though the original Full Funding Grant Agreement has been completed and revenue service for the project has begun.

The original total capital cost estimate for the project was $433.87 million, with $260.3 million in Section 5309 New Starts funding, which accounted for 60% of the overall project cost.

New York: New York/Second Avenue Subway MOS

The Metropolitan Transportation Authority and New York City Transit (MTA/NYCT) are proposing to construct 2.3 miles of new subway on Manhattan's East Side to provide extended Broadway express service between Brooklyn, Lower Manhattan, West Midtown, and East Harlem. The Second Avenue Subway Minimum Operable Segment (MOS) would extend MTA rail service from its current terminal at 57th Street and Seventh Avenue via an existing track connection to the 63rd Street line, with new stations at 96th, 86th, and 72nd Streets and new entrances at Third Avenue to the existing Lexington Avenue/63rd Street station. New tunnels would be built from 99th Street to 62nd Street, while the existing tunnel between 99th and 105th Streets would be used for train storage. The MOS is the first part of a planned 8.5-mile subway line extending the length of Manhattan's East Side from 125th Street in East Harlem to Hanover Square in the Financial District.

Under current conditions, the Lexington Avenue Line (LAL) experiences significant travel-time delays as crowded trains wait in stations while large volumes of riders board and alight. During a 15-minute period in the morning peak hour at the 86th Street station, nearly 3,000 riders enter and exit southbound trains, causing excessive crowding on platforms and queuing on stairs. The Second Avenue Subway MOS is intended to reduce this excessive overcrowding on North America's busiest transit line; improve service reliability on the LAL; improve mobility for commuters on the Manhattan's East Side; and meet existing and future travel demand throughout the corridor and region.

MTA/NYCT completed a major investment study (MIS)/Draft EIS on the Manhattan East Side Corridor in September 1999. The MIS/Draft EIS covered the northern portion of the corridor from 63rd Street to East 125th Street. The full 8.5-mile Second Avenue Subway was selected as the locally preferred alternative (LPA) in May 2001. FTA approved the LPA into PE in December 2001. Anticipating the financial difficulties in implementing the entire project at once, MTA/NYCT contemplated the development of minimum operable segments within the corridor. A Final EIS covering the full alignment, but including a strategy for the implementation of distinct operable segments within the corridor, was completed in April 2004. In July 2004, FTA issued an environmental Record of Decision for the full-length project. MTA has submitted a final design request for the Second Avenue Subway MOS, which FTA is currently reviewing and expects to approve in early 2006. Revenue operations for the first MOS are planned for 2012.

SAFETEA-LU Section 3043(b)(21) authorizes the New York Second Avenue Subway MOS project for final design and construction. The capital cost for the 2.3-mile Second Avenue Subway MOS is estimated to be $4,947.8 million, including $1,109.3 million in finance costs. MTA is seeking $1,300.00 million, or approximately 26 percent of total project costs, in New Starts funding. FTA notes that MTA's New Starts funding request is higher than what has historically been provided by FTA to other major transit capital investment projects, but the New Starts share of 26 percent is significantly lower than most other proposed projects. Through FY 2006, Congress has appropriated $33.42 million in New Starts funding for this project.

Virginia: Norfolk/Norfolk LRT

Hampton Roads Transit (HRT) is proposing to construct and operate an 11-station, 7.4-mile light rail transit (LRT) line within the city of Norfolk that is intended to serve as the initial segment of a regional rapid transit system. The project alignment would begin at the Eastern Virginia Medical Center, move eastward as a dedicated in-street guideway through downtown Norfolk to Norfolk State University, and continue along an abandoned Norfolk Southern Railroad right-of-way (ROW) parallel to Interstate-264 (I-264), to the eastern terminus at Newtown Road. Park-and-ride access to the system would be provided by the construction of new facilities at Newtown Road, Military Highway, and Ballantine Boulevard, as well as shared use of existing parking facilities at the Harbor Park baseball stadium on the southeastern fringe of downtown, where a station is planned. The project scope also includes an LRT maintenance facility and the purchase of nine vehicles.

Travel forecasts indicate worsened congestion on I-264 and major arterials (Brambleton Avenue, Virginia Beach Boulevard, Tidewater Drive) within the project corridor through 2025. Options for improving mobility within the area are limited by geographic constraints (numerous waterways) and the absence of transportation rights-of-way. The Norfolk LRT project takes advantage of an abandoned rail ROW and is intended to help meet future travel demand to downtown Norfolk and throughout the corridor, provide improved mobility for transit-dependent populations, and achieve local land use goals. The project is further intended to provide a rapid transit connection from Harbor Park and other fringe park-and-ride facilities to destinations within the downtown area.

In 1997, FTA first approved an 18-mile LRT system extending between the cities of Norfolk and Virginia Beach into PE. The Draft EIS for the project was completed in April 1999. In November 1999, Virginia Beach voters did not approve a local funding measure for the project, resulting in the truncation of the project at Kempsville Road within the city limits of Norfolk. FTA approved the abridged project into PE in October 2002. A Supplemental Draft EIS was completed in January 2003. Since that time, HRT has undertaken additional scope and cost reductions that have resulted in the current 7.4-mile alignment. The Final EIS was published in October 2005 reflecting FTA concerns relative to ridership and cost assumptions. A Record of Decision for the project is anticipated in early 2006. Revenue operations are anticipated to begin in December 2008.

In October 2005, the Norfolk City Council adopted a parking policy in anticipation of the LRT project which is intended to put limits on the downtown parking supply. These limits are further intended to result in a measurable parking deficit in the future, which was assumed in the project's forecast of travel-time benefits. FTA required that such parking restrictions be implemented prior to accepting the project's travel forecast for the purposes of approving final

design. FTA is reviewing the City's parking policy to ensure that it will result in the realization of the assumed parking deficit. FTA further notes that the project's current cost estimate is significantly lower than any other comparable LRT system currently under construction, and FTA intends to perform an assessment of the reliability of the project's cost and schedule prior to advancing the project.

SAFETEA-LU Section 3043(b)(22) authorizes the Norfolk LRT project for final design and construction. The capital cost for the 7.4-mile Norfolk LRT is estimated to be $203.7 million, of which HRT is seeking $99.8 million, or 49 percent, in New Starts funding. Through FY 2006, Congress has appropriated $12.90 million in New Starts funding for this project.

Virginia: Northern Virginia/Dulles Corridor Metrorail Project – Extension to Wiehle Avenue

The Virginia Department of Rail and Public Transportation (VDRPT) in cooperation with the Washington Metropolitan Area Transit Authority (WMATA) is proposing to construct an 11.6-mile extension of the region's Metrorail system from the existing East Falls Church Metrorail station through the large Tysons Corner employment and retail center to Wiehle Avenue in the Reston area of Fairfax County. The project will be operated as a separate Metrorail line under a new service configuration that terminates in Washington DC at the existing Stadium Armory Metrorail station. The proposed project scope includes construction of five new stations, a major park-and-ride lot at Wiehle Avenue, and expanded storage capacity at WMATA's West Falls Church rail yard. The project also includes the purchase of 64 heavy rail vehicles. The extension would be operated by WMATA, with trains operating at seven minute peak frequencies from the Wiehle Avenue station through East Falls Church, continuing along the existing Metrorail Orange Line track east through Arlington County, downtown Washington DC, Capitol Hill, and terminating at Stadium Armory. The 11.6-mile extension is the first minimum operable segment (MOS) of a proposed 23.1-mile extension of Metrorail west to Dulles International Airport and Loudoun County.

The Tysons Corner area contains over 25 million square feet of office space and 110,000 employees. Redevelopment and expansion of the major retail and office development is underway. The Reston area also contains significant mixed-use development, with a substantial employment base and large residential population, many of whom commute to employment sites in Washington D.C. The primary transportation arteries that serve this rapidly growing area are Routes 267 (the Dulles Toll Road) and 7, both of which experience significant congestion during peak hours. The proposed Metrorail extension would expand transportation capacity to and from Reston and the Tysons Corner regional activity centers, (including reverse commute trips) while providing a direct rail link for commuters from northwest Fairfax and Loudoun Counties to employment opportunities in Tysons Corner, the Rosslyn - Ballston corridor, downtown Washington DC, and other locations adjacent to stations along the 106-mile Metrorail system.

In November 2002, a 23.1-mile Metrorail extension to Route 772 in Loudoun County replaced a previously-identified bus rapid transit system as the locally preferred alternative (LPA) in the Dulles Corridor. Based upon FTA and local concerns that the full LPA would be too costly to implement at one time, VDRPT and WMATA identified an MOS terminating at Wiehle Avenue. FTA approved a Supplemental Draft EIS in October 2003 reflecting the Wiehle Avenue MOS. FTA approved VDRPT's request to initiate PE for the Extension to Wiehle Avenue project in June 2004. VDRPT received a record of decision on the Final EIS that covers both the MOS and Loudoun County extension in April 2005. VDRPT is currently undertaking an environmental

assessment of recent project scope changes that will require an amended environmental Record of Decision. This work is anticipated to be completed in early 2006. Revenue operations for the project is scheduled for 2011.

VDRPT's cost estimate assumes several scope modifications which require further design to mitigate uncertainties in the project cost and contingency level. FTA intends to perform an assessment of the reliability of the project's cost and schedule prior to advancing it into final design.

SAFETEA-LU Section 3043(b)(23) authorizes the Dulles Corridor Extension to Wiehle Avenue project for final design and construction. The capital cost for the 11.6-mile project is estimated to be $1,840.1 million, of which VDRPT is seeking $920.0 million, or 50 percent, in New Starts funding. FTA notes that VDRPT's New Starts funding request is higher than what has historically been provided by FTA to other major transit capital investment projects. Through FY 2006, Congress has appropriated $215.63 million in New Starts funding for this project.

Washington: Seattle/University Link LRT Extension

The Central Puget Sound Regional Transit Authority, commonly known as Sound Transit, is proposing to implement an all-tunnel extension of the Central Link light rail transit (LRT) Initial Segment, currently under construction from the Segment's northern terminus at Westlake Station in downtown Seattle to the University of Washington, 3.1 miles to the northeast. University Link is the first phase of Sound Transit's planned North Link LRT extension to the Northgate Transit Center in North Seattle.

The University Link corridor is the most densely developed residential and employment area in the Central Puget Sound region and the state of Washington. The three largest urban centers in the state – downtown Seattle, Capitol Hill/First Hill, and the University District – are located along the University Link alignment. However, travel by private vehicle and bus between these areas is extremely congested due to high traffic volumes and the corridor's unique physical geography. First Hill and Capitol Hill rise sharply northeast of downtown Seattle, and Interstate 5 (I-5) – the region's primary north-south freeway corridor – runs along the base of these hills, separating them from downtown. The steep grades and limited crossing points of I-5 exacerbate congestion between downtown and the First Hill/Capitol Hill urban center. Farther to the north, the University District is separated from the rest of the corridor by Portage Bay and the Lake Washington Ship Canal; only three river crossings (two of them drawbridges) connect the University with the southern portion of the corridor.

Furthermore, while I-5 north of downtown features reversible express lanes to accommodate morning inbound and evening outbound travel, the significant, and growing, reverse-commute market between downtown (and points south) and Capitol Hill/First Hill and the University District enjoys no such advantage, resulting in a substantial disparity between northbound and southbound transit travel times during peak periods. The University Link LRT Extension is intended to provide more reliable and faster bi-directional transit service to and between these urban centers, while supporting local land use goals and contributing to the maintenance of 1990 traffic levels at the University of Washington, which, by prior agreement, is necessary for the City of Seattle to approve any new campus development.

The University Link LRT Extension is part of the Central Link LRT system that has been in planning for more than two decades. Due to financial constraints, Sound Transit is implementing the Central Link LRT system in segments. An "Initial Segment" of the project runs from the Westlake Station of the existing Downtown Seattle Transit Tunnel south to Tukwila; this project alignment is currently being constructed under an FFGA executed by FTA in October 2003. The North Link segment would connect the Initial Segment's northern terminus with the Northgate Transit Center. Sound Transit completed a Draft Supplemental EIS for North Link in December 2003. The Sound Transit Board selected the locally preferred alternative for North Link in July 2005, and the following month selected the 3.1-mile University Link Extension as the first phase of the implementation of North Link. FTA issued a limited-scope Draft Supplemental EIS in October 2005 to address changes in the preferred alternative, including an alternative route through the University of Washington. FTA notified Congress of its intent to approve PE for the project in November 2005; this approval is assumed in December 2005. Sound Transit is currently completing the Final EIS for North Link, including the University Link project, with a Record of Decision anticipated in Spring 2006. Sound Transit must address a number of issues related to its technical capacity to effectively manage the implementation of the University Link project and other capital investment projects (including the Initial Segment of the Central Link LRT system) prior to its approval to advance into final design. Revenue operations for University Link are scheduled for 2016.

SAFETEA-LU Section 3043(c)(231) authorizes the Seattle Link LRT Extensions project for alternatives analysis and preliminary engineering. The capital cost of the University Link is estimated to be approximately $1,720.0 million of which Sound Transit is seeking $700.0 million, or 41 percent, in New Starts funding. Through FY 2006, Congress has not appropriated New Starts funding for the University Link LRT Extension.

Small Starts

FTA is budgeting $100 million in the President's FY 2007 Budget for potential projects which may qualify under the Small Starts program, which is defined in SAFETEA-LU as transit capital investment projects with a total capital cost of less than $250 million and a Section 5309 New Starts share of total costs of less than $75 million. As noted previously, FTA is engaged in a statutorily-required rulemaking for the implementation of the Small Starts program, which will address the evaluation process and further definition of the Project Construction Grant Agreement mechanism which will be the funding instrument for such projects. Pending completion of the rulemaking progress, FTA is not recommending Small Starts funding for any specific project for FY 2007 at this time; however, FTA may recommend funding as part of the FY 2007 appropriations process for emerging transit capital investments which meet SAFETEA-LU's definition for Small Starts projects.

Other Funding

The President's FY 2007 Budget also includes funding in the amount of $34.66 million for other statutorily-required purposes. Funding for the Denali Commission was established in SAFETEA-LU (49 USC 5309(m)(6)(C)), with $5.00 million authorized for each fiscal year from 2006 to 2009. The Commission is designed to provide critical utilities, infrastructure, and economic support throughout Alaska, particularly in remote communities. As directed by Section 307(e) of Pub.L. 105-277, as amended (42 USC 3121 note Denali Commission Act of 1998, as amended), "The Secretary of Transportation is authorized to make direct lump sum

payments to the Commission to construct docks, waterfront development projects, and related transportation infrastructure, provided the local community provides a ten percent non-Federal match in the form of any necessary land or planning and design funds."

SAFETEA-LU also reauthorized funds for Ferry Capital Projects in Alaska and Hawaii, with $15.00 million in funding authorized each fiscal year from 2006 to 2009 for fixed guideway ferry systems and extension projects utilizing ferry boats, ferry boat terminals, or approaches to ferry boat terminals (49 USC 5309(m)(6)(B)).

Finally, $14.66 million – one percent of the Section 5309 New Starts/Small Starts program – is included for Federal oversight of the planning, development, and construction of candidate projects.

Transportation in the Parks and Public Lands Program

SAFETEA-LU Section 5320 established a new program to fund alternative transportation projects in national parks and public lands. The program is to be implemented by the Department of Transportation in consultation with the Department of the Interior and other Federal land management agencies. The Secretary of Transportation will develop cooperative arrangements with the Secretary of the Interior that provide: 1) technical assistance; 2) interagency and multidisciplinary teams to develop alternative transportation policy, procedures, and coordination; and, 3) procedures and criteria relating to the planning, selection, and funding of qualified projects and the implementation and oversight of selected projects. The Secretary of the Interior, after consultation with and in cooperation with the Secretary of Transportation, will determine the final selection and funding levels of an annual program of qualified projects.

Section 5320 stipulates that the Secretary of Transportation annually submit a report on the allocation of amounts made available to assist qualified projects under this section, and that this information is to be included in the Annual Report on New Starts submitted under Section 5309(k)(1). In December 2005, Congress appropriated $22 million for the Alternative Transportation in the Parks and Public Lands program for FY 2006, consistent with funding levels authorized in SAFETEA-LU. At the time of this publication, the allocation of these funds was not yet determined by the Department of Transportation and the Department of the Interior. It is anticipated that the *FY 2008 Annual Report on New Starts* will include a report on the funds allocated under Section 5320 once projects have been selected.

FY 2007 New Starts Projects and Ratings Contained in this Report

As noted previously, the *FY 2007 Annual Report on New Starts*, as with all previous annual reports, provides information on New Starts projects in different stages of development. For projects under an FFGA, the report includes a summary profile of the project scope, expected ridership, and implementation status. The report also includes detailed information, evaluations, and ratings for all candidate projects which have been approved by FTA for, and are actively engaged in, PE and final design and which are seeking more than $25 million in New Starts funding. Finally, the report includes summary information on projects approved by FTA for, and actively engaged in, PE and final design which are exempt from project evaluation because they are requesting less than $25 million in New Starts funding. The maps on pages 25 and 26 present the location of existing and pending FFGAs, and projects in PE and final design, respectively.

In the past year, several proposed New Starts projects which had been included in the *FY 2006 Annual Report on New Starts* no longer meet the conditions for inclusion in this year's report. Sponsors of these projects have either a) fully implemented the project scope described in last year's report; b) received the entirety of the New Starts funding requested to implement said scope; c) terminated or suspended project development activities; d) withdrawn from formal inclusion in the New Starts "pipeline" while they address outstanding issues which prevent their projects from advancing in development; or e) decided to no longer pursue New Starts funding.

Two projects under an FFGA received their final New Starts appropriation in FY 2006 and are thus not included in this year's report: the ***North Central Corridor Commuter Rail*** and the ***South West Corridor Commuter Rail*** projects, both in metropolitan Chicago. Among the projects reported in final design in the *FY 2006 Annual Report on New Starts*, the Kansas City Area Transit Authority implemented its 10-mile ***Southtown BRT*** line in July 2005, and in May 2005 the Regional Transit Commission (RTC) of Southern Nevada terminated further development of the ***Resort Corridor Downtown Monorail Extension***. RTC is currently looking at other alternatives, including bus rapid transit, in the corridor.

Several projects reported in preliminary engineering in last year's report are not included in the *FY 2007 Annual Report*. The Alaska Railroad Corporation confirmed that future pursuit of New Starts funding for the ***South Wasilla Track Realignment*** project in Wasilla, Alaska is uncertain; fixed guideway modernization funds are currently contemplated to complete the project. In April 2005 the Los Angeles County Metropolitan Transportation Authority decided not to pursue an FFGA for the ***Exposition Corridor LRT*** project. In July 2005 the Orange County Transportation Authority suspended further development of its ***CenterLine LRT*** project and is now considering other alternatives in the CenterLine corridor. In March 2005, the San Diego Association of Governments (SANDAG) decided to combine the implementation of both phases of its ***Mid-Coast LRT*** extension to University City. SANDAG is thus preparing a PE request for the combined project, which is anticipated in 2006. The City of Ft. Collins withdrew its ***Mason Transportation Corridor*** project from formal PE status in late 2005. It intends to do further work on improving the local financial commitment for the project, and is contemplating advancing the project as a Small Start.

In February 2005 the Hillsborough Area Regional Transit Authority suspended further development of the ***Tampa Bay Regional Rail*** system and withdrew from PE status. In

September 2005 the New Orleans Regional Transit Authority also suspended further development of its ***Desire Streetcar*** project. In September 2005, the Massachusetts Bay Transportation Authority withdrew from preliminary engineering status while it further considers the location of the western portal of the ***Silver Line Phase III*** project. In October 2005 the Sun Metro Area Rapid Transit Authority in El Paso, Texas, notified FTA that it is no longer pursuing New Starts funding for its proposed ***Starter Line***. Finally, the Santa Clara Valley Transportation Authority (VTA) withdrew the ***Silicon Valley Rapid Transit Corridor*** project from PE in late 2005. Over the coming months, VTA will revise its data to create a more accurate model for the project, solidify local financing commitments, and work closely with FTA to create a realistic roadmap to revive the project with the intent to request re-entry into PE at a later date. FTA intends to work closely with VTA as they develop reliable modeling, travel forecasting, and cost effectiveness data to meet the required New Starts criteria as grandfathered by SAFETEA-LU.

All projects which have suspended project development activities must re-request FTA approval when and if they demonstrate readiness to advance.

Tables 2 A-B present the ratings for all projects currently advancing through the New Starts development process. Projects are rated against a number of measures which reflect the project justification and local financial commitment criteria established by statute. The FY 2007 project evaluation process is similar to the process used in the evaluation of projects included in the FY 2004-2006 *Annual Reports on New Starts,* and is consistent with FTA's *Final Rule on Major Capital Investment Projects* issued on December 7, 2000; this process is further documented in Appendix B of this report. However, this year's project evaluation process includes two changes established in SAFETEA-LU which FTA is implementing for the FY 2007 evaluation cycle without a rulemaking. As noted previously, SAFETEA-LU replaces the three-point rating scale established by TEA-21 ("Highly Recommended," "Recommended," and "Not Recommended") with a five-point scale of *"Low,"* "*Medium-Low,*" "*Medium,*" "*Medium-High,*" and "*High.*" In addition, SAFETEA-LU, while continuing to require that a project's overmatch be evaluated, adds a clause that nothing in the Act shall be construed as authorizing the Secretary to require a non-Federal financial commitment for a project that is more than 20 percent of the net capital project cost. Consequently, FTA will no longer exercise its long-standing decision-rule to automatically rate local financial commitment as *Low* for any project which requests a greater than 60 percent share of total project costs.

In addition, with the TEA-21 rating scale convention superseded by SAFETEA-LU, FTA will no longer assign a designation of "Not Rated" to projects whose submitted project justification criteria are deemed by FTA to be unreliable and/or calculated in a manner which is not consistent with FTA guidance. Instead, such projects will be rated *Low* for the affected criteria. FTA will continue to work with sponsors of such projects to ensure that the estimates of project costs and benefits are reliable and accurately convey the merits of proposed New Starts investments.

As noted earlier, project evaluation is an ongoing process. The ratings contained in this report are based on project information available through November 2005. As proposed New Starts projects proceed through the project development process, the estimates of costs, benefits, and impacts are refined. The FTA ratings and recommendations are updated annually for purposes of this report, as well as at the time a request is made to enter into preliminary engineering, final design, or an FFGA. The *Annual Report on New Starts* provides a snapshot of each project in

development. In addition to providing information to Congress, it serves as guidance to project sponsors, so that improvements can be made. Since projects can be expected to be refined as they progress through the development process, the ratings for projects that are not yet recommended for FFGAs should not be construed as a statement about the ultimate merits of the project, but rather an assessment of the project's current strengths and weaknesses. It should be stressed, however, that the ratings reported in this document are final for purposes of the President's Fiscal Year 2007 Budget. Updated project information and ratings will be reviewed as part of the budget development process for the next fiscal year.

Table 2-A
Summary of FY2007 New Starts Ratings

Phase State, City, Project	Total Capital Cost (millions)		Total New Starts Funding Requested (millions)	New Starts Funds Share of Capital Costs	Overall Project Rating	Finance Rating	Project Justification Rating
Pending FY2006 FFGA							
NY NY, Long Island Rail Road East Side Access	$7,779.3	YOE	$2,632.1	34%	Medium	Medium	Medium-High
PA Pittsburgh, North Shore LRT Connector	$393.0	YOE	$217.7	55%	Medium	Medium	Medium-High
Final Design							
CO Denver, West Corridor LRT	$593.0	YOE	$290.6	49%	Medium	Medium-High	Medium
NC Raleigh-Durham, Regional Rail System	$809.9	YOE	$485.4	60%	Low	Medium Low	Medium-Low
OR Portland, South Corridor I-205 / Portland Mall LRT	$557.4	YOE	$334.4	60%	Medium	Medium	Medium-High
OR Washington County, Wilsonville to Beaverton Commuter Rail	$117.3	YOE	$58.7	50%	Medium	Medium	Medium
TN Nashville, East Corridor Commuter Rail (1)	$41.0	YOE	$24.0	59%	Exempt	Exempt	Exempt
TX Dallas, Northwest / Southeast LRT MOS	$1,406.2	YOE	$700.0	50%	Medium	Medium-High	Medium
UT Salt Lake City, Weber County to Salt Lake City Commuter Rail	$611.7	YOE	$489.3	80%	Medium	Medium-High	Medium
Preliminary Engineering							
CA Sacramento South Corridor LRT Extension	$197.1	YOE	$98.6	50%	Medium	Medium	Medium
CA San Francisco, Central Subway	$1,412.5	YOE	$762.2	54%	Medium	Medium	Medium-High
CT Hartford, New Britain - Hartford Busway	$335.5	YOE	$167.8	50%	Medium	Medium	Medium
DE Wilmington, Wilmington to Newark Commuter Rail Improvements (1)	$54.9	YOE	$24.9	45%	Exempt	Exempt	Exempt
FL Miami, North Corridor Metrorail Extension	$914.7	YOE	$457.3	50%	Medium	Medium	Medium
MN Minneapolis-Big Lake, Northstar Corridor Rail	$265.2	YOE	$131.0	49%	Medium	Medium	Medium
NY New York, Second Avenue Subway MOS	$4,947.8	YOE	$1,300.0	26%	Medium	Medium	Medium-High
PA Harrisburg, CORRIDORone Rail MOS (1)	$87.0	YOE	$24.9	29%	Exempt	Exempt	Exempt
PA Philadelphia, Schuylkill Valley MetroRail	$2,588.9	YOE	$2,071.1	80%	Low	Low	Low
RI Providence, South County Commuter Rail (1)	$43.7	YOE	$24.9	57%	Exempt	Exempt	Exempt
TX Houston, North Corridor Rapid Transit MOS	$359.7	YOE	$179.8	50%	Medium	Medium	Medium
TX Houston, Southeast Corridor Rapid Transit MOS	$354.4	YOE	$177.2	50%	Medium	Medium	Medium
VA Norfolk, Norfolk LRT	$203.7	YOE	$99.8	49%	Medium	Medium	Medium
VA Northern VA, Dulles Corridor Metrorail Project - Extension to Wiehle Avenue	$1,840.1	YOE	$920.0	50%	Medium	Medium	Medium
WA Seattle, University Link LRT Extension	$1,720.0	YOE	$700.0	41%	High	Medium-High	Medium-High

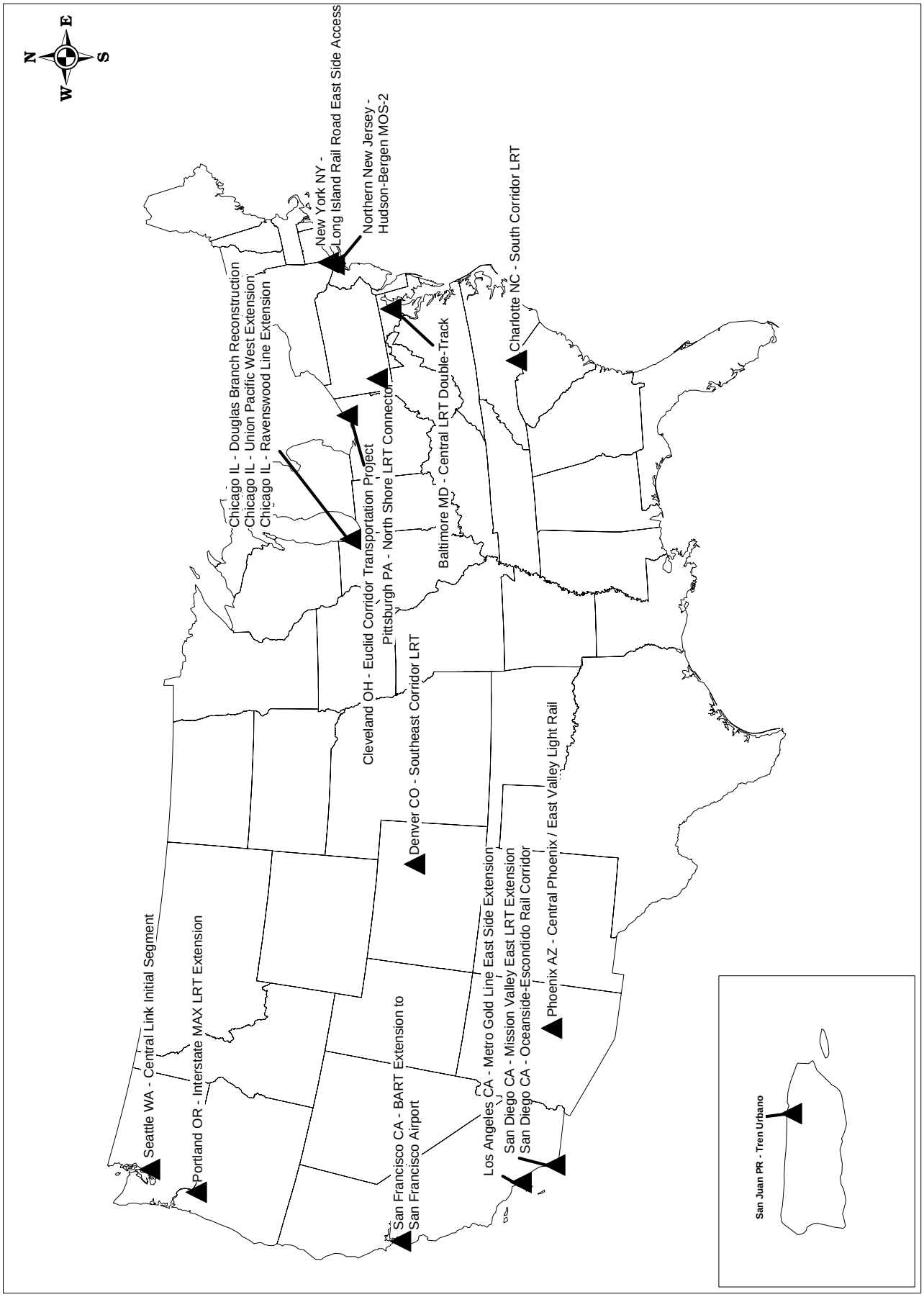
(1) This project has not been rated; under §5309(e)(8))(A), proposed New Starts projects requiring less than $25.00 million in §5309 New Starts funding are exempt from the project evaluation and rating process.

Table 2-B
Summary of FY2007 New Starts Ratings

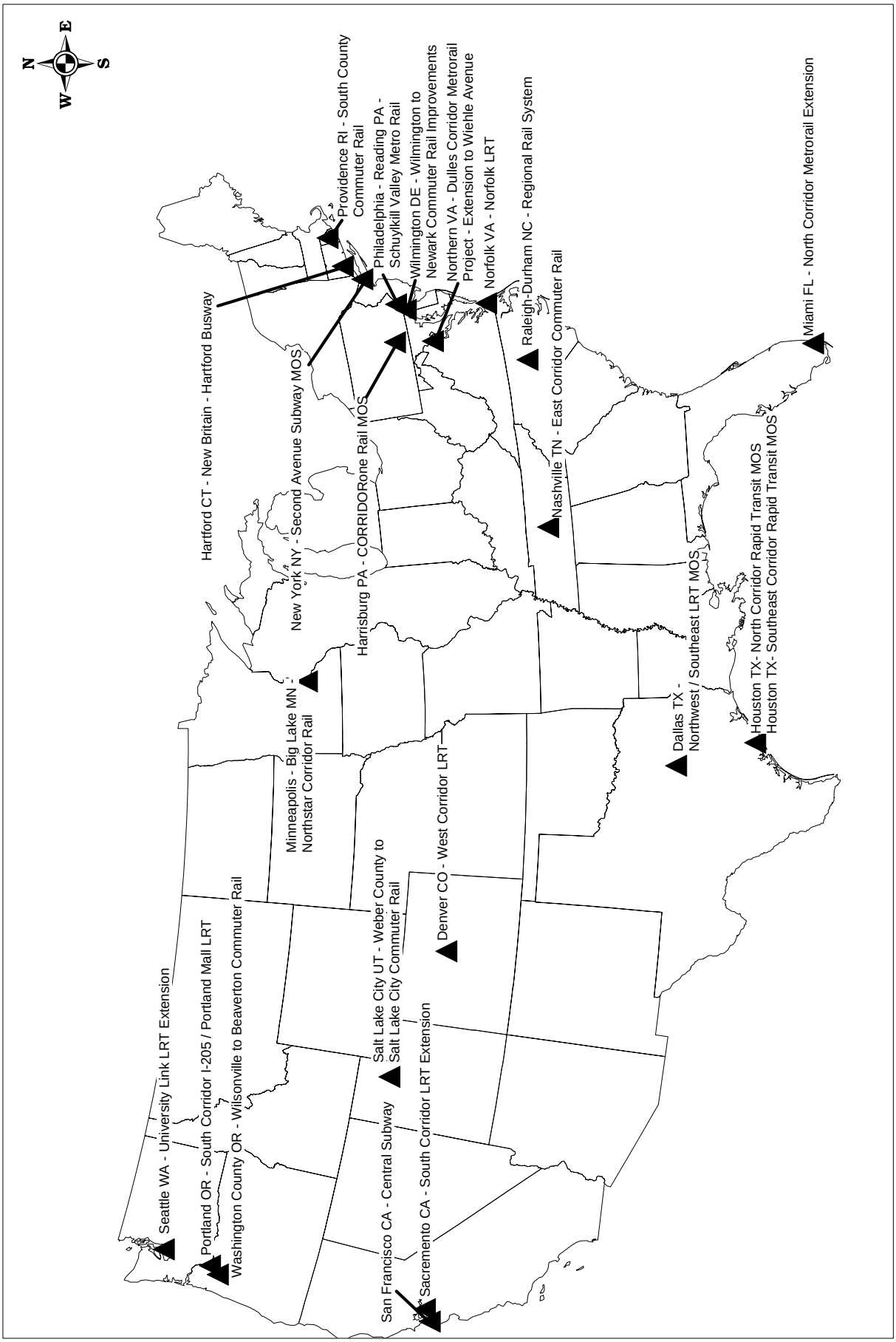
Phase State, City, Project	Overall Project Rating	Finance Rating	Finance Rating Criteria			Project Justification Rating	Project Justification Criteria				
			New Starts Share Rating	Capital Finance Rating	Operating Finance Rating		Mobility Improvement Rating	Environment Benefits Rating	Operating Efficiency Rating	Cost Effectiveness Rating	Land Use Rating
Pending FY2006 FFGA											
NY NY, Long Island Rail Road East Side Access	Medium	Medium	High	Medium	Medium	Medium-High	High	High	Medium	Medium	High
PA Pittsburgh, North Shore LRT Connector	Medium	Medium	Medium	Medium-High	Medium	Medium-High	Medium-High	High	Medium	Medium	Medium-High
Final Design											
CO Denver, West Corridor LRT	Medium	Medium-High	Medium-High	Medium-High	Medium-High	Medium	Medium	High	Medium	Medium	Medium
NC Raleigh-Durham, Regional Rail System	Low	Medium Low	Medium	Medium-Low	Medium	Medium-Low	Low	Low	Low	Low	Medium
OR Portland, South Corridor I-205 / Portland Mall LRT	Medium	Medium	Medium	Medium	Medium	Medium-High	Medium	Medium	Medium	Medium	Medium-High
OR Washington County, Wilsonville to Beaverton Commuter Rail	Medium	Medium	Medium	Medium-High	Medium	Medium	Medium	Medium	Medium	Medium-Low	Medium-High
TN Nashville, East Corridor Commuter Rail (1)	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt
TX Dallas, Northwest / Southeast LRT MOS	Medium	Medium-High	Medium	Medium-High	Medium-High	Medium	Medium	High	Medium	Medium	Medium
UT Salt Lake City, Weber County to Salt Lake City Commuter Rail	Medium	Medium-High	Low	Medium-High	Medium-High	Medium	Medium	High	Medium	Medium-Low	Medium
Preliminary Engineering											
CA Sacramento South Corridor LRT Extension	Medium	Medium	Medium	Medium	Medium-High	Medium	Medium	High	Medium	Medium-High	Medium-Low
CA San Francisco, Central Subway	Medium	Medium	Medium	Medium	Medium	Medium-High	High	High	Medium	Medium-Low	High
CT Hartford, New Britain - Hartford Busway	Medium	Medium	Medium	Medium	Medium	Medium	Medium-High	High	Medium	Medium	Medium
DE Wilmington, Wilmington to Newark Commuter Rail Improvements (1)	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt
FL Miami, North Corridor Metrorail Extension	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium
MN Minneapolis-Big Lake, Northstar Corridor Rail	Medium	Medium	Medium-High	Medium	Medium-High	Medium	Medium-Low	Medium	Medium	Medium-Low	Medium
NY New York, Second Avenue Subway MOS	Medium	Medium	High	Medium	Medium	Medium-High	Medium-High	High	Medium	Medium	High
PA Harrisburg, CORRIDORone Rail MOS (1)	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt
PA Philadelphia, Schuylkill Valley MetroRail	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
RI Providence, South County Commuter Rail (1)	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt
TX Houston, North Corridor Rapid Transit MOS	Medium	Medium	Medium	Medium-High	Medium	Medium	Medium-High	High	Medium	Medium-Low	Medium
TX Houston, Southeast Corridor Rapid Transit MOS	Medium	Medium	Medium	Medium-High	Medium	Medium	Medium-High	High	Medium	Medium-Low	Medium
VA Norfolk, Norfolk LRT	Medium	Medium	Medium-High	Medium	Medium	Medium	Medium-Low	High	Medium	Medium	Medium
VA Northern VA, Dulles Corridor Metrorail Project - Extension to Wiehle Avenue	Medium	Medium	Medium	Medium	Medium-High	Medium	Medium-Low	High	Medium	Medium-Low	Medium
WA Seattle, University Link LRT Extension	High	Medium-High	Medium-High	Medium-High	Medium-High	Medium-High	Medium-High	Medium	Medium	Medium	Medium-High

(1) This project has not been rated; under §5309(e)(8))(A), proposed New Starts projects requiring less than $25.00 million in §5309 New Starts funding are exempt from the project evaluation and rating process.

Existing and Pending Full Funding Grant Agreements



New Starts Projects in Final Design and Preliminary Engineering



Appendix A
New Starts Project Profiles

As of November 2005

Alphabetical List of Projects by Development Phase and State

Full Funding Grant Agreements

AZ, Phoenix, Central Phoenix / East Valley Light Rail A-11
CA, Los Angeles, Metro Gold Line East Side Extension A-15
CA, San Diego, Mission Valley East LRT Extension A-19
CA, San Diego, Oceanside-Escondido Rail Corridor A-23
CA, San Francisco, BART Extension to San Francisco Airport A-27
CO, Denver, Southeast Corridor LRT A-31
IL, Chicago, Douglas Branch Reconstruction A-35
IL, Chicago, Ravenswood Line Extension A-39
IL, Chicago, Union Pacific West Line Extension A-43
MD, Baltimore, Central LRT Double-Track A-47
NC, Charlotte, South Corridor LRT A-51
NJ, Northern New Jersey, Hudson-Bergen MOS-2 ..... A-55
OH, Cleveland, Euclid Corridor Transportation Project A-59
OR, Portland, Interstate MAX LRT Extension A-63
PR, San Juan, Tren Urbano A-67
WA, Seattle, Central Link Initial Segment A-71

Pending Full Funding Grant Agreements

NY, New York, Long Island Rail Road East Side Access A-77
PA, Pittsburgh, North Shore LRT Connector A-85

Final Design

CO, Denver, West Corridor LRT A-93
NC, Raleigh-Durham, Regional Rail System A-101
OR, Portland, South Corridor I-205 / Portland Mall LRT A-109
OR, Washington County, Wilsonville to Beaverton Commuter Rail A-117
TN, Nashville, East Corridor Commuter Rail A-125
TX, Dallas, Northwest/Southeast LRT MOS A-129
UT, Salt Lake City, Weber County to Salt Lake City Commuter Rail A-137

Preliminary Engineering

CA, Sacramento, South Corridor LRT Extension A-147
CA, San Francisco, Central Subway A-155
CT, Hartford, New Britain - Hartford Busway A-163
DE, Wilmington, Wilmington to Newark Commuter Rail Improvements A-171
FL, Miami, North Corridor Metrorail Extension A-175
MN, Minneapolis-Big Lake, Northstar Corridor Rail A-183
NY, New York, Second Avenue Subway MOS A-191
PA, Harrisburg, CORRIDOR*one* Rail MOS A-199
PA, Philadelphia-Reading, Schuylkill Valley MetroRail A-203
RI, Providence, South County Commuter Rail A-207
TX, Houston, North Corridor Rapid Transit MOS A-211
TX, Houston, Southeast Corridor Rapid Transit MOS A-219

VA, Norfolk, Norfolk LRT A-227
VA, Northern Virginia, Dulles Corridor Metrorail Project – Extension to Wiehle Avenue .. A-235
WA, Seattle, University Link LRT Extension A-243

Alphabetical List of Projects by State and City

Arizona

AZ, Phoenix, Central Phoenix / East Valley Light Rail A-11

California

CA, Los Angeles, Metro Gold Line East Side Extension A-15
CA, Sacramento, South Corridor LRT Extension A-147
CA, San Diego, Mission Valley East LRT Extension A-19
CA, San Diego, Oceanside-Escondido Rail Corridor A-23
CA, San Francisco, BART Extension to San Francisco Airport A-27
CA, San Francisco, Central Subway A-155

Colorado

CO, Denver, Southeast Corridor LRT A-31
CO, Denver, West Corridor LRT A-93

Connecticut

CT, Hartford, New Britain - Hartford Busway A-163

Delaware

DE, Wilmington, Wilmington to Newark Commuter Rail Improvements A-171

Florida

FL, Miami, North Corridor Metrorail Extension A-175

Illinois

IL, Chicago, Douglas Branch Reconstruction A-35
IL, Chicago, Ravenswood Line Extension A-39
IL, Chicago, Union Pacific West Line Extension A-43

Maryland

MD, Baltimore, Central LRT Double-Track A-47

Minnesota

MN, Minneapolis-Big Lake, Northstar Corridor Rail A-183

New Jersey

NJ, Northern New Jersey, Hudson-Bergen MOS-2 ..... A-55

New York

NY, New York, Long Island Rail Road East Side Access A-77
NY, New York, Second Avenue Subway MOS A-191

North Carolina

NC, Charlotte, South Corridor LRT A-51
NC, Raleigh-Durham, Regional Rail System A-101

Ohio
OH, Cleveland, Euclid Corridor Transportation Project A-59

Oregon
OR, Portland, Interstate MAX LRT Extension A-63
OR, Portland, South Corridor I-205 / Portland Mall LRT A-109
OR, Washington County, Wilsonville to Beaverton Commuter Rail..... A-117

Pennsylvania
PA, Pittsburgh, North Shore LRT Connector..... A-85
PA, Harrisburg, CORRIDOR*one* Rail MOS..... A-199
PA, Philadelphia-Reading, Schuylkill Valley MetroRail..... A-203

Puerto Rico
PR, San Juan, Tren Urbano A-67

Rhode Island
RI, Providence, South County Commuter Rail A-207

Tennessee
TN, Nashville, East Corridor Commuter Rail A-125

Texas
TX, Dallas, Northwest/Southeast LRT MOS A-129
TX, Houston, North Corridor Rapid Transit MOS A-211
TX, Houston, Southeast Corridor Rapid Transit MOS A-219

Utah
UT, Salt Lake City, Weber County to Salt Lake City Commuter Rail A-137

Virginia
VA, Norfolk, Norfolk LRT A-227
VA, Northern Virginia, Dulles Corridor Metrorail Project – Extension to Wiehle Avenue .. A-235

Washington
WA, Seattle, Central Link Initial Segment..... A-71
WA, Seattle, University Link LRT Extension A-243

Background

The project profiles presented in this Appendix provide background information supporting the Department of Transportation's New Starts Program funding recommendations for FY 2007. The Department's funding recommendations are being provided to Congress pursuant to 49 USC 5309(k)(1). The funding recommendations are based on the decision criteria defined in 49 USC 5309(d).

Under 49 USC 5309(d), major capital investment grants for the construction of a new fixed guideway system or the extension of an existing system seeking $75 million or greater in Federal New Starts funds may be made only if the Secretary determines that the proposed project is:

(A) based on the results of an alternatives analysis and preliminary engineering;

(B) justified based on a comprehensive review of its mobility improvements, environmental benefits, cost effectiveness, and operating efficiencies, economic development effects and public transportation supportive land use policies and future patterns and

(C) supported by an acceptable degree of local financial commitment (including evidence of stable and dependable funding sources) to construct, maintain, and operate the system or extension, and maintain and operate the entire public transportation system without requiring a reduction in existing public transportation services or level of service to operate the proposed project.

The 49 USC 5309(d) criteria provide a basis for selecting those projects which are the most worthy of Federal funds from among the eligible projects. To this end, the New Starts project profiles describe the fixed guideway projects that are most advanced, and evaluate them in terms of the Section 5309(d) criteria.

This *Annual Report on New Starts* includes profiles for each project under a Full Funding Grant Agreement (FFGA) and proposed project undergoing final design or preliminary engineering. In addition to providing information to Congress, the document serves as guidance to project sponsors so that improvements can be made. Since projects can be expected to continue to change as they progress through the development process, the ratings for projects that are not yet recommended for FFGA's should not be construed as a statement about the ultimate merit of the project. Rather, the ratings provide an assessment of the project's current strengths and weaknesses.

Profiles for projects that are under construction – or, in a few cases, in revenue operation - are also included in this report if additional funds are needed in FY 2007 to fulfill the FFGA.

In general, the profiles for projects in final design and preliminary engineering include the following sections:

(1) **Description:** This section briefly describes a project's physical characteristics (scope) and peak period operating plan. This section also summarizes the transportation problem or problems the proposed project is intended to address. Projects' summary rating of *High*, *Medium-High*, *Medium*, *Medium-Low*, or *Low* are presented in this section, as are areas of concern or action items which the project sponsor must address prior to subsequent evaluations.

(2) **Project Development History and Current Status:** This section identifies where the project is in the development process. It indicates, for example, when the project was

approved into preliminary engineering (and final design, if appropriate), as well as when it completed – or is anticipating to complete – Federal environmental review requirements.

(3) **Significant Changes Since FY 2006 Evaluation:** This section describes significant changes in the project scope, capital cost, travel demand forecasts, or financial plan since the previous evaluation, which contribute to an understanding of why the information reported in the FY 2007 *Annual Report on New Starts* may be different from last year's data.

(4) **Project Justification:** This section presents an evaluation of each project's merit based on the criteria cited in 49 USC 5309(d) and FTA's *Final Rule* on New Starts project evaluation and rating, which became effective April 6, 2001. Information on transit supportive land use and project cost effectiveness is summarized. For cost effectiveness, issues related to the estimate of project costs and benefits are identified. Ratings and data are also reported for the other project justification criteria, including: mobility improvements, environmental benefits, operating efficiencies, and other factors (where appropriate).

(5) **Local Financial Commitment:** This section presents the evaluation of each project's financial plan and local financial commitment for the New Starts share, capital financial plan, and operating financial plan.

Profiles of projects which are "exempt" from evaluation under the New Starts criteria include only the description and status sections. Additionally, profiles for projects covered by existing FFGAs include only the information contained under the description and status sections, because projects are not re-evaluated once a funding agreement is in place.

Projects with Full Funding Grant Agreements

Central Phoenix/East Valley Light Rail

Phoenix, Arizona

(November 2005)

Description

The City of Phoenix and Valley Metro Rail, Inc. (VMR), a nonprofit corporation and the sub-recipient of Federal funds awarded under this Full Funding Grant Agreement (FFGA), are constructing a 19.6-mile light rail system, with track alignment located mostly in street median from 19th Avenue and Bethany Home Road in north central Phoenix, through the City of Tempe, to Main Street and Sycamore Street in the City of Mesa. The project includes 27 stations, seven new surface parking lots, a bridge over Town Lake in Tempe, and a bridge at 48th Street in Phoenix. The project scope will also include 36 light rail vehicles, and a maintenance and storage facility. In 2020, the project is expected to serve 49,900 riders.

The total project cost under the FFGA is $1,412.12 million. The Section 5309 New Starts funding share is $587.20 million.

Status

After completing a major investment study in February 1997, the Maricopa Association of Governments adopted LRT for the Central Phoenix/East Valley corridor into its financially constrained long range plan. FTA granted Valley Metro Rail permission to enter preliminary engineering (PE) on a 13-mile segment of the corridor in September 1998. FTA subsequently approved PE on 20.3 miles of the proposed system the following year. On March 14, 2000, city of Phoenix voters passed a sales tax referendum that increased the local sales tax rate by 0.4 percent, all of which is dedicated to transit development. VMR completed the NEPA process and received a Record of Decision on the Central Phoenix/East Valley Light Rail project in February 2003. The project was approved for entry into final design in July 2003, and recommended for funding in the President's FY 2005 Budget. VMR has begun purchasing right-of-way, relocating utilities, and constructing the maintenance facility for the project under a Letter of No Prejudice from FTA. During final design and in preparation for the FFGA, FTA conducted an independent risk assessment, while VMR completed a risk management plan. FTA and the City of Phoenix entered into an FFGA in January 2005, with revenue operations scheduled for December 2008. Construction started in January 2005 and is projected to be completed within budget and on schedule.

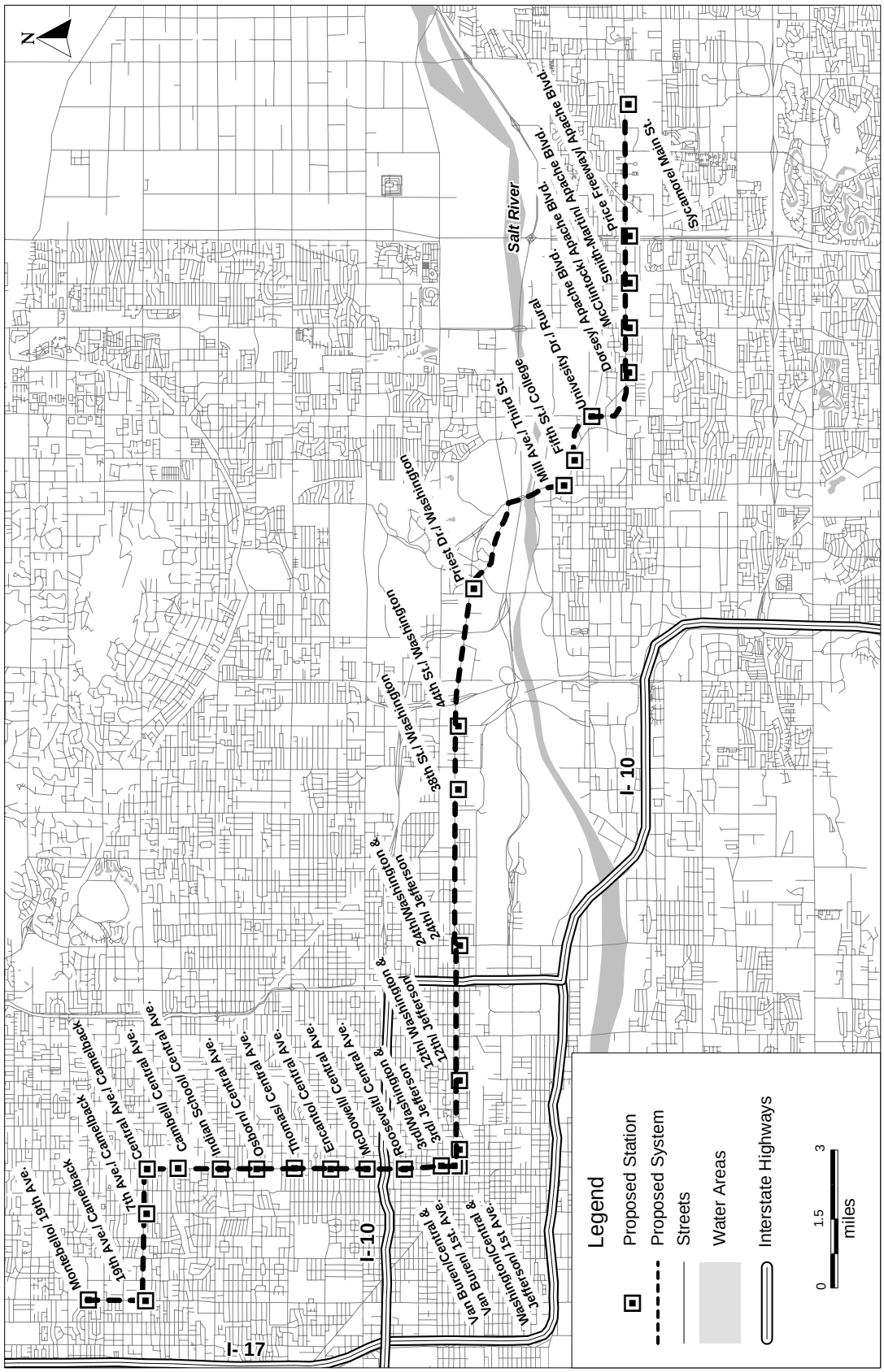
SAFETEA-LU Section 3043(a)(19) authorized the Central Phoenix/East Valley for final design and construction. Through FY 2006, Congress has appropriated $222.86 million in Section 5309 New Starts funds for the project.

Reported in Year of Expenditure Dollars		
Source of Funds	**Total Funding (million)**	**Appropriations to Date**
Federal: Section 5309 New Starts FFGA Commitment Flexible Funds (CMAQ)	$587.20 $59.75	$222.86 million appropriated through FY 2006
Non-Federal Funds:	$765.17	
TOTAL	**$1,412.12**	

NOTE: The sum of the figures may differ from the total as listed due to rounding.

Central Phoenix / East Valley Light Rail

Phoenix, Arizona



Metro Gold Line East Side Extension

Los Angeles, California

(November 2005)

Description

The Los Angeles County Metropolitan Transportation Authority (LACMTA) is constructing a 5.9-mile, dual-track light rail system with eight new stations and one station modification in the East Side Corridor, connecting downtown Los Angeles with low- to moderate-income communities in East Los Angeles. The alignment is primarily at-grade, with a 1.7-mile mid-section tunnel. The Metro Gold Line East Side Extension originates at Union Station in downtown Los Angeles, where it serves as an extension to the Pasadena Gold Line. It continues east along Alameda Street through the City Terrace, Belvedere, and East Los Angeles communities of unincorporated Los Angeles County, and terminates just before the intersection of Pomona and Atlantic Boulevards.

The East Side Corridor has among the highest residential densities and largest transit-dependent populations in Los Angeles. Over 60 bus routes currently serve the corridor, many of which are at capacity during peak travel times and suffer delays due to traffic congestion. The Metro Gold Line East Side Extension will improve public transportation services and provide travel-time savings for the East Side communities and their residents accessing jobs in downtown Los Angeles and other employment destinations along LACMTA's rail and rapid bus network. Average daily ridership in the year 2020 is estimated to be 23,000 riders.

The total project cost under the Full Funding Grant Agreement (FFGA) is $898.81 million. The Section 5309 New Starts funding share is $490.70 million.

Status

In 1998, LACMTA undertook an alternatives analysis to evaluate feasible alternatives for the East Side and Mid-City corridors. FTA approved the East Side project into preliminary engineering in August 2000. LACMTA completed the NEPA process and received a Record of Decision in June 2002. FTA approved the project's entry into final design in October 2002. FTA and LACMTA entered into an FFGA in June 2004, with revenue operations scheduled for December 2009. Construction started in July 2004 and is projected to be completed within budget and on schedule.

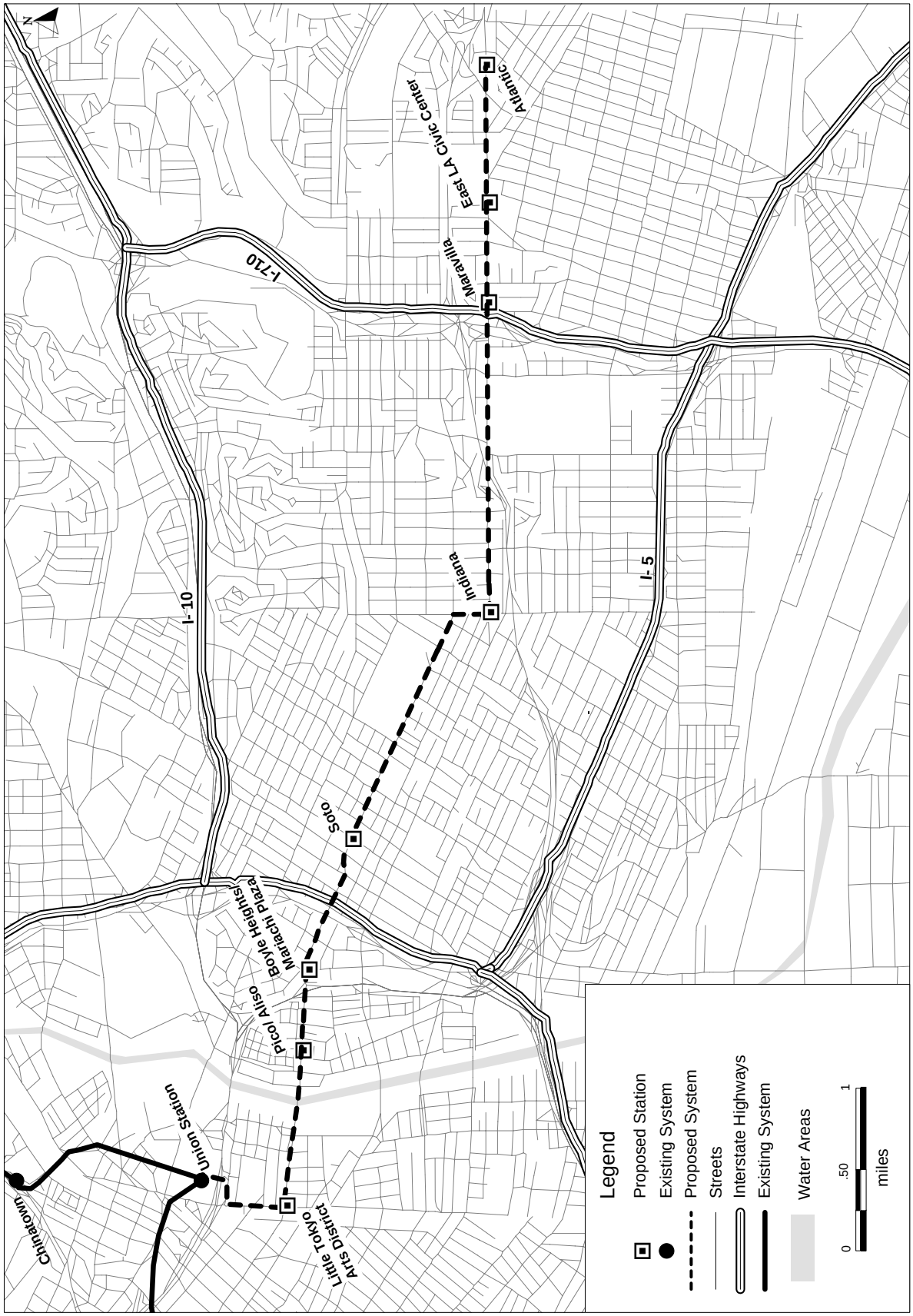
SAFETEA-LU Section 3043(a)(9) authorizes the Los Angeles Metro Gold Line Eastside Extension for final design and construction. Through FY 2006, Congress has appropriated $155.19 million for the Metro Gold Line East Side Extension project.

Reported in Year of Expenditure Dollars		
Source of Funds	**Total Funding (million)**	**Appropriations to Date**
Federal:		
Section 5309 New Starts FFGA Commitment	$490.70	$155.19 million appropriated through FY 2006
Section 5309 Fixed Guideway Modernization	$23.10	
Flexible Funds (STP and CMAQ)	$189.88	
Local:		
Sales Tax Revenue	$195.13	
TOTAL	**$898.81**	

NOTE: The sum of the figures may differ from the total as listed due to rounding.

Metro Gold Line East Side Extension

Los Angeles, California



Mission Valley East LRT Extension

San Diego, California

(November 2005)

Description

The Metropolitan Transit Development Board (MTDB) is constructing a 5.9-mile Mission Valley East Light Rail Transit (LRT) extension of the agency's Blue Line, from its current terminus east of Interstate 15 to the City of La Mesa, where it will connect to the existing Orange Line near Baltimore Drive. The project includes four new stations at Grantville, San Diego State University, Alvarado Medical Center, and 70th Street. The project will also serve two existing stations at Mission San Diego and Grossmont Center, and includes the purchase of 11 low-floor light rail vehicles. The project has elevated at-grade and tunnel segments, two park-and-ride lots, and a new access road between Waring Road and the Grantville Station. The project is expected to serve 10,800 average weekday boardings in 2015.

The total project cost under the Full Funding Grant Agreement (FFGA) for the Mission Valley East extension is $430.96 million. The Section 5309 New Starts funding share is $329.96 million.

Status

A major investment study/Draft Environmental Impact Statement (EIS) was completed in May 1997. The Mission Valley East segment was the locally preferred alternative selected in October 1997 by MTDB, with concurrence from the San Diego Association of Governments (the local Metropolitan Planning Organization). FTA approved the project into preliminary engineering in March 1998. Preliminary engineering was completed in July 1998. The Final EIS was completed and FTA issued a Record of Decision in August 1998. FTA approved the project into final design in October 1998. FTA and MTDB entered into an FFGA in June 2000. The system was opened for revenue operations five months ahead of schedule, on July 8, 2005.

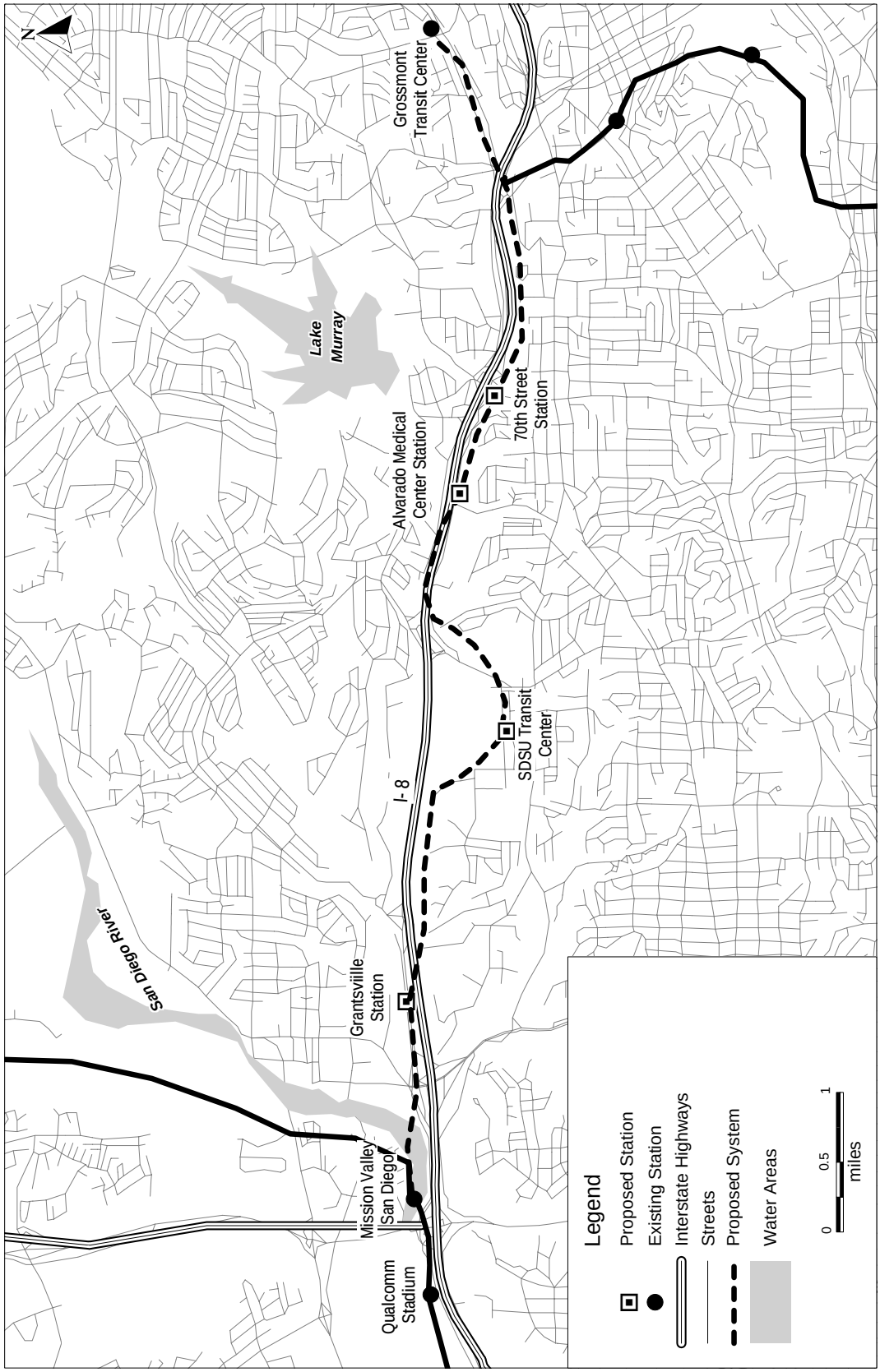
SAFETEA-LU Section 3043(a)(26) authorized the Mission Valley East Corridor for final design and construction. Through FY 2006, Congress has appropriated $329.15 million in Section 5309 funds for this project.

Reported in Year of Expenditure Dollars		
Source of Funds	**Total Funding (million)**	**Appropriations to Date**
Federal:		
Section 5309 New Starts FFGA Commitment	$329.96	$329.15 million appropriated through FY 2006
Flexible Funds	$13.70	
State:		
Transit Capital Improvement	$4.10	
Traffic System Management	$0.80	
Statewide Transportation Improvement Program	$62.90	
Local:		
Transnet Sales Tax	$19.50	
TOTAL	**$430.96** [1]	

NOTE: The sum of the figures may differ from the total as listed due to rounding.
[1] $1 million in-kind right-of-way donation not included in total.

Mission Valley East LRT Extension

San Diego, California



Oceanside-Escondido Rail Corridor

San Diego, California

(November 2005)

Description

The North County Transit District (NCTD) is converting an existing 22-mile freight rail corridor into a transit system using diesel multiple unit vehicle technology. The segment will run east from the coastal city of Oceanside through the cities of Vista and San Marcos, and unincorporated portions of San Diego County to Escondido. The alignment will include a 1.7-mile loop of new right-of-way to serve the campus of California State University-San Marcos (CSUSM). The project is located along the State Highway 78 corridor, which connects Interstates 5 and 15 and is the primary east-west corridor in Northern San Diego County. The project also includes 15 stations, 12 diesel multiple unit vehicles, and a maintenance and storage facility. Four stations will be located at existing transit centers. In 2020, the project is expected to serve 19,000 daily riders.

The total project cost under the Full Funding Grant Agreement is $351.52 million. The Section 5309 New Starts funding share is $152.10 million.

Status

An Environmental Impact Report (EIR) for the Oceanside-Escondido Rail project and an EIR for the CSUSM alignment were published and certified in 1990 and 1991, respectively. An Environmental Assessment/Subsequent Environmental Impact Report (SEIR) was completed in early 1997. The North County Transit Development Board certified the SEIR in March 1997, and FTA issued a Finding of No Significant Impact in October 1997. FTA approved the project for entry into final design in February 2000. An FFGA was awarded in February 2003, with a revenue operations date of December 31, 2005. Construction started in December 2002, and is currently projected to be completed later than planned and at a higher total cost than budgeted.

The project is currently $32 million over budget and 24 months behind schedule due to the need to process a deviation request to the California Public Utilities Commission (CPUC) for the Diesel Multiple Unit (DMU) vehicles, and the extended effort of negotiations with Burlington Northern Santa Fee (BNSF), the freight provider along the corridor.

FTA directed NCTD to develop a Recovery Plan to remedy the cost overruns and schedule slippage based on the cost-to-complete project estimate and established revenue operations date in the FFGA. The Recovery Plan is intended to bring the project to within five percent of the baseline cost estimate. FTA approved the Plan on June 30, 2005. FTA will not increase New Starts funds for this project.

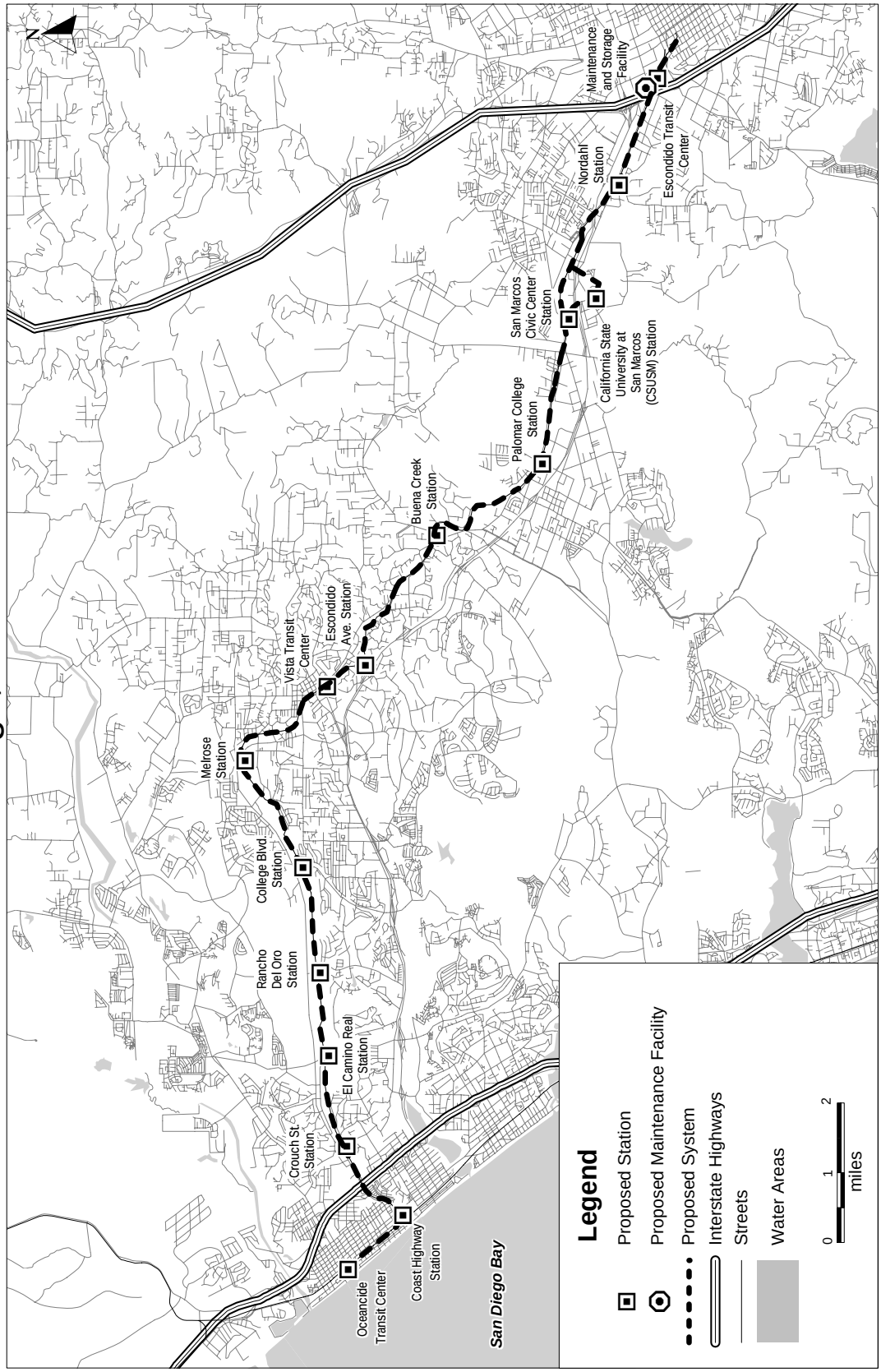
TEA-21 Section 3030(a)(77) authorized the Oceanside-Escondido Corridor for final design and construction. Through FY 2006, Congress has appropriated $151.42 million in Section 5309 New Starts funds for the project.

Reported in Year of Expenditure Dollars		
Source of Funds	**Total Funding (million)**	**Appropriations to Date**
Federal:		
Section 5309 New Starts FFGA Commitment	$152.10	$151.42 million appropriated through FY 2006
State:		
Proposition 108	$ 19.47	
Statewide Transportation Improvement Program	$ 7.34	
Traffic Congestion Relief Program	$ 88.52	
Local:		
Transnet (North County Transit District)	$ 67.38	
Transnet (Metropolitan Transit Development Board)	$ 11.29	
Regional Transportation Improvement Program	$ 5.42	
TOTAL	**$351.52**	

NOTE: The sum of the figures may differ from the total as listed due to rounding.

Oceanside - Escondido Rail Corridor

San Diego, California



BART Extension to San Francisco Airport

San Francisco, California

(November 2005)

Description

The Bay Area Rapid Transit (BART) and San Mateo County Transit District (SamTrans) have completed an 8.7-mile double track, four-station, heavy rail extension from BART's Colma Station through Colma, South San Francisco, and San Bruno, and along the Caltrain right-of-way to Millbrae. Approximately 1.5 miles north of the Millbrae Avenue intermodal terminal, an east-west aerial "Y" stub will service the San Francisco International Airport (SFO). The project includes expansion and improvement of several existing maintenance and storage yards. In 2010, average weekday boardings are estimated at 73,800, with an estimated 17,800 daily trips by air travelers and airport employees. The extension opened for service in June 2003. In October 2004, there were 27,000 average weekday boardings.

The total project cost under the amended Full Funding Grant Agreement (FFGA), reflecting increases in project cost, is $1,552.23 million. The Section 5309 New Starts funding share is $750.00 million.

Status

An alternatives analysis/Draft Environmental Impact Statement (EIS)/Draft Environmental Impact Report was completed in 1992, resulting in the selection of a locally preferred alternative. New alignments were evaluated in April 1995, whereby BART and SamTrans revised the locally preferred alternative. The Final EIS was completed in June 1996, and FTA issued a Record of Decision in August 1996. FTA approved the project into final design in September 1996. The original FFGA for the SFO project was signed in June 1997, with a total project cost estimate of $1,054 million. FTA amended the FFGA in June 2000 to reflect the increased cost of construction in the region. The amended FFGA revised the total cost estimate to $1,552.23 million, but maintained the Section 5309 New Start funding of $750.00 million. The BART extension opened for revenue service in June 2003.

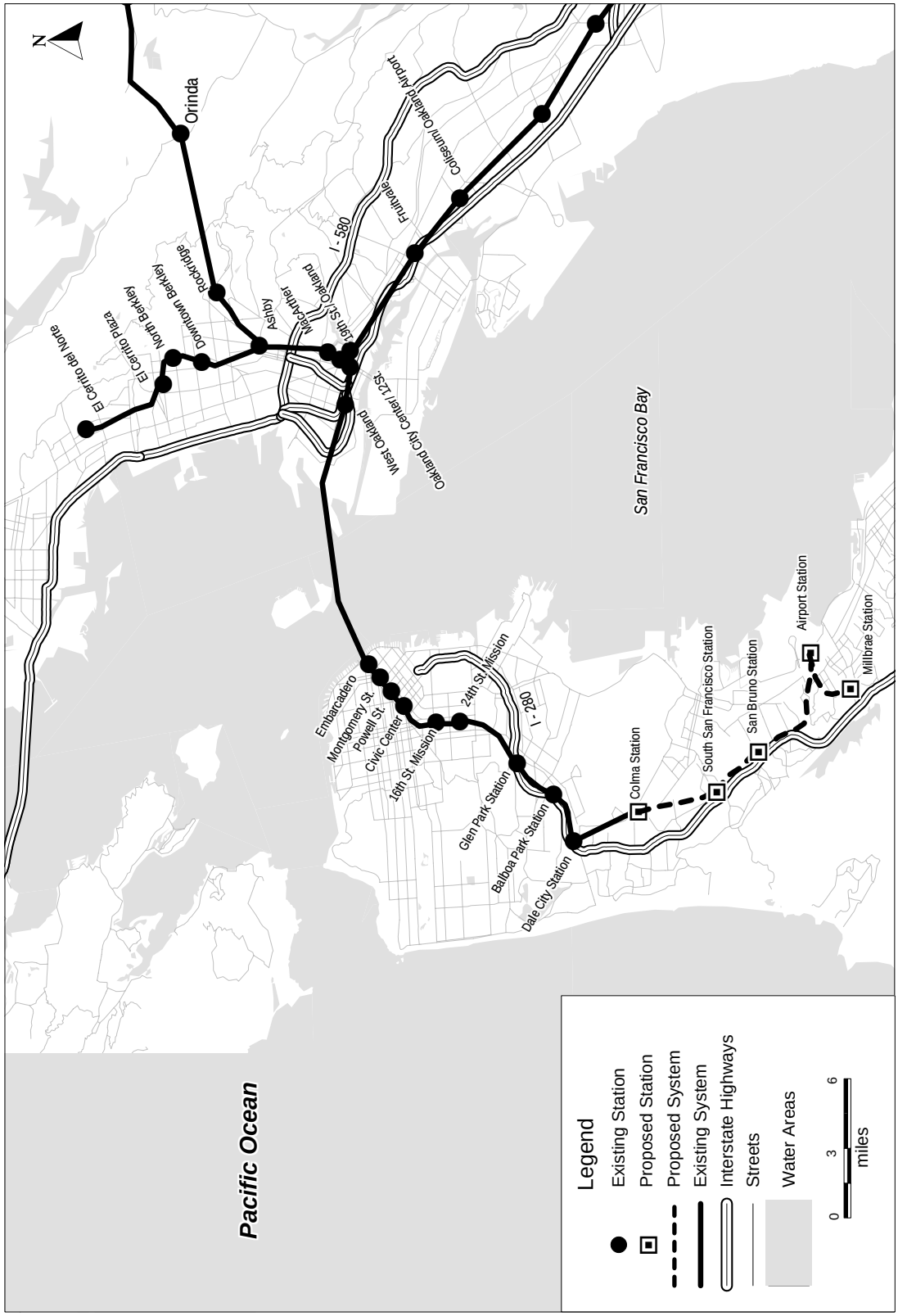
SAFETEA-LU Section 3043(a)(28) authorized the BART to SFO project for final design and construction. Through FY 2006, Congress has appropriated $748.59 million in Section 5309 New Starts funds.

Reported in Year of Expenditure Dollars		
Source of Funds	**Total Funding (million)**	**Appropriations to Date**
Federal: Section 5309 New Starts FFGA Commitment	$750.00	$748.59 million appropriated through FY 2006
State:	$152.00	
Local: BART [1] San Francisco International Airport	 $445.23 $123.00	
Subtotal:	**$1,470.23**	
Additional Local Funding:	$ 82.00	
TOTAL	**$1,552.23**	

NOTE The sum of the figures may differ from the total as listed due to rounding.
[1] Local funding includes up to $77 million for airport systems.

BART Extension to San Francisco Airport

San Francisco, California



Southeast Corridor LRT

Denver, Colorado

(November 2005)

Description

The Regional Transportation District (RTD) and the Colorado Department of Transportation (CDOT) are constructing the Southeast Corridor project (known locally as T-REX). T-REX is a 19.1-mile double-track light rail transit (LRT) system extending from the existing LRT station at Interstate 25 (I-25) and Broadway in Denver, along I-25 to Lincoln Avenue and I-25 in Douglas County, with an LRT spur line along Interstate 225 to Parker Road in Arapahoe County. The project includes 13 new stations, 34 light rail vehicles, 12 park-and-ride lots, a maintenance facility and system upgrades. The double-track system will operate in an exclusive, grade-separated right-of-way and connect with the existing 5.3-mile Central Corridor LRT in downtown Denver at the existing Broadway station. At I-25 and Broadway, the Southeast Corridor LRT will also connect with RTD's 8.7-mile Southwest Corridor LRT. Ridership is estimated to be 38,100 average weekday boardings by 2020.

The total project cost under the Full Funding Grant Agreement (FFGA) for this project is $879.27 million. The Section 5309 New Starts funding share is $525.00 million.

Status

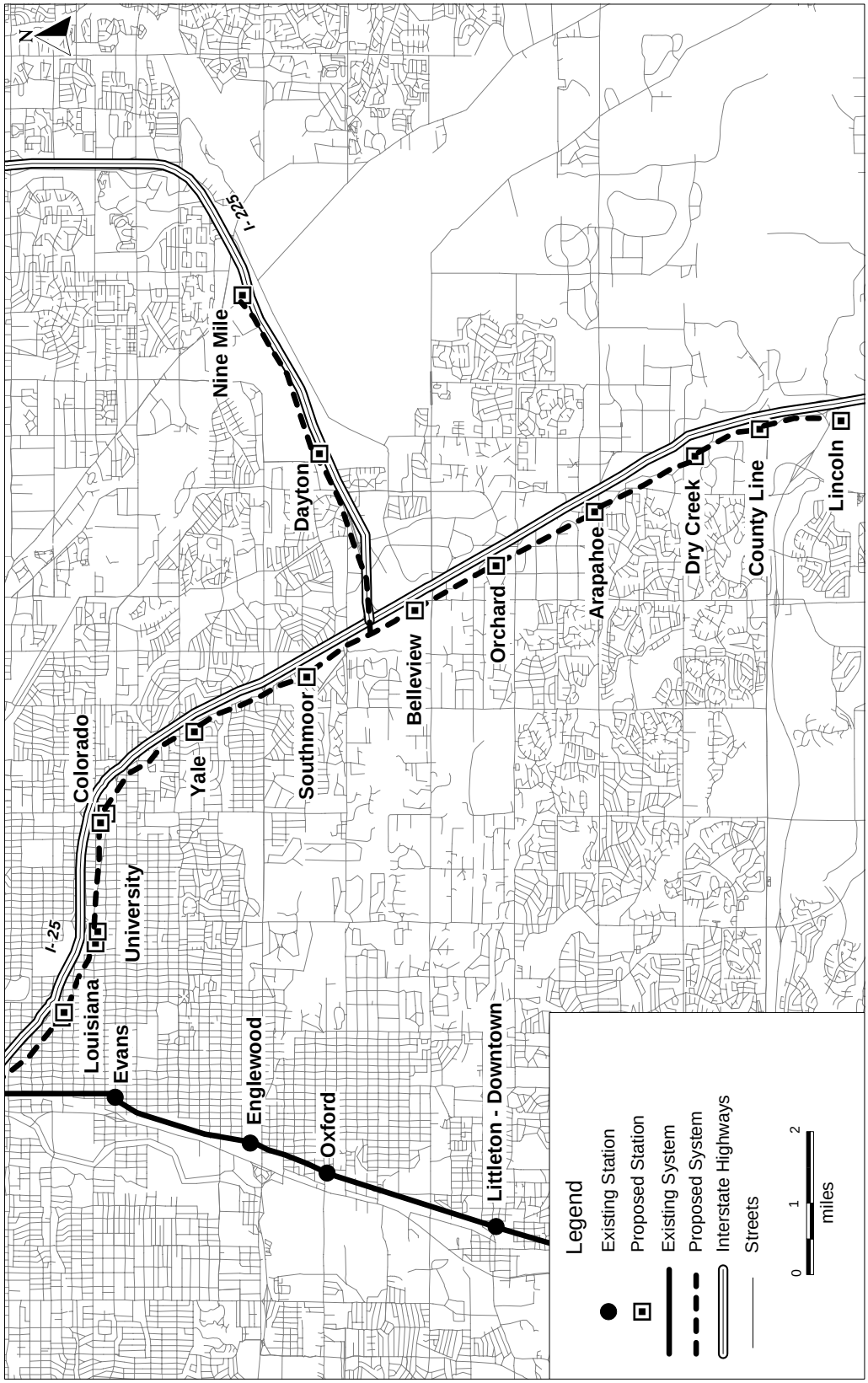
CDOT, in cooperation with the Denver Regional Council of Governments and the RTD, completed a major investment study on the Southeast Corridor in July 1997. In February 1998, FTA approved the project into preliminary engineering. FTA and the Federal Highway Administration issued a Final Environmental Impact Statement for the project in December 1999 and a Record of Decision in March 2000. In May 2000, FTA approved the project into final design. RTD and FTA entered into an FFGA in November 2000, with revenue operations scheduled for June 2008. RTD is constructing T-REX through a design-build contract that was awarded in June 2001. Construction started in September 2001 and is projected to be completed within budget and on schedule.

SAFETEA-LU Section 3043(a)(7) authorized the Denver Southeast LRT for final design and construction. Through FY 2006, Congress has appropriated $366.22 million in Section 5309 New Starts funds for the project.

Reported in Year of Expenditure Dollars		
Source of Funds	**Total Funding (million)**	**Appropriations to Date**
Federal: Section 5309 New Starts FFGA Commitment	$525.00	$366.22 million appropriated through FY 2006
Local: Sales Tax Revenue-Based Bond Proceeds	$354.27	
TOTAL	**$879.27**	

NOTE: The sum of the figures may differ from the total as listed due to rounding.

Southeast Corridor LRT
Denver, Colorado



Douglas Branch Reconstruction

Chicago, Illinois

(November 2005)

Description

The Chicago Transit Authority (CTA) is reconstructing 6.6 miles of the existing Douglas Branch of CTA's heavy rail Blue Line. The line extends from a point just west of downtown Chicago to its terminus at Cermak Avenue. The project includes reconstruction and rehabilitation of 11 stations and aerial structures, upgrading power distribution and signal systems, and reconstruction of the 54th Street maintenance yard. The line currently has approximately 27,000 average weekday boardings serving one of the most economically distressed areas in Chicago. The project is expected to serve 6,000 daily new riders in 2020.

The total project cost under the Full Funding Grant Agreement (FFGA) is $482.68 million. The Section 5309 New Starts funding share is $320.10 million.

Status

In December 1997, the Chicago Area Transportation Study (the local Metropolitan Planning Organization) included the Douglas Branch Reconstruction Project in the region's financially-constrained long-range transportation plan. CTA completed preliminary engineering in December 1999. FTA issued a Finding of No Significant Impact on an Environmental Assessment in April 2000, and approved the project into final design in January 2001. FTA and CTA entered into an FFGA in January 2001, with revenue operations scheduled for January 2005. Construction started in July 2001 and was completed within the FFGA budget on January 31, 2005.

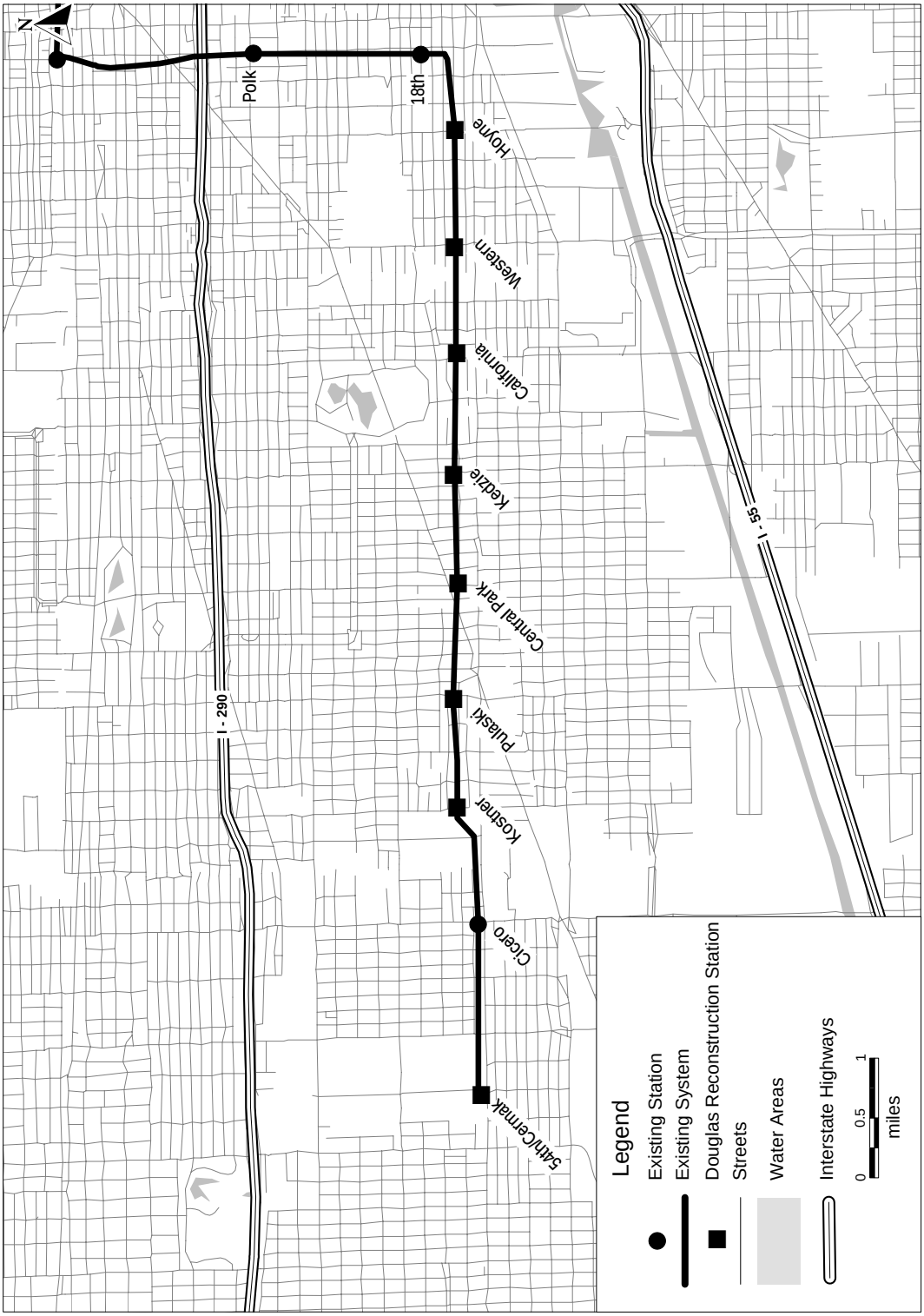
SAFETEA-LU Section 3043(a)(4) authorized the Douglas Branch project for final design and construction. Through FY 2006, Congress has appropriated $318.53 million in Section 5309 New Starts funds for the project.

Reported in Year of Expenditure Dollars		
Source of Funds	**Total Funding (million)**	**Appropriations to Date**
Federal:		
Section 5309 New Starts FFGA Commitment	$320.10	$318.53 million appropriated through FY 2006
Section 5309 Fixed Guideway Modernization	$ 8.46	
Section 5307 Urbanized Area Formula	$55.22	
State:		
Illinois Department of Transportation	$41.39	
Local:		
Bonds	$57.51	
TOTAL	**$482.68**	

NOTE: The sum of the figures may differ from the total as listed due to rounding.

Douglas Branch Reconstruction

Chicago, Illinois



Ravenswood Line Extension
Chicago, Illinois
(November 2005)

Description
The Chicago Transit Authority (CTA) is proposing to reconstruct existing platforms and stations on the existing Ravenswood (Brown) Line to accommodate eight-car trains, along with other related capital improvements. The Ravenswood Line extends approximately 9.1 miles from the Kimball Terminal on the north side of Chicago through the "Loop Elevated" in downtown Chicago, and includes 19 stations. The majority of the line operates on an elevated structure (8.0 miles), except for a portion near the northern end of the line that operates at grade (1.1 miles).

The proposed project includes the modernization of stations and other rail infrastructure improvements, including compliance with the Americans with Disabilities Act regulations for improved station accessibility, resulting in an enhancement of passenger safety and convenience. CTA is also upgrading several highway grade crossings to reduce inconvenience to vehicular traffic and improve pedestrian safety along the line. CTA also expects the modernization of the Brown Line's signal/communication controls to improve train performance and reliability. It will optimize operations along the line via a reduction or elimination of current "slow zones" of, in some areas, less than 15 miles per hour due to the line's deterioration. CTA estimates that average daily ridership in 2020 will total 68,000 passengers.

The total project cost under the Full Funding Grant Agreement (FFGA) is $529.91 million. The Section 5309 New Starts funding share is $245.52 million.

Status
In November 1997, the Chicago Area Transportation Study (the local Metropolitan Planning Organization) included the Ravenswood Expansion Project in the region's financially-constrained long-range transportation plan. CTA completed preliminary engineering in early 2000. In February 2002, CTA completed an Environmental Assessment. FTA issued a Finding of No Significant Impact on the project in July 2002, and approved the project into final design in August 2002. CTA and FTA entered into an FFGA in January 2004, with revenue operations scheduled for December 2009. Due to receipt of construction bids above the engineer's estimate, FTA asked CTA to submit a Recovery Plan. CTA is in the process of repackaging the bid packages. Construction started in late 2004, and is projected to be completed within budget and schedule.

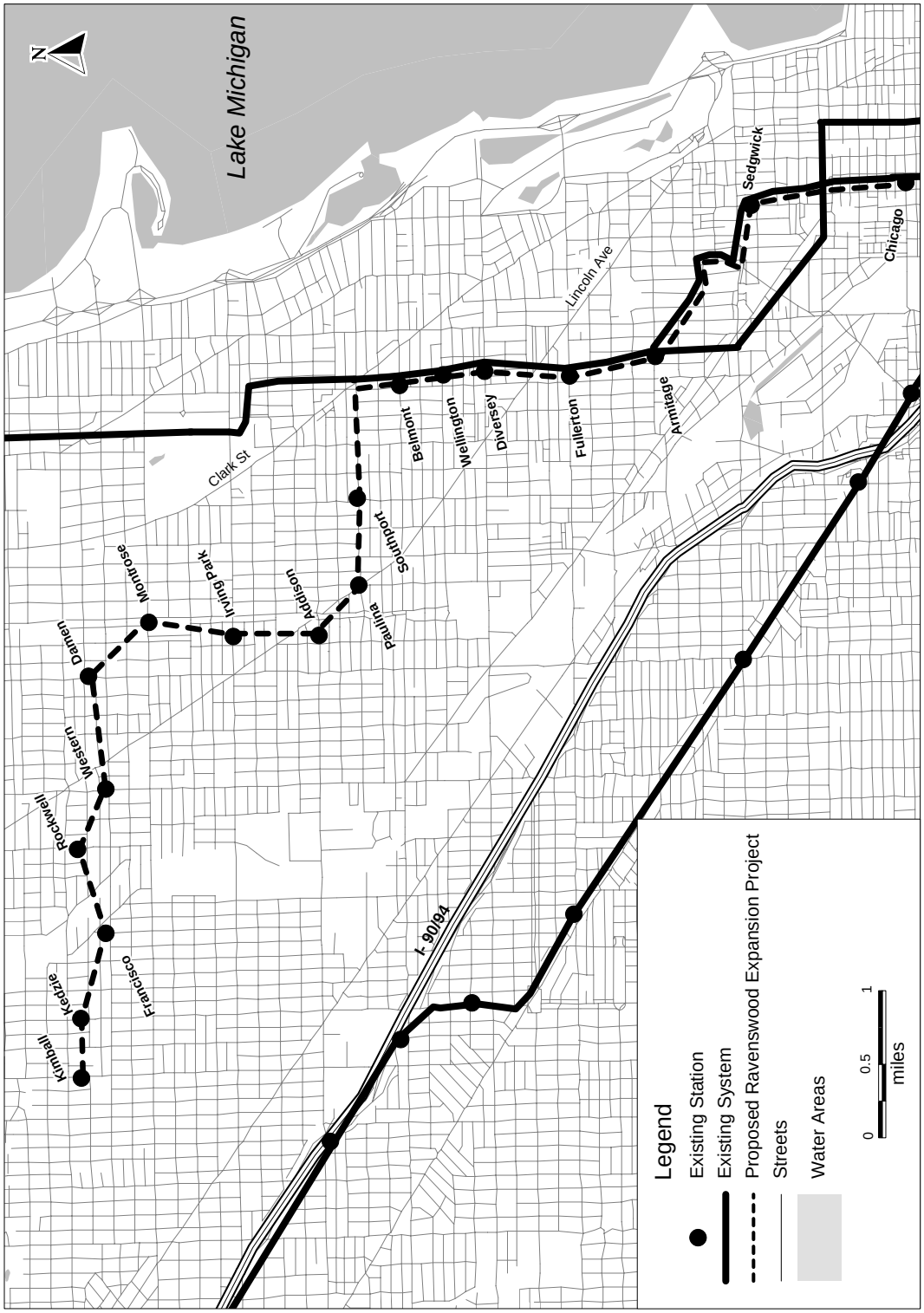
SAFETEA-LU Section 3043 (a)(5) authorized the Ravenswood Line Extension for final design and construction. Through FY 2006, Congress has appropriated $99.57 million in Section 5309 New Starts funds for the project.

Reported in Year of Expenditure Dollars		
Source of Funds	**Total Funding (million)**	**Appropriations to Date**
Federal: Section 5309 New Starts FFGA Commitment Section 5307 Urbanized Area Formula	 $245.52 $177.57	 $99.57 million appropriated through FY 2006
Local: Illinois Department of Transportation Regional Transit Authority/Chicago Transit Authority	 $49.72 $57.10	
TOTAL	**$529.91**	

NOTE: The sum of the figures may differ from the total as listed due to rounding.

Ravenswood Line Extension

Chicago, Illinois



Union-Pacific West Line Extension

Chicago, Illinois

(November 2005)

Description

Metra, the commuter rail division of the Regional Transportation Authority of Northeastern Illinois, is constructing an 8.5-mile extension to the existing 35-mile Union-Pacific West Line (once known as the Central Kane Corridor). Metra's Union-Pacific West (UPW) Line currently operates 59 weekday trains (29 outbound, 30 inbound) and 34 weekend trains (20 roundtrip trains on Saturdays and 14 roundtrip trains on Sundays) over the Union-Pacific Railroad from the Chicago Passenger Terminal in the central business district to Geneva, Illinois (Kane County). The project would extend the line approximately 8.5 miles west from Geneva to Elburn, Illinois. The project also includes multiple improvements to track and signals, construction of two new stations, parking facilities, the purchase of two diesel locomotives, and the construction of a new overnight train storage yard. The additional track, new stations, and related improvements will enable Metra to accommodate additional trains, increase operating speeds and bring new commuter rail service to the communities of LaFox and Elburn, Illinois. Metra estimates 3,900 average weekday boardings on the UPW line in 2020.

The total project cost under the Full Funding Grant Agreement (FFGA) for the UPW extension is $134.56 million. The Section 5309 New Starts funding share is $80.76 million.

Status

In August 1998, Metra completed a major investment study for the Central Kane Corridor. In December 1998, FTA approved Metra's request to initiate preliminary engineering and the environmental review process on the UPW extension project. Metra completed an Environmental Assessment for the project in June 2000. FTA issued a Finding of No Significant Impact in August 2000. FTA approved the UPW project into final design in January 2001. Metra and FTA entered into an FFGA in November 2001, with revenue operations scheduled for December 2006. Construction began in June 2003, and is projected to be completed within budget and on schedule.

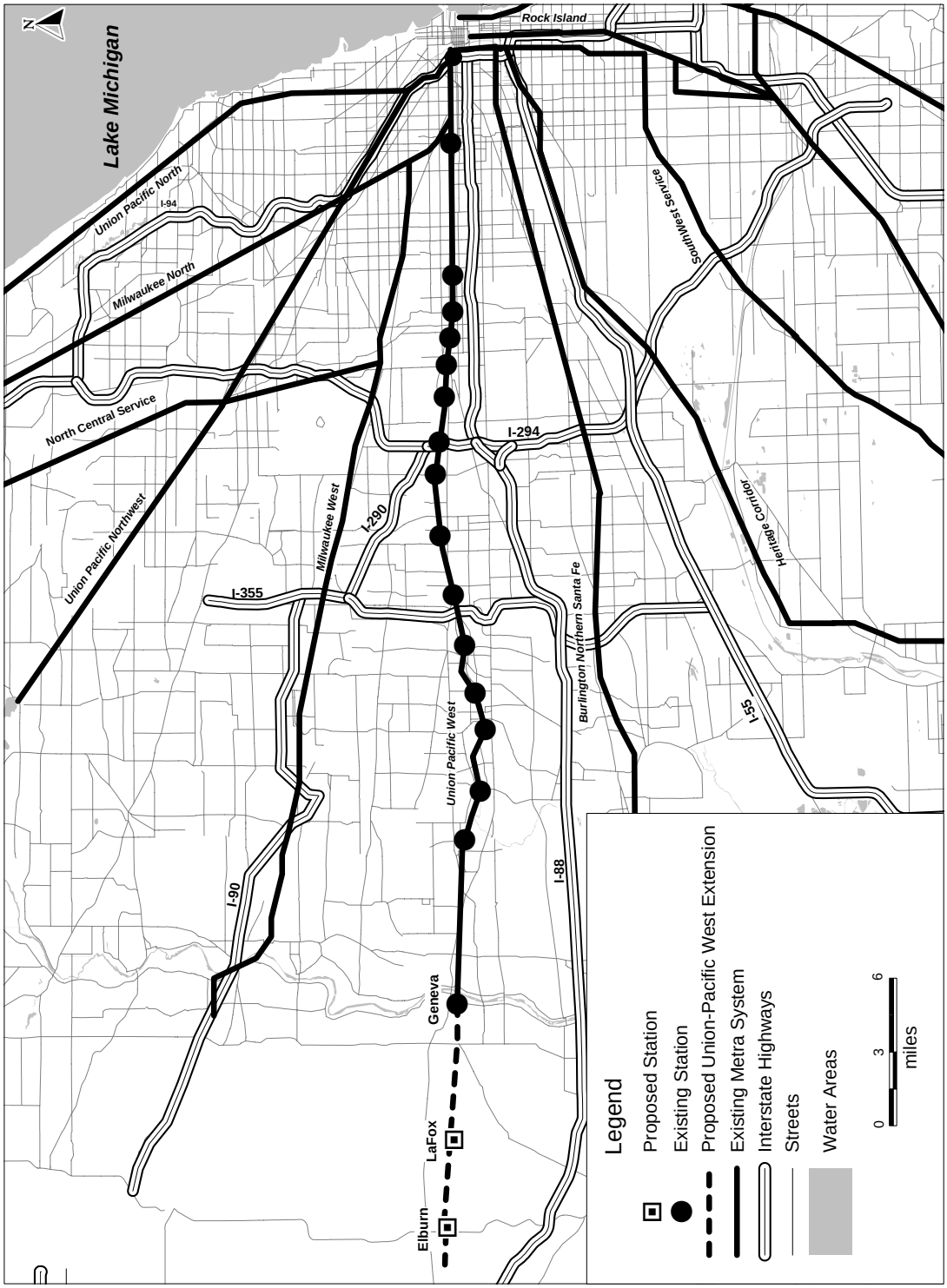
SAFETEA-LU Section 3030(a)(13) authorized the West Line Extension for final design and construction. Through FY 2006, Congress has appropriated $79.51 million in Section 5309 New Starts funds for the project.

Reported in Year of Expenditure Dollars		
Source of Funds	**Total Funding (million)**	**Appropriations to Date**
Federal:		
Section 5309 New Starts FFGA Commitment	$80.76	$79.51 million appropriated through FY 2006
Section 5309 Fixed Guideway Modernization	$12.90	
State:		
Illinois Department of Transportation Bonds	$22.50	
Local:		
Metra	$17.30	
Municipality Contributions	$0.60	
Bonds	$0.50	
TOTAL	**$134.56**	

NOTE: The sum of the figures may differ from the total as listed due to rounding.

Union-Pacific West Line Extension

Chicago, Illinois



Central LRT Double-Track

Baltimore, Maryland

(November 2005)

Description

The Maryland Mass Transit Administration (MTA) is upgrading 9.4 miles of designated areas of the Baltimore Central Light Rail Line (CLRL). The scope of the project includes double-tracking eight sections of the existing 29-mile Baltimore CLRL, between the Warren Road and Cromwell/Glen Burnie Stations. Although no new stations are required, the addition of a second track will require construction of a second platform at four existing stations. The project includes two new bridges over the Middle Branch River and Kloman Avenue, crossing improvements, installation of a bi-directional signal system, catenary, and other equipment and systems.

Once the project is complete and traffic signal pre-emption on Howard Street is installed, the project will reduce headways from 17 minutes to eight minutes in the peak period and to 12 minutes in the off-peak, and will also improve operational reliability. In 2020, average weekday boardings are estimated at 44,000, with an estimated 6,800 daily new riders.

The total project cost under the Full Funding Grant Agreement (FFGA) for these improvements is $153.70 million. The Section 5309 New Starts funding share is $120.00 million.

Status

In February 1999, FTA approved Maryland MTA's request to enter preliminary engineering. The project was divided into two segments to facilitate the environmental review. An Environmental Assessment for the southern segment, Cromwell Station to Hamburg Street, was completed with FTA's issuance of a Finding of No Significant Impact (FONSI) in July 2000. FTA approved entry into final design for the southern segment in August 2000. The preliminary engineering/environmental review phase for the northern segment, 28th Street to Warren Road, was completed with FTA's issuance of a FONSI in November 2000. FTA approved the northern segment of the CLRL for entry into final design in January 2001. In July 2001, FTA and MTA entered into an FFGA with revenue operations scheduled for December 2006. Construction started in March 2002 and is projected to be completed within budget and on schedule.

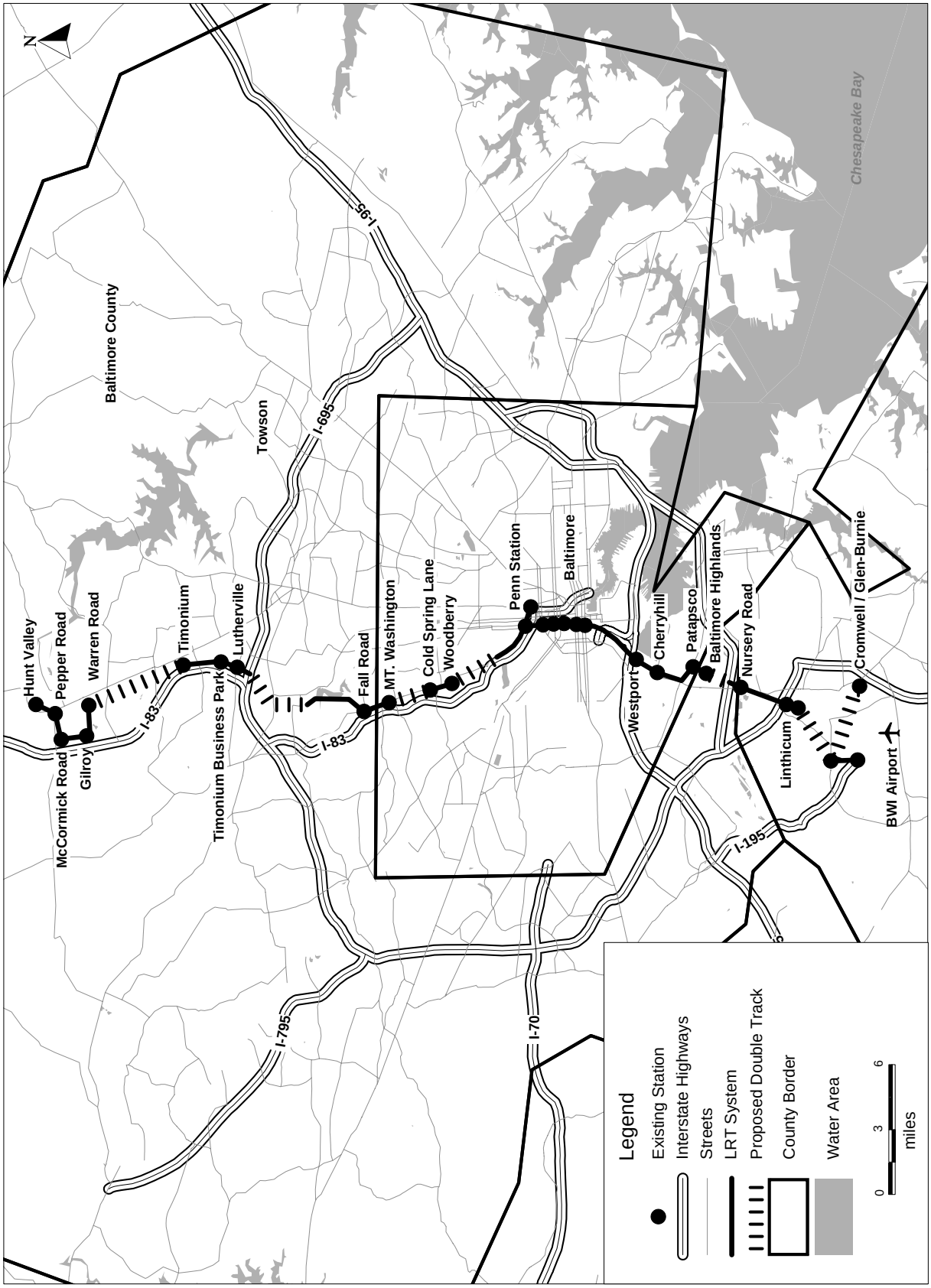
SAFETEA-LU Section 3043 (a)(2) authorized the Maryland–Light Rail Double-Track for final design and construction. Section 3030(g)(1) of TEA-21 specified that the Baltimore-Washington Transportation Improvement Program projects be funded at an 80 percent Federal share, and that the local share include the aggregate expenditure of State and local funds, including highway funds provided by the State of Maryland for all phases of the Central Corridor Light Rail project. Through FY 2006, Congress has appropriated $119.52 million in Section 5309 New Starts funds for the project.

Reported in Year of Expenditure Dollars		
Source of Funds	**Total Funding (million)**	**Appropriations to Date**
Federal: Section 5309 New Starts FFGA Commitment Section 5307 Urbanized Area Formula Funds	$120.00 $3.00	$119.52 million appropriated through FY 2006
State: Maryland Transportation Trust Fund	$30.70	
TOTAL	**$153.70**	

NOTE: The sum of the figures may differ from the total as listed due to rounding.

Central LRT Double-Track

Baltimore, Maryland



South Corridor LRT

Charlotte, North Carolina

(November 2005)

Description

The Charlotte Area Transit System (CATS), in cooperation with the City of Charlotte, is constructing a 9.6-mile, 15 station light rail transit (LRT) line extending from Uptown Charlotte (the city's central business district (CBD)) to Interstate 485 in south Mecklenburg County near the South Carolina State line. A 3.7-mile portion of the proposed system – between Uptown and Scaleybark Road – would operate on an abandoned Norfolk Southern right-of-way owned by the City of Charlotte. The remainder of the planned system (5.9 miles) would operate on separate tracks generally paralleling the right-of-way. Seven of the proposed stations from I-485 north to Scaleybark Road would include park-and-ride lots with a total of approximately 3,300 spaces, and would serve as transfer points for local and express bus service. The South Corridor Light Rail project is expected to carry 9,100 average weekday riders in December 2007 and 17,650 average weekday riders by 2025.

The total project cost under the Full Funding Grant Agreement (FFGA) is $426.85 million.

Status

In November 1998, a local referendum was passed authorizing a dedicated local sales tax of ½ percent for funding transit service in the region. A major investment study in the South Corridor that identified light rail as the locally preferred alternative was completed the following year. FTA approved the South Corridor LRT project for preliminary engineering in August 2000. CATS issued a Draft Environmental Impact Statement (EIS) in October 2002. The Final EIS was published in April 2003, and a Record of Decision was issued in May 2003. FTA approved the project's entry into final design in August 2003. In May 6, 2005, FTA entered into an FFGA providing a Federal commitment of $192.94 million in New Starts funds.

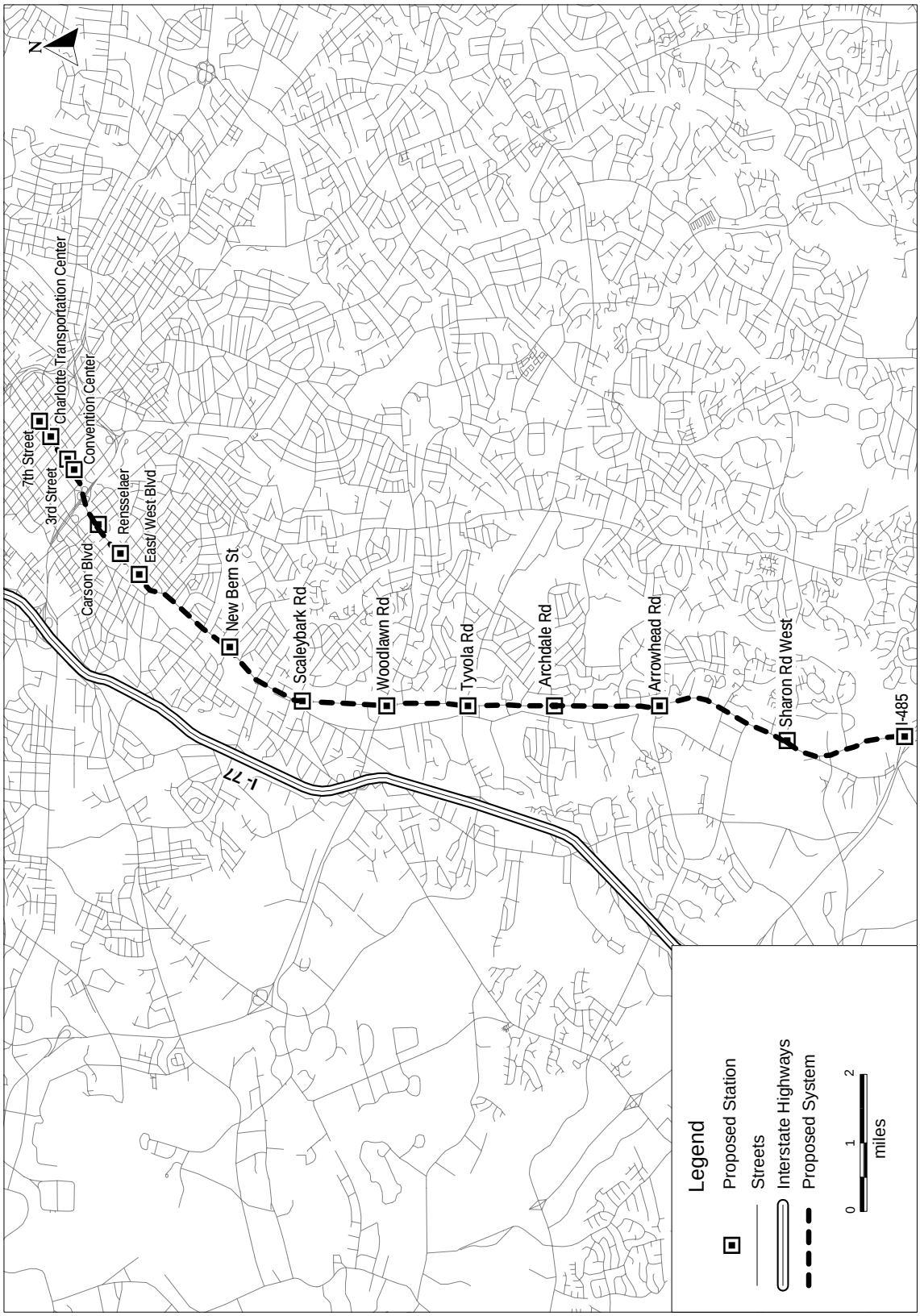
SAFETEA-LU Section 3043 (a)(3) authorized the South Corridor LRT project for final design and construction. Through FY 2006, Congress has appropriated $122.20 million for the project.

Reported in Year of Expenditure Dollars		
Source of Funds	**Total Funding (million)**	**Appropriations to Date**
Federal: Section 5309 New Starts FFGA Commitment Section 5307 Formula Funds	$192.94 $6.41	$122.20 appropriated through FY 2006
State: State FFGA	$106.70	
Local: Sale Tax Revenues	$120.80	
TOTAL	**$426.85**	

NOTE: The sum of the figures may differ from the total as listed due to rounding.

South Corridor LRT

Charlotte, North Carolina



Hudson-Bergen MOS-2

Northern New Jersey

(November 2005)

Description

The New Jersey Transit Corporation (NJT) is constructing a second minimum operable segment (MOS-2) for the Hudson-Bergen Waterfront Light Rail Transit System. The MOS-2 project includes a 5.1-mile, 6 station extension from Hoboken Terminal to the Tonnelle Avenue park-and-ride lot in North Bergen and a one-mile, one station extension south from 34th Street to 22nd Street in Bayonne. NJT expects MOS-2 to serve 34,900 average weekday boardings in 2010.

The total cost of MOS-2 under the Full Funding Grant Agreement (FFGA) is $1,215.40 million. The Section 5309 New Starts funding share for the project is $500.00 million.

Status

The Final Environmental Impact Statement for the full Hudson-Bergen Waterfront Light Rail Transit project was issued in August 1996. An Environmental Assessment was completed on a re-alignment and submitted to FTA in August 1998. FTA issued a Finding of No Significant Impact in June 1999.

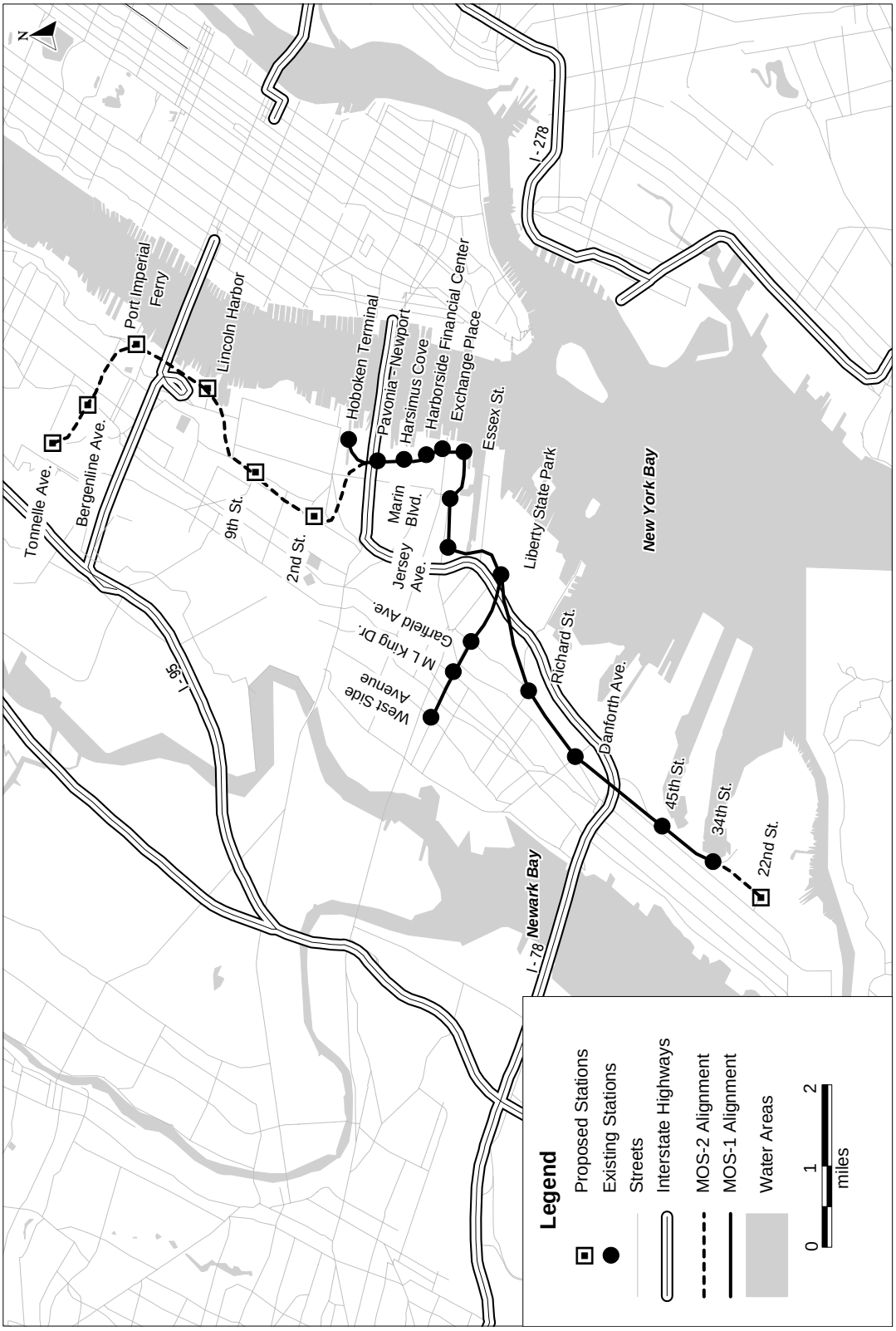
FTA and NJT entered into an FFGA in November 2000, with revenue operations scheduled for 2005. MOS-2, like the completed initial minimum operable segment (MOS-1), is a design/build/ operate/maintain project. Construction on MOS-2 began in September 2000 under a Letter of No Prejudice and is expected to be completed within budget and on schedule. Revenue service began in November 2003 for the segment from 34th Street to 22nd Street in Bayonne. In September 2004, revenue service began at three stations between Hoboken Terminal and Weehawken. The final segment from Lincoln Harbor to Tonnelle Avenue should be in revenue service in early 2006

SAFETEA-LU Section 3043 (a)(16) authorized the Hudson-Bergen MOS-2 project for final design and construction. Through FY 2006, Congress has appropriated $344.81 million in Section 5309 New Starts funds for the project.

Reported in Year of Expenditure Dollars		
Source of Funds	**Total Funding (million)**	**Appropriations to Date**
Federal:		
Section 5309 New Starts FFGA Commitment	$500.00	$344.81 million appropriated through FY 2006
Section 5307 Urbanized Area Formula Funds	$153.70	
State:		
New Jersey Transportation Trust Fund	$530.40	
Port Authority of NY & NJ and Utility Reimbursements	$31.30	
TOTAL	**$1,215.40**	

NOTE: The sum of the figures may differ from the total as listed due to rounding.

Hudson-Bergen MOS-2
Northern New Jersey



Euclid Corridor Transportation Project

Cleveland, Ohio

(November 2005)

Description

The Greater Cleveland Regional Transit Authority (GCRTA) is constructing a 9.4-mile, 35 station bus rapid transit (BRT) line along Euclid Avenue from Public Square in downtown Cleveland to the Stokes-Windermere Rapid Transit Station (Red Line) in East Cleveland. The project includes the procurement of 20 articulated low-floor vehicles for revenue service, one prototype vehicle for training purposes, and modifications to two existing maintenance facilities. The new BRT line will connect the region's two largest employment areas and serve a number of large hospitals and educational and research facilities, including Cleveland State University and Case Western University. The project is expected to serve 39,000 average weekday boardings in 2025, including 6,200 new riders.

The total project cost under the Full Funding Grant Agreement (FFGA) is $168.40 million. The Section 5309 New Starts funding share for the project is $82.20 million.

Status

In September 1996, FTA approved GCRTA's request to enter into preliminary engineering. GCRTA completed an Environmental Assessment, and FTA issued a Finding of No Significant Impact in February 2002. FTA approved the project to enter into final design in July 2002, and issued a Letter of No Prejudice in July 2004. FTA and GCRTA entered into an FFGA in October 2004, with revenue operations scheduled for December 2008. Due to forecasted budget increases and schedule delays, FTA asked GCRTA for a project recovery plan. Construction started in late 2004 and is projected to be completed within budget and schedule as specified in the recovery plan.

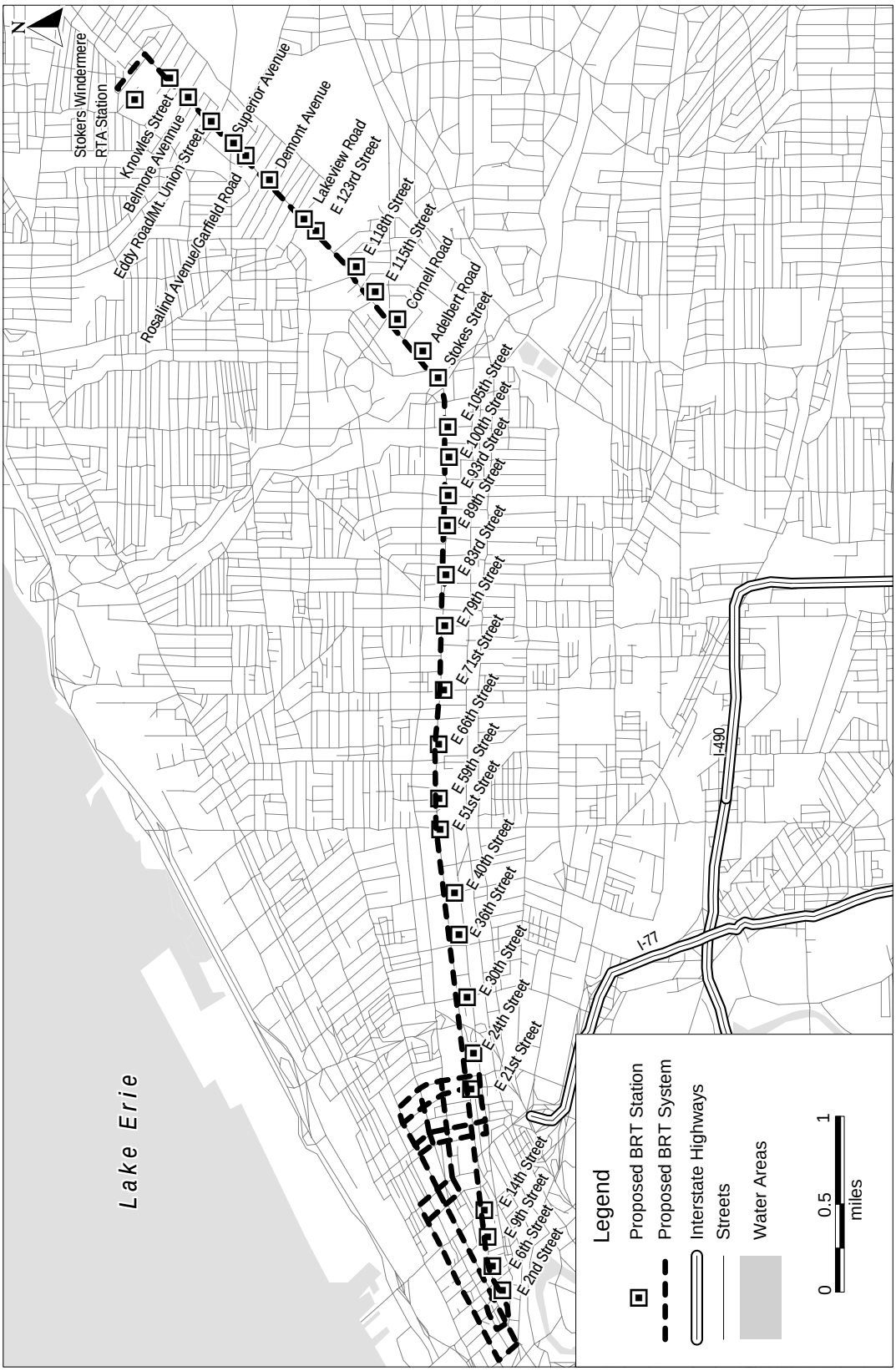
SAFETEA-LU Section 3043(a)(6) authorized the Euclid Corridor Transportation Project for final design and construction. Through FY 2006, Congress has appropriated $81.51 million in Section 5309 New Starts funding for this project.

Reported in Year of Expenditure Dollars		
Source of Funds	**Total Funding (million)**	**Appropriations to Date**
Federal:		
Section 5309 New Starts FFGA Commitment	$82.20	$81.51 million appropriated through FY 2006
Section 5309 Fixed Guideway Modernization	$0.60	
Flexible Funds (CMAQ)	$60.00	
Local:		
GCRTA and City of Cleveland	$ 25.60	
TOTAL	**$168.40**	

NOTE: The sum of the figures may differ from the total as listed due to rounding.

Euclid Corridor Transportation Project

Cleveland, Ohio



Interstate MAX LRT Extension

Portland, Oregon

(November 2005)

Description

The Tri-County Metropolitan Transportation District of Oregon (TriMet) completed construction of a 5.8-mile extension of its light rail (LRT) system known locally as the Interstate Metropolitan Area Express (Interstate MAX). The Interstate MAX line is extending existing light rail service northward from the Rose Quarter and the Oregon Convention Center in the Lloyd District of Portland, to North Portland neighborhoods, medical facilities, the Portland International Raceway, and the Metropolitan Exposition Center. The project includes 10 stations, 17 light rail vehicles, two park-and-ride facilities, and expansion of the vehicle storage and maintenance facilities at the Ruby Junction Yard/Junction/ Shops. The project is expected to serve 18,100 average weekday boardings by 2020, including 8,400 new riders.

The total project cost under the Full Funding Grant Agreement (FFGA) is $350.00 million. The Section 5309 New Starts funding share for the project is $257.50 million.

Status

In April 1996, FTA approved a larger 12-mile segment for entry into preliminary engineering, and a Draft Environmental Impact Statement (EIS) was completed in February 1998. As a result of a failed general bond measure in 1998, the project scope was reduced and a Supplemental EIS was completed in 1999. The Final EIS on the Interstate MAX project was completed in October 1999, and FTA issued a Record of Decision for the project in January 2000. FTA approved the project into final design in February 2000. TriMet and FTA entered into an FFGA in September 2000. Construction started in June 2001, and the project was completed under budget and on schedule. Section 529 of Division H of the Consolidated Appropriations Act, 2005, requires FTA to amend the FFGA to allow Portland to apply the savings from the original budget to the purchase of seven additional vehicles. The project commenced revenue operations on May 1, 2004. In October 2004, the average weekday ridership was 12,100.

SAFETEA-LU Section 3043 (a)(22) authorized the north portion of the Portland South-North Corridor LRT (Interstate MAX) for final design and construction. Through FY 2006, Congress has appropriated $256.96 million in Section 5309 New Starts funds for the project. This total does not include $8.96 million in prior year funds that are not included in the FFGA commitment.

Reported in Year of Expenditure Dollars		
Source of Funds	**Total Funding (million)**	**Appropriations to Date**
Federal: Section 5309 New Starts FFGA Commitment Flexible Funds (STP/CMAQ)	$257.50 $24.00	$256.96 million appropriated through FY 2006 [1]
Local: City of Portland Tri-Met Revenue Bonds	$30.00 $38.50	
TOTAL	**$350.00**	

NOTE: The sum of the figures may differ from the total as listed due to rounding.
[1] Does not include $8.9 million in prior year Section 5309 New Starts funds that are not included in the FFGA commitment.

Interstate MAX LRT Extension

Portland, Oregon

Tren Urbano

San Juan, Puerto Rico

(November 2005)

Description

The Puerto Rico Highway and Transportation Authority (PRHTA), a division of the Puerto Rico Department of Transportation and Public Works, is constructing a 10.7-mile double-track heavy rail system between Bayamón Centro and the Sagrado Corazon area of Santurce in San Juan. Approximately 40 percent of the alignment is at or near grade. Aside from a short below-grade segment in the Centro Medico area, and an underground segment through Rio Piedras, the remainder is elevated track. The project includes 16 stations, 74 vehicles, right-of-way acquisition, and construction of a maintenance/storage facility. The Tren Urbano project is expected to carry 113,300 riders per day in 2010.

The total project cost under an amended Full Funding Grant Agreement (FFGA) is $1,653.61 million, reflecting changes in project scope that added two stations and ten rail cars. The 5309 New Starts funding share for this project is $307.41 million.

Status

In 1993, FTA selected Tren Urbano as one of the Turnkey Demonstration Projects under the Intermodal Surface Transportation Efficiency Act of 1991. Thus, the project is being constructed and will be operated under a design/build/operate/maintain procurement.

The Tren Urbano Phase 1 environmental review process was completed in November 1995 and included 14 stations. A Record of Decision was issued in February 1996. In March 1996, FTA entered into an FFGA providing a Federal commitment of $307.40 million in Section 5309 New Starts funds out of a total project cost of $1,250.00 million.

Subsequent to the signing of the FFGA, three Environmental Assessments (EA) were prepared that revised the alignment at the Villa Nevarez station and added two new stations in Rio Piedras at the University of Puerto Rico and in Hato Rey at Domenech Street. The FTA issued Findings of No Significant Impact on aspects of the new alignment for the three EAs in November 1996, February 1997, and July 1997, respectively.

The FFGA was amended in July 1999 to incorporate the two stations identified in the environmental review process and ten additional railcars. The revenue operations date was changed to May 2002. The revised $1,653.61 million project cost also included the costs for extended project management services, design development activities, and anticipated costs for claims and contingencies.

In 2000, the project was awarded a Transportation Infrastructure Finance and Innovation Act (TIFIA) loan of $300.00 million in recognition of the national and regional significance of the project. The PRHTA repaid this loan in full in 2003.

In 2000, due to concerns about schedule, costs and project management, FTA required PRHTA to submit a Recovery Plan. Subsequently, FTA and the U.S. Department of Transportation's Office of Inspector General (OIG) engaged in intense oversight of the project. Since then PRHTA completed construction, testing and safety certification and the system entered revenue operations in June 2005.

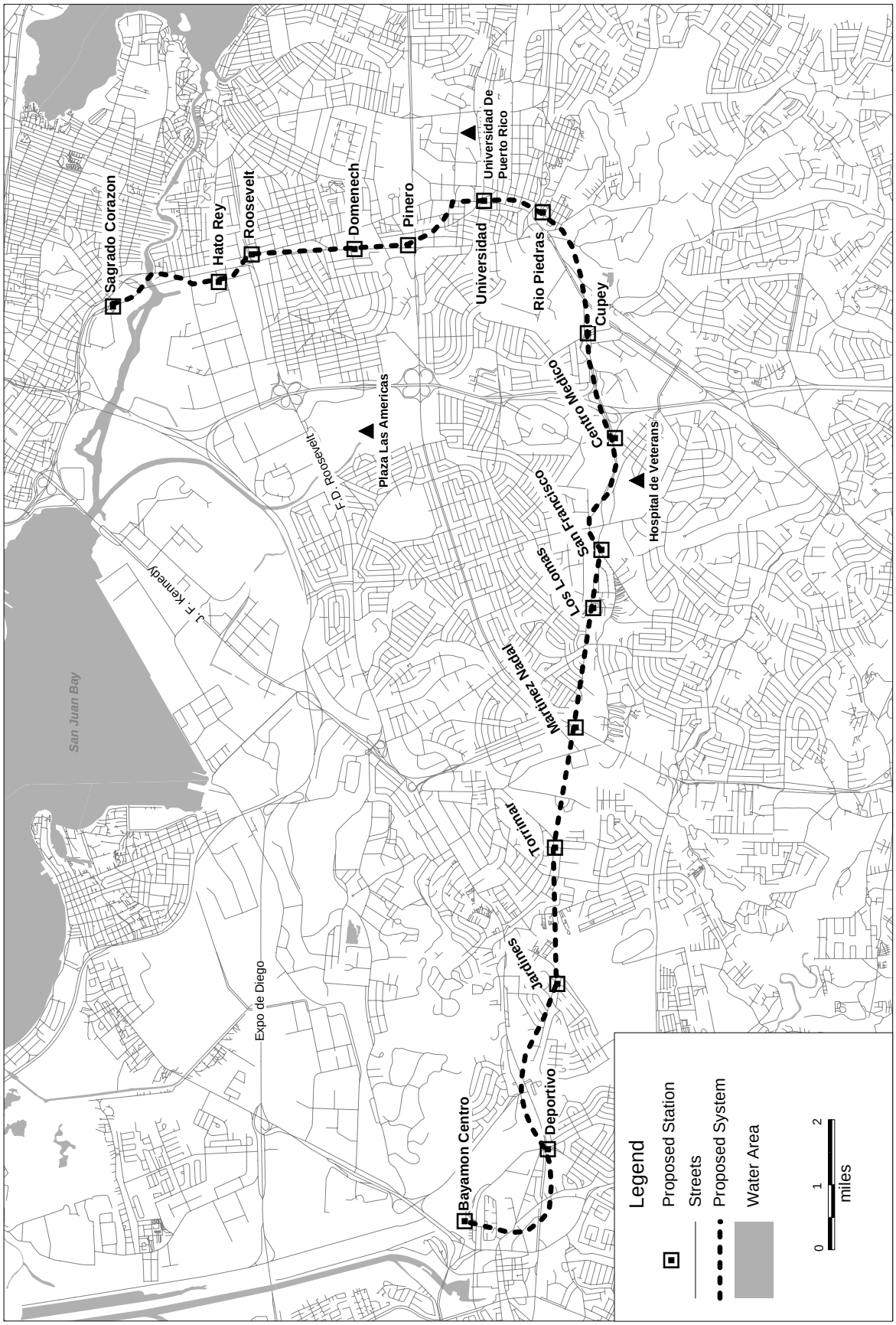
The project is currently in the closeout phase. When the remaining issues are satisfactorily addressed, FTA will notify Congress of the cost increases and schedule changes. No additional Federal funds will be added to those already approved in the existing FFGA.

SAFETEA-LU Section 3043 (a)(29) authorizes the Tren Urbano project for final design and construction. Through FY 2006, Congress has appropriated $304.74 million in Section 5309 New Starts funds to the project. This total includes $4.96 million in prior year funds that are not included in the FFGA commitment.

Reported in Year of Expenditure Dollars		
Source of Funds	**Total Funding (million)**	**Appropriations to Date**
Federal:		
Section 5309 New Starts FFGA Commitment	$307.41	$304.74 million appropriated through FY 2006 [1]
Section 5307 Urbanized Area Formula Funds	$141.00	
Flexible Funding	$259.90	
Local:	$945.30	
TOTAL	**$1,653.61**	

NOTE: The sum of the figures may differ from the total as listed due to rounding.
[1] The appropriations to date reported above include $4.96 million in prior year Section 5309 New Starts funds that are not included in the FFGA commitment.

Tren Urbano
San Juan, Puerto Rico



Central Link Initial Segment
Seattle, Washington
(November 2005)

Description

Central Puget Sound Regional Transit Authority (Sound Transit) is implementing a 13.9-mile double track light rail for the Initial Segment of the Central Link Light Rail (LRT) transit project. The Initial Segment runs from Convention Place through downtown Seattle to South 154th Street in the City of Tukwila. The system will use the existing 1.3-mile Downtown Seattle Transit Tunnel (DSTT), a new one-mile long Beacon Hill tunnel, and a new 0.1-mile tunnel (the Pine Street stub tunnel) in the vicinity of the Convention Place station. The stub tunnel will be used for crossover and turnback operations. The scope of work includes seven new stations, renovation of four stations in the DSTT, a maintenance and operations facility, and a park-and-ride lot at the southern terminus at South 154th Street. A fleet of approximately 31 low-floor, articulated, 90- to 95-foot vehicles will be procured for the Initial Segment. Sound Transit estimates that average daily ridership in 2020 will total 42,500 passengers.

The total project cost under the proposed Full Funding Grant Agreement (FFGA) is $2,436.90 million. The Section 5309 New Starts funding share is $500.00 million.

Status

FTA approved the initiation of preliminary engineering for the Central Link LRT project (Northgate to South 200th Street) in July 1997. A Draft Environmental Impact Statement (EIS) on Central Link was published in December 1998. In February 1999, Sound Transit identified a 20-mile light rail system from Northeast 45th Street at the University of Washington to South 200th Street in the city of SeaTac as the locally preferred alternative (LPA).

The Final EIS was completed in November 1999, and FTA issued a Record of Decision in January 2000 for the entire proposed system. The Sound Transit Board formally adopted a 7.2-mile initial minimum operable segment (MOS-1) in November 1999. This original MOS-1 ran from NE 45th Street at the University of Washington to the maintenance base at South Lander Street in the industrial area south of downtown Seattle. Approximately 4.5 miles of this MOS was new tunnel under Capitol Hill, Portage Bay, and the University of Washington. FTA approved the project's advancement into final design in February 2000.

Based on increased costs for tunneling, right-of-way, mitigation, and other factors, Sound Transit increased the total project cost for MOS-1 and rescheduled the revenue operations date. After review and evaluation of the revised information, FTA executed an FFGA for MOS-1 in January 2001.

In April 2001, the Secretary of Transportation put the project on hold until significant concerns raised by the Office of the Inspector General were resolved. The Sound Transit Board then re-examined the entire project to determine if a portion of the 20-mile LPA could be identified as a new initial segment, or if MOS-1 could be redefined to reduce risks and better meet budget limitations.

In November 2001, the Sound Transit Board formally adopted the current Initial Segment from Convention Place to the South 154th Street Station as the revised MOS. An additional environmental review assessed the impacts of project changes, including the new termini and joint bus-rail operations in the DSTT and a new alignment through the City of Tukwila. A Supplemental Final EIS on the Tukwila segment was published in November 2001, and FTA issued an amended Record of Decision in May 2002. Based upon supplemental environmental and financial review, FTA approved the project's entry into final design in August 2002, and issued an FFGA in October 2003. At the same time, FTA rescinded

the FFGA executed in January 2001. Construction started in November 2003 and is projected to be completed within budget and on schedule.

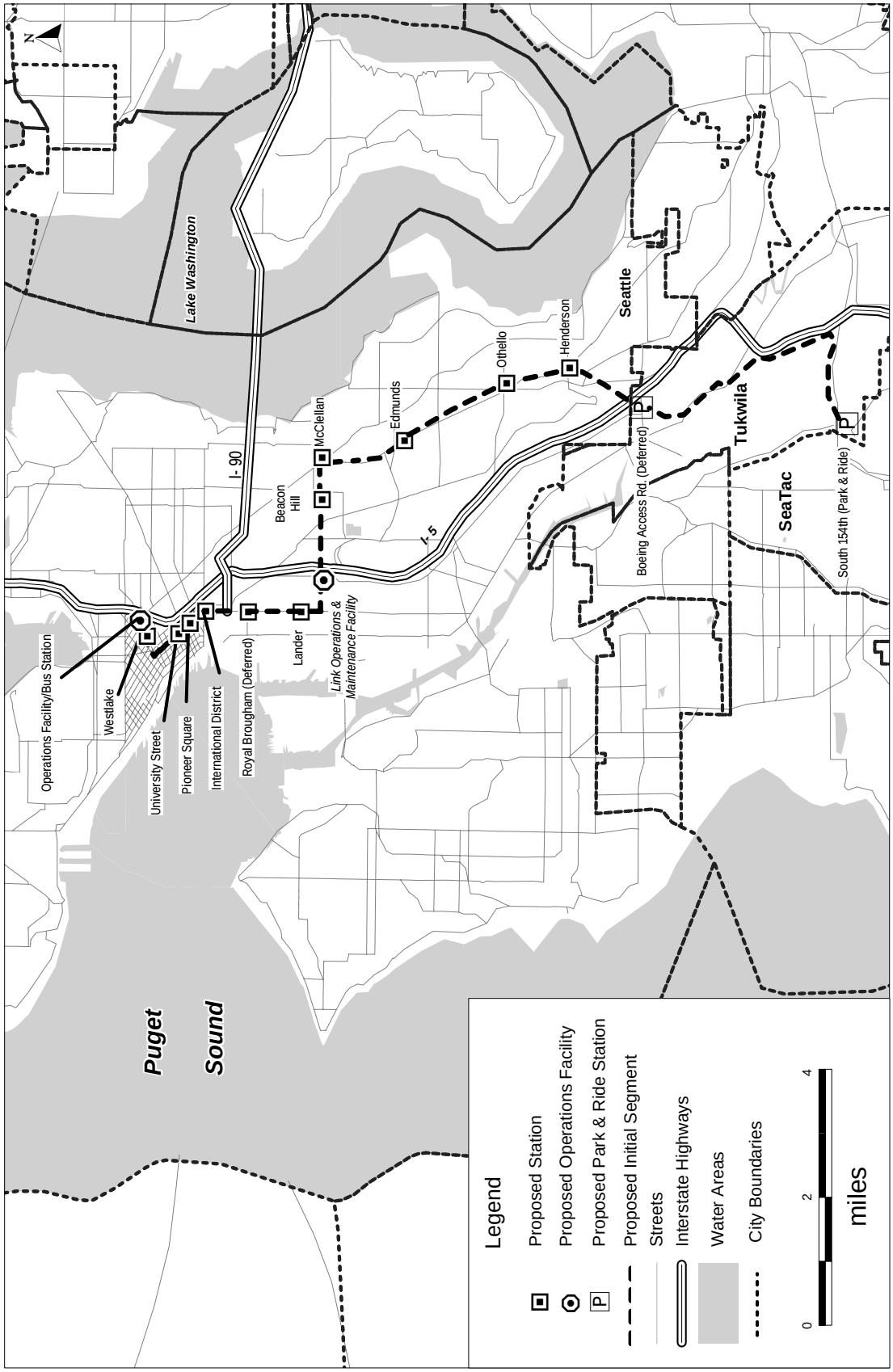
SAFETEA-LU Section 3043 (a)(30) authorized the Central Link Initial Segment project for final design and construction. Through FY 2006, Congress has appropriated $322.55 million in Section 5309 New Starts funds for the project.

Reported in Year of Expenditure Dollars		
Source of Funds	**Total Funding (million)**	**Appropriations to Date**
Federal: Section 5309 New Starts FFGA Commitment	$500.00	$322.55 million appropriated through FY 2006
Local: Retail Sales and Vehicle Excise Taxes Long-Term Bonds	$779.20 $1,157.70	
TOTAL	**$2,436.90**	

NOTE: The sum of the figures may differ from the total as listed due to rounding.

Central Link Initial Segment

Seattle, Washington



Pending Full Funding Grant Agreements

Long Island Rail Road East Side Access

New York, New York

(November 2005)

The Metropolitan Transportation Authority (MTA) and the Long Island Rail Road (LIRR) are proposing to construct a new direct 3.5-mile commuter rail extension from LIRR's Main and Port Washington Branch Lines in Long Island and Queens, to Grand Central Terminal (GCT) on Manhattan's East Side. The project includes the construction of a new station in the Sunnyside area of Queens, and new tunnels beneath Sunnyside Yard connecting to the currently unused lower level of the 63rd Street Tunnel beneath the East River. In Manhattan, the project would continue west beneath 63rd Street and towards Park Avenue under the Lexington Avenue subway, turning south beneath the existing MTA-Metro North Railroad tracks under Park Avenue to a new LIRR passenger concourse in the lower level of GCT. At GCT, the project would provide new tracks, platforms, entrances, waiting areas, ticket windows, and other services.

The current highway system and East River crossings (bridges and tunnels) to Manhattan from Nassau/Suffolk (and parts of eastern Queens) are at capacity and subject to severe congestion and long delays. Expansion of the highway network is not feasible due to lack of available rights-of-way, high costs, and potentially adverse environmental impacts in a "severe" non-attainment area for ozone. The LIRR operates at capacity in this area with peak service of 37 trains per hour into its only Manhattan terminal at Penn Station. Nearly half of LIRR's 106,000 existing daily riders have destinations on Manhattan's East Side, and currently spend approximately 20 minutes "doubling back" from Penn Station on the island's West Side. Without the project, future LIRR trains to Penn Station will be severely congested, and are projected to operate at 27 percent over their passenger-carrying capacity. This level of crowding and discomfort would discourage or prevent new riders from using the LIRR to reach Manhattan. By redirecting trains to GCT, this congestion would be relieved and added capacity for Amtrak and New Jersey Transit service would be created at Penn Station.

Summary Description	
Proposed Project:	Commuter Rail Extension 3.5 Miles 2 Stations
Total Capital Cost ($YOE):	$7,779.3 Million (includes $1.47 billion in finance charges)
Section 5309 New Starts Share ($YOE):	$2,632.1 Million (33.8%)
Annual Forecast Year Operating Cost:	$348.0 Million
Ridership Forecast (2030):	171,900 Average Weekday Boardings 27,300 Daily New Riders
Opening Year Ridership Forecast (2012):	166,300 Average Weekday Boardings
FY 2007 Finance Rating:	**Medium**
FY 2007 Project Justification Rating:	**Medium-High**
FY 2007 Overall Project Rating:	**Medium**

FTA notes that MTA/LIRR's New Starts funding request of $2.63 billion is higher than what has historically been provided by FTA to other major transit capital investment projects, but the New Starts share (less than 34%) is significantly lower. FTA expects to execute a Full Funding Grant Agreement (FFGA) for the Long Island Rail Road East Side Access project in FY 2006.

Project Development History and Current Status

MTA/LIRR completed a major investment study for the project corridor in April 1998. FTA approved MTA/LIRR's request to advance the project into preliminary engineering in September 1998. A Draft Environmental Impact Statement (EIS) was completed in May 2000; a Final EIS was completed in March 2001; and an environmental Record of Decision was issued by FTA in May 2001. FTA approved the project into final design in February 2002. The project was recommended for an FFGA in the FY 2005 and 2006 President's Budgets. Execution of the FFGA was delayed because the MTA's 2005-2009 capital program did not include expected revenues for the project. MTA and State budget officials are currently solidifying financing strategies to implement the project, including the use of recently approved bond revenues.

Significant Changes Since FY 2006 Evaluation (November 2004)

In June 2005, MTA provided a revised set of travel forecasts reflecting a 2030 forecast year and updated population and employment assumptions for the New York City area. Project finance costs increased by $40 million since last year. In early November 2005, New York voters approved a statewide bond referendum that will provide an additional $450 million in funding to the project.

Project Justification Rating: Medium-High

The project is rated *Medium-High* based on a *Medium* rating for cost effectiveness and a *High* rating for transit-supportive land use.

Cost Effectiveness Rating: Medium

The *Medium* cost effectiveness rating reflects the level of travel-time benefits (106,200 hours each weekday) relative to the project's annualized costs. The estimate of both costs and benefits of the project at this stage of development is considered reliable.

Cost Effectiveness	
	New Start vs. Baseline
Cost per Hour of Transportation System User Benefit	$18.43*
Incremental Cost per Incremental Trip	$36.22

* Indicates that measure is a component of Cost Effectiveness rating.

The East Side Access project would increase LIRR's tunnel capacity across the East River by 50 percent and shorten daily travel time for 84,000 LIRR riders destined for Manhattan's East Side by an estimated 40 minutes per passenger. The redistribution of ridership from Penn Station to LIRR's new service at GCT would significantly improve travel throughout the LIRR network. LIRR would be able to expand peak hour service to Manhattan from 37 trains to a projected 61 trains (a 40 percent increase), with 24 peak hour trains serving GCT. Approximately 70 percent of daily travel-time benefits would result from LIRR riders no longer traveling in overcrowded conditions between parts of Queens, all of Nassau and Suffolk counties, and Manhattan. The remaining travel time benefits are experienced by LIRR riders who will no longer have to retrace their route to reach destinations on Manhattan's East Side near GCT, and those who encounter less crowded conditions at Penn Station on Manhattan's West Side.

The project has been sufficiently developed to the point that the definition of the scope is firm. However, since several critical path items (award of Manhattan and Queens tunnel excavation contracts and an executed Amtrak operating agreement) did not occur as planned, the current schedule for revenue operations (2012) is being reevaluated. Inflation assumptions for capital costs should also be reexamined. FTA is working with MTA to update the project's risk analysis/risk mitigation program to manage the technical work and reduce project uncertainties.

Transit-Supportive Land Use Rating: High

The *High* land use rating is based upon the *High* ratings assigned to all of the subfactors as summarized below.

Existing Land Use: High

- The Grand Central Terminal is located in a uniquely high-intensity setting where transit and walking are the dominant modes of transportation. Nearly 660,000 employees work within ½ mile of the station, and over 50,000 people reside within this same area.
- Land use in the Sunnyside station area is currently industrial, although the Queens Plaza transportation hub, directly to the north of the yard, has a station serving six subway lines, and thus generates substantial pedestrian activity. Redevelopment of the areas northwest and south of the railroad complex is underway. Over 25,000 employees currently work in the Sunnyside station area, which houses a residential population of 9,300.
- The character of development is highly pedestrian-oriented in the GCT station area. While existing land use at the site of the proposed Sunnyside station area does not currently create an attractive pedestrian environment, there is significant pedestrian traffic in the area due to the presence of several subway connections at Queens Plaza and pockets of redevelopment to the northwest (Court Square) and south of the railroad complex.
- New York City discourages parking in the central business district (CBD) by leveraging an 18 percent tax on off-street parking in Manhattan. Off-street parking is available in the GCT area, but parking costs are extremely high, typically upwards of $25 per day.

Transit-Supportive Plans and Policies: High

- Building density on the East Side of Midtown Manhattan near the GCT area is exceptionally high, and city policies encourage neighborhood preservation, the continued concentration of activity in the area, and investment in pedestrian facilities. An increase of 70,000 workers and 7,000 residents is projected in the GCT area by 2025.
- New York City plans to create a new central business district within the Sunnyside station area by promoting intensification of office, residential, and institutional development. Zoning revisions have recently been adopted to implement these plans. It is anticipated that the dense urban environment combining industrial, commercial, institutional, and residential uses that will be created will be more typical of transit-oriented development than the existing, predominantly industrial, landscape. Employment in the Sunnyside station area is projected to grow by 3,500, while population is estimated to increase by 1,200 by 2025.
- New York City's development plan for the Sunnyside area includes four million additional square feet of office space within walking distance of the proposed station.
- Policies in New York City, Nassau County and Suffolk County support the concentration of new development in existing centers.

Performance and Impacts of Policies: High

- Several examples of transit- and pedestrian-friendly improvements implemented in conjunction with new private development illustrate the effectiveness of city land use policies. A 45-story Bear Stearns headquarters building is nearing completion along Madison Avenue and will include ground floor retail uses and escalators leading to cross passageways serving the platforms at GCT. A major insurance company, Met Life, has moved its corporate headquarters to the Sunnyside station area at Queens Plaza North and is building an adjacent tower.
- Recent zoning changes have resulted in development of a new commercial hub proposal between the Queens Plaza subway station adjacent to the proposed Sunnyside station and the Court Square office district.

Other Project Justification Criteria

Mobility Improvements Rating: High	
Within ½-mile radius of boarding areas:	
Existing Employment	697,700
Projected Employment (2030)	828,600
Low Income Households (% of total HH)	3,130 (8%)
Average Per Station:	
Employment	348,900*
Low Income Households	1,600*
	New Start vs. Baseline
Transportation System User Benefit Per Project Passenger Mile (Minutes)	11.05*

Environmental Benefits Rating: High	
Criteria Pollutant (Reduction in tons)	**New Start vs. Baseline**
Carbon Monoxide (CO)	1,470
Nitrogen Oxide (NO_x)	40
Volatile Organic Compounds (VOC)	30
Particulate Matter (PM_{10})	30
Carbon Dioxide (CO_2)	36,900
Criteria Pollutant Status	**EPA Designation**
Carbon Monoxide (CO)	Maintenance Area*
8-Hour Ozone (O_3)	Moderate Non-Attainment Area*
Particulate Matter (PM_{10})	Moderate Non-Attainment Area*
Particulate Matter ($PM_{2.5}$)	Non-Attainment Area*
Annual Energy Savings (million British Thermal Units)	418,800

Operating Efficiencies Rating: Medium		
	Baseline	**New Start**
System Operating Cost per Passenger Mile (current year dollars)	$0.295*	$0.299*

* Indicates that measure is a component of rating for each criterion.
N/A indicates information was not available for this entry.

Local Financial Commitment Rating: Medium

The *Medium* local financial commitment rating is based on the *High* rating for the New Starts share of project costs and the *Medium* ratings for both the capital and operating finance plans.

Section 5309 New Starts Share of Total Project Costs: 34%
Rating: High

MTA/LIRR is requesting a 34 percent New Starts share of total project costs, which results in a *High* rating for this measure.

Locally Proposed Financial Plan		
Source of Funds	**Total Funds ($million)**	**Percent of Total**
Federal: Section 5309 New Starts Flexible Funds (CMAQ) Other Federal	 $2,632.1 $11.2 $28.2	 33.8% 0.1% 0.4%
State: State Transportation Bond Act of 2005	$450.0	5.8%
Local: MTA Dedicated Sources (bonds, surplus toll revenues, etc.) MTA Operating Budget	$3,184.2 $1,473.6	40.9% 18.9%
Total:	**$7,779.3**	100.0%

NOTE: The financial plan reflected in this table has been developed by the project sponsor and does not reflect a commitment by DOT or FTA. The sum of the figures may differ from the total as listed due to rounding.

Capital Finance Plan Rating: Medium

The capital finance plan is rated *Medium*, based upon the average of the ratings assigned to each of the subfactors listed below. The capital condition, completeness of the plan, commitment of funds and the capital cost estimate and planning assumptions subfactors were rated *Medium.* The capital funding capacity subfactor was rated *Medium-Low*.

Agency Capital Condition: Medium

- The average age of MTA's bus fleet is 6.1 years, which is near the industry average. The average age of the MTA's rail fleet is 19.8 years for New York City Transit and 19.9 years and 19.0 years for the LIRR and Metro-North Railroad, respectively.
- MTA's bond ratings, which were issued in March 2000, are as follows: Standard & Poor's AA- and Fitch A+.

Completeness of Capital Plan: Medium

- The financial plan included a 20-year cash flow statement, more than five years of historical data, identification of some key assumptions with little detail, supporting documentation including fleet management plans, and a limited sensitivity analysis.

Commitment of Capital Funds: Medium

- Approximately 62 percent of non-New Starts funding is committed or budgeted. Primary funding sources include bond proceeds, State and local capital support, and other dedicated tax revenues.

Capital Funding Capacity: Medium-Low

- The financial plan shows a balanced budget, with no cash surpluses beyond 2005. MTA has limited reserve accounts and/or access to credit that would allow MTA to cover cost increases or funding shortfalls.

Capital Cost Estimate and Planning Assumptions: Medium

- Assumptions in the capital plan are consistent with historical experience.
- There is concern about maintaining the project schedule, which would likely have an effect on the capital cost estimate.

Operating Finance Plan Rating: Medium

The operating finance plan is rated *Medium*, based upon the average rating of the five subfactors listed below. A *High* rating was assigned for the commitment of operating funds subfactor. The completeness and operating cost estimates and planning assumptions subfactors were rated *Medium*. The agency operating condition and operating funding capacity were rated *Medium-Low*.

Agency Operating Condition: Medium-Low

- MTA is in fair financial condition. Except for the service interruptions resulting from the September 11th attacks, MTA has not reduced service in recent years.
- MTA's current ratio of assets to liabilities as reported in its most recent audited financial statement is 1.02.

Completeness of Operating Plan: Medium

- The financial plan included a 20-year cash flow statement, more than five years of historical data, the identification of some assumptions with little detail, supporting documentation and no sensitivity analysis. There were inconsistencies between the financial plan narrative, the financial plan cash flow statement and the adopted and proposed MTA multi-year budgets.

Commitment of Operating Funds: High

- Over 92 percent of operating funding is committed. The remainder is considered budgeted. Funding sources include fares, other operating revenues, and dedicated State and local taxes.

Operating Funding Capacity: Medium-Low

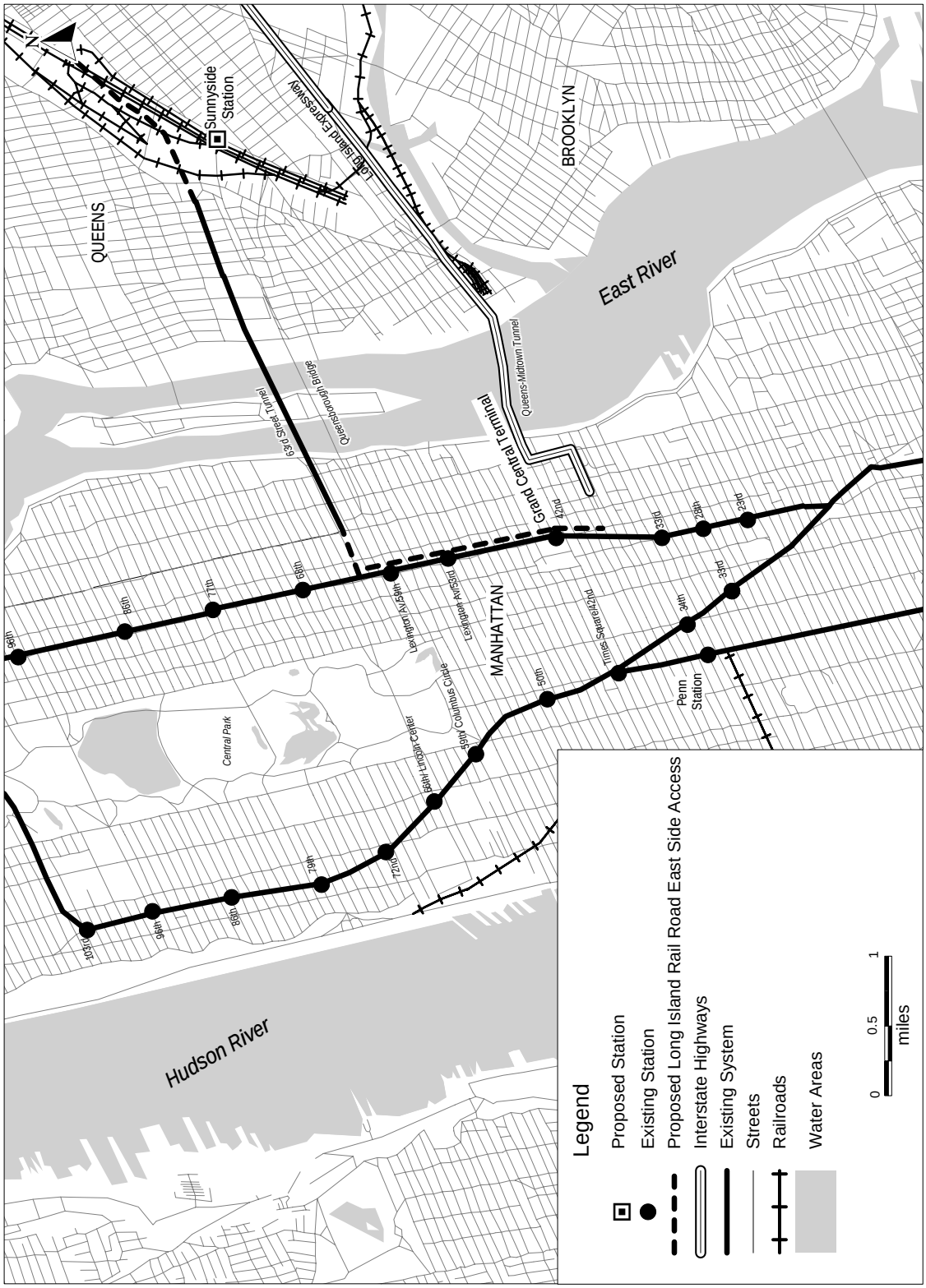
- The financial plan does not show cash balances or reserve accounts because MTA is required to operate under a balanced budget by statute. Consequently, MTA's financial plan indicates that operating sources will be equal to operating uses for the period 2005–2024. MTA has access to short-term credit exceeding 8 percent of annual operating expenses.

Operating Cost Estimates and Planning Assumptions: Medium

- Operating cost estimates and revenue forecasts are consistent with historical trends.

Long Island Rail Road East Side Access

New York, New York



North Shore LRT Connector

Pittsburgh, Pennsylvania

(November 2005)

The Port Authority of Allegheny County (Port Authority) is proposing to design and construct a light rail transit (LRT) extension that would link the Golden Triangle area of downtown Pittsburgh across the Allegheny River to the rapidly developing North Shore and Strip District areas. The proposed project would be constructed primarily underground, extending 1.2 miles from the existing Gateway LRT station to the North Shore via two bored tunnels below the Allegheny River. This LRT line would continue through the North Shore area as a mix of below-grade and elevated alignments. The project as currently scoped also includes a 0.3-mile spur from the existing Steel Plaza LRT station in downtown Pittsburgh to the David L. Lawrence Convention Center. Four stations would be constructed as part of the total project: a reconfigured and expanded Gateway station to facilitate the tie-in to the existing system; two new stations on the North Shore; and the Convention Center station to be located underground at 11th Street near the Convention Center. Four new light rail vehicles would be procured through the project. Service would be provided at better than three-minute frequencies during peak periods.

Pittsburgh's North Shore is one of the fastest redeveloping areas in the city. Traffic congestion is prevalent in the area during peak commuter periods, weekends, and before and after events at PNC Park and Heinz Field, which reduces the speed, reliability, and effectiveness of bus transit. Physical barriers created by the Allegheny River and the surrounding terrain prohibit any feasible roadway expansion. The proposed project is designed to improve transit service in the area by providing quick, convenient, and reliable LRT connections between key downtown trip generators. The project is further intended to serve a variety of travel markets, including LRT riders now transferring to buses in the Golden Triangle to continue to the North Shore, commuters using fringe parking on the North Shore to travel to the Golden Triangle, and students of Allegheny County Community College located on the North Shore.

Summary Description	
Proposed Project:	Light Rail Transit 1.5 Miles 4 Stations
Total Capital Cost ($YOE):	$393.0 Million (includes $0.2 million in finance charges)
Section 5309 New Starts Share ($YOE):	$217.7 Million (55.4%)
Annual Forecast Year Operating Cost:	$8.5 Million
Ridership Forecast (2025):	15,800 Average Weekday Boardings 4,100 Daily New Riders
Opening Year Ridership Forecast (2010):	10,000 Average Weekday Boardings
FY 2007 Finance Rating:	**Medium**
FY 2007 Project Justification Rating:	**Medium-High**
FY 2007 Overall Project Rating:	**Medium**

FTA expects to execute a Full Funding Grant Agreement (FFGA) for the Pittsburgh North Shore LRT Connector project in FY 2006. The project was recommended for an FFGA in the FY 2006 President's Budget; congressional review of the agreement and attendant documents was completed in July 2005. Execution of an FFGA for the project, however, has been delayed due to an unanticipated cost increase associated with construction of the Allegheny River tunnel. FTA is working with the Port Authority to reconfigure the project scope to conform to the $393.0 million cost estimate - while delivering the

anticipated benefits - on which the FFGA recommendation was based. Pending completion of this work, a full re-evaluation of the project is not possible; therefore, FTA is reporting for the *FY 2007 Annual Report on New Starts* information which supported the project's FY 2006 evaluation and rating and the submitted FFGA, which results in an overall rating of *Medium*. Based upon analysis completed by the Port Authority to date, FTA expects that the final project scope, budget, and resulting benefits will continue to support execution of the FFGA.

Project Development History and Current Status

In Fall 1997, the city of Pittsburgh and the Southwestern Pennsylvania Commission (the local metropolitan planning organization) initiated a major investment study to evaluate possible transportation linkages within the North Shore/central business district (CBD) segment of the Spine Line Corridor. Upon completion of the *North Shore Connector Draft Environmental Impact Statement*, the Port Authority's Board of Directors selected the Gateway LRT Alternative as the locally preferred alternative in August 2000. FTA approved the North Shore LRT Connector for preliminary engineering in January 2001. FTA issued the NEPA Record of Decision in July 2002 and approved the project's entry into final design in April 2003. The project was recommended for an FFGA in the President's FY 2006 Budget. Due to increases in the project cost estimate, the Port Authority is developing a revised project scope and budget for FTA consideration.

Significant Changes Since FY 2006 Evaluation (November 2004)

The capital cost of the project has increased since last year, requiring additional cost analysis and scope modifications which are continuing at the time of this evaluation.

Project Justification Rating: Medium-High

FTA's evaluation of the project justification criteria is based upon information submitted by Port Authority in 2004. Since that time, FTA has revised the breakpoints for assigning ratings for cost effectiveness, resulting in an improvement in the project's cost effectiveness rating from *Medium-Low* to *Medium*, and an improvement in the project's justification criteria from *Medium* to *Medium-High*. The project received a *Medium-High* rating for transit-supportive land use.

Cost Effectiveness Rating: Medium

The *Medium* cost effectiveness rating reflects the travel-time benefits (4,100 weekday hours) relative to the project's annualized costs. The cost effectiveness estimate assumes the present scope and cost, both of which are being re-examined; therefore, the current cost effectiveness carries some risk.

Cost Effectiveness	
	New Start vs. Baseline
Cost per Hour of Transportation System User Benefit	$21.89*
Incremental Cost per Incremental Trip	$15.80

* Indicates that measure is a component of Cost Effectiveness rating.

The North Shore LRT Connector is expected to provide benefits to a number of downtown-oriented travel markets, including trips between the four major activity centers in Pittsburgh's urban core: the Golden Triangle, Strip District, North Shore, and Station Square. Nearly 15 percent of travel-time benefits are anticipated to be accrued by patrons utilizing less-expensive fringe parking facilities on the North Shore for travel to the Golden Triangle. In addition to improving access *within* the corridor, the project would provide improved LRT access from various points in the region *to* the corridor, particularly the North Shore area, which currently requires LRT passengers to transfer to bus. For example, commuters from Pittsburgh's South Hills suburban communities bound for the North Shore would benefit from a one-seat ride and experience annual travel-time savings of over 80,000 hours.

Transit-Supportive Land Use Rating: Medium-High

The *Medium-High* land use rating is based on the *Medium-High* ratings assigned to each of the subfactors summarized below.

Existing Land Use: Medium-High

- Existing employment within ½ mile of proposed station areas is approximately 150,500. Population within ½ mile of station areas is approximately 8,100.
- Land use in the downtown area is dense and transit-supportive, with the exception of vacant land on the North Shore that is awaiting redevelopment.
- A new street grid and pedestrian facilities have been established on the North Shore.

Transit-Supportive Plans and Policies: Medium-High

- There are no coordinated regional growth management policies, although efforts are being undertaken to promote transit-oriented development in various parts of the region.
- The Pittsburgh *1998 Downtown Master Plan* and the *2002 Master Plan for the North Shore* reflect a strong emphasis on development with transit-supportive densities and design.
- Former industrial and warehousing structures are being adapted for retail/entertainment, residential and office use in the Strip District.
- Pittsburgh's zoning code allows for increased development densities in proximity to transit.
- Off-street parking requirements have been eliminated in the downtown area and reduced by 25 percent in the North Shore area in proximity to transit.
- Emerging policies reflect the view of city officials that LRT is an amenity for potential North Shore tenants and a mechanism to help reduce downtown parking needs.

Performance and Impacts of Policies: Medium-High

- The North Shore is being redeveloped with two major sports facilities, new infrastructure, and high-density, mixed-use development on a reconstructed street grid. Initial public investments in infrastructure and sports stadiums have been instrumental in leveraging additional private investment in the North Shore area.
- Development proposals for the North Shore are integrated with plans for the LRT project and reflect transit-supportive design principles.
- At least 43 acres of new development are planned or under consideration, in addition to the new development that has already taken place or is underway.
- Port Authority has worked successfully in existing station areas downtown to undertake joint development projects.

Other Project Justification Criteria

Mobility Improvements Rating: Medium-High	
Within ½-mile radius of boarding areas:	
Existing Employment	150,500
Projected Employment (2030)	162,600
Low Income Households (% of total HH)	450 (13%)
Average Per Station:	
Employment	37,625*
Low Income Households	113*
	New Start vs. Baseline
Transportation System User Benefit Per Project Passenger Mile (Minutes)	23.09*

Environmental Benefits Rating: High	
Criteria Pollutant (Reduction in tons)	**New Start vs. Baseline**
Carbon Monoxide (CO)	33
Nitrogen Oxide (NO_x)	5
Volatile Organic Compounds (VOC)	8
Particulate Matter (PM_{10})	0
Carbon Dioxide (CO_2)	13,160
Criteria Pollutant Status	**EPA Designation**
8-Hour Ozone (O_3)	Subpart 1*
Particulate Matter ($PM_{2.5}$)	Non-Attainment Area*
Annual Energy Savings (million British Thermal Units)	22,960

Operating Efficiencies Rating: Medium		
	Baseline	**New Start**
System Operating Cost per Passenger Mile (current year dollars)	$0.534*	$0.537*

* Indicates that measure is a component of rating for each criterion.
N/A indicates information was not available for this entry.

Local Financial Commitment Rating: Medium

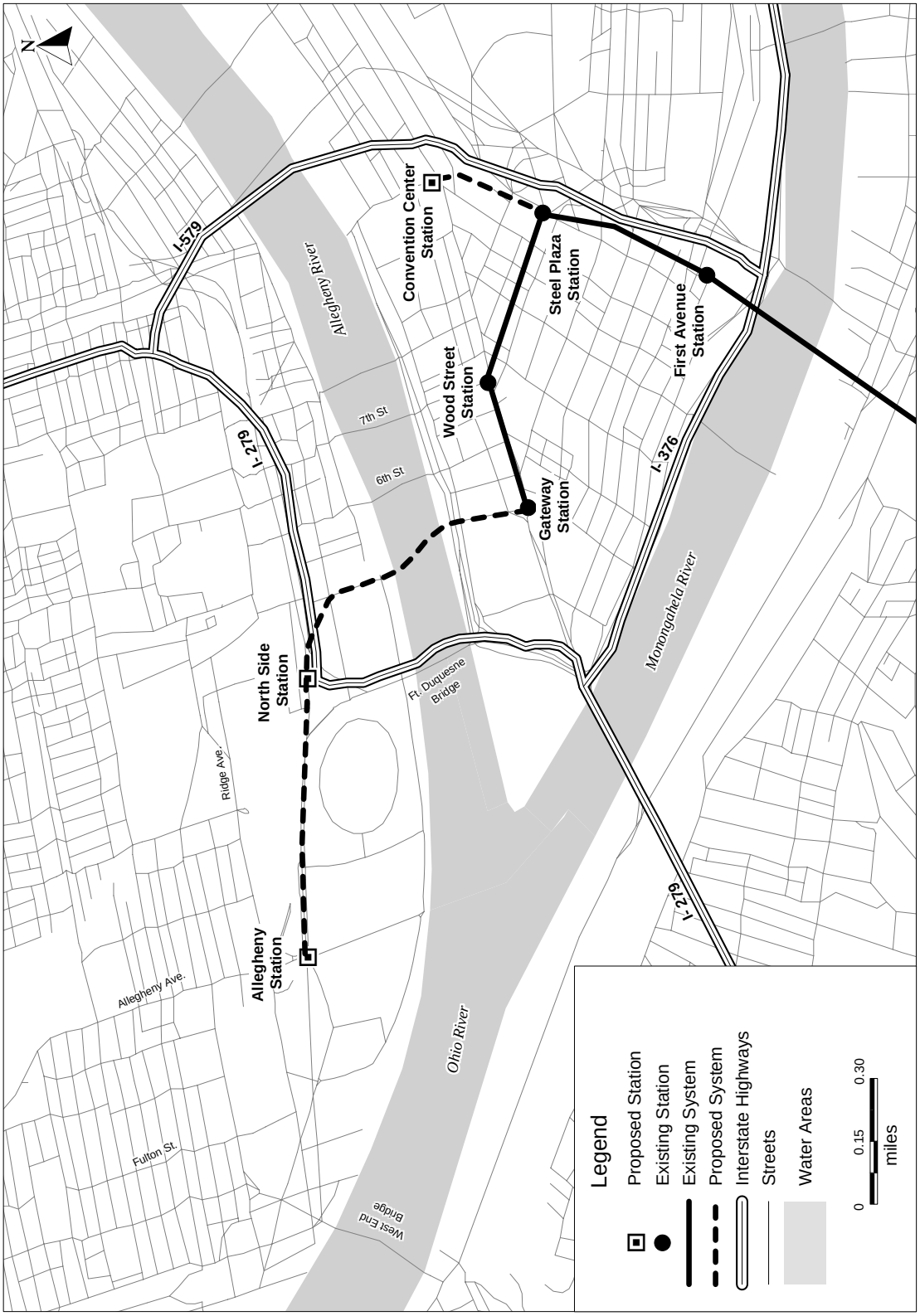
The local financial commitment rating of *Medium* reflects the FY 2006 New Starts evaluation and rating, as updated for the Port Authority's most recent FFGA submission. This rating is based upon a rating of *Medium-High* for the capital plan, and *Medium* ratings for the New Starts share of project costs and the project operating plan.

Locally Proposed Financial Plan		
Source of Funds	**Total Funds ($million)**	**Percent of Total**
Federal: Section 5309 New Starts Flexible Funds (CMAQ) Section 5309 Fixed Guideway Modernization Funds	 $217.7 $76.2 $20.5	 55.4% 19.4% 5.2%
State: Capital Grant	$65.5	16.7%
Local: Allegheny County Appropriation	$13.1	3.3%
Total:	**$393.0**	100.0%

NOTE: The financial plan reflected in this table has been developed by the project sponsor and does not reflect a commitment by DOT or FTA. The sum of the figures may differ from the total as listed due to rounding.

North Shore LRT Connector

Pittsburgh, Pennsylvania



Projects in Final Design

West Corridor LRT

Denver, Colorado

(November 2005)

The Regional Transportation District (RTD) is proposing the West Corridor project, a 12-station, 12.1-mile light rail transit (LRT) line extending from RTD's existing LRT line near Colfax Avenue and Interstate 25 (I-25), and following the former Associated Rail right-of-way and US 6, to US 6/US 40 in Jefferson County, Colorado. The proposed project connects with the Central Platte Valley light rail extension and the Central Corridor light rail line at the existing Auraria station adjacent to downtown Denver. The West Corridor LRT project would also provide connections to the second largest employment center in the Denver metropolitan area, the Denver Tech Center, via the Southeast Corridor light rail line currently under construction. Constructed mostly at-grade, the proposed West Corridor LRT project would have six above-grade overpasses at major intersections and three short below-grade sections at high-traffic areas. 5,700 park-and-ride spaces would be built as part of the project. Service would operate at five-minute headways during weekday peak periods.

The West Corridor project parallels West 6th Avenue, which carries the second highest traffic volume in the region. Regional projections indicate that local traffic will increase 20 percent by 2025, and population and employment will increase by approximately one-third. Neither the Colorado Department of Transportation (CDOT) nor the Denver Regional Council of Governments (DRCOG) has included widening of this roadway in their long range transportation plans. Intended as a high-capacity transit alternative to West 6th Avenue, the West Corridor LRT project is designed to improve transit travel times in the corridor and to increase transit connectivity to regional employment centers currently underserved by public transportation.

Summary Description	
Proposed Project:	Light Rail Transit 12.1 Miles 12 Stations
Total Capital Cost ($YOE):	$593.0 Million (includes $ 68.9 million in finance charges)
Section 5309 New Starts Share ($YOE):	$290.6 Million (49.0%)
Annual Forecast Year Operating Cost:	$28.2 Million
Ridership Forecast (2025):	28,700 Average Weekday Boardings 4,700 Daily New Riders
Opening Year Ridership Forecast (2013):	24,900 Average Weekday Boardings
FY 2007 Finance Rating:	**Medium-High**
FY 2007 Project Justification Rating:	**Medium**
FY 2007 Overall Project Rating:	**Medium**

FTA expects to execute a Full Funding Grant Agreement for the Denver West Corridor LRT project in late FY 2006 or 2007.

Project Development History and Current Status

The West Corridor has been the focus of study for over 30 years. Recognizing its strategic importance to the region, RTD purchased the rail right-of-way in 1988. RTD, in cooperation with DRCOG and CDOT, completed a major investment study on the corridor in July 1997, which resulted in the selection of a locally preferred alternative that included both LRT and roadway transportation management improvements. The selection of LRT was based on the inability to widen West 6th Avenue to respond to ongoing population and employment growth within the corridor. FTA approved RTD's request to enter preliminary engineering on the West Corridor LRT project in March 2001. A Final Environmental Impact Statement was completed in October 2003, and a NEPA Record of Decision was issued in April 2004. In November 2004, Denver-area voters passed RTD's FasTracks funding plan, which increases RTD's sales tax revenues and is anticipated to support the construction of over 100 miles of new rail transit (including the Denver West Corridor LRT project) and a 24 percent increase in local bus service. FTA approved the project into final design in August 2005.

Significant Changes Since FY 2006 Evaluation (November 2004)

The project's capital cost increased from $561.9 million due to corrections to RTD's calculation of project financing costs. RTD also increased the New Starts amount and share of total project costs.

Project Justification Rating: Medium

The project is rated *Medium* for project justification based on a *Medium* rating for cost effectiveness and a *Medium* rating for transit-supportive land use.

Cost Effectiveness Rating: Medium

The *Medium* cost effectiveness rating reflects the level of travel-time benefits (5,700 hours each weekday, plus special events) relative to the project's annualized costs. The estimates of both costs and benefits of the project at this stage of development are considered reliable.

Cost Effectiveness	
	New Start vs. Baseline
Cost per Hour of Transportation System User Benefit	$21.17*
Incremental Cost per Incremental Trip	$25.55

* Indicates that measure is a component of Project Justification rating.

Over one-half of travel time benefits are attributable to trips destined for downtown Denver. Lakewood, and in particular the Federal Center complex, also attracts a significant market that would benefit from the faster and more reliable travel speeds generated by the proposed West Corridor LRT. Lower income households receive approximately 40 percent of project travel-time benefits, including one-quarter of all reverse commute trips within the corridor. Less than 10 percent of travel-time benefits are attributable to trips to and from several special event venues along the LRT alignment, including Invesco Field, Coors Field, Pepsi Center, and Six Flags Elitch Gardens.

FTA considers the project schedule to be realistic and the cost estimate sound, although it notes that the budget carries low unallocated cost contingencies. RTD's extensive prior experience on recent major federally-funded projects, including the Southwest Corridor and the Southeast Transportation Expansion Project, retention of key personnel, and expertise and accumulation of historical data from these projects, provides an additional level of confidence that the agency has the technical capability and capacity to successfully execute the West Corridor LRT project.

Transit-Supportive Land Use Rating: Medium

The *Medium* land use rating is based upon the *Medium-Low* rating assigned to existing land use, the *Medium-High* rating for transit-supportive plans and policies in the project corridor, and the *Medium* rating for performance and impacts of land use policies.

Existing Land Use: Medium-Low

- The West Corridor LRT line would follow the route of an old interurban transit line through the western suburbs of Denver. Station area residential densities are low to moderate, averaging roughly 5,200 people per square mile. Employment located within ½ mile of proposed station areas is approximately 31,600. Employment in the Denver CBD, to which the project provides a direct connection, is about 120,000.
- Neighborhoods in the eastern half of the corridor are characterized by small-lot single-family and duplex residences, and some pockets of multi-family development, on a grid street system. The western part of the corridor includes an industrial and office park, community college, and county government center. Pedestrian access in these areas is relatively poor.
- There are approximately 2.2 parking spaces per employee in the CBD, suggesting an ample parking supply. Average parking costs are $6 per day.

Transit-Supportive Plans and Policies: Medium-High

- A regional vision plan adopted in 1997, entitled *Metro Vision 2020*, calls for adoption of an urban growth boundary and concentration of development in transit-oriented activity centers. A compact to implement *Metro Vision* policies has been endorsed by jurisdictions covering 80 percent of the region's population and over 50 percent of its land area. Significant actions to protect open space have been undertaken in recent years, as have some major infill and redevelopment projects.
- Comprehensive plans for Denver and Lakewood (covering most station areas) contain policies favoring transit-supportive development, including higher densities, mixed uses, and pedestrian-oriented design.
- Existing station area zoning supports moderate residential densities (typically seven to 14 units per acre) and moderately high commercial densities (typically 1.5 to 2.0 floor area ratio). The city and county of Denver have recently made some code revisions to enhance pedestrian access and have created a transit mixed-use zoning district that they propose to apply to one or two West Corridor station areas.
- Denver has undertaken some transit-oriented development initiatives in the vicinity of existing LRT stations. RTD has completed an initial study of transit-oriented development opportunities in West Corridor station areas. Denver and Lakewood will be initiating station-area planning activities in 2006 in four West Corridor station areas.

Performance and Impacts of Policies: Medium

- No transit-supportive developments have been constructed yet in any West Corridor station areas, but existing light rail lines in the Denver area are attracting new development. A number of projects currently underway and proposed in both Denver and Lakewood exhibit strong pedestrian-oriented design features.
- Long-term forecasts indicate a strong long-term economic climate in the Denver region; however, in the past three years the regional economy has slowed sharply, with the West Corridor exhibiting one of the weaker markets in the region. There are some opportunities for major redevelopment in the West Corridor and additional opportunities for incremental change.

Other Project Justification Criteria

Mobility Improvements Rating: Medium	
Within ½-mile radius of boarding areas:	
Existing Employment	31,600
Projected Employment (2025)	43,600
Low Income Households (% of total HH)	3,800 (6%)
Average Per Station:	
Employment	2,600*
Low Income Households	314*
	New Start vs. Baseline
Transportation System User Benefit Per Project Passenger Mile (Minutes)	2.08*

Environmental Benefits Rating: High	
Criteria Pollutant (Reduction in tons)	**New Start vs. Baseline**
Carbon Monoxide (CO)	226
Nitrogen Oxide (NO_x)	11
Volatile Organic Compounds (VOC)	11
Particulate Matter (PM_{10})	8
Carbon Dioxide (CO_2)	7,894
Criteria Pollutant Status	**EPA Designation**
Carbon Monoxide (CO)	Maintenance Area*
8-Hour Ozone (O_3)	Subpart 1*
1-Hour Ozone (O_3)	Subpart 1*
Particulate Matter (PM_{10})	Maintenance Area*

Operating Efficiencies Rating: Medium		
	Baseline	**New Start**
System Operating Cost per Passenger Mile (current year dollars)	$0.321*	$0.328*

* Indicates that measure is a component of rating for each criterion.
N/A indicates information was not available for this entry.

Local Financial Commitment Rating: Medium-High

The *Medium-High* local financial commitment rating is based on *Medium-High* ratings for the New Starts share of project costs and for both the capital and operating finance plans.

Section 5309 New Starts Share of Total Project Costs: 49.0%
Rating: Medium-High

RTD is requesting a 49 percent New Starts share of total project costs, which results in a *Medium-High* rating for this measure.

Locally Proposed Financial Plan		
Source of Funds	**Total Funding ($million)**	**Percent of Total**
Federal:		
Section 5309 New Starts	$290.6	49.0%
Flexible Funds (CMAQ)	$2.0	0.3%
Local:		
Bond Proceeds	$125.8	21.2%
Sales & Use Tax	$126.6	21.4%
Prior Expenditures	$8.7	1.5%
COPS	$26.6	4.5%
Government Contributions	$12.7	2.1%
Total:	**$593.0**	100.0%

NOTE: The financial plan reflected in this table has been developed by the project sponsor and does not reflect a commitment by DOT or FTA. The sum of the figures may differ from the total as listed due to rounding.

Capital Finance Plan Rating: Medium-High

The capital finance plan is rated *Medium-High* based upon the average of the ratings assigned to each of the subfactors listed below. The project received a *High* rating for capital funding capacity, a *Medium-High for* commitment of capital funds, and *Medium* ratings for the capital condition, completeness of capital plan and capital cost estimates and planning assumptions subfactors.

Agency Capital Condition: Medium

- The average age of RTD's bus fleet is six years, which is younger than the industry average.
- RTD's good bond ratings, which were issued in December 2002, are as follows: Moody's Investors Service A1; Standard & Poor's Corporation AA-; and Fitch A+.

Completeness of Capital Plan: Medium

- The capital plan contains a 23-year cash flow for the West Corridor project and RTD's other capital needs, identifies key assumptions, and includes a sensitivity analysis. The plan lacks some written explanatory details and does not contain an updated system-wide cash flow for the current year.

Commitment of Capital Funds: Medium-High

- Approximately 98 percent of non-New Starts funding is committed. The primary sources of local funds for the project are revenue derived from the local sales and use tax, and bond proceeds backed by a one-cent sales and use tax, as provided for by FasTracks.

Capital Funding Capacity: High

- The project's financial plan shows projected cash balances, reserve accounts, and/or access to credit that would allow RTD to cover cost increases or funding shortfalls equal to approximately 50 percent of project costs.

Capital Cost Estimate and Planning Assumptions: Medium

- The capital cost estimate, planning assumptions and methodology appear to be reasonable and are generally consistent with RTD's historic experience. Capital costs were developed using unit costs consistent with historical and current costs in the Denver area.

Operating Finance Plan Rating: Medium-High

The operating finance plan is rated *Medium-High*, based upon the average of the ratings of the five subfactors listed below. The commitment of operating funds and operating funding capacity were rated *High*; operating condition was rated *Medium-High*; and the completeness and operating cost estimates and planning assumptions subfactors were rated *Medium*.

Agency Operating Financial Condition: Medium-High

- RTD is in excellent financial condition, demonstrating no historical cash flow shortages and no recent service cutbacks.
- RTD's current ratio of assets to liabilities as reported in its most recent audited financial statement is 1.52.

Completeness of Operating Plan: Medium

- RTD's operating plan includes a 23-year operating cash flow statement and historical data and identifies key assumptions. However, the plan is missing assumptions regarding the projection of fare revenues, as well as some explanatory detail on the operating plan.

Commitment of Operating Funds: High

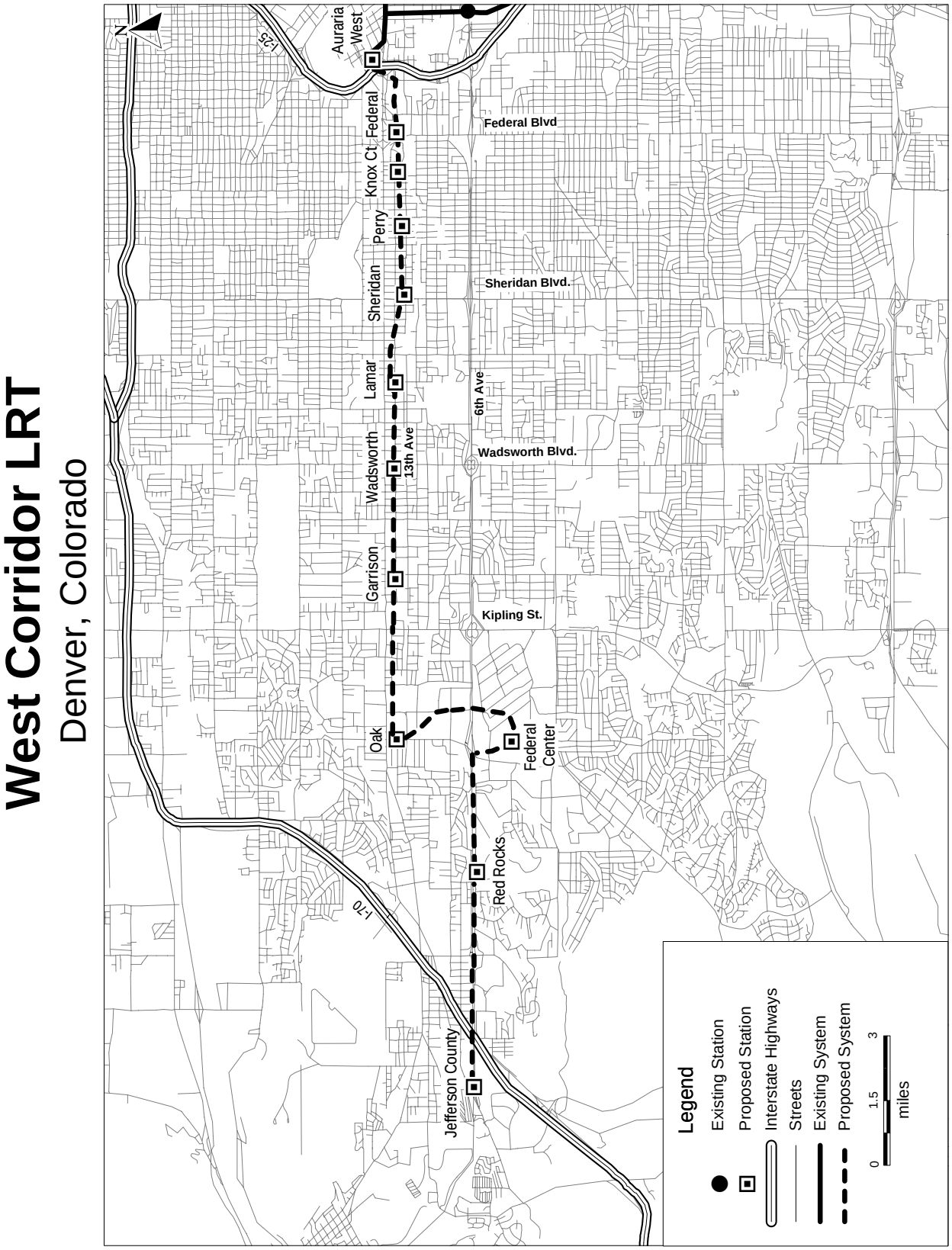
- All operating funding is committed, including fare revenues and increased sales and use tax revenues.

Operating Funding Capacity: High

- The project's financial plan shows projected cash balances, reserve accounts, and/or access to credit exceeding 50 percent of annual operating expenses.

Operating Cost Estimates and Planning Assumptions: Medium

- The operating cost estimate methodology, operating service plan, fare revenues, and sales and use tax revenues are consistent with historical experience.


West Corridor LRT
Denver, Colorado
N
I-25
Auraria West
Federal
Knox Ct.
Perry
Sheridan
Lamar
Wadsworth
13th Ave
Garrison
Oak
Federal Blvd
Sheridan Blvd.
6th Ave
Wadsworth Blvd.
Kipling St.
Federal Center
Red Rocks
I-70
Jefferson County
Legend
Existing Station
Proposed Station
Interstate Highways
Streets
Existing System
Proposed System
0
1.5
3
miles

Regional Rail System

Raleigh-Durham, North Carolina

(November 2005)

The Triangle Transit Authority (TTA) intends to initiate rail service using diesel multiple unit rail vehicles in a 28.1-mile corridor between 9th Street in Durham and downtown Raleigh. The Regional Rail System would use existing North Carolina Railroad and CSX rail corridors to connect Durham, Research Triangle Park, Cary, North Carolina State University (NCSU), and downtown Raleigh. The project scope includes the construction of 12 stations and 10 park-and-ride lots containing a total of 1,900 spaces, as well as sufficient maintenance and yard facilities to accommodate 14 vehicles. The project would have two operating phases: (1) from the opening year in 2009 until 2015, service would be provided every 15 minutes during peak periods and every 30 minutes during off-peak periods; and, (2) beginning in 2015 service would be provided every 10 minutes during peak periods and every 20 minutes during off-peak periods.

The Regional Rail System is intended to provide additional transportation capacity for one of the region's most congested travel corridors (Interstate 40); provide improved linkages to the corridor's numerous activity centers and educational facilities (including Duke University and Medical Center and North Carolina State University); and help achieve local land use goals and objectives.

Summary Description	
Proposed Project:	Diesel Multiple Unit Rail 28.1 Miles 12 Stations
Total Capital Cost ($YOE):	$809.9 Million (includes $65.9 million in finance charges)
Section 5309 New Starts Share ($YOE):	$485.4 Million (59.9%)
Annual Forecast Year Operating Cost:	$26.9 Million
Ridership Forecast (2030):	Not Available
Opening Year Ridership Forecast:	Not Available
FY 2007 Finance Rating:	**Medium-Low**
FY 2007 Project Justification Rating:	**Medium-Low**
FY 2007 Overall Project Rating:	**Low**

The project is rated *Low* at this time. FTA approved the project into preliminary engineering (PE) almost eight years ago and final design nearly three years ago. Since that time, TTA has reduced the scope of the project while experiencing a three hundred percent increase in the project capital cost. In addition, TTA has been unable to produce and submit to FTA reliable information on the project's transportation benefits for the past two years, and has this year been rated *Medium-Low* for local financial commitment. TTA must submit reliable information on the costs and benefits of a project scope that results in a *Medium* overall project rating by September 30, 2006, or be removed from final design status.

Project Development History and Current Status

In January 1998, FTA approved TTA to initiate preliminary engineering and the preparation of a Draft Environmental Impact Statement (EIS) on the Regional Rail System. The Draft EIS was released in May 2001. Selection of a 32-mile, 16-station locally preferred alternative occurred in January 2002, after consideration of the comments received on the Draft EIS. TTA published the Final EIS in December 2002 and received a Record of Decision in January 2003. The project was approved for entry into final design in February 2003. In July 2004, TTA reduced the scope of the project from 32 miles and 16 stations to an initial operating segment of 28 miles and 12 stations. TTA and FTA are currently completing an environmental assessment on further scope changes which are being proposed to mitigate recent increases in the project cost estimate.

Significant Changes Since FY 2006 Evaluation (November 2004)

Over the last year, TTA has completed additional design work on the revised project scope, which resulted in a significant increase to the capital cost estimate. TTA has proposed more than 20 cost-cutting measures worth $84 million to offset some of the increase, including, among other things: changing the configuration of the train sets from married pair trains to one car trains which reduces the number of vehicles needed from 28 to 14; deleting some grade crossings; redesigning stations with shorter platforms and different canopies; and eliminating a pedestrian bridge. Assuming all of the cost cutting measures are able to be implemented, the cost of the project will increase from $694.6 million reported last year to the $809.9 million reported in this profile. The amount of Section 5309 New Starts funding requested by TTA has also increased, from $416.1 million last year to $485.4 million this year.

Project Justification Rating: Medium-Low

This project is rated *Medium-Low* for project justification, based upon the absence of acceptable information on cost effectiveness, which results in a rating of *Low* for that measure. The project received a *Medium* rating for transit-supportive land use.

Cost Effectiveness Rating: Low

As noted, TTA has not submitted to FTA acceptable estimates of the travel-time benefits for the Raleigh Regional Rail System, as modified in July 2004; therefore, FTA cannot evaluate the project's cost effectiveness. FTA is continuing to work with TTA to develop an acceptable and reliable travel forecast for the project.

The capital cost estimate is uncertain at this time. If any of the proposed cost cutting measures are eliminated following the stakeholder review process required under NEPA, they will be added back into the scope of the project, resulting in increased costs. Additional uncertainties exist because the agreements with railroads and utilities have not yet been executed. If the schedule slips more than a few months, as anticipated, vehicle and maintenance facility bids will expire and rebids are not expected to be as favorable.

Transit-Supportive Land Use Rating: Medium

The *Medium* rating is based upon the *Medium-High* rating assigned to transit-supportive plans and policies, the *Medium-High* rating assigned to performance and impacts, and the *Medium-Low* rating for existing land use in the project corridor.

Existing Land Use: Medium-Low

- Approximately 75,100 jobs are currently located within ½ mile of the proposed station areas. Approximately 19,000 people currently live within ½ mile of the proposed station areas, with an average population density in station areas of 2,100 persons per square mile.
- The corridor has diverse land uses surrounding Durham and Raleigh and their accompanying suburbs. Four of the proposed stations are located in downtown areas. The downtown and Research Triangle Park (RTP) stations are predominantly surrounded by employment while others have a mixture of uses. The land just north and south of RTP is sparsely developed with single-family and light industrial land uses.
- Parking supply is one-space per employee in several transit areas; parking surpluses exist in Raleigh and Cary. Parking costs in several station areas are relatively low ($4-$8 per day).

Transit-Supportive Plans and Policies: Medium-High

- According to a 2002 corridor market study, the Durham, Raleigh and RTP areas are "built-out and transit-oriented development will be reuse and infill oriented," while Cary, West Raleigh, and North Raleigh will "require zoning and density policy changes to allow for suitable transit-oriented development."
- Durham is updating its Smart Growth Audit and open space preservation program defining an urban growth area boundary. Cary has adopted a growth management plan, an open space plan, and an historic resources plan. Wake County has established a growth management task force, a watershed management task force, and an open space advisory committee.
- Each major municipality has established policies in its comprehensive plan for promoting transit-oriented development. Raleigh, Durham, and Cary have design guidelines to promote transit-friendly station area development. Station small area plans have been completed in Cary Town Center, Downtown Raleigh, Government Center, West Raleigh, and the Fairgrounds. Durham has approved a compact neighborhood land use category for station areas and has corresponding zoning amendments for higher residential densities and reduced setbacks. Raleigh has three zones that can be developed for high-density uses and has adopted a transit overlay district.
- Durham provided subsidies for the American Tobacco redevelopment project and dedicated a property tax increase for downtown revitalization. Raleigh purchased land for a convention center and hotel near the downtown station.
- In July 2003, Cary adopted a land development ordinance, which has made infill easier by reexamining zoning. Raleigh's transit overlay district also streamlines the development process.
- TTA has selected a Master Developer to guide transit oriented development in station areas. As of October 2005, a contract had not yet been signed between TTA and the developer.

Performance and Impacts of Policies: Medium-High

- An analysis performed in 2003 examined opportunities at each station area and identified the following: land available for development; the status of any planned or proposed development; and possible densities that can be built with existing zoning.
- Station area development continues with the redevelopment or development of commercial and residential properties at over half of the proposed station sites including: a convention center, a 450-room hotel and condominium project near the downtown Raleigh station; a 25-acre mixed use development near the Triangle Metro Center station; and 1.4 million square feet of office space at the downtown Durham station.

Other Project Justification Criteria

Mobility Improvements Rating: Low	
Within ½-mile radius of boarding areas:	
Existing Employment	75,100
Projected Employment (2030)	111,900
Low Income Households (% of total HH)	1,900 (22%)
Average Per Station:	
Employment	6,261*
Low Income Households	159*
	New Start vs. Baseline
Transportation System User Benefit Per Project Passenger Mile (Minutes)	N/A*

Environmental Benefits Rating: Low	
Criteria Pollutant (Reduction in tons)	**New Start vs. Baseline**
Carbon Monoxide (CO)	N/A
Nitrogen Oxide (NO_x)	N/A
Volatile Organic Compounds (VOC)	N/A
Particulate Matter (PM_{10})	N/A
Carbon Dioxide (CO_2)	N/A
Criteria Pollutant Status	**EPA Designation**
Carbon Monoxide (CO)	Maintenance Area*
8-Hour Ozone (O_3)	Subpart 1*
Annual Energy Savings (million British Thermal Units)	N/A

Operating Efficiencies Rating: Low		
	Baseline	**New Start**
System Operating Cost per Passenger Mile (current year dollars)	N/A*	N/A*

* Indicates that measure is a component of rating for each criterion.
N/A indicates information was not available for this entry.

Local Financial Commitment Rating: Medium-Low

The *Medium-Low* rating for local financial commitment is based on *Medium* ratings for the New Starts share of project costs and the operating finance plan as well as the *Medium-Low* rating for the capital finance plan.

Section 5309 New Starts Share of Total Project Costs: 60% Rating: Medium

TTA is requesting an approximately 60 percent New Starts share of total project costs, which equates to a *Medium* rating for this measure. FTA notes that TTA's proposed New Starts funding amount exceeds the amount requested at the time of final design approval and has not been accepted by FTA; consequently, this amount may be reduced if the project advances.

Locally Proposed Financial Plan		
Source of Funds	**Total Funds ($million)**	**Percent of Total**
Federal: Section 5309 New Starts Flexible Funds (CMAQ)	 $485.4 $12.0	 59.9% 2.5%
State: State Full Funding Grant Agreement	 $149.9	 18.5%
Local: TTA Tax Revenues TTA Bond Proceeds	 $74.9 $87.8	 9.3% 10.8%
Total:	**$809.9**	100.0%

NOTE: The financial plan reflected in this table has been developed by the project sponsor and does not reflect a commitment by DOT or FTA. The sum of the figures may differ from the total as listed due to rounding.

Capital Finance Plan Rating: Medium-Low

The capital finance plan is rated *Medium-Low*, based upon the ratings assigned to each of the subfactors listed below. A *High* rating was assigned to the current capital condition and commitment of capital funds subfactors; a *Medium* rating was assigned to completeness of the plan; a *Medium-Low* rating was assigned to capital funding capacity; and a *Low* rating was assigned to the capital cost estimate and planning assumptions subfactor. These ratings average to *Medium*, but the rating was lowered to *Medium-Low* due to the *Low* rating for the capital cost estimate and planning assumptions subfactor.

Agency Capital Condition: High

- The average age of TTA's bus fleet is 5.4 years, which is younger than the industry average.
- TTA has not yet had occasion to request a bond rating.

Completeness of Capital Plan: Medium

- The capital plan was generally complete. It included a 30-year cash flow statement, documentation on some key assumptions but not all, fleet management plans, more than five years of historical data, and a limited sensitivity analysis. While the sensitivity analysis tested several scenarios, it examined only a narrow range of construction costs and did not examine the impact of different farebox recovery rates, which are the key areas of risk to the plan.
- The plan did not adequately describe the debt structure contemplated to support the project, nor did it substantiate an estimate of $65 million in joint development proceeds that is material to the

plan. It also did not include a discussion of how TTA would cover cost increases or funding shortfalls.

Commitment of Capital Funds: High

- Approximately 97.5 percent of non-New Starts funding is committed. The committed funds derive from a full-funding grant agreement with the State of North Carolina, federal flexible funds, and two taxes levied by TTA including a $5.00 vehicle registration fee and a five percent tax on short-term auto and light truck rentals.

Capital Funding Capacity: Medium-Low

- The project's financial plan shows projected cash balances, reserve accounts, and/or access to credit that would allow TTA to cover cost increases or funding shortfalls equal to less than 10 percent of project costs.

Capital Cost Estimate and Planning Assumptions: Low

- The capital financial plan is heavily influenced by optimistic assumptions in the operating financial plan regarding growth in passenger revenues and operating costs, which allow a greater amount of tax revenues to be transferred to the capital plan. The capital plan also relies heavily on an assumed $65 million in joint development proceeds during the construction period that can only be considered speculative at best at this point in time. Lastly, the financing assumptions for the project are very optimistic.
- The current capital cost estimate is uncertain. It assumes more than $84 million in cost cutting measures will be implemented, however, these proposed cost cutting measures must first go through an environmental review before they can be accepted.

Operating Finance Plan Rating: Medium

The operating finance plan is rated *Medium*. The operating condition subfactor received a *High* rating and the operating cost estimates and planning assumptions subfactor received a *Low* rating. All other subfactors received a *Medium-High* rating. These ratings average to *Medium-High*, but the rating was lowered to *Medium* due to the *Low* rating for the operating cost estimates and planning assumptions subfactor.

Agency Operating Condition: High

- TTA is in excellent operating condition. TTA has doubled its regional bus service in the past five years. It has not incurred a cash flow shortage in any year since it started levying taxes in 1992.
- TTA's current ratio of assets to liabilities as reported in its most recent audited financial statement is 17.0.

Completeness of Operating Plan: Medium-High

- The operating financial plan was complete and very detailed. It included a 30-year cash flow statement, documentation on all key assumptions, more than five years of historical data, and a sensitivity analysis. While the sensitivity analysis tested several scenarios, it did not examine the impact of different farebox recovery rates, which is the key area of risk to the plan.

Commitment of Operating Funds: Medium-High

- Over 88 percent of operating funding is committed. The committed funds include: fare revenue, TTA tax revenue, and other operating income and interest income.

Operating Funding Capacity: Medium-High

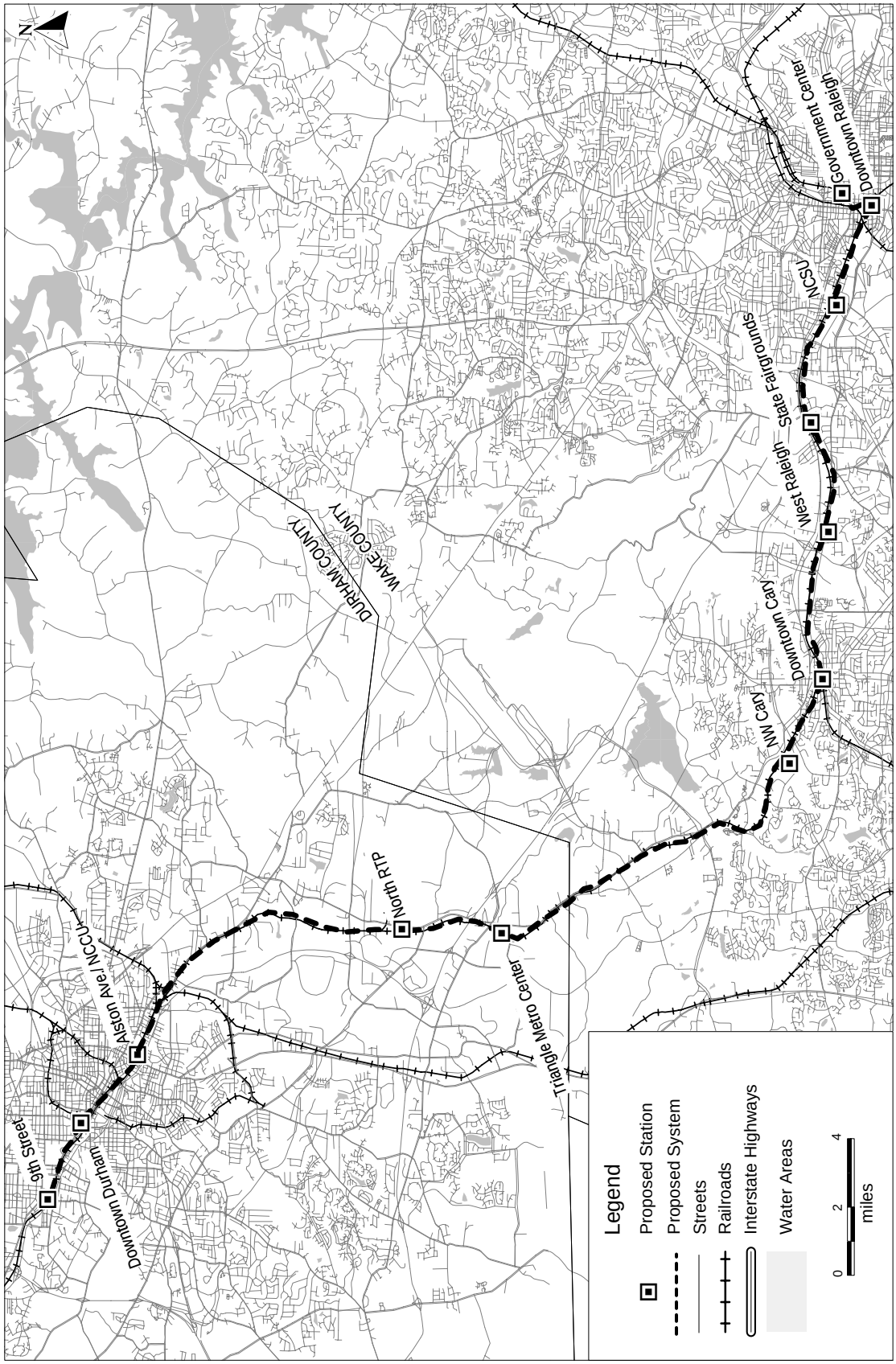
- The project's financial plan shows projected cash balances, reserve accounts, and/or access to credit exceeding 42 percent of annual operating expenses.

Operating Cost Estimates and Planning Assumptions: Low

- The operating financial plan includes assumptions about fare revenues that are far more optimistic than historical experience suggests is reasonable. In addition, the assumptions on growth in bus and rail operating costs are very optimistic when compared with history.

Regional Rail System

Raleigh - Durham, North Carolina



South Corridor I-205 / Portland Mall LRT

Portland, Oregon

(November 2005)

The Tri-County Metropolitan Transportation District (TriMet) and Portland Metro, the region's metropolitan planning organization, are proposing to construct 8.3 miles of new light rail transit (LRT) guideway consisting of two segments connecting to the existing "MAX" LRT system along Interstate 84 (I-84). Long-range regional forecasts point toward increasing traffic congestion along the I-205 corridor, for trips both originating and terminating in the southeastern metropolitan Portland area. The intent of the South Corridor I-205/Portland Mall LRT project is to address increased travel demand in this rapidly growing corridor; to provide additional fixed guideway access between regional activity centers; and to help the Portland region achieve its land use, development, and growth management goals and objectives.

The first segment of the proposed project is a 6.5-mile double-track line that runs north/south and parallel to I-205, connecting the Clackamas Regional Center in southeast Portland with the Gateway Transit Center east of downtown on TriMet's existing LRT system. The I-205 alignment will also include eight new stations with approximately 2,100 park-and-ride spaces which are intended to draw commuters from throughout the southeastern metropolitan Portland area to downtown and other major employment centers located along the regional MAX system. The second segment of the project is a 1.8-mile LRT spur which would begin at the existing Rose Quarter Transit Center and terminate at Portland State University in south downtown Portland. This new LRT alignment, which would run along the existing downtown bus mall on 5th and 6th Avenues, is needed because TriMet's existing downtown LRT line (to the region's west side) does not have the capacity to carry the additional eight trains per peak hour into the central business district (CBD) that will result from the I-205 extension.

Summary Description	
Proposed Project:	Light Rail Transit 8.3 Miles 15 Stations
Total Capital Cost ($YOE):	$557.4 Million (includes $25.37 million in finance charges)
Section 5309 New Starts Share ($YOE):	$334.4 Million (60.0%)
Annual Forecast Year Operating Cost:	$26.7 Million
Ridership Forecast (2025):	46,500 Average Weekday Boardings 9,400 Daily New Riders
Opening Year Ridership Forecast (2009):	25,300 Average Weekday Boardings
FY 2007 Finance Rating:	**Medium**
FY 2007 Project Justification Rating:	**Medium-High**
FY 2007 Overall Project Rating:	**Medium**

FTA expects to execute a Full Funding Grant Agreement for the South Corridor I-205/Portland Mall LRT project in late FY 2006 or 2007.

Project Development History and Current Status

The *South/North Major Investment Study* covering the travel shed connecting the cities of Oregon City and Milwaukie, the Clackamas Regional Center area, downtown, north, and southeast Portland, and the city of Vancouver, Washington, was initiated in 1993 and completed in 1995. In 1998, Metro issued a Draft Environmental Impact Statement (EIS) and adopted LRT as the locally preferred alternative (LPA). The failure of a November 1998 ballot measure that would have provided local funding for the LPA triggered the need to re-evaluate the potential improvements, including a separate analysis of the I-205 corridor within the southern portion of the study area. A Supplemental Draft EIS that focused on transportation alternatives in the I-205 corridor was completed in December 2002. In October 2003, TriMet completed an Amendment to the Supplemental Draft EIS that examined the potential impacts of a downtown LRT spur, an improvement that had not been included in the previous environmental work. A revised LPA that included the downtown spur alignment was approved by FTA into preliminary engineering in March 2004. Metro completed the Final EIS in December 2004 and FTA issued a Record of Decision in February 2005. FTA approved final design for the project in October 2005.

Significant Changes Since FY 2006 Evaluation (November 2004)

TriMet has revised the capital cost to reflect additional detail and understanding of project scope elements resulting from preliminary engineering. This work has resulted in an increase in the capital cost estimate from the $502.1 million reported last year. TriMet has also increased its proposed New Starts funding amount.

Project Justification Rating: Medium-High

The project is rated *Medium-High* based on a *Medium* rating for cost effectiveness and a *Medium-High* rating for transit-supportive land use.

Cost Effectiveness Rating: Medium

The *Medium* cost effectiveness rating reflects the level of travel-time benefits (7,700 hours each weekday) relative to the project's annualized costs. The estimate of both costs and benefits of the project at this stage of development is considered reliable.

Cost Effectiveness	
	New Start vs. Baseline
Cost per Hour of Transportation System User Benefit	$15.69*
Incremental Cost per Incremental Trip	10.43

* Indicates that measure is a component of Cost Effectiveness rating.

The implementation of fixed guideway transit in a congested regional transportation corridor is expected to improve travel times between the southeastern metropolitan Portland area and downtown Portland. Approximately 80 percent of total project boardings and 60 percent of travel-time benefits will result from trips with at least one end in the I-205 corridor. Downtown Portland is the primary destination for trips originating in the corridor. The second downtown LRT alignment will penetrate areas in the southern part of the CBD not presently served by MAX and will provide over 30 percent of the project's travel-time benefits. Less than ten percent of travel-time benefits are attributable to increased service frequencies along the existing I-84 MAX alignment resulting from the South Corridor I-205/Portland Mall LRT project.

The project's cost estimate is comparable to those of other LRT at-grade projects in the New Starts pipeline. TriMet has a good track record of constructing LRT projects on schedule and within budget.

Transit-Supportive Land Use Rating: Medium-High

The *Medium-High* rating reflects the *Medium-High* ratings assigned to transit-supportive plans and policies and their performance and impacts, and the *Medium* rating for existing land use in the project corridor.

Existing Land Use: Medium

- The I-205 South segment of the corridor currently is characterized by auto-oriented development in the form of detached, single-family homes and low-density commercial and light industrial development. Population density is low to moderate, averaging 4,200 persons per square mile.
- The proposed new downtown segment serves a high-density, mixed-use, pedestrian-friendly environment, and proposed station areas contain over 150,000 jobs.
- Portland encourages alternatives to auto trips to its downtown by limiting the supply of surface parking lots; however, ample parking for auto-oriented uses exists along the I-205 segment. Including monthly discounts, the average daily rate for parking in the central city is $7.43.

Transit-Supportive Plans and Policies: Medium-High

- Oregon's comprehensive planning system has been in place for more than 25 years, and the Portland urban growth boundary has effectively constrained development to designated areas. Metro (the regional government) has unparalleled authority to establish and enforce land use policy. Its *Urban Growth Management Functional Plan* identifies growth centers and requires that local jurisdictions require minimum densities in these centers as well as policies that support pedestrian and transit access.
- Numerous State, regional, and local plans and policies strongly emphasize corridor and station area development. Three stations in the I-205 segment of the corridor serve designated local or regional centers, where a mix of land uses and high-density, transit-oriented development is specified in planning documents. Other stations largely include established single-family neighborhoods.
- As required by regional policies, local jurisdictions have adopted transit-supportive zoning ordinances. Minimum and maximum parking requirements in South Corridor station areas are lower than those generally found in suburban areas, and include allowances for reduced parking based on proximity to transit.
- Metro's Transit-Oriented Development Program provides technical and financial assistance to support transit-oriented development activities throughout the region. Three proposed stations on the I-205 segment and all proposed stations along the downtown segment would be located within areas targeted for pedestrian improvements in regional and local plans; tax increment finance (TIF) revenues are being used to fund pedestrian improvements in these areas.

Performance and Impacts of Policies: Medium-High

- Portland's urban growth boundary has helped protect open space from rapid, low-density development, while a variety of infill projects and new transit-oriented developments have occurred in existing LRT station areas. In one South Corridor station area, a mall owner has submitted plans to redevelop surface parking as multi-story, mixed-use development.
- The light rail expansion project is expected to help promote more mixed-use, transit-oriented development in the station areas over time and may spur redevelopment in both Clackamas Regional Center and Lents Town Center. The amount of vacant land available for new development is minimal in most station areas, though, so the project's impact on regional land use may be modest.

Other Project Justification Criteria

Mobility Improvements Rating: Medium	
Within ½-mile radius of boarding areas:	
Existing Employment	150,400
Projected Employment (2025)	231,200
Low Income Households (% of total HH)	3,800 (21%)
Average Per Station:	
Employment	10,030*
Low Income Households	253*
	New Start vs. Baseline
Transportation System User Benefit Per Project Passenger Mile (Minutes)	1.97*

Environmental Benefits Rating: Medium	
Criteria Pollutant (Reduction in tons)	**New Start vs. Baseline**
Carbon Monoxide (CO)	195
Nitrogen Oxide (NO_x)	6
Volatile Organic Compounds (VOC)	6
Particulate Matter (PM_{10})	N/A
Carbon Dioxide (CO_2)	7,898
Criteria Pollutant Status	**EPA Designation**
Carbon Monoxide (CO)	Maintenance Area*
Annual Energy Savings (million British Thermal Units)	91,669

Operating Efficiencies Rating: Medium		
	Baseline	**New Start**
System Operating Cost per Passenger Mile (current year dollars)	$0.346*	$0.340*

* Indicates that measure is a component of rating for each criterion.
N/A indicates information was not available for this entry.

Local Financial Commitment Rating: Medium

The *Medium* local financial commitment rating is based on *Medium* ratings for the New Starts share of project costs and for both the capital and operating finance plans.

Section 5309 New Starts Share of Total Project Costs: 60%
Rating: Medium

TriMet is requesting a 60 percent New Starts share of total project costs, which results in a *Medium* rating for this measure.

Locally Proposed Financial Plan		
Source of Funds	**Total Funds ($million)**	**Percent of Total**
Federal:		
Section 5309 New Starts	$334.4	60.0%
Flexible Funds (STP-Regional)	$54.6	9.8%
Flexible Funds (STP-Oregon DOT)	$23.0	4.1%
FTA Section 5309 Bus Discretionary	$2.5	0.4%
Local:		
TriMet	$32.6	5.8%
Clackamas County	$38.8	7.0%
City of Portland	$46.3	8.3%
Portland Development Comm.	$22.1	4.0%
Private land donation	$3.1	0.6%
Total:	**$557.4**	100.0 %

NOTE: The financial plan reflected in this table has been developed by the project sponsor and does not reflect a commitment by DOT or FTA. The sum of the figures may differ from the total as listed due to rounding.

Capital Finance Plan Rating: Medium

The capital finance plan is rated *Medium*, based upon the average of the ratings assigned to each of the subfactors listed below. The commitment of funds subfactor and the completeness subfactor each received a *Medium-High* rating; the remaining subfactors received *Medium* ratings.

Agency Capital Condition: Medium

- The average age of TriMet's bus fleet is 8.3 years, which is slightly older than the industry average.
- TriMet's good bond ratings, which were issued in March 2005, are as follows: Moody's Investors Service Aa3 and Standard & Poor's Corporation AA+.

Completeness of Capital Plan: Medium-High

- The capital plan was complete and included a detailed 20-year cash flow statement, levels of commitment of project funds and supporting evidence, fleet management plans, financial statements, a contingency plan to cover funding shortfalls and cost increases, and more than 20 years of historical information. It also included a limited sensitivity analysis.

Commitment of Capital Funds: Medium-High

- Ninety-seven percent of non-New Starts funding is committed or budgeted. Committed funds deriving from existing sources include federal flexible funds, Clackamas County urban renewal funds, TriMet general funds from payroll taxes, City of Portland funds, and Portland Development Commission urban development funds.

Capital Funding Capacity: Medium

- The project's financial plan shows projected cash balances, reserve accounts, and/or access to credit that would allow TriMet to cover cost increases or funding shortfalls equal to approximately 10 percent of project costs.

Capital Cost Estimate and Planning Assumptions: Medium

- All material assumptions affecting the capital plan are consistent with past trends.
- The capital cost estimate includes a sufficient contingency for a project in final design, and the allowance for finance charges is current and reliable.

Operating Finance Plan Rating: Medium

The operating finance plan is rated *Medium*, based upon the average of the ratings of the five subfactors listed below. The commitment of funds subfactor received a *High* rating, the completeness subfactor received a *Medium-High* rating, and the current operating condition subfactor was rated *Medium-Low*. The remaining subfactors were rated *Medium*.

Agency Operating Condition: Medium-Low

- TriMet has struggled the past four years in maintaining its service levels while payroll tax revenues stagnated.
- TriMet's current ratio of assets to liabilities as reported in its most recent audited financial statement (June 2004) is 1.04.

Completeness of Operating Plan: Medium-High

- The operating plan submission was thorough and complete. It includes an identification of all sources and uses of funds; evidence of commitment of operating funds for the project; detailed assumptions on which the operating plan was based; historical data on service levels, operating costs, and revenues dating to the early 1980s; and a sensitivity analysis.

Commitment of Operating Funds: High

- All operating funding is committed. The principal sources of operating and maintenance funds include TriMet payroll tax revenue, passenger fares, and FTA Section 5307 formula funds.

Operating Funding Capacity: Medium

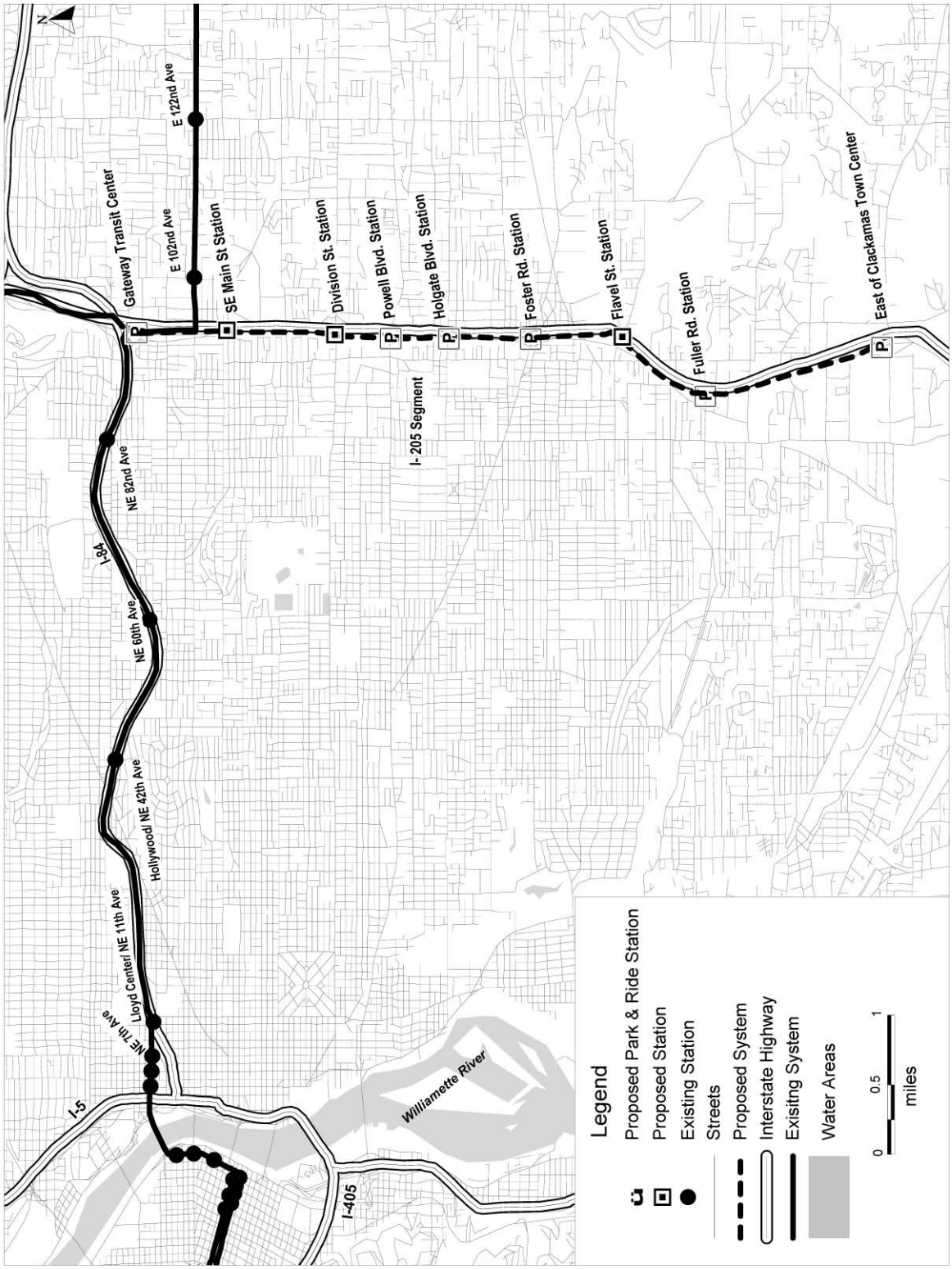
- The project's financial plan shows projected cash balances, reserve accounts, and/or access to credit exceeding 12 percent of annual operating expenses.

Operating Cost Estimates and Planning Assumptions: Medium

- Operating cost growth assumptions are conservative with respect to historical experience, while operating revenue assumptions are in line with historical experience.

South Corridor I-205 / Portland Mall LRT

Portland, Oregon



Wilsonville to Beaverton Commuter Rail

Washington County, Oregon

(November 2005)

The Tri-County Metropolitan Transportation District of Oregon (TriMet), in conjunction with Portland Metro, the Oregon Department of Transportation (ODOT), Washington and Clackamas Counties, and the cities of Wilsonville, Tualatin, Tigard, and Beaverton, is proposing to design and construct a 14.7-mile commuter rail line in the Wilsonville-Beaverton corridor. The proposed project would operate along portions of existing Union Pacific Railroad (UPRR) tracks and connect to TriMet's Westside MAX light rail transit (LRT) system at the Beaverton Transit Center (BTC). Approximately 2,000 feet of new street-running rail track would be constructed at the northern terminus of the alignment near the BTC. The proposed project also includes the purchase of four diesel multiple unit passenger railcars, and the construction of five stations, four park-and-ride lots, and vehicle maintenance and dispatch facilities. TriMet proposes to operate the commuter rail service at 30-minute headways during weekday morning and evening peak periods.

Washington County is forecast to absorb a significant share of the Portland metropolitan area's growth over the next 20 years, resulting in increased travel demand throughout the county and for trips destined for other parts of the region. The physical geography of the corridor and adopted regional plans and policies limit the ability to significantly expand highway facilities. At the same time, the rail right-of-way that would be used by the project is underutilized, and provides the potential for additional transportation capacity. The Wilsonville to Beaverton Commuter Rail project is intended to connect rapidly growing suburban communities in western Washington County via a reliable guideway transit alternative that will offer travel-time savings as compared to local and express bus service. The project is further intended to shape future development in the corridor, consistent with local and regional land use goals and objectives.

Summary Description	
Proposed Project:	Commuter Rail 14.7 Miles 5 Stations
Total Capital Cost ($YOE):	$117.3 Million (includes $5.1 million in finance charges)
Section 5309 New Starts Share ($YOE):	$58.7 Million (50.0%)
Annual Forecast Year Operating Cost:	$8.8 Million
Ridership Forecast (2020):	3,000 Average Weekday Boardings 1,900 Daily New Riders
Opening Year Ridership Forecast (2008):	1,600 Average Weekday Boardings
FY 2007 Finance Rating:	**Medium**
FY 2007 Project Justification Rating:	**Medium**
FY 2007 Overall Project Rating:	**Medium**

FTA expects to execute a Full Funding Grant Agreement for the Wilsonville to Beaverton Commuter Rail project in FY 2006. SAFETEA-LU Section 3011(f)(3) exempts the project from FTA's cost effectiveness funding policy.

Project Development History and Current Status

Based upon previous feasibility studies, the Washington County Board of Commissioners unanimously adopted commuter rail as the locally preferred alternative for the corridor in June 2000. FTA approved Washington County's request to enter preliminary engineering (PE) on the project in July 2000 as an "exempt" New Starts project. In January 2001, FTA authorized publication of the project's Environmental Assessment. During PE, the project's cost estimate increased significantly, primarily because UPRR required TriMet to buy, rather than lease, its railroad right-of-way. This cost increase triggered a request for more New Starts funding and made the project subject to evaluation against the New Starts project justification and local financial commitment criteria.

Prior to advancing the project into final design, FTA worked with TriMet and Metro staff to improve the travel forecasts of the unique suburb-to-suburb travel markets expected to utilize the project. TriMet also modified the project scope and fleet requirements to reduce costs and thus improve the project's cost effectiveness. FTA approved the project into final design in May 2004.

Significant Changes Since FY 2006 Evaluation (November 2004)

The project cost has been updated from the $104.1 million reported last year to reflect a 75 percent level of design, inclusion of PE costs, and inflation. Modest scope changes did not materially impact the project's capital cost estimate.

Project Justification Rating: Medium

The project is rated *Medium* for project justification based on a *Medium-Low* rating for cost effectiveness and a *Medium-High* rating for transit-supportive land use.

Cost Effectiveness Rating: Medium-Low

The *Medium-Low* cost effectiveness rating reflects a sufficient level of travel-time benefits (1,200 hours each weekday) as compared to the project's annualized costs. The capital cost estimate is considered reliable, but FTA notes that the project serves markets which are unusual for commuter rail; consequently, Metro's estimates of travel-time benefits carry some risk.

Cost Effectiveness	
	New Start vs. Baseline
Cost per Hour of Transportation System User Benefit	$25.26*
Incremental Cost per Incremental Trip	$13.82

* Indicates that measure is a component of Cost Effectiveness rating.

The Wilsonville to Beaverton Commuter Rail project does not provide a direct connection to downtown. Travel forecasts show that a majority of trips and benefits are attributable to intra-corridor travel. For travel to destinations outside of the corridor, trips destined to Beaverton and Hillsboro (located at the western termini of the MAX LRT system) generate more benefits than central business district (CBD)-oriented trips. Trips from downtown and southwest Portland to the corridor generate nearly one third of the project's anticipated travel-time benefits, demonstrating that the proposed New Start serves an unusually large reverse-commute market.

The capital cost estimate was updated in November 2005 to reflect cost escalation attributable primarily to inflation. The revised cost calculation includes a revised contingency amount and is based on an independent assessment, which increases the confidence level of cost components. The projected revenue operations date of September 2008 is aggressive but achievable.

Transit-Supportive Land Use Rating: Medium-High

The *Medium-High* land use rating is based upon the *High* rating given to transit-supportive plans and policies, the *Medium-High* rating assigned to the performance and impacts of these plans and policies, and the *Medium-Low* rating for existing land uses in the project corridor.

Existing Land Use: Medium-Low

- The project uses a portion of an active freight rail line between Wilsonville and Beaverton that traverses areas of low- to moderate-density commercial, industrial, and residential development in Washington County.
- Existing pedestrian-oriented character is above average for a suburban rail line since three of the five stations are in older downtown areas with a mix of uses. However, total employment and population served are relatively small (29,800 jobs and an average population density of 3,000 persons per square mile).
- Off-street parking is plentiful, accounting for nearly one-third of the land use in one station area.

Transit-Supportive Plans and Policies: High

- Oregon's comprehensive planning system has been in place for more than 25 years, and the Portland urban growth boundary has effectively constrained development to designated areas. Metro (the regional government) has unparalleled authority to establish and enforce land use policy. Its *Urban Growth Management Functional Plan* identifies growth centers and requires that local jurisdictions require minimum densities in these centers, as well as policies that support pedestrian and transit access.
- Beaverton, Tigard, and Tualatin have redevelopment plans in place to increase densities and pedestrian access in their downtown areas. Tigard is in the process of adopting a downtown implementation plan, which includes recommendations and a timeline for specific actions to promote mixed-use, pedestrian friendly redevelopment.
- Regional policies require local jurisdictions to adopt transit-supportive zoning ordinances, and all of the jurisdictions in the commuter rail corridor have updated their comprehensive plans and implementing ordinances in order to comply. The highest residential densities are in the range of 30 units per acre. Maximum parking requirements in proposed station areas are lower than those generally found in suburban areas.
- Metro's Transit-Oriented Development Program provides technical and financial assistance to support transit-oriented development activities throughout the region. Four of the five commuter rail stations will be located within areas targeted for pedestrian improvements in regional and local plans.

Performance and Impacts of Policies: **Medium-High**

- Portland's urban growth boundary has helped protect open space from rapid, low-density development, while a variety of infill projects and new transit-oriented developments have occurred in existing LRT station areas, including Beaverton.
- While Washington County experienced rapid economic growth in the 1990s, recent development activity has been modest due to the recent economic downturn. Vacancy rates are now dropping substantially, and as the economy improves in the future, opportunities for higher-density redevelopment are likely to increase.
- Construction is underway at the Washington Square Mall, currently a suburban-style shopping mall located at a proposed station, to replace some surface parking with higher-density development.

Other Project Justification Criteria

Mobility Improvements Rating: Medium	
Within ½-mile radius of boarding areas:	
Existing Employment	29,800
Projected Employment (2020)	35,100
Low Income Households (% of total HH)	400 (9%)
Average Per Station:	
Employment	5,960*
Low Income Households	80*
	New Start vs. Baseline
Transportation System User Benefit Per Project Passenger Mile (Minutes)	9.22*

Environmental Benefits Rating: Medium	
Criteria Pollutant (Reduction in tons)	**New Start vs. Baseline**
Carbon Monoxide (CO)	2
Nitrogen Oxide (NO_x)	6
Volatile Organic Compounds (VOC)	0
Particulate Matter (PM_{10})	N/A
Carbon Dioxide (CO_2)	4,121
Criteria Pollutant Status	**EPA Designation**
Carbon Monoxide (CO)	Maintenance Area*
Annual Energy Savings (million British Thermal Units)	53,211

Operating Efficiencies Rating: Medium		
	Baseline	**New Start**
System Operating Cost per Passenger Mile (current year dollars)	$0.300*	$0.301*

* Indicates that measure is a component of rating for each criterion.
N/A indicates information was not available for this entry.

Local Financial Commitment Rating: Medium

The *Medium* local financial commitment rating is based on the *Medium-High* rating for the capital finance plan and the *Medium* ratings for the New Starts share of project costs and the operating finance plan.

Section 5309 New Starts Share of Total Project Costs: 50%
Rating: Medium

TriMet is requesting a New Starts share of 50 percent of total project costs, which results in a *Medium* rating for this measure. FTA notes that TriMet's proposed New Starts funding amount exceeds the amount requested at the time of final design approval and has not been accepted by FTA; consequently, this amount may be reduced prior to execution of an FFGA.

Locally Proposed Financial Plan		
Source of Funds	**Total Funds ($million)**	**Percent of Total**
Federal:		
Section 5309 New Starts	$58.7	50.0%
Flexible Funds (STP)	$10.3	8.8%
State:		
Lottery Bond Proceeds	$35.3	30.1%
Local:		
Washington County General Fund	$7.0	5.9%
TriMet General Fund	$1.0	0.9%
Bond Interest & Expense	$5.1	4.3%
Total:	**$117.3**	100.0%

NOTE: The financial plan reflected in this table has been developed by the project sponsor and does not reflect a commitment by DOT or FTA. The sum of figures may differ from total as listed due to rounding.

Capital Finance Plan Rating: Medium-High

The capital finance plan is rated *Medium-High*, based upon the average of the ratings assigned to each of the subfactors listed below. The commitment of funds and capital funding capacity subfactors received *High* ratings, completeness received a *Medium-High* rating, agency condition received a *Medium* rating, and the capital cost estimate and planning assumptions subfactor received a *Medium-Low* rating.

Agency Capital Condition: Medium

- The average age of TriMet's bus fleet is 8.3 years, which is slightly older than the industry average.
- TriMet's good bond ratings, which were issued in March 2005, are as follows: Moody's Investors Service Aa3 and Standard & Poor's Corporation AA+.

Completeness of Capital Plan: Medium-High

- The capital plan was complete and included a detailed 20-year cash flow statement, levels of commitment of project funds and supporting evidence, fleet management plans, financial statements, a contingency plan to cover funding shortfalls and cost increases, and more than 20 years of historical information. It also included a limited sensitivity analysis.

Commitment of Capital Funds: High

- All non-New Starts funding is committed. Non-New Starts funds for the project derive from State of Oregon lottery bond proceeds, Washington County general funds, Federal flexible funds (Surface Transportation Program), and TriMet general funds.

Capital Funding Capacity: High

- The financial plan shows projected cash balances, reserve accounts, and/or access to credit that would allow TriMet to cover cost increases or funding shortfalls equal to approximately 53 percent of project costs.

Capital Cost Estimate and Planning Assumptions: Medium

- All material assumptions affecting the capital plan are consistent with past trends.
- The revised capital cost estimate reflects a contingency level and inflation assumptions that are within an acceptable range for this level of project development.

Operating Finance Plan Rating: Medium

The operating finance plan is rated *Medium*, based upon the average of the ratings of the five subfactors listed below. The commitment of funds subfactor received a *High* rating; the completeness subfactor received a *Medium-High* rating; and the current operating condition subfactor was rated *Medium-Low*. The remaining subfactors were rated *Medium*.

Agency Operating Condition: Medium-Low

- TriMet has struggled the past four years in maintaining its service levels while payroll tax revenues stagnated.
- TriMet's current ratio of assets to liabilities as reported in its most recent audited financial statement (June 2004) is 1.04.

Completeness of Operating Plan: Medium-High

- The operating plan submission was thorough and complete. It includes an identification of all sources and uses of funds; evidence of commitment of operating funds for the project; detailed assumptions on which the operating plan was based; historical data on service levels, operating costs, and revenues dating to the early 1980s; and a sensitivity analysis.

Commitment of Operating Funds: High

- All operating funding is committed. The primary sources of operating and maintenance funds include TriMet payroll tax revenue, passenger fares, and Section 5307 urbanized area formula funds.

Operating Funding Capacity: Medium

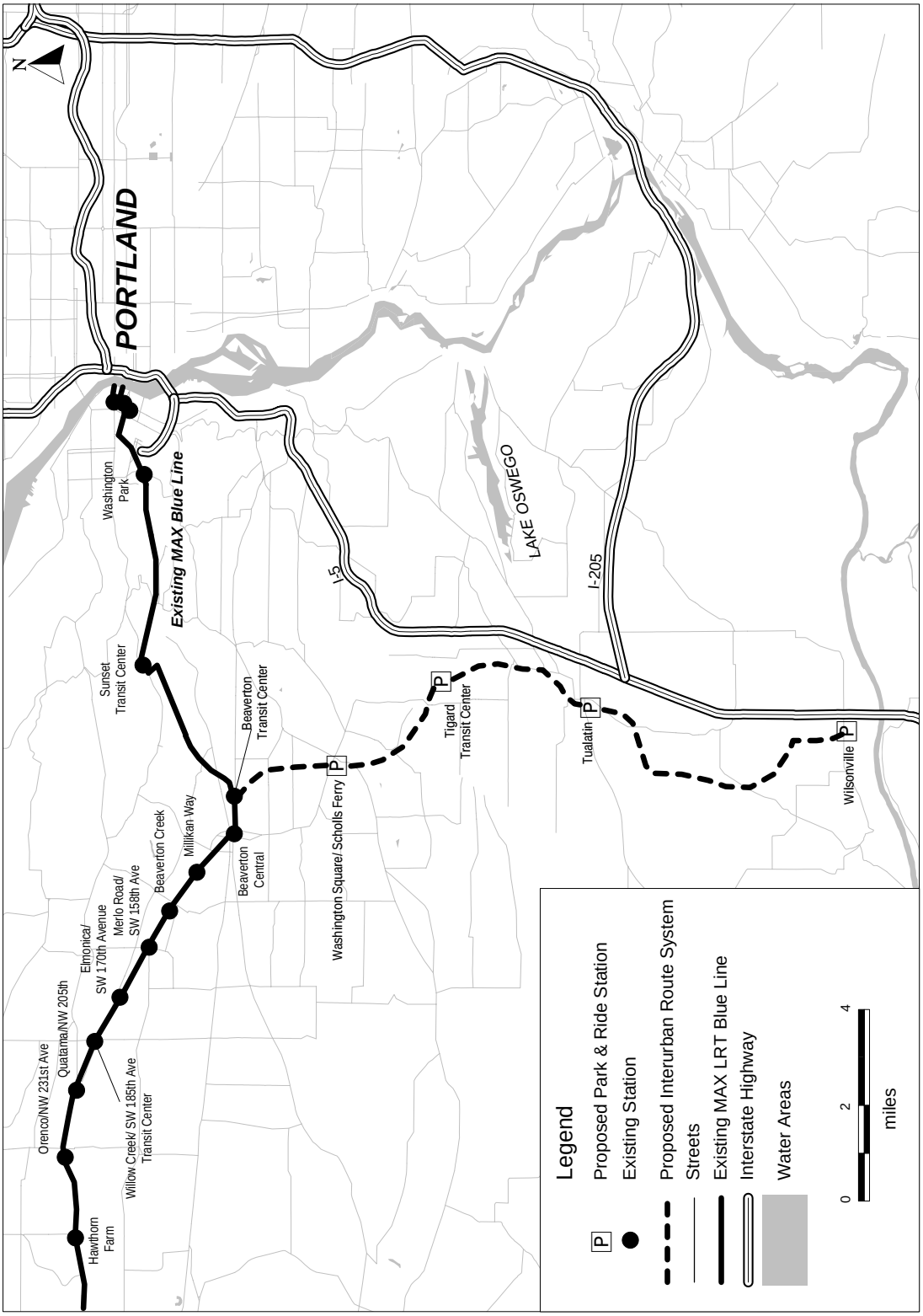
- The project's financial plan shows projected cash balances, reserve accounts, and/or access to credit exceeding 12 percent of annual operating expenses.

Operating Cost Estimates and Planning Assumptions: Medium

- Operating cost growth assumptions are conservative with respect to historical experience, while operating revenue assumptions are in line with historical experience.

Wilsonville to Beaverton Commuter Rail

Washington County, Oregon



East Corridor Commuter Rail

Nashville, Tennessee

(November 2005)

The Regional Transportation Authority of Nashville, Tennessee (NRTA) is proposing to implement a single-track, 32-mile commuter rail line between downtown Nashville and the city of Lebanon in Wilson County. The project includes the expansion and upgrade of existing freight rail tracks to commuter rail standards, construction of six stations, acquisition and rehabilitation of rail vehicles and locomotives, and the upgrade of two existing rail yards for vehicle storage and maintenance.

The project is estimated to cost $41.0 million in year of expenditure dollars, with a proposed Section 5309 New Starts share of $24.0 million (58.5 percent). *Because the proposed New Starts share is less than $25 million, the project is exempt from the New Starts criteria and is not subject to FTA's evaluation and rating (49 U.S.C 5309(e)(1)(B)).*

Summary Description	
Proposed Project:	Commuter Rail
	32 Miles, 6 Stations
Total Capital Cost ($2004):	$41.0 Million
Section 5309 New Starts Share ($2004):	$24.0 Million (58.5%)
Annual Operating Cost ($YOE):	$3.0 Million
Ridership Forecast (2012):	1,900 Average Weekday Boardings

Project Development History and Current Status

Based on local studies examining the potential market for and cost of commuter rail in the Nashville region, the East Corridor was selected as the first corridor to be implemented in a Nashville Area Commuter Rail System. FTA approved the project's advancement into preliminary engineering in November 1999. NRTA completed an Environmental Assessment and received a Finding of No Significant Impact (FONSI) for the project in May 2000. In June 2001, FTA approved the project for advancement into final design.

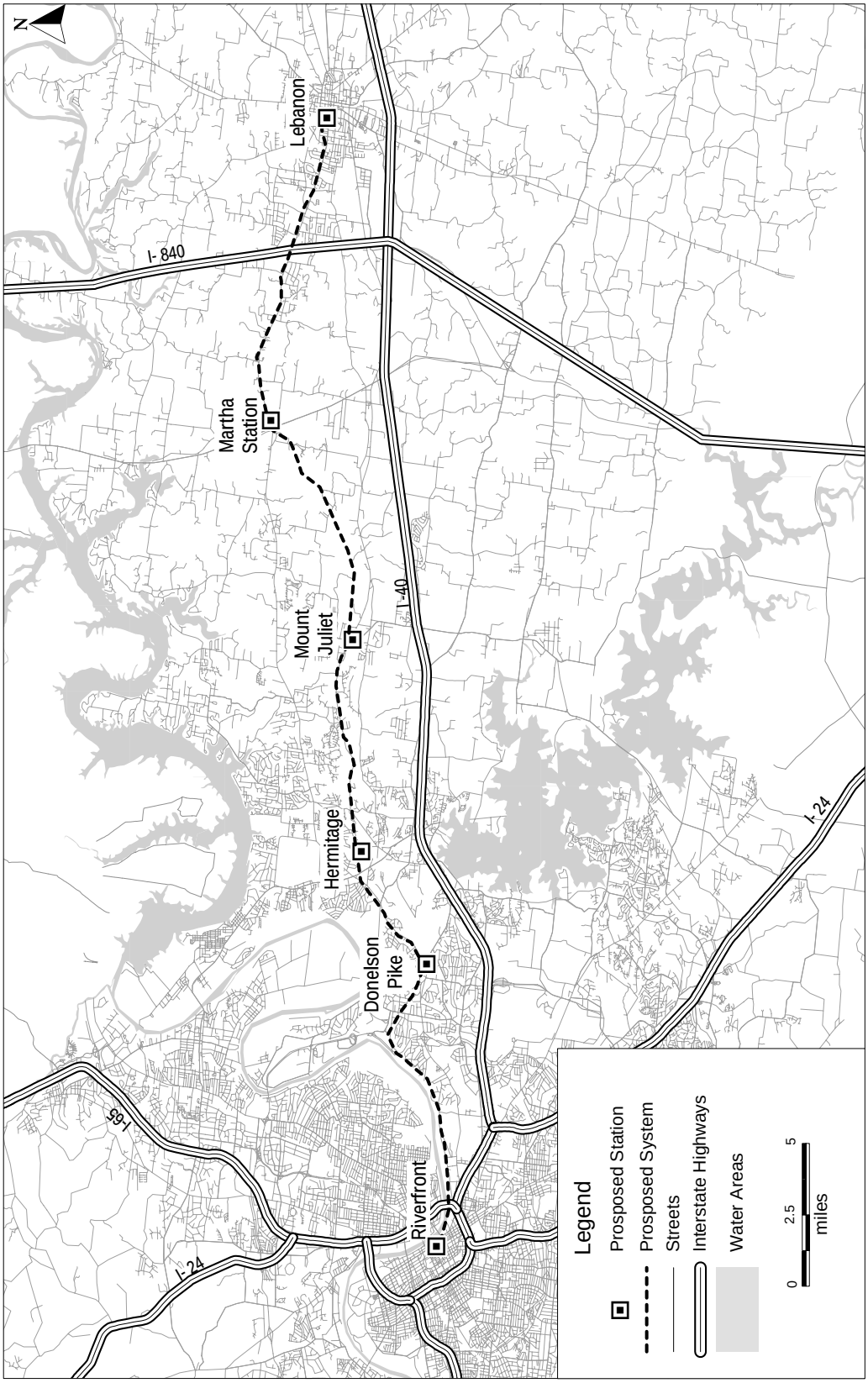
In September 2003, FTA conditionally approved a grant for project construction, requiring that Americans with Disabilities Act (ADA) requirements related to station platform levels be met before construction could begin. In March 2004, FTA informed NRTA that all ADA requirements had been satisfied, and the conditions attached to the grant were removed. NRTA prepared a Supplemental Environmental Assessment and received a FONSI in April 2005 for changes to specific station locations that were made since the original FONSI was received in 2000. Construction continues, and revenue operation is currently anticipated to begin in Spring 2006.

Locally Proposed Financial Plan		
Source of Funds	**Total Funds ($million)**	**Percent of Total**
Federal:		
Section 5309 New Starts	$24.0	58.5%
FHWA High Priority Project Funds	$7.4	18.0%
Section 115 Funds (STP)	$1.0	2.4%
State:		
TDOT General Fund	$4.0	9.8%
Local:		
Nashville and Eastern Rail Authority	$2.5	6.1%
Metropolitan Government of Nashville, Davidson County	$1.6	3.9%
City of Mt. Juliet	$.2	0.5%
City of Lebanon	$.2	0.5%
Wilson County	$.2	0.5%
Total:	**$41.0**	100.0%

NOTE: The financial plan reflected in this table has been developed by the project sponsor and does not reflect a commitment by DOT or FTA. The sum of the figures may differ from the total as listed due to rounding.

East Corridor Commuter Rail

Nashville, Tennessee



Northwest/Southeast LRT MOS

Dallas, Texas

(November 2005)

Dallas Area Rapid Transit (DART) is proposing to construct a 21-mile, two-segment extension of its light rail transit (LRT) system. The Southeast (SE) segment extends 10.1 miles from the Dallas central business district (CBD) to Buckner Boulevard. The Northwest (NW) segment extends 10.9 miles from the existing Victory Station to the city of Farmers Branch. A locally-funded extension of the NW line to Frankford Road in Carrollton is also being advanced by DART. The NW and SE LRT alignments would be connected through the existing four-station CBD Transitway Mall. Each segment would operate in an exclusive right-of-way, with no mixed traffic operations. A total of 16 stations would be constructed. DART would add 3,400 parking spaces to its system as part of the project, and is planning to procure a fleet of high capacity "super" light rail vehicles consistent with the system's long range capital program. Service would be provided at ten-minute peak-period frequencies.

The NW segment, which generally parallels Interstate 35 East (I-35 E) (a major north-south arterial), is a growing employment area and a major North American Free Trade Agreement cargo route. Traffic on I-35 E, adjacent to the NW segment, is projected to increase 45 percent by 2025. Truck traffic is estimated to increase nearly 80 percent by 2011 in the NW segment corridor. The SE segment corridor, located entirely within the city of Dallas, houses a highly transit-dependent population. Approximately one-third of SE Corridor households are considered low-income; nearly 17 percent of households do not own a car, more than double the percentage of zero-car households within Dallas County. By linking residents in the SE segment to the Dallas CBD and employment areas in the NW segment, the project is intended to provide a more reliable alternative than existing bus service, thereby ameliorating daily travel times in the entire NW/SE corridor, while improving mobility and accessibility throughout the corridor and in other parts of the region served by the DART LRT system.

Summary Description	
Proposed Project:	Light Rail Transit 21 Miles 16 Stations
Total Capital Cost ($YOE):	$1,406.2 Million (includes $155.4 million in finance charges)
Section 5309 New Starts Share ($YOE):	$700.0 Million (49.8%)
Annual Forecast Year Operating Cost:	$47.6 Million
Ridership Forecast (2025):	45,900 Average Weekday Boardings 10,700 Daily New Riders
Opening Year Ridership Forecast (2011):	40,300 Average Weekday Boardings
FY 2007 Finance Rating:	**Medium-High**
FY 2007 Project Justification Rating:	**Medium**
FY 2007 Overall Project Rating:	**Medium**

FTA expects to execute a Full Funding Grant Agreement for the Dallas Northwest/Southeast LRT MOS project in FY 2006.

Project Development History and Current Status

DART completed major investment studies on the SE Corridor and NW Corridor in January 2000 and February 2000, respectively. FTA approved the combined NW/SE LRT minimum operable segment (MOS) into preliminary engineering in July 2001. DART completed separate Final Environmental Impact Statements for each project in October 2003 (including the locally-funded NW segment extension). FTA issued Records of Decision completing the environmental review processes for both projects in February 2004. FTA approved the NW/SE LRT MOS project into final design in June 2005.

Significant Changes Since FY 2006 Evaluation (November 2004)

In June 2005, DART submitted revised travel forecasts for the project, based on an assumption of signal priority for LRT along the CBD Transitway Mall. The NW/SE LRT MOS project is expected to bring combined LRT headways to 2.5 minutes in each direction in the CBD - which would compromise LRT operations under the current fixed-time traffic signal system. Implementation of LRT signal priority results in an increase in the estimate of the project's travel time benefits. The project cost estimate decreased from 1,490.1 million due to a reduction in the estimated finance costs.

Project Justification Rating: Medium

The project is rated *Medium* for project justification based on a *Medium* rating for cost effectiveness and a *Medium* rating for the project's transit-supportive land use.

Cost Effectiveness Rating: Medium

The *Medium* cost effectiveness rating reflects the level of travel-time benefits (15,400 hours each weekday, plus special events) relative to the project's annualized costs. The estimate of both costs and benefits of the project at this stage of development is considered reliable.

Cost Effectiveness	
	New Start vs. Baseline
Cost per Hour of Transportation System User Benefit	$18.60*
Incremental Cost per Incremental Trip	$30.50

* Indicates that measure is a component of Cost Effectiveness rating.

The NW LRT alignment is intended to provide fast and reliable transit travel times in the increasingly congested I-35 corridor. The NW corridor generates approximately one-third of the project's travel-time benefits. While the Dallas CBD generates nearly two thirds of regional work-commute travel-time benefits, the high concentration of jobs located along the mid-NW alignment (particularly at the Medical District and Market Center) results in significant benefits accruing to this market as well. Residents along the SE alignment benefit from more direct transit access to downtown Dallas and NW corridor job opportunities; 60 and 20 percent of SE-generated travel-time benefits are attributable to these two travel markets, respectively. Travel forecasts indicate that more than one half of all work-commute benefits are experienced by lower-income populations; 20 percent of these benefits are attributable to the SE corridor alone. Less than 10 percent of forecast benefits are attributable to trips to special event generators, including Fair Park and America Airlines Arena. DART, in cooperation with the city of Dallas, has also developed a series of measures for expanding LRT capacity and speeds in the CBD. Implementation of these measures provides approximately 15 percent of estimated travel-time benefits.

While the cost estimate for the NW/SE LRT MOS project is generally sound and has recently been revised to include updated finance charges and current actual costs for construction materials, the contingency is relatively low given the project's level of development. The project's schedule is aggressive with respect to completion of design packages, approval of an FFGA, and start of construction.

Transit-Supportive Land Use Rating: Medium

The rating is based upon the *Medium* ratings assigned to existing land use and transit-supportive plans and policies and the *Medium-High* rating assigned to the performance and impacts of land use policies.

Existing Land Use: Medium

- Total employment for all station areas is 121,900. The majority of station areas exhibit moderate to low population densities. Population density for all station areas is estimated at greater than 2,700 persons per square mile. Within the entire corridor, the number of persons per square mile is estimated at nearly 3,500. Both project segments provide direct access to downtown Dallas, which current contains approximately 123,500 jobs.
- The corridor contains an entertainment district, medical facilities, cultural and historic sites, museums, and large residential developments. Several of these major trip generators serve large numbers of employees and are within walking distance of proposed station areas.
- Large amounts of dedicated parkland and/or flood plains are found near two stations. Two station areas include large tracts of industrial land, while three station areas have substantial vacant land. Remaining station areas are considered mixed-use.
- The average cost of off-street parking in downtown Dallas is a relatively inexpensive $5 per day.

Transit-Supportive Plans and Policies: Medium

- The city of Dallas' *Growth Policy Plan* includes guidelines for regional scale development locations, employment centers, and high-density development near DART stations, and is accompanied by local policies aimed at preserving neighborhoods and making them more livable.
- Along with station area planning, the plan also focuses on thoroughfare planning (entertainment venues), social/cultural amenities, and park-and-ride facilities. The plan encourages growth nodes to be supported by DART's transportation capacity.
- The Transit Oriented Development Implementation Program, currently under development, would place funds from the sale of specified parcels of DART-owned land into a fund to promote access to facilities from development around DART stations.

Performance and Impacts of Policies: Medium-High

- Growth management goals have been achieved along the existing DART light rail system (Southwest, Northeast and North Central corridors) through the use of planned developments, overlays, and ordinances. The cities of Farmers Branch and Dallas have plans to promote transit-oriented development and high-density employment and housing.
- Significant amounts of development, influenced by rail construction and operations, have been built or are planned along the existing rail system, including a new hotel and mixed uses in the downtown area and the construction of municipal facilities and residential housing in a redevelopment project in the Cedars station area.
- Regionally, transit-oriented development strategies from Dallas' metropolitan transportation plan, *Mobility 2025*, are being applied by DART and its member cities.
- As a follow up to the University of North Texas Center for Economic Development and Research's initial evaluation of property values near DART's existing LRT stations, the Center completed a study in 2003 that confirms a continual rise in property values near LRT stations, including a nearly 25 percent increase in office property values adjacent to LRT stations versus an 11.5 percent increase for properties located away from LRT stations.

Other Project Justification Criteria

Mobility Improvements Rating: Medium	
Within ½-mile radius of boarding areas:	
Existing Employment	121,900
Projected Employment (2025)	148,500
Low Income Households (% of total HH)	3,200 (23%)
Average Per Station:	
Employment	7,619*
Low Income Households	200*
	New Start vs. Baseline
Transportation System User Benefit Per Project Passenger Mile (Minutes)	3.12*

Environmental Benefits Rating: High	
Criteria Pollutant (Reduction in tons)	**New Start vs. Baseline**
Carbon Monoxide (CO)	242
Nitrogen Oxide (NO_x)	56
Volatile Organic Compounds (VOC)	33
Particulate Matter (PM_{10})	13
Carbon Dioxide (CO_2)	19,430
Criteria Pollutant Status	**EPA Designation**
8-Hour Ozone (O_3)	Moderate Non-Attainment Area*
Annual Energy Savings (million British Thermal Units)	215,493

Operating Efficiencies Rating: Medium		
	Baseline	**New Start**
System Operating Cost per Passenger Mile (current year dollars)	$0.773*	$0.731*

* Indicates that measure is a component of rating for each criterion.
N/A indicates information was not available for this entry.

Local Financial Commitment Rating: Medium-High

The *Medium-High* local financial commitment rating is based on *Medium-High* ratings for the capital and operating finance plans, and a *Medium* rating for the non-New Starts share of project costs.

Section 5309 New Starts Share of Total Project Costs: 50%
Rating: Medium

DART is requesting an approximately 50 percent New Starts share of total project costs, which results in a *Medium* rating for this measure.

Locally Proposed Financial Plan		
Source of Funds	**Total Funds ($million)**	**Percent of Total**
Federal: Section 5309 New Starts	$700.0	49.8%
Local: Dedicated Sales Tax	$706.2	50.2%
Total:	**$1,406.2**	100.0%

NOTE: The financial plan reflected in this table has been developed by the project sponsor and does not reflect a commitment by DOT or FTA. The sum of the figures may differ from total as listed due to rounding.

Capital Finance Plan Rating: Medium-High

The capital finance plan is rated *Medium-High,* based upon the average of the ratings of the five subfactors listed below. The capital condition, commitment of capital funds and capital funding capacity subfactors are rated *High*. The completeness and capital cost estimates and planning assumptions subfactors are rated *Medium*.

Agency Capital Condition: High

- The average age of DART's bus fleet is 5.6 years, which is younger than the industry average.
- DART's excellent bond ratings, which were issued in December 2003, are as follows: Moody's Investors Service Aaa and Aa3; Standard & Poor's Corporation AAA and AA; and Fitch AAA and AA.

Completeness of Capital Plan: Medium

- The submission was complete and included a 20-year cash flow statement, identification of key assumptions, historical data, supporting documentation, and a moderate level of detail. The submittal did not include a sensitivity analysis.

Commitment of Capital Funds: High

- All non-New Starts funding for the project is committed and comes from the existing dedicated local sales tax.

Capital Funding Capacity: High

- The project's financial plan shows projected cash balances, reserve accounts, and/or access to credit that would allow DART to cover cost increases or funding shortfalls equal to approximately 57 percent of the estimated capital costs.

Capital Cost Estimate and Planning Assumptions: Medium

- Assumptions included in the capital financial plan, including sales tax growth rate assumptions, are generally in line with or are more conservative than historical experience.
- The capital cost estimate is considered current and reliable, and include conservative inflation assumptions, although contingencies are low and there is concern that any schedule slippage may result in cost increases.

Operating Finance Plan Rating: Medium-High

The operating finance plan is rated *Medium-High*, based upon the average of the ratings of the five subfactors listed below. The commitment of operating funds and operating funding capacity subfactors are rated *High*; the completeness of the operating plan and operating cost estimates and planning assumptions subfactors are rated *Medium;* and the operating condition subfactor is rated *Medium-Low*.

Agency Operating Condition: Medium-Low

- DART is in good financial condition, with a history of balanced budgets or surpluses, positive cash reserves, and few service modifications.
- DART's current ratio of assets to liabilities, as reported in its most recent audited financial statements, is 1.1. The low current ratio is due to a large amount of commercial paper on DART's balance sheet under current liabilities. This commercial paper is expected to be converted into long-term debt in the near future. When this happens, DART's current ratio should improve significantly.

Completeness of Operating Plan: Medium

- The submission was generally complete and included a 20-year cash flow statement, identification of key assumptions, historical data, supporting documentation, and a moderate level of detail. However, project-specific operating costs and revenues were only specified in the initial year of operation. For all other years, the project operating costs and revenues were shown consolidated with the rest of the system.
- The submittal did not include a sensitivity analysis.

Commitment of Operating Funds: High

- All operating funding is committed, including fare revenues and dedicated sales tax funding.

Operating Funding Capacity: High

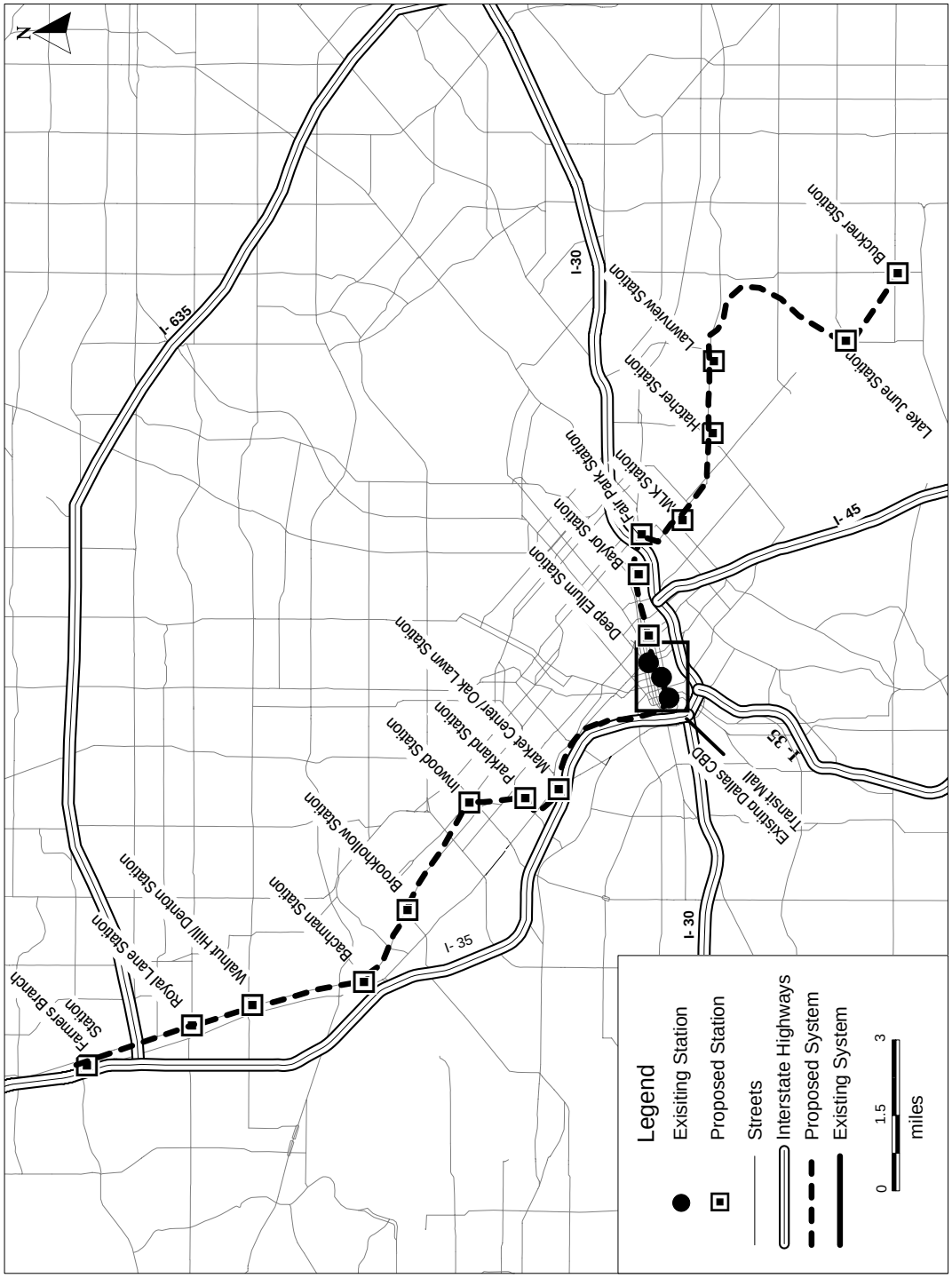
- The project's financial plan shows projected cash balances, reserve accounts, and/or access to credit exceeding 50 percent of the project's estimated annual operating expenses.

Operating Cost Estimates and Planning Assumptions: Medium

- Operating cost and revenue assumptions are consistent with historical experience.

Northwest / Southeast Light Rail MOS

Dallas, Texas



Weber County to Salt Lake City Commuter Rail

Salt Lake City, Utah

(November 2005)

The Utah Transit Authority (UTA) is proposing to construct the 43-mile Weber County to Salt Lake City Commuter Rail project. The project includes eight stations to serve the areas of Pleasant View, Ogden, Clearfield, Layton, Bountiful and downtown Salt Lake City. The commuter rail line would operate within an existing railroad corridor parallel to Interstate 15 (I-15), utilizing right-of-way (ROW) previously acquired by UTA under a rail corridor preservation plan with certain facilities already in place. Approximately 6,300 park-and-ride spaces would be built at corridor stations to expand the transit catchment area beyond the immediate corridor. Bus and light rail transit connections are intended to provide further service to other travel markets, including Weber State University, Hill Air Force Base, Freeport Center, the University of Utah, the Medical Center, and to the areas of Sandy and Draper in the southern part of Salt Lake City. The commuter rail project would operate at 20-minute frequencies during peak-periods. The Weber County to Salt Lake City Commuter Rail project is the northern segment of a planned commuter rail system extending south of Salt Lake City to Provo.

Regional travel forecasts demonstrate that current levels of vehicle congestion on I-15 will continue in the future despite planned highway improvements. The Weber County to Salt Lake City Commuter Rail project is intended to be part of a multimodal solution to the problem of increased travel demand in the corridor. The project would improve the reliability and speed of transit service, thereby attracting more ridership and providing for expanded transportation capacity within the narrow I-15 corridor.

Summary Description	
Proposed Project:	Commuter Rail 43 Miles 8 Stations
Total Capital Cost ($YOE):	$611.7 Million (includes $70.0 million in finance charges)
Section 5309 New Starts Share ($YOE):	$489.3 Million (80.0%)
Annual Forecast Year Operating Cost:	$15.5 Million
Ridership Forecast (2025):	11,800 Average Weekday Boardings 6,100 Daily New Riders
Opening Year Ridership Forecast (2008):	5,500 Average Weekday Boardings
FY 2007 Finance Rating:	**Medium-High**
FY 2007 Project Justification Rating:	**Medium**
FY 2007 Overall Project Rating:	**Medium**

Division H of the Consolidated Appropriations Act, 2005, permits UTA to count completed and future highway and transit expenditures to meet the local financial share requirements for the Weber County to Salt Lake City Commuter Rail project. UTA's latest financial plan does not fully utilize the provisions contained in the Act, proposing instead an 80 percent share of New Starts funding matched by the value of project ROW and local revenues.

FTA expects to execute a Full Funding Grant Agreement for the Weber County to Salt Lake City Commuter Rail project in FY 2006. The Administration has exempted the project from FTA's cost effectiveness funding policy.

Project Development History and Current Status

The commuter rail project is a part of a local multimodal transportation "shared solution" strategy proposed in several studies developed since the 1980s to meet projected travel demand in the 1-15 Corridor. Completed in January 2002, the *Inter-Regional Corridor Alternatives Analysis* considered a number of transit alternatives for the project corridor, and identified commuter rail to be the locally preferred alternative. The project was approved for entry into preliminary engineering (PE) in December 2003. A Draft Environmental Impact Statement (EIS) was completed in April 2004. A Final EIS was issued in February 2005 and a NEPA Record of Decision was completed in April 2005. The project was approved into final design in June 2005.

Significant Changes Since FY 2006 Evaluation (November 2004)

The project's cost estimate increased from the $581.4 million reported last year, due largely to an increase in the estimated finance costs and inclusion of PE costs. UTA also increased the proposed New Starts funding amount consistent with its 80 percent share assumption.

Project Justification Rating: Medium

The project is rated *Medium* for project justification based on a *Medium-Low* rating for cost effectiveness and a *Medium* rating for transit-supportive land use.

Cost Effectiveness Rating: Medium-Low

The *Medium-Low* cost effectiveness rating reflects the level of travel-time benefits (6,400 hours each weekday) relative to the project's annualized costs. The project cost estimate is considered reliable at this stage of development. FTA notes that the project serves markets which are unusual for commuter rail; consequently, UTA's estimates of travel-time benefits carry some risk.

Cost Effectiveness	
	New Start vs. Baseline
Cost per Hour of Transportation System User Benefit	$22.78*
Incremental Cost per Incremental Trip	$23.88

* Indicates that measure is a component of Project Justification rating.

The project is expected to provide peak period travel times that are competitive with private automobiles traveling within the corridor. Over one-quarter of travel-time benefits accrue to downtown Salt Lake City-bound trips from communities within and to the north of the corridor. Approximately 30 percent of benefits are attributable to reverse commute trips attracted to the corridor (primarily Ogden and other Weber County destinations), which is unusual for commuter rail. Travel forecasts indicate that 20 percent of travel-time benefits accrue to trips to colleges and universities located throughout UTA's existing and planned rail network.

Few cost uncertainties remain. UTA will need to focus on cost containment related to utility relocation, rolling stock procurement, and construction coordination with Union Pacific during project implementation. Guideway, stations, and systems costs are consistent with those of other commuter rail projects in the New Starts pipeline. The project's current cost estimate reflects recent updates to quantities and unit prices for essential scope elements.

Transit-Supportive Land Use Rating: Medium

The *Medium* land use rating is based upon the *Medium* ratings assigned to transit-supportive plans and policies and their performance and impacts, and the *Medium-Low* rating for existing land use in the project corridor.

Existing Land Use: Medium-Low

- The average station area population density is 3,000 residents per square mile. Total station area employment is also relatively low, at approximately 30,600 jobs. Similarly, total employment served by the system is modest at 76,600. This figure includes much of the Salt Lake City CBD.
- The Salt Lake Intermodal Station and the Ogden Station are at the edge of the cities' downtowns, within ½ mile of office buildings and large entertainment and mixed-use complexes. At the stations outside Salt Lake City and Ogden, vacant land and pockets of residential, general commercial, and light industrial development predominate. Land use patterns are largely low-density and auto-oriented.
- The parking supply in downtown Salt Lake City is limited. The average parking cost in the Salt Lake downtown area is $8 per day. Ample free parking appears to be available at all other station areas.
- Overall, current levels of population, employment and other trip generators in station areas are marginally supportive of a major transit investment.

Transit-Supportive Plans and Policies: Medium

- The Salt Lake metropolitan area is experiencing high rates of in-migration. Population and employment increases in the metropolitan area are projected to exceed 30 percent by 2030, and approximately 16 percent of population growth and 26 percent of employment growth are projected to occur in the project corridor. State policy supports locally-initiated growth management policies and programs, which have been guided with some success by the efforts of Envision Utah, a private land use planning advocacy group. However, no legally binding growth management policies are in effect in the region, and land development remains largely market-driven.
- Master planning efforts are actively under way at most stations for the specific purpose of fostering transit-supportive development.
- Official support for transit-oriented zoning is strong throughout the corridor, although planning efforts in most station areas remain at an early stage. High-density transit-oriented zoning has been adopted for sections of downtown Salt Lake City and Ogden.
- UTA has worked closely with the development community and officials from local jurisdictions, who have demonstrated strong support for the project and transit-oriented development in station areas. Several corridor municipalities plan to invest in pedestrian infrastructure in station areas. Salt Lake City is a participant in a program enabling residents within ½ mile of a rail station to have access to increased mortgage credit.

Performance and Impacts of Policies: Medium

- A number of development projects have been located to take advantage of recently-initiated light rail service. However, these initiatives have been limited to the Salt Lake City CBD. There is an expectation that commuter rail service will result in some changes to planned development at several of the proposed commuter rail stations.
- Major redevelopment projects are being constructed in Ogden's downtown, within walking distance of the existing intermodal center.
- A transit-adjacent development with big-box retail and some residential has been proposed for the Farmington commuter station.

Other Project Justification Criteria

Mobility Improvements Rating: Medium	
Within ½-mile radius of boarding areas:	
Existing Employment	30,600
Projected Employment (2030)	38,100
Low Income Households (% of total HH)	621 (11%)
Average Per Station:	
Employment	3,800*
Low Income Households	78*
	New Start vs. Baseline
Transportation System User Benefit Per Project Passenger Mile (Minutes)	1.62*

Environmental Benefits Rating: High	
Criteria Pollutant (Reduction in tons)	**New Start vs. Baseline**
Carbon Monoxide (CO)	126
Nitrogen Oxide (NO_x)	24
Volatile Organic Compounds (VOC)	8
Particulate Matter (PM_{10})	13
Carbon Dioxide (CO_2)	1
Criteria Pollutant Status	**EPA Designation**
Carbon Monoxide (CO)	Ogden – Maintenance Area*
Particulate Matter (PM_{10})	Ogden – Non Attainment Area* Salt Lake County – Non Attainment*
Annual Energy Savings (million British Thermal Units)	125,432

Operating Efficiencies Rating: Medium		
	Baseline	**New Start**
System Operating Cost per Passenger Mile (current year dollars)	$0.632*	$0.589*

* Indicates that measure is a component of rating for each criterion.
N/A indicates information was not available for this entry.

Local Financial Commitment Rating: Medium-High

The *Medium-High* local financial commitment rating is based on the *Medium-High* ratings for capital and operating finance plans.

Section 5309 New Starts Share of Total Project Costs Rating: 80% Rating: Low

Division H of the Consolidated Appropriations Act, 2005, permits UTA to count completed and future highway and transit expenditures to meet the local financial share requirements for the Weber County to Salt Lake City Commuter Rail project. UTA has submitted a financial plan that assumes an approximately 80 percent share of project costs, which would normally result in a *Low* rating for this factor. However, due to the appropriations act provision, the New Starts share of project costs is not applicable to FTA's rating process.

Locally Proposed Financial Plan		
Source of Funds	**Total Funding ($million)**	**Percent of Total**
Federal: Section 5309 New Starts	$489.3	80.0%
Local: UTA Previously Purchased Right-of-Way Contribution UTA Sales Tax and Bond Proceeds	 $40.0 $82.4	 6.5% 13.5%
Total:	**$611.7**	100.0%

NOTE: The financial plan reflected in this table has been developed by the project sponsor and does not reflect a commitment by DOT or FTA. The sum of the figures may differ from the total as listed due to rounding.

Capital Finance Plan Rating: Medium-High

The capital finance plan is rated *Medium-High*, based upon the average of the ratings assigned to each of the subfactors listed below. The commitment of funds subfactor received a *High* rating; the completeness subfactor received a *Medium-High* rating, and the remaining subfactors were rated *Medium*. The proposed capital plan assumes a 20 percent local match.

Agency Capital Condition: Medium

- The average age of UTA's bus fleet is seven years, which is in line with the industry average.
- UTA's good bond ratings, which were issued in October 2005, are as follows: Moody's Investors Service Aa3 and Standard & Poor's Corporation AA.

Completeness of Capital Plan: Medium-High

- The submission was complete and included a 26-year cash flow, a moderate level of detail, a sensitivity analysis, and supporting documentation. Other than sales tax revenue data, only limited historical data was provided.

Commitment of Capital Funds: High

- All non-New Starts funding is committed. Committed funds include right-of-way previously purchased by UTA, sales tax revenues from UTA's dedicated sales tax, and bond proceeds.

Capital Funding Capacity: Medium

- The project's financial plan shows projected cash balances, reserve accounts, and/or access to credit that would allow UTA to cover cost increases or funding shortfalls equal to approximately 19 percent of project costs.

Capital Cost Estimate and Planning Assumptions: Medium

- Sales tax revenue assumptions are reasonable compared to historical experience. Interest rate assumptions both for bond financing and for reserve accounts are reasonable.

Operating Finance Plan Rating: Medium-High

The operating finance plan is rated *Medium-High* based upon the average of the ratings assigned to each of the five subfactors listed below. The operating condition and commitment of funds subfactors received *High* ratings; completeness of the operating plan received a *Medium-High* rating; operating funding capacity received a *Medium* rating; and the operating cost estimates and planning assumptions subfactor received a *Medium-Low* rating.

Agency Operating Financial Condition: High

- UTA is in very good condition and has experienced continued growth in service during recent years.
- UTA's current ratio of assets to liabilities as reported in its most recent audited financial statement is 3.8.

Completeness of Operating Plan: Medium-High

- The submission was complete and included a 26-year cash flow, a moderate level of detail, a sensitivity analysis, and supporting documentation.

Commitment of Operating Funds: High

- All operating funding is committed. Operating funds include passenger revenues, sales tax revenues, joint development revenues, advertising and other non-passenger revenues, and interest income.

Operating Funding Capacity: Medium

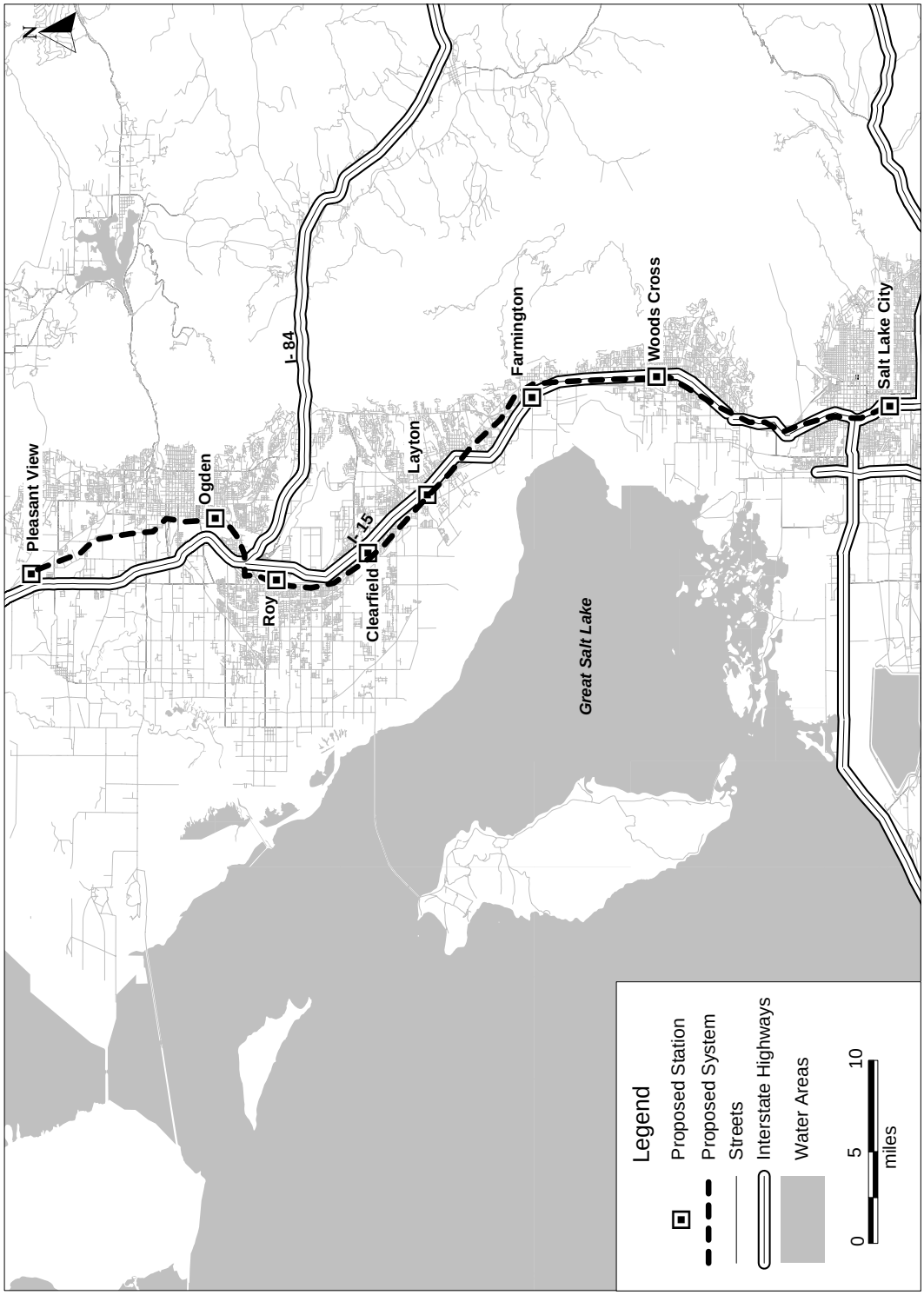
- The project's financial plan shows projected cash balances, reserve accounts, and/or access to credit exceeding 12 percent of annual operating expenses.

Operating Cost Estimates and Planning Assumptions: Medium-Low

- Operating planning assumptions appear overly optimistic compared to historical experience, particularly with regard to forecasted sales tax revenue growth.

Weber County to Salt Lake City Commuter Rail

Salt Lake City, Utah



Projects in Preliminary Engineering

South Corridor LRT Extension

Sacramento, California

(November 2005)

The Sacramento Regional Transit District (RT) is proposing to implement an extension of its existing South Corridor light rail transit (LRT) line from its current terminus at Meadowview Road south and east to Cosumnes River College (CRC), near the intersection of State Highway 99 and Calvine Road. The four-station, 4.2-mile project would operate in an exclusive, primarily at-grade right-of-way requiring six street crossings along the alignment. No additional vehicles or yard improvements would be necessary to operate the proposed service, which features 10-minute peak-period frequencies. Approximately 2,700 park-and-ride spaces would be constructed at three of the four proposed stations as part of the project.

The South Corridor LRT Extension is located within one of the fastest growing areas of Sacramento County. Additional development anticipated to the south along Route 99 and Interstate 5, and a high rate of employment growth forecasted for downtown Sacramento, have created the need for additional peak-period transportation capacity between the Sacramento region's southern communities and its central business district (CBD). By extending existing LRT service south and providing new park-and-ride opportunities in the corridor, the South Corridor LRT Extension project is intended to provide an attractive alternative to private automobiles for trips destined for downtown and other areas served by the LRT system. Further, the project is anticipated to help the region meet its air quality goals, as well as facilitate economic development opportunities along the alignment.

Summary Description	
Proposed Project:	Light Rail Transit 4.2 Miles 4 Stations
Total Capital Cost ($YOE):	$197.1 Million
Section 5309 New Starts Share ($YOE):	$98.6 Million (50.0%)
Annual Forecast Year Operating Cost:	$5.3 Million
Ridership Forecast (2025):	10,750 Average Weekday Boardings 2,200 Daily New Riders
Opening Year Ridership Forecast (2010):	7,400 Average Weekday Boardings
FY 2007 Finance Rating:	**Medium**
FY 2007 Project Justification Rating:	**Medium**
FY 2007 Overall Project Rating:	**Medium**

FTA will be working with RT prior to the South Corridor LRT Extension project's next evaluation to confirm the operating costs, and perhaps revise the service plan, of its New Starts baseline alternative.

Project Development History and Current Status

The South Sacramento Corridor was identified as a candidate for a future extension of LRT during RT's 1991 *Sacramento Systems Planning Study*. Following completion of a Draft Environmental Impact Statement (EIS) in 1995, the RT Board adopted a locally preferred alternative for LRT improvements in the South Sacramento Corridor. In response to funding constraints, RT decided to implement the South Corridor LRT in two phases. A minimum operable segment from downtown Sacramento to Meadowview was advanced first and opened for service in September 2003.

RT re-evaluated candidate corridors for additional LRT extensions in its 2000 *Multi-Corridor Study*. This study confirmed the South Corridor as the highest priority corridor for further LRT extension. Following a reduction in project scope and cost, work with local stakeholders to further identify transit-oriented development opportunities in the corridor, improvements to the project's baseline alternative against which to measure the benefits of the proposed extension, and refinements to the project's management plan, RT submitted a complete PE request for the South Corridor LRT Extension project in August 2004. The project was approved into PE in February 2005.

Project Justification Rating: Medium

The *Medium* rating for project justification is based on a *Medium-High* rating for cost effectiveness and a *Medium-Low* rating for transit-supportive land use.

Cost Effectiveness Rating: Medium-High

The *Medium-High* rating reflects the level of travel-time benefits relative to the project's annualized costs. FTA has identified concerns with the operations and maintenance cost assumptions used in the calculation of cost effectiveness. However, any change in these costs is not anticipated to threaten the sufficiency of the project's cost effectiveness.

Cost Effectiveness	
	New Start vs. Baseline
Cost per Hour of Transportation System User Benefit	$13.59*
Incremental Cost per Incremental Trip	$11.95

* Indicates that measure is a component of Cost Effectiveness rating.

Travel forecasts show that nearly three-quarters of all travel time benefits generated by the South Corridor LRT Extension project are attributable to commuters destined for downtown Sacramento, with LRT providing service that is competitive with express bus travel times on congested highway facilities for such trips. Given the provision of park-and-ride facilities along the alignment (particularly the 2,000-space lot at Cosumnes River College just off of Route 99, a major parallel facility for travel downtown), a significant level of travel-time benefits are attributable to this market. Approximately 10 percent of travel-time benefits are for trips destined for the corridor itself, with reverse-commute trips ending at Cosumnes River College representing the largest single corridor market.

Project costs are relatively modest, owing to the short distance of the line and the absence of need for additional vehicles or maintenance facilities. The projects cost estimate was recently updated from $153 million to $197 million. The cost estimate is considered reliable at this stage of project development; however, the cost inflation rate assumptions may be low and the project implementation schedule may be aggressive, and both should be re-examined.

Transit-Supportive Land Use Rating: Medium-Low

The *Medium-Low* land use rating is based upon the *Medium* rating for transit-supportive land use policies, the *Medium-Low* rating assigned to the performance of these policies, and the *Low* rating for existing land use.

Existing Land Use: Low

- Regional development is centered around downtown Sacramento, where 40 percent of regional employment is located. The northern end of the South Corridor project serves this area.
- The South Corridor LRT Extension would connect Cosumnes River College to downtown Sacramento. Station area residential densities are low to moderate, averaging approximately 5,100 people within ½ mile of proposed stations. The current number of employees within ½ mile of proposed station areas is approximately 1,800. Employment in the Sacramento CBD, to which the project provides a direct connection, is about 103,600.
- There are significant pockets of vacant land in the station areas. Station areas currently have limited pedestrian connectivity, with circuitous pedestrian routes and large lots between adjacent uses and proposed stations.
- Parking is generally available in the corridor. Institutional and retail developments are on or adjacent to large parking lots.

Transit-Supportive Plans and Policies: Medium

- SACOG, the metropolitan planning organization, has led a multiyear public-oriented regional visioning process called "Blueprint" to educate the public about smart growth initiatives. The city of Sacramento is beginning to implement policies to encourage infill development.
- Two stations highlight renewed commitment to focus development around stations. The plan for the College Square development near the proposed CRC station has incorporated neighborhood retail and housing linked by pedestrian pathways and plazas. The proposed Morrison Creek station provides a significant development opportunity. Transit-supportive site plans and community plans are being initiated. The light rail project would incorporate new pedestrian bridges and paths to link other corridor stations with existing residential neighborhoods.
- The city of Sacramento has adopted transit-oriented overlay zoning, which provides for higher densities near transit stations, a minimum of 0.4 floor area ratio, and 15 dwelling units per acre, that supports transit-oriented uses and design principles.
- RT's joint development program has demonstrated progress in recent years. Several requests for proposals are being initiated. Studies for additional projects along the existing South Sacramento Corridor LRT line are currently being performed. Reports of the development review process indicate rejection of some non-transit-supportive projects near the proposed stations.

Performance and Impacts of Policies: Medium-Low

- Some impacts of transit-oriented policies are beginning to be demonstrated. The College Square development has incorporated internal pedestrian paths, neighborhood-oriented retail, and housing.
- Growth is occurring in the general vicinity of the corridor. The proposed Morrison Creek station highlights the strongest potential for linking the proposed investment with new development opportunities planned adjacent to the station.

Other Project Justification Criteria

Mobility Improvements Rating: Medium	
Within ½-mile radius of boarding areas:	
Existing Employment	1,800
Projected Employment (2025)	2,800
Low Income Households (% of total HH)	650 (15%)
Average Per Station:	
Employment	450*
Low Income Households	162*
	New Start vs. Baseline
Transportation System User Benefit Per Project Passenger Mile (Minutes)	3.39*

Environmental Benefits Rating: High	
Criteria Pollutant (Reduction in tons)	**New Start vs. Baseline**
Carbon Monoxide (CO)	7
Nitrogen Oxide (NO_x)	5
Volatile Organic Compounds (VOC)	2
Particulate Matter (PM_{10})	0
Carbon Dioxide (CO_2)	1,249
Criteria Pollutant Status	**EPA Designation**
Carbon Monoxide (CO)	Maintenance Area*
Particulate Matter (PM_{10})	Moderate Non-Attainment Area*
8-Hour Ozone (O_3)	Serious Non-Attainment Area*
Annual Energy Savings (million British Thermal Units)	17,776

Operating Efficiencies Rating: Medium		
	Baseline	**New Start**
System Operating Cost per Passenger Mile (current year dollars)	$0.830*	$0.810*

* Indicates that measure is a component of rating for each criterion.
N/A indicates information was not available for this entry.

Local Financial Commitment Rating: Medium

The *Medium* rating for local financial commitment is based on the *Medium-High* rating for the operating finance plan and the *Medium* ratings for the New Starts share of project costs and the capital finance plan.

Section 5309 New Starts Share of Total Project Costs: 50%
Rating: Medium

RT is requesting a 50 percent New Starts share of total project costs, which results in a *Medium* rating for this measure.

Locally Proposed Financial Plan		
Source of Funds	**Total Funds ($million)**	**Percent of Total**
Federal:		
Section 5309 New Starts	$98.6	50.0%
Flexible Funds (CMAQ)	$7.1	3.6%
STIP Funds*	$4.3	2.2%
State:		
Traffic Congestion Relief Program	$66.0	33.5%
Local:		
Laguna Community Facilities District (LCFD)	$0.8	0.4%
Elk Grove/West Vineyard Transit Development Fee (TDF)	$3.3	1.7%
Measure A Sales Tax Developer Fee	$17.1	8.7%
Total:	**$197.1**	100.0%

NOTE: The financial plan reflected in this table has been developed by the project sponsor and does not reflect a commitment by DOT or FTA. The sum of the figures may differ from the total as listed due to rounding.

*STIP funds are state-administered Federal flexible funds augmented by state gas tax and other revenues. These funds are passed from the state to local transportation agencies as STIP funds, but all Federal requirements apply.

Capital Finance Plan Rating: Medium

The capital finance plan is rated *Medium*, based upon the average of the ratings assigned to each of the subfactors listed below. The completeness of the capital plan and the commitment of capital funds subfactors are rated *Medium-High*. The remaining subfactors are rated *Medium*.

Agency Capital Condition: Medium

- The average age of RT's bus fleet is 6.4 years, which is younger than the industry average.
- RT's good bond ratings, which were issued in December 2003, are as follows: Moody's Investors Service Aaa.

Completeness of Capital Plan: Medium-High

- The financial plan was complete, and included a 20-year cash flow statement, identification of key assumptions, a fleet management plan, historical data, a sensitivity analysis and a contingency plan.

Commitment of Capital Funds: Medium-High

- Approximately 33 percent of the non-New Starts funding is committed or budgeted, and the remaining sources are planned. Sources of non-New Starts funding include Federal Flexible Funds (CMAQ), State Transportation Improvement Program (STIP) funds, State Traffic Congestion Relief Program funds, and funds from the Elk Grove/West Vineyard Transit Development Fee, the Laguna Community Facilities District, and the Measure A Developer fee.

Capital Funding Capacity: Medium

- The project's financial plan shows projected cash balances, reserve accounts, and/or access to credit that would allow RT to cover cost increases or funding shortfalls equal to or greater than 25 percent of the project costs.

Capital Cost Estimate and Planning Assumptions: Medium

- Assumptions in the capital plan are generally in line with historical experience.
- Capital cost estimates are in line with similar, recently constructed projects.

Operating Finance Plan Rating: Medium-High

The operating finance plan is rated *Medium-High*, based upon the average of the ratings of the five subfactors listed below. The commitment of operating funds subfactors is rated *High*; current operating condition and completeness are rated *Medium-High*; and the operating funding capacity and operating cost estimates and planning assumptions subfactors are rated *Medium*.

Agency Operating Condition: Medium-High

- RT is in good operating condition, with no recent service cutbacks or cash flow shortages.
- RT's current ratio of assets to liabilities as reported in its most recent audited financial statement is 1.53.

Completeness of Operating Plan: Medium-High

- The submission was complete and included a 20-year cash flow statement, eleven years of historical data, a sensitivity analysis and identification of all key assumptions.

Commitment of Operating Funds: High

- More than 75 percent of the funds needed to operate and maintain the proposed transit system is committed or budgeted, and the remainder is planned. Sources of funds include fare revenues, State transit assistance, and dedicated sales tax revenues.

Operating Funding Capacity: Medium

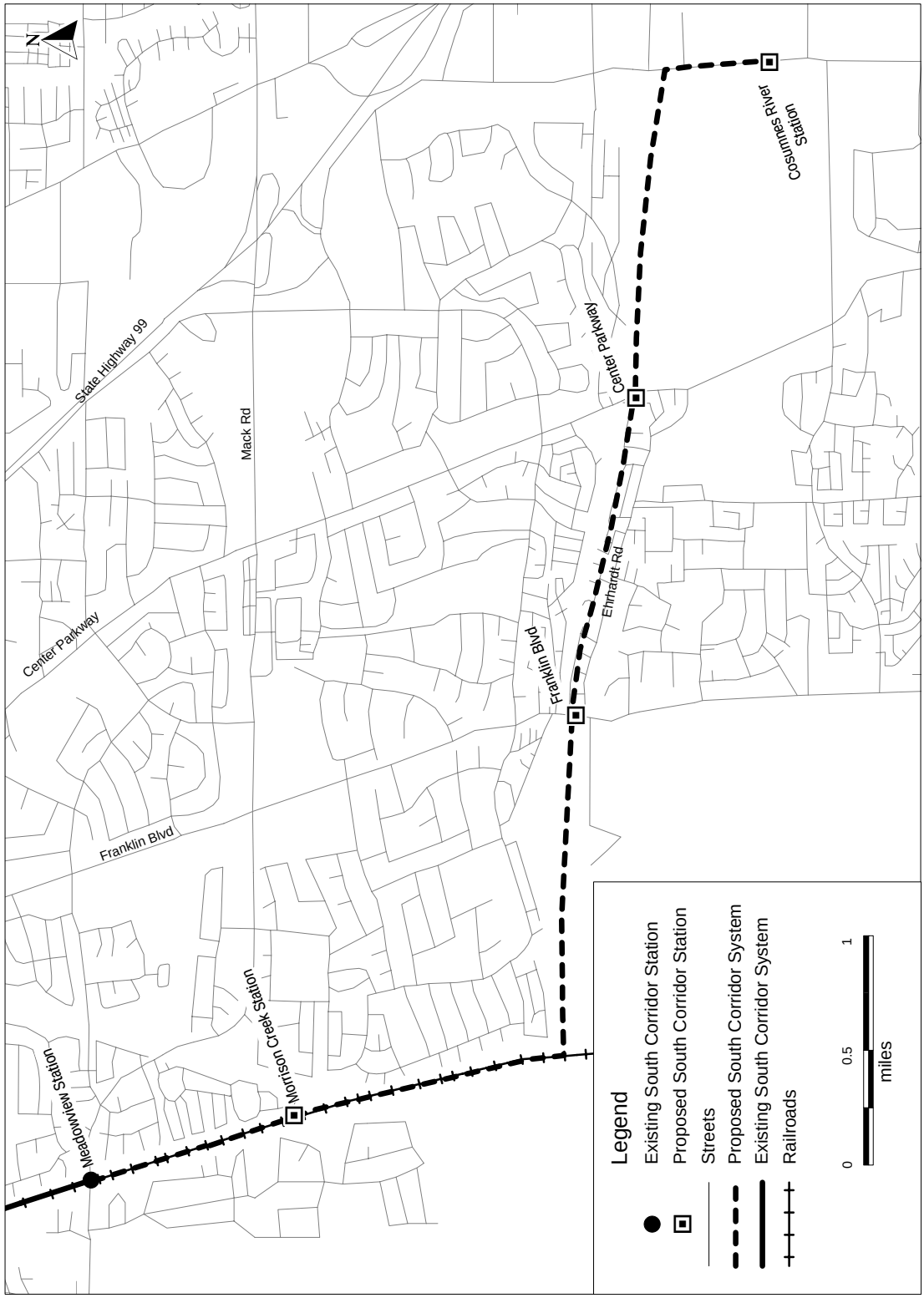
- The project's financial plan shows projected cash balances, reserve accounts, and/or access to credit exceeding 12 percent of annual operating expenses.

Operating Cost Estimates and Planning Assumptions: Medium

- RT's assumptions regarding fare revenues, sales tax revenue growth, and operating costs are consistent with historical experience.

South Corridor LRT Extension

Sacramento, California



Central Subway

San Francisco, California

(November 2005)

The San Francisco Municipal Railway (Muni) and the San Francisco County Transportation Authority (SFCTA) are planning the Central Subway project, a 1.5-mile extension of the Third Street light rail transit (LRT) line (currently under construction) from its termini at Fourth and King Streets, north under Market Street and into Chinatown. Three new stations would be constructed along the Central Subway alignment and four light rail vehicles would be purchased to augment the existing fleet. The current Third Street LRT project extends 5.4 miles south from Fourth and King Streets along Third Street and Mission Bay Boulevard to the Bayshore Caltrain Station in Visitacion Valley. Taken together, the Third Street LRT, scheduled to open in December 2005, and the Central Subway project would provide a continuous 6.9-mile light rail system serving the heavily transit-dependent communities of Bayshore and Chinatown.

The Financial District, Union Square, and Chinatown have a very high level of existing transit service. Bus routes that serve the project corridor operate on two-minute headways during peak hours and typically carry passenger loads which are at or above capacity. Currently, commuter rail passengers from the south must board these crowded buses or walk over a mile from the CalTrain Station to reach the San Francisco central business district (CBD). The Central Subway project would provide high-capacity rail service, with 2.5-minute peak headways, to an area of San Francisco that has demand for transit which exceeds the extensive existing bus service. Additionally, implementation of the Central Subway project would restore a continuous transportation link from the communities of Visitacion Valley, Bayshore, and South of Market area (SOMA) to Union Square and Chinatown that was lost when the Embarcadero Freeway was destroyed by the Loma Preita earthquake in 1989. This restored connection is anticipated to improve transit service between these areas, accommodate redevelopment of SOMA, and serve large crowds attending events at the Moscone Center and SBC Park (home of the San Francisco Giants).

Summary Description	
Proposed Project:	Light Rail Transit 1.5 Miles 3 Stations
Total Capital Cost ($YOE):	$1,412.5 Million
Section 5309 New Starts Share ($YOE):	$762.2 Million (54%)
Annual Forecast Year Operating Cost:	$24.6 Million
Ridership Forecast (2030):	45,900 Average Weekday Boardings 20,800 Daily New Riders
FY 2007 Finance Rating:	**Medium**
FY 2007 Project Justification Rating:	**Medium-High**
FY 2007 Overall Project Rating:	**Medium**

Division H of the Consolidated Appropriations Act, 2005, includes language directing FTA to permit Muni to use local funding expended for the construction of the Third Street LRT project as match for the Central Subway. This action reduces the overall New Starts share from 54 percent for the Central Subway project alone to less than 38 percent of the cost of the combined projects.

Project Development History and Current Status

In October 1996, FTA Muni began preparation of a Draft Environmental Impact Statement (EIS)/Draft Environmental Impact Report for the Third Street/Central Subway light rail line. Because of their phased implementation schedule, the two segments are considered separate projects. Muni is currently constructing the Third Street light rail line using local, State, and non-New Starts Federal funding. FTA approved the Central Subway project to advance into preliminary engineering in July of 2002. While the Central Subway alignment has recently been revised, requiring supplemental environmental work, ongoing consideration of alternative alignments is expected to delay further advancement of the project.

Significant Changes Since FY 2006 Evaluation (November 2004)

The alignment of the Central Subway project has been changed to use a more direct configuration under 4th Street, and the number of stations has been reduced from five to three. Because of the revised alignment, an increased level of engineering, and extension of the project implementation schedule, the project capital cost has increased from $994.4 million. Additionally, Muni has updated its travel forecasts for the project to reflect a 2030 design year, and the systemwide operations and maintenance cost estimate used in calculating project cost effectiveness has been corrected.

Project Justification Rating: Medium-High

The project is rated *Medium-High* based on a *Medium-Low* rating for cost effectiveness and a *High* rating for transit-supportive land use.

Cost Effectiveness Rating: Medium-Low

The *Medium-Low* cost effectiveness rating reflects the level of travel-time benefits (11,300 hours each weekday) relative to the project's annualized costs. Given the uncertainty of the project scope, this estimate of project cost effectiveness carries some risk.

Cost Effectiveness	
	New Start vs. Baseline
Cost per Hour of Transportation System User Benefit	$23.05*
Incremental Cost per Incremental Trip	$11.28

* Indicates that measure is a component of Cost Effectiveness rating.

The Central Subway provides a new direct transit link between the San Francisco CBD and southeastern San Francisco, and provides an improved connection between these areas and CalTrain and other commuter services from the region's South Bay area. Without the Central Subway, commuters from Mission Bay, Bayview, and the South Bay destined for Chinatown and Union Square must travel along the circuitous Embarcadero alignment to reach Market Street on the far eastern end of the CBD, or transfer to local bus service at King Street. The proposed project provides a more direct connection to downtown and eliminates transfers for riders originating within the City; fully one-third of work trip benefits are attributable to this market. The project also generates a significant level of travel time benefits for reverse commute trips to industrial areas in the Third Street corridor. Approximately 85 percent of forecast benefits are attributable to San Francisco residents; the remainder of benefits accrue to residents from other jurisdictions in the region taking advantage of improved LRT connections to CalTrain and BART. Over 40 percent of benefits accrue to low-income households.

MUNI has revised the capital cost estimate to reflect increased finance costs, a revised construction schedule, added contingencies, a higher inflation rate, and a more comprehensive construction cost estimate. The revised cost estimate is considered reasonable and reliable for this stage of project development, although FTA notes that the cost contingency is still considered marginal for an extensive tunnel investment.

Transit-Supportive Land Use Rating: High

The *High* land use rating is based upon the *High* ratings assigned to existing land use and performance of land use policies, and the *Medium-High* rating for transit-supportive land use plans and policies.

Existing Land Use: High

- Population density is approximately 35,300 people per square mile in the corridor, and total employment in project station areas is approximately 217,600 jobs.
- The San Francisco CBD is the densest and most transit accessible downtown on the west coast. Union Square is the primary retail district in the city with dense pedestrian and transit-oriented development. Chinatown has extremely dense concentrations of residential units, retail, and some office and small-scale industrial uses.
- Available parking in the corridor is generally on-street, with some off-street parking for commuters and city-owned parking garages for commuters and shoppers. The daily cost to park in city-owned lots in the corridor is high, ranging from $20 to $30 per day.

Transit-Supportive Plans and Policies: Medium-High

- While the city and entire Bay Area have a number of physical constraints to growth such as topographical limitations, it does not have a unified or enforceable growth management policy.
- San Francisco's *General Plan* has long encouraged higher-density and transit-oriented development. The city is undertaking additional planning initiatives to focus higher-intensity growth in transit corridors. The city is considering zoning changes that would require residential community-oriented retail development near transit nodes.
- The city's zoning regulations are intended to maintain a medium to high-density profile and scale, with a mixture of land uses in many areas. The city's plan generally supports transit-supportive densities. There are no minimum parking requirements or off-street parking provisions in the CBD and other major employment areas.
- The City of San Francisco Redevelopment Agency employs a number of special tools to help implement land use policies contained in the city's *General Plan* such as tax increment financing, special land acquisition rules, and special land assembly abilities.
- San Francisco's existing land use pattern includes the densest development along its major transportation corridors. The objective of the City Planning Department and directing codes and ordinances is to reinforce this pattern of development along corridors that have high transit capacity such as the Central Subway corridor. Thus, land use planning in the Central Subway corridor is focused more on the corridor and neighborhood level than around individual stations or stops.

Performance and Impacts of Policies: High

- The existing high-density development and pedestrian accessibility in the City of San Francisco demonstrates the strength of city policies and market forces at achieving transit-oriented intensities and urban design. The number of jobs in the San Francisco CBD has doubled since the 1970s with no increase in the volume of traffic entering the area.
- The South of Market area within the New Central Subway corridor is expected to experience strong growth over the next two decades, with high density residential, high-tech office, and a variety of retail uses continuing to fill in sites formerly occupied by industrial uses.

Other Project Justification Criteria

Mobility Improvements Rating: High	
Within ½-mile radius of boarding areas:	
Existing Employment	217,600
Projected Employment (2030)	268,700
Low Income Households (% of total HH)	6,000 (18%)
Average Per Station:	
Employment	72,520*
Low Income Households	2,000*
	New Start vs. Baseline
Transportation System User Benefit Per Project Passenger Mile (Minutes)	3.35*

Environmental Benefits Rating: High	
Criteria Pollutant (Reduction in tons)	**New Start vs. Baseline**
Carbon Monoxide (CO)	1
Nitrogen Oxide (NO_x)	9
Volatile Organic Compounds (VOC)	3
Particulate Matter (PM_{10})	0
Carbon Dioxide (CO_2)	429
Criteria Pollutant Status	**EPA Designation**
Carbon Monoxide (CO)	Maintenance Area*
8-Hour Ozone (O_3)	Marginal Non-Attainment Area*
Annual Energy Savings (million British Thermal Units)	4,079

Operating Efficiencies Rating: Medium		
	Baseline	**New Start**
System Operating Cost per Passenger Mile (current year dollars)	$0.717*	$0.734*

* Indicates that measure is a component of rating for each criterion.
N/A indicates information was not available for this entry.

Local Financial Commitment Rating: Medium

The *Medium* local financial commitment rating is based upon the *Medium* ratings assigned to both the capital and operating finance plans.

Section 5309 New Starts Share of Total Project Costs: 54%
Rating: Medium

Division H of the Consolidated Appropriations Act, 2005, permits Muni to use non-New Starts funds expended for the Third Street LRT project as match to the Central Subway. While the New Starts share rating reflects the Central Subway project alone ($1,412.5 million), the legislative language lowers the New Starts share to approximately 38 percent of the total costs of the combined Third Street/Central Subway project ($2,012.5 million).

Locally Proposed Financial Plan		
Source of Funds	**Total Funds ($million)**	**Percent of Total**
Federal: Section 5309 New Starts STIP Funds	 $762.2 $92.2	 54.0% 6.5%
State: Traffic Congestion Relief Plan	 $14.0	 1.0%
Local: Proposition B/K Sales Tax Funds Other Local Sources	 $126.0 $418.1	 8.9% 29.6%
Total:	**$1,412.5**	100.0%

NOTE: The financial plan reflected in this table has been developed by the project sponsor and does not reflect a commitment by DOT or FTA. The sum of the figures may differ from the total as listed due to rounding.

*STIP funds are state-administered Federal flexible funds augmented by state gas tax and other revenues. These funds are passed from the state to local transportation agencies as STIP funds, but all Federal requirements apply.

Capital Finance Plan Rating: Medium

The capital finance plan is rated *Medium,* based upon the average of the ratings assigned to each of the subfactors listed below. The commitment of capital funds subfactor was rated *High*; the capital condition was rated *Medium-High*; the completeness and capital cost estimates and planning assumptions subfactors were rated *Medium-Low*; and the capital funding capacity subfactor was rated *Low*.

Agency Capital Condition: Medium-High

- The average age of Muni's bus fleet is 4.9 years, which is significantly younger than the industry average.
- Muni's good bond ratings, which were issued in May 2004, are as follows: Moody's Investors Service Aa3, Standard & Poor's Corporation AA, and Fitch AA-.

Completeness of Capital Plan: Medium-Low

- The financial plan omits key explanatory details such as a funding source for the $418 million increase in the project's cost, details on the financing costs, and a sensitivity analysis.

Commitment of Capital Funds: High

- Over 50 percent of the Non-Section 5309 New Starts funds (Muni Third Street Light Rail and New Central Subway) have been committed and budgeted. Sources of funds include traffic congestion relief funding and proposition B and K sales tax revenues.

Capital Funding Capacity: Low

- The project's financial plan does not specify how Muni intends to pay for the recent $418 million project cost increase and, therefore, does not provide for any additional funding capacity to cover additional cost increases or funding shortfalls.

Capital Cost Estimate and Planning Assumptions: Medium-Low

- Muni's financial plan contains numerous inconsistencies. Assumptions regarding project financing were lacking detail.
- There are ongoing uncertainties regarding the project's scope at this stage of preliminary engineering.

Operating Finance Plan Rating: Medium

The operating finance plan is rated *Medium*, based upon the averaged ratings of the five subfactors listed below. The commitment of operating funds subfactor was rated *High;* operating funding capacity was rated *Medium-Low*; and the remaining subfactors were rated *Medium*.

Agency Operating Condition: Medium

- Muni is undergoing a challenging economic environment with some recent service cuts (roughly four percent reduction in service hours).
- Muni's current ratio of assets to liabilities as reported in its most recent audited financial statement is 1.53.

Completeness of Operating Plan: Medium

- The submission was complete and included a 20-year cash flow statement, more than five years of historical data, identification of key assumptions, and a moderate level of detail. The plan did not include a sensitivity analysis.

Commitment of Operating Funds: High

- Over 50 percent of operating funding is committed. The main revenue sources are fares, parking fees, General Fund contributions, and sales tax and fuel assistance revenues.

Operating Funding Capacity: Medium-Low

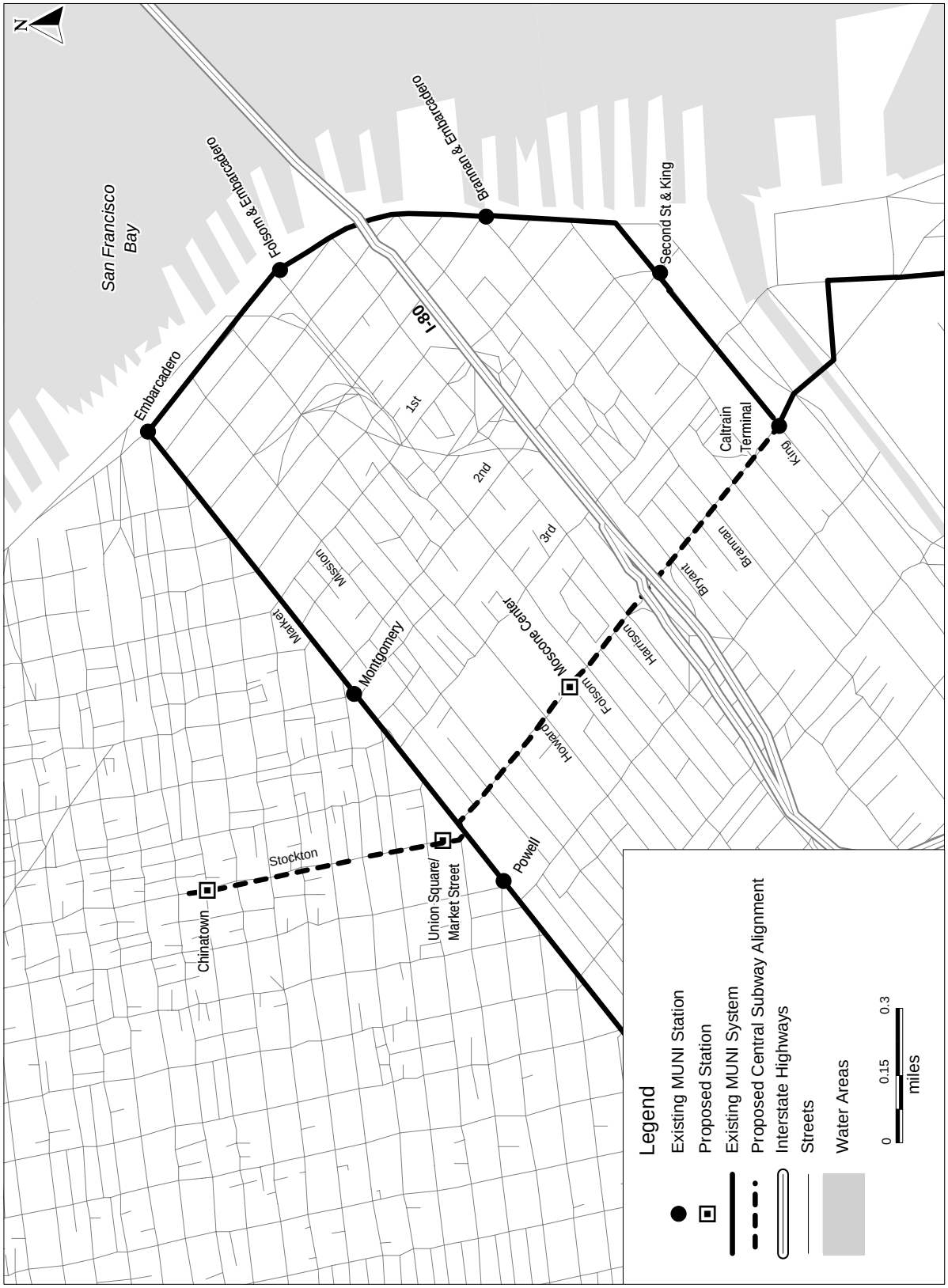
- The project's financial plan shows projected reserve accounts and/or access to credit exceeding 12 percent of annual operating expenses.

Operating Cost Estimates and Planning Assumptions: Medium

- The operating plan assumes frequent fare increases that differ from history. However, the project has only a minimal impact on overall system-wide operating costs. Other assumptions are generally in line with historical experience

Central Subway

San Francisco, California



New Britain – Hartford Busway

Hartford, Connecticut

(November 2005)

The Connecticut Department of Transportation (ConnDOT) is proposing to construct the New Britain-Hartford Busway, an 11-station, 9.4-mile exclusive bus rapid transit (BRT) system operating primarily in an existing and abandoned railroad right-of-way on a new two-way roadway between downtown New Britain and downtown Hartford's Union Station. The busway would run parallel to Interstate 84 (I-84), the primary transportation link between New Britain, West Hartford, and downtown Hartford. The project's operating plan calls for a number of bus routes to operate on the Busway, including services that enter and exit the facility to reach destinations well outside of the immediate corridor without the need for a transfer. The project scope includes the procurement of 30 new buses and construction of six small park-and-ride lots along the alignment.

I-84 is currently, and is forecast to remain, the region's most congested highway. In addition, the combined population of New Britain and Hartford account for just under 50 percent of the entire metropolitan area's zero-car households. The proposed busway project is intended to provide faster transit travel times between major activity centers throughout the corridor, improve mobility and accessibility for the corridor's relatively large transit-dependent population, and promote redevelopment opportunities in older urban centers along the project alignment.

Summary Description	
Proposed Project:	Bus Rapid Transit 9.4 Miles 11 Stations
Total Capital Cost ($YOE):	$335.5 Million
Section 5309 New Starts Share ($YOE):	$167.8 Million (50.0%)
Annual Forecast Year Operating Cost:	$9.6 Million
Ridership Forecast (2030):	18,000 Average Weekday Boardings 4,500 Daily New Riders
Opening Year Ridership Forecast (2011):	16,400 Average Weekday Boardings
FY 2007 Finance Rating:	**Medium**
FY 2007 Project Justification Rating:	**Medium**
FY 2007 Overall Project Rating:	**Medium**

In the *FY 2006 Annual Report on New Starts*, FTA rated the New Britain – Hartford Busway project as *Not Recommended*, based on concerns related to the project's capital cost estimate and ConnDOT's financial capacity to implement the project in a timely manner. Since that time, ConnDOT has provided FTA improved information on the agency's capital condition and financial capacity, resulting in this year's *Medium* rating. However, FTA continues to note concerns with the project's cost estimate and the slow progress achieved by ConnDOT in advancing the project beyond preliminary engineering (PE), which was approved by FTA nearly six years ago. ConnDOT must finalize the scope, schedule, and right-of-way costs, and take any necessary local legislative action to secure adequate financial commitments to support a final design approval by September 30, 2006 or be removed from PE status.

Project Development History and Current Status

The 1994 regional transportation plan prepared by the Capitol Region Council of Governments identified the I-84 corridor west of Hartford as one of the metropolitan area's high priority corridors in need of improvement. A major investment study in the corridor was completed in 1999; it resulted in the selection of a BRT system between New Britain and Hartford as the locally preferred alternative. FTA approved the New Britain - Hartford Busway's entrance into PE in January 2000. The project received a NEPA Record of Decision (ROD) in March 2002. In order to address changes in project scope since issuance of the ROD, ConnDOT is preparing supplementary environmental documentation for FTA approval.

Significant Changes Since FY 2006 Evaluation (November 2004)

ConnDOT prepared and submitted an enhanced cash flow reflecting anticipated sources and uses of capital and operating funds for transit. Updated capital cost estimates reflect a revised project implementation schedule (including the delay of revenue operations from December 2010 to 2011) and a slight decrease in total capital costs due to the elimination of one station. Updated travel forecasts reflect the revised scope and a 2030 design year.

Project Justification Rating: Medium

The project is rated *Medium* based on the *Medium* rating for cost effectiveness and the *Medium* rating for transit-supportive land use.

Cost Effectiveness Rating: Medium

The *Medium* cost effectiveness rating reflects the level of travel time-benefits (4,000 weekday hours) relative to the project's annualized costs. Given the uncertainties of the project's capital costs, ConnDOT's current estimate of cost effectiveness carries some risk.

Cost Effectiveness	
	New Start vs. Baseline
Cost per Hour of Transportation System User Benefit	$19.03*
Incremental Cost per Incremental Trip	$17.07

* Indicates that measure is a component of Cost Effectiveness rating.

The New Britain-Hartford Busway project is anticipated to result in travel-time benefits not only to residents living within the corridor, but to suburban commuters who take advantage of the flexibility of BRT service. Specifically, ConnDOT's operating plan for the Busway allows several routes to exit the facility and circulate through neighborhoods to reach destinations far removed from the alignment. This reduces the number of transfers required, allows more riders access to more trip origins and destinations with a single-seat ride, and contributes to higher ridership levels. Approximately 40 percent of travel-time benefits accrue to suburban travel markets, with Hartford and New Britain residents splitting the remainder of time savings. In addition, zero-car households generate nearly 40 percent of the project's travel-time benefits.

ConnDOT's updated cost estimate reflects the project's still early design, despite the fact that it has been in PE for nearly six years. FTA believes that additional costs may accrue when ConnDOT finalizes necessary right-of-way agreements with Amtrak; clarifies the extent (and cost) of needed real estate acquisition; improves the sufficiency of the project's cost contingency fund and inflation assumptions; and further compensates for a four-year schedule extension to achieve revenue operations by 2011.

Transit-Supportive Land Use Rating: Medium

The *Medium* rating is based upon the *Medium* ratings assigned to existing land use and transit supportive plans and policies and the performance and impacts of land use plans and policies.

Existing Land Use: Medium

- The busway corridor includes portions of four communities with varying levels of development. Beyond the New Britain and Hartford downtowns, the corridor is dominated by medium density residential uses, with some commercial, light industrial, open space, and mixed-use developments.
- Existing population and employment densities around station areas are 6,000 persons and 8,700 employees per square mile, respectively. Total station area population is approximately 42,100, while total station area employment is approximately 64,800 employees.
- Surface parking is plentiful near many proposed stations. Monthly market rates for parking in the downtown Hartford core reach $100 per month.

Transit-Supportive Plans and Policies: Medium

- The State of Connecticut established a number of Transportation Investment Areas, including the area of this project, to focus development in areas of intense transportation system development. In addition, a statewide document, *Conservation and Development: Policies Plan for Connecticut (1998-2003*), updated in 2004 as *Recommended Conservation and Development Policies Plan for Connecticut (2004-2009),* continues to provide general policies for communities and counties on transportation, infrastructure, housing, and growth management issues.
- The New Britain/Hartford Station Area Planning Project has developed detailed transit-oriented station area plans citing area resources and design and development opportunities for six key stations.
- All municipalities are in the process of adopting transit-oriented overlay zoning to respond to the project. The town of West Hartford and the city of Hartford have adopted overlay zones that remove restrictions on residential density, height, and lot occupancy. Additional overlay zones are under consideration in these municipalities, and New Britain and Newington are in the process of adopting transit-oriented overlay zones.
- Municipal Advisory Committees have been developed to guide the linkage between the busway project and land uses. The Transit Oriented Development (TOD) Station Area Planning Project involves the development of a primer on TOD for local governments and other stakeholders.

Performance and Impacts of Policies: Medium

- The development / redevelopment in the corridor is increasing. One of many projects in downtown Hartford, Adriaen's Landing, includes development of the Connecticut Convention Center, the Hartford Marriott Downtown, an entertainment district with 200 residences and 150,000 square feet of retail and entertainment, and the Connecticut Center for Science and Exploration. Redevelopment of industrial space (former warehouses and factories) and commercial districts (New Britain) throughout the corridor suggests that the development community is focusing increasingly on busway stations.
- Redevelopment potential is evident in locations such as downtown New Britain and downtown Hartford. Some stations have space available for joint/co-development at ground level and above stations; others are located adjacent to vacant properties that would be available for development. Some of the vacant land in the corridor lies in floodplains and wetlands with limited development potential.

Other Project Justification Criteria

Mobility Improvements Rating: Medium-High	
Within ½-mile radius of boarding areas:	
Existing Employment	64,800
Projected Employment (2030)	80,900
Low Income Households (% of total HH)	4,500 (26)%
Average Per Station:	
Employment	5,890*
Low Income Households	409*
	New Start vs. Baseline
Transportation System User Benefit Per Project Passenger Mile (Minutes)	3.60*

Environmental Benefits Rating: High	
Criteria Pollutant (Reduction in tons)	**New Start vs. Baseline**
Carbon Monoxide (CO)	257
Nitrogen Oxide (NO_x)	5
Volatile Organic Compounds (VOC)	5
Particulate Matter (PM_{10})	N/A
Carbon Dioxide (CO_2)	14,305
Criteria Pollutant Status	**EPA Designation**
8-Hour Ozone (O_3)	Moderate Non-Attainment*
Particulate Matter (PM_{10})	Moderate Non-Attainment*
Annual Energy Savings (million British Thermal Units)	184,922

Operating Efficiencies Rating: Medium		
	Baseline	**New Start**
System Operating Cost per Passenger Mile (current year dollars)	$0.632*	$0.581*

* Indicates that measure is a component of rating for each criterion.
N/A indicates information was not available for this entry.

Local Financial Commitment Rating: Medium

The *Medium* local financial commitment rating is based on the *Medium* ratings for the New Starts share of project costs and for both the operating and capital finance plans.

Section 5309 New Starts Share of Total Project Costs: 50%
Rating: Medium

ConnDOT is requesting a 50 percent New Starts share of total project costs, which equates to a *Medium* rating for this measure.

Locally Proposed Financial Plan		
Source of Funds	**Total Funds ($million)**	**Percent of Total**
Federal:		
Section 5309 New Starts	$167.8	50.0%
Section 5307 Urbanized Area Formula Funds	$12.1	3.6%
Section 5309 Fixed Guideway Modernization Funds	$10.7	3.2%
Section 5309 Bus Discretionary	$20.9	6.2%
Flexible Funds (CMAQ and STP)	$35.3	10.5%
FHWA NHS Funds	$6.0	1.8%
State:		
Transportation Strategy Board	$19.5	5.8%
Special Transportation Fund	$63.2	18.8%
Total:	**$335.5**	100.0%

NOTE: The financial plan reflected in this table has been developed by the project sponsor and does not reflect a commitment by DOT or FTA. The sum of the figures may differ from the total as listed due to rounding.

Capital Finance Plan Rating: Medium

The capital finance plan is rated *Medium*. The agency capital condition subfactor received a *High* rating; the commitment of capital funds and capital funding capacity subfactors received *Medium-High* ratings; the plan completeness subfactor received a *Medium* rating; and the capital cost estimate and planning assumptions subfactor received a *Medium-Low* rating. These ratings average to a *Medium-High*, but the rating was lowered to *Medium* due to the *Medium-Low* rating for the capital cost estimate and planning assumptions subfactor.

Agency Capital Condition: High

- The average age of ConnDOT's Statewide bus fleet is 5.2 years, while the average age of the Hartford Division's bus fleet is 5.6 years, which is younger than the industry average.
- ConnDOT's excellent Special Tax Obligation bond ratings, which were issued in November 2004, are as follows: Moody's Investors Service Aaa; Standard & Poor's Corporation AAA; and Fitch AAA.

Completeness of Capital Plan: Medium

- ConnDOT's submission was improved over previous years. The submittal included cash flows specifying the sources and uses of capital funds for transit and highway projects Statewide. While the submission included a sensitivity analysis examining the potential for project cost increases, there was no accompanying analysis demonstrating how ConnDOT would address such

cost increases. The plan included a discussion of inflation for project capital costs but only limited discussion of assumed growth in capital funding sources.

Commitment of Capital Funds: Medium-High

- Over 25 percent of non-New Starts funding is committed or budgeted. Federal funding sources include Section 5307 Formula funds, Section 5309 Fixed Guideway Modernization funds, Section 5309 Bus Discretionary funds, flexible funds including CMAQ and STP, and FHWA National Highway System funds. State funding sources include revenues from the State Transportation Fund and the Transportation Strategy Board.

Capital Funding Capacity: Medium-High

- The project's financial plan shows projected cash balances, reserve accounts, and/or access to credit based on the State Transportation Fund that would allow ConnDOT to cover cost increases or funding shortfalls equal to approximately 37 percent of project costs. It is not clear what proportion of the State Transportation Fund could be available to cover project cost overruns.

Capital Cost Estimate and Planning Assumptions: Medium-Low

- ConnDOT's financial plan assumes a significant increase in supplemental Special Tax Obligation bonding to fund the project. This increase is approximately four times the level of supplemental bonding received in recent years.
- The capital cost estimate of the project has quadrupled since the project entered preliminary engineering. Cost uncertainty remains related to scope, schedule, and third party agreements.

Operating Finance Plan Rating: Medium

The operating finance plan is rated *Medium*, based upon the average of the ratings of the five subfactors listed below. The operating condition subfactor received a *Medium-High* rating; the operating cost estimates and planning assumptions subfactor received a *Medium-Low* rating; and the remaining subfactors received *Medium* ratings.

Agency Operating Condition: Medium-High

- ConnDOT is in good condition with no bus service cutbacks in recent years and a history of being able to draw funds as required from the State Transportation Fund.
- ConnDOT did not provide an audited financial statement for FY 2004, but a June 2004 Statement of Financial Information indicates a high current ratio of assets to liabilities of 7.0.

Completeness of Operating Plan: Medium

- ConnDOT's submission was improved over previous years. The plan included a 20-year cash flow of the sources and uses of operating funds for the project, the Hartford Bus Division and for transportation Statewide. However, the submission lacked a complete sensitivity analysis addressing how ConnDOT would cover unexpected cost increases and detail on how busway operating costs were estimated.

Commitment of Operating Funds: Medium

- Less than 25 percent of operating funding is committed. Planned sources of funds include the State Transportation Fund and farebox revenues.

Operating Funding Capacity: Medium

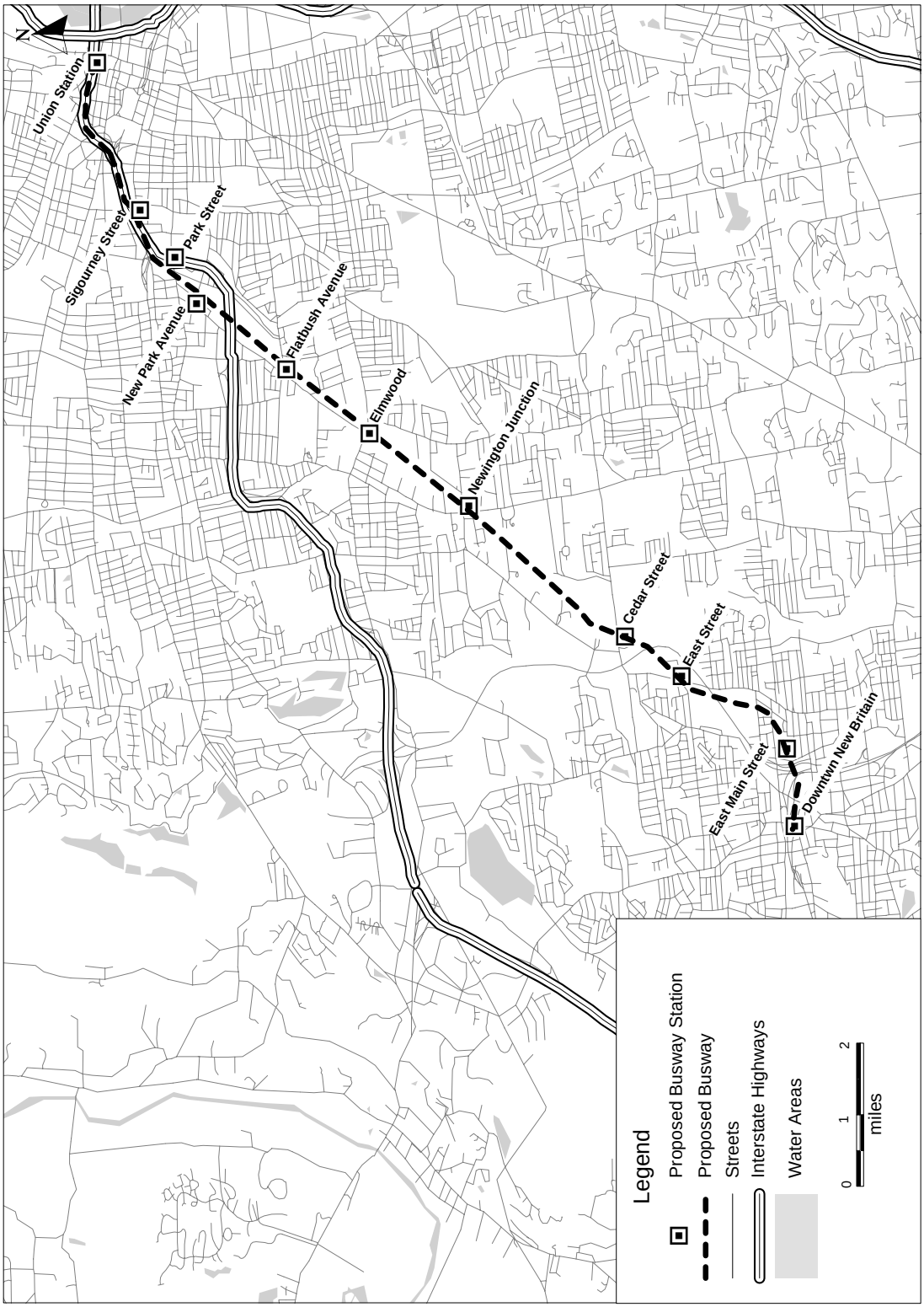
- The project's financial plan shows access to the State Transportation Fund in an amount equal to approximately 16 percent of annual operating expenses for the Hartford Bus Division.

Operating Cost Estimates and Planning Assumptions: Medium-Low

- Assumptions regarding the sources of funds tend to be conservative, while the assumptions regarding operating costs, uses of funds, and subsidy needs appear optimistic.

New Britain - Hartford Busway

Hartford, Connecticut



Wilmington to Newark Commuter Rail Improvements

Wilmington, Delaware

(November 2005)

The Delaware Transit Corporation (DTC) proposes to implement several commuter rail improvements in the segment of the Northeast Corridor between Wilmington and Newark. The proposed Wilmington to Newark Commuter Rail Improvements project consists of three improvements intended to significantly enhance existing Southeastern Pennsylvania Transportation Authority (SEPTA) commuter rail service along the Northeast Corridor in Delaware. The proposed improvements include: (1) addition of a third track along a 1.5-mile segment, allowing for more movement along the corridor by commuter trains that must share the tracks with Amtrak and freight operations; (2) relocation of the Newark rail station to a location one-half mile east of the main line, allowing for more flexibility for trains that enter and exit the station; and (3) the purchase of two 2-car train sets, providing additional train capacity between the Wilmington and Newark stations and allowing for increased frequency and shorter headways. The changes are expected to increase ridership, improve schedule reliability, and reduce travel time.

The current estimated capital cost of the project is $54.9 million, which includes $24.9 million in Section 5309 New Starts funds. *Because the proposed Section 5309 New Starts amount is less than $25 million, the project is exempt from FTA's New Starts evaluation and rating process (49 USC 5309(e)(1)(B)).*

Summary Description	
Proposed Project:	Commuter Rail Improvements
	1.5 Miles, 1 Station Relocation
Total Capital Cost ($YOE):	$54.9 Million
Section 5309 New Starts Share ($YOE):	$24.9 Million (45.0%)
Ridership Forecast (2020):	5,000 Average Weekday Boardings

Project Development History and Current Status

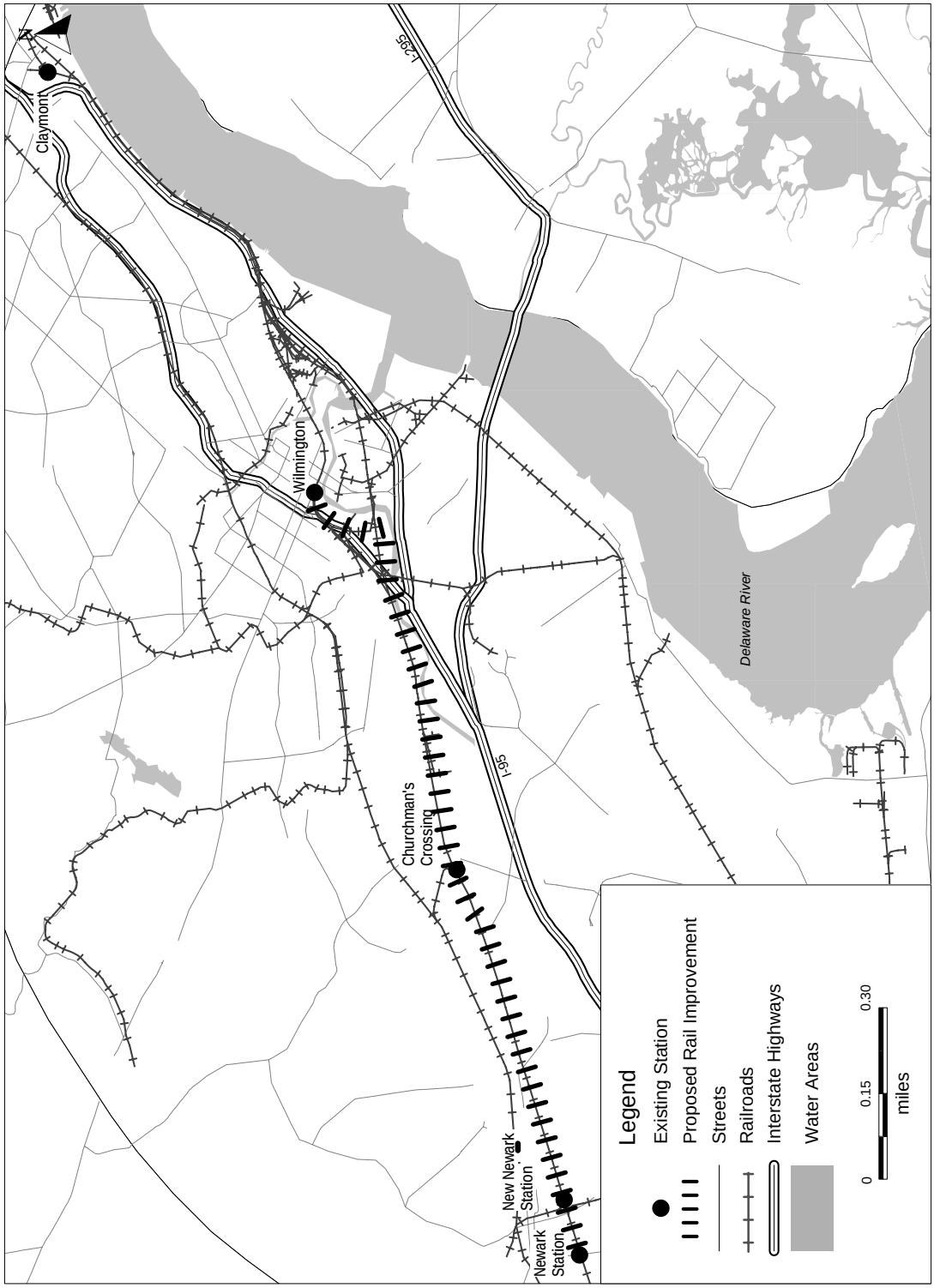
FTA approved DTC's request to enter preliminary engineering for the Wilmington to Newark Commuter Rail Improvements in April 2004. DTC has initiated an environmental review of the project that includes a categorical exclusion for track work and an environmental assessment for the Newark Rail Station. Completion of this review is anticipated in December 2005. Start-up of the enhanced service provided for by the project is anticipated in 2009.

Locally Proposed Financial Plan		
Proposed Source of Funds	**Total Funding ($million)**	**Percent of Total**
Federal: Section 5309 New Starts FHWA Earmarks	 $24.9 $9.9	 45.4 % 18.0 %
State: Delaware State Transportation Trust Fund	$20.1	36.6 %
Total:	**$54.9**	100.0 %

NOTE: The financial plan reflected in this table has been developed by the project sponsor and does not reflect a commitment by DOT or FTA. The sum of the figures may differ from the total as listed due to rounding.

Wilmington to Newark Commuter Rail Improvements

Wilmington, Delaware



North Corridor Metrorail Extension

Miami, Florida

(November 2005)

The Miami-Dade Transit Agency (MDTA) is proposing the construction of a 9.0-mile Metrorail extension along NW 27th Avenue between the existing Dr. Martin Luther King Jr. Metrorail station and the Broward County line. The project includes seven stations, seven park-and-ride lots providing a total of 4,350 spaces, and 16 railcars. Peak period Metrorail service along the North Corridor would operate at 4.5-minute frequencies.

NW 27th Avenue is one of the few continuous north-south arteries in Miami-Dade County and serves as an alternative to the severely congested north-south I-95 and State Route 826. The proposed project will provide an additional travel alternative in the corridor that will have direct connections with the existing Metrorail system, Tri-Rail (regional commuter rail), the Miami Intermodal Center, and the Miami International Airport. The project is further intended to provide direct service to the Miami central business district (CBD) and Medical Center, as well as Miami-Dade Community College-North Campus and Pro Player Stadium. The North Corridor project would provide fixed guideway rapid transit in an area with a high percentage of households with low incomes that are transit-dependent. According to 2000 Census data, 26 percent of households in the corridor have incomes below the poverty level and 20 percent of households in the corridor do not own, or have access to, a private vehicle.

Summary Description	
Proposed Project:	Heavy Rail 9.0 Miles 7 Stations
Total Capital Cost ($YOE):	$914.7 Million
Section 5309 New Starts Share ($YOE):	$457.3 Million (50.0%)
Annual Forecast Year Operating Cost:	$35.2 Million
Ridership Forecast (2025):	23,700 Average Weekday Boardings 13,900 Daily New Riders
Opening Year Ridership Forecast (2012):	21,800 Average Weekday Boardings
FY 2007 Finance Rating:	**Medium**
FY 2007 Project Justification Rating:	**Medium**
FY 2007 Overall Project Rating:	**Medium**

SAFETEA-LU Section 3011(e) states that FTA, "shall credit funds provided by the Florida department of transportation for the extension of the Miami Metrorail System from Earlington Heights to the Miami Intermodal Center to satisfy the matching requirements of section 5309(h)(4) of title 49, United States Code, for the Miami North Corridor and Miami East-West Corridor projects." The information submitted by MDT on the North Corridor project for the *FY 2007 Annual Report on New Starts* did not reflect this matching allowance, and is thus not reflected in this evaluation.

Project Development History and Current Status

The project has gone through several changes, starting out as a heavy rail extension when it was approved by FTA into preliminary engineering in 1998; changing to a lower cost bus rapid transit project when a one-cent sales tax referendum was rejected by voters in 1999; and finally reverting back to a Metrorail extension when a ½-cent sales tax referendum passed in November 2002. The referendum identified for voters a list of specific projects, known as the *People's Transportation Plan* (PTP), to be funded with the additional revenues, including the North Corridor Metrorail Extension, a number of other fixed guideway projects, and a significant expansion of bus service.

MDTA issued a Draft Environmental Impact Statement (EIS) for the North Corridor in January 1998. Because the Draft EIS is older than three years, publication of a Supplemental Draft EIS is required before a Final EIS and Record of Decision (ROD) can be issued. The current project schedule assumes completion of NEPA and issuance of a ROD in June 2006.

Significant Changes Since FY 2006 Evaluation (November 2004)

The capital cost of the project has increased from $842.5 million to $914.7 million. The increase is not a reflection of change in scope or more precise engineering documents, but is predominately due to a number of increased design allowances for the guideway and stations. MDTA also prepared and submitted to FTA an updated estimate of the project's travel time benefits.

Project Justification Rating: Medium

The project is rated *Medium* for project justification based on a *Medium* rating for cost effectiveness and a *Medium* rating for the project's transit-supportive land use.

Cost Effectiveness Rating: Medium

The *Medium* cost effectiveness rating reflects the level of travel-time benefits (11,200 hours each weekday) relative to the project's annualized costs. The estimates of both costs and benefits of the project at this stage of development are considered reliable.

Cost Effectiveness	
	New Start vs. Baseline
Cost per Hour of Transportation System User Benefit	$17.35*
Incremental Cost per Incremental Trip	$13.90

* Indicates that measure is a component of Cost Effectiveness rating.

Travel forecasts show that the North Corridor Metrorail Extension project will significantly improve transit travel times between Broward County, northern Miami-Dade County, and downtown Miami, due to the elimination of, or reduction in, the number of transfers currently required. A trip during the peak period from the northern terminus of the project to downtown Miami is projected to take 56 minutes by bus versus only 28 minutes on the rail project. More than one third of the travel-time benefits of the project are realized on trips produced in Broward County and destined to Miami-Dade County because of this improvement in travel time. Approximately 15 percent of benefits are realized by people whose trips originate in the project corridor and are destined for other parts of Miami-Dade County, particularly downtown Miami and Little Havana.

The current capital cost estimate for the North Corridor Metrorail Extension is considered reasonable at this stage of development. However, the level of project development is best described as conceptual. After several years of inactivity with regard to project engineering and design, work is now underway and the scope is being refined. As the project progresses further into preliminary engineering, a number of the scope elements could change, resulting in changes to the capital cost estimate.

Transit-Supportive Land Use Rating: Medium

The *Medium* land use rating is based upon the *Medium* ratings assigned to transit-supportive plans and policies and their performance and impacts, and the *Medium-Low* rating for existing land use in the project corridor.

Existing Land Use: Medium-Low

- Population density within ½ mile of the North Corridor station areas is approximately 7,000 persons per square mile. The North Corridor has approximately 17,600 jobs within ½ mile of the proposed stations. The project provides direct service to the central business district (CBD), which contains approximately 60,300 jobs.
- The corridor is lined with strip commercial uses. The area immediately east and west of the strip commercial development consists mostly of low- and medium-density residential uses. There is a high volume of pedestrian activity in the corridor despite the lack of existing pedestrian amenities.
- Parking in downtown Miami averages $10 per day and is relatively constrained in many areas of the CBD.

Transit-Supportive Plans and Policies: Medium

- The State of Florida Growth Management Act (SB 360) amended on June 24, 2005, establishes growth management laws to ensure critical transportation infrastructure and services are in place to accommodate future urban growth and redevelopment. The act promotes regional planning through an incentive program and provides funding for transportation investments that support growth management.
- *Miami-Dade County's Comprehensive Development Master Plan* (CDMP) incorporates policies to ensure consistency between land use plans and transportation plans. An Urban Development Boundary constrains the extension of urban services, facilities, and development to a 12-mile wide swath of land. Restoration of the Everglades appears to make the boundary binding.
- The CDMP encourages transit-oriented development and designates each station area as either a Metropolitan Urban Center or a Community Urban Center. The CDMP requires that average floor area ratios (FAR) for Metropolitan Urban Centers should not be less than 3.0 at the core adjacent to transit stations and should taper to not less than 0.75 FAR at the edge. The 199th Street Station is designated as a Metropolitan Center.
- The 1978 Transit Development Ordinance established two overlay zones. The Rapid Transit Zone applies incentives for joint development with the private sector for all land owned and controlled by the rapid transit system.
- The county is in the final stages of rewriting its zoning code to include supportive zoning regulations near transit stations and standards from its *Urban Design Manual*.
- In an effort to implement the CDMP, the county has engaged in a series of planning efforts that have resulted in new zoning ordinances for transit stations.
- The area has some tools to implement land use policies including Community Development Block Grant neighborhood target areas, Miami-Dade County's Enterprise Zone, the Miami Smart Commute Initiative, and the Florida Brownfield Redevelopment Program.

Performance and Impacts of Policies: Medium

- MDTA described seven joint developments that demonstrate the effectiveness of the Transit Development Zone Ordinance and Joint Development Policy.
- More than 1.6 million square feet of development have occurred and over 380 medium- and high-density units have been built adjacent to Metrorail.

Other Project Justification Criteria

Mobility Improvements Rating: Medium	
Within ½-mile radius of boarding areas:	
Existing Employment	17,600
Projected Employment (2025)	25,400
Low Income Households (% of total HH)	2,700 (25%)
Average Per Station:	
Employment	2,514*
Low Income Households	386*
	New Start vs. Baseline
Transportation System User Benefit Per Project Passenger Mile (Minutes)	3.41*

Environmental Benefits Rating: Medium	
Criteria Pollutant (Reduction in tons)	**New Start vs. Baseline**
Carbon Monoxide (CO)	907
Nitrogen Oxide (NO_x)	63
Volatile Organic Compounds (VOC)	81
Particulate Matter (PM_{10})	117
Carbon Dioxide (CO_2)	21,084
Criteria Pollutant Status	**EPA Designation**
	Attainment for all pollutants
Annual Energy Savings (million British Thermal Units)	239,898

Operating Efficiencies Rating: Medium		
	Baseline	**New Start**
System Operating Cost per Passenger Mile (current year dollars)	$0.630*	$0.580*

* Indicates that measure is a component of rating for each criterion.
N/A indicates information was not available for this entry.

Local Financial Commitment Rating: Medium

The *Medium* local financial commitment rating is based on *Medium* ratings for the New Starts share of project costs and for both the capital and operating finance plans.

Section 5309 New Starts Share of Total Project Costs: 50%
Rating: Medium

MDTA is requesting a 50 percent New Starts share of total project costs, which results in a *Medium* rating for this measure.

Locally Proposed Financial Plan		
Source of Funds	**Total Funds ($million)**	**Percent of Total**
Federal: Section 5309 New Starts	$457.3	50.0%
State: FDOT	$228.7	25.0%
Local: ½ Cent Sales Tax	$228.7	25.0%
Total:	**$914.7**	100.0%

NOTE: The financial plan reflected in this table has been developed by the project sponsor and does not reflect a commitment by DOT or FTA. The sum of the figures may differ from the total as listed due to rounding.

Capital Finance Plan Rating: Medium

The capital finance plan is rated *Medium*, based upon the average of the ratings assigned to each of the subfactors listed below. The project received *Medium-High* scores for completeness and commitment of capital funds. The capital condition and capital funding capacity subfactors received a *Medium* rating, while a *Medium-Low* rating was assigned to the capital cost estimates and planning assumptions subfactor.

Agency Capital Condition: Medium

- The average age of MDTA's bus fleet is seven years, which is slightly older than the industry average.
- MDTA's good ratings for short term commercial paper, which were issued in December 2004, are as follows: Moody's Investors Service P-1, Standard & Poor's Corporation A-1+, and Fitch F1+.

Completeness of Capital Plan: Medium-High

- The submission was complete and included a 20-year cash flow statement, more than five years of historical data, identification of key assumptions, and a moderate level of detail. The plan included only a limited sensitivity analysis.

Commitment of Capital Funds: Medium-High

- Fifty percent of non-New Starts funding is committed. Half of the non-Section 5309 New Starts share comes from a ½-cent sales tax dedicated to transit. The remaining funds are expected to come from the Florida Department of Transportation.

Capital Funding Capacity: Medium

- The project's financial plan shows projected cash balances, reserve accounts, and/or access to credit that would allow MDTA to cover cost increases or funding shortfalls equal to approximately 25 percent of project costs.

Capital Cost Estimate and Planning Assumptions: Medium-Low

- Sales tax growth projections and assumptions regarding the cost of replacement buses for the system are optimistic based on past trends. Other assumptions on capital revenues are reasonable and in line with historical experience.

Operating Finance Plan Rating: Medium

The operating finance plan is rated *Medium*, based upon the average of the ratings of the five subfactors listed below. A *High* rating was assigned to the commitment of operating funds; a *Medium-High* rating was assigned to completeness; a *Medium* rating was assigned to operating funding capacity; a *Medium-Low* rating was assigned to the operating cost estimates and planning assumptions subfactor; and a *Low* rating was assigned to agency operating condition.

Agency Operating Condition: Low

- Miami-Dade's current ratio of assets to liabilities as reported in its most recent audited financial statement is 0.41.

Completeness of Operating Plan: Medium-High

- The submission was complete and included a 20-year cash flow statement, more than five years of historical data, identification of key assumptions, and a moderate level of detail. The plan also included a limited sensitivity analysis.

Commitment of Operating Funds: High

- Over 90 percent of operating funding is committed. In addition to fare revenues and other non-fare revenues generated by MDTA, the agency levies a ½-cent sales tax, which is dedicated to its capital and operating programs. Other revenue sources include county and State operating assistance, and revenues from a local option gas tax.

Operating Funding Capacity: Medium

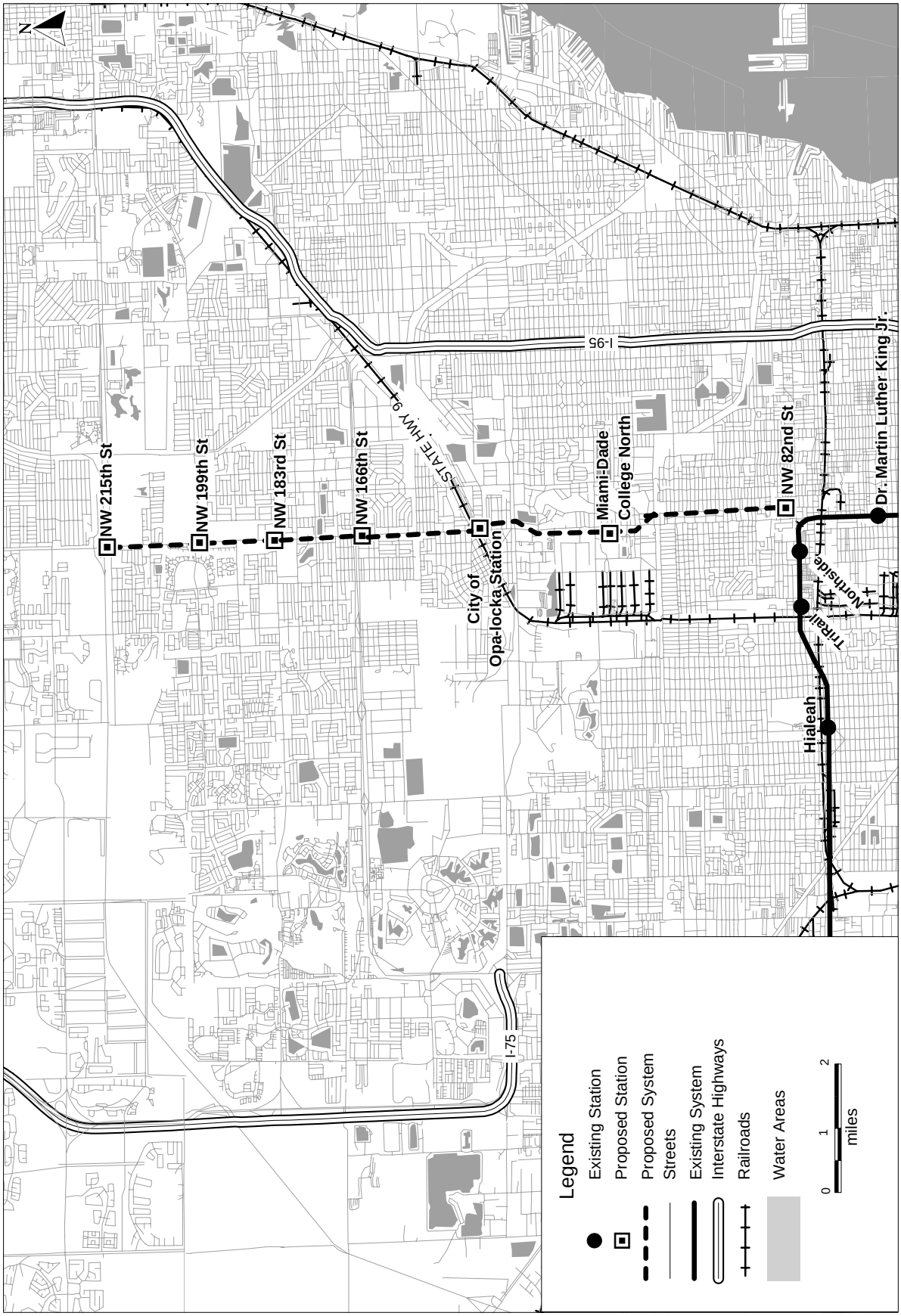
- The project's financial plan shows projected cash balances, reserve accounts, and/or access to credit of at least 12 percent of annual operating expenses.

Operating Cost Estimates and Planning Assumptions: Medium-Low

- Assumptions on ridership growth, local general fund appropriations, and sales tax projections are optimistic compared to recent trends.

North Corridor Metrorail Extension

Miami, Florida



Northstar Corridor Rail

Minneapolis-Big Lake, Minnesota

(November 2005)

The Minnesota Department of Transportation (Mn DOT), in cooperation with the Northstar Corridor Development Authority (NCDA), is proposing to construct a 40-mile minimum operable segment (MOS) commuter rail line that would connect the Minneapolis central business district (CBD) with the town of Big Lake. The commuter rail line would operate on an existing Burlington Northern Santa Fe (BNSF) freight rail line and would include a vehicle maintenance facility, layover facility, and requisite track and signal upgrades. The project also includes a four-block extension of the existing Hiawatha light rail transit (LRT) line from its current terminus at 5th Avenue North in the Minneapolis CBD to a proposed multimodal station at 3rd Avenue North, where the Northstar rail line would terminate. The Northstar commuter rail line would operate 18 weekday trips with 30-minute headways during peak periods. Five of the proposed six stations include park-and-ride lots that would provide over 2,400 parking spaces. The MOS is part of a larger proposal to construct an 82-mile commuter rail line from Minneapolis to Rice, Minnesota.

The Northstar Corridor is considered one of the fastest growing areas in the Twin Cities metropolitan region. It includes the fully developed urban core and several rapidly growing suburban areas. Major highway routes into the CBD are at capacity during peak periods for commuters from the north and northwest. By 2025, travel along the corridor's main arterials is projected to increase significantly, with the number of trips in the corridor expected to grow by over 30 percent and the number of inbound trips to the Minneapolis CBD estimated to increase by almost 75 percent. This growth in travel is anticipated to result in longer automobile travel times in the corridor. Increasing roadway capacity to meet growing travel demand is constrained by geography and existing development; the Mississippi River limits the number of access points to the CBD from the north. By avoiding roadway congestion surrounding downtown Minneapolis, the project is expected to provide improved mobility for peak period commuters.

Summary Description	
Proposed Project:	Commuter Rail; Light Rail Transit 40 Miles Commuter Rail; 0.3-miles LRT 6 Stations
Total Capital Cost ($YOE):	$265.2 Million
Section 5309 New Starts Share ($YOE):	$131.0 Million (49.4%)
Annual Forecast Year Operating Cost ($YOE):	$12.0 Million
Ridership Forecast (2025):	5,600 Average Weekday Boardings 1,300 Daily New Riders
Opening Year Ridership Forecast (2009):	4,000 Average Weekday Boardings
FY 2007 Finance Rating:	**Medium**
FY 2007 Project Justification Rating:	**Medium**
FY 2007 Overall Project Rating:	**Medium**

In late November 2005, Mn DOT added $24 million in contingencies to the project cost estimate which are not reflected in this evaluation. While the contingencies mitigate some of FTA's concerns with the project's cost estimate, they will have a negative impact on the value of its cost effectiveness.
Mn DOT has made significant progress in the last year towards advancing the project into final design. Mn DOT must finalize the scope, schedule, and right-of-way costs for the project and advance it into final design by September 30, 2006 or it will be removed from preliminary engineering (PE) status. FTA

further notes that the cost effectiveness rating of the project is *Medium-Low*. The project would need to receive a cost effectiveness rating of *Medium* to be recommended by FTA for a Full Funding Grant Agreement. FTA understands the need for approval of capital funding for the project by the Minnesota state legislature in the Spring of 2006. FTA has committed to work closely with Mn DOT to assure that information necessary for the legislature to act on the project's financing is provided on a timely basis.

Project Development History and Current Status

Mn DOT completed a major investment study of the corridor in December 1999. FTA approved an 80-mile commuter rail project between Minneapolis and Rice, Minnesota into PE in June 2000. A Draft Environmental Impact Statement (EIS) was completed in November 2000, a final EIS was completed in March 2002, and an environmental Record of Decision (ROD) was issued in December 2002. In response to concerns with the project's capital cost and cost effectiveness, Mn DOT identified the 40-mile MOS in early 2004 which is the subject of this evaluation. An Environmental Assessment is being prepared to determine necessary mitigation resulting from project scope changes since the 2002 ROD.

Significant Changes Since FY 2006 Evaluation (November 2004)

Mn DOT did not submit information to FTA for evaluation in the FY 2006 *Annual Report on New Starts*. In February 2005, the state legislature appropriated additional capital funding for the project. In June 2005, Mn DOT submitted an updated travel forecast for the project.

Project Justification Rating: Medium

The project is rated *Medium* for project justification based on a *Medium-Low* rating for cost effectiveness and a *Medium* rating for the project's transit-supportive land use.

Cost Effectiveness Rating: Medium-Low

The *Medium-Low* cost effectiveness rating reflects the level of travel-time benefits (3,100 hours each weekday, plus special events) relative to the project's annualized costs. The cost effectiveness of the project will increase once added contingencies have been incorporated into the capital cost estimate.

Cost Effectiveness	
	New Start vs. Baseline
Cost per Hour of Transportation System User Benefit	$24.90*
Incremental Cost per Incremental Trip	$49.46

* Indicates that measure is a component of Cost Effectiveness rating.

Nearly two-thirds of project travel time benefits accrue to travelers bound for the Minneapolis CBD from northwestern suburban communities, because the commuter rail line provides a time-competitive alternative to congested arterials (Interstate 94) and Mississippi River choke points (Interstate 35 West and Trunk Highway 10) north of downtown. Other benefiting markets include transit riders from outlying Ramsey County and Hennepin County. Less than 20 percent of benefits result from riders making non-work trips on the commuter rail line to sports stadia, the Mall of America, cultural events, and other destinations. Estimated benefits to zero-car households and reverse commuters are negligible.

At the time of FTA's evaluation, the project cost estimate was not considered reliable. Discrepancies exist between the current design drawings and cost estimates for major elements of the project such as stations and the vehicle maintenance facility. Inflation rate assumptions are low. Important construction agreements with BNSF have not yet been executed; design compliance with the ADA level boarding provisions has not been resolved; and additional environmental studies may be required. Mn DOT is updating the cost estimate, and FTA will initiate an assessment of the risks associated with the revised cost and schedule prior to advancing the project into final design.

Transit-Supportive Land Use Rating: Medium

The *Medium* land use rating is based upon the *Medium* ratings assigned to existing land use and performance and impacts of land use policies, and the *Medium-High* rating for transit-supportive plans and policies.

Existing Land Use: Medium

- Current total employment within a ½ mile of all station areas is approximately 46,400. Current total employment for the Minneapolis CBD is estimated at 146,500.
- The current number of persons per square mile in the corridor is relatively low (1,900/mile).
- Beyond the Minneapolis CBD, the corridor's land use character is a mixture of smaller mixed use, town-scale, and main street areas, with moderate to low density residential and industrial uses. Several proposed station areas are located near redevelopable land and lower density housing in need of rejuvenation.

Transit-Supportive Plans and Policies: Medium-High

- The Metropolitan Council (local metropolitan planning organization) has established a growth boundary through its 2030 Regional Development Framework where urban services are provided and policies encourage clustered, mixed-use growth along transportation corridors. Four of the six station areas are within the growth boundary and the Met Council coordinates planned growth within the other two station areas that are not within the growth boundary.
- Master Plans in each of the impacted cities with future stations, including downtown Minneapolis, have policies to support mixed use and medium-density residential development near proposed station areas.
- Each of the impacted municipalities are in the process of adopting transit-oriented zoning regulations to permit mixed uses and medium-to-high density residential development in station areas based on the Northstar Corridor Development Authority's and the Minnesota DOT's Northstar Project Office's *Station Neighborhood Development Principles and Guidelines*.

Performance and Impacts of Policies: Medium

- Private developers have proposed transit-supportive redevelopment projects at three key stations along the project's alignment that include mixed use and residential development. One of the proposals, near the planned Elk River station, has already broken ground.
- Redevelopment and mixed used development strategies are being developed for all proposed station areas. All planned station areas have available space for additional housing and retail/commercial use.

Other Project Justification Criteria

Mobility Improvements Rating: Medium-Low	
Within ½-mile radius of boarding areas:	
Existing Employment	46,400
Projected Employment (2025)	51,600
Low Income Households (% of total HH)	380 (9%)
Average Per Station:	
Employment	7,585*
Low Income Households	63*
	New Start vs. Baseline
Transportation System User Benefit Per Project Passenger Mile (Minutes)	1.40*

Environmental Benefits Rating: Medium	
Criteria Pollutant (Reduction in tons)	**New Start vs. Baseline**
Carbon Monoxide (CO)	444
Nitrogen Oxide (NO_x)	45
Volatile Organic Compounds (VOC)	5
Particulate Matter (PM_{10})	1
Carbon Dioxide (CO_2)	11,280
Criteria Pollutant Status	**EPA Designation**
Carbon Monoxide (CO)	Maintenance*
Annual Energy Savings (million British Thermal Units)	147,544

Operating Efficiencies Rating: Medium		
	Baseline	**New Start**
System Operating Cost per Passenger Mile (current year dollars)	$0.455*	$0.451*

* Indicates that measure is a component of rating for each criterion.
N/A indicates information was not available for this entry.

Local Financial Commitment Rating: Medium

The *Medium* local financial commitment rating is based on *Medium-High* ratings for the New Starts share of project costs and the operating finance plan and the *Medium* rating for the capital finance plan. FTA's evaluation covers the financial plan supporting the project capital cost estimate of $265.2 million and does not reflect recent cost increases.

Section 5309 New Starts Share of Total Project Costs: 49%
Rating: Medium-High

Mn DOT is requesting an approximately 49 percent New Starts share of total project costs, which equates to a *Medium-High* rating for this measure.

Locally Proposed Financial Plan		
Source of Funds	**Total Funds ($million)**	**Percent of Total**
Federal: Section 5309 New Starts Flexible Funds (CMAQ and STP)	 $131.0 $5.1	 49.4% 1.9%
State: General Obligation Bonds	 $85.9	 32.4%
Local: NCDA Capital Partners Metropolitan Council	 $40.7 $2.5	 15.4% 0.9%
Total:	**$265.2**	100.0%

NOTE: The financial plan reflected in this table has been developed by the project sponsor and does not reflect a commitment by DOT or FTA. The sum of the figures may differ from total as listed due to rounding.

Capital Finance Plan Rating: Medium

The capital finance plan is rated *Medium*. The commitment of capital funds subfactor received a *High* rating. The agency capital condition and completeness of capital plan subfactors received *Medium-High* ratings, while the capital cost estimates and planning assumptions subfactor received a *Medium-Low* rating. The capital funding capacity subfactor received a *Medium* rating. These ratings average to a *Medium-High*, but the rating was lowered to *Medium* due to the *Medium-Low* rating for the capital cost estimate and planning assumptions subfactor, based on the uncertainty of the capital cost estimate.

Agency Capital Condition: Medium-High

- The average age of Metro Transit's bus fleet is 5.7 years, which is younger than the industry average.
- Mn DOT's excellent bond ratings, which were issued in 2004, are as follows: Moody's Investors Service Aa1, Standard & Poor's Corporation AAA, and Fitch's AAA.

Completeness of Capital Plan: Medium-High

- Mn DOT's submission was complete, including a 20-year cash flow, fleet management plan, and sensitivity analysis. Historical data were provided for 1998-2005 (eight years), but were presented as sums over years, rather than annual data.

Commitment of Capital Funds: High

- Over 50 percent of non-New Starts funding is committed. Federal funding sources include CMAQ and STP funds. State funding sources include General Obligation Bonds. Local funding sources include funds from the NCDA Capital Partners and the Metropolitan Council.

Capital Funding Capacity: Medium

- The project's financial plan shows no projected cash balances or reserve accounts, but access to the large additional debt capacity of the State of Minnesota would allow Mn DOT to cover cost increases or funding shortfalls equal to approximately 20 percent of project costs.

Capital Cost Estimate and Planning Assumptions: Medium-Low

- Funding assumptions regarding sources and commitment are reasonable.
- An updated capital cost estimate is expected in December 2005. FTA has several concerns with the project's current cost estimates. Also, inflation and bond rate assumptions are optimistic.

Operating Finance Plan Rating: Medium-High

The operating finance plan is rated *Medium-High*, based upon the average of the ratings of the five subfactors listed below. The commitment of operating funds subfactor received a *High* rating. The agency operating condition and operating funding capacity subfactors received *Medium-High* ratings; the completeness subfactor received a *Medium* rating; and the planning assumptions subfactor received a *Medium-Low* rating.

Agency Operating Condition: Medium-High

- Mn DOT is in good operating condition with no service cutbacks and a history of being able to draw funds as required from the Minnesota General Fund.
- Mn DOT's current ratio of assets to liabilities as reported in its most recent audited financial statements is 1.55.

Completeness of Operating Plan: Medium

- Mn DOT's submission included 20-year cash flows for both the project and for all Mn DOT operations, but excluded a sensitivity analysis. Historical data were provided for 1998-2005 (eight years), but were presented as sums over these years, rather than annual data.

Commitment of Operating Funds: High

- All operating funding is committed. Sources of operating funds include farebox revenues, Federal Section 5307 formula funding (preventative maintenance), the Minnesota General Fund and funds from NCDA Capital Partners.

Operating Funding Capacity: Medium-High

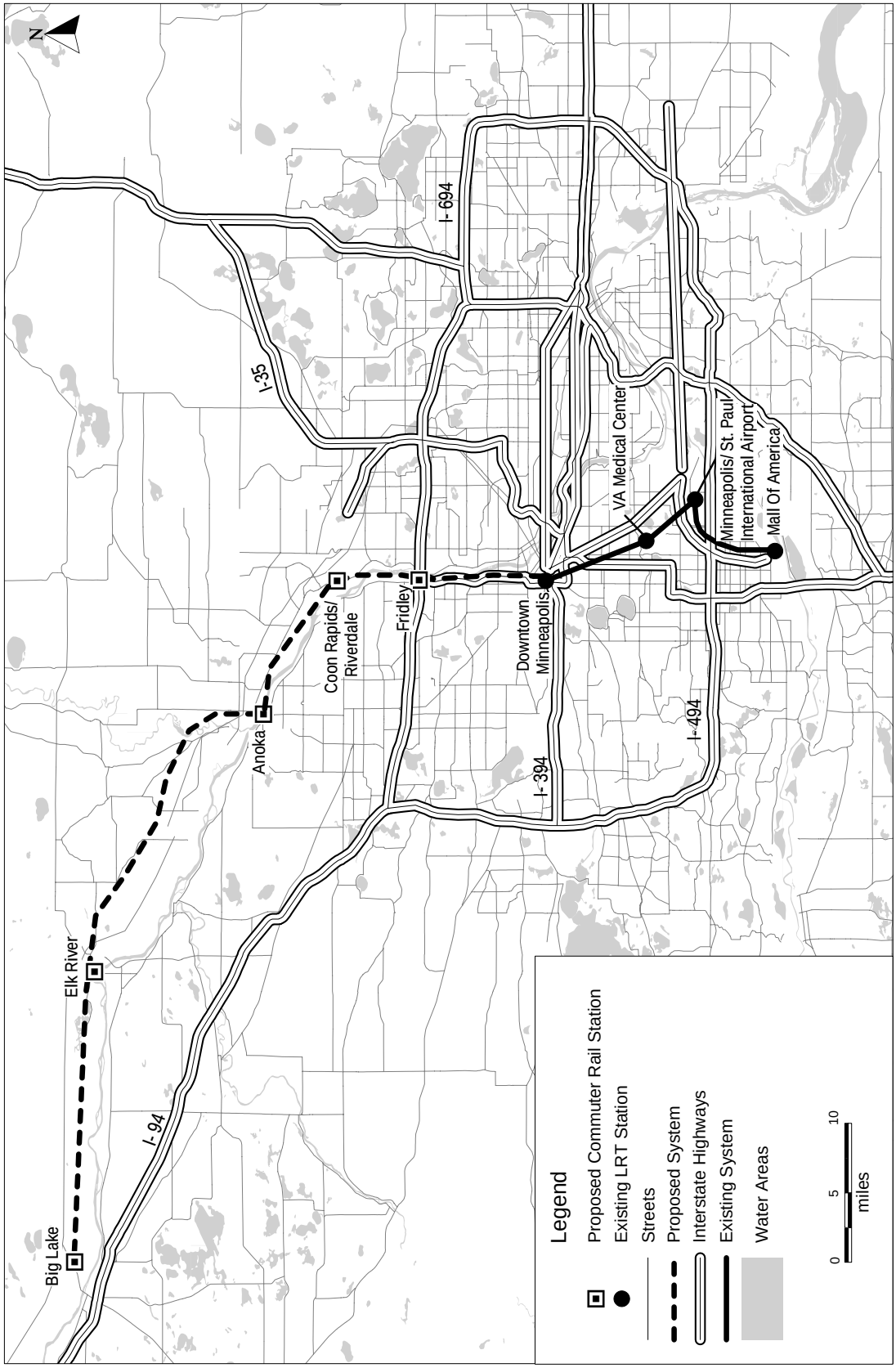
- Mn DOT's operating plan shows no projected cash balances or reserve accounts, but available taxing capacity exceeds 25 percent of annual operating expenses.

Operating Cost Estimates and Planning Assumptions: Medium-Low

- As the project sponsors do not possess experience in commuter rail operations, the operating financial plan does not include any historical basis of comparison.
- Although the cost model methodology is acceptable, questions remain regarding some cost components. Assumptions regarding growth of commuter rail operating costs appear optimistic.
- Growth assumptions for state and local subsidy contributions appear optimistic given historic inflation rates for U.S. transit operators. Inflation rate assumptions also appear optimistic with respect to fare increases and the resulting impact on ridership.

Northstar Corridor Rail

Minneapolis-Big Lake, Minnesota



Second Avenue Subway MOS

New York, New York

(November 2005)

The Metropolitan Transportation Authority and New York City Transit (MTA/NYCT) are proposing to construct 2.3 miles of new subway on Manhattan's East Side to provide extended Broadway express service between Brooklyn, Lower Manhattan, West Midtown, and East Harlem. The Second Avenue Subway Minimum Operable Segment (MOS) would extend MTA rail service from its current terminal at 57th Street and Seventh Avenue via an existing track connection to the 63rd Street line, with new stations at 96th, 86th, and 72nd Streets and new entrances at Third Avenue to the existing Lexington Avenue/63rd Street station. New tunnels would be built from 99th Street to 62nd Street, while the existing tunnel between 99th and 105th Streets would be used for train storage. The MOS is the first part of a planned 8.5-mile subway line extending the length of Manhattan's East Side from 125th Street in East Harlem to Hanover Square in the Financial District.

Under current conditions, the Lexington Avenue Line (LAL) experiences significant travel-time delays as crowded trains wait in stations while large volumes of riders board and alight. For example, during a 15-minute period in the morning peak hour at the 86th Street station, nearly 3,000 riders enter and exit southbound trains, causing excessive crowding on platforms and queuing on stairs. This reduces train throughput on the LAL, as dwell times at stations are extended to accommodate these heavy passenger loads. The purpose of the Second Avenue Subway MOS is to reduce excessive overcrowding that currently occurs on Manhattan's only full north-south passenger rail line (which is North America's busiest transit line); improve service reliability on the LAL; improve mobility for commuters on the island's East Side; and meet existing and future travel demand throughout the corridor and region.

Summary Description	
Proposed Project:	Heavy Rail 2.3 Miles 3 Stations
Total Capital Cost ($YOE):	$4,947.8 Million (includes $1.10 billion in finance charges)
Section 5309 New Starts Share ($YOE):	$1,300.0 Million (26.3%)
Annual Forecast Year Operating Cost:	$26.5 Million
Ridership Forecast (2030):	213,000 Average Weekday Boardings 5,350 Daily New Riders
Opening Year Ridership Forecast (2012):	191,000 Average Weekday Boardings
FY 2007 Finance Rating:	**Medium**
FY 2007 Project Justification Rating:	**Medium-High**
FY 2007 Overall Project Rating:	**Medium**

FTA notes that MTA's New Starts funding request of $1.3 billion for the Second Avenue Subway MOS project is higher than what has historically been provided by FTA to other major transit capital investment projects, but the New Starts share (just over 26 percent) is significantly lower.

Project Development History and Current Status

MTA/NYCT completed a major investment study/Draft Environmental Impact Statement (MIS/Draft EIS) on the Manhattan East Side Corridor in September 1999. The MIS/Draft EIS covered the northern portion of the corridor from 63rd Street to East 125th Street. The full 8.5-mile Second Avenue Subway was selected as the locally preferred alternative (LPA) in May 2001. FTA approved the LPA into preliminary engineering in December 2001. Anticipating the financial difficulties in implementing the entire project at once, MTA/NYCT contemplated the development of minimum operable segments within the corridor. A Final EIS covering the full alignment, but including a strategy for the implementation of distinct operable segments within the corridor, was completed in April 2004. In July 2004, FTA issued an environmental Record of Decision for the full-length project. MTA has submitted a final design request for the Second Avenue Subway MOS, which FTA expects to approve in 2006.

Significant Changes Since FY 2006 Evaluation (November 2004)

In June 2005, MTA provided a revised set of travel forecasts reflecting a 2030 forecast year and updated population and employment assumptions for the New York City area. However, finance charges increased by over $600 million since last year, accounting for the project's cost increase. In early November 2005, New York voters approved a statewide bond referendum that will provide an additional $450 million in funding to the project.

Project Justification Rating: Medium-High

The project is rated *Medium-High* for project justification based on a *Medium* rating for cost effectiveness and a *High* rating for the project's strong transit-supportive land use.

Cost Effectiveness Rating: Medium

The *Medium* cost effectiveness rating reflects the level of travel-time benefits (62,300 hours each weekday) relative to the project's annualized costs. The estimate of both costs and benefits of the project at this stage of development is considered reliable.

Cost Effectiveness	
	New Start vs. Baseline
Cost per Hour of Transportation System User Benefit	$14.10*
Incremental Cost per Incremental Trip	$169.80

* Indicates that measure is a component of Cost Effectiveness rating.

The first MOS of the Second Avenue Subway would result in a more efficient ride between the Upper East Side, southern East Harlem, and West Midtown by providing a cross-platform transfer to the F Line at the LAL/63rd Street station. With the project, crowding on the LAL is expected to decrease by as much as 13 percent, with 23,500 fewer riders entering the Manhattan central business district on southbound express and local LAL trains on an average weekday. Nearly 72,000 riders traveling between the Upper East Side or East Harlem and employment centers in West Midtown are expected to experience approximately 15 percent of the project's travel-time benefits. The remaining travel-time benefits would accrue to riders traveling from other areas (Upper West Side, West Harlem, Bronx, etc.) to the corridor under less crowded conditions. In addition, morning peak hour boardings on the southbound LAL would decrease by 48 percent at 86th Street, improving passenger circulation at the station and contributing to better train throughput and reliability on the LAL.

MTA has developed a risk analysis/risk mitigation program to manage the technical work and has budgeted for identified risks to reduce uncertainties. However, FTA believes that the project's current schedule should be reevaluated. Schedule slippage could result in an increase in the capital cost estimate. FTA will initiate an assessment of the reliability of the cost and schedule of the project in early 2006.

Transit-Supportive Land Use Rating: High

The project's *High* land use rating reflects a high rating for each component of the land use evaluation criterion.

Existing Land Use: High

- Station areas have a total population of approximately 255,000. Over 243,000 employees worked in proposed station areas in 2000. Thus, the number of residents and workers within walking distance of the stations is supportive of very high rates of transit usage.
- Population density is very high in the proposed station areas, with 67,600 households per square mile and 110,800 residents per square mile. A portion of East Midtown's CBD is within the 72nd Street station area at the southern terminus of MOS.
- Development throughout the corridor is pedestrian-oriented with sidewalks on every street and ground floor retail located within residential neighborhoods.
- Numerous public institutions, including museums and hospitals, are major trip generators within station areas.
- The southern portion of the station area that includes part of the East Midtown CBD features large-scale retail uses and high-rise office development, which front directly on the area's sidewalks.
- Parking availability is limited, and high parking costs serve as an effective disincentive to automobile use.

Transit-Supportive Plans and Policies: High

- New York City policies promote the continued development and restoration of older buildings to accommodate growth in the corridor. Policies and market conditions continue to encourage dense office development, which is among the highest densities in the world.
- Policy support for the concentration of development in high-density transit corridors is reflected in city zoning regulations, which contain a Special Transit Land Use District mapped along the Second Avenue Subway corridor. City zoning emphasizes the concentration of new development in areas well served by transit; the preservation of the historic and unique character of existing neighborhoods; and requirements for sidewalks and other pedestrian amenities.
- Zoning regulations establish requirements for the allocation of pedestrian space and amenities and limits to curb cuts and truck loading. Zoning regulations also encourage strict limits on parking supplies throughout station areas.

Performance and Impacts of Policies: High

- The intensive development, pedestrian-friendly character, and high rates of transit usage in the corridor reflect the impact of land use policies and the application of such tools as zoning, floor area bonuses, and tax incentives. These measures have worked collectively with market forces to create existing, highly transit-supportive development patterns in the corridor.
- New York City's zoning regulations have achieved improvements to the pedestrian environment in dense areas and resulted in street-level retail, as well as clustered street-level commercial uses near transit stations.

Other Project Justification Criteria

Mobility Improvements Rating: Medium-High	
Within ½-mile radius of boarding areas:	
Existing Employment	243,000
Projected Employment (2030)	274,900
Low Income Households (% of total HH)	11,940 (8%)
Average Per Station:	
Employment	95,330*
Low Income Households	3,980*
	New Start vs. Baseline
Transportation System User Benefit Per Project Passenger Mile (Minutes)	1.92*

Environmental Benefits Rating: High	
Criteria Pollutant (Reduction in tons)	**New Start vs. Baseline**
Carbon Monoxide (CO)	148
Nitrogen Oxide (NO_x)	4
Volatile Organic Compounds (VOC)	8
Particulate Matter (PM_{10})	5
Carbon Dioxide (CO_2)	27,200
Criteria Pollutant Status	**EPA Designation**
Carbon Monoxide (CO)	Maintenance Area*
8-Hour Ozone (O_3)	Moderate Non-Attainment Area*
Particulate Matter (PM_{10})	Moderate Non-Attainment Area*
Particulate Matter ($PM_{2.5}$)	Non-Attainment Area*
Annual Energy Savings (million British Thermal Units)	420,400

Operating Efficiencies Rating: Medium		
	Baseline	**New Start**
System Operating Cost per Passenger Mile (current year dollars)	$0.375*	$0.376*

* Indicates that measure is a component of rating for each criterion.
N/A indicates information was not available for this entry.

Local Financial Commitment Rating: Medium

The *Medium* local financial commitment rating is based on the *High* rating for the New Starts share of project costs and the *Medium* ratings for both the capital and operating finance plans.

Section 5309 New Starts Share of Total Project Costs: 26%
Rating: High

MTA/NYCT is requesting an approximately 26 percent New Starts share of total project costs, which results in a *High* rating for this measure.

Locally Proposed Financial Plan		
Source of Funds	**Total Funds ($million)**	**Percent of Total**
Federal: Section 5309 New Starts Flexible Funds (CMAQ)	 $1,300.0 $45.3	 26.3% 0.9%
State: State Transportation Bond Act of 2005	 $450.0	 9.1%
Local: MTA Dedicated Sources (bonds, surplus toll revenues, etc.) MTA Operating Budget	 $2,043.2 $1,109.3	 41.3% 22.4%
Total:	**$4,947.8**	100.0%

NOTE: The financial plan reflected in this table has been developed by the project sponsor and does not reflect a commitment by DOT or FTA. The sum of the figures may differ from the total as listed due to rounding.

Capital Finance Plan Rating: Medium

The capital finance plan is rated *Medium*, based upon the average of the ratings assigned to each of the subfactors listed below. The commitment of capital funds subfactor was rated as *High;* the capital condition, completeness of the plan, and the capital cost estimate and planning assumptions subfactors were rated *Medium;* and capital funding capacity was rated *Medium-Low*.

Agency Capital Condition: Medium

- The average age of MTA's bus fleet is 6.1 years, which is near the industry average. The average age of the MTA's rail fleet is 19.8 years for NYCT and 19.9 years and 19.0 years for the Long Island Rail Road and Metro-North Railroad, respectively.
- MTA's bond ratings, which were issued in March 2000, are as follows: Standard & Poor's Corporation AA- and Fitch A+.

Completeness of Capital Plan: Medium

- The financial plan included a 20-year cash flow statement, more than five years of historical data, identification of some key assumptions with little detail, supporting documentation including fleet management plans, and a limited sensitivity analyses.

Commitment of Capital Funds: High

- Approximately 78 percent of non-New Starts funding is committed or budgeted. Primary funding sources include bond proceeds, State and local capital support, and other dedicated tax revenues.

Capital Funding Capacity: Medium-Low

- The financial plan shows a balanced budget, with no cash surpluses beyond 2005. MTA has limited reserve accounts and/or access to credit that would allow the agency to cover cost increases or funding shortfalls.

Capital Cost Estimate and Planning Assumptions: Medium

- Assumptions in the capital plan are consistent with historical experience, but are not completely supported.
- The capital cost estimate is considered reasonable and includes overall contingencies of 17 percent of total capital cost; however, there are concerns related to the MTA's ability to maintain the current schedule.

Operating Finance Plan Rating: Medium

The operating finance plan is rated *Medium*, based upon the average rating of the five subfactors listed below. A *High* rating was assigned for the commitment of operating funds subfactor. The completeness and operating cost estimates and planning assumptions subfactors were rated *Medium*. The agency operating condition and operating funding capacity subfactors were rated *Medium-Low*.

Agency Operating Condition: Medium-Low

- MTA is in fair financial condition. Except for the service interruptions resulting from the September 11th attacks, MTA has not reduced service in recent years.
- MTA's current ratio of assets to liabilities as reported in its most recent audited financial statement is 1.02.

Completeness of Operating Plan: Medium

- The financial plan included a 20-year cash flow statement, more than five years of historical data, and the identification of some assumptions with little detail, supporting documentation and no sensitivity analysis. There were inconsistencies between the financial plan narrative, the financial plan cash flow statement and the adopted and proposed MTA multi-year budgets.

Commitment of Operating Funds: High

- Over 92 percent of operating funding is committed. Funding sources include fares, other operating revenues, and dedicated State and local taxes.

Operating Funding Capacity: Medium-Low

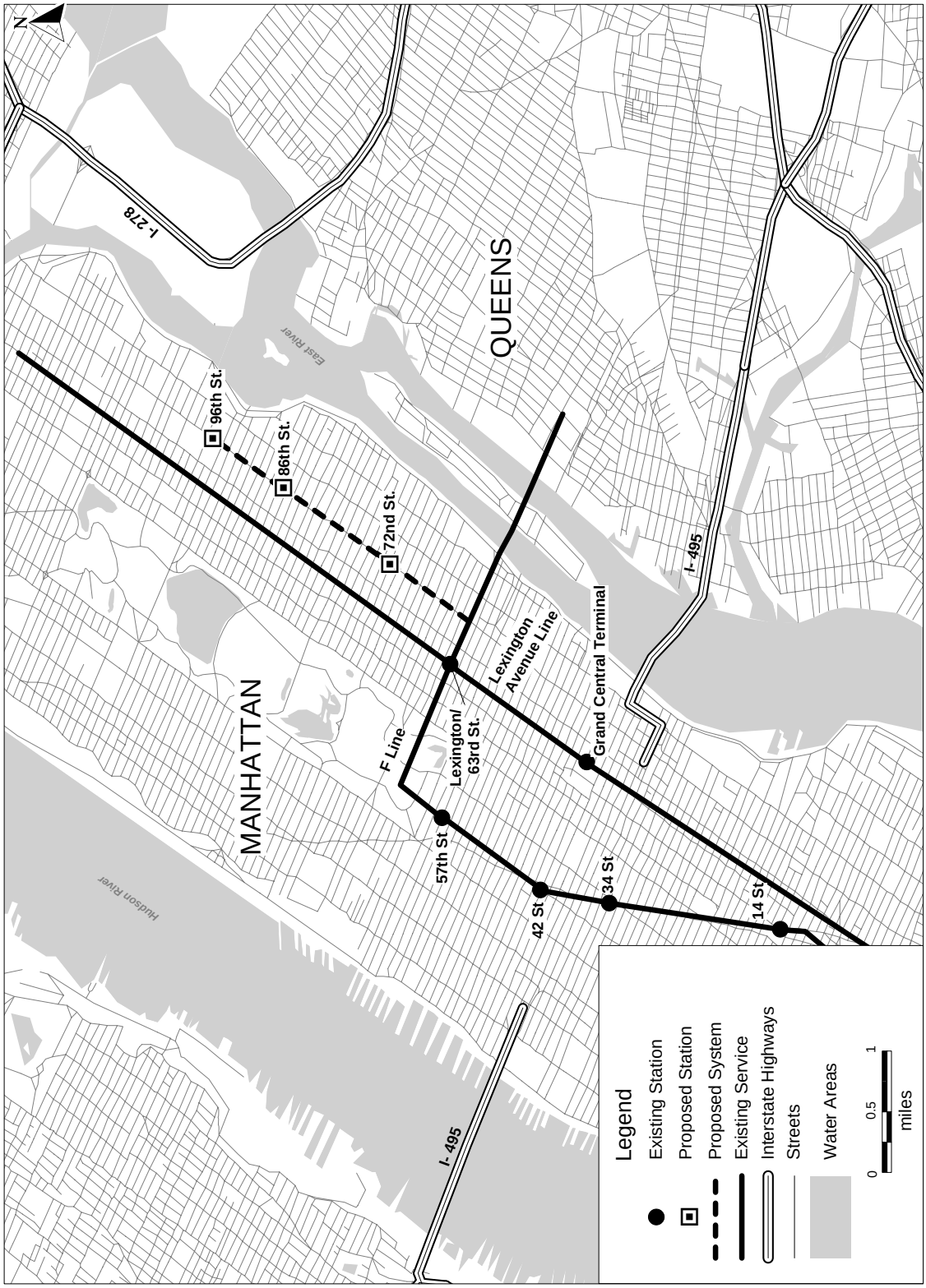
- The financial plan does not show cash balances or reserve accounts because MTA is required to operate under a balanced budget by statute. Consequently, MTA's financial plan indicates that operating sources will be exactly equal to operating uses for the period 2005–2024. MTA has access to short-term credit exceeding eight percent of annual operating expenses.

Operating Cost Estimates and Planning Assumptions: Medium

- Operating cost estimates and revenue forecasts are consistent with historical trends.

Second Avenue Subway MOS

New York, New York



CORRIDOR*one* Rail MOS

Harrisburg, Pennsylvania

(November 2005)

Capital Area Transit (CAT) of Harrisburg, Pennsylvania proposes to develop a 40.5-mile minimum operable segment (MOS) of a regional rail system that would run along central Pennsylvania's major transportation corridor. The corridor currently accommodates both Amtrak and Norfolk Southern Railroad lines. The proposed project would provide rail service between East Mechanicsburg and Lancaster via Harrisburg, supported by significant upgrades to CAT and Red Rose Transit (Lancaster, Pennsylvania) bus services. CAT proposes the re-use of the old Cumberland Valley Railroad Bridge across the Susquehanna River and use of the Keystone Corridor for the leg between Harrisburg and Lancaster. The project is intended to improve transportation mobility and connectivity across the Susquehanna River; provide an effective transit link to Harrisburg International Airport and its intermodal facilities; and leverage the investment made by the Commonwealth of Pennsylvania and Amtrak in upgrading the Keystone Corridor to improve transit service.

The project is estimated to cost $87.0 million (escalated dollars), which includes a proposed Section 5309 New Starts share of $24.9 million (28.7 percent). *Because the proposed New Starts share is less than $25 million, the project is exempt from the New Starts criteria and is not subject to FTA's evaluation and rating (49 U.S.C 5309(e)(1)(B)).*

Summary Description	
Proposed Project:	Commuter Rail
	40.5 Miles, 11 Stations
Total Capital Cost ($YOE):	$87.0 Million
Section 5309 New Starts Share ($YOE):	$24.9 Million (28.7%)
Annual Operating Cost ($YOE):	Not Available
Ridership Forecast:	2,100 Average Weekday Boardings

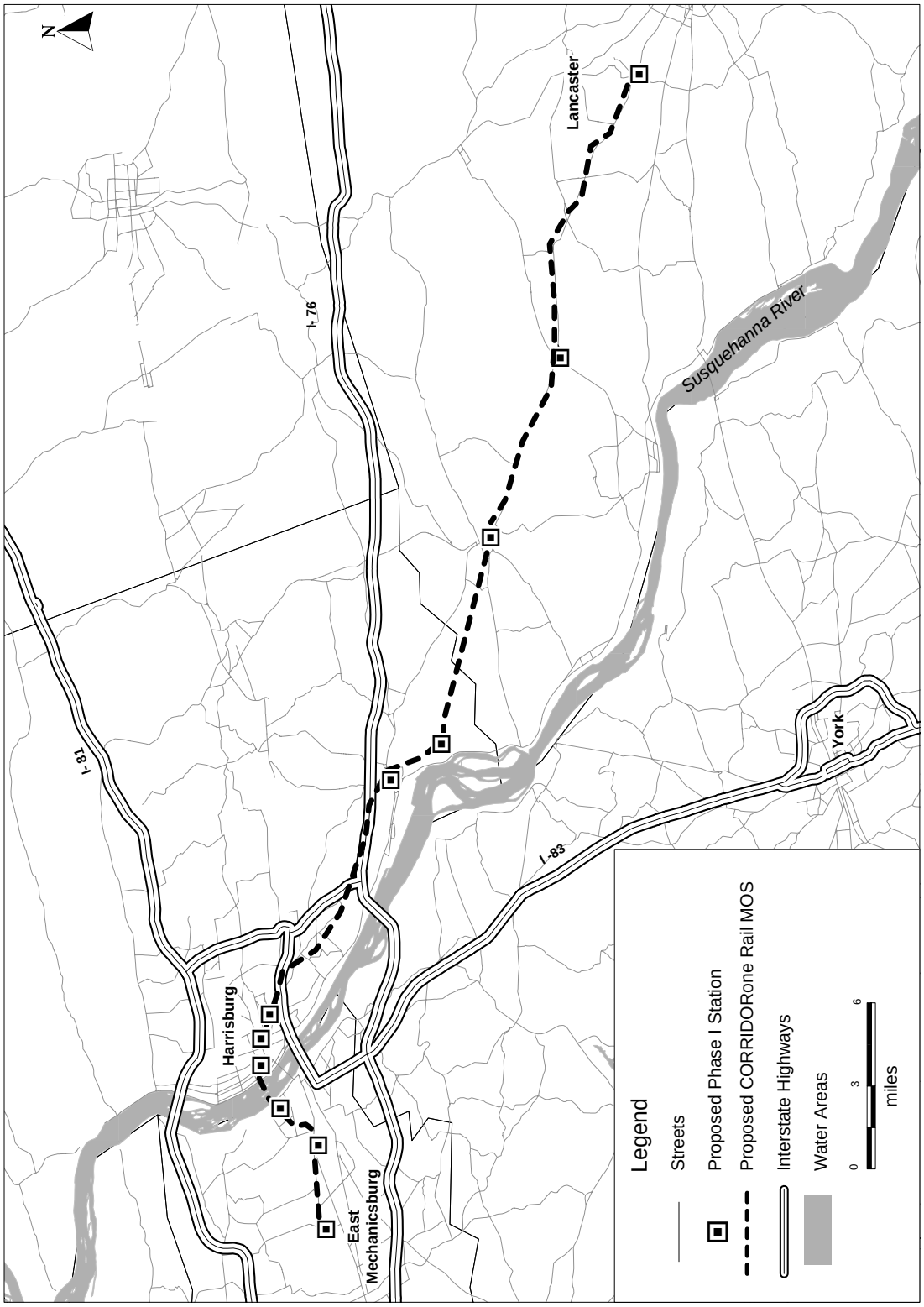
Project Development History and Current Status

FTA approved CAT's initiation of preliminary engineering (PE) and NEPA review in August 2002. CAT completed subsequent transitional analysis to refine the evaluation of potential alternative project segments and defined a minimum operable segment in May 2003. Since May 2003, CAT has added some detail to the project's capital cost estimate and financial plan and has developed an updated ridership forecast. CAT is undertaking an environmental assessment on the proposed investment and must identify an implementable project scope and submit to FTA a supporting financial plan by September 30, 2006 or be removed from PE status.

Locally Proposed Financial Plan		
Proposed Source of Funds	**Total Funding ($million)**	**Percent of Total**
Federal: Section 5309 New Starts Section 5309 Bus Discretionary Section 5307 Urbanized Area Formula Funds	 $24.9 $4.0 $10.0	 28.7 % 4.6 % 11.5 %
State: Annual Capital Budget	 $40.9	 47.0%
Local: County Contributions Private Sources	 $0.2 $7.0	 0.2 % 8.0 %
Total:	**$87.0**	100.0 %

NOTE: The financial plan reflected in this table has been developed by the project sponsor and does not reflect a commitment by DOT or FTA. The sum of the figures may differ from the total as listed due to rounding.

CORRIDORone Rail MOS
Harrisburg, Pennsylvania



Schuylkill Valley MetroRail

Philadelphia – Reading, Pennsylvania

(November 2005)

The Southeastern Pennsylvania Transportation Authority (SEPTA) and the Berks Area Reading Transportation Authority (BARTA) have proposed, and were approved by FTA into preliminary engineering (PE) for, the development of a 74-mile electrified commuter rail system in the Schuylkill Valley, extending from downtown Philadelphia northwest to Reading, Pennsylvania. The Schuylkill Valley corridor is comprised of 52 municipalities in four counties, including the smaller cities of Norristown, Pottstown, and Phoenixville; suburban centers at King of Prussia and Great Valley; and regional activity centers and attractions such as Center City Philadelphia, King of Prussia Mall, Valley Forge National Park, and the Reading Outlet Stores Mall. The alignment of the proposed project would generally parallel the Schuylkill Expressway (Interstate 76), the Route 422 Expressway, and the Schuylkill River. The proposed 34-station rail line would operate on shared track utilizing existing SEPTA and Norfolk Southern Railroad right-of-way, as well as Philadelphia's Center City Tunnel.

Summary Description	
Proposed Project:	Hybrid Commuter Rail 74 Miles, 34 Stations
Total Capital Cost ($YOE):	$2,588.9 Million
Section 5309 New Starts Share ($YOE):	$2,071.1 Million (80.0%)
Annual Forecast Year Operating Cost:	$65.2 Million
Ridership Forecast:	Not Available
FY 2007 Finance Rating:	**Low**
FY 2007 Project Justification Rating:	**Low**
FY 2007 Overall Project Rating:	**Low**

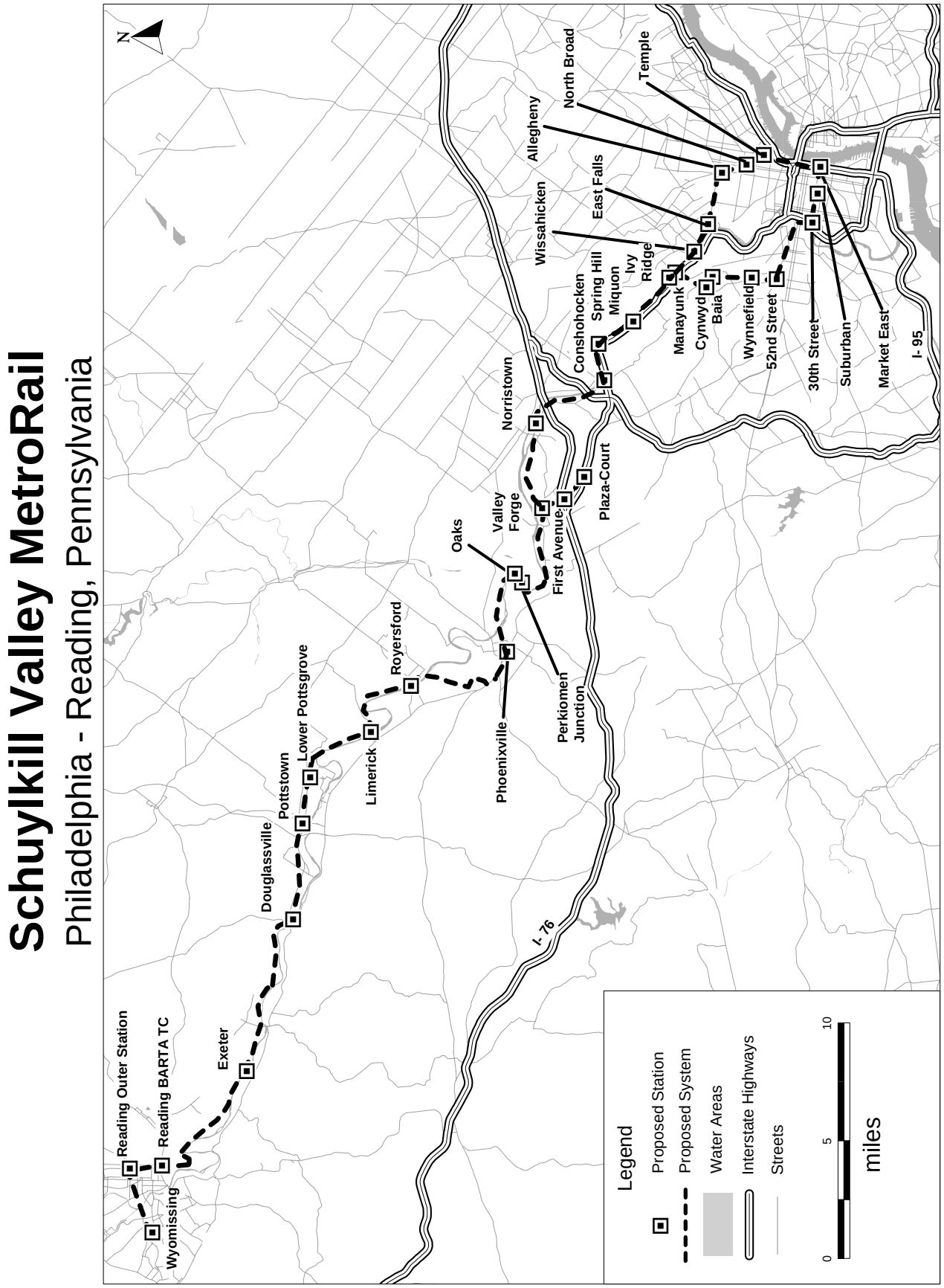
SEPTA did not submit information to FTA for evaluation in the *FY 2007 Annual Report on New Starts*. The Schuylkill Valley MetroRail project, as currently scoped, is rated *Low* based on the absence of current capital and operating financial plans, and estimates of the project's justification criteria, for the proposed $2.6 billion investment. The project was approved into PE in January 2002 and has been rated *Not Recommended* in the three previous *Annual Report on New Starts*. Since January 2004, at the direction of the Governor, the Pennsylvania Secretary of Transportation's appointed task force for examining alternative rapid transit strategies in the Schuylkill Valley corridor has been working towards identifying an alternative design concept and scope which will meet the New Starts criteria for project justification and local financial commitment. SEPTA must identify a revised project with sufficient cost effectiveness and reasonable financial plan by September 30, 2006 and produce the information necessary to rate the project or be removed from PE status.

Project Justification Rating: Low

The project is *Low* for project justification because SEPTA did not submit information on the project's cost effectiveness, transit supportive land use, and other criteria.

Local Financial Commitment Rating: Low

The project is rated *Low* for local financial commitment because SEPTA did not submit a current financial plan for the project.


Schuylkill Valley MetroRail
Philadelphia - Reading, Pennsylvania
N
Reading Outer Station
Reading BARTA TC
Wyomissing
Exeter
Douglassville
Pottstown
Lower Pottsgrove
Limerick
Royersford
Phoenixville
Oaks
Valley Forge
Perkiomen Junction
First Avenue
Norristown
Plaza-Court
Conshohocken
Spring Hill
Miquon
Ivy Ridge
Wissahicken
East Falls
Allegheny
North Broad
Temple
Manayunk
Cynwyd
Baia
Wynnefield
52nd Street
30th Street
Suburban
Market East
I- 95
I- 76
Legend
Proposed Station
Proposed System
Water Areas
Interstate Highways
Streets
0
5
10
miles

South County Commuter Rail

Providence, Rhode Island

(November 2005)

The Rhode Island Department of Transportation (RIDOT) is proposing to extend commuter rail service 20 miles along the Northeast Corridor from Providence to Wickford Junction/North Kingston to the South County region of the State. The Northeast Corridor is currently used only for Amtrak and freight operations; therefore, the extension of commuter rail service represents a new passenger service in the corridor.

RIDOT has identified the need to extend commuter rail service to meet demand for travel in the South County area. More specifically, the locally stated goals of the transit improvement are to reduce congestion, improve safety, and provide intermodal connections in the Interstate 95 and Route1/Route 4 corridors; provide needed intermodal connections to T.F. Green Airport via RIDOT's Warwick Intermodal Station; support RIDOT's ongoing commitment to maintain and improve the existing highway and rail infrastructure rather than invest in additional roadway capacity; and support the State's objectives of using transportation to attain regional economic development goals by providing opportunities to attract new commercial development, including the Warwick Station Redevelopment District at T.F. Green Airport.

The proposed project includes the purchase of rolling stock, a new station, a new 1,000-car parking garage, and a mainline interlocking at Wickford Junction. The proposed eight round-trip commuter rail trains daily (Monday through Friday) would augment existing Providence to Boston commuter service. The Massachusetts Bay Transportation Authority (MBTA) has been identified as the service operator for this commuter rail service extension.

The total capital cost for this commuter rail extension project is estimated at $43.7 million, with a proposed Section 5309 New Starts share of $24.9 million. *Because the proposed New Starts share is less than $25 million, the project is exempt from the New Starts criteria and is thus not subject to FTA's evaluation and rating (49 U.S.C 5309(e)(1)(B)).*

Summary Description	
Proposed Project:	Commuter Rail Extension 20 Miles, 1 Station
Total Capital Cost ($YOE):	$43.7 Million
Section 5309 New Starts Share ($YOE):	$24.9 Million (56.9%)
Ridership Forecast (2020):	2,300 Daily Riders

Project Development History and Current Status

In an effort to increase mobility in southeastern New England, the State of Rhode Island, in cooperation with the Commonwealth of Massachusetts, entered into a cooperative agreement in 1998 known as the Pilgrim Partnership Agreement. The central tenet of the Pilgrim Partnership Agreement is that RIDOT will sub-allocate Federal formula funding to MBTA in exchange for commuter rail service to Providence. The South County Commuter Rail Project is a continuation of a bi-state goal to improve mobility within a shared corridor.

In September 2004, FTA issued a Letter of No Prejudice (LONP) in the amount of $11.5 million (total cost) for the procurement of five commuter rail coaches for the South County Commuter Rail project. This LONP allows RIDOT to take advantage of a procurement opportunity through an existing MBTA vehicle option. By acquiring the coaches through the MBTA option, RIDOT will be able to achieve cost savings and take possession of the vehicles in time to meet revenue operations for this project. As

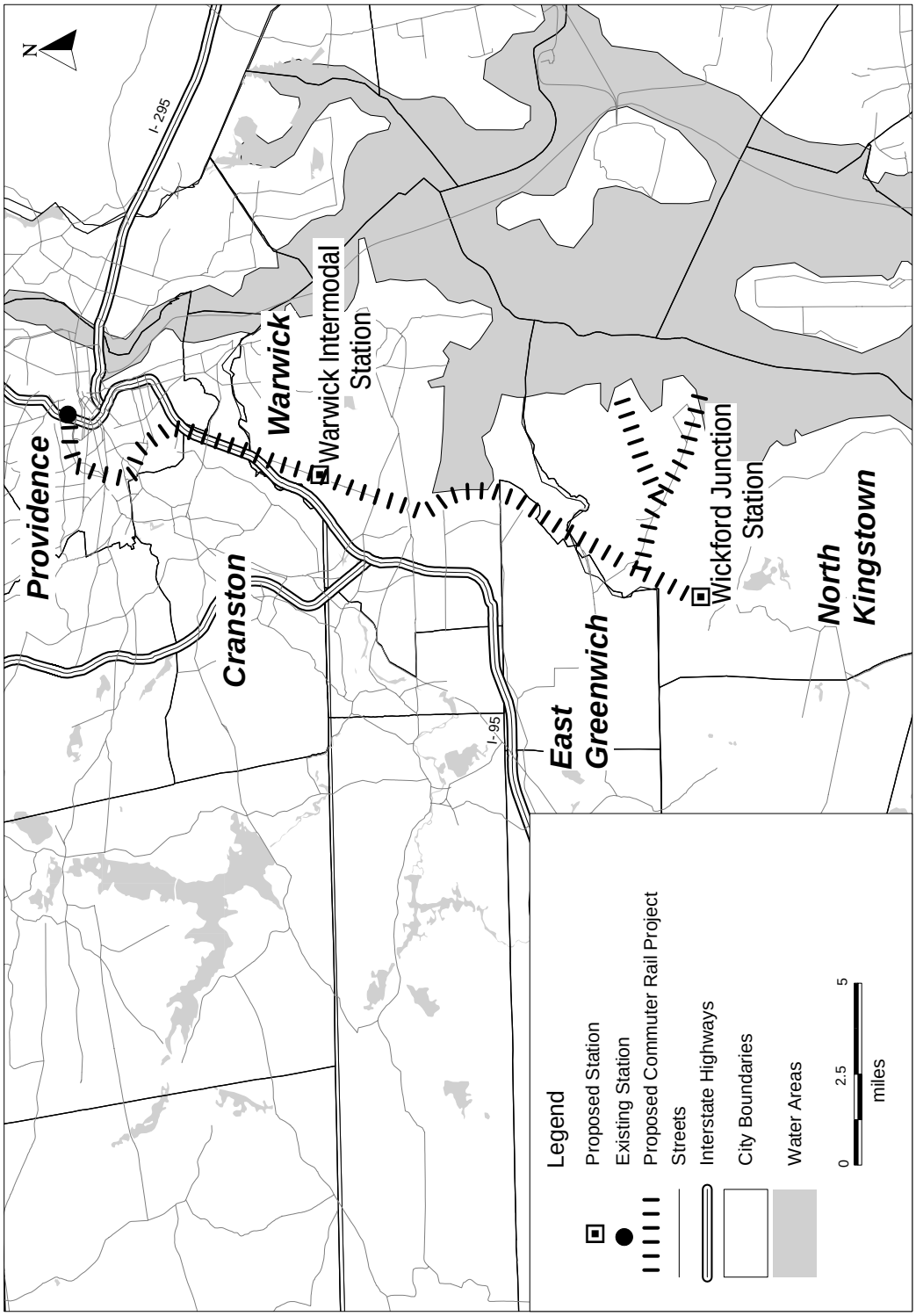
preliminary engineering progresses, some limited project design changes will require an environmental reevaluation that is currently underway.

Locally Proposed Financial Plan		
Proposed Source of Funds	**Total Funding ($million)**	**Percent of Total**
Federal:		
Section 5309 New Starts	$24.9	56.9%
Flexible Funds (CMAQ)	$3.0	7.0%
Section 5309 Fixed Guideway Modernization	$6.9	16.0%
Local:	$8.8	20.1%
Total:	**$43.7**	100.0%

NOTE: The financial plan reflected in this table has been developed by the project sponsor and does not reflect a commitment by DOT or FTA. The sum of the figures may differ from the total as listed due to rounding.

South County Commuter Rail

Providence, Rhode Island



North Corridor Rapid Transit MOS

Houston, Texas

(November 2005)

The Metropolitan Transit Authority of Harris County (METRO) is proposing to operate by 2030 a 5.4-mile extension of its light rail transit (LRT) system from the existing University of Houston-Downtown (UH-D) Station in the Houston central business district (CBD) to the Northline Mall Transit Center. The alignment would be double-tracked with 4.4 miles at grade and one mile above grade and would operate in both exclusive guideway and mixed traffic. LRT service would operate with peak period headways of four minutes. The project is a minimum operable segment (MOS) of a planned 24-mile LRT line from the CBD to George Herbert Bush Intercontinental Airport.

The North Corridor extends from the CBD north along Interstate Highway 45 (IH-45) and is bounded by IH-45 on the west and the Hardy Toll Road (IH-610) on the east. Currently, a total of 100 buses per hour operate in mixed traffic in the North Corridor to the CBD. Nearly 86 peak-hour buses operate on routes that serve the CBD via North Main Street. Buses traveling along Main Street pass under the Hardy Rail Yard using the Main Street Tunnel – a facility that funnels traffic from two lanes to one lane in each direction. In the CBD, most of the travel to/from major arterials surrounding the CBD occurs on downtown streets that are aligned in a north-south direction. Much of METRO's bus service that provides access to downtown job centers from outlying areas board/alight riders from lanes on north-south streets. Although METRO uses "skip-stop" operations on these streets, curbside-loading areas limit the number of buses that board/alight passengers. Queuing of peak hour buses causes extended clearance times for buses using the same CBD loading areas. Bus flow is also limited by traffic in the adjacent lane, causing re-entry delays. Constrained operations and reduced bus speeds produce schedule delays and service reliability problems that are compounded as traffic volumes increase and METRO adds more buses to accommodate demand. The North Corridor Rapid Transit MOS project is intended to result in greater transit capacity and improved transit service in the CBD and through the Main Street tunnel.

Summary Description	
Proposed Project:	Light Rail Transit (converted from BRT) 5.4 Miles 5 Stations
Total Capital Cost ($YOE):	$359.7 Million
Section 5309 New Starts Share ($YOE):	$179.8 Million (50.0%)
Annual Forecast Year Operating Cost ($YOE):	$22.2 Million
Ridership Forecast (2025):	12,400 Average Weekday Boardings 3,100 Daily New Riders
Opening Year Ridership Forecast (2012):	7,700 Average Weekday Boardings
FY 2007 Finance Rating:	**Medium**
FY 2007 Project Justification Rating:	**Medium**
FY 2007 Overall Project Rating:	**Medium**

METRO is considering implementing fixed guideway bus rapid transit (BRT) in the North Corridor before converting to the LRT operations described in this evaluation. FTA is working with METRO to evaluate the benefits, costs, and impacts of such an implementation strategy. Pursuant to SAFETEA-LU Section 3043(h), FTA will substitute BRT for LRT in subsequent evaluations when METRO demonstrates that BRT has met the requirements for preliminary engineering status.

Project Development History and Current Status

METRO completed an alternatives analysis study on the North-Hardy Corridor in November 2003, resulting in the selection of light rail transit as the locally preferred alternative. The North Corridor was one of several corridors included in the *2025 METRO Solutions Transit System Plan* that was passed by Houston-area voters in November 2003. The *Plan* allows METRO to issue up to $640 million in bonds to help fund the implementation of system expansion projects, including the North Corridor LRT MOS project. METRO initiated a Draft Environmental Impact Statement (EIS) on the North Corridor in December 2003. FTA approved the North Corridor LRT MOS into preliminary engineering in April 2005, and the evaluation presented in this profile reflects the information upon which that approval was made. Since then, METRO has proposed interim implementation of BRT in the corridor, and is working with the Houston-Galveston Area Council to incorporate the revised project into the region's long range plan, as well as study the costs, benefits, and impacts of a BRT-to-LRT conversion strategy.

Project Justification Rating: Medium

The project is rated *Medium* for project justification based on a *Medium-Low* rating for cost effectiveness and a *Medium* rating for the project's transit-supportive land use.

Cost Effectiveness Rating: Medium-Low

The *Medium-Low* cost effectiveness rating reflects the level of travel-time benefits (2,600 hours each weekday, plus special events) relative to the project's annualized costs. The estimate of both costs and benefits of the project at this stage of development is considered reliable.

Cost Effectiveness	
	New Start vs. Baseline
Cost per Hour of Transportation System User Benefit	$23.80*
Incremental Cost per Incremental Trip	$21.42

* Indicates that measure is a component of Cost Effectiveness rating.

Travel forecasts for the corridor demonstrate travel time benefits to four primary markets. The first is travelers bound for the Houston CBD and the Texas Medical Center (TMC) areas. These transit riders generate over 40 percent of travel-time benefits because the LRT would provide a one-seat ride to the CBD, universities, and TMC areas (interlining with the existing Main Street LRT) and avoid congested downtown streets and corridor choke points by operating in a separate guideway. About half of these benefits accrue to persons traveling to/from work. As an added benefit, the LRT would reduce the number of buses traveling between the corridor and downtown, thereby reducing bus volumes in the Main Street Tunnel and on CBD streets. The second benefiting market includes transit riders from the corridor's outer and inner IH-610 areas, many of which currently commute via auto and express buses on the Hardy Toll Road to the CBD and other corridor attractions. Approximately 25 percent of benefits are attributable to this market because the LRT would eliminate much of the transferring travelers currently endure to reach the CBD. The third benefiting market includes transit riders from the corridor's southwestern and western areas that currently commute via IH 45 to major corridor destinations. The LRT would offer travel-time benefits for riders traveling from the corridor to the southwest portion of the IH-610 Loop. Over 15 percent of benefits accrue to this market. The remaining benefits include improved service to the corridor's transit dependent areas, especially households with average incomes of $16,000 or less, and LRT riders traveling to special events (sports stadia, convention center, and cultural attractions) located on the southern edge of the Houston CBD.

The current estimate for total capital costs for the project is considered reliable. The cost estimate reflects an average projected inflation rate and a project schedule – including the durations for each phase – that are considered reasonable.

Transit-Supportive Land Use Rating: Medium

The rating is based upon the *Medium* ratings assigned to existing land use and the performance and impacts of land use policies which offset the *Medium-Low* rating for transit-supportive policies.

Existing Land Use: Medium

- Current total employment within a ½-mile of all station areas is approximately 22,800.
- Current total employment for the Houston CBD is estimated at over 156,000.
- Existing population density within the entire corridor, the number of persons per square mile, is moderate (7,300 persons/square mile).
- The land use character of the North Corridor is primarily auto-oriented, featuring commercial strips with large parking lots, underutilized industrial areas, and many vacant parcels. Exceptions include some pre-World War II neighborhoods built on a grid pattern of streets.

Transit-Supportive Plans and Policies: Medium-Low

- There are no coordinated regional growth management policies. The Houston-Galveston Area Council's (local MPO) policy documents include goals related to denser, more transit-oriented development patterns. The Houston area's rapid population increases and sprawl have contributed to an interest in growth planning, but specific initiatives have not been undertaken at the regional level.
- Neighborhood plans covering the North Corridor define general objectives for increasing the pedestrian-friendliness and transit-orientation of development. Two areas adjacent to the Houston CBD have undergone more detailed planning to support high-density, transit-oriented development. Otherwise, subarea plans have not been developed yet, and implementation tools are generally weak.
- The City of Houston is not zoned. Private deed restrictions are often used to ensure that standards for land use are maintained. Much of the North Corridor is designated as "urban" allowing reductions in setbacks and in the size of single-family lots. The City may choose to reduce parking requirements in areas where demand can be met through means other than off-street parking, and will consider reductions in the North Corridor. There are no parking requirements for downtown projects.
- METRO will initiate station area planning activities with stakeholders and design teams during preliminary engineering for the North Corridor to ensure that station designs, area land uses, and area plans are complementary, following a similar public outreach effort that was used for the current Main Street LRT. Parts of the North Corridor are within City or State-designated districts that provide funding mechanisms for infrastructure improvements.

Performance and Impacts of Policies: Medium

- Changes to development patterns, including pedestrian- and transit-oriented design features, are evident in the downtown Houston and Midtown areas along the existing Main Street LRT. Many projects (mostly small) have been proposed in the North Corridor, but it is unclear to what extent they will be built on transit-supportive principles.
- The Houston region and CBD are expecting strong growth, but the Northside area is not currently one of the more economically active parts of the region. The extent to which the CBD development activity will spread north from the CBD and support revitalization of corridor neighborhoods remains to be seen. There are ample vacant lots available for development in the corridor.

Other Project Justification Criteria

Mobility Improvements Rating: Medium-High	
Within ½-mile radius of boarding areas:	
Existing Employment	22,800
Projected Employment (2025)	29,800
Low Income Households (% of total HH)	2,492 (26%)
Average Per Station:	
Employment	4,560*
Low Income Households	500*
	New Start vs. Baseline
Transportation System User Benefit Per Project Passenger Mile (Minutes)	4.01*

Environmental Benefits Rating: High	
Criteria Pollutant (Reduction in tons)	**New Start vs. Baseline**
Carbon Monoxide (CO)	17
Nitrogen Oxide (NO_x)	1
Volatile Organic Compounds (VOC)	1
Particulate Matter (PM_{10})	0
Carbon Dioxide (CO_2)	4,000
Criteria Pollutant Status	**EPA Designation**
8-Hour Ozone (O_3)	Moderate Non-Attainment Area*
Annual Energy Savings (million British Thermal Units)	51,900

Operating Efficiencies Rating: Medium		
	Baseline	**New Start**
System Operating Cost per Passenger Mile (current year dollars)	$0.278*	$0.279*

* Indicates that measure is a component of rating for each criterion.
N/A indicates information was not available for this entry.

Local Financial Commitment Rating: Medium

The *Medium* local financial commitment rating is based on the *Medium-High* rating for the capital finance plan and the *Medium* ratings for the New Starts share of project costs and the operating finance plan.

Section 5309 New Starts Share of Total Project Costs: 50%
Rating: Medium

METRO is requesting a 50 percent New Starts share of total project costs, which results in a *Medium* rating for this measure.

Locally Proposed Financial Plan		
Source of Funds	**Total Funds ($million)**	**Percent of Total**
Federal: Section 5309 New Starts	$179.8	50.0%
Local: METRO Dedicated Sales Tax	$179.8	50.0%
Total:	**$359.7**	100.0%

NOTE: The financial plan reflected in this table has been developed by the project sponsor and does not reflect a commitment by DOT or FTA. The sum of the figures may differ from total as listed due to rounding.

Capital Finance Plan Rating: Medium-High

The capital finance plan is rated *Medium-High*, based on the average of the ratings assigned to each of the subfactors listed below. The capital condition, commitment of capital funds, and capital funding capacity subfactors received *High* ratings. The completeness of the capital plan was rated *Medium-High*, while the capital cost estimates and planning assumptions subfactor received a *Medium* rating.

Agency Capital Condition: High

- The average age of METRO's bus fleet age is under six years, which is in line with the industry average.
- METRO has no outstanding debt. Therefore, no bond ratings have been assigned.

Completeness of Capital Plan: Medium-High

- The submission was complete and included a 20-year cash flow statement, more than five years of historical data, identification of key assumptions, and a moderate level of detail. The plan also included a limited sensitivity analysis.

Commitment of Capital Funds: High

- METRO's sales tax revenues will cover the non-New Starts share for the North Corridor LRT MOS project.
- METRO's sales tax revenues are considered committed, accounting for 100 percent of the project's non-New Starts share.

Capital Funding Capacity: High

- The project's financial plan shows projected cash balances, reserve accounts, and/or access to credit that would allow METRO to cover cost increases or funding shortfalls equal to approximately 50 percent of project costs.

Capital Cost Estimate and Planning Assumptions: Medium

- Assumptions included in the capital finance plan, including sales tax growth rate assumptions, are consistent with historical experience.
- The capital cost estimate is considered current and reliable. The project's contingency is adequate for this stage of development.

Operating Finance Plan Rating: Medium

The operating finance plan is rated *Medium*, based upon the average of the ratings of the five subfactors listed below. Commitment of operating funds was rated *High*; completeness of the operating plan was rated *Medium-High;* operating funding capacity was rated *Medium*; the operating cost estimates and planning assumptions subfactor received a *Medium-Low* rating; and operating condition was rated *Low*.

Agency Operating Condition: Low

- METRO's current ratio of assets to liabilities, as reported in its most recent audited financial statements, is 0.79.
- METRO's low current ratio is due to a sharp year-over-year increase in liabilities from FY 2002 to FY 2003 as a result of a $45 million payment from METRO's General Mobility Program to the City of Houston per a September 2003 agreement between METRO and the City. The sharp drop in METRO's current ratio from FY 2002 – FY 2003, as reported in METRO's most recent audited financial statements, is a result of this one-time occurrence and is considered anomalous.
- METRO's transit services have increased in the last five years, despite a decline in ridership due to a downturn in regional economic growth.

Completeness of Operating Plan: Medium-High

- The submission was complete and included a 20-year cash flow statement, more than five years of historical data, identification of key assumptions, and a moderate level of detail. The plan also included a limited sensitivity analysis.

Commitment of Operating Funds: High

- All operating funding (fare revenues and dedicated sales tax funding) is considered committed.
- In addition to METRO's farebox revenues, other operating funds include sales tax levies, interest income, and miscellaneous revenue (advertising and ID card fees).

Operating Funding Capacity: Medium

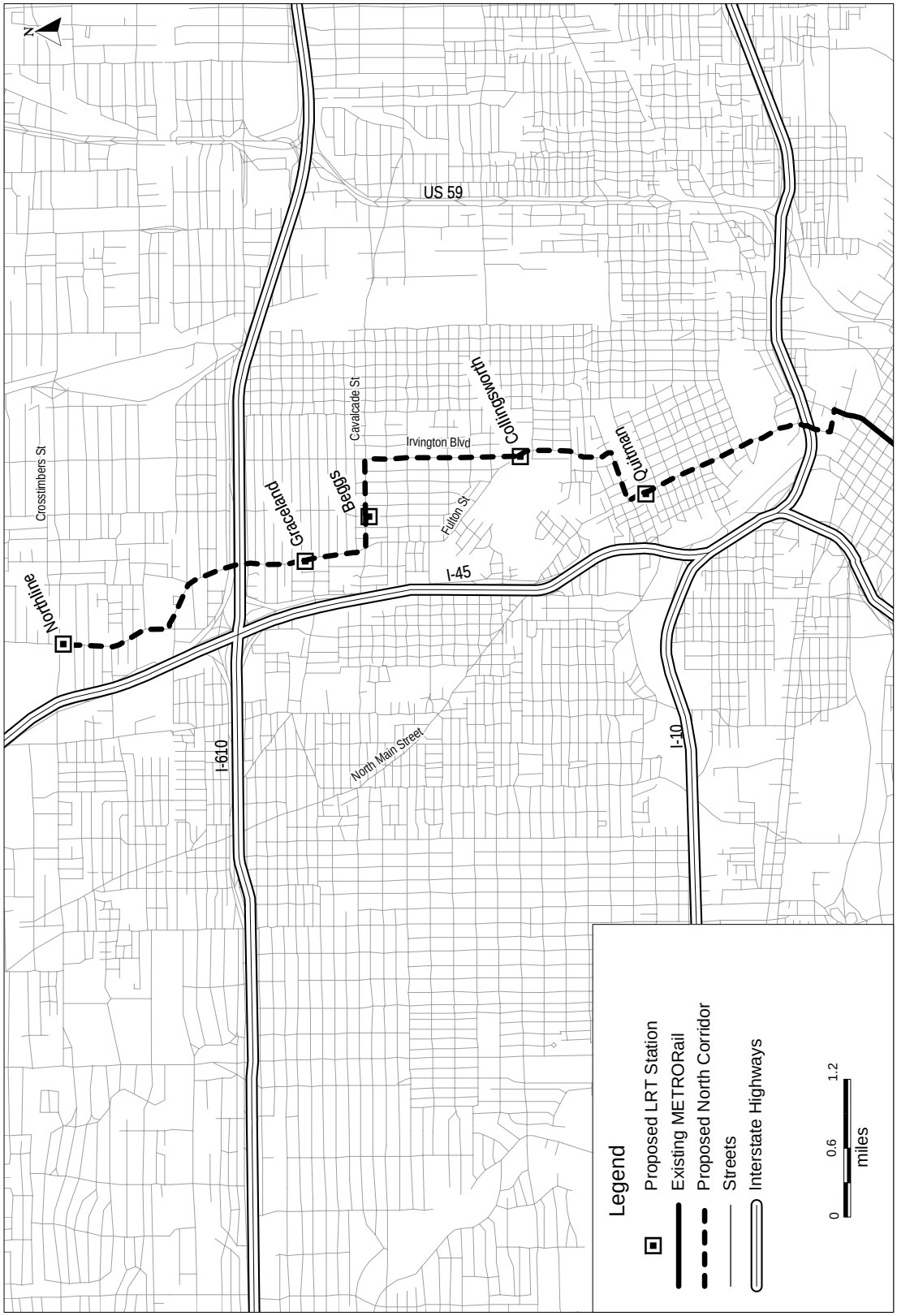
- The project's financial plan shows projected cash balances, reserve accounts, and/or access to credit exceeding 12 percent of annual operating expenses.

Operating Cost Estimates and Planning Assumptions: Medium-Low

- Assumptions on operating costs, ridership, and farebox revenues are considered optimistic compared to historical experience.

North Corridor Rapid Transit MOS

Houston, Texas



Southeast Corridor Rapid Transit MOS

Houston, Texas

(November 2005)

The Metropolitan Transit Authority of Harris County (METRO) is proposing to operate by 2030 a 6.8-mile extension to its light rail transit (LRT) system from the current Bagby/Smith Station in the Houston central business district (CBD) to Griggs Road, east of Dr. Martin Luther King (MLK), Jr. Boulevard. The project would connect with METRO's existing Main Street LRT in the CBD and provide fixed guideway service to the University of Houston-Downtown, Texas Southern University and the Texas Medical Center. The alignment would be double-tracked with all but 0.1 miles at grade, and would operate in exclusive guideway and mixed traffic at intersection crossings. LRT service would operate with peak-hour headways of six minutes. The project is considered the first minimum operable segment (MOS) of a 13-mile LRT line from the CBD to the William P. Hobby Airport.

The corridor extends from downtown Houston to the vicinity of MLK Jr. Boulevard/Griggs Road at Palm Center and is bounded by Interstate Highway 45 (IH-45) on the east, US Route 59/State Highway 288 on the west, and Almeda-Genoa Road on the south. Existing freeways, particularly north of IH-610, require "out of direction" travel adding to the length of the trip. Travel in the corridor is focused on the few existing north-south and east-west arterials. Current transit service operates on the same network of arterials. Congested arterials impede bus service to/from the corridor's major activity centers. Bus service is often circuitous and the number of stops so frequent that bus travel times are not competitive with auto travel. The volume of METRO buses operating on downtown streets compounds traffic problems. During peak periods, buses queue to load/unload riders, causing severe service reliability problems, increased travel times for CBD commuters, and constrained METRO operations in the CBD. Projected growth in travel demand would exacerbate these conditions if planned transit improvements are not implemented. The Southeast Corridor constitutes only five percent of METRO's service area, but includes 25 percent of METRO's local bus riders. The area has a high proportion of zero-car households and persons under 18 and over 64 years of age – indicators of transit-dependent populations. The project is intended to result in improved transit service and reliability for these corridor travel markets.

Summary Description	
Proposed Project:	Light Rail Transit (converted from BRT) 6.8 Miles 11 Stations
Total Capital Cost ($YOE):	$354.4 Million
Section 5309 New Starts Share ($YOE):	$177.2 Million (50.0%)
Annual Forecast Year Operating Cost ($YOE):	$15.1 Million
Ridership Forecast (2025):	12,400 Average Weekday Boardings 2,300 Daily New Riders
Opening Year Ridership Forecast (2012):	7,430 Average Weekday Boardings
FY 2007 Finance Rating:	**Medium**
FY 2007 Project Justification Rating:	**Medium**
FY 2007 Overall Project Rating:	**Medium**

METRO is considering implementing fixed guideway bus rapid transit (BRT) in the Southeast Corridor before converting to the LRT operations described in this evaluation. FTA is working with METRO to evaluate the benefits, costs, and impacts of such an implementation strategy. Pursuant to SAFETEA-LU

Section 3043(h), FTA will substitute BRT for LRT in subsequent evaluations when METRO demonstrates that BRT has met the requirements for preliminary engineering status.

Project Development History and Current Status

METRO completed an alternatives analysis study on the Southeast-Universities-Hobby Corridor in November 2003, which resulted in selection of light rail transit as the locally preferred alternative. The Southeast Corridor was one of several corridors included in the *2025 METRO Solutions Transit System Plan* that was passed by Houston-area voters in November 2003. The *Plan* allows METRO to issue up to $640 million in bonds to help fund the implementation of system expansion projects, including the Southeast LRT MOS project. METRO initiated a Draft Environmental Impact Statement (EIS) on the Southeast Corridor in December 2003. FTA approved the project into preliminary engineering in April 2005, and the evaluation presented in this profile reflects the information upon which that approval was made. Since that time, METRO has proposed interim implementation of BRT in the corridor, and is working with the Houston-Galveston Area Council to incorporate the revised project into the region's long range plan, as well as study the costs, benefits, and impacts of a BRT-to-LRT conversion strategy.

Project Justification Rating: Medium

The project is rated *Medium* for project justification based on a *Medium-Low* rating for cost effectiveness and a *Medium* rating for the project's transit-supportive land use.

Cost Effectiveness Rating: Medium-Low

The *Medium-Low* cost effectiveness rating reflects the level of travel-time benefits (3,000 hours each weekday, plus special events) relative to the project's annualized costs. The estimate of both costs and benefits of the project at this stage of development is considered reliable.

Cost Effectiveness	
	New Start vs. Baseline
Cost per Hour of Transportation System User Benefit	$24.31*
Incremental Cost per Incremental Trip	$33.76

* Indicates that measure is a component of Cost Effectiveness rating.

Nearly 25 percent of Southeast Corridor households do not have access to an automobile. While the existing transit system provides the corridor's transit-dependent population with access to downtown Houston, the universities, and the Texas Medical Center (TMC) areas, the service operates at low speeds and is subject to the same delays as auto traffic. The limited service levels and reliability restrict mobility and reduce residents' access to jobs.

Travel forecasts for the corridor demonstrate travel time benefits to three primary markets. The first includes transit riders commuting within the IH-610 area and to the Houston CBD, TMC and universities' areas from the corridor's heavily transit-dependent population (households with incomes less than $15,000). These riders generate nearly 50 percent of travel-time benefits because the LRT would provide faster and more direct service to major activity centers, compared to local bus service. The second market includes transit riders from the north and southwest sections of the corridor taking advantage of improved access to the CBD and other core activity centers. Nearly 40 percent of benefits are attributable to this market. The remaining benefits include corridor transit riders switching from conventional buses and autos to the LRT, as well as LRT riders traveling to special events (sports stadia, convention center and cultural attractions on the southern edge of the CBD).

The current estimate for total capital costs for the project is considered reliable. The cost estimate reflects an average projected inflation rate and a project schedule – including the durations for each phase – that are considered reasonable.

Transit-Supportive Land Use Rating: Medium

The rating is based upon the *Medium* ratings assigned to existing land use and the performance and impacts of land use policies which offset the *Medium-Low* rating for transit-supportive policies.

Existing Land Use: Medium

- The project alignment penetrates downtown Houston. Current total employment within a ½-mile of all station areas is 147,100.
- Current total employment for the entire Houston CBD is estimated at over 156,000.
- Existing population density within the entire corridor, the number of persons per square mile, is low to moderate (4,300 persons/square mile).
- The majority of station areas exhibit moderate to low population densities. The land use character of the Southeast Corridor ranges from an intensive mixed-use downtown – with several of the nation's tallest buildings – to a much more auto-oriented, suburban style of development around the corridor's two outermost stations.
- Many jobs located in the CBD are near planned Southeast Corridor stations. Two major universities (Texas Southern University and the University of Houston-Downtown) with a combined enrollment of 44,000 students are served.

Transit-Supportive Plans and Policies: Medium-Low

- There are no coordinated regional growth management policies. The Houston-Galveston Area Council's (local MPO) policy documents include goals related to denser, more transit-oriented development patterns. The Houston area's rapid population increases and sprawl have contributed to an interest in growth planning, but specific initiatives have not been undertaken at the regional level.
- Plans for the downtown and east downtown areas have focused on pedestrian improvements and increasing the mix of residential and other non-office uses. Neighborhood plans define general objectives for increasing the pedestrian friendliness and transit orientation of development, but implementation mechanisms other than funding for infrastructure are limited. Local university-area land use plans will increase density in two planned station areas.
- The City of Houston is not zoned. Private deed restrictions are often used to ensure that standards for land use are maintained, although enforcement has lapsed in some Southeast Corridor neighborhoods. The City may choose to reduce parking requirements in areas where demand can be met through means other than off-street parking, and will consider reductions in the Southeast Corridor. There are no parking requirements for downtown projects.
- METRO will initiate station area planning activities with stakeholders and design teams during preliminary engineering for the Southeast Corridor to ensure that station designs, area land uses, and area plans are complementary, following a similar public outreach effort that was used for the existing Main Street LRT. The entire corridor is within City or State-designated districts that provide funding mechanisms for infrastructure improvements.

Performance and Impacts of Policies: Medium

- Changes to development patterns, including pedestrian- and transit-oriented design features, are evident in the downtown Houston and Midtown areas along the existing Main Street LRT. In contrast, several projects under construction or planned nearby the outermost Southeast Corridor stations appear less transit-supportive, with auto-oriented suburban-style designs.
- The station areas within the Southeast Corridor offer plentiful sites for development, especially on the eastern side of the CBD. Small and large vacant lots are available in proximity to other proposed transit stations and major roadway corridors.

Other Project Justification Criteria

Mobility Improvements Rating: Medium-High	
Within ½-mile radius of boarding areas:	
Existing Employment	147,100
Projected Employment (2025)	175,900
Low Income Households (% of total HH)	2,497 (38%)
Average Per Station:	
Employment	13,370*
Low Income Households	227*
	New Start vs. Baseline
Transportation System User Benefit Per Project Passenger Mile (Minutes)	5.96*

Environmental Benefits Rating: High	
Criteria Pollutant (Reduction in tons)	**New Start vs. Baseline**
Carbon Monoxide (CO)	12
Nitrogen Oxide (NO_x)	1
Volatile Organic Compounds (VOC)	1
Particulate Matter (PM_{10})	0
Carbon Dioxide (CO_2)	2,850
Criteria Pollutant Status	**EPA Designation**
8-Hour Ozone (O_3)	Moderate Non-Attainment Area*
Annual Energy Savings (million British Thermal Units)	37,000

Operating Efficiencies Rating: Medium		
	Baseline	**New Start**
System Operating Cost per Passenger Mile (current year dollars)	$0.265*	$0.269*

* Indicates that measure is a component of rating for each criterion.
N/A indicates information was not available for this entry.

Local Financial Commitment Rating: Medium

The *Medium* local financial commitment rating is based on the *Medium-High* rating for the capital finance plan and the *Medium* ratings for the New Starts share of project costs and the operating finance plan.

Section 5309 New Starts Share of Total Project Costs: 50%
Rating: Medium

METRO is requesting a 50 percent New Starts share of total project costs, which results in a *Medium* rating for this measure.

Locally Proposed Financial Plan		
Source of Funds	**Total Funds ($million)**	**Percent of Total**
Federal: Section 5309 New Starts	$177.2	50.0%
Local: METRO Dedicated Sales Tax	$177.2	50.0%
Total:	**$354.4**	100.0%

NOTE: The financial plan reflected in this table has been developed by the project sponsor and does not reflect a commitment by DOT or FTA. The sum of the figures may differ from total as listed due to rounding.

Capital Finance Plan Rating: Medium-High

The capital finance plan is rated *Medium-High*, based on the average of the ratings assigned to each of the subfactors listed below. The capital condition, commitment of capital funds, and capital funding capacity subfactors received *High* ratings. The completeness of the capital plan was rated *Medium-High*, while the capital cost estimates and planning assumptions subfactor received a *Medium* rating.

Agency Capital Condition: High

- The average age of METRO's bus fleet age is under six years, which is in line with the industry average.
- METRO has no outstanding debt. Therefore, no bond ratings have been assigned.

Completeness of Capital Plan: Medium-High

- The submission was complete and included a 20-year cash flow statement, more than five years of historical data, identification of key assumptions, and a moderate level of detail. The plan also included a limited sensitivity analysis.

Commitment of Capital Funds: High

- METRO's sales tax revenues will cover the non-New Starts share for the Southeast Corridor LRT MOS project.
- METRO's sales tax revenues are considered committed, accounting for 100 percent of the project's non-New Starts share.

Capital Funding Capacity: High

- The project's financial plan shows projected cash balances, reserve accounts, and/or access to credit that would allow METRO to cover cost increases or funding shortfalls equal to approximately 50 percent of project costs.

Capital Cost Estimate and Planning Assumptions: Medium

- Assumptions included in the capital financial plan, including sales tax growth rate assumptions, are consistent with historical experience.
- The capital cost estimate is considered current and reliable. The project's contingency is adequate for this stage of development.

Operating Finance Plan Rating: Medium

The operating finance plan is rated *Medium*, based upon the average of the ratings of the five subfactors listed below. Commitment of operating funds was rated *High*; completeness of the operating plan was rated *Medium-High;* operating funding capacity was rated *Medium*; the operating cost estimates and planning assumptions subfactor received a *Medium-Low* rating; and operating condition was rated *Low*.

Agency Operating Condition: Low

- METRO's current ratio of assets to liabilities, as reported in its most recent audited financial statements, is 0.79.
- METRO's low current ratio is due to a sharp year-over-year increase in liabilities from FY 2002 to FY 2003 as a result of a $45 million payment from METRO's General Mobility Program to the City of Houston per a September 2003 agreement between METRO and the City. The sharp drop in METRO's current ratio from FY 2002 – FY 2003, as reported in METRO's most recent audited financial statements, is a result of this one-time occurrence and is considered anomalous.
- METRO's transit services have increased in the last five years, despite a decline in ridership due to a downturn in regional economic growth.

Completeness of Operating Plan: Medium-High

- The submission was complete and included a 20-year cash flow statement, more than five years of historical data, identification of key assumptions, and a moderate level of detail. The plan also included a limited sensitivity analysis.

Commitment of Operating Funds: High

- All operating funding (fare revenues and dedicated sales tax funding) is considered committed.
- In addition to METRO's farebox revenues, other operating funds include sales tax levies, interest income, and miscellaneous revenue (advertising and ID card fees).

Operating Funding Capacity: Medium

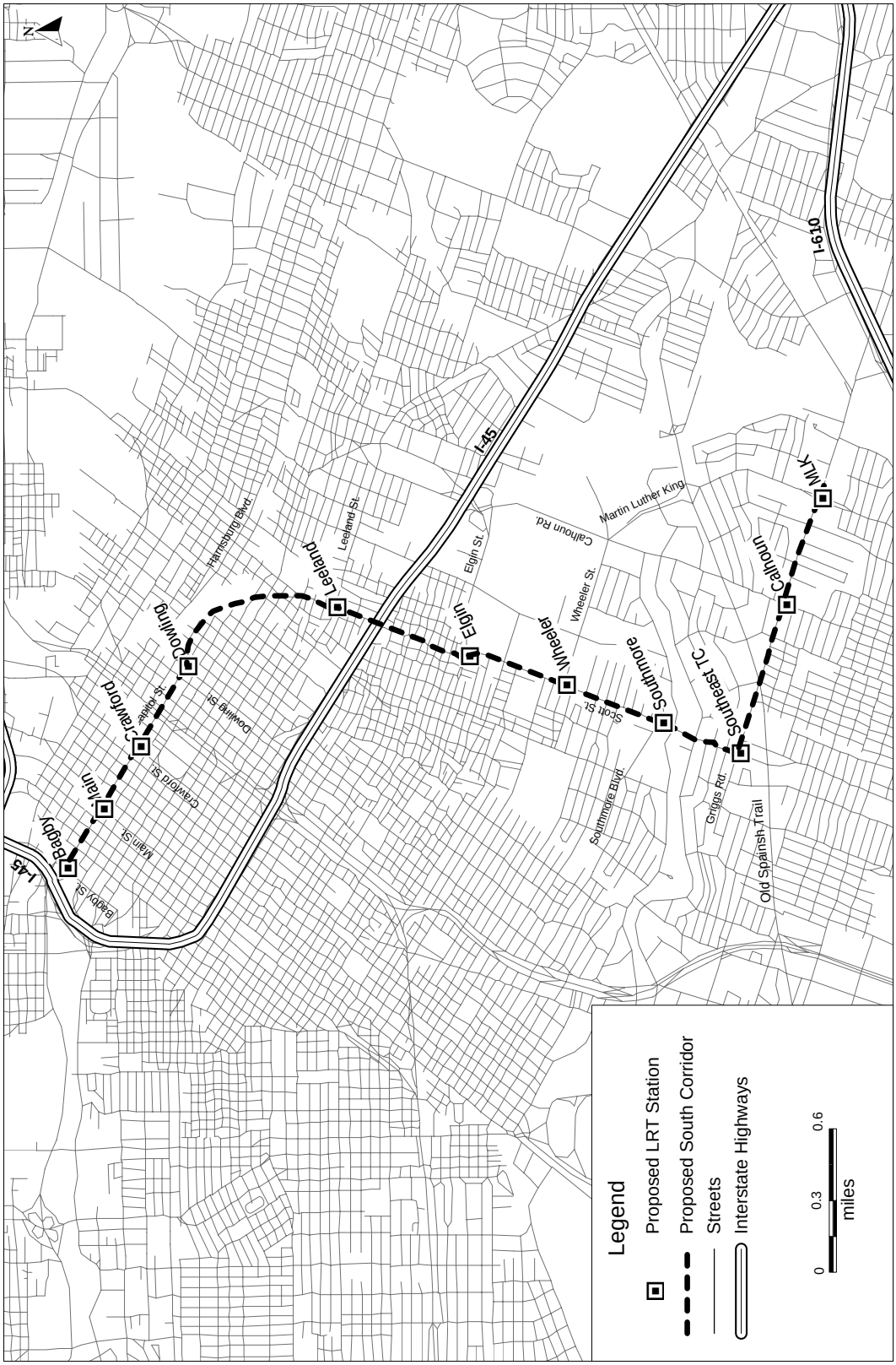
- The project's financial plan shows projected cash balances, reserve accounts, and/or access to credit exceeding 12 percent of annual operating expenses.

Operating Cost Estimates and Planning Assumptions: Medium-Low

- Assumptions on operating and maintenance costs, ridership and farebox revenues are considered optimistic, compared to historical experience.

Southeast Corridor Rapid Transit MOS

Houston, Texas



Norfolk LRT

Norfolk, Virginia

(November 2005)

Hampton Roads Transit (HRT) is proposing to construct and operate an 11-station, 7.4-mile light rail transit (LRT) line within the city of Norfolk that is intended to serve as the initial segment of a regional rapid transit system. The project alignment would begin at the Eastern Virginia Medical Center, move eastward as a dedicated in-street guideway through downtown Norfolk to Norfolk State University, and continue along an abandoned Norfolk Southern Railroad right-of-way (ROW) parallel to Interstate-264 (I-264), to the eastern terminus at Newtown Road. Park-and-ride access to the system would be provided by the construction of new facilities at Newtown Road, Military Highway, and Ballantine Boulevard, as well as shared use of existing parking facilities at the Harbor Park baseball stadium on the southeastern fringe of downtown, where a station is planned. The project scope also includes an LRT maintenance facility and the purchase of nine vehicles. The project will use line-of-sight operations with advanced vehicle location systems. Service would operate at 7.5-minute frequencies during peak periods.

Travel forecasts indicate worsened congestion on I-264 and major arterials (Brambleton Avenue, Virginia Beach Boulevard, Tidewater Drive) within the project corridor through 2025. Options for improving mobility within the area are limited by geographic constraints (numerous waterways) and the absence of transportation rights-of-way. The Norfolk LRT project takes advantage of an abandoned rail ROW and is intended to help meet future travel demand to downtown Norfolk and throughout the corridor, provide improved mobility for transit-dependent populations, and achieve local land use goals. The project is further intended to provide a rapid transit connection from Harbor Park and other fringe park-and-ride facilities to destinations within the downtown area.

Summary Description	
Proposed Project:	Light Rail Transit 7.4 Miles 11 Stations
Total Capital Cost ($YOE):	$203.7 Million (includes $3.6 million in finance charges)
Section 5309 New Starts Share ($YOE):	$99.8 Million (49%)
Annual Forecast Year Operating Cost:	$7.1 Million
Ridership Forecast (2025):	6,500 Average Weekday Boardings 1,600 Daily New Riders
Opening Year Ridership Forecast (2008):	2,900 Average Weekday Boardings
FY 2007 Finance Rating:	**Medium**
FY 2007 Project Justification Rating:	**Medium**
FY 2007 Overall Project Rating:	**Medium**

The project's cost estimate is significantly lower than any other comparable LRT system currently under construction. In addition, HRT's estimate of project travel-time benefits is based upon a recently-adopted parking policy which is intended to result in a future parking deficit in downtown Norfolk. FTA intends to work with HRT to validate the reasonableness and reliability of the cost estimate and downtown parking assumptions prior to advancing the project into final design.

Project Development History and Current Status

In 1997, FTA approved into preliminary engineering (PE) an 18-mile LRT system extending between the cities of Norfolk and Virginia Beach. The Draft Environmental Impact Statement (EIS) for the project was completed in April 1999. In November 1999, Virginia Beach voters failed to approve a local funding measure for the project, resulting in the truncation of the project at Kempsville Road within the city limits of Norfolk. FTA approved the abridged project into PE in October 2002. A Supplemental Draft EIS was completed in January 2003. Since that time, HRT has undertaken additional scope and cost reductions that have resulted in the current 7.4-mile alignment. The Final EIS was published in October 2005 reflecting FTA concerns relative to ridership and cost assumptions. A Record of Decision for the project is anticipated in early 2006.

Significant Changes Since FY 2006 Evaluation (November 2004)

This project was not rated in the *FY 2006 Annual Report on New Starts* because FTA had concerns with HRT's estimate of travel-time benefits, which were based upon an unsubstantiated assumption regarding future parking deficits in downtown Norfolk. In March 2005, FTA met with HRT and various City officials to discuss its concerns and develop a strategy for overseeing project progression. In October 2005 the Norfolk City Council adopted downtown parking restrictions which are intended to support the ridership forecasts for the project. The project implementation schedule has been extended by six months.

Project Justification Rating: Medium

The project is rated *Medium* for project justification based on its *Medium* ratings for cost effectiveness and transit-supportive land use.

Cost Effectiveness Rating: Medium

The *Medium* cost effectiveness rating reflects the level of travel time-benefits (2,100 weekday hours) relative to the project's annualized costs. Pending further analysis of Norfolk's new downtown parking policy and the project capital cost estimate, FTA believes that its current cost effectiveness carries some uncertainty.

Cost Effectiveness	
	New Start vs. Baseline
Cost per Hour of Transportation System User Benefit	$21.66*
Incremental Cost per Incremental Trip	$17.07

* Indicates that measure is a component of Cost Effectiveness rating.

HRT's submission of project benefits indicates that the Norfolk LRT project will predominantly benefit downtown-bound commuters. HRT's travel forecasts assume the existence of a significant parking deficit in downtown Norfolk by 2025. This parking deficit would be relieved, in part, by the connection of the proposed LRT system to parking facilities located on the fringe of the central business district (CBD). Seventy-five percent of projected travel-time benefits are consequently attributable to this park-and-ride market, assuming the projected parking deficit is realized. FTA is reviewing the City of Norfolk's recently-adopted downtown parking policy to ensure that it will result in the realization of the assumed parking constraint.

As noted, the project's cost estimate is significantly lower than any other comparable LRT system currently under construction. Maintenance of the project cost has been achieved through significant scope changes and reductions, the shortening of station platforms, and the deletion of signal and communications systems. The project's modest contingency and assumed annual inflation rates do not provide much cushion for unforeseen site conditions or slippage in project schedule.

Transit-Supportive Land Use Rating: Medium

The *Medium* land use rating is based upon the *Medium-High* rating assigned to transit-supportive plans and policies and performance and impacts of policies, and the *Medium-Low* rating for existing land uses in the project corridor.

Existing Land Use: Medium-Low

- Employment and population levels in the area served by the project are modest. Station area employment is estimated at approximately 53,800 employees. Total CBD employment is 42,000, and population densities average 4,200 persons per square mile in station areas.
- Pedestrian access in the CBD and redeveloping waterfront neighborhoods has improved considerably within the past few years. Elsewhere, neighborhoods are generally walkable, but some developments at each end of the alignment have considerable surface parking.
- Downtown Norfolk generally maintains an adequate parking supply, although some areas suffer from parking shortages. Parking costs in the CBD range from $4 to $14 per day.

Transit-Supportive Plans and Policies: Medium-High

- Jurisdictions in the Hampton Roads area have adopted and applied various tools for growth management, primarily oriented toward the preservation of natural areas.
- The city of Norfolk has adopted and implemented redevelopment plans for the downtown area that focus on creating a mixed-use, pedestrian-scaled environment that builds on historic architecture and amenities such as the waterfront.
- Residential densities in corridor neighborhoods typically range from six to 15 units per acre but are much higher for some newer downtown developments. Redevelopment plans are also being implemented to rebuild residential neighborhoods in the corridor.
- Pedestrian-oriented design guidelines have been adopted for a number of areas in the corridor, especially near downtown, and are being enforced.
- Some downtown and adjacent districts do not require off-street parking and allow provisions for shared parking.
- The city is considering the adoption of a transit overlay district that could be applied to station areas to restrict uses, establish design standards, and restrict parking.
- The city of Norfolk has been a strong leader in planning initiatives to redevelop downtown and many residential neighborhoods of the city. City agencies have a number of financial and regulatory incentives at their disposal and have aided with land acquisition and assembly in redevelopment areas.

Performance and Impacts of Policies: Medium-High

- Significant redevelopment activities have occurred in downtown Norfolk in recent years, and these developments have been consistent with pedestrian-oriented design principles.
- Vacant and underutilized properties are being transformed into mixed-use, urban-scale developments with residential, retail, and office uses.
- Development in the easternmost station areas continues to be auto-oriented.
- There is a moderate amount of redevelopment potential in transit station areas. A market for both new commercial and residential development in the downtown area has been demonstrated and is likely to continue.

Other Project Justification Criteria

Mobility Improvements Rating: Medium-Low	
Within ½-mile radius of boarding areas:	
Existing Employment	53,800
Projected Employment (2025)	62,200
Low Income Households (% of total HH)	1,800 (24%)
Average Per Station:	
Employment	4,890*
Low Income Households	164*
	New Start vs. Baseline
Transportation System User Benefit Per Project Passenger Mile (Minutes)	7.84*

Environmental Benefits Rating: High	
Criteria Pollutant (Reduction in tons)	**New Start vs. Baseline**
Carbon Monoxide (CO)	40
Nitrogen Oxide (NO_x)	3
Volatile Organic Compounds (VOC)	2
Particulate Matter (PM_{10})	0
Carbon Dioxide (CO_2)	1,108
Criteria Pollutant Status	**EPA Designation**
8-Hour Ozone (O_3)	Marginal Non-Attainment Area*
Annual Energy Savings (million British Thermal Units)	10,876

Operating Efficiencies Rating: Medium		
	Baseline	**New Start**
System Operating Cost per Passenger Mile (current year dollars)	$0.433*	$0.439*

* Indicates that measure is a component of rating for each criterion.

Local Financial Commitment Rating: Medium

The *Medium* local financial commitment rating is based on the *Medium-High* rating for the New Starts share of project costs and the *Medium* ratings for both the capital and operating plans.

Section 5309 New Starts Share of Total Project Costs: 49%
Rating: Medium-High

HRT is requesting 49 percent in New Starts funding to cover total project costs, which results in a *Medium-High* rating for this measure.

Locally Proposed Financial Plan		
Source of Funds	**Total Funds ($million)**	**Percent of Total**
Federal:		
Section 5309 New Starts	$99.8	49.0%
Flexible Funds (STP)	$35.5	17.4%
FHWA FY 2003 Earmark	$1.0	0.5%
State:		
General Assembly Appropriations	$1.2	0.6%
Virginia Mass Transit Fund	$20.2	9.9%
Virginia Transportation Trust Fund	$3.6	1.8%
MPO Flexible Funds (STP)	$8.9	4.4%
Local:		
City of Norfolk Bonds	$33.5	16.4%
Total:	**$203.7**	100.0%

NOTE: The financial plan reflected in this table has been developed by the project sponsor and does not reflect a commitment by DOT or FTA. The sum of the figures may differ from the total as listed due to rounding.

Capital Finance Plan Rating: Medium

The capital finance plan is rated *Medium*. The project received a *High* rating on completeness and commitment of capital funds, a *Medium-High* rating on capital funding capacity, and a *Medium-Low* rating on capital condition and capital cost estimates and assumptions. The average of these ratings is *Medium-High*, but the rating has been lowered to *Medium*, because of the *Medium-Low* rating for the capital cost estimates and planning assumptions subfactor.

Agency Capital Condition: Medium-Low

- The average age of HRT's bus fleet is 8.5 years, which is older than the industry average.
- HRT does not have bond ratings.

Completeness of Capital Plan: High

- HRT submitted a very thorough plan that included a 20-year cash flow statement, identification of all key assumptions, a fleet management plan, more than five years of historical data, and an extensive sensitivity analysis.

Commitment of Capital Funds: High

- Approximately 27 percent of non-New Starts funding is committed and 40 percent is budgeted. Local funding is expected to come from bonds issued by the city of Norfolk, Federal flexible funds, and State capital grants.

Capital Funding Capacity Medium-High

- The city of Norfolk (which is responsible for the local share of the project capital cost) can cover cost increases or funding shortfalls through additional bonding equal to more than twice the project cost. However, the city will undoubtedly have other demands on this debt capacity, aside from the transit system.

Capital Cost Estimate and Planning Assumptions: Medium-Low

- Assumptions in the capital financial plan are optimistic compared to historical experience.
- Capital cost contingencies are considered low for this stage of development.

Operating Finance Plan Rating: Medium

The operating finance plan is rated *Medium*. Completeness of the operating plan and commitment of operating funds were rated *High; Medium* ratings were assigned to the operating condition and operating funding capacity subfactors; and a *Medium-Low* rating was assigned to the operating cost estimates and planning assumptions subfactor. The average of these ratings is *Medium-High*, but the rating has been lowered to *Medium*, because of the *Medium-Low* rating for the operating cost estimates and planning assumptions subfactor.

Agency Operating Condition: Medium

- HRT is in average operating condition, with service cutbacks in FY 2002 that eliminated some demonstration services and reduced service in Chesapeake, Portsmouth, and Virginia Beach.
- HRT's current ratio of assets to liabilities as reported in its most recent audited financial statement (FY 2004) is 1.26.

Completeness of Operating Plan: High

- HRT submitted a very thorough plan that contained all required elements including a 20-year cash flow statement, identification of all key assumptions with an extensive level of detail, more than five years of historical data, and an extensive sensitivity analysis.

Commitment of Operating Funds: High

- Eighty-three percent of operating funding is committed. The city of Norfolk will fund project operating and maintenance costs that are not covered by fare revenues and State operating assistance.

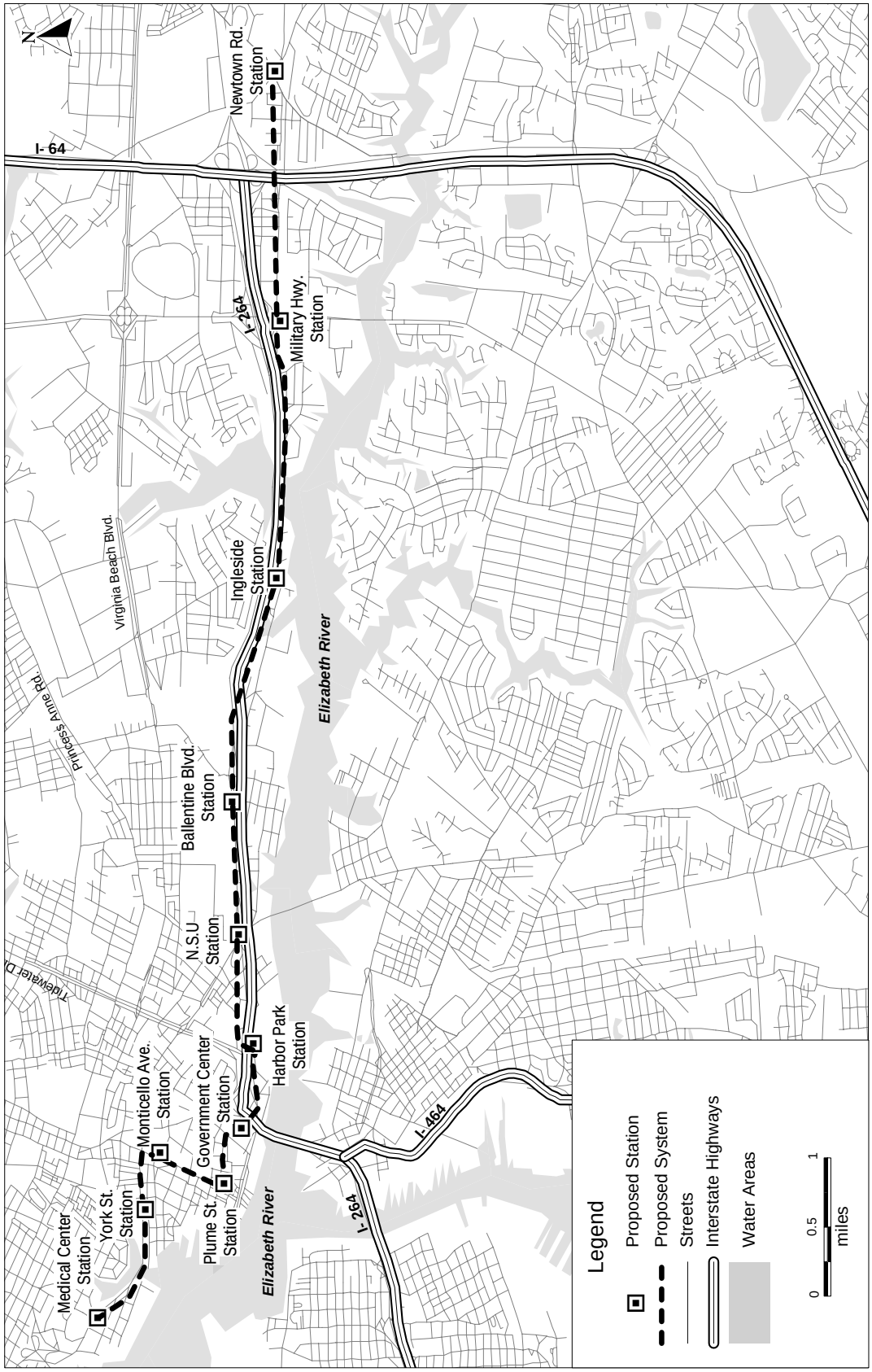
Operating Funding Capacity: Medium

- The project's financial plan shows projected cash balances, reserve accounts, and/or access to credit exceeding 20 percent of annual operating expenses.

Operating Cost Estimates and Planning Assumptions: Medium-Low

- Ridership, fare revenue, inflation, and operating cost assumptions are optimistic compared to historical experience.

Norfolk LRT
Norfolk, Virginia



Dulles Corridor Metrorail Project – Extension to Wiehle Avenue

Northern Virginia

(November 2005)

The Virginia Department of Rail and Public Transportation (VDRPT) in cooperation with the Washington Metropolitan Area Transit Authority (WMATA) is proposing to construct an 11.6-mile extension of the region's Metrorail system from the existing East Falls Church Metrorail station through the large Tysons Corner employment and retail center to Wiehle Avenue in the Reston area of Fairfax County. The project will be operated as a separate Metrorail line under a new service configuration that terminates in Washington DC at the existing Stadium Armory Metrorail station. The proposed project scope includes construction of five new stations, a major park-and-ride lot at Wiehle Avenue, and expanded storage capacity at WMATA's West Falls Church rail yard. The project also includes the purchase of 64 heavy rail vehicles. The extension would be operated by WMATA, with trains operating at seven minute peak frequencies from the Wiehle Avenue station through East Falls Church, continuing along the existing Metrorail Orange Line track east through Arlington County, downtown Washington DC, Capitol Hill, and terminating at Stadium Armory. The 11.6-mile extension is the first minimum operable segment (MOS) of a proposed 23.1-mile extension of Metrorail west to Dulles International Airport and Loudoun County.

The Tysons Corner area contains over 25 million square feet of office space and 110,000 employees. Redevelopment and expansion of the major retail and office development is underway. The Reston area also contains significant mixed-use development, with a substantial employment base and large residential population, many of whom commute to employment sites in Washington D.C. The primary transportation arteries that serve this rapidly growing area are Routes 267 (the Dulles Toll Road) and 7, both of which experience significant congestion during peak hours. The proposed Metrorail extension would expand transportation capacity to and from Reston and the Tysons Corner regional activity centers, (including reverse commute trips) while providing a direct rail link for commuters from northwest Fairfax and Loudoun Counties to employment opportunities in Tysons Corner, the Rosslyn - Ballston corridor, downtown Washington DC, and other locations adjacent to stations along the 106-mile Metrorail system.

Summary Description	
Proposed Project:	Heavy Rail 11.6 Miles 5 Stations
Total Capital Cost ($YOE):	$1,840.1 Million
Section 5309 New Starts Share ($YOE):	$920.0 Million (50.0%)
Annual Forecast Year Operating Cost:	$67.6 Million
Ridership Forecast (2030):	77,400 Average Weekday Boardings 16,000 Daily New Riders
Opening Year Ridership Forecast (2011):	62,800 Average Weekday Boardings
FY 2007 Finance Rating:	**Medium**
FY 2007 Project Justification Rating:	**Medium**
FY 2007 Overall Project Rating:	**Medium**

VDRPT's cost estimate assumes several scope modifications which require further design to mitigate uncertainties in the project cost and contingency level. VDRPT's New Starts funding request of $920 million is significantly higher than what has historically been provided by FTA to other major transit capital investment projects.

Project Development History and Current Status

In 1996, a major investment study was completed that recommended a fixed guideway transit project in the Dulles Corridor. In July 1999, the Dulles Corridor Task Force issued the *Supplement to the Dulles Corridor Transportation Study* that reaffirmed the selection of a rail system, but also recommended implementation of bus rapid transit (BRT) service as an interim step to constructing rail. The phased bus/rail system was adopted into the National Capital Region Transportation Planning Board's long range plan in October of 1999. In March of 2000, FTA approved initiation of preliminary engineering (PE) for the Dulles Corridor Bus Rapid Transit Project.

Upon completion of a Draft Environmental Impact Statement (EIS) in November 2002, a 23.1-mile Metrorail extension to Route 772 in Loudoun County replaced BRT as the locally preferred alternative (LPA). Based upon FTA and local concerns that the full LPA would be too costly to implement at one time, VDRPT and WMATA identified an MOS terminating at Wiehle Avenue. FTA approved a Supplemental Draft EIS in October 2003 reflecting the Wiehle Avenue MOS. FTA approved VDRPT's request to initiate PE for the Extension to Wiehle Avenue project in June 2004. VDRPT received a Record of Decision on the Final EIS that covers both the MOS and Loudoun County extension in April 2005. VDRPT is currently undertaking an environmental assessment of recently proposed project scope changes that will require an amended environmental Record of Decision.

Significant Changes Since FY 2006 Evaluation (November 2004)

The capital cost of the project has increased significantly, from $1,521.5 million to $1,840 million, due primarily to further refinement of real estate and utility requirements partially offset by project scope changes, including shortening of the tunnel segment through Tysons Corner. The forecast year for the project's travel demand estimates has changed from 2025 to 2030.

Project Justification Rating: Medium

The project is rated *Medium* for project justification based on a *Medium-Low* rating for cost effectiveness and a *Medium* rating for transit-supportive land use.

Cost Effectiveness Rating: Medium-Low

The *Medium-Low* cost effectiveness rating reflects the level of travel-time benefits (18,100 hours each weekday) relative to the project's annualized costs. Pending the outcome of further design work (which may impact the capital cost estimate), the estimate of project cost effectiveness carries some uncertainty.

Cost Effectiveness	
	New Start vs. Baseline
Cost per Hour of Transportation System User Benefit	$23.63*
Incremental Cost per Incremental Trip	$26.78

* Indicates that measure is a component of Cost Effectiveness rating.

Over 50 percent of project travel-time benefits result from additional off-peak rail service provided between the East Falls Church and Stadium Armory Metrorail stations. Substantial travel-time benefits are also attributable to trips originating in Reston destined for downtown Washington DC and other destinations adjacent to the regional Metrorail system, as well as reverse commute trips to Tysons Corner.

The project's capital cost has increased by $319 million since the request to initiate PE was approved in June 2004. VDRPT is pursuing several modifications to the project scope, and some scope elements require further design to mitigate uncertainties with the current cost estimate. The capital cost estimate for the guideway and stations, above and below grade, is comparable to other heavy rail projects undertaking PE.

Transit-Supportive Land Use Rating: Medium

The *Medium* land use rating reflects the *Medium-High* ratings assigned to transit-supportive land use plans and policies and the performance of those plans and policies, and the *Medium-Low* rating assigned to existing land use.

Existing Land Use: Medium-Low

- Land use around proposed stations is highly oriented toward large office and retail developments designed for automobile commuting. Approximately 71,000 jobs are located within ½ mile of the proposed stations, although less than 12,500 residents live within ½ mile of the stations.
- The project provides direct rail access to the region's central business district, which contains over 650,000 jobs.
- Existing developments within Tysons Corner generally feature large setbacks with minimal walkways. Sidewalks are provided at about 60 percent of approaches to intersections, and all stations are located on major auto routes.
- Daily parking rates have gradually been instituted in the core of Tysons Corner, but remain rare and run only as high as $5 a day, while parking in Reston is typically free. Parking in the Washington, DC CBD costs up to $15 per day.

Transit-Supportive Plans and Policies: Medium-High

- Tysons Corner is an attractive area for commercial development, and is expecting up to 40 percent increases in development over the next 25 years. Fairfax County has established a special tax district to support the rail system, and is permitting higher development densities in areas surrounding proposed stations. Higher density development allowed in rail station areas is considered an incentive for transit-oriented development on the few remaining vacant parcels and for redevelopment of some of the existing low-density strip malls in the corridor.
- Fairfax County has begun the planning process needed to make the area more transit-supportive. Both regional and local plans focus high-density development in Tysons Corner and, specifically, adjacent to the proposed rail stations.
- Fairfax County uses the proffer system and bonus/incentive zoning to control and direct development. Additional densities of floor area ratios (FAR) of 1.0 – 2.5 are allowed within 1000 feet of station platforms compared to allowed FARs of 0.6 – 1.0 beyond 1600 feet of proposed stations.
- Policies also support more mixed-use and residential development with a 3:1 density bonus for developments with at least one third residential use. Parking reductions are also offered to development adjacent to transit.
- Adopted urban design guidelines require new developments to be designed with a pedestrian-friendly layout and to provide streetscape amenities. They include provisions to minimize building setbacks and parking in front of buildings, to develop and enlarge a pedestrian network of sidewalks and plazas, and to provide pedestrian lighting and street furniture. Enforcement of requirements for transit-supportive layouts and improvements to pedestrian infrastructure by developers will be key to attaining high rates of transit use in the corridor.

Performance and Impacts of Policies: Medium-High

- Several aging office buildings near the proposed Tysons East station have been demolished, and construction is underway for office/mixed use around the proposed station site. The developer will provide improved access to the station site and is orienting the development layout towards the station.
- Areas adjacent to Metrorail stations throughout WMATA's system have experienced dense, mixed-use development, including the Rosslyn-Ballston corridor, Crystal City, Bethesda, and Silver Spring.

Other Project Justification Criteria

Mobility Improvements Rating: Medium-Low	
Within ½-mile radius of boarding areas:	
Existing Employment	71,000
Projected Employment (2025)	115,300
Low Income Households (% of total HH)	170 (4%)
Average Per Station:	
Employment	14,200*
Low Income Households	34*
	New Start vs. Baseline
Transportation System User Benefit Per Project Passenger Mile (Minutes)	1.91*

Environmental Benefits Rating: High	
Criteria Pollutant (Reduction in tons)	**New Start vs. Baseline**
Carbon Monoxide (CO)	209
Nitrogen Oxide (NO_x)	36
Volatile Organic Compounds (VOC)	17
Particulate Matter (PM_{10})	12
Carbon Dioxide (CO_2)	11,980
Criteria Pollutant Status	**EPA Designation**
Carbon Monoxide (CO)	Maintenance Area*
Particulate Matter (PM_{10})	Non-Attainment Area*
8-Hour Ozone (O_3)	Moderate Non-Attainment Area*
Annual Energy Savings (million British Thermal Units)	93,750

Operating Efficiencies Rating: Medium		
	Baseline	**New Start**
System Operating Cost per Passenger Mile (current year dollars)	0.180*	$0.185*

* Indicates that measure is a component of rating for each criterion.
N/A indicates information was not available for this entry.

Local Financial Commitment Rating: Medium

The *Medium* local financial commitment rating is based on a *Medium-High* rating for the operating finance plan and *Medium* ratings for the New Starts share of project costs and the capital finance plan.

Section 5309 New Starts Share of Total Project Costs: 50% Rating: Medium

VDRPT is requesting a 50 percent New Starts share of total project costs, which results in a *Medium* rating for this measure.

Locally Proposed Financial Plan		
Source of Funds	**Total Funds ($million)**	**Percent of Total**
Federal: Section 5309 New Starts	$920.0	50.0%
State: Virginia Transportation Act 2000 Dulles Toll Road Revenues Commonwealth of VA Bonds	 $51.7 $263.3 $145.0	 2.8% 14.3% 7.9%
Local: Fairfax County Transportation Improvement District Fairfax County General Fund Revenues or Tax Proceeds	 $400.0 $60.0	 21.7% 3.3%
Total:	**$1,840.1**	100.0%

NOTE: The financial plan reflected in this table has been developed by the project sponsor and does not reflect a commitment by DOT or FTA. The sum of the figures may differ from the total as listed due to rounding.

Capital Finance Plan Rating: Medium

The capital finance plan is rated *Medium*, based upon the average of the ratings assigned to each of the subfactors listed below. The commitment of capital funds is rated *High*; the capital cost estimate and planning assumptions subfactor is rated *Medium-Low;* and the remaining subfactors are rated *Medium*.

Agency Capital Condition: Medium

- The average age of WMATA's bus fleet is 8.4 years, which is older than the industry average.
- VDRPT and Fairfax County have excellent bond ratings (Moody's Investors Service AAA).

Completeness of Capital Plan: Medium

- The submission was partially complete. The project financial plan included a 20-year cash flow statement, more than five years of historical data, identification of key assumptions, a moderate level of detail, and a sensitivity analysis. However, the system-wide financial plan lacks a long-term forecast of capital costs and funding for the WMATA system.

Commitment of Capital Funds: High

- Over 78 percent of non-New Starts funding is committed. Sources of funds include a property tax to be levied in a new Transportation Improvement District (TID), toll revenue from the Dulles Toll Road, and the Commonwealth's Transportation Act of 2000.

Capital Funding Capacity: Medium

- The project's financial plan shows projected cash balances, reserve accounts, and/or access to credit through the Commonwealth of Virginia that would allow VDRPT to cover cost increases or funding shortfalls of up to 37 percent of project costs. However, because this reflects the Commonwealth's entire net debt capacity, it is not reasonable to expect it would all be available to the project. Nonetheless, there is sufficient capacity to warrant a *Medium* rating.

Capital Cost Estimate and Planning Assumptions: Medium-Low

- The assumptions in the capital plan are consistent with historical experience. The financial plan shows WMATA's infrastructure renewal needs being met in the near-term, although there is some concern about longer-term needs, particularly related to the ability of the agency to meet future ridership demand.
- The level of contingency for the project is considered low for this stage of development.

Operating Finance Plan Rating: Medium-High

WMATA will operate the project. The operating finance plan is rated *Medium-High*, based upon the average of the ratings of the five subfactors listed below. The operating condition and commitment of operating funds subfactors are rated *High*; the operating funding capacity and operating cost estimates and planning assumptions subfactors are rated *Medium*; and plan completeness is rated *Medium-Low*.

Agency Operating Condition: High

- WMATA is in very good operating financial condition. In the past five years there have been no cash flow shortages in the operating plan, while service has expanded.
- WMATA's current ratio of assets to liabilities as reported in its most recent audited financial statement is 6.3, indicating excellent liquidity.

Completeness of Operating Plan: Medium-Low

- The operating financial plan includes a 20-year cash flow projection, but supporting data are sparse. Key supporting data are absent including historical operating data and operating expenses, revenue forecasts for every operating funding source, and ridership assumptions that underpin the passenger revenue calculations.
- Operating subsidies to be paid by WMATA pact jurisdictions are assumed to be available, without supporting analysis regarding the affordability of operating subsidy and competing local capital funding commitments.

Commitment of Operating Funds: High

- All operating funding is considered committed. This reflects a requirement of the WMATA compact that each jurisdiction pay a share of operating costs based on an explicit formula.

Operating Funding Capacity: Medium

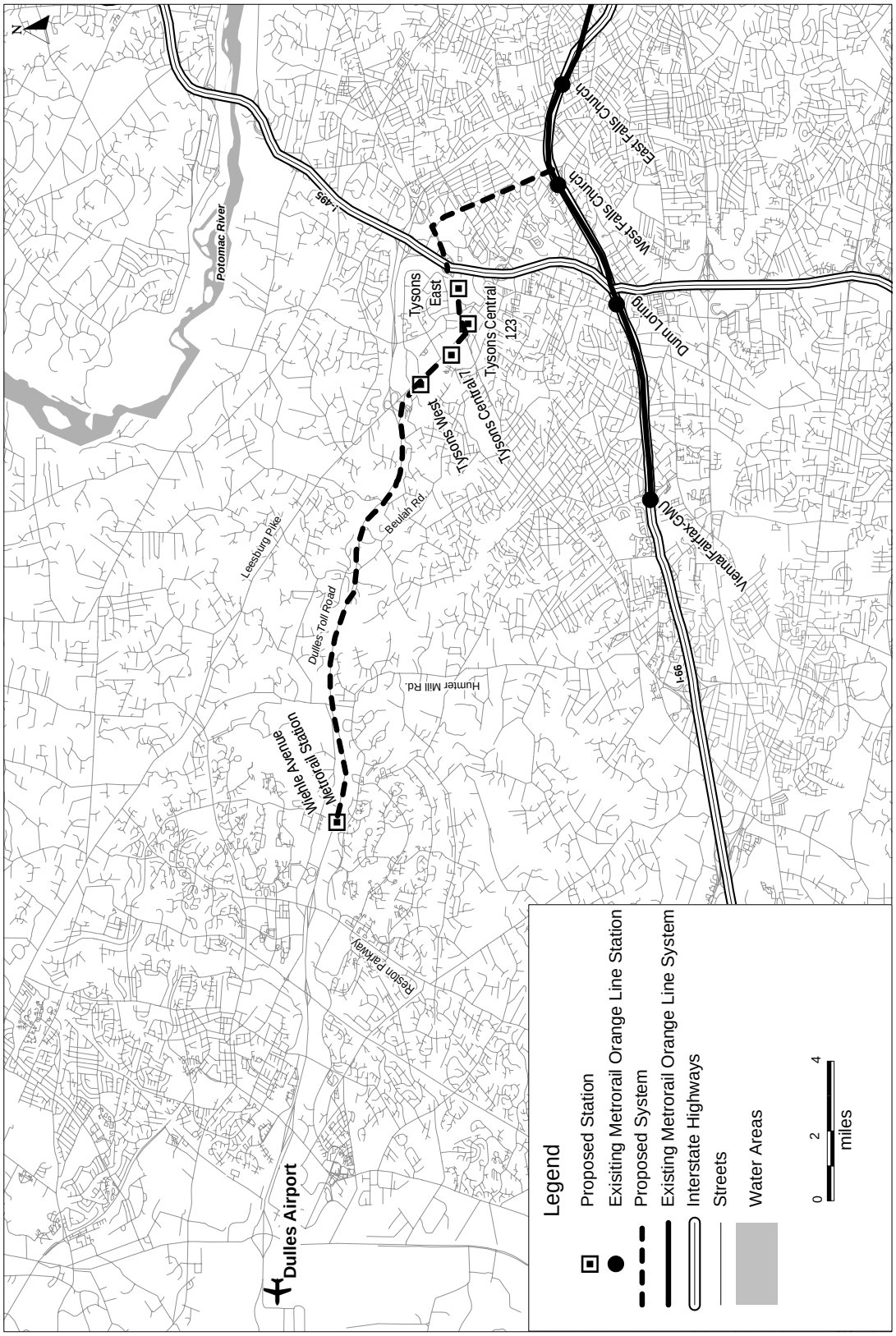
- The project's financial plan does not show projected cash balances, reserve accounts, and/or access to credit. Because the operating plan is fiscally balanced (i.e., no operating surpluses or shortfalls), the agency's current working capital would not be diminished and would be sufficient to fund 50 percent of operating cost.
- It is not possible to determine from the information submitted if the projected 6.5 percent annual increase in local subsidy requirements is financially feasible.

Operating Cost Estimates and Planning Assumptions: Medium

- Although the forecasts of operating and maintenance costs and passenger revenues are slightly conservative, they are offset by the optimistic assumptions regarding large growth in the operating subsidy provided by local jurisdictions.

Dulles Corridor Metrorail Project - Extension to Wiehle Avenue

Northern Virginia



University Link LRT Extension

Seattle, Washington

(November 2005)

The Central Puget Sound Regional Transit Authority, commonly known as Sound Transit, is proposing to implement an extension of the Central Link light rail transit (LRT) Initial Segment currently under construction from the Segment's northern terminus at Westlake Station in downtown Seattle to the University of Washington, 3.1 miles to the northeast. The all-tunnel alignment also includes a station at Capitol Hill. 30 vehicles would be procured as part of the project scope, which would permit 5-minute peak period operations throughout the entire Central Link line (which by 2030 is proposed to extend south to SeaTac International Airport). University Link itself is the first phase of Sound Transit's planned North Link LRT extension to the Northgate Transit Center in North Seattle.

The University Link corridor is the most densely developed residential and employment area in the Central Puget Sound region and the state of Washington. The three largest urban centers in the state – downtown Seattle, Capitol Hill/First Hill, and the University District – are located along the alignment. However, travel by private vehicle and bus between these areas is extremely congested due to high traffic volumes and the corridor's unique physical geography. First Hill and Capitol Hill rise sharply northeast of downtown Seattle, and Interstate 5 (I-5) – the region's primary north-south freeway corridor – runs along the base of these hills, separating them from downtown. The steep grades and limited crossing points of I-5 exacerbate congestion between downtown and the First Hill/Capitol Hill urban center. Farther to the north, the University District is separated from Capitol Hill and downtown Seattle by Portage Bay and the Lake Washington Ship Canal; only three river crossings (two of them drawbridges) connect the University with the southern portion of the corridor.

Furthermore, while I-5 north of downtown features reversible express lanes to accommodate AM inbound and PM outbound travel, the significant and growing reverse-commute market between downtown (and points south) and Capitol Hill/First Hill and the University District enjoys no such advantage, resulting in a substantial disparity between northbound and southbound transit travel times during peak periods. The University Link LRT Extension is intended to provide more reliable and faster bi-directional transit service to and between these urban centers, while supporting local land use goals and contributing to the maintenance of 1990 traffic levels at the University of Washington, which, by prior agreement, is necessary for the City of Seattle to approve any new campus development.

Summary Description	
Proposed Project:	Light Rail Transit 3.1 Miles 2 Stations
Total Capital Cost ($YOE):	$1,720.0 Million (includes $220.0 million in finance costs)
Section 5309 New Starts Share ($YOE):	$700 Million (40.7%)
Annual Forecast Year Operating Cost:	$28.9 Million
Ridership Forecast (2030):	40,200 Average Weekday Boardings 17,400 Daily New Riders
Opening Year Ridership Forecast (2016):	Not Available
FY 2007 Finance Rating:	**Medium-High**
FY 2007 Project Justification Rating:	**Medium-High**
FY 2007 Overall Project Rating:	**High**

Project Development History and Current Status

The University Link LRT Extension is part of the Central Link LRT system that has been in planning for more than two decades. In 1999, Sound Transit published an Environmental Impact Statement (EIS) for a Central Link alignment which extended from South 200th Street in the City of Seatac to North 103rd Street in the City of Seattle. Due to financial constraints, Sound Transit identified three operable segments for implementation, the first of which extended from just south of downtown Seattle to the University of Washington. FTA awarded a Full Funding Grant Agreement (FFGA) for this project in January 2001.

Due to cost increases, the FFGA was suspended later that year. Sound Transit subsequently redefined the Central Link project. An "Initial Segment" of the project runs from the Westlake Station of the existing Downtown Seattle Transit Tunnel south to Tukwila; this project alignment is currently being constructed under an FFGA executed by FTA in October 2003. The North Link segment would connect the Initial Segment's northern terminus with the Northgate Transit Center. Sound Transit completed a Draft Supplemental EIS for North Link in December 2003. The Sound Transit Board selected the locally preferred alternative for North Link in July 2005, and the following month selected the 3.1-mile University Link Extension as the first phase of the implementation of North Link. FTA issued a limited-scope Draft Supplemental EIS in October 2005 to address changes in the preferred alternative, including an alternative route through the University of Washington. FTA notified Congress of its intent to approve preliminary engineering (PE) for the project in November 2005; PE approval is assumed in December 2005. Sound Transit is currently completing the Final EIS for North Link, including the University Link project, with a Record of Decision anticipated in Spring 2006.

Project Justification Rating: Medium-High

The *Medium-High* rating for project justification is based on a *Medium* rating for cost effectiveness and a *Medium-High* rating for transit-supportive land use.

Cost Effectiveness Rating: Medium

The *Medium* rating is based on the level of travel-time benefits (14,000 average weekday hours) relative to the project's annualized costs.

Cost Effectiveness	
	New Start vs. Baseline
Cost per Hour of Transportation System User Benefit	$19.93*
Incremental Cost per Incremental Trip	$16.84

* Indicates that measure is a component of Cost Effectiveness rating.

The University Link LRT Extension is intended to provide improved bi-directional transit access and faster travel times between Capitol Hill, the University District, downtown Seattle, and points south. Nearly two-thirds of project travel-time benefits accrue to travelers destined for the University District or Capitol Hill, while 25 percent of benefits are for trips originating in these station areas destined for other parts of the region. Over 20 percent of project benefits accrue to trips internal to the project corridor. Approximately 10 percent of project benefits are the result of improved LRT frequencies throughout the entire Central Link line necessitated by the higher passenger loads caused by the extension.

The project's level of design is relatively advanced for a project just approved into preliminary engineering, owing to the amount of engineering and design already completed for the 2001 Central Link alignment. FTA's review of the project cost estimate further indicates that it was prepared in accordance with good industry practice. Consequently, there is an increased level of confidence in the University Link LRT Extension's current budget and schedule relative to the defined scope. The total project contingency appears sufficient but unallocated contingencies and assumed cost inflation rates may be low and should be re-examined by Sound Transit.

Transit-Supportive Land Use Rating: Medium-High

The *Medium-High* land use rating is based upon the *High* rating assigned to transit supportive policies and the *Medium-High* ratings assigned to existing land use and the performance of policies.

Existing Land Use: Medium-High

- The University Link connects the densely developed Seattle CBD to the Capitol Hill neighborhood and the University of Washington campus. Employment in the Seattle CBD was a relatively high 183,200 in 2000. Capitol Hill, a mixed-use urban neighborhood with the most dense residential development in the Puget Sound Region, is also home to two colleges and four large medical facilities. The University of Washington is home to 35,000 students and 20,000 faculty and staff. The two project station areas have a combined population of nearly 21,000 and 23,700 jobs, with an average population density of 16,400 persons per square mile.
- Parking in the CBD is relatively expensive, up to $26 daily. Total parking provided for the UW campus is capped at a restrictive 12,300 which is roughly one space for every five students, faculty, and staff. In the Capitol Hill neighborhood, most parking is on-street or in small off-street lots, and is highly utilized.

Transit-Supportive Plans and Policies: High

- Growth management policies are strong at all levels of government. The state's Growth Management Act requires establishment of an urban growth boundary, reflected in local comprehensive plans. King County's planning policies established this boundary and designated urban centers, including downtown Seattle, Capitol Hill, and the University District. Seattle's comprehensive plan identifies both the Capitol Hill and University of Washington station areas as urban centers or villages, in which new growth will be concentrated. The region's Vision 2020 land use plan identifies policies used to guide development and control urban sprawl.
- Seattle's Comprehensive Plan and neighborhood plans for the Capitol Hill and University District call for the concentration of growth in compact walkable neighborhoods known as urban villages. Station area planning processes have been completed and resulted in recommendations including changes to zoning, parking policies, development opportunities, and other actions. Many of these recommendations have been implemented. For example, station area overlay districts and rezones have been accomplished to prohibit auto-oriented uses, increase densities, and reduce parking requirements in the Capitol Hill station area. The UW Campus Master Plan defines opportunities for building expansion, provides design guidelines, and recommends pedestrian improvements.
- A range of tools exist to implement policies that are not otherwise mandated by law. These include tax increment financing, multi-family tax abatement and exemption programs, a location efficient mortgage program, and funding provided through the Washington State Commute Trip Reduction Act. Regional, county, and city agencies have all implemented outreach activities, technical assistance, and financial incentives to promote transit-oriented development.

Performance and Impacts of Policies: Medium-High

- Regional monitoring of growth targets in 2002 by the Puget Sound Regional Council indicates that growth is in fact occurring in targeted areas, with King County the most aggressive in targeting this growth in its urban centers. Some instances exist of coordination of development with the LRT Initial Segment planning and construction.
- There is not a significant amount of land available for development in either of the two University Link station areas. However, redevelopment and infill development is expected to be supportive of transit, based on policies and zoning adopted in each area.

Other Project Justification Criteria

Mobility Improvements Rating: Medium-High	
Within ½-mile radius of boarding areas:	
Existing Employment	23,700
Projected Employment (2030)	35,000
Low Income Households (% of total HH)	1,990 (15%)
Average Per Station:	
Employment	11,830*
Low Income Households	1,000*
	New Start vs. Baseline
Transportation System User Benefit Per Project Passenger Mile (Minutes)	2.82*

Environmental Benefits Rating: Medium	
Criteria Pollutant (Reduction in tons)	**New Start vs. Baseline**
Carbon Monoxide (CO)	602
Nitrogen Oxide (NO_x)	52
Volatile Organic Compounds (VOC)	46
Particulate Matter (PM_{10})	1
Carbon Dioxide (CO_2)	11,816
Criteria Pollutant Status	**EPA Designation**
Carbon Monoxide (CO)	Maintenance Area
Particulate Matter (PM_{10})	Maintenance Area
Annual Energy Savings (million British Thermal Units)	151,198

Operating Efficiencies Rating: Medium		
	Baseline	**New Start**
System Operating Cost per Passenger Mile (current year dollars)	$0.392*	$0.372*

* Indicates that measure is a component of rating for each criterion.
N/A indicates information was not available for this entry.

Local Financial Commitment Rating: Medium-High

The *Medium-High* local financial commitment rating is based on the *Medium-High* ratings assigned to the New Starts share of project costs and both the capital and operating finance plans.

Section 5309 New Starts Share of Total Project Costs: 41%
Rating: Medium-High

Sound Transit is requesting a less than 41 percent New Starts share of total project costs, which equates to a *Medium-High* rating for this measure.

Locally Proposed Financial Plan		
Source of Funds	**Total Funds ($million)**	**Percent of Total**
Federal: Section 5309 New Starts	$700.0	40.7%
Local: Local Option Taxes Bonds Additional Revenues	 $230.0 $490.0 $300.0	 13.4% 28.5% 17.4%
Total:	**$1,720.0**	100.0%

NOTE: The financial plan reflected in this table has been developed by the project sponsor and does not reflect a commitment by DOT or FTA. The sum of the figures may differ from the total as listed due to rounding.

Capital Finance Plan Rating: Medium-High

The capital finance plan is rated *Medium-High*, based upon the average of ratings assigned to each of the subfactors listed below. The commitment of capital funds subfactor was rated *High*. Capital condition and completeness of the capital plan were rated *Medium-High*. The capital cost estimates and planning assumptions subfactor was rated *Medium*. Capital funding capacity was rated *Medium-Low*.

Agency Capital Condition: Medium-High

- The average age of Sound Transit's bus fleet is 5.1 years, which is significantly younger than the industry average. The age of the agency's light rail and commuter rail fleet is also very young at two and five years respectively.
- Sound Transit's good bond ratings, which were issued in March 2005, are as follows: Moody's Investors Service Aa3 and Standard and Poor's Corporation AA-.

Completeness of Capital Plan: Medium-High

- The capital plan is complete and includes a 20-year cash flow, key assumptions, moderate detail, a fleet management plan, a sensitivity analysis and more than five years of historical data.

Commitment of Capital Funds: High

- Over 70 percent of non-New Starts funding is committed. The non-Section 5309 capital funds are comprised of Sound Transit cash provided by local option sales and use taxes, existing or new bond proceeds, and additional local resources.

Capital Funding Capacity: Medium-Low

- The project's financial plan shows projected cash balances, reserve accounts, and/or access to credit that would allow Sound Transit to cover cost increases or funding shortfalls equal to approximately 13 percent of project costs. Sound Transit has ample debt capacity as an agency. However, Sound Transit's financial policies impose local/internal constraints that limit the amount of funds available for this project.

Capital Cost Estimate and Planning Assumptions: Medium

- Sound Transit capital planning assumptions are conservative compared to historical experience.
- The cost estimate is considered current and reliable, although unallocated contingencies and cost escalation assumptions may be low.

Operating Finance Plan Rating: Medium-High

The operating finance plan is rated *Medium-High*, based upon the average of the ratings of the five subfactors listed below. Completeness of the operating plan was rated *Medium;* the operating cost estimates and planning assumptions subfactor was rated *Medium-Low;* and the remaining subfactors were rated *High*.

Agency Operating Condition: High

- Sound Transit is in very good condition. Sound Transit has not experienced any recent service cutbacks. On the contrary, Sounder commuter rail service continues to ramp up as additional round-trips are added, while Regional Express bus service increases gradually.
- Sound Transit's current ratio of assets to liabilities as reported in its most recent audited financial statement is 6.2.

Completeness of Operating Plan: Medium

- The submission was complete. It included a 20-year cash flow statement, a limited sensitivity analysis, and a moderate level of detail. While key assumptions regarding the operating plan were stated and eight years of historical data were provided, the data was provided at only a highly summarized level.

Commitment of Operating Funds: High

- All operating funding is committed. Sound Transit's operating expenses are entirely funded by dedicated local option (sales and use/motor vehicle excise (MVET)/car rental) taxes, fares and other system-generated revenue, especially investment income and advertising.

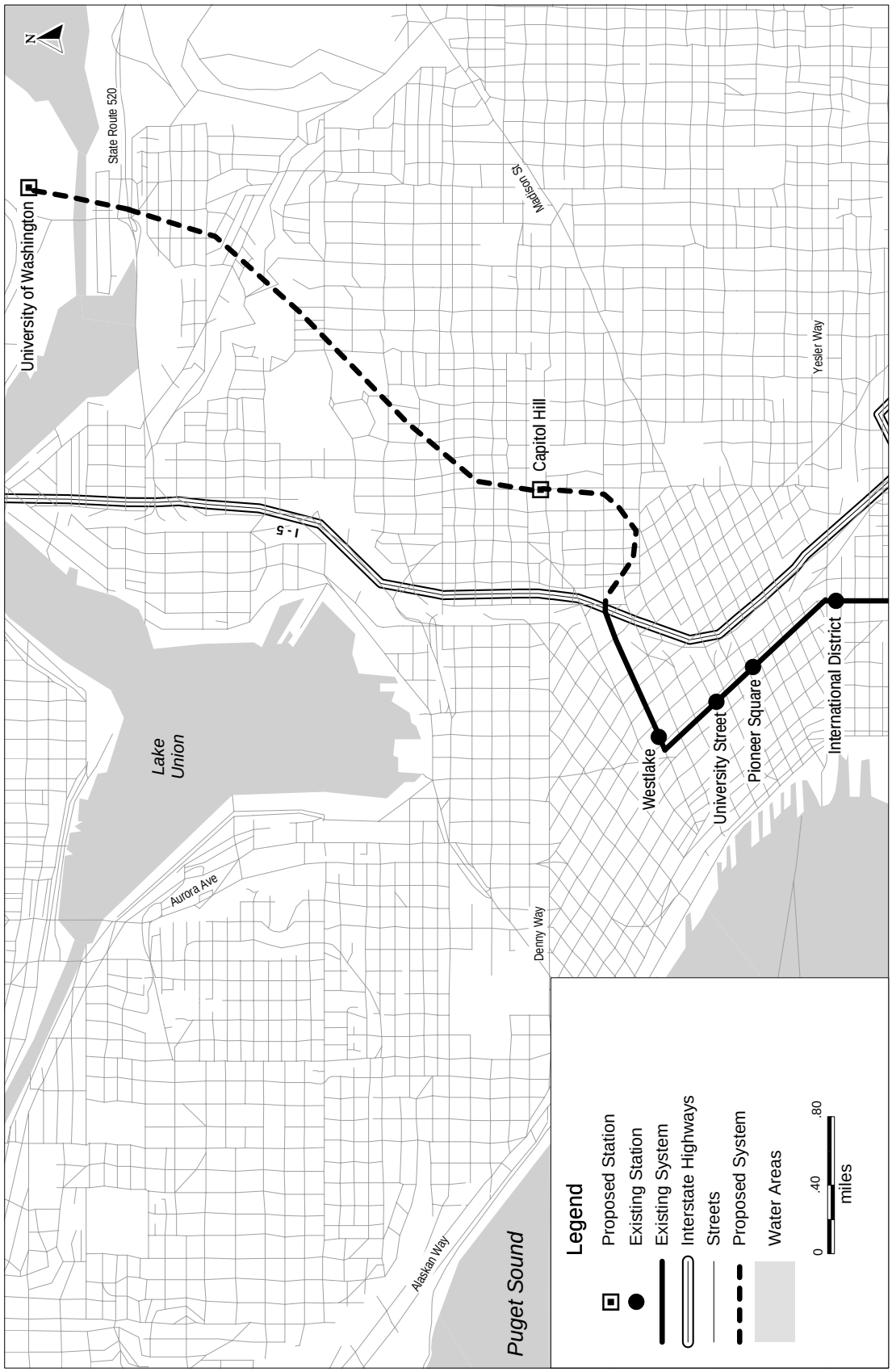
Operating Funding Capacity: High

- The project's financial plan shows cash balances, reserve accounts and/or access to credit exceeding 100 percent of annual operating expenses.

Operating Cost Estimates and Planning Assumptions: Medium-Low

- Light rail fare revenue assumptions are much higher than national experience.
- It is difficult to compare the growth in operating and maintenance expenses to historical trends because Sound Transit is a relatively new and emerging transit agency, with no experience operating light rail. Sound Transit's estimates of light rail operating costs place its future system near the middle of costs experienced by other light rail operations in the United States.

University Link LRT Extension
Seattle, Washington



Appendix B
FY 2007 Evaluation and Rating Process

FY 2007 New Starts Evaluation and Rating Process

This document describes the methodology that the Federal Transit Administration (FTA) used to evaluate, rate, and recommend funding for projects included in the *FY 2007 Annual Report on New Starts*. This methodology was similar to the process used in the evaluation of projects included in the *FY 2004-2006 Annual Reports on New Starts*, and is consistent with FTA's *Final Rule on Major Capital Investment Projects* issued on December 7, 2000.

The bulk of this appendix is based on processes that were developed before passage of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) which was signed into law on August 10, 2005. However, the FY 2007 project evaluation process reflected two changes established in SAFETEA-LU which FTA implemented in time for the FY 2007 evaluation cycle. Specifically, SAFETEA-LU replaced a three-point rating scale with a five-point scale, with the overall project rating designations of *Highly Recommended*, *Recommended*, and *Not Recommended* replaced with *Low*, *Medium-Low*, *Medium*, *Medium-High*, and *High*. In addition, SAFETEA-LU, while continuing to require that a project's overmatch be evaluated, added a clause that nothing in the Act shall be construed as authorizing the Secretary to require a non-Federal financial commitment for a project that is more than 20 percent of the net capital project cost. Project sponsors are still encouraged to request the lowest New Starts share possible given there are limited funds and the number of projects in the New Starts pipeline exceeds available funds.

This appendix describes how FTA applied these two provisions for the FY 2007 evaluation cycle. For all other changes in SAFETEA-LU, FTA intends to work closely with the transit industry over the coming months to fully implement the New Starts provisions, including further refinements to the New Starts evaluation and rating process to be applied to subsequent annual project evaluation cycles.

Section I of this appendix introduces the legislative background of FTA's project evaluation and rating responsibilities; identifies each of the statutory criteria used by FTA in its evaluation process; and summarizes the overall project evaluation and rating process. Sections II and III describe the specific project justification and local financial commitment measures and ratings, respectively, including an explanation of the rating ranges and thresholds for each individual measure, and how they are rolled up into aggregate criteria ratings. Section IV concludes with a summary of what the overall project rating means for funding recommendations in the President's Budget for FY 2007. All funding recommendations in the President's Budget are subject to the availability of appropriations.

This document is supplemented by two additional documents. *Guidelines and Standards for Assessing Transit-Supportive Land Use* and *Guidelines and Standards for Assessing Local Financial Commitment* provide additional detail on the process FTA uses to evaluate these two criteria. These materials are posted on FTA's website at its site for *New Starts Project Planning and Development*:
http://www.fta.dot.gov/grant_programs/transportation_planning/9924_ENG_HTML.htm.

FTA reminds the audience of this appendix that project evaluation is an on-going process. It is based on an analysis of Section 5309 New Starts Criteria and documentation submitted to FTA by local agencies. As New Starts projects proceed through project development, the estimates of costs, benefits, and impacts are refined. The FTA ratings and recommendations will be updated at least annually to reflect new information, changing conditions, and refined financing plans.

I. Legislative Background

SAFETEA-LU continues the evaluation process provisions first established by the Transportation Equity Act for the 21st Century (TEA-21) in 1998. SAFETEA-LU requires the U.S. Department of Transportation to submit an annual report to Congress (*Annual Report on New Starts*) that includes a proposal on the allocation of funds among applicants for amounts to be made available to finance grants and loans for capital projects for new fixed guideway systems and extensions to existing fixed guideway systems. It also requires that the annual report include the Secretary's evaluations and ratings of the capital projects seeking grants or loans for new or extended fixed guideway systems.

Like TEA-21, SAFETEA-LU mandates that proposed New Starts projects must receive FTA approval to advance from "alternatives analysis" to "preliminary engineering," and from "preliminary engineering" to "final design and construction." This approval is based, in large part, on an evaluation of the proposed project's New Starts criteria.

FTA's evaluation includes a review of each project's New Starts criteria and the assignment of a rating to each criterion. Based on these criteria-specific ratings, FTA assigns candidate New Starts projects summary ratings for project justification and local financial commitment, as well as providing an overall project rating. Sections 1.A and 1.B below present the criteria used by FTA in its New Starts evaluation process; Section 1.C provides an overview of how these criteria fit into the overall evaluation process; and Section 1.D summarizes how overall project ratings are derived.

I.A Project Justification Criteria

Similar to TEA-21, SAFETEA-LU Section 3011(a)(49 USC 5309(d)) requires that projects proposed for New Starts funding be justified based on a comprehensive review of the following criteria:

- Mobility Improvements;
- Environmental Benefits;
- Operating Efficiencies;
- Cost Effectiveness; and
- Transportation Supportive Land Use Policies and Future Patterns

SAFETEA-LU also continues the TEA-21 requirement of considering "other factors."

SAFETEA-LU further requires that FTA consider in its review the economic development effects of New Starts projects. However, FTA desires to work with the industry on the

development of appropriate factors for measuring the economic development effects of candidate projects, and therefore did not consider them in the FY 2007 evaluation cycle.

Section III of this appendix presents the specific measures FTA used in the FY 2007 evaluation cycle to represent each of the project justification criteria, and how FTA evaluated them.

I.B Local Financial Commitment

Similar to TEA-21, SAFETEA-LU Section 3011(a)(49 USC 5309(d)) requires that proposed projects also be supported by an acceptable degree of local financial commitment, including evidence of stable and dependable financing sources to construct, maintain and operate the transit system. Section 5309(d) calls for an evaluation of the extent to which the project has a local financial commitment that exceeds the required non-Federal share of the cost of the project.

The measures for the evaluation of the local financial commitment to a proposed project used in the FY 2007 evaluation cycle were:

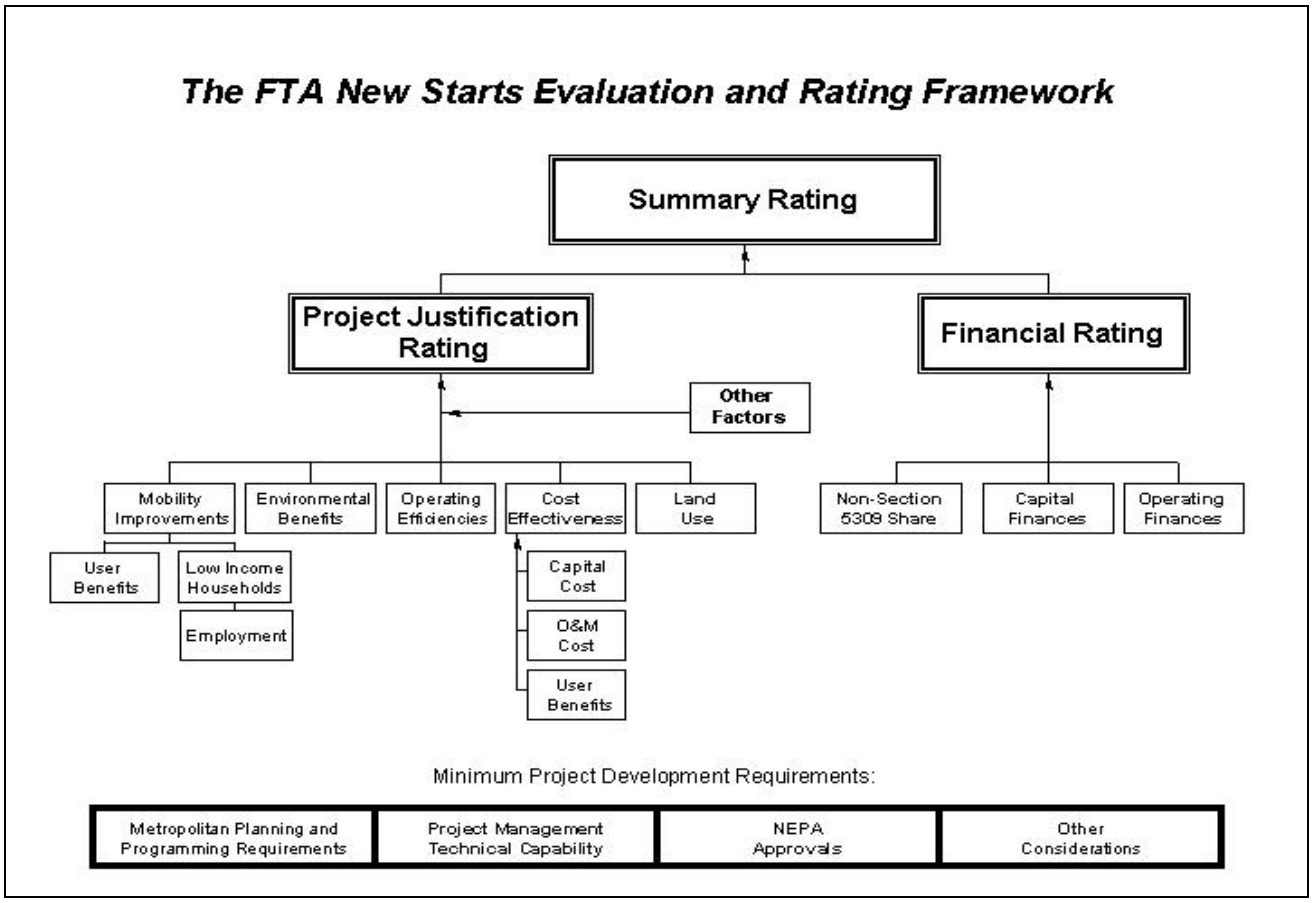
- The proposed share of total project costs from sources other than the Section 5309 New Starts program, including Federal formula and flexible funds, the local match required by Federal law, and any additional capital funding;
- The strength of the proposed capital financing plan; and
- The ability of the sponsoring agency to fund operation and maintenance of the entire system as planned once the guideway project is built.

Section IV describes how FTA used these measures in its evaluation of candidate New Starts projects.

I.C The Evaluation Process

FTA evaluates proposed New Starts projects against the full range of criteria for both project justification and local financial commitment, as described in Figure I-1 on the following page. The specific project justification and local financial commitment measures included in Figure I-1 are described in detail in Sections II and III of this appendix, respectively.

Figure I-1 New Starts Evaluation Process



I.D Overall Project Ratings

TEA-21 required that an overall project rating of *Highly Recommended*, *Recommended* or *Not Recommended* be assigned to each proposed project, based on the results of FTA's evaluation of each of the criteria for project justification and local financial commitment. However, SAFETEA-LU Section 5309(d) requires that FTA assign overall ratings on a 5-point scale of *High, Medium-High, Medium, Medium-Low*, or *Low* to each New Starts project subject to evaluation.

To assign overall project ratings to each proposed New Starts project, FTA considers the individual ratings for each of the local financial commitment measures and project justification criteria. FTA combines this information into summary "finance" and "project justification" ratings for each project.

For both project justification and finance, summary ratings are assigned as one of the following: *High, Medium-High, Medium, Medium-Low* or *Low*. These summary ratings are then combined into an overall project rating. Table I-1 on the following page summarizes the decision rules used to reach overall project ratings under both TEA-21 and the FY 2007 evaluation cycle under SAFETEA-LU. As the table demonstrates, the decision rules remain unchanged; only the designation assigned to the project's overall rating is different from prior

practice. While SAFETEA-LU anticipates that FTA will use the full range of ratings, from *High, Medium-High, Medium, Medium-Low* to *Low* in making this determination, however, FTA determined that it was less subjective to simply use *High, Medium* and *Low* in FY 2007. We want to receive input from the transit community before using the five-point rating system.

Table I-1 FY 2007 Overall Rating Decision Rules

Summary Ratings	Overall Ratings TEA-21 (FY 2000 -FY 2006)	Overall Ratings SAFETEA-LU (FY 2007)
At least Medium-high for finance and project justification	Highly Recommended	High
At least Medium for finance and project justification	Recommended	Medium
Not rated at least Medium for finance and project justification	Not Recommended	Low

FTA emphasizes that these decision rules are for the FY 2007 evaluation cycle only. It is anticipated that the decision rules used to achieve an overall project rating in subsequent evaluation cycles (FY 2008 and beyond) will be established through a formal rulemaking process and will encompass all five ratings from *High* to *Low*.

FTA further notes that a project will no longer receive a designation of **Not Rated** if it receives a *Medium* or higher rating for finance, but cannot produce acceptable information in support of its project justification criteria. In cases where such information is either not submitted or submitted but deemed to be unreliable, FTA will assign a rating of *Low* to the affected project justification criteria.

I.E Ratings: An On-going Process

Again, it is important to emphasize that project evaluation is an on-going process. FTA evaluation and rating occurs annually in support of budget recommendations presented in the *Annual Report on New Starts* and when a project sponsor requests FTA approval to advance their proposed New Starts project into preliminary engineering and final design. Consequently, as proposed New Starts projects proceed through the project development process, information concerning costs, benefits, and impacts is refined and the ratings are updated to reflect new information.

II. Summary Project Justification Rating

The following summarizes FTA's process for evaluating the project justification criteria of proposed New Starts projects.

II.A Project Justification Rating

FTA assigns a summary project justification rating of *High, Medium-High, Medium, Medium-Low* or *Low* to each project based on consideration of the ratings applied to the project justification criteria presented in Section I.A and each of the specific measures identified in Table II-1 below:

Table II-1 New Starts Project Justification Criteria and Supporting Measures and Categories

Criterion	Measures/Categories
Cost Effectiveness	• Incremental Cost per Hour of Transportation System User Benefit
Transit Supportive Land Use and Future Patterns	• Existing Land Use • Transit Supportive Plans and Policies • Performance and Impacts of Policies
Mobility Improvements	• Normalized Travel Time Savings (Transportation System User Benefit per Project Passenger Mile) • Low-Income Households Served • Employment Near Stations
Operating Efficiencies	• System Operating Cost per Passenger Mile
Environmental Benefits	• Change in Regional Pollutant Emissions • Change in Regional Energy Consumption • EPA Air Quality Designation

For mobility improvements and transit supportive land use, projects are aligned for each measure and category in a continuum of values from *Low* to *High* and broken into five groups, with each group assigned a numeric rating of 1 (*Low*) to 5 (*High*). The thresholds that distinguish the five groups are not pure quintiles (that is, 20 percent each of the total number of projects being evaluated for the measure) but rather logical break points in the aligned data that separate one group from another. Where criteria are represented by more than one measure, ratings for each measure are rolled up and averaged into criterion-specific ratings, where the numeric rating is converted into a corresponding *High, Medium-High, Medium, Medium-Low* or *Low* rating. The mobility improvements and land use rating process are described in greater detail in *Sections II.C* and *II.D* below.

For the cost effectiveness criterion, specific dollar breakpoints are defined for *High, Medium-High, Medium, Medium-Low* and *Low* ratings (these breakpoints are presented in *Section II.B* below). Decision rules for the operating efficiencies and environmental benefits criteria are described in *Sections II.E* and *II.F* below.

Criterion-specific ratings are subsequently combined to form the summary *High, Medium-High, Medium, Medium-Low* or *Low* justification ratings for each project presented in *Section I.E*.

FTA assigns a weight of 50 percent each to the cost effectiveness and land use criteria in order to establish a summary project justification rating. When the average of the cost effectiveness and land use rating falls equally between two ratings (say, between a *Medium* and a *Medium-High* rating), the mobility improvements rating is introduced as a "tiebreaker." Specifically,

when mobility improvements are rated *Low*, the summary rating will "round down" to the lower of the two ratings; for all other mobility improvement ratings, the rating is "rounded-up" to establish the summary project justification rating. For example, a project with a cost effectiveness rating of *Medium-High* and a land use rating of *Low* - along with a mobility improvements rating of *Medium* - would receive a summary project justification rating of *Medium*.

Based upon its prior experience in evaluating New Starts projects, FTA has determined that locally-generated and reported information in support of the operating efficiencies and environmental benefits criteria does not distinguish in any meaningful way any differences between competing major transit capital investments. Consequently, while ratings for these criteria are assigned by FTA and reported in (among other places) the *Annual Report on New Starts*, they are not considered in the determination of an overall project justification rating. If well documented, and considered by FTA to be an unusually significant benefit to a proposed project that is not otherwise captured in the other New Starts criteria, "other factors" may increase a summary project justification rating by no more than one step (for example, from *Medium-High* to *High*). The evaluation and rating of individual project justification criteria is discussed below.

Failure to submit acceptable information (for example, reliable travel forecasts to support the cost effectiveness, mobility improvements, and operating efficiencies criteria) will result in a *Low* rating for the affected project justification criteria.

II.B Cost Effectiveness

In its evaluation of the cost effectiveness of a proposed project, FTA considers the incremental cost per hour of transportation system user benefits in the forecast year. This measure, expressed in constant base-year dollars, is based on the annualized total capital and annual operating costs divided by the forecast change in annual user benefits, comparing the proposed project to the New Starts baseline alternative. Table II-2 below presents the thresholds FTA used in FY 2007 for assigning a *High, Medium-High, Medium, Medium-Low* or *Low* cost effectiveness rating for each project:

Table II-2 Cost Effectiveness Breakpoints

High	$10.99 and under
Medium-High	$11.00- $13.99
Medium	$14.00-$21.99
Medium-low	$22.00-$27.99
Low	$28.00 and over

II.C Transit-Supportive Existing Land Use and Future Patterns

In its evaluation of the land use affecting New Starts projects, FTA explicitly considers the following transit supportive land use categories and factors:

1. **Existing Land Use**
2. **Transit Supportive Plans and Policies**, including the following factors:
   - Growth management;

- Transit supportive corridor policies;
- Supportive zoning regulations near transit stations; and
- Tools to implement land use policies.

3. **Performance and Impacts of Policies**, including the following factors:
   - Performance of land use policies; and
   - Potential impact of transit project on regional land use.

FTA also permits New Starts project sponsors to submit information in support of an optional "other land use considerations" category.

Based on information submitted to FTA by local agencies, FTA gauges each category by the factors identified above. FTA assigns one of five numerical ratings ("1" to "5") to each project for each of these factors. Each factor is weighted equally within its category, averaged, and combined into category-specific ratings. These category ratings are then combined equally (that is, each land use category rating contributes one-third of the value) and converted to a descriptive rating of *High*, *Medium-High*, *Medium*, *Medium-Low* or *Low* to determine the overall land use rating. In rare cases, when based on unusually compelling "other" land use considerations, FTA may increase the land use rating by one point.

Additional detail on FTA's land use rating process is contained in *Guidelines and Standards for Assessing Transit-Supportive Land Use*. Table II-3 on the following pages summarizes the ratings applied by FTA in the assessment of each land use category and supporting factor at each stage of project development.

Table II-3 Ratings Applied in Assessment of Land Use Criterion

I. EXISTING LAND USE		
Existing Land Use		
Phase of Project Development	Land Use Assessment Ratings	
Preliminary Engineering and Final Design	HIGH (5)	Current levels of population, employment, and other trip generators in station areas are sufficient to support a major transit investment. Most station areas are pedestrian-friendly and fully accessible.
	MEDIUM (3)	Current levels of population, employment, and other trip generators in station areas marginally support a major transit investment. Some station areas are pedestrian-friendly and accessible. Significant growth must be realized.
	LOW (1)	Current levels of population, employment, and other trip generators in station areas are inadequate to support a major transit investment. Station areas are not pedestrian-friendly.
Ratings based on assessment of the following: • Existing corridor and station area development; • Existing corridor and station area development character; • Existing station area pedestrian facilities, including access for persons with disabilities; and • Existing corridor and station area parking supply.		
II. TRANSIT-SUPPORTIVE PLANS AND POLICIES		
Growth Management		
Phase of Project Development	Land Use Assessment Ratings	
Preliminary Engineering and Final Design	HIGH (5)	Adopted and enforceable growth management and land conservation policies are in place throughout the region. Existing and planned densities, along with market trends in the region and corridor are strongly compatible with transit.
	MEDIUM (3)	Significant progress has been made toward implementing growth management and land conservation policies. Strong policies may be adopted in some jurisdictions but not others, or only moderately enforceable policies (e.g., incentive-based) may be adopted regionwide. Existing and/or planned densities and market trends are moderately compatible with transit.
	LOW (1)	Limited consideration has been given to implementing growth management and land conservation policies; adopted policies may be weak and apply to only a limited area. Existing and/or planned densities and market trends are minimally or not supportive of transit.
Ratings based on assessment of the following: • Concentration of development around established activity centers and regional transit; and • Land conservation and management.		

Table II-3 Ratings Applied in Assessment of Land Use Criterion (cont.)

II. TRANSIT-SUPPORTIVE PLANS AND POLICIES		
Transit-Supportive Corridor Policies		
Final Design	HIGH (5)	Conceptual plans for the corridor and station areas have been developed. Local jurisdictions have adopted or drafted revisions to comprehensive and/or small area plans in most or all station areas. Land use patterns proposed in conceptual plans and local and institutional plan revisions are strongly supportive of a major transit investment.
	MEDIUM (3)	Conceptual plans for the corridor and station areas have been developed. Local jurisdictions have initiated the process of revising comprehensive and/or small area plans. Land use patterns proposed in conceptual plans and local and institutional plan revisions are at least moderately supportive of a major transit investment.
	LOW (1)	Limited progress, to date, has been made toward developing station area conceptual plans or revising local comprehensive or small area plans. Existing station area land uses identified in local comprehensive plans are marginally or not transit-supportive.
Preliminary Engineering	HIGH (5)	Conceptual plans for the corridor and station areas have been developed. Discussions have been undertaken with local jurisdictions about revising comprehensive plans. Land use patterns proposed in conceptual plans for station areas (or in existing comprehensive plans and institutional master plans throughout the corridor) are strongly supportive of a major transit investment.
	MEDIUM (3)	Conceptual plans for the corridor and station areas are being developed. Discussions have been undertaken with local jurisdictions about revising comprehensive plans. Land use patterns proposed in conceptual plans for station areas (or existing in local comprehensive plans and institutional master plans) are at least moderately supportive of a major transit investment.
	LOW (1)	Limited progress, to date, has been made toward developing station area conceptual plans or working with local jurisdictions to revise comprehensive plans. Existing station area land uses identified in local comprehensive plans are marginally or not transit-supportive.
Ratings based on assessment of the following: • Plans and policies to increase corridor and station area development; • Plans and policies to enhance transit-friendly character of corridor and station area development; • Plans to improve pedestrian facilities, including facilities for persons with disabilities; and • Parking policies.		

Table II-3 Ratings Applied in Assessment of Land Use Criterion (cont.)

II. TRANSIT-SUPPORTIVE PLANS AND POLICIES		
Supportive Zoning Regulations Near Transit Stations		
Final Design	HIGH (5)	Local jurisdictions have adopted zoning changes that strongly support a major transit investment in most or all transit station areas.
	MEDIUM (3)	Local jurisdictions are in the process of adopting zoning changes that moderately or strongly support a major transit investment in most or all transit station areas. Alternatively: strongly transit-supportive zoning has been adopted in some station areas but not in others.
	LOW (1)	No more than initial efforts have begun to prepare station area plans and related zoning. Existing station area zoning is marginally or not transit-supportive.
Preliminary Engineering	HIGH (5)	A conceptual planning process is underway to recommend zoning changes for station areas. Conceptual plans and policies for station areas are recommending transit-supportive densities and design characteristics. Local jurisdictions have committed to examining and changing zoning regulations where necessary. Alternatively, a "high" rating can be assigned if existing zoning in most or all transit station areas is already strongly transit-supportive.
	MEDIUM (3)	A conceptual planning process is underway to recommend zoning changes for station areas. Local jurisdictions are in the process of committing to examining and changing zoning regulations where necessary. Alternatively, a "medium" rating can be assigned if existing zoning in most or all transit station areas is already moderately transit-supportive.
	LOW (1)	Limited consideration has been given to preparing station area plans and related zoning. Existing station area zoning is marginally or not transit-supportive.
Ratings based on assessment of the following: • Zoning ordinances that support increased development density in transit station areas; • Zoning ordinances that enhance transit-oriented character of station area development and pedestrian access; and • Zoning allowances for reduced parking and traffic mitigation.		

Table II-3 Ratings Applied in Assessment of Land Use Criterion (cont.)

II. TRANSIT-SUPPORTIVE PLANS AND POLICIES		
Tools to Implement Land Use Policies		
Final Design	HIGH (5)	Transit agencies and/or regional agencies are working proactively with local jurisdictions, developers, and the public to promote transit-supportive land use planning and station area development. The transit agency has established a joint development program and identified development opportunities. Agencies have adopted effective regulatory and financial incentives to promote transit-oriented development. Public and private capital improvements are being programmed in the corridor and station areas which implement the local land use policies and which leverage the Federal investment in the proposed corridor.
	MEDIUM (3)	Transit agencies and/or regional agencies have conducted some outreach to promote transit-supportive land use planning and station area development. Regulatory and financial incentives to promote transit-oriented development are being developed, or have been adopted but are only moderately effective. Capital improvements are being identified that support station area land use plans and leverage the Federal investment in the proposed major transit corridor.
	LOW (1)	Limited effort has been made to reach out to jurisdictions, developers, or the public to promote transit-supportive land use planning; to identify regulatory and financial incentives to promote development; or to identify capital improvements.
Preliminary Engineering	HIGH (5)	Transit agencies and/or regional agencies are working proactively with local jurisdictions, developers, and the public to promote transit-supportive land use planning and station area development. Local agencies are making recommendations for effective regulatory and financial incentives to promote transit-oriented development. Capital improvement programs are being developed that support station area land use plans and leverage the Federal investment in the proposed major transit corridor.
	MEDIUM (3)	Transit agencies and/or regional agencies have conducted some outreach to promote transit-supportive land use planning and station area development. Agencies are investigating regulatory and financial incentives to promote transit-oriented development. Capital improvements are being identified that support station area land use plans and leverage the Federal investment in the proposed major transit corridor.
	LOW (1)	Limited effort has been made to reach out to jurisdictions, developers, or the public to promote transit-supportive land use planning; to identify regulatory and financial incentives to promote development; or to identify capital improvements.

Table II-3 Ratings Applied in Assessment of Land Use Criterion (cont.)

II. TRANSIT-SUPPORTIVE PLANS AND POLICIES		
Tools to Implement Land Use Policies (Continued)		
Ratings based on assessment of the following: • Outreach to government agencies and the community in support of land use planning; • Regulatory and financial incentives to promote transit-supportive development; and • Efforts to engage the development community in station area planning and transit-supportive development.		
III. PERFORMANCE AND IMPACTS OF LAND USE POLICIES		
Performance of Land Use Policies		
Final Design	HIGH (5)	A significant number of development proposals are being received for transit-supportive housing and employment in station areas. Significant amounts of transit-supportive development have occurred in other, existing transit corridors and station areas in the region.
	MEDIUM (3)	Some development proposals are being received for transit-supportive housing and employment in station areas. Moderate amounts of transit-supportive development have occurred in other existing transit corridors and station areas in the region.
	LOW (1)	A limited number of proposals for transit-supportive housing and employment development in the corridor are being received. Other existing transit corridors and station areas in the region lack significant examples of transit-supportive housing and employment development.
Preliminary Engineering	HIGH (5)	Transit-supportive housing and employment development is occurring in the corridor. Significant amounts of transit-supportive development have occurred in other, existing transit corridors and station areas in the region.
	MEDIUM (3)	Station locations have not been established with finality, and therefore, development would not be expected. Moderate amounts of transit-supportive housing and employment development have occurred in other, existing transit corridors and station areas in the region.
	LOW (1)	Other existing transit corridors and station areas in the region lack significant examples of transit-supportive housing and employment development.
Ratings based on assessment of the following: • Demonstrated cases of development affected by transit-oriented policies; and • Station area development proposals and status.		

Table II-3 Ratings Applied in Assessment of Land Use Criterion (cont.)

III. PERFORMANCE AND IMPACTS OF LAND USE POLICIES		
Potential Impact of Transit Project on Regional Land Use		
Preliminary Engineering and Final Design	HIGH (5)	A significant amount of land in station areas is available for new development or redevelopment at transit-supportive densities. Local plans, policies, and development programs, as well as real estate market conditions, strongly support such development.
	MEDIUM (3)	A moderate amount of land in station areas is available for new development or redevelopment at transit-supportive densities. Local plans, policies, and development programs, as well as real estate market conditions, moderately support such development.
	LOW (1)	Only a modest amount of land in station areas is available for new development or redevelopment. Local plans, policies, and development programs, as well as real estate market conditions, provide marginal support for new development in station areas.
Ratings based on assessment of the following: • Adaptability of station area land for development; and • Corridor economic environment.		

As Table II-3 indicates, FTA takes into consideration the stage of development of a proposed project in its evaluation of land use information. For example, the planning and policy oriented factors (existing land use, containment of sprawl, and corridor policies) are relevant in evaluating projects in all stages of project development, but particularly useful for projects early in project development. On the other hand, the implementation-oriented factors (supportive zoning regulations, implementation tools, and performance of land use policies) are more applicable in evaluating projects more advanced in preliminary engineering or final design.

II.D Mobility Improvements

In its evaluation of the mobility improvements that would be realized by implementation of a proposed project, FTA reviews three measures:

1. **Normalized Travel Time Savings**, as measured by transportation system user benefits per project passenger mile;
2. Number of current **Low-income Households** which would be served by the proposed New Starts investment; and
3. Number of current **Jobs** served by the proposed New Starts project.

The normalized travel time savings of New Starts projects is weighted 50 percent in the development of the mobility improvements rating; the low-income households and employment measures *combined* account for the other 50 percent of the rating. The process FTA uses to establish measure-specific ratings and the overall mobility improvements rating is described below:

Transportation System User Benefits per Passenger Mile This measure reflects the travel time savings, as measured by minutes of transportation system user benefits in the forecast year anticipated from the proposed project compared to its baseline alternative. In order to rate projects in comparison to other proposed New Starts, this

measure is normalized by the annual passenger miles traveled on the New Starts project in the forecast year.

As noted previously, projects are aligned in ascending order of user benefits per passenger mile and categorized into five groups, separated by the logical breakpoints indicated by the submitted data for the measure. Projects in the highest grouping (that is with the most user benefits per passenger mile) receive a “5,” while projects in the lowest grouping receive a “1.”

Number of Low-income Households and Jobs Served These two measures reflect the absolute number of low-income households (defined as below the poverty level) and jobs located within ½ mile of the "boarding points", or stations, associated with the proposed project. The total number of low-income households and jobs located within these ½ mile zones is then divided by the total number of stations to determine both the average number of low-income households and average number of jobs per station. Projects are aligned in ascending order of both low-income households per station and jobs per station, categorized into five groups, and assigned a numerical rating from “1” to “5.”

The numerical ratings assigned for both low-income households and jobs are compared for each project. FTA then considers the potential for connections of these two markets in assigning a single rating for both measures. In the case of projects which are new guideway systems in their regions, the lower of the low-income households or jobs rating is assigned as the combined rating for the two measures. For extensions to existing guideways, the higher of the low-income households and employment rating is utilized, unless the employment rating is higher and there are few low-income households living along the guideway. In this latter case, the low-income rating would be assigned as the combined rating of the two measures.

II.E Operating Efficiencies

FTA measures this criterion by evaluating the change in systemwide operating costs per passenger mile in the forecast year, comparing the Section 5309 New Start investment to the baseline alternative. FTA assigns a rating of *Medium* to all projects that have information submitted for this measure. As noted previously, FTA has found that information submitted in support of the operating efficiencies criterion does not distinguish with any meaning the merits of competing New Starts projects. While FTA reports the information submitted by project sponsors on operating efficiencies to Congress in the *Annual Report on New Starts*, it does not formally incorporate this measure into its evaluation.

II.F Environmental Benefits

In its evaluation of environmental benefits that would be realized through the implementation of a proposed project, FTA considers the current air quality designation by EPA. This measure is defined for each of the transportation-related pollutants (ozone, CO, and PM-10) as the current air quality designation by EPA for the metropolitan region in which the proposed project is located, indicating the severity of the metropolitan area's noncompliance with the health-based EPA standard (NAAQS) for the pollutant, or its compliance with that standard. New Starts project sponsors submit information to FTA on the forecast reductions in emissions resulting from the New Starts project for each transportation-related pollutant.

Specifically, FTA follows the following decision rule when assigning ratings for environmental benefits:

- Projects in non-attainment areas for any transportation-related pollutants that demonstrate a reduction in that pollutant receive a "high" rating.
- Projects that are in attainment areas that demonstrate reductions in any transportation-related pollutant receive a "medium" rating.
- All other projects are rated "low."

As noted previously, FTA has found that information submitted in support of the environmental benefits criterion does not distinguish with any meaning the merits of competing New Starts projects. While FTA reports the information submitted by project sponsors on environmental benefits to Congress in the *Annual Report on New Starts*, it does not formally incorporate this measure in its evaluation of New Starts projects.

II.G Other Factors

Consistent with Section 5309(d), FTA also includes a variety of other factors when evaluating project justification, including:

- Environmental justice considerations and equity issues;
- Opportunities for increased access to employment for low-income persons, and welfare to work initiatives;
- Livable communities initiatives and local economic development initiatives;
- Consideration of innovative financing, procurement, and construction techniques, including design-build turnkey applications;
- The cost effectiveness of the New Starts project based on alternative land use forecasts which consider the economic development impacts (benefits) of the proposed transit capital investment; and
- Any other factor which the New Starts project sponsor believes articulates the benefits of the proposed major transit capital investment but which is not captured within the other project justification criteria.

Only in the most compelling of cases are other factors formally assigned a rating. When they are rated, FTA considers other factors in the evaluation of candidate New Starts projects in two

ways. For evaluations in support of budget recommendations contained in the *Annual Report on New Starts*, the other factors rating is introduced *after* the assignment of an initial summary project justification rating. If the other factors rating are higher than the summary project justification rating, FTA may increase this initial summary justification rating by a maximum of one step.

For preliminary engineering and final design approvals, other factors are considered in the same way. In addition, the technical capability of the project sponsor to implement and operate the project is implicitly considered within the "other factors" criteria. This inclusion ensures that project management issues are adequately addressed in FTA's decision to permit advancement into the next stage of the project development process.

III. Summary Finance Rating

The following provides a summary of FTA's process for evaluating the local financial commitment of proposed New Starts projects.

III.A Financial Rating

FTA assigns a summary finance rating of *High, Medium-High, Medium, Medium-Low* or *Low* to each project following consideration of individual ratings applied to the following measures for local financial commitment:

1. **Share of non-New Starts funding**;
2. Stability and reliability of the proposed project's **capital funding plan**, including the following factors:
    - Current capital condition;
    - Completeness of plan;
    - Commitment of capital funds;
    - Capital funding capacity; and
    - Reasonable capital planning assumptions and cost estimates.
3. Stability and reliability of the proposed project's **operating funding plan**, including the following factors:
    - Current operating financial condition;
    - Completeness of operating plan;
    - Commitment of operations and maintenance (O&M) funds;
    - O&M funding capacity; and
    - Operations planning assumptions and cost estimates.

These ratings are based on an analysis of the Section 5309 New Starts Criteria and documentation submitted to FTA by local agencies. FTA's evaluation takes into account the stage of project development, particularly when considering the stability and reliability of the capital and operating finance plans. Expectations for firm commitments of non-Federal funding sources become increasingly higher as projects progress further through development (preliminary engineering, followed by final design), and are rated accordingly.

The summary finance rating considers the non-Section 5309 New Starts share of project capital costs. The following ratings are assigned to the New Starts share of project costs:

- >60 percent = *Low* rating
- 50-60 percent = *Medium* rating
- 35-49 percent = *Medium-High* rating
- < 35 percent = *High* rating

In addition, FTA rates the capital and operating plan for each factor according to the standards defined in Tables III-1 and III-2 on the following pages.

Additional detail on FTA's process for rating local financial commitment is contained in its *Guidelines and Standards for Assessing Local Financial Commitment*. However, it should be noted that those guidelines do not reflect the way that FTA treated the non-Section 5309 New Starts share of the project in FY2007. Based on language in SAFETEA-LU, where there is any inconsistency between those guidelines and this appendix, the practices spelled out in this appendix supersedes those guidelines.

Numerical ratings from 1 to 5 (*Low* to *High*) are assigned to each of the factors reflecting each measure; these factors are weighted equally within each measure, then averaged and combined into ratings for each measure. Once measure-specific ratings have been determined, FTA weighs the proposed non-New Starts share as 20 percent of the summary financial rating; the strength and reliability of the capital plan counts as 50 percent of the rating; and the strength and reliability of the operating plan accounts for 30 percent of the rating. These ratings are combined and converted by FTA into a summary financial rating of *High, Medium-High, Medium, Medium-Low* or *Low*.

Failure to submit either a capital or operating financial plan for evaluation will result in a *Low* rating for finance.

Table III-1 Capital Plan Rating Standards

	Reasonable Capital Planning Assumptions	Capital Funding Capacity	Commitment Of Capital Funds	Completeness	Current Capital Condition
High (5)	Financial plan contains very conservative capital planning assumptions and cost estimates when compared with recent historical experience.	The applicant has access to funds via additional debt capacity, cash reserves, or other committed funds to cover cost increases or funding shortfalls equal to at least 50% of estimated project costs.	For final design - 100% of Non-Section 5309 New Starts Funds are committed or budgeted. For PE – Over 50% of Non-Section 5309 New Starts Funds are committed or budgeted. The remaining funds are planned.	Capital plan includes: - 20-year cash flow - All assumptions are clearly explained - High level of detail - Fleet Management Plan - Extensive Sensitivity analysis - More than 5 years of historical data	- Average bus fleet age under 6 years. - Bond ratings less than 2 years old (if any) of AAA (Fitch/S&P) or Aaa (Moody's) or better
Medium-High (4)	Financial plan contains conservative capital planning assumptions and cost estimates when compared with recent historical experience.	The applicant has available cash reserves, debt capacity, or additional funding commitments to cover cost increases or funding shortfalls equal to at least 25% of estimated project costs.	For final design - Over 75% of Non-Section 5309 New Starts Funds are committed or budgeted. For PE – Over 25% of Non-Section 5309 New Starts Funds are committed or budgeted. The remaining funds are planned.	Capital plan is complete, i.e. it includes: - 20-year cash flow - Key assumptions - Moderate level of detail - Fleet Management Plan - Sensitivity Analysis - More than 5 years of historical data	- Average bus fleet age under 6 years. - Bond ratings less than 2 years old (if any) of A (Fitch/S&P) or A2 (Moody's) or better
Medium (3)	Financial plan contains capital planning assumptions and cost estimates that are in line with historical experience.	For final design - The applicant has available cash reserves, debt capacity, or additional committed funds to cover cost increases or funding shortfalls equal to at least 10% of estimated project costs. For PE - The applicant has a reasonable plan to cover cost increases or funding shortfalls equal to at least 25% of project	For final design - Over 50% of Non-Section 5309 New Starts Funds are committed or budgeted. For PE - No Non-Section 5309 New Starts Funds are committed or budgeted, but the sponsor has a reasonable plan to secure all needed funding.	Capital plan is complete, i.e. it includes: - 20-year cash flow - Key assumptions - Missing some explanatory details - Fleet Management Plan - 5 years historical data	- Average bus fleet age under 8 years. - Bond ratings less than 2 years old (if any) of A - (Fitch/S&P) or A3 (Moody's) or better
Medium-low (2)	Financial plan contains optimistic capital planning assumptions and cost estimates.	The applicant has a reasonable plan to cover only minor (under 10%) cost increases or funding shortfalls. For PE –The applicant has a reasonable plan to cover cost increases or funding shortfalls equal to at least 10% of estimated project costs	For final design – Between 25% and 50% of Non-Section 5309 New Starts Funds are committed or budgeted. For PE - No Non-Section 5309 New Starts funds are committed. The sponsor has no reasonable plan to secure the necessary funding.	Capital plan is partially complete, i.e. it includes: - 20-year cash flow - Missing other items of supporting documentation (i.e. fleet management plan, key assumptions, historical data)	- Average bus fleet age under 12. - Bond ratings less than 2 years old (if any) of BBB+ (Fitch/S&P) or Baa (Moody's) or better
Low (1)	Financial plan contains capital planning assumptions and cost estimates that are far more optimistic than recent history suggests.	The applicant has no reasonable plan to cover cost increases or funding shortfalls.	For final design - Under 25% of Non-Section 5309 New Starts Funds are committed or budgeted. For PE - The sponsor has not identified any reasonable funding sources for the Non-Section 5309 New Starts funding share.	Capital plan is incomplete. Missing some key components, including the 20-year cash flow.	- Average bus fleet age 12 years or more. - Bond ratings less than 2 years old (if any) of BBB (Fitch/S&P) or Baa3 (Moody's) or below

Table III-2 Operating Plan Rating Standards

	Operating Planning Assumptions	O&M Funding Capacity	Commitment of O&M Funds	Completeness	Current Operating Financial Condition
High (5)	The assumptions supporting the operating and maintenance cost estimates and revenue forecasts are very conservative relative to historical experience.	- Projected cash balances, reserve accounts or access to line of credit exceeding 50 percent (6 months) of annual operating expenses.	For final design - 100% of the funds needed to operate and maintain the proposed transit project are committed or budgeted. For PE – Over 75% of the funds needed to operate and maintain the proposed transit system are committed or budgeted. The remaining funds are planned.	Operating plan includes: - More than 5 years of historical data - 20-year cash flow - Key assumptions identified - Extensive level of detail - Extensive Sensitivity Analysis	- Historical and actual positive cash flow. No cash flow shortfalls. - Current operating ratio exceeding 2.0 - No service cutbacks in recent years.
Medium-High (4)	The assumptions supporting the operating and maintenance cost estimates and revenue forecasts are conservative relative to historical experience.	- Projected cash balances, reserve accounts or access to line of credit exceeding 25 percent (3 months) of annual operating expenses.	For final design - Over 75% of the funds needed to operate and maintain the proposed transit project are committed or budgeted. For PE - Over 50% of the funds needed to operate and maintain the proposed transit system are committed or budgeted. The remaining funds are planned.	Operating plan is complete, including: - More than 5 years of historical data - 20-year cash flow - Key assumptions identified - Moderate level of detail -Sensitivity Analysis	- Historical and actual balanced budgets. Any annual cash flow shortfalls paid from cash reserves or other committed sources. - Current operating ratio is at least 1.5 - No service cutbacks in recent years.
Medium (3)	The assumptions supporting the operating and maintenance cost estimates and revenue forecasts are consistent with historical experience.	- Projected cash balances, reserve accounts or access to line of credit exceeding 12 percent (1.5 months) of annual operating expenses.	For final design – Over 50% of the funds needed to operate and maintain the proposed transit system are committed or budgeted. For PE – While no additional O&M funding has been committed, a reasonable plan to secure funding commitments has been presented.	Operating plan is complete, including: - 20-year cash flow - 5 years of historical data - Key assumptions identified - Missing some explanatory detail	- Historical and actual balanced budgets. Any annual cash flow shortfalls paid from cash reserves or annual appropriations. - Current operating ratio is at least 1.2 - No service cutbacks or only minor service cutbacks in recent years
Medium-low (2)	The assumptions supporting the operating and maintenance cost estimates and revenue forecasts are optimistic relative to historical experience.	- Projected cash balances, reserve accounts or access to line of credit are less than 8 percent (1 month) of annual operating expenses.	For final design - Sponsor has identified reasonable potential funding sources, but has received less than 50% commitments to fund transit operations and maintenance. For PE - Sponsor does not have a reasonable plan to secure O&M funding. No unspecified sources.	Operating plan is missing no key components, i.e.: - 3 years or less of historical data - 20-year cash flow - Missing key assumptions	- Historical and actual cash flow show several years of revenue shortfalls. Any annual cash flow shortfalls paid from short-term borrowing. - Current operating ratio is at least 1.0 - Major Service cutbacks in recent years
Low (1)	The assumptions supporting the operating and maintenance cost estimates and revenue forecasts are far more optimistic than historical experience suggests is reasonable.	- Projected cash balances are insufficient to maintain balanced budgets.	For final design - Sponsor has not yet received any funding commitments to fund transit operations and maintenance and has not identified any reasonable plan for securing funding commitments. For PE - Sponsor has not identified any reasonable funding sources for the operation and maintenance of the proposed project.	Operating plan is missing some key components, i.e.: - No cash flow - No historical data	- Historical and actual cash flow show several years of revenue shortfalls, or historical information not provided. - Current operating ratio is less than 1.0 - Major Service cutbacks in recent years

III.B Financial Rating Decision Rule

In addition to the non-Section 5309 New Starts share, capital and operating financial rating considerations and weights described above, FTA uses the following decision rules to calculate the overall financial rating.

- If the New Starts share, which accounts for 20% of the financial rating, brings the overall financial rating to less than *Medium*, it will be excluded from the overall financial rating calculation. In other words, a New Starts share of less than 80 percent can improve the project's rating but it cannot hurt it. This rule was applied for the first time in FY2007 in order to respond to direction in SAFETEA-LU that we evaluate the percent of New Starts share, as required by Section 5309(d)(4)(B)(v), while ensuring that no project is required to provide more than the required 20 percent match as provided in Section 5309(h)(5). If and how this rule is applied in future years will be subject to the New Starts rulemaking.
- If either of a proposed project's capital or operating finance plan receives a *Medium-Low* or *Low* rating, the summary finance rating for the project cannot be higher than a *Medium-Low*.
- To receive a summary financial rating of *Medium-High*, both the capital and operating funding plan must be rated at least *Medium-High*.

IV. Ratings and Funding Recommendations

Section 5309(d)(1)(B)(ii) directs FTA to consider for full funding grant agreements (FFGA) only those projects which receive a *Medium*, *Medium-High*, or *High* overall project rating. (Note that for the FY 2007 funding recommendations FTA did not use the *Medium-High* overall rating.) FTA notes, however, that project ratings are intended only to reflect the worthiness of each project, not the readiness of a project for an FFGA. A rating of *High* or *Medium* does not translate directly into a funding recommendation in any given fiscal year. Proposed projects that are rated *High* or *Medium*, will be eligible for multi-year funding recommendations in the Administration's proposed budget if other requirements have been met (completion of the Federal environmental review process, demonstrated technical capability to construct and operate the project, development of a firm and final cost estimate and financial plan, etc.) and if funding is available. In addition, notwithstanding their overall project rating, as a general practice the Administration will target its funding recommendations in FY 2007 and beyond to those proposed New Starts projects able to achieve a *Medium* or higher rating for cost effectiveness, unless the project has been exempt from this policy.

When determining annual funding allocations among proposed New Starts, the following general principles are applied:

- Any project recommended for new funding commitments should meet the project justification, finance, and process criteria established by Section 5309(e) and be consistent with Executive Order 12893, "Principles for Federal Infrastructure Investments," issued January 26, 1994.

- Existing FFGA commitments should be honored before any additional funding recommendations are made, to the extent that funds can be obligated for these projects in the coming fiscal year.
- The FFGA defines the terms of the Federal commitment to a specific project, including funding. Upon completion of an FFGA, the Federal funding commitment has been fulfilled. Additional project funding will not be recommended. Any additional costs beyond the scope of the Federal commitment are the responsibility of the grantee.
- Funding for initial planning efforts such as alternatives analysis is provided through grants out of the Section 5303 Metropolitan Planning or Section 5307 Urbanized Area Formula programs or from the newly created Section 5339 Alternatives Analysis program.
- Firm funding commitments, embodied in FFGAs, will not be made until the final design process has progressed to the point where costs, benefits, and impacts are accurately forecasted.
- Funding should be provided to the most worthy projects to allow them to proceed through the process on a reasonable schedule, to the extent that funds can be obligated to such projects in the upcoming fiscal year. The results of the project evaluation process and resulting finance, justification, and overall ratings determine whether particular projects are "worthy."

Again, FTA emphasizes that project evaluation and rating is an on-going process. As proposed New Starts projects proceed through the project development process, information concerning costs, benefits, and impacts is refined and the ratings may be updated to reflect new information.