

# Annual Report on Funding Recommendations

## Fiscal Year 2011

New Starts, Small Starts, and Paul S. Sarbanes Transit in  
Parks Program

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

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## **Alphabetical List of Acronyms**

<b>Acronym</b>	<b>Name</b>
AA	Alternatives Analysis
ANPRM	Advance Notice of Proposed Rulemaking
ATPPL	Alternative Transportation in the Parks and Public Lands
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
ESWA	Early Systems Work Agreement
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
LONP	Letter of No Prejudice
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
ROD	Record of Decision
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 21 <sup>st</sup> Century (1998)
STP	Surface Transportation Program
USC	United States Code
YOE	Year of Expenditure

## Executive Summary

This *Annual Report on Funding Recommendations* is issued by the Secretary of Transportation to help inform the appropriations cycle for the upcoming fiscal year by providing information on projects included in the Federal Transit Administration's (FTA) discretionary New Starts and Small Starts programs. These programs are part of the Major Capital Investment Grant Program provisions of 49 USC 5309, most recently reauthorized in August 2005 by the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU).<sup>1</sup> New Starts projects are those whose sponsors are requesting \$75 million or more in New Starts funds, or anticipating a total capital cost of \$250 million or more (49 USC 5309(d)). Small Starts projects are those whose sponsors are requesting less than \$75 million in Small Starts funds and anticipating a total capital cost of less than \$250 million (49 USC 5309(e)).

FTA's discretionary Major Capital Investment Grant program is the Federal government's primary financial resource for supporting major transit capital projects that are locally planned, implemented, and operated. The program has helped to make possible dozens of new or extended transit fixed guideway systems across the country—heavy rail, light rail, commuter rail, bus rapid transit systems, and ferries. These public transportation investments, in turn, have improved the mobility of millions of Americans, provided alternatives to congested roadways, and fostered the development of safer, more viable and livable communities.

This report provides vital funding and project information to Congress about the New and Small Starts programs. It also serves as guidance to project sponsors so that improvements in project development can be made.

This report also includes information about the Paul S. Sarbanes Transit in Parks Program, codified at 49 USC 5320, and formerly known as the Alternative Transportation in Parks and Public Lands Program. Section 5320 requires the Secretary of Transportation, in consultation with the Secretary of the Interior, to prepare an annual report on the allocation of amounts available to projects under the transit in parks program. The law further directs that the annual report on the transit in parks program be included in this *Annual Report*.

The information in this report is arranged in three appendices:

- **APPENDIX A: NEW AND SMALL STARTS PROJECT PROFILES** provides: the status of eight New Starts projects awarded Full-Funding Grant Agreements (FFGA); the detailed results of FTA's evaluation and rating of the project justification and local financial commitment criteria for 19 proposed major capital investments in preliminary engineering or final design; the results of FTA's streamlined evaluation and rating of six Small Starts and four Very Small Starts projects in project development (simple, low-risk projects that qualify for a highly simplified project evaluation and rating process by FTA);

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<sup>1</sup> The mandate for the *Annual Report* is a continuation of detailed provisions first established by the Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21) in 1998, and reauthorized by SAFETEA-LU, signed into law on August 10, 2005. SAFETEA-LU made changes to the New Starts program, including the creation of the Small Starts program.

and brief summaries of the status of six projects in the preliminary engineering or final design stages whose sponsors are requesting less than \$25 million in New Starts funding and, which are, therefore, currently exempt from the New Starts evaluation and rating process. Project profiles in this report reflect information as of November 2009 or earlier.

- **APPENDIX B: FY 2011 EVALUATION AND RATING PROCESS** describes FTA's process for evaluating and rating New Starts projects currently in the preliminary engineering and final design stages, including the measures and rating breakpoints used. Also covered here is the evaluation and rating process for Small Starts and Very Small Starts projects in the project development stage.
- **APPENDIX C: PAUL S. SARBANES TRANSIT IN PARKS PROGRAM** describes the allocation of funds under this program as required by SAFETEA-LU under 40 USC 5320. SAFETEA-LU Section 3021, which amended Section 5320 of Title 49 USC, established a new program to fund transit projects in national parks and public lands. The program is implemented by the U.S. Department of Transportation in consultation with the U.S. Department of the Interior and other Federal land management agencies. Section 3021(m) of SAFETEA-LU stipulates that the annual report on the allocation of this program's funds be included in this *Annual Report*.

## Introduction

FTA and local sponsors of New Starts and Small Starts projects typically enter into multi-year contractual agreements that formally establish the maximum level of Federal Section 5309 New and Small Starts financial assistance and outline the terms and conditions of Federal financial participation. For projects requiring \$75 million or more in New Starts funding, or with a total project cost of \$250 million or more, the requisite agreement is the Full Funding Grant Agreement (FFGA). For projects requiring less than \$75 million in Small Starts funding, with a total project cost of less than \$250 million, the requisite agreement is the Project Construction Grant Agreement (PCGA).

The FFGA or PCGA defines the project, including its cost, scope, and schedule; commits to a maximum level of New Starts or Small 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. (Note that FTA may administer Small Starts funding as a capital grant for project sponsors whose total Small Starts funding request is less than \$25 million, and whose request can be met with a single year appropriation or with existing appropriations.)

The FFGA or 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 or PCGA limits the exposure of the Federal government to cost increases that may result, for example, if the project is not adequately designed, engineered, and/or managed 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 or Small Starts projects, but uses 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 to provide guidance on management, construction, and quality assurance practices.<sup>2</sup>

For projects under an FFGA or PCGA that have not yet been fully funded, this report includes a summary profile of the projects' scope, expected ridership, and implementation status. In a few cases, profiles for projects already in revenue operation are included in this report because additional funds are needed in FY 2011 to fulfill the FFGA.

The report also includes detailed information, evaluations, and ratings for all New and Small Starts projects that are approved by FTA to actively engage in preliminary engineering, final design, and Small Starts project development. Per FTA's June 2007 *Guidance on New Starts/Small Starts Policies and Procedures*, FTA no longer requires New Starts and Small Starts project sponsors to submit information for evaluation in the *Annual Report* if their project is not a candidate for funding, unless significant issues were raised in prior year evaluations that

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<sup>2</sup> Additional information and guidance on developing FFGAs are contained in FTA Circular 5200.1A, Full Funding Grant Agreements Guidance (Dec. 5, 2002); and the FTA Rule on Project Management Oversight (49 CFR Part 633).

warranted a re-rating. Instead, the *Annual Report* conveys the most recent ratings of such projects, notes their progress, and discusses any significant issues since that evaluation.

Projects can be expected to continue to change as they progress through the development process. Hence, the ratings for projects that are not yet recommended for FFGAs or PCGAs should not be construed as statements about the ultimate ratings of those projects. Rather, the ratings provide assessments of the projects' strengths and weaknesses at the time they were rated.

## **General Commitment Guidelines for New and Small Starts Projects**

- Any project recommended for an FFGA or PCGA should meet the project justification, local financial commitment, and process criteria established by Sections 5309(d) and 5309(e) and be consistent with Executive Order 12893, *Principles for Federal Infrastructure Investments*, issued January 26, 1994.
- To the extent that funds can be obligated in the coming fiscal year under existing FFGAs and PCGAs, these commitments should be honored before any new funding recommendations are made.
- The FFGA and PCGA define the terms of the Federal commitment to a specific project, including funding. Upon completion of an FFGA or PCGA, 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 or PCGA 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 program, the Section 5307 Urbanized Area Formula program, the Section 5339 Alternatives Analysis program, or Title 23 "flexible funding".
- Firm funding commitments, embodied in FFGAs or PCGAs, will not be made until the sponsors have demonstrated that their projects are ready for such an agreement, i.e., the project's development and design has progressed to the point where its scope, costs, benefits, and impacts are considered firm and final.
- Funding should be provided to the most qualified 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 project justification, local financial commitment, and overall project ratings, and considerations such as project readiness and the availability of funds.
- As announced by Secretary of Transportation Ray LaHood on January 13, 2010, these decisions will be based on meaningful consideration of the full range of benefits that transit

can provide, rather than requiring a *Medium* or higher rating for cost effectiveness as was previously the case.

- FTA generally proposes to fund under one-year capital grants rather than PCGAs those Small Starts projects whose sponsors request less than \$25 million in total Small Starts funding or who make a request that can be met with a single year appropriation or existing appropriations.
- FTA encourages an overmatch of New Starts/Small Starts funding as a means of funding more projects and leveraging state, local, and other Federal financial resources.

FTA emphasizes that the process of project evaluation and rating is ongoing. As proposed 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.

## **FY 2011 Funding Allocations and Recommendations**

A total of \$1,559.6 million is recommended for allocation to existing or proposed New Starts FFGAs. A total of \$199.6 million is recommended for allocation for proposed Small Starts projects. An additional \$44.6 million in unallocated funding is proposed for other New or Small Starts eligible purposes. The Budget proposal also includes a 1.0 percent set-aside for management and oversight in the amount of \$18.2 million.

### ***Existing Full Funding Grant Agreements***

A detailed schedule of the multi-year funding commitment negotiated by FTA and the project sponsor to finance the federal New Starts share is included as Attachment 6 of each FFGA. Eight 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. Table 1 presents FY 2011 commitments previously negotiated by FTA and reflected in Attachment 6 of each of these existing FFGAs. FTA has reviewed the progress of each of these projects and is requesting \$924.6 million, which is the aggregate of the amounts reflected in the Attachment 6 for these projects for FY 2011. Descriptions of each of these projects can be found in Appendix A.

### ***Existing Project Construction Grant Agreements***

All existing PCGAs are fully funded. Thus, no FY 2011 funding is shown in Table 1 for existing PCGAs.

### ***FFGA Recommendations***

Ten projects are likely to be ready for an FFGA in FY 2011 (including four projects previously recommended for an FFGA in the FY 2010 Annual Report.) These projects are in the Final Design stage or nearing Final Design approval, and the environmental process has been completed or is nearing completion. For these projects, FTA recommends a total of \$635.0 million in New Starts funding in FY 2011. Table 1 identifies the funding recommended for each project and appropriations received through FY 2010, while Appendix A provides detailed descriptions of the projects, including their most recent New Starts evaluation and rating.

### ***Small Starts Funding Recommendations***

The President's Budget for FY 2011 requests \$199.6 million for nine projects that qualify under the Small Starts program. Small Starts projects are defined in SAFETEA-LU as transit capital investment projects with a total capital cost of less than \$250 million and a Section 5309 Small Starts share of less than \$75 million. In July 2007, FTA issued *Updated Interim Guidance and Instructions for Small Starts*, which documents procedures for evaluating and advancing projects into Small Starts project development for the FY 2011 evaluation cycle. The *Interim Guidance* further establishes the eligibility parameters for "Very Small Starts" projects, a subset of the lowest-cost Small Starts that may follow an even more simplified project development and evaluation process.

Of the six Small Starts projects and four Very Small Starts projects profiled in Appendix A of this report, nine proposed projects demonstrated sufficient readiness to be considered for funding in the FY 2011 President's Budget. Most of these projects are proposed to be funded under a multi-year Project Construction Grant Agreement. However, if a project's sponsor requests less than \$25 million in Small Starts funding or has received its full appropriations, FTA will award funds in a single-year capital grant rather than a PCGA.

Table 1 identifies the funding recommended for each project and appropriations received through FY 2010, while Appendix A provides a detailed description of each of the Small Starts and Very Small Starts projects, including their most recent evaluations and ratings.

### ***Other New and Small Start Funding***

The President's Budget for FY 2011 includes \$44.6 million for other New and Small Starts eligible purposes. By reserving funding for additional, but unspecified, projects in FY 2011, FTA recognizes that a project's advancement does not necessarily coincide with the Federal budget process. Project sponsors can expedite project development as they overcome project uncertainties, address local funding issues, and utilize innovative procurement and delivery practices. Reservation of these funds allows FTA to be poised to provide funding for additional qualified projects.

**FY 2011 Funding for New Starts and Small Starts Projects**

Project	Overall Project Rating	Total Capital Cost (millions \$)	Total New Starts Funding (millions \$)	Appropriations Received Through FY10 (including American Recovery and Reinvestment Act)	Amount of New Starts Funds Needed to Complete	FY 2011 President's Budget
<b>Totals by Phase</b>						
Recommended Full Funding Grant Agreements		\$42,162,617,520	\$15,914,147,055	\$5,033,068,343	\$10,881,078,712	\$1,559,610,717
Recommended Project Construction Grant Agreements and Small Starts Grants		\$1,018,736,284	\$477,544,649	\$158,581,697	\$318,962,952	\$199,635,923
Other New Starts/Small Starts Projects				\$135,012,000		\$44,644,240
Oversight Activities						\$18,221,120
Ferry Capital Projects (AK or HI)				\$84,760,000		\$0
Denali Commission				\$24,850,500		\$0
<b>GRAND TOTAL</b>		<b>\$43,181,353,804</b>	<b>\$16,391,691,704</b>	<b>\$5,436,272,540</b>	<b>\$11,200,041,664</b>	<b>\$1,822,112,000</b>
<b>Existing New Starts Full Funding Grant Agreements - Projects Under Construction or Open for Service</b>						
CO Denver, West Corridor LRT	FFGA	\$709,830,000	\$308,680,000	\$268,501,000	\$40,179,000	\$40,179,000
NY New York, Long Island Rail Road East Side Access	FFGA	\$7,386,003,583	\$2,632,113,826	\$1,703,927,338	\$928,186,488	\$215,000,000
NY New York, Second Avenue Subway Phase I	FFGA	\$4,866,614,468	\$1,300,000,000	\$752,200,379	\$547,799,621	\$197,182,000
TX Dallas, Northwest/Southeast LRT MOS	FFGA	\$1,406,215,977	\$700,000,000	\$435,325,714	\$264,674,286	\$86,249,717
UT Salt Lake City, Mid Jordan LRT	FFGA	\$535,366,000	\$428,292,800	\$228,780,050	\$199,512,750	\$100,000,000
UT Salt Lake City, Weber County to Salt Lake City Commuter Rail	FFGA	\$611,684,000	\$489,346,000	\$340,798,510	\$148,547,490	\$80,000,000
VA Northern Virginia, Dulles Corridor Metrorail Project Extension to Wiehle Ave.	FFGA	\$3,142,471,634	\$900,000,000	\$404,483,364	\$495,516,636	\$96,000,000
WA Seattle, University Link LRT Extension	FFGA	\$1,947,682,000	\$813,000,000	\$272,600,000	\$540,400,000	\$110,000,000
<b>Total Existing New Starts Full Funding Grant Agreements</b>		<b>\$20,605,867,662</b>	<b>\$7,571,432,626</b>	<b>\$4,406,616,355</b>	<b>\$3,164,816,271</b>	<b>\$924,610,717</b>
<b>Pending Full Funding Grant Agreements - Projects First Recommended For Funding in FY10 Report</b>						
FL Orlando, Central Florida Commuter Rail Transit -- Initial Operating Segment	Medium	\$357,222,858	\$178,611,429	\$66,623,030	\$111,988,399	\$40,000,000
NJ Northern New Jersey, Access to the Region's Core	Medium-High	\$8,699,979,000	\$3,000,000,000	\$280,385,726	\$2,719,614,274	\$200,000,000
TX Houston, North Corridor LRT	Medium	\$756,008,000	\$450,000,000	\$92,225,000	\$357,775,000	\$75,000,000
TX Houston, Southeast Corridor LRT	Medium	\$822,919,000	\$450,000,000	\$92,225,000	\$357,775,000	\$75,000,000
<b>Total Pending Full Funding Grant Agreements</b>		<b>\$10,636,128,858</b>	<b>\$4,078,611,429</b>	<b>\$531,458,756</b>	<b>\$3,547,152,673</b>	<b>\$390,000,000</b>
<b>New Full Funding Grant Agreement Funding Recommendations</b>						
CA San Francisco, Central Subway LRT	Medium-High	\$1,578,300,000	\$942,199,000	\$15,900,000	\$926,299,000	\$20,000,000
CO Denver, East Corridor	Medium	\$1,765,102,000	\$850,446,000	\$2,500,000	\$847,946,000	\$40,000,000
CO Denver, Gold Line	Medium	\$715,532,000	\$180,000,000	\$2,000,000	\$178,000,000	\$40,000,000
CT Hartford, New Britain - Hartford Busway	Medium	\$572,690,000	\$275,300,000	\$10,641,032	\$264,658,968	\$45,000,000
HI Honolulu, High Capacity Transit Corridor Project	Medium	\$5,347,681,000	\$1,550,000,000	\$30,000,000	\$1,520,000,000	\$55,000,000
MN St. Paul-Minneapolis, Central Corridor LRT	Medium-High	\$941,316,000	\$466,158,000	\$33,952,200	\$432,205,800	\$45,000,000
<b>Total New Full Funding Grant Agreement Funding Recommendations</b>		<b>\$10,920,621,000</b>	<b>\$4,264,103,000</b>	<b>\$94,993,232</b>	<b>\$4,169,109,768</b>	<b>\$245,000,000</b>
<b>Small Starts Funding Recommendations</b>						
CA Oakland, East Bay BRT	High	\$234,553,000	\$75,000,000	\$0	\$75,000,000	\$15,000,000
CA Riverside, Perris Valley Line	Medium-High	\$232,693,654	\$75,000,000	\$51,510,000	\$23,490,000	\$23,490,000
CA San Bernardino, E Street Corridor sbX BRT	Medium-High	\$191,706,000	\$75,000,000	\$32,370,000	\$42,630,000	\$42,630,000
CA San Francisco, Van Ness Avenue BRT	Medium-High	\$118,608,000	\$74,723,000	\$396,000	\$74,327,000	\$15,000,000
CO Fort Collins, Mason Corridor BRT	Medium	\$81,969,885	\$65,575,908	\$60,125,335	\$5,450,573	\$5,450,573
CO Roaring Fork Valley, BRT Project	Medium-High	\$43,967,000	\$24,973,000	\$810,000	\$24,163,000	\$24,163,000
NY New York City, Nostrand Ave BRT	Medium-High	\$39,872,414	\$28,398,554	\$0	\$28,398,554	\$28,398,554
TX Austin, MetroRapid BRT	Medium	\$47,000,000	\$37,600,000	\$13,370,204	\$24,229,796	\$24,229,796
WA King County, West Seattle BRT	Medium	\$28,366,000	\$21,274,000	\$0	\$21,274,000	\$21,274,000
<b>Total Small Starts Funding Recommendations</b>		<b>\$1,018,736,284</b>	<b>\$477,544,649</b>	<b>\$158,581,697</b>	<b>\$318,962,952</b>	<b>\$199,635,923</b>
<b>Other New Starts/Small Starts Projects</b>						<b>\$44,644,240</b>

## Principles for New Starts Evaluation and Rating

The projects profiled in this report are the culmination of an extensive evaluation and rating process. SAFETEA-LU established a ratings scale for candidate New Starts and Small Starts projects: *High*, *Medium-High*, *Medium*, *Medium-Low*, and *Low*. Consistent with SAFETEA-LU, only those projects rated *Medium* or higher may be advanced through the New Starts and Small Starts project development process. As they progress through project development, projects that continue to be rated *Medium* or higher will be eligible for consideration for multi-year funding recommendations in the President's budget if funding is available, the proposed project scope, cost estimate, and budget are considered firm and reliable, and local funding commitments are in place or expected to be in place at the time of a grant agreement.

Tables 2A and 2B present the ratings for all projects currently advancing through the New Starts and Small 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 2011 project evaluation process for New and Small Starts differs from the process used in the evaluation of projects included in the FY 2004-2010 *Annual Reports* due to the passage of the SAFETEA-LU Technical Corrections Act in June 2008, which directed FTA to give "comparable, but not necessarily equal weights" to all of the project justification criteria. The revised rating process was outlined in FTA's 2009 *Guidance on New Starts/Small Starts Policies and Procedures*.

Since publication of the FY 2010 report in May 2009, several projects have been approved into New Starts Preliminary Engineering or Final Design or Small Starts Project Development. These include:

Approved into New Starts Preliminary Engineering <sup>3</sup>

- Draper, UT -- Draper LRT
- Honolulu, HI – Rail Transit Project – East Kapolei to Ala Moana Center
- Houston, TX – University Corridor LRT
- San Jose, CA -- Silicon Valley Berryessa Extension
- Vancouver, WA -- Columbia River Crossing

Approved into Small Starts Project Development

- Seattle, WA – West Seattle BRT

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<sup>3</sup> The Oakland Airport Connector project in Oakland, CA was concurrently approved into both preliminary engineering and final design in December 2009. However, the project's outlook is uncertain pending resolution of Civil Rights compliance concerns.

Table 2A -- Summary of FY 2011 New Starts Ratings

Phase State, City, Project	Capital Cost (millions)	Financing Costs (millions)	Total Capital Cost (millions)	Total New or Small Starts Funding Requested (millions)	New or Small Starts Funds Share of Capital Costs	Overall Project Rating	Local Financial Commitment Rating	Project Justification Rating
<b>Final Design</b>								
AZ Tucson, Modern Streetcar *	\$182.5	\$0.0	\$182.5	\$25.0	14%	<b>Exempt</b>	Exempt	Exempt
CA Oakland, Oakland Airport Connector*	\$484.1	\$8.6	\$492.7	\$25.0	5%	<b>Exempt</b>	Exempt	Exempt
CA San Francisco, Central Subway LRT	\$1,578.3	\$0.0	\$1,578.3	\$942.2	60%	<b>Medium-High</b>	Medium	Medium-High
CT Hartford, New Britain - Hartford Busway	\$560.7	\$12.0	\$572.7	\$275.3	48%	<b>Medium</b>	Medium	Medium
CT Stamford, Urban Transitway Phase II *	\$48.3	\$0.0	\$48.3	\$24.7	51%	<b>Exempt</b>	Exempt	Exempt
DE Wilmington, Wilmington to Newark Commuter Rail Improvements *	\$78.4	\$0.0	\$78.4	\$25.0	32%	<b>Exempt</b>	Exempt	Exempt
FL Orlando, Central Florida Commuter Rail Transit - Initial Operating Segment	\$356.3	\$0.9	\$357.2	\$178.6	50%	<b>Medium</b>	Medium	Medium
NJ Northern New Jersey, Access to the Region's Core	\$8,700.0	\$0.0	\$8,700.0	\$3,000.0	34%	<b>Medium-High</b>	Medium	Medium-High
RI Providence, South County Commuter Rail *	\$49.2	\$0.0	\$49.2	\$24.9	51%	<b>Exempt</b>	Exempt	Exempt
TX Houston, North Corridor LRT	\$710.2	\$45.8	\$756.0	\$450.0	60%	<b>Medium</b>	Medium	Medium
TX Houston, Southeast Corridor LRT	\$767.3	\$55.6	\$822.9	\$450.0	55%	<b>Medium</b>	Medium	Medium
<b>Preliminary Engineering</b>								
CA Sacramento, South Corridor Phase 2	\$270.0	\$0.0	\$270.0	\$135.0	50%	<b>Medium-Low</b>	Medium-Low	Medium
CA San Jose, Silicon Valley Berryessa Extension	\$2,203.4	\$305.8	\$2,509.1	\$900.0	36%	<b>Medium</b>	Medium	Medium
CO Denver, East Corridor	\$1,719.0	\$46.1	\$1,765.1	\$850.4	48%	<b>Medium</b>	Medium	Medium
CO Denver, Gold Line	\$627.6	\$87.9	\$715.5	\$180.0	25%	<b>Medium</b>	Medium	Medium
FL Miami, Orange Line Phase 2: North Corridor Metrorail Extension	\$1,340.9	\$163.8	\$1,504.7	\$700.0	47%	<b>Medium-Low</b>	Medium-Low	Medium
HI Honolulu, High Capacity Transit Corridor Project	\$5,057.4	\$290.3	\$5,347.7	\$1,550.0	29%	<b>Medium</b>	Medium	Medium
MA Boston, Assembly Square Station *	\$47.7	\$0.0	\$47.7	\$25.0	52%	<b>Exempt</b>	Exempt	Exempt
MA Boston, Silver Line Phase III	\$1,696.1	\$410.5	\$2,106.5	\$1,261.8	60%	<b>Medium-Low</b>	Medium-Low	Medium-High
MN St. Paul-Minneapolis, Central Corridor LRT	\$923.4	\$17.9	\$941.3	\$466.2	50%	<b>Medium-High</b>	Medium-High	Medium-High
NC Charlotte, Northeast Corridor Light Rail Project	\$1,139.2	\$40.8	\$1,180.0	\$590.0	50%	<b>Medium</b>	Medium	Medium
OR Portland, Milwaukie LRT	\$1,214.6	\$257.1	\$1,471.8	\$735.9	50%	<b>Medium-High</b>	Medium	Medium-High
TX Houston, University Corridor LRT	\$1,326.7	\$170.2	\$1,496.9	\$748.5	50%	<b>Medium</b>	Medium	Medium
UT Salt Lake City, Draper LRT	\$192.9	\$19.3	\$212.2	\$169.8	80%	<b>Medium</b>	Medium	Medium
WA Vancouver, Columbia River Crossing	\$829.8	\$116.0	\$945.8	\$750.0	79%	<b>Medium</b>	Medium	Medium
<b>Small Starts Project Development</b>								
CA Oakland, East Bay BRT	\$234.6	\$0.0	\$234.6	\$75.0	32%	<b>High</b>	High	Medium-High
CA Riverside, Perris Valley Line	\$232.7	\$0.0	\$232.7	\$75.0	32%	<b>Medium-High</b>	High	Medium
CA San Bernardino, E Street Corridor sbX BRT	\$186.7	\$5.0	\$191.7	\$75.0	39%	<b>Medium-High</b>	Medium-High	Medium
CA San Francisco, Van Ness Avenue BRT	\$118.6	\$0.0	\$118.6	\$74.7	63%	<b>Medium-High</b>	Medium	High
CO Fort Collins, Mason Corridor BRT	\$82.0	\$0.0	\$82.0	\$65.6	80%	<b>Medium</b>	Medium	Medium
CO Roaring Fork Valley, BRT Project	\$44.0	\$0.0	\$44.0	\$25.0	57%	<b>Medium-High</b>	Medium-High	Medium
MI Grand Rapids, Division Avenue BRT	\$35.7	\$1.0	\$36.7	\$29.3	80%	<b>Medium</b>	Medium	Medium
NY New York City, Nostrand Ave BRT	\$39.2	\$0.6	\$39.9	\$28.4	71%	<b>Medium-High</b>	Medium	High
TX Austin, MetroRapid BRT	\$47.0	\$0.0	\$47.0	\$37.6	80%	<b>Medium</b>	Medium	Medium
WA King County, West Seattle BRT	\$28.4	\$0.0	\$28.4	\$21.3	75%	<b>Medium</b>	Medium	Medium

\* 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. Listings above at \$25.00 million reflect rounding.

Table 2B -- Detailed Summary of FY 2011 New Starts Ratings

Phase State, City, Project	Overall Project Rating	Local Financial Commitment Rating	Local Financial Commitment Rating			Project Justification Rating	Project Justification					
			New Starts Share Rating	Capital Plan Rating	Operating Plan Rating		Environmental Benefits Rating	Operating Efficiencies Rating †	Mobility Improvement Rating	Cost Effectiveness Rating	Economic Development Rating	Land Use Rating
<b>Final Design</b>												
AZ Tucson, Modern Streetcar *	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt
CA Oakland, Oakland Airport Connector*	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt
CA San Francisco, Central Subway LRT	Medium-High	Medium	Medium	Medium	Medium	Medium-High	High	Medium	Medium-High	Medium	High	High
CT Hartford, New Britain - Hartford Busway	Medium	Medium	Medium-High	Medium	Medium	Medium	High	Medium	Medium	Medium	Medium	Medium-Low
CT Stamford, Urban Transitway Phase II *	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt
DE Wilmington, Wilmington to Newark Commuter Rail Improvements *	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt
FL Orlando, Central Florida Commuter Rail Transit - Initial Operating Segment	Medium	Medium	Medium	Medium	Medium	Medium	Medium	---	Medium-Low	Medium-Low	---	Medium
NJ Northern New Jersey, Access to the Region's Core	Medium-High	Medium	High	Medium	Medium	Medium-High	High	---	Medium-High	Medium	---	High
RI Providence, South County Commuter Rail *	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt
TX Houston, North Corridor LRT	Medium	Medium	Medium	Medium	Medium	Medium	High	---	Medium-High	Medium-High	---	Medium-Low
TX Houston, Southeast Corridor LRT	Medium	Medium	Medium	Medium	Medium	Medium	High	---	Medium	Medium	---	Medium-Low
<b>Preliminary Engineering</b>												
CA Sacramento, South Corridor Phase 2	Medium-Low	Medium-Low	Medium	Medium-Low	Medium-Low	Medium	High	Medium	Medium-Low	Medium	Medium	Low
CA San Jose, Silicon Valley Berryessa Extension	Medium	Medium	Medium-High	Medium	Medium	Medium	High	Medium	Medium-Low	Medium-Low	Medium-High	Medium-Low
CO Denver, East Corridor	Medium	Medium	Medium-High	Medium	Medium	Medium	High	Medium	Medium-Low	Medium	Medium-High	Medium-Low
CO Denver, Gold Line	Medium	Medium	High	Medium	Medium	Medium	High	Medium	Medium-Low	Medium	Medium-High	Medium-Low
FL Miami, Orange Line Phase 2: North Corridor Metrorail Extension	Medium-Low	Medium-Low	Medium-High	Medium	Medium-Low	Medium	Medium	Not Available	Medium	Medium	Not Available	Medium
HI Honolulu, High Capacity Transit Corridor Project	Medium	Medium	High	Medium	Medium	Medium	Medium	Medium	Medium-High	Medium	Medium-High	Medium
MA Boston, Assembly Square Station *	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt
MA Boston, Silver Line Phase III	Medium-Low	Medium-Low	Medium	Medium-Low	Medium-Low	Medium-High	High	Not Available	Medium-High	Medium	Not Available	High
MN St. Paul-Minneapolis, Central Corridor LRT	Medium-High	Medium-High	Medium	Medium-High	Medium-High	Medium-High	Medium	Medium	Medium	Medium	High	Medium-High
NC Charlotte, Northeast Corridor Light Rail Project	Medium	Medium	Medium	Medium-High	Medium	Medium	High	Medium	Medium-High	Medium	Medium-High	Low
OR Portland, Milwaukie LRT	Medium-High	Medium	Medium	Medium	Medium	Medium-High	Medium	Medium	Medium-High	Medium	High	Medium
TX Houston, University Corridor LRT	Medium	Medium	Medium	Medium	Medium	Medium	High	Medium	Medium-High	Medium	Medium	Medium-Low
UT Salt Lake City, Draper LRT	Medium	Medium	Low	Medium-High	Medium-High	Medium	High	Medium	Medium	Medium-Low	Medium	Medium-Low
WA Vancouver, Columbia River Crossing	Medium	Medium	Low	Medium	Medium	Medium	Medium	Medium	Medium	Medium	High	Medium
<b>Small Starts Project Development</b>												
CA Oakland, East Bay BRT	High	High	N/A	N/A	N/A	Medium-High	N/A	N/A	N/A	High	Medium	Medium
CA Riverside, Perris Valley Line	Medium-High	High	N/A	N/A	N/A	Medium	N/A	N/A	N/A	Medium	---	Medium-Low
CA San Bernardino, E Street Corridor sbX BRT	Medium-High	Medium-High	Medium-High	Medium-High	Medium-High	Medium	N/A	N/A	N/A	High	Medium-Low	Medium-Low
CA San Francisco, Van Ness Avenue BRT	Medium-High	Medium	N/A	N/A	N/A	High	N/A	N/A	N/A	High	High	High
CO Fort Collins, Mason Corridor BRT	Medium	Medium	Low	Medium-High	Medium	Medium	N/A	N/A	N/A	Medium	Medium-High	Medium-Low
CO Roaring Fork Valley, BRT Project	Medium-High	Medium-High	Medium	Medium-High	Medium-High	Medium	N/A	N/A	N/A	Medium	Medium	Medium
MI Grand Rapids, Division Avenue BRT	Medium	Medium	N/A	N/A	N/A	Medium	N/A	N/A	N/A	Medium	Medium	Medium
NY New York City, Nostrand Ave BRT	Medium-High	Medium	N/A	N/A	N/A	High	N/A	N/A	N/A	High	Medium-High	High
TX Austin, MetroRapid BRT	Medium	Medium	N/A	N/A	N/A	Medium	N/A	N/A	N/A	Medium	Medium	Medium
WA King County, West Seattle BRT	Medium	Medium	N/A	N/A	N/A	Medium	N/A	N/A	N/A	Medium	Medium	Medium

\*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.

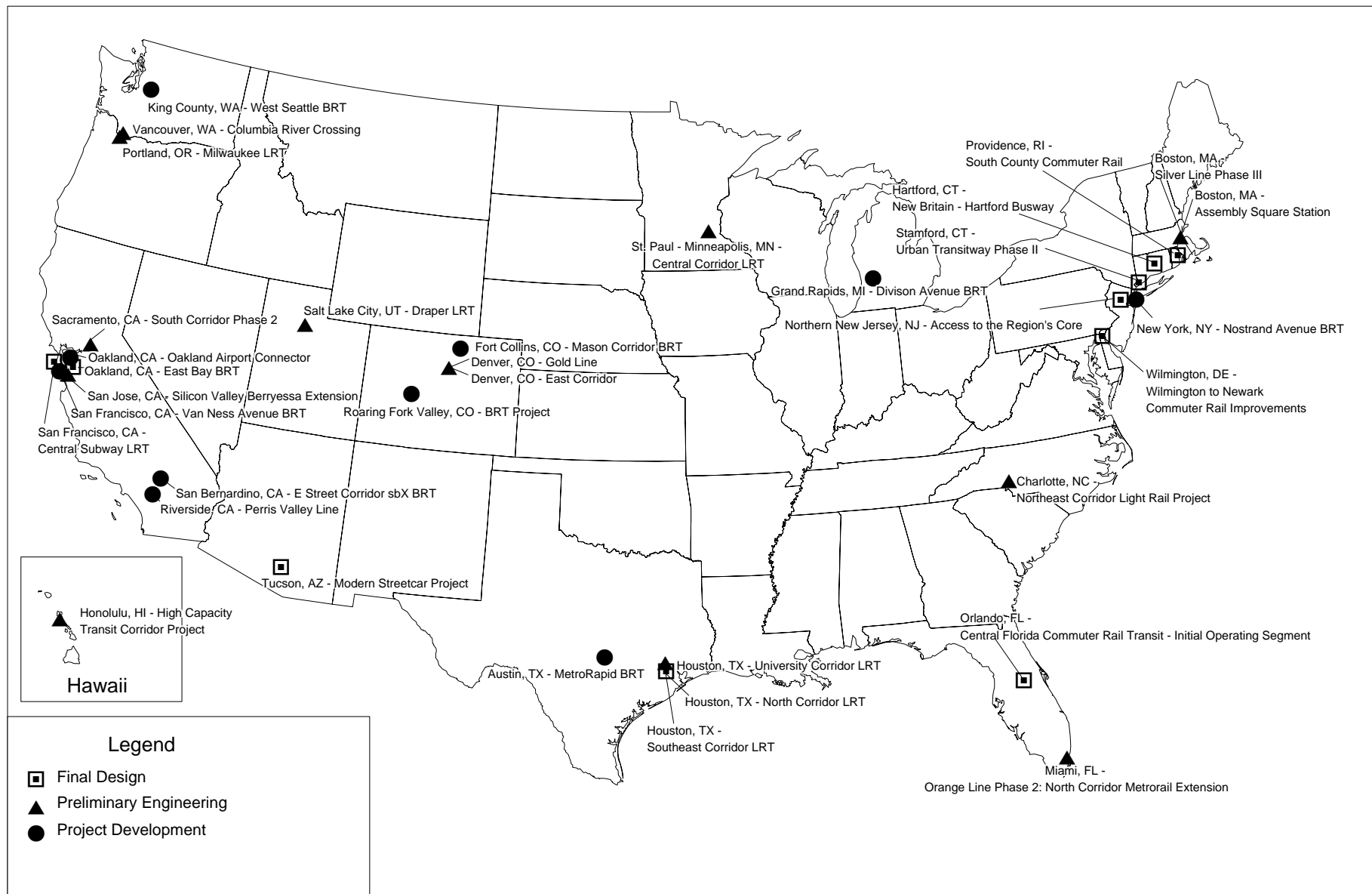
"--" signifies that the revised weighting of the project justification criteria that took effect in July 2009 does not apply to this project. Per FTA's 2006 Final Guidance on New Starts Policies and Procedures, when FTA proceeds with policy/guidance changes, it ensures existing projects far along in the development process are not adversely impacted by allowing them to continue to be evaluated and rated under the old methodology.

"N/A" signifies that this criterion does not apply to Small Starts projects per the simplified evaluation process specified in SAFETEA-LU and FTA's Small Starts Interim guidance.

# Full Funding Grant Agreements FY 2011



# Project Development, Preliminary Engineering and Final Design FY 2011



***Paul S. Sarbanes Transit in Parks Program***

In FY 2009, Congress appropriated \$26.90 million for the Paul S. Sarbanes Transit in Parks Program, which was consistent with funding levels authorized in SAFETEA-LU. FTA has not completed the FY 2009 evaluation process, but anticipates announcing successful applicants in the *Federal Register* once project selections have been finalized. Appendix B describes FTA's overall progress in developing the program and describes the technical assistance activities sponsored to date.

# **Appendix A**

## **New Starts and Small Starts**

### **Project Profiles**

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## Alphabetical List of Projects by Development Phase and State

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**Washington**

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## **New Starts and Small Starts Projects and Ratings Contained in This Report**

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, 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.

49 USC 5309(e) establishes requirements for “Small Starts” projects seeking no more than \$75 million in Small New Starts funding with a total project cost of not greater than \$250 million. Grants for such projects can only be made if the Secretary finds that the project is:

- (A) based on the results of an alternatives analysis and preliminary engineering;
- (B) justified based on a review of its cost effectiveness, public transportation supportive land use policies, and effect on economic development; and
- (C) supported by an acceptable degree of local financial commitment.

Profiles for projects that are under construction—or, in a few cases, in revenue operation—are included in this report if additional funds are needed to fulfill the New or Small Starts funding commitment.

This section includes profiles for each project under an FFGA or PCGA, as well as proposed projects undergoing final design, preliminary engineering, or Small Starts project development. In addition to providing information to Congress, the document serves as guidance to project sponsors so that improvements in project development 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 FFGAs or PCGAs should not be construed as a statement about the ultimate merit of the project. Rather, the ratings provide an assessment of the project’s strengths and weaknesses at the time it was rated.

In general, the profiles for projects in final design, preliminary engineering, and Small Starts project development 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' overall ratings of *High*, *Medium-High*, *Medium*, *Medium-Low*, or *Low* are presented in this section, as are areas of concern or 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 the Last Evaluation:** This section describes significant changes in the project scope, capital cost, travel demand forecasts, or financial plan since the previous evaluation, that contribute to an understanding of why the information reported in the *Annual Report* 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 (e); FTA's *Final Rule* on New Starts project evaluation and rating, which became effective April 6, 2001; FTA's 2006 through 2009 *Guidance on New Starts Policies and Procedures* documents; and FTA's *Updated Interim Guidance and Instructions for Small Starts*, issued July 20, 2007.
- (5) **Local Financial Commitment:** This section presents the evaluation of each project's capital and operating financial plan and local financial commitment for the New Starts or Small Starts share.

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

# Full Funding Grant Agreements

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# **West Corridor LRT**

## **Denver, Colorado**

(November 2009)

The Denver Regional Transportation District (RTD) is constructing a 12-station, 12.1-mile light rail transit (LRT) line extending from RTD's existing LRT system 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 LRT line at the existing Auraria station adjacent to downtown Denver where it interlines to Denver Union Station (DUS). The project scope includes 32 light rail vehicles. Service would operate at five-minute peak-period headways between DUS and the Federal Center station in Lakewood and 15-minute peak-period headways between Federal Center and Jefferson County Government Center during weekday peak periods. The project is expected to serve 29,700 average weekday boardings in 2030.

The total project cost under the Full Funding Grant Agreement (FFGA) is \$709.83 million. The Section 5309 New Starts funding share is \$308.68 million.

## **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 the Denver Regional Council of Governments (DRCOG) and the Colorado Department of Transportation (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 partially based on the inability to widen West 6<sup>th</sup> 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 increased RTD's sales tax revenues to support the construction of over 100 miles of new rail transit (including the West Corridor LRT project) and a 24 percent increase in local bus service. FTA approved the project into final design in August 2005. During final design, RTD implemented a series of value engineering and cost containment measures to control cost growth. An Environmental Assessment was completed in August 2007. FTA issued a Finding of No Significant Impact in November 2007. RTD and FTA entered into an FFGA in January 2009, with revenue operations scheduled for May 2013. The construction contracts, including the construction management/general contractor (CMGC) and systems contract are underway and the project is progressing satisfactorily. In addition to four major steel bridge superstructures being procured and fabricated, right-of-way acquisition, utility relocation, and procurement of long lead items are underway. Vehicles which were bought under exiting pre-award authority have been delivered.

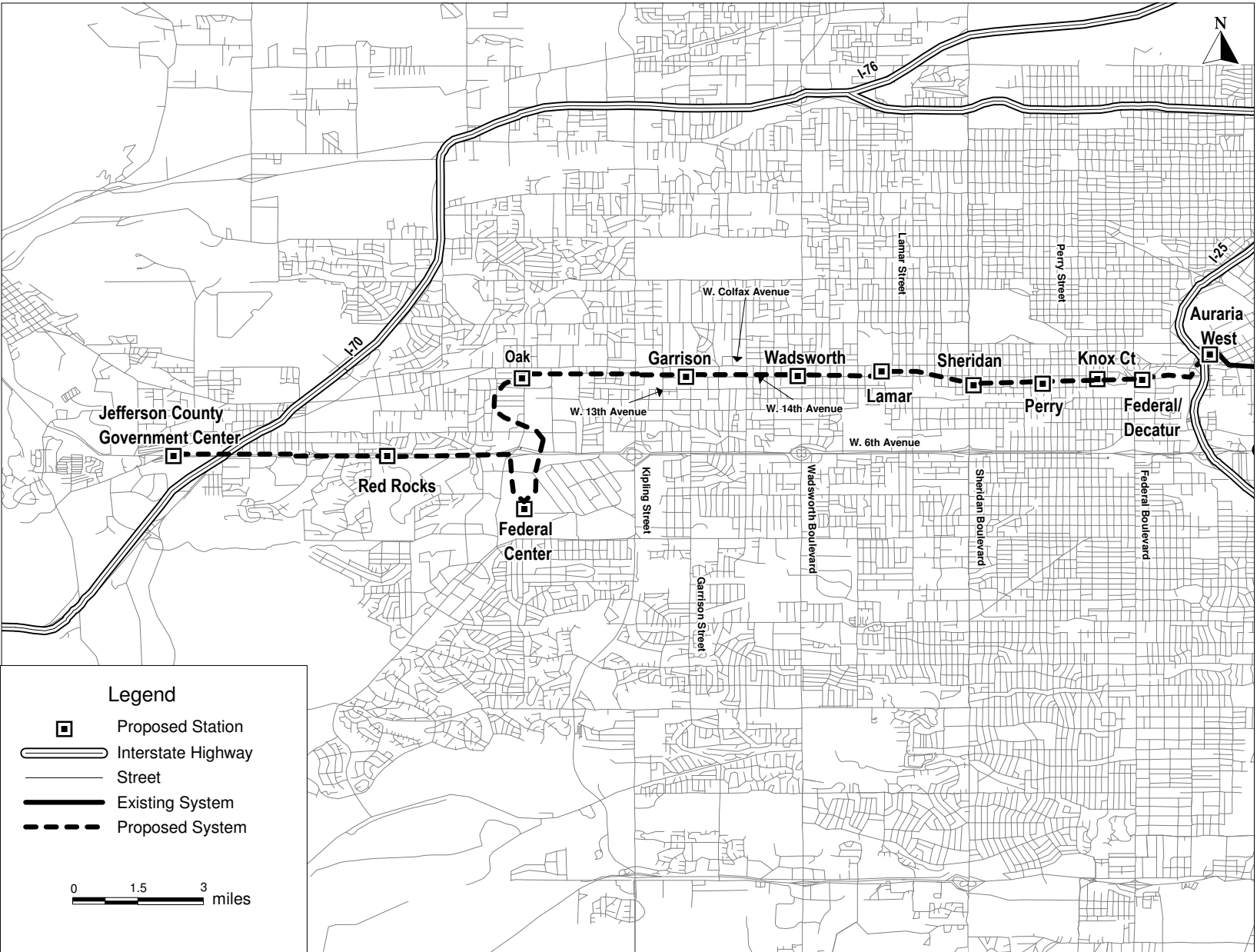
SAFETEA-LU Section 3043(b)(7) authorized the Denver West Light Rail Transit project for final design and construction. Through FY 2010, Congress has appropriated a total of \$268.50 million for the project. This includes \$40.00 million in ARRA allocations.

<b>Reported in Year of Expenditure Dollars</b>		
<b><u>Source of Funds</u></b>	<b><u>Total Funding (\$million)</u></b>	<b><u>Appropriations to Date</u></b>
<b>Federal:</b> Section 5309 New Starts FFGA Commitment Section 5307 CMAQ	\$308.68 \$9.50	\$268.50 million in total appropriations through FY 2010. This includes \$40.00 million in ARRA funds.
<b>Local:</b> Sales Tax Revenues and Local government contributions	\$391.65	
<b>TOTAL</b>	<b>\$709.83</b>	

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

# West Corridor LRT

Denver, Colorado





# **Long Island Rail Road East Side Access**

## **New York, New York**

(November 2009)

The Metropolitan Transportation Authority's (MTA) Long Island Rail Road (LIRR) is constructing 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 new tunnels beneath Sunnyside Yard connecting to the currently unused lower level of the 63<sup>rd</sup> Street Tunnel beneath the East River. In Manhattan, the project will continue west beneath 63<sup>rd</sup> Street toward 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 will provide new tracks, and a passenger concourse including 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 the 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, 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.

The total project cost under the Full Funding Grant Agreement (FFGA) is \$7,386.00 million. The Section 5309 New Starts funding share is \$2,632.11 million.

## **Status**

MTA completed a major investment study for the project corridor in April 1998. FTA approved MTA'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. Under a Letter of No Prejudice (LONP), MTA began construction in late 2001. The LONP granted authority to expend up to \$1,080.04 million while maintaining eligibility of the expenses for later reimbursement, and was liquidated upon FFGA execution. FTA approved the project into final design in February 2002. Due to the redesign of a vent facility at 50<sup>th</sup> Street, FTA issued a supplemental environmental Finding of No Significant Impact in July 2006. MTA and FTA entered into an FFGA in December 2006, with revenue operations scheduled for December 2013. Major tunneling construction has made significant progress in Manhattan and to a lesser degree in Queens. Costs are increasing over the original budget due to a combination of events including higher cost of materials, a less competitive bidding environment that required repackaging that delayed the project, poor contractor performance, unbudgeted stakeholder requirements, and lack of timely decisions. FTA does not believe that the costs can be recouped and expects the project will remain over budget until completed. The project revenue operation date is delayed two years and local share is being increased to cover increasing costs of about \$1,500 million.

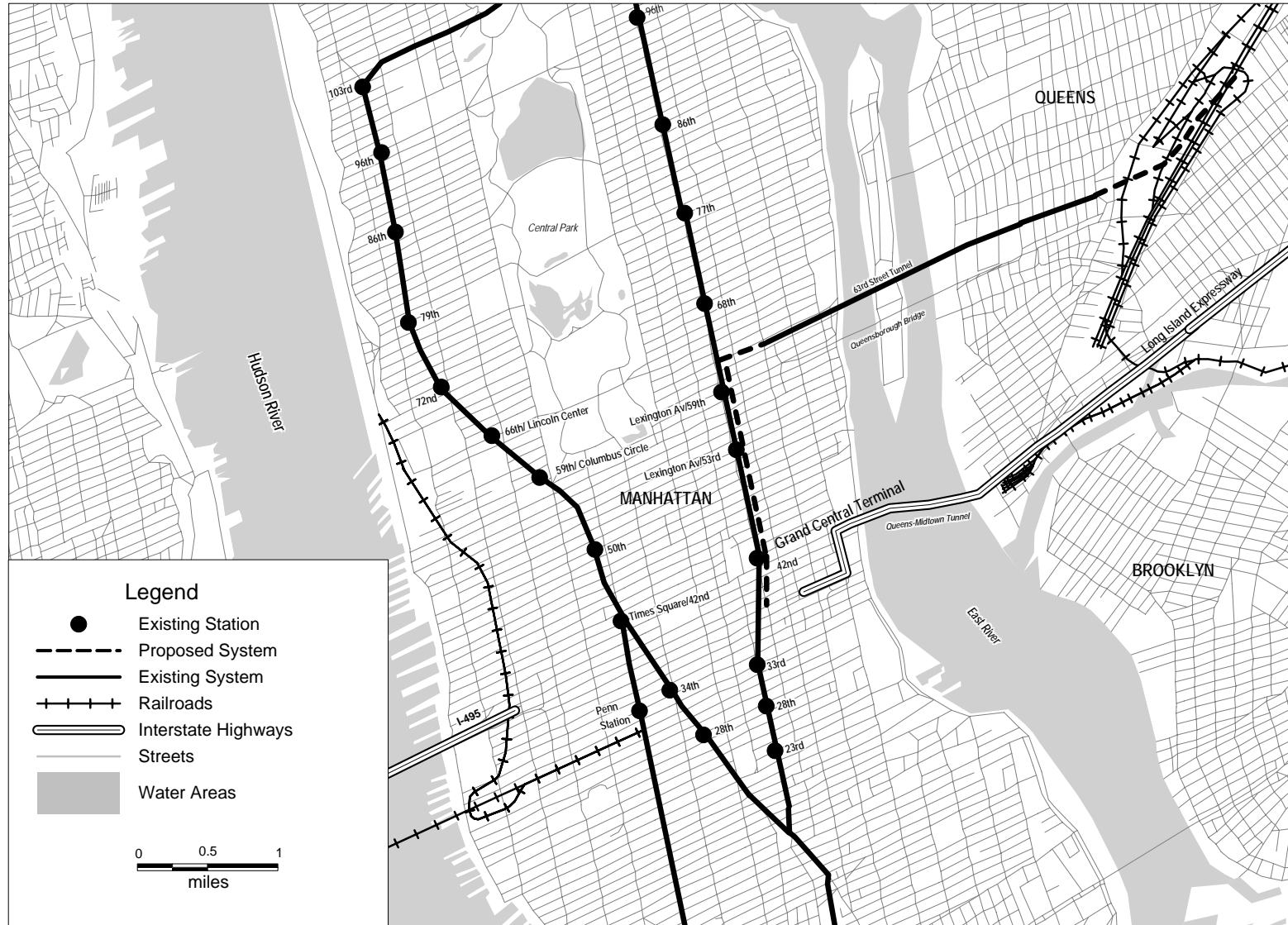
SAFETEA-LU Section 3043(b)(20) authorized the LIRR East Side Access project for final design and construction. Through FY 2010, Congress has appropriated \$1,703.93 million in Section 5309 New Starts funds including \$195.41 million in ARRA grants for the project.

<b>Reported in Year of Expenditure Dollars</b>		
<b><u>Source of Funds</u></b>	<b><u>Total Funding (\$million)</u></b>	<b><u>Appropriations to Date</u></b>
<b>Federal:</b> Section 5309 New Starts FFGA Commitment Flexible Funds (CMAQ) Section 5309 Fixed Guideway Modernization Funds Section 5307 Urbanized Area Formula Funds	\$2,632.11 \$11.20 \$22.98 \$16.26	\$1,703.93 million in total appropriations through FY 2010. This includes \$195.41 million in ARRA funds
<b>State:</b> State Transportation Bond Act of 2005	\$450.00	
<b>Local:</b> MTA Dedicated Sources (bonds, surplus toll revenues, etc.) MTA Operating Budget	\$3,217.35 \$1,036.10	
<b>TOTAL</b>	<b>\$7,386.00</b>	

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

# Long Island Rail Road East Side Access

New York, New York





# **Second Avenue Subway Phase I**

## **New York, New York**

(November 2009)

The Metropolitan Transportation Authority and New York City Transit (MTA/NYCT) are constructing 2.3 miles of new subway on Manhattan's East Side from 96<sup>th</sup> Street to 63<sup>rd</sup> Street, connecting with the existing Broadway Line at the 63<sup>rd</sup> Street Station. The Second Avenue Subway Phase I project includes: construction of three new stations at 96<sup>th</sup>, 86<sup>th</sup>, and 72<sup>nd</sup> Streets; modification of the existing 63<sup>rd</sup> Street station; new tunnels from 92<sup>nd</sup> to 63<sup>rd</sup> Streets; station/ancillary facilities; track, signal and power systems; and the procurement of 68 rail cars. The Phase I project is a minimum operable segment (MOS) of a planned 8.5-mile subway line extending the length of Manhattan's East Side from 125<sup>th</sup> Street in East Harlem to Hanover Square in the Financial District.

The project will relieve overcrowded conditions and improve service reliability on the Lexington Avenue Line (LAL), and improve current mobility and meet future demand for commuters throughout New York City and the metropolitan area. The LAL is currently the only full north-south passenger rail line serving Manhattan's east side and is the busiest transit line in North America. This heavy passenger load (approximately 3,000 passengers at one station during a 15-minute period of the morning peak hour) causes significant delays in service due to the excessive overcrowding along station platforms and queuing on stairways.

The total project cost under the Full Funding Grant Agreement (FFGA) is \$4,866.61 million. The Section 5309 New Starts funding share is \$1,300.00 million.

### **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 63<sup>rd</sup> Street to East 125<sup>th</sup> 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 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 four 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. FTA included the Phase I MOS in the "other projects" category in the FY 2007 President's Budget. FTA approved entry into final design for the Second Avenue Subway Phase I project in April 2006. FTA executed an Early Systems Work Agreement (ESWA) in January 2007, to enable MTA to advance critical elements of the project. The tunneling contract has been awarded. MTA and FTA entered into an FFGA in November 2007, with revenue operations scheduled for June 2014. Construction has begun on the tunneling and two of the stations. Costs are increasing over the original budget due to a combination of events including higher cost of materials, a less competitive bidding environment that required repackaging that delayed the project, unbudgeted stakeholder requirements, and a lack of timely decisions. FTA does not believe the costs can be recouped and expects the project will remain over budget until completed. The project revenue operation date is delayed one year and local share is being increased to cover increasing costs of about \$1,000 million.

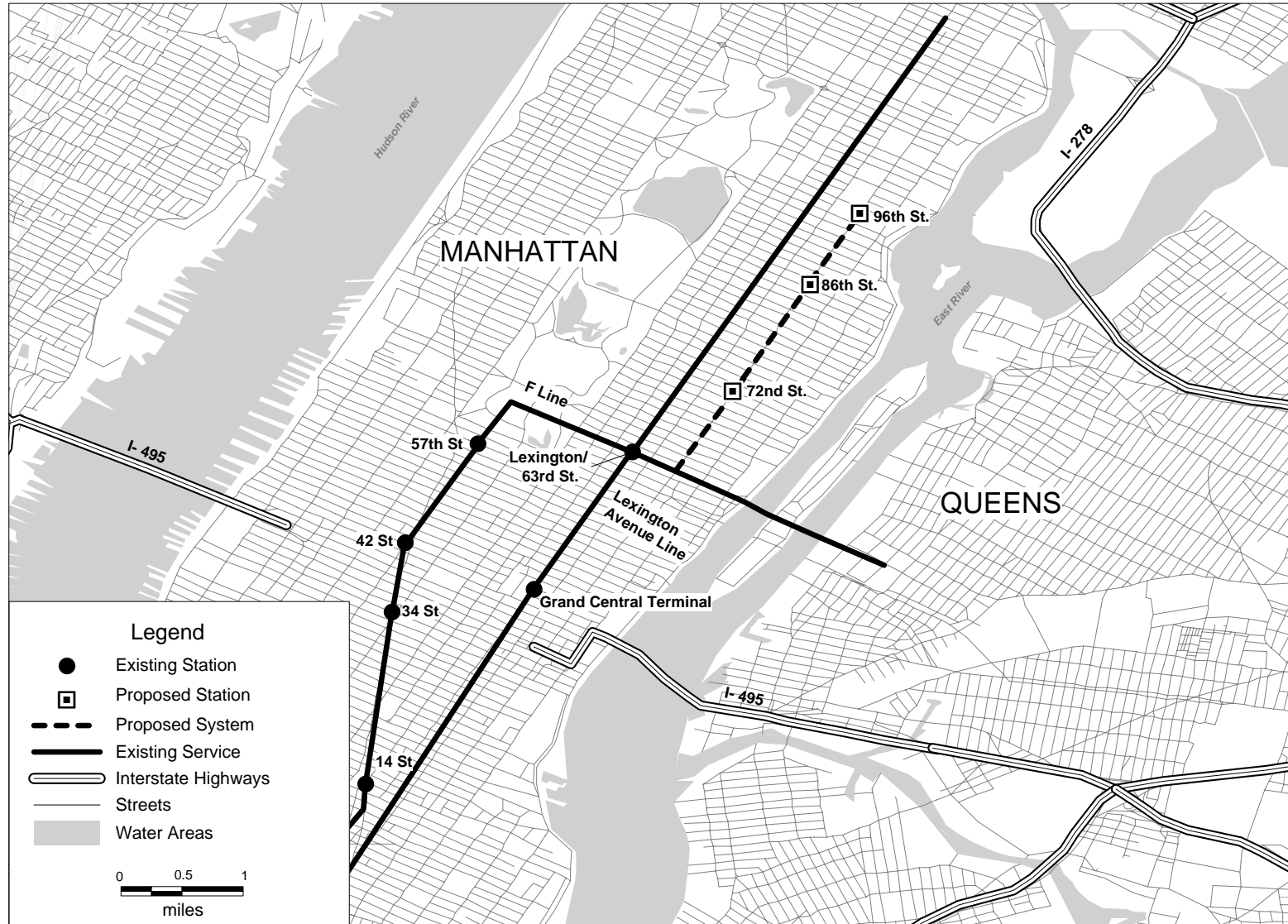
Through FY 2010, Congress has appropriated \$752.20 million in Section 5309 New Starts funds including \$78.87 million in ARRA funds for the project.

Reported in Year of Expenditure Dollars		
<u>Source of Funds</u>	<u>Total Funding (\$million)</u>	<u>Appropriations to Date</u>
<b>Federal:</b> Section 5309 New Starts	\$1,300.00	\$752.20 million in total appropriations through FY 2010. This includes \$78.87 million in ARRA funds
Section 5307 Other Flexible Funds (CMAQ)	\$2.46 \$48.23	
<b>State:</b> State Transportation Bond Act of 2005	\$450.00	
<b>Local:</b> MTA Dedicated Sources (bonds, surplus toll revenues, etc.)	\$2,249.31	
MTA Operating Budget (finance costs)	\$816.61	
<b>TOTAL</b>	<b>\$4,866.61</b>	

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

# Second Avenue Subway Phase I

New York, New York





## **Northwest / Southeast LRT MOS**

### **Dallas, Texas**

(November 2009)

Dallas Area Rapid Transit (DART) is constructing 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 from Farmers Branch 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. The project includes construction of 16 stations, approximately 2,700 parking spaces, 18 super light rail vehicles (LRV), approximately 38 “C” car retrofits, and a rail operating facility. The project is expected to serve 45,900 average weekday boardings in 2025.

The total project cost under the Full Funding Grant Agreement (FFGA) is \$1,406.22 million. The Section 5309 New Starts funding share is \$700.00 million.

### **Status**

DART completed major investment studies on the SE and NW Corridors 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 process for both corridors in February 2004. FTA approved the NW/SE LRT MOS project into final design in June 2005. FTA and DART entered into an FFGA in July 2006, with a revenue operations date scheduled for June 2011. Southeast Line Segment SE-1A commenced revenue service on September 14, 2009.

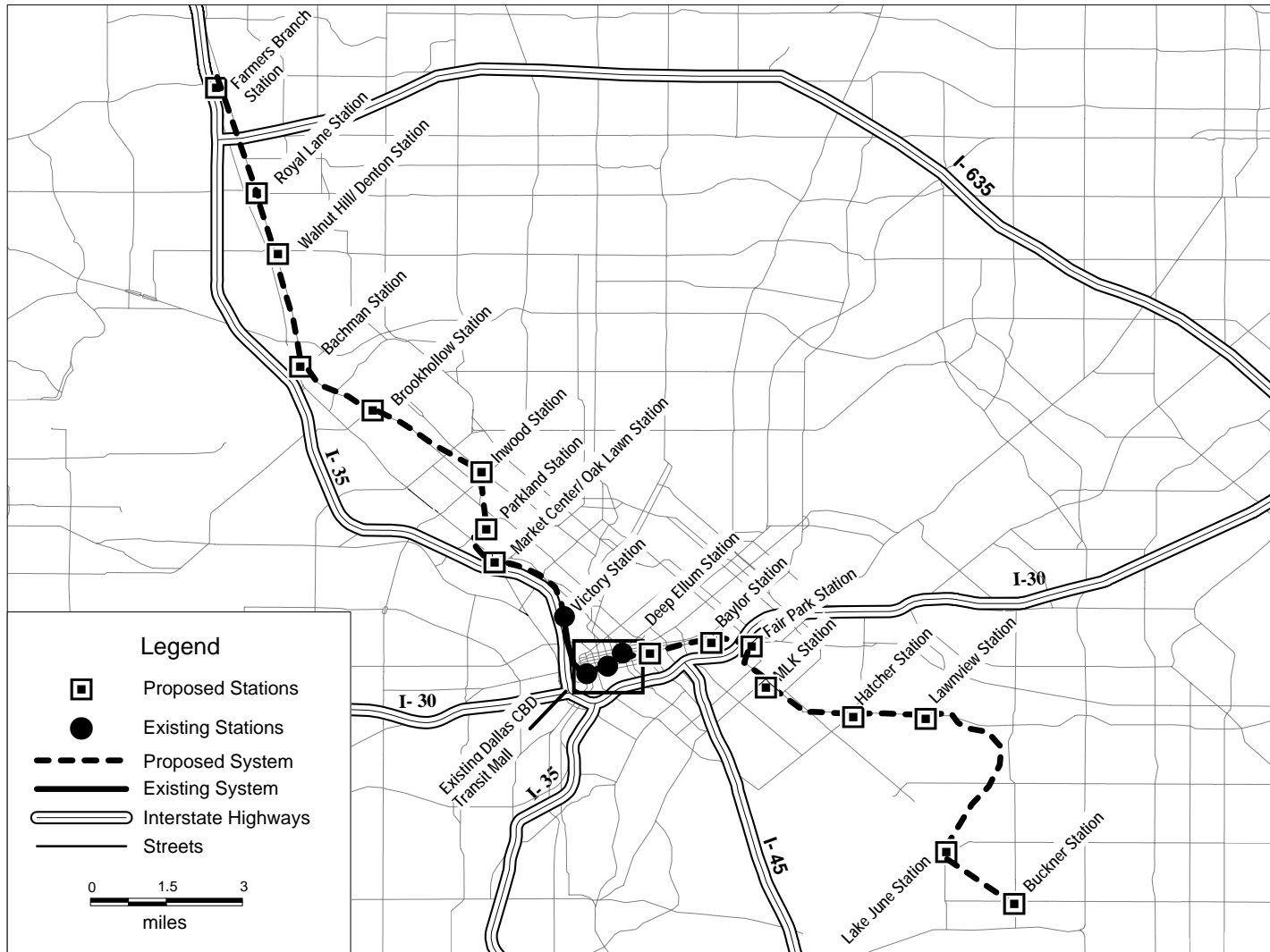
SAFETEA-LU Section 3043(b)(5) authorized the Northwest-Southeast LRT for final design and construction. Through FY 2010, Congress has appropriated a total of \$435.33 million in Section 5309 funds including \$78.39 million in ARRA grants for this project.

<b>Reported in Year of Expenditure Dollars</b>		
<b><u>Source of Funds</u></b>	<b><u>Total Funding (\$million)</u></b>	<b><u>Appropriations to Date</u></b>
<b>Federal:</b> Section 5309 New Starts FFGA Commitment	\$700.00	\$435.33 in total appropriations through FY 2010. This includes \$78.39 million in ARRA allocations in FY 2009
<b>Local:</b> Sales Tax Revenue	\$706.22	
<b>TOTAL</b>	<b>\$1,406.22</b>	

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

# Northwest / Southeast LRT MOS

## Dallas, Texas





## **Mid-Jordan LRT**

### **Salt Lake City, Utah**

(November 2009)

The Mid-Jordan LRT is a 10.6-mile southwestern extension of the Utah Transit Authority's (UTA) TRAX light rail transit (LRT) system. The project will operate largely on existing Bingham Branch Line rail right-of-way (ROW) purchased from the Union Pacific Railroad in September 2002. The Mid-Jordan LRT alignment would serve the growing suburban communities of Midvale and West Jordan, as well as the planned Kennecott Daybreak Development near the project terminus at South Jordan. The project scope includes nine new stations, 3,035 park-and-ride spaces, and 28 low-floor light rail vehicles. Service would operate daily between 5:00 a.m. and 12:00 a.m. with 15-minute headways during both peak and off-peak periods, and one additional train will be deployed during the peak hour. Mid-Jordan LRT service would interline with UTA's existing Sandy/Salt Lake TRAX Line at the existing Fashion Place West station, providing a direct connection to the Salt Lake City central business district and the University of Utah. The project is expected to serve 9,500 average weekday boardings in 2030.

The total project cost under the Full Funding Grant Agreement (FFGA) is \$535.37 million. The Section 5309 New Starts funding share is \$428.29 million.

### **Status**

The proposed project is consistent with previous studies and plans prepared by the Wasatch Front Regional Council, the region's metropolitan planning organization, and UTA. The Mid-Jordan Corridor was identified in the December 2000 South Salt Lake County Transit Corridors Analysis as a prime candidate for improved transit service. A Draft Environmental Impact Statement (EIS) was completed in July 2005. FTA approved the Mid-Jordan LRT project into preliminary engineering in May 2007. The Final EIS was signed in July 2007, and the environmental Record of Decision was issued in September 2007. The project was approved into final design in April 2008. Under a Letter of No Prejudice (LONP), UTA began construction in August 2008. A second LONP was provided in October 2008. The two LONPs granted authority to expend up to \$35.89 million while maintaining eligibility of the expenses for later reimbursement, and were liquidated upon FFGA execution. UTA and FTA entered into an FFGA in January 2009, with revenue operations scheduled for December 2011. Construction began May 15, 2008. All elements of construction are ongoing including track and systems installation and the project is progressing satisfactorily.

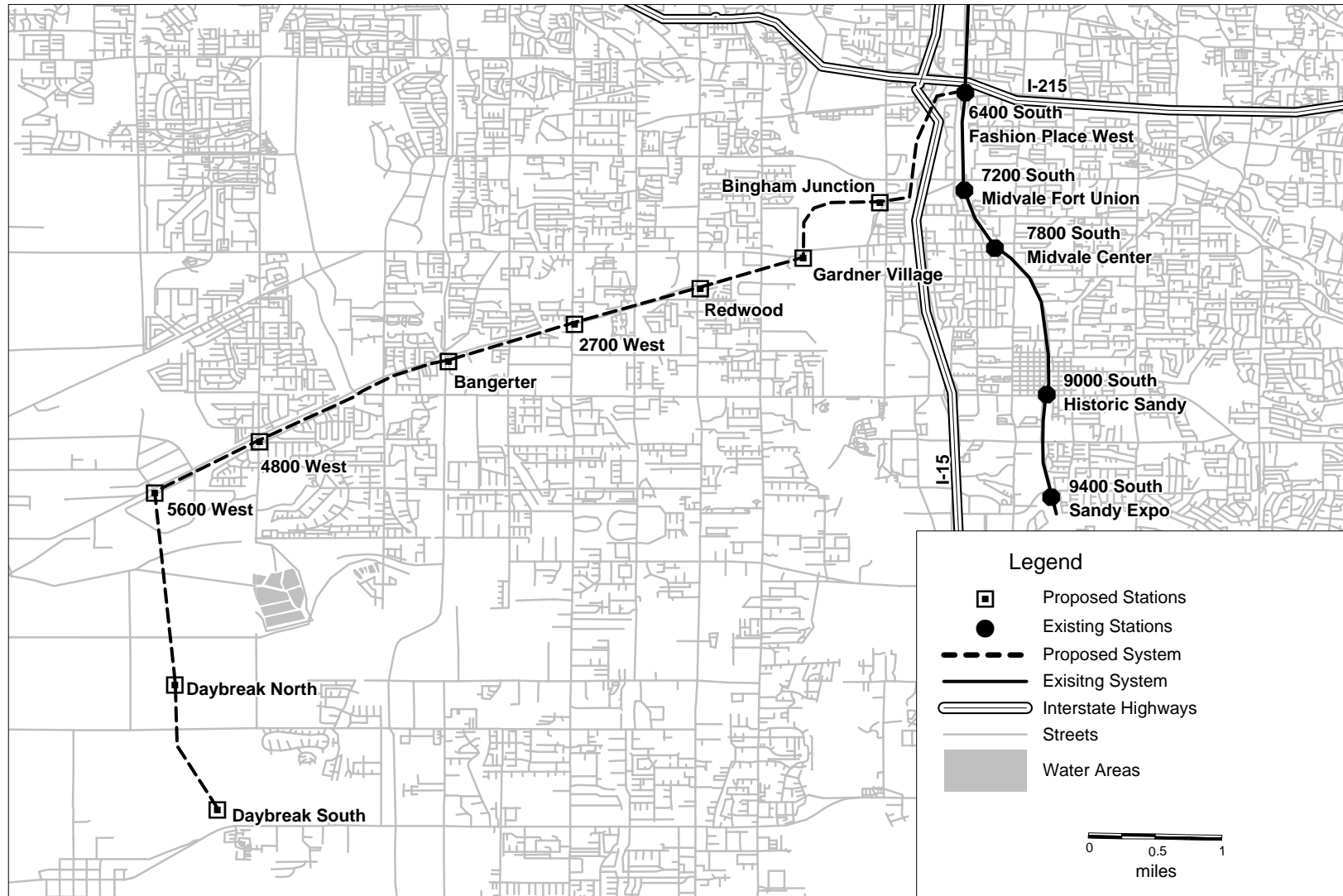
SAFETEA-LU Section 3043(c)(214) authorized the West Jordan LRT Extension (now known as Mid-Jordan LRT Extension) for final design and construction. Through FY 2010, Congress has appropriated \$228.78 million for the project. This includes \$90.89 million in ARRA allocations.

<b>Reported in Year of Expenditure Dollars</b>		
<b><u>Source of Funds</u></b>	<b><u>Total Funding (\$million)</u></b>	<b><u>Appropriations to Date</u></b>
<b>Federal:</b> Section 5309 New Starts FFGA Commitment	\$428.29	\$228.78 million in total appropriations through FY 2010 million. This includes \$90.89 million in ARRA funds.
<b>Local:</b> Sales Tax Revenues Right-of-Way purchased by UTA	\$80.10 \$26.98	
<b>TOTAL</b>	<b>\$535.37</b>	

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

# Mid - Jordan LRT

## Salt Lake City, Utah





# **Weber County to Salt Lake City Commuter Rail**

## **Salt Lake City, Utah**

(November 2009)

The Utah Transit Authority (UTA) has completed construction of the 44-mile Weber County to Salt Lake City Commuter Rail project. The project includes eight stations to serve the areas of Pleasant View, Ogden, Roy, Clearfield, Layton, Farmington, Woods Cross and downtown Salt Lake City. The commuter rail line operates within an existing railroad corridor parallel to Interstate 15 (I-15), utilizing right-of-way previously acquired by UTA under a rail corridor preservation plan with certain facilities already in place. Approximately 6,300 park-and-ride spaces will be built at project 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 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. The project is expected to serve 11,800 average weekday boardings in 2025.

The total project cost under the Full Funding Grant Agreement (FFGA) is \$611.68 million. The Section 5309 New Starts funding share is \$489.35 million.

### **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 I-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 as the locally preferred alternative. The project was approved for entry into preliminary engineering in December 2003. A Draft Environmental Impact Statement (EIS) was completed in April 2004. A Final EIS was published in February 2005, and a NEPA Record of Decision was issued in April 2005. The project was approved into final design in June 2005. FTA and UTA entered into an FFGA in June 2006, with revenue operations scheduled for September 2008. The project began revenue operations between Salt Lake City and Ogden on April 26, 2008, and full revenue operation to Pleasant View on September 26, 2008.

SAFETEA-LU Section 3043(b)(30) authorized the Weber County to Salt Lake City Commuter Rail for final design and construction. Through FY 2010, Congress has appropriated \$340.80 million for the project.

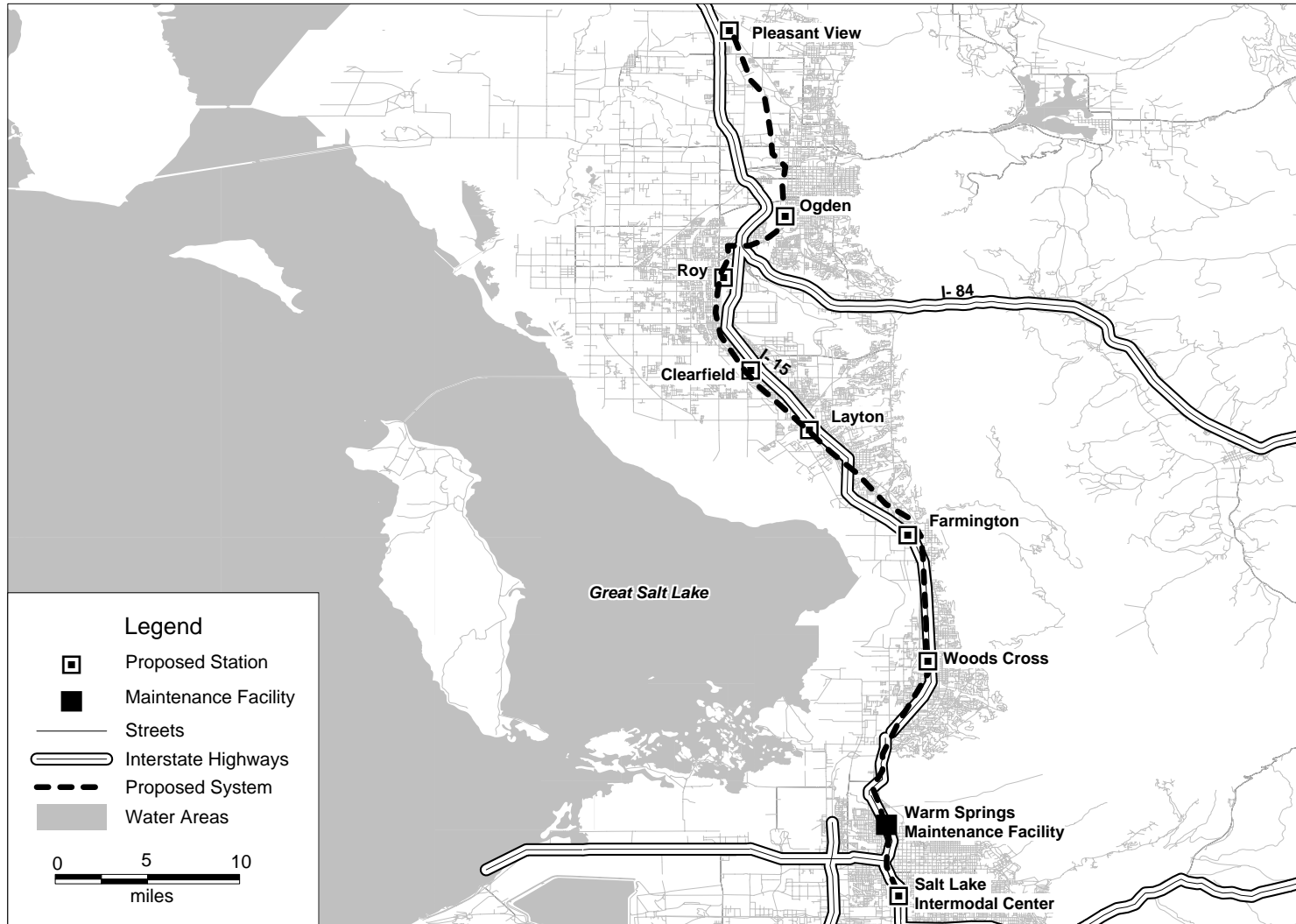
<b>Reported in Year of Expenditure Dollars</b>		
<b><u>Source of Funds</u></b>	<b><u>Total Funding (\$million)</u></b>	<b><u>Appropriations to Date</u></b>
<b>Federal:</b> Section 5309 New Starts FFGA Commitment	\$489.35	\$340.80 million appropriated through FY 2010
<b>Local:</b> Sales Tax Revenues Right-of-Way	\$82.33 \$40.00	
<b>TOTAL</b>	<b>\$611.68</b>	

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

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.

# Weber County to Salt Lake City Commuter Rail

## Salt Lake City, Utah





# **Dulles Corridor Metrorail Project – Extension to Wiehle Avenue**

## **Northern Virginia**

(November 2009)

The Metropolitan Washington Airports Authority (MWAA), in cooperation with the Washington Metropolitan Area Transit Authority (WMATA), is proposing to construct an 11.7-mile extension of the region's Metrorail system from west of 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 11.7-mile extension is the first phase 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 major retail and office development is underway. The Reston area contains significant mixed-use development, with a substantial employment base and large residential population, many of whom commute to employment sites in Washington, DC. The primary transportation arteries that serve this rapidly-growing area are the Dulles Toll Road and Route 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. Ridership is projected to be approximately 85,700 daily riders by 2030, including an estimated 10,000 new transit riders.

The total project cost under the Full Funding Grant Agreement (FFGA) is \$3,142.47 million. The Section 5309 New Starts funding share is \$900.00 million.

## **Status**

Following years of study, a phased bus/rail system in the Dulles corridor was adopted into the region's long range plan in October 1999. In March 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). Due to funding concerns, the Virginia Department of Rail and Public Transportation (DRPT), the project's original sponsor, and WMATA identified a project terminating at Wiehle Avenue as the first phase of implementation of the LPA. FTA approved a Supplemental Draft EIS in October 2003 reflecting this terminus. FTA approved DRPT's request to initiate PE for the Extension to Wiehle Avenue project in June 2004. DRPT received a Record of Decision (ROD) on the Final EIS for both this project and the full LPA in March 2005. The environmental documents covered the entire LPA west through Dulles International Airport to Loudoun County. Thus, the Federal Aviation Administration issued its own Record of Decision in July 2005.

In March 2006, the Commonwealth of Virginia accepted the MWAA proposal to assume control of the Dulles Toll Road and responsibility for construction of the project. Such authority is intended to enable MWAA to accelerate implementation of not only the Metrorail Extension to Wiehle Avenue but the full LPA using Dulles Toll Road revenues. In February 2006, Fairfax County requested that the Metrorail alignment along Route 7 be shifted from the south side to the median, so that a boulevard-type roadway could be constructed. An Environmental Assessment addressing this proposed change was published in February 2006. After a public hearing in March 2006, FTA issued an amended ROD in November 2006. The Project was formally transferred from DRPT to MWAA in July 2007. FTA approved the Project into final design in May 2008. The Dulles Toll Road was transferred from the Virginia Department of Transportation (VDOT) to MWAA in November 2008. MWAA and FTA executed an FFGA in March 2009, with revenue operations scheduled for December 2014. Construction has begun along the entire 11-mile alignment consisting of utility relocation, tunneling and elevated structure work.

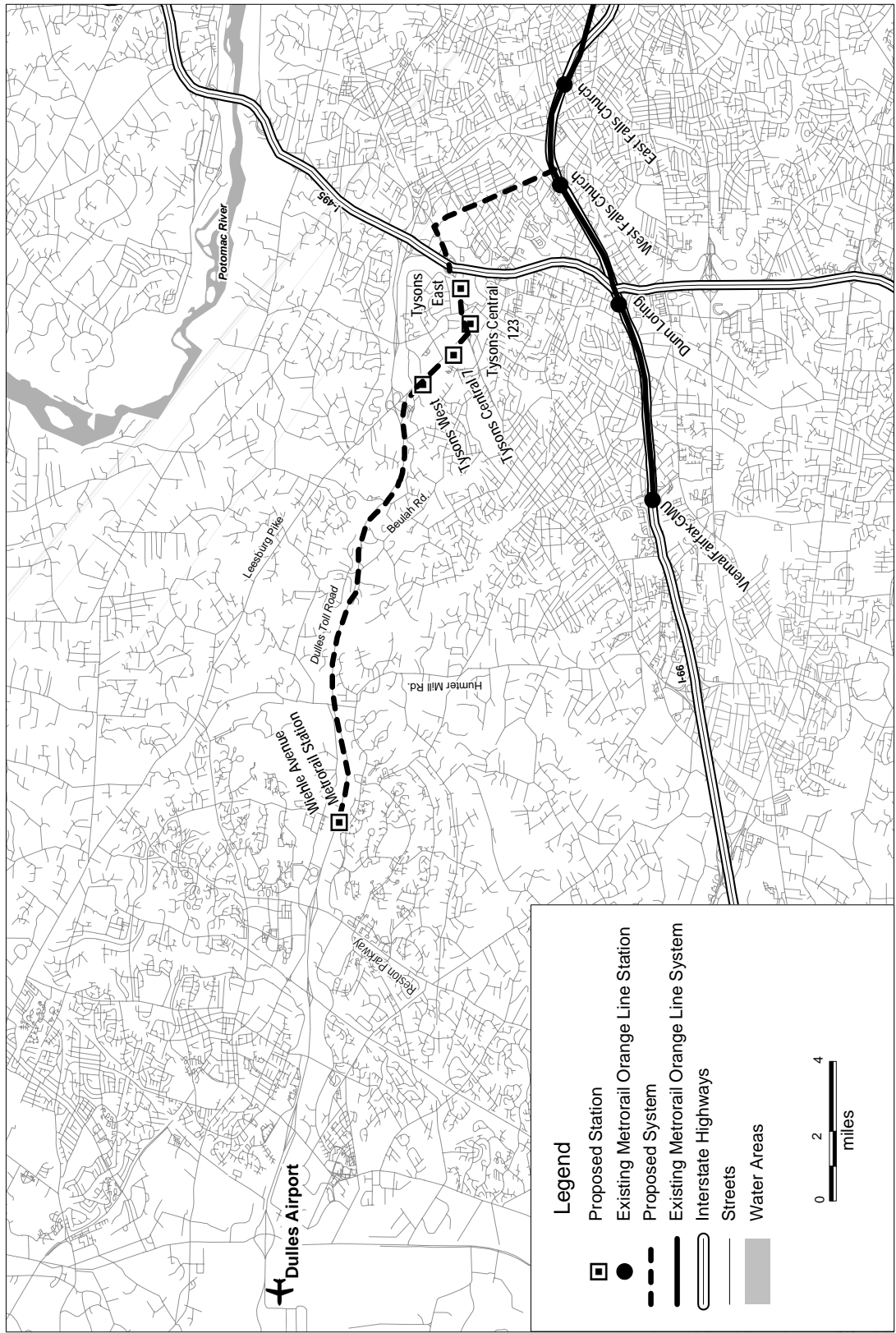
SAFETEA-LU Section 3043(b)(23) authorized the Dulles Corridor Metrorail Project for final design and construction. Through FY 2010, Congress has appropriated \$404.48 million in Section 5309 New Starts funds including \$77.26 million in ARRA funds for the project.

Reported in Year of Expenditure Dollars		
<u>Source of Funds</u>	<u>Total Funding (\$million)</u>	<u>Appropriations to Date</u>
<b>Federal:</b> Section 5309 New Starts FFGA Commitment FHWA Flexible Funds (STP)	\$900.00 \$75.00	\$404.48 million in total appropriations through FY 2010. This includes \$77.26 million in ARRA funds.
<b>State:</b> Virginia Transportation Act 2000 Commonwealth Transportation Board Bonds	\$51.70 \$125.00	
<b>Local:</b> Dulles Toll Road Revenues and Bond Proceeds Fairfax County Transportation Improvement District	\$1,467.02 \$523.75	
<b>TOTAL</b>	<b>\$3,142.47</b>	

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

# Dulles Corridor Metrorail Project - Extension to Wiehle Avenue

## Northern Virginia





# **University Link LRT Extension**

## **Seattle, Washington**

(November 2009)

The Central Puget Sound Regional Transit Authority (Sound Transit) is constructing an extension of the Central Link light rail transit (LRT) Initial Segment from its terminus at Westlake Station in downtown Seattle to the University of Washington, 3.1 miles to the northeast. The all-tunnel alignment includes a station at Capitol Hill. Twenty-seven vehicles would be procured as part of the project, which would permit five-minute peak-period operations throughout the entire Central Link line. 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 Seattle 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. Travel by private vehicle and bus between these areas is extremely congested due to high traffic volumes and the corridor's 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. Farther to the north, the University District is separated from Capitol Hill and downtown by Portage Bay and the Lake Washington Ship Canal; only three crossings (two of them drawbridges) connect the University with the southern portion of the corridor.

Reversible express lanes on I-5 north of downtown result in a 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 downtown Seattle, Capitol Hill/First Hill, and the University District, while supporting local land use goals and contributing to the maintenance of 1990 traffic levels at the University of Washington. The project is expected to serve approximately 40,200 average weekday boardings in 2030.

The total project cost under the Full Funding Grant Agreement (FFGA) is \$1,947.68 million. The Section 5309 New Starts funding share is \$813.00 million.

## **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 extending from South 200<sup>th</sup> Street in the City of SeaTac to North 103<sup>rd</sup> 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 an FFGA for this project in January 2001, which was suspended later that year due to cost increases.

Sound Transit redefined the project as an "Initial Segment" from Westlake Station in the Downtown Seattle Transit Tunnel south to Tukwila, which was constructed under an FFGA executed by FTA in October 2003 and opened for revenue service in July 2009. Sound Transit completed a Supplemental Draft EIS for the North Link segment in December 2003, and the Sound Transit Board selected the 3.1-mile University Link Extension as the first phase in August 2005. FTA issued a limited-scope Supplemental Draft EIS in October 2005 to address changes in the preferred alternative, including an alternative route through the University of Washington. FTA approved the project into preliminary

engineering in December 2005. FTA issued a Final EIS in April 2006 and a Record of Decision in June 2006. FTA approved the project into final design (FD) in December 2006. Sound Transit and FTA executed an FFGA in January 2009, with revenue operations scheduled for April 2017. Construction work is just beginning on the project. Right of way acquisitions are underway. Pile installation was initiated on the west side in late July and is now complete. Foundations for the Catenary are being placed and also two TBM shafts are under construction.

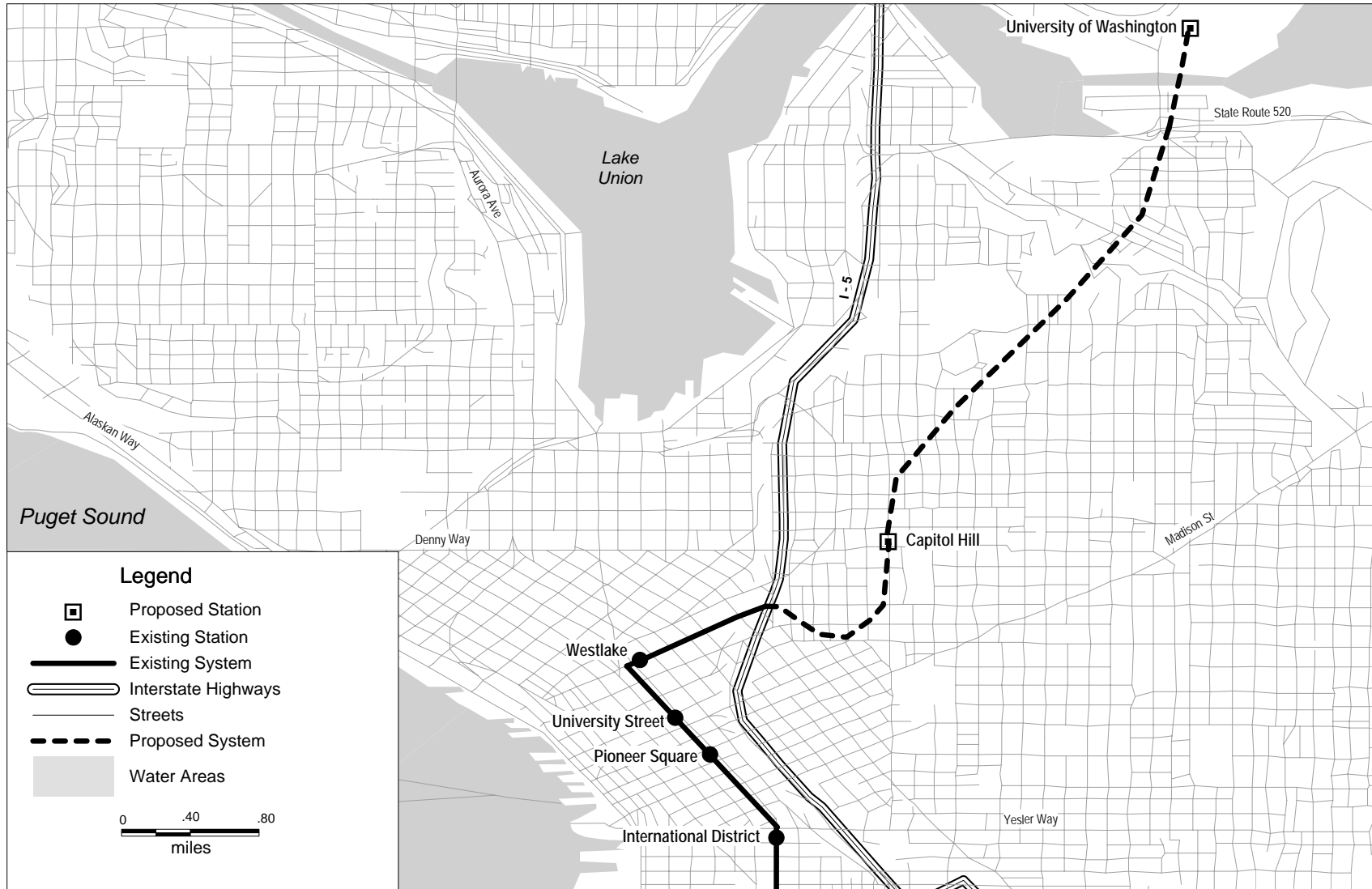
SAFETEA-LU Section 3043(c)(231) authorized the University Link LRT Extension for FD and construction. Through FY 2010, Congress has appropriated \$272.60 million in Section 5309 New Starts funds for the project including \$44.00 million in ARRA funds.

<b>Reported in Year of Expenditure Dollars</b>		
<b><u>Source of Funds</u></b>	<b><u>Total Funding (\$million)</u></b>	<b><u>Appropriations to Date</u></b>
<b>Federal:</b> Section 5309 New Starts FFGA Commitment  FHWA Flexible Funds (CMAQ) Section 5309 Fixed Guideway Modernization	\$813.00  \$9.00 \$3.00	\$272.60 million in total appropriations through FY 2010. This includes \$44.00 million in ARRA funds.
<b>Local:</b> Bond Proceeds, Local Option Tax Revenues, Sales of Excess ROW	\$1,122.68	
<b>TOTAL</b>	<b>\$1,947.68</b>	

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

# University Link LRT Extension

## Seattle, Washington





# Final Design

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# Modern Streetcar Project

## Tucson, Arizona

(November 2009)

The City of Tucson (COT) Department of Transportation proposes to build a Modern Streetcar Project in the downtown Tucson Urban Corridor. The corridor includes many of Tucson's major activity centers including downtown Tucson, the Rio Nuevo master plan development area, the University of Arizona Tucson campus, the 4<sup>th</sup> Avenue and University Main Gate business district, and the Arizona Health Sciences Center. The Tucson Modern Streetcar will serve 18 stations along a 3.9-mile double track route. Streetcars will operate at grade—in most locations on surface streets in mixed traffic with some reserved right-of-way, where available. Track placement will primarily be in the center of shared travel lanes with stations located either in the roadway median or on the outside of roadways. Station platforms will be designed so that they can be used by buses as well as by streetcars, where possible. Streetcars will operate with 10-minute frequency during peak periods and 20-minute frequency during off-peak periods and on weekends. The project will require eight modern streetcar vehicles.

The total capital cost of the Tucson Modern Streetcar Project is estimated to be \$182.52 million, with a proposed Section 5309 New Starts share of \$24.99 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 USC 5309(e)(1)(B)).*

Summary Description	
<b>Proposed Project:</b>	Modern Streetcar 3.9 Route Miles 18 Stations
<b>Total Capital Cost (\$YOE):</b>	\$182.52 Million
<b>Section 5309 New Starts Share (\$YOE):</b>	\$24.99 Million (13.7%)
<b>Ridership Forecast (2012):</b>	3,600 Average Weekday Boardings

## Project Development History and Current Status

COT conducted a Tucson Urban Corridor Alternatives Analysis in August 2004 to identify potential transit alternatives connecting major activity centers in the Tucson central core. A Notice of Intent (NOI) to prepare an Environmental Impact Statement (EIS) was published in January 2005. Based on the results of the AA, the Tucson mayor and city council adopted the Modern Streetcar Project as the Locally Preferred Alternative (LPA) for the Tucson Urban Corridor in January 2006. The LPA was adopted in the Pima County Association of Governments' (PAG) 2030 Regional Transportation Plan in June 2006. The LPA was also included in the adopted 2009-2013 PAG Transportation Improvement Program. Local funding for the Tucson Modern Streetcar was a component of the Regional Transportation Authority Plan that was adopted by Pima County voters in May 2006.

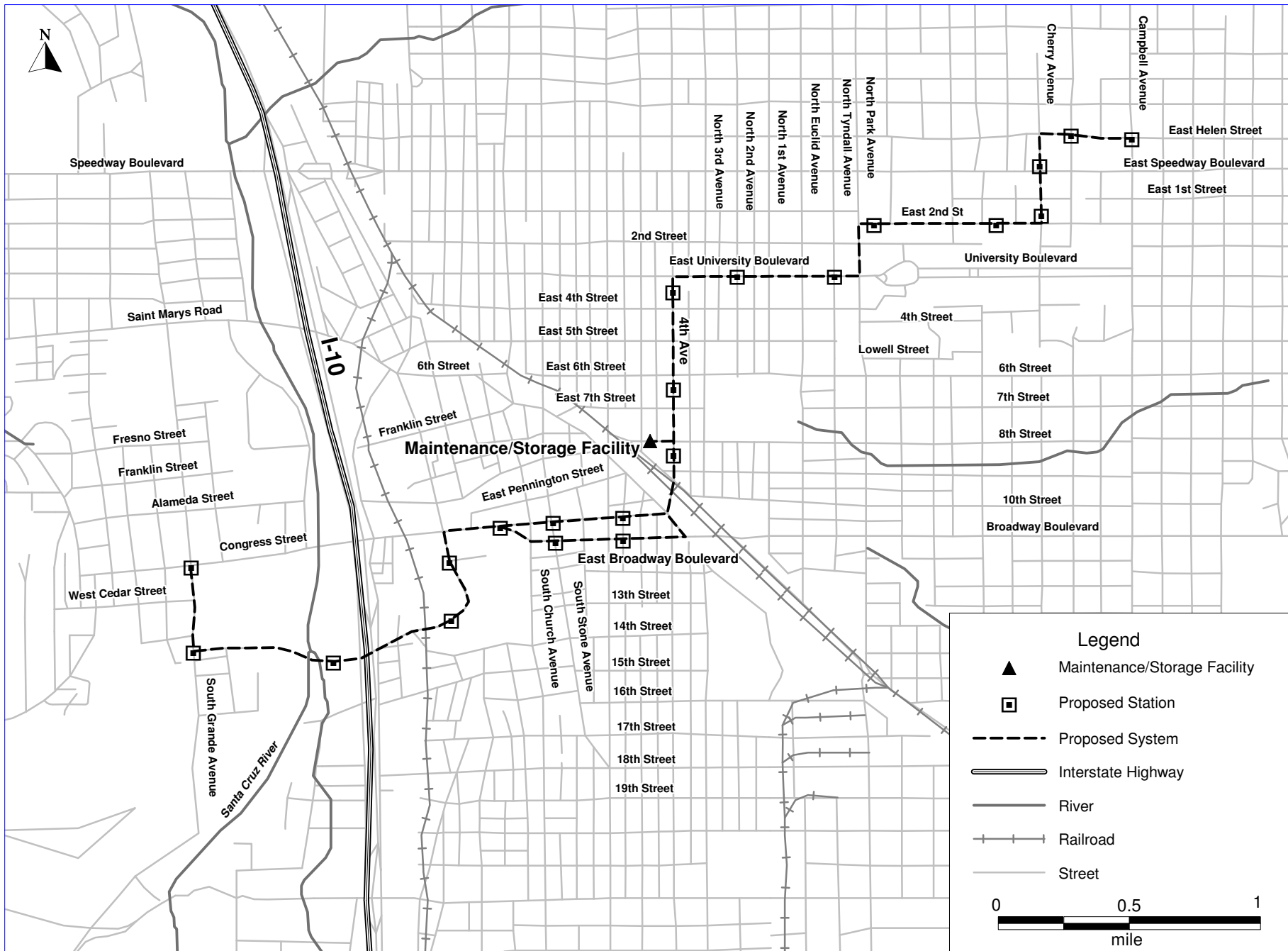
Although FTA issued a NOI to prepare an EIS in 2005, during scoping it was determined that the project was unlikely to have significant environmental impacts. Accordingly, in March 2007, FTA decided that an Environmental Assessment (EA) would suffice. A draft EA was submitted to FTA in January 2008, and a Final EA was completed in February 2008. FTA issued a Finding of No Significant Impact (FONSI) in January 2009. FTA approved the project into preliminary engineering in December 2008, and into final design in September 2009.

<b>Locally Proposed Financial Plan</b>		
<b><u>Source of Funds</u></b>	<b><u>Total Funds (\$million)</u></b>	<b><u>Percent of Total</u></b>
<b>Federal:</b> Section 5309 New Starts	\$24.99	13.7%
<b>Local:</b> Regional Transportation Authority Sales Tax City of Tucson Collateralized Debt Financing; Debt Service to be Paid by: STP-Flex Federal Funds Local Matching Funds Municipal Improvement District (MID) Tax	\$74.99    \$66.30 \$ 4.23 \$12.00	41.1%    36.3% 2.3% 6.6%
<b>Total:</b>	<b>\$182.52</b>	<b>100.0%</b>

**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.

# Modern Streetcar Project

## Tucson, Arizona





# Oakland Airport Connector

## Oakland, California

(November 2009)

The San Francisco Bay Area Rapid Transit District (BART) is planning a 3.2 mile automated guideway transit (AGT) system that will provide a direct connection between BART's Coliseum Station and the Oakland International Airport. The Oakland Airport Connector (OAC) project will operate 12 fully automated vehicles on an exclusive right-of-way, similar to systems operated in many airports. The OAC will include stations at the BART Coliseum Station and the Oakland International Airport Terminal, a vehicle maintenance and storage facility, and four traction power substations. The project will be designed to accommodate a potential future intermediate station at Doolittle Drive.

The total capital cost of the project is estimated to be \$492.69 million, with a proposed Section 5309 New Starts share of \$24.99 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 USC 5309(e)(1)(B)).*

Summary Description	
<b>Proposed Project:</b>	Automated Guideway Transit 3.2 Miles 2 Stations
<b>Total Capital Cost (\$YOE):</b>	\$492.69 Million (includes \$8.6 million in finance charges)
<b>Section 5309 New Starts Share (\$YOE):</b>	\$24.99 Million (5.1%)
<b>Ridership Forecast (2012):</b>	5,000 Average Weekday Boardings

## Project Development History and Current Status

Planning studies for a fixed guideway connection between the BART system and Oakland International Airport began as early as 1981, when BART and the Urban Mass Transit Administration (UMTA) completed the BART Oakland Airport Alternatives Analysis/Draft Environmental Impact Statement (EIS). In November 1999, FTA published a Notice of Intent to prepare a DEIS, which was circulated for public review in August 2001. Based upon the DEIS, an Automated Guideway Transit alternative was selected as the locally preferred alternative. In December 2001, the Metropolitan Transportation Commission adopted the automated guideway transit alternative into the regional Long Range Plan. In March 2002, a Final EIS was published. FTA issued a Record of Decision for the project in July 2002. In March 2007, BART adopted an FEIS/FEIR addendum for minor changes to the project, which did not require a supplemental environmental review. In May 2007, FTA selected the OAC project as a Pilot Project under the Public-Private Partnership Pilot Program (Penta-P). In July 2009, BART issued a request for design-build-operate-maintain (DBOM) proposals.

Because the project has completed the environmental review process required by the National Environmental Policy Act, the majority of non-New Starts funding is committed, and this is an "Exempt" Penta-P project, FTA agreed to expedite project delivery by concurrently approving entry of the project into preliminary engineering and final design. FTA notified Congress of its intent to approve the project into preliminary engineering and final design in November 2009, and took formal approval action in December 2009.<sup>1</sup>

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<sup>1</sup> As of January 2010, the project's outlook is uncertain pending resolution of Civil Rights compliance concerns.

### Locally Proposed Financial Plan

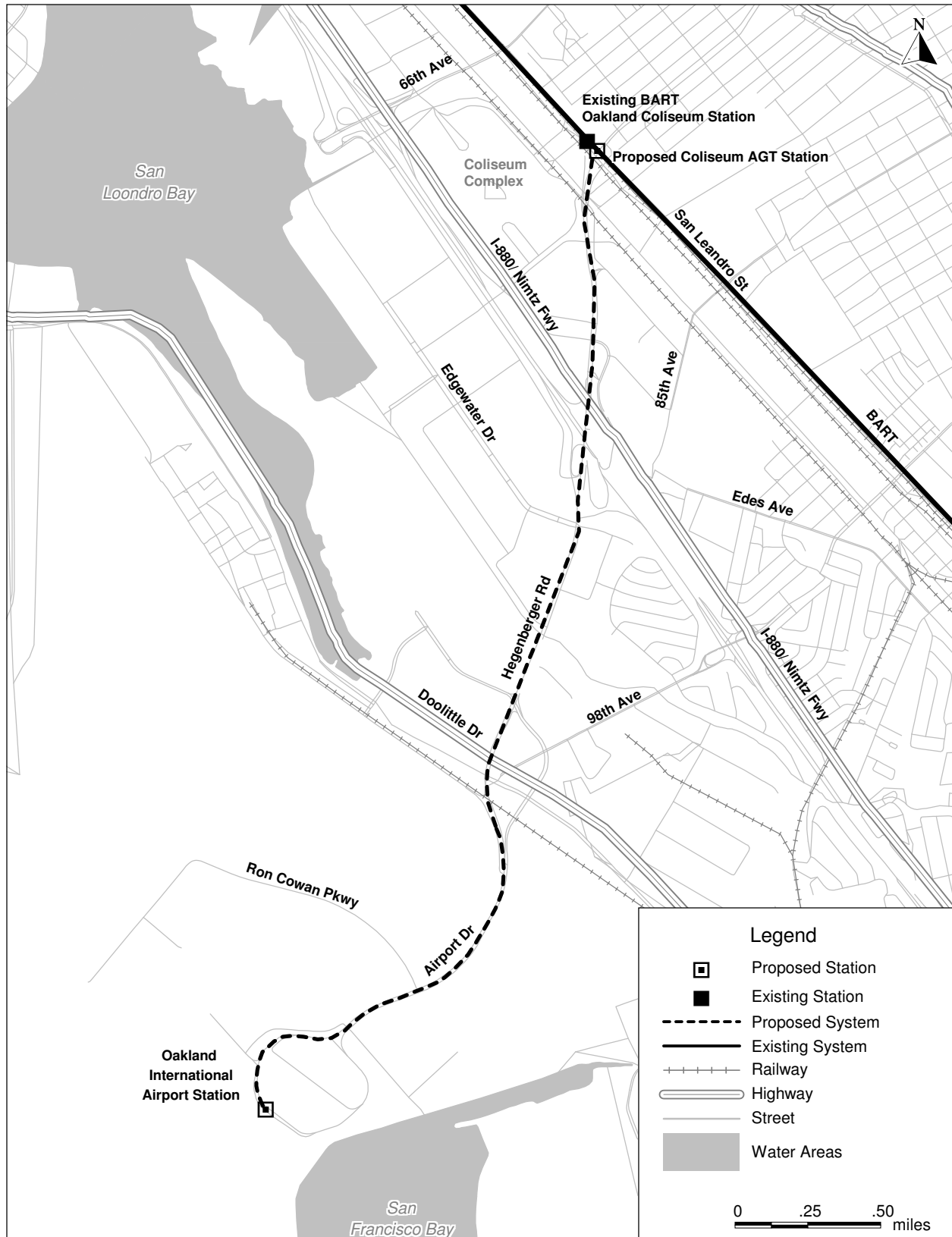
<u>Source of Funds</u>	<u>Total Funds (\$million)</u>	<u>Percent of Total</u>
<b>Federal:</b>		
Section 5309 New Starts	\$24.99	5.1%
American Recovery and Reinvestment Act	\$70.00	14.2%
State Transportation Improvement Program (STIP)	\$20.70	4.2%
TIFIA Loan	\$79.43	16.1%
<b>State:</b>		
Proposition 1B	\$32.80	6.6%
<b>Local:</b>		
Alameda County Transportation Improvement Agency Measure B	\$89.05	18.1%
Port of Oakland Passenger Facility Charges	\$29.54	5.9%
Regional Measure 1 and 2 (Bridge Tolls)	\$99.00	20.1%
Regional Measure 2	\$47.20	9.5%
<b>Total:</b>	<b>\$492.69</b>	<b>100.0%</b>

**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.

\*State Transportation Improvement Program (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.

# Oakland Airport Connector

Oakland, California





# Central Subway LRT

## San Francisco, California

(November 2009)

The San Francisco Municipal Transportation Agency (SFMTA) and the San Francisco County Transportation Authority (SFCTA) are planning the Central Subway project, a 1.7-mile extension of the Third Street light rail transit (LRT) line from its terminus at Fourth and King Streets. From a portal south of Market Street, the project descends below grade and extends northward under Fourth Street and Stockton Street into Chinatown in the San Francisco central business district (CBD). One surface station and three underground stations would be constructed along the project alignment. Four light rail vehicles would be purchased to augment the existing fleet. When completed, the combined Third Street LRT / Central Subway project would provide a continuous seven-mile light rail system connecting the heavily transit-dependent communities of Bayshore in the south with Chinatown in the north.

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 that are at or above capacity. Currently, commuter rail passengers from the south must board these crowded buses operating on congested roadways or walk over a mile from the CalTrain Station to reach the CBD. LRT passengers from the south may choose to continue on LRT to access downtown, but the alignment along the Embarcadero is circuitous. The Central Subway project is intended to provide a direct rapid transit link between these areas. Implementation of the Central Subway project is further expected to help carry large crowds attending events at convention and professional sports venues in the South of Market area (SOMA).

Summary Description	
<b>Proposed Project:</b>	Light Rail Transit 1.7 Miles 4 Stations
<b>Total Capital Cost (\$YOE):</b>	\$1,578.30 Million
<b>Section 5309 New Starts Share (\$YOE):</b>	\$942.19 Million (59.6%)
<b>Annual Forecast Year Operating Cost:</b>	\$8.84 Million
<b>Ridership Forecast (2030):</b>	41,450 Average Weekday Boardings 4,800 Daily New Riders
<b>Opening Year Ridership Forecast (2016):</b>	40,000 Average Weekday Boardings
<b>FY 2011 Local Financial Commitment Rating:</b>	Medium
<b>FY 2011 Project Justification Rating:</b>	Medium-High
<b>FY 2011 Overall Project Rating:</b>	Medium-High

### Project Development History and Current Status

In October 1996, SFMTA began preparation of a Draft Environmental Impact Statement (EIS) for the Third Street/Central Subway light rail line. Because of their phased implementation, the two segments were considered separate projects, and FTA issued a Record of Decision on the Third Street alignment in 1998. FTA approved the Central Subway project into preliminary engineering in July 2002. Since then, SFMTA modified the project alignment and examined alternative tunneling scenarios. In late 2006, the SFMTA undertook a value engineering study to examine ways to lower the project's total capital cost, which resulted in \$180 million in cost reductions from scope changes. The SFMTA issued a Draft EIS on

the Central Subway in September 2007, and a Final EIS in September 2008. FTA issued the Record of Decision for the project in November 2008. FTA notified Congress of its intent to approve the project into final design in November 2009 and took formal approval action in December 2009.

### **Significant Changes Since FY 2010 Evaluation (November 2008)**

SFMTA completed preliminary engineering and FTA undertook a risk assessment of the project's cost estimate and schedule. As a result, the project's capital cost estimate was revised to reflect the higher level of design and to include a higher level of contingency and a higher escalation rate. The financial plan was revised to reflect the updated capital cost estimate and changes in local revenue sources.

### **Project Justification Rating: Medium-High**

The project justification rating is based on the weighted average of the ratings assigned to each of the following criteria: the cost-effectiveness criterion is weighted 20 percent; the transit supportive land use criterion is weighted 20 percent; the economic development criterion is weighted 20 percent; the mobility improvements criterion is weighted 20 percent; the environmental benefits criterion is weighted 10 percent; and the operating efficiencies criterion is weighted 10 percent.

### ***Cost Effectiveness Rating: Medium***

The cost effectiveness rating reflects the level of travel-time benefits (11,000 hours each weekday) relative to the project's capital and operating costs based on a comparison to a baseline alternative.

<b>Cost Effectiveness</b>	
	<b><u>New Start vs. Baseline</u></b>
Cost per Hour of Transportation System User Benefit	\$23.68*
Incremental Cost per Incremental Trip	\$30.37

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

### ***Transit-Supportive Land Use Rating: High***

The land use rating reflects the population and employment densities within ½-mile of proposed station areas.

- Population density within ½-mile of the station areas is approximately 53,700 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.

### ***Economic Development Rating: High***

The economic development rating is based upon the average of the ratings assigned to the subfactors below.

### **Transit-Supportive Plans and Policies: Medium-High**

- While the San Francisco Bay region has a number of physical and topographical constraints to growth, 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. Additional planning initiatives are underway to focus higher-intensity growth in transit corridors. Zoning changes are being considered that would require residential community-oriented retail development near transit nodes.
- San Francisco's zoning regulations are intended to maintain a medium to high-density profile and scale, with a mixture of land uses in many areas. There are no minimum parking requirements or off-street parking provisions in the CBD and other 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.

#### 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 1970's 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.

Mobility Improvements Rating: Medium-High		
Transportation System User Benefit Per Passenger Mile (Minutes)  Number of Transit Dependents Using the Project  Transit Dependent User Benefits per Passenger Mile (Minutes)	<u>New Start vs. Baseline</u>	
	8.8	
	7,000	
	34.8	
Environmental Benefits Rating: High		
<u>Criteria Pollutant Status</u> 8-Hour Ozone (O <sub>3</sub> ) Particulate Matter (PM <sub>2.5</sub> )	<u>EPA Designation</u>	
	Marginal Non-attainment Area	
Operating Efficiencies Rating: Medium		
System Operating Cost per Passenger Mile (current year dollars)	<u>Baseline</u>	<u>New Start</u>
	\$1.50	\$1.51

## **Local Financial Commitment Rating: Medium**

The local financial commitment rating is based on the weighted average of the ratings assigned to each of the following criteria: the New Starts share of project costs is weighted 20 percent; the strength of the capital finance plan is weighted 50 percent; and the strength of the operating finance plan is weighted 30 percent.

### ***Section 5309 New Starts Share of Total Project Costs: 60%***

#### ***Rating: Medium-High***

Division H of the Consolidated Appropriations Act, 2005, permits SFMTA to use non-New Starts funds expended for the Third Street LRT project as match to the Central Subway. While the New Starts percentage reflected above and in the table below is calculated based on the Central Subway project alone, the rating assigned reflects the legislative language which lowers the New Starts share to 42.7 percent of the total costs of the combined Third Street/Central Subway project (\$2,220.6 million).

<b>Locally Proposed Financial Plan</b>		
<b><u>Source of Funds</u></b>	<b><u>Total Funds (\$million)</u></b>	<b><u>Percent of Total</u></b>
<b>Federal:</b>		
Section 5309 New Starts	\$942.19	59.6%
FHWA Flex Funds (CMAQ)	\$6.23	0.3%
<b>State:</b>		
Proposition 1B	\$240.00	15.2%
Transportation Congestion Relief Program	\$14.00	0.9%
Regional Transportation Improvement Program	\$88.00	5.6%
<b>Local:</b>		
Proposition B/K Sales Tax Funds	\$123.98	7.9%
SFMTA and Parking Revenues	\$163.89	10.5%
<b>Total:</b>	<b>\$1,578.30</b>	<b>100.0%</b>

**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 rating is based upon the weighted average of the ratings assigned to each of the subfactors listed below. The agency capital condition is weighted 25 percent, the commitment of capital funds is weighted 25 percent, and the capital cost estimate, planning assumptions and capital funding capacity subfactor is weighted 50 percent.

### **Agency Capital Condition: Medium**

- The average age of SFMTA's bus fleet is 6.8 years, which is in line with the industry average.
- SFMTA's good bond ratings, which were issued in 2006, are as follows: Moody's Investors Service Aa3, Standard & Poor's Corporation AA, and Fitch AA-.

**Commitment of Capital Funds: Medium**

- Over 68 percent of the non-Section 5309 New Starts funds have been committed and budgeted. Sources of funds include State Proposition 1B funding, Regional Transportation Improvement Program funding, traffic congestion relief funding, proposition B and K sales tax revenues, and parking revenue.

**Capital Cost Estimate, Planning Assumptions, and Financial Capacity: Medium-Low**

- Several revenue assumptions are considered optimistic compared to historical data including the level of operating funds available for capital replacement, state of good repair funding needs, and level of parking revenues.
- The capital cost estimate is considered reasonable. The capital financial plan does not present a formal mitigation plan for potential project cost increases or delays in funding availability.

***Operating Finance Plan Rating: Medium***

The operating finance plan rating is based upon the weighted average of the ratings assigned to each of the subfactors listed below. The agency operating condition is weighted 25 percent, the commitment of operating funds is weighted 25 percent, and the operating cost estimates, planning assumptions and operating funding capacity subfactor is weighted 50 percent.

**Agency Operating Condition: Medium-Low**

- SFMTA's current ratio of assets to liabilities as reported in its most recent audited financial statement is greater than 1.2.
- SFMTA has experienced some recent budget challenges, requiring service cuts in FY2010 to reduce low-performing service.

**Commitment of Operating and Maintenance Funding: Medium-High**

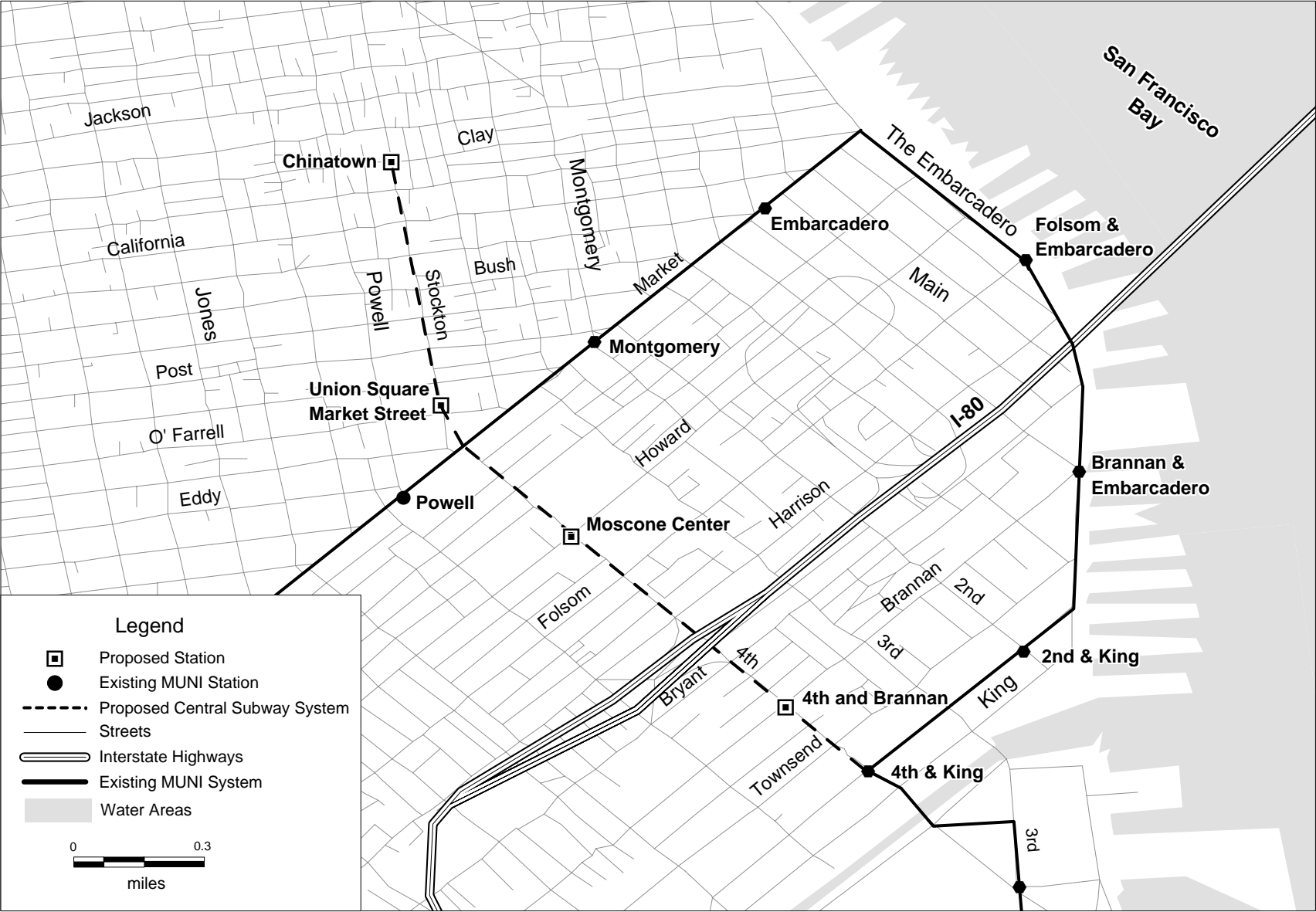
- Over 75 percent of operating funding is committed. The main revenue sources are fares, parking fees, General Fund contributions, and state sales tax and fuel assistance revenues.

**Operating Cost Estimates, Planning Assumptions, and Financial Capacity: Medium-Low**

- Assumed growth in operating expenses is optimistic compared to historical experience. Operating revenue assumptions are in line with or more conservative than historical experience.
- The project has only a minimal impact on overall system-wide operating costs.

# Central Subway LRT

San Francisco, California



# New Britain – Hartford Busway

## Hartford, Connecticut

(November 2009)

The Connecticut Department of Transportation (ConnDOT) proposes to construct the New Britain-Hartford Busway, an 11-station, 9.4-mile exclusive bus rapid transit (BRT) system operating primarily in existing and abandoned railroad right-of-way between downtown New Britain and 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 park-and-ride lots along the alignment.

Existing transit service between New Britain and Hartford is slow and limited. I-84 connects the two cities. It is currently, and is forecast to remain, the region's most congested highway. A trip between New Britain and Hartford on public transportation can be made at present by transfers between local routes, or by travel on a single express route, which is circuitous and slow. Both Hartford and New Britain have large populations of transit dependents—approximately one-third and 16 percent, respectively. The proposed busway is intended to provide faster transit travel time 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	
<b>Proposed Project:</b>	Bus Rapid Transit 9.4 Miles 11 Stations
<b>Total Capital Cost (\$YOE):</b>	\$572.69 Million (Includes \$12.04 million in finance charges)
<b>Section 5309 New Starts Share (\$YOE):</b>	\$275.30 Million (48.1%)
<b>Annual Forecast Year Operating Cost:</b>	\$22.06 Million
<b>Ridership Forecast (2030):</b>	16,300 Average Weekday Boardings 4,900 Daily New Riders
<b>Opening Year Ridership Forecast (2013):</b>	13,400 Average Weekday Boardings
<b>FY 2011 Local Financial Commitment Rating:</b>	Medium
<b>FY 2011 Project Justification Rating:</b>	Medium
<b>FY 2011 Overall Project Rating:</b>	Medium

ConnDOT's schedule anticipates receipt of a Full Funding Grant Agreement (FFGA) in Spring 2010. There are a number of items that must be addressed before an FFGA will be considered: FTA must complete the risk assessment and the financial capacity assessment; ConnDOT must maintain a sufficient New Starts rating; and, ConnDOT must submit an executed agreement addressing the cost of the permanent easement for Amtrak right of way, executed construction and protective services agreements with Amtrak, a Force Account plan for construction, and a detailed utility relocation plan.

## 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. A major investment study in the corridor was completed in 1999, which 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 into preliminary engineering (PE) in January 2000. The project received a Federal environmental Record of Decision (ROD) in March 2002. In order to address changes in project scope since issuance of the ROD, ConnDOT twice conducted reevaluations of the Final Environmental Impact Statement for the project, the first of which FTA concurred with in June 2006, and the second of which FTA concurred with in September 2008. FTA approved final design for the project in October 2006.

## Significant Changes Since FY 2010 Evaluation (November 2008)

ConnDOT developed a new service plan, which resulted in changes to the operating and capital costs and the calculation of project benefits.

## Project Justification Rating: Medium

The project justification rating is based on the weighted average of the ratings assigned to each of the following criteria: the cost-effectiveness criterion is weighted 20 percent; the transit supportive land use criterion is weighted 20 percent; the economic development criterion is weighted 20 percent; the mobility improvements criterion is weighted 20 percent; the environmental benefits criterion is weighted 10 percent; and the operating efficiencies criterion is weighted 10 percent. Per FTA's 2006 *Final Guidance on New Starts Policies and Procedures*, once a project has been approved into final design, the project is not subject to any changes in New Starts policy, guidance, and procedures. Thus, the revised weighting of the project justification criteria that took effect in September 2009 was not required to be applied to this project, but was done so at the project sponsor's request.

## *Cost Effectiveness Rating: Medium*

The cost effectiveness rating reflects the level of travel-time benefits (4,300 hours each weekday) relative to the project's annualized capital and operating costs based on a comparison to a baseline alternative.

Cost Effectiveness Rating	
	<u>New Start vs. Baseline</u>
<b>Cost per Hour of Transportation System User Benefit</b>	\$24.54*
<b>Incremental Cost per Incremental Trip</b>	\$23.28

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

## *Transit-Supportive Land Use Rating: Medium-Low*

The land use rating reflects the population and employment densities within ½-mile of proposed station areas.

- Population density within ½-mile of the station areas is approximately 5,645 people per square mile and employment in project station areas is approximately 81,000 jobs.
- The project serves four jurisdictions between the downtown areas of Hartford and New Britain. Intermediate stations serve residential neighborhoods of varying urban and suburban character, with low to medium densities, as well as a mix of auto-oriented commercial and industrial development and undeveloped land. The busway is in a transportation corridor and the stations

- Parking rates are in the medium range in downtown Hartford and New Britain, while parking is free and generally available at other stations.

### ***Economic Development Rating: Medium***

The economic development rating is based upon the average of the ratings assigned to the subfactors below.

#### **Transit-Supportive Plans and Policies: Medium**

- The State of Connecticut has passed a series of laws and enacted policies and programs supporting growth management, including most recently the provision of funding for a pilot transit-oriented development (TOD) program, to which the Cities of Hartford and New Britain are applying for grants. This program was created in support of state legislation passed previously requiring designation of areas for compact, transit accessible, pedestrian-oriented mixed use development. A rigorous land use planning effort, the *New Britain-Hartford Station Planning Project*, was conducted for the busway and has produced conceptual transit-oriented station area plans, although implementation is largely still pending. The City of Hartford is implementing significant infrastructure improvements to enhance the pedestrian environment.
- Progress in implementing plans is most evident in recent zoning changes designed to promote TOD. The Town of West Hartford has adopted a Special Development District Designation, which provides bonus floor area for buildings close to transit terminals, and the City of Hartford has implemented an Industrial Residential Overlay District, allowing the conversion of industrial space to residential and mixed uses. New Britain is in the process of rezoning its downtown to allow increased densities and development with transit-supportive characteristics, including reducing parking requirements.

#### **Performance and Impacts of Policies: Medium**

- Significant redevelopment is under way in downtown Hartford, reflecting recovery from a long period of economic decline. Major components have been completed of the 30-acre Adriaen's Landing site project, which includes a new Connecticut Convention Center, Downtown Marriott Hotel, an entertainment district, residential development, and the Connecticut Center for Science and Exploration.
- Multiple development projects are either recently completed or under construction in downtown Hartford station areas and the rehabilitation of industrial buildings in the Parkville Station area is proceeding.
- A substantial increase in employment and more modest but solid population growth are projected in station areas and the rating for total employment served by the system will increase from low to medium-low by 2030, as a result of projected growth.

Mobility Improvements Rating: Medium		
Transportation System User Benefit Per Passenger Mile (Minutes)	<u>New Start vs. Baseline</u>	
	4.3	
	5,600	
Number of Transit Dependents Using the Project		
Transit Dependent User Benefits per Passenger Mile (Minutes)	3.7	
Environmental Benefits Rating: High		
<u>Criteria Pollutant Status</u>	<u>EPA Designation</u>	
8-Hour Ozone (O <sub>3</sub> )	Moderate Non-attainment Area	
Operating Efficiencies Rating: Medium		
System Operating Cost per Passenger Mile (current year dollars)	<u>Baseline</u>	<u>New Start</u>
	\$0.71	\$0.62

### **Local Financial Commitment Rating: Medium**

The local financial commitment rating is based on the weighted average of the ratings assigned to each of the following criteria: the New Starts share of project costs is weighted 20 percent; the strength of the capital finance plan is weighted 50 percent; and the strength of the operating finance plan is weighted 30 percent.

***Section 5309 New Starts Share of Total Project Costs: 48.1%***

***Rating: Medium-High***

<b>Locally Proposed Financial Plan</b>		
<b><u>Source of Funds</u></b>	<b><u>Total Funds (\$million)</u></b>	<b><u>Percent of Total</u></b>
<b>Federal:</b>		
Section 5309 New Starts	\$275.30	48.1%
Section 5307 Urbanized Area Formula Funds	\$18.20	3.2%
Section 5309 Fixed Guideway Modernization Funds	\$21.18	3.7%
Section 5309 Bus Discretionary FHWA Flexible Funds	\$25.92	4.5%
(CMAQ and STP)	\$112.75	19.7%
FHWA NHS Funds	\$6.00	1.0%
<b>State:</b>		
State Transportation Fund (STF)	\$113.34	19.8%
<b>Total:</b>	<b>\$572.69</b>	<b>100.0%</b>

**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 rating is based upon the weighted average of the ratings assigned to each of the subfactors below. The agency capital condition is weighted 25 percent, the commitment of capital funds is weighted 25 percent, and the capital cost estimate, planning assumptions and capital funding capacity subfactor is weighted 50 percent.

**Agency Capital Condition: High**

- The average age of ConnDOT's Statewide bus fleet is 7.6 years, while the average age of the Hartford Division's bus fleet is 6.5 years, which is in line with the industry average.
- ConnDOT's Special Tax Obligation bond ratings, issued in January 2009, are as follows: Moody's Investors Service A1, Standard & Poor's AA, and Fitch AA-.
- There have been no service reductions.

**Commitment of Capital Funds: Medium**

- Approximately 51 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 funds committed in Public Act 06-136.

**Capital Cost Estimates, Planning Assumptions, and Financial Capacity: Medium-Low**

- While assumptions regarding federal funding are reasonable, growth in state funding sources assumed in the plan are more optimistic than history.
- The project's financial plan shows annual deficits in the State Transportation Fund beginning in 2010, and a negative fund balance beginning in 2014. Although the Legislature is compelled to maintain a minimum positive fund balance for a rolling five-year horizon, the financial plan does not describe any means by which these deficits would be eliminated.
- The capital cost estimate of the project is considered current and reliable, but risks must be closely monitored as the project continues in final design including railroad agreements, right-of-way acquisition, and utility relocation.

***Operating Finance Plan Rating: Medium***

The operating finance plan rating is based upon the weighted average of the ratings assigned to each of the subfactors listed below. The agency operating condition is weighted 25 percent, the commitment of operating funds is weighted 25 percent, and the operating cost estimates, planning assumptions and operating funding capacity subfactor is weighted 50 percent.

**Agency Operating Condition: Medium-High**

- The current ratio of assets to liabilities as reported for the Special Transportation Fund in its most recent audited financial statement is 5.6. ConnDOT has a history of being able to draw funds as required from the State Transportation Fund.
- ConnDOT has increased service in recent years

**Commitment of Operating Funds: Medium**

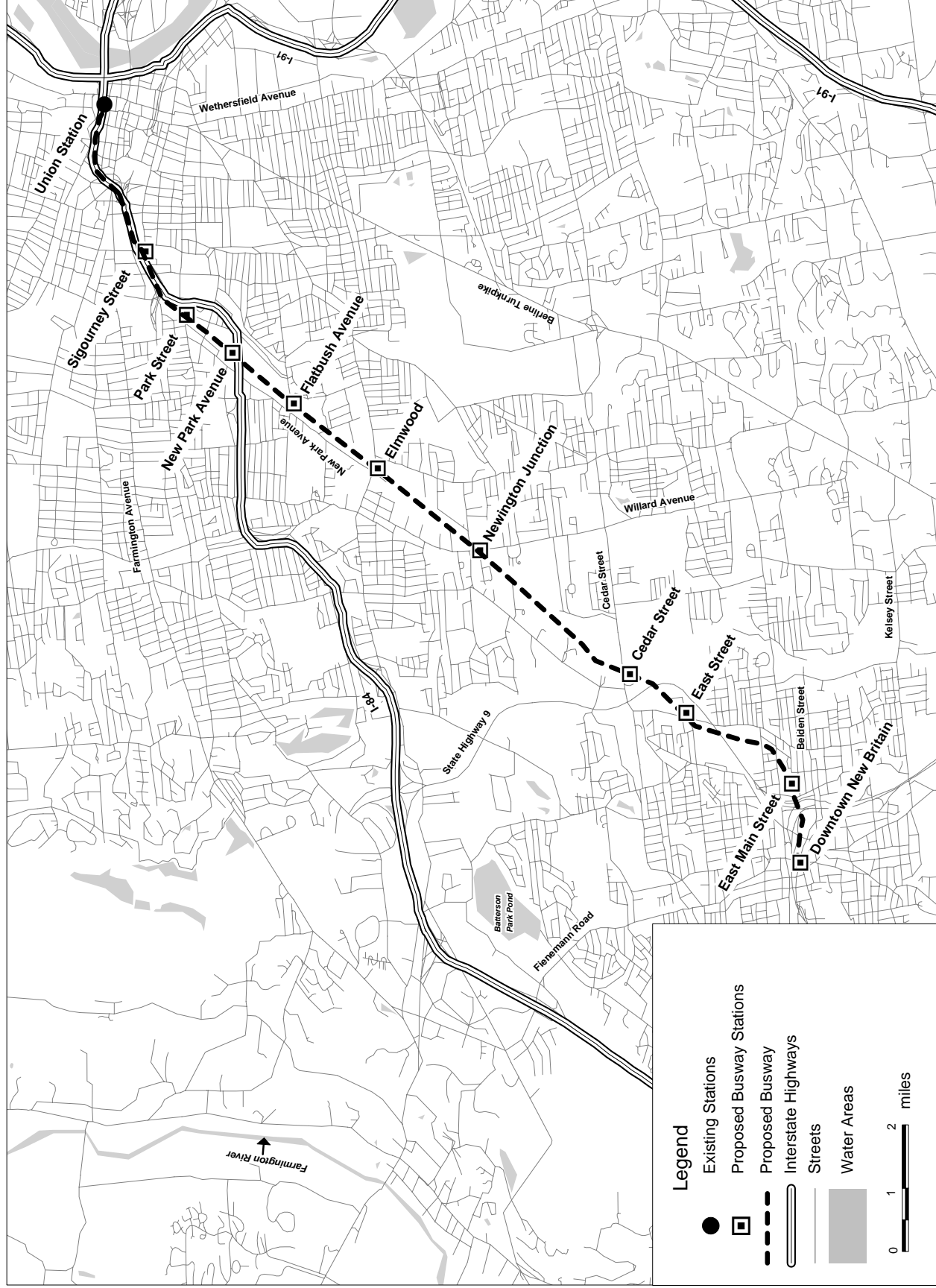
- Less than 50 percent of operating funding is committed. Most of the "planned" sources of funds derive from the State Transportation Fund, which cannot be committed more than a year in advance.

**Operating Cost Estimates, Planning Assumptions, and Financial Capacity: Medium-Low**

- The operating plan is based on optimistic assumptions regarding growth in operating subsidies and passenger revenues.
- The project's financial plan shows annual deficits in the State Transportation Fund beginning in 2010, and a negative fund balance beginning in 2014. Historically, the State has acted to balance the State Transportation Fund.

# New Britain - Hartford Busway

## Hartford, Connecticut





## Urban Transitway Phase II

### Stamford, Connecticut

(November 2009)

The City of Stamford, Connecticut is proposing to extend Phase I of its Urban Transitway, currently under construction, for 0.6 miles along Myrtle Avenue to US Route 1. The facility will accommodate new dedicated bus-priority/High Occupancy Vehicle (HOV) lanes in both directions, bike pathways, sidewalks, and landscaping. Signal priority treatments at intersections will provide for local and commuter bus priority, reducing total average trip times and improving reliability for passengers. High amenity bus stops in the corridor will include real-time passenger displays. The dedicated lanes will be for the exclusive use of buses and other HOV vehicles seven days-per-week/twenty-four hours-per-day. The new facility will also accommodate direct access to Connecticut Transit's (CTTransit) bus maintenance facility from Myrtle Avenue, thereby reducing deadhead miles and improving overall system operating efficiency.

The City of Stamford has identified the need to improve bus and HOV access between the Stamford Intermodal Transportation Center (SITC), at the eastern end of the Phase I Transitway, and US Route 1. The Phase II Urban Transitway will extend the benefits of Phase I from its current Elm Street terminus to US Route 1, relieving congestion on local streets and providing fast, direct bus rapid transit-like levels of service between the SITC and the Myrtle Avenue Corridor, as well as the Glenbrook, Cove, and Shippan neighborhoods of Stamford. As with the Phase I Transitway, the city and CTTransit are committed to providing regular service along the full Transitway at peak hour headways of 10 minutes or less, stopping at high-amenity bus stops at locations to be identified following broad community consultation.

The total capital cost for the Stamford Urban Transitway Phase II project is estimated at \$48.31 million, with a proposed Section 5309 New Starts share of \$24.72 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 USC 5309(e)(1)(B)).*

Summary Description	
<b>Proposed Project:</b>	Busway/HOV Extension 3,000 Feet
<b>Total Capital Cost (\$YOE):</b>	\$48.31 Million
<b>Section 5309 New Starts Share (\$YOE):</b>	\$24.72 Million (51.2%)
<b>Ridership Forecast:</b>	Not Available

### Project Development History and Current Status

The need for direct access between the SITC and residential and commercial areas in the eastern and northeastern sections of Stamford emerged out of the city's 2002 Master Plan, as well as the South Western Regional Planning Agency's (Stamford's metropolitan planning organization) long range transportation plan (2004-2030). The City of Stamford and CTTransit have developed a Stamford Urban Transitway Operations Plan to identify agency commitments and responsibilities agreed to during the design phase of the Phase I Transitway. Phase I is now partially opened. Construction is anticipated to be completed in early-summer 2010. The two parties will update the document to reflect operating responsibilities associated with opening of the Phase II Transitway, which is anticipated in summer 2012.

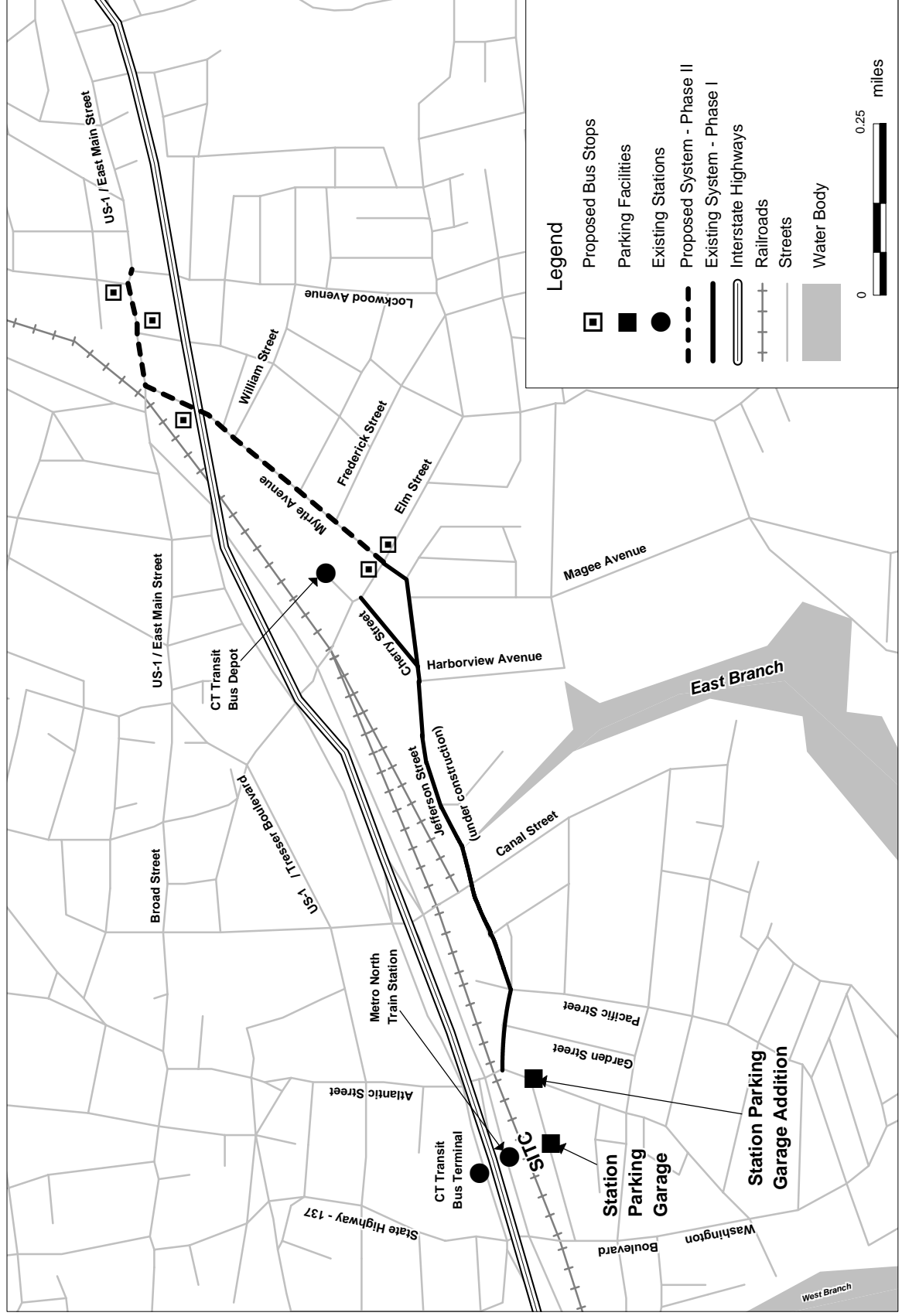
FTA approved the project into preliminary engineering in May 2006, and issued a Finding of No Significant Impact based on the project's Environmental Assessment in September 2006. FTA approved the project into final design in November 2007.

<b>Locally Proposed Financial Plan</b>		
<b><u>Source of Funds</u></b>	<b><u>Total Funds (\$million)</u></b>	<b><u>Percent of Total</u></b>
<b>Federal:</b>		
Section 5309 New Starts	\$24.72	51.2%
Section 5309 Bus	\$8.80	18.2%
FHWA ITS Earmark	\$0.93	1.9%
EPA Brownfields	\$0.16	0.3%
<b>Local:</b>		
City of Stamford General Fund	\$13.70	28.4%
<b>Total:</b>	<b>\$48.31</b>	<b>100.0%</b>

**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.

# Urban Transitway Phase II

Stamford, Connecticut





# Wilmington to Newark Commuter Rail Improvements

## Wilmington, Delaware

(November 2009)

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) construction of a third track along a 1.5-mile segment of Amtrak's Northeast Corridor, south of Wilmington, to increase track capacity for intercity, commuter and freight operations and allow additional commuter trains to service the Newark, DE, SEPTA Station; (2) relocation of the Newark rail station to a location one mile closer to Philadelphia, to eliminate commuter train conflicts with freight operations and provide a two track station which will allow 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 \$78.42 million, which includes \$24.99 million in Section 5309 New Starts funds. *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 USC 5309(e)(1)(B)).*

Summary Description	
<b>Proposed Project:</b>	Commuter Rail Improvements 1.5 Miles, 1 Station Relocation, two 2-car trains
<b>Total Capital Cost (\$YOE):</b>	\$78.42 Million
<b>Section 5309 New Starts Share (\$YOE):</b>	\$24.99 Million (31.9%)
<b>Ridership Forecast (2020):</b>	5,000 Average Weekday Boardings

### Project Development History and Current Status

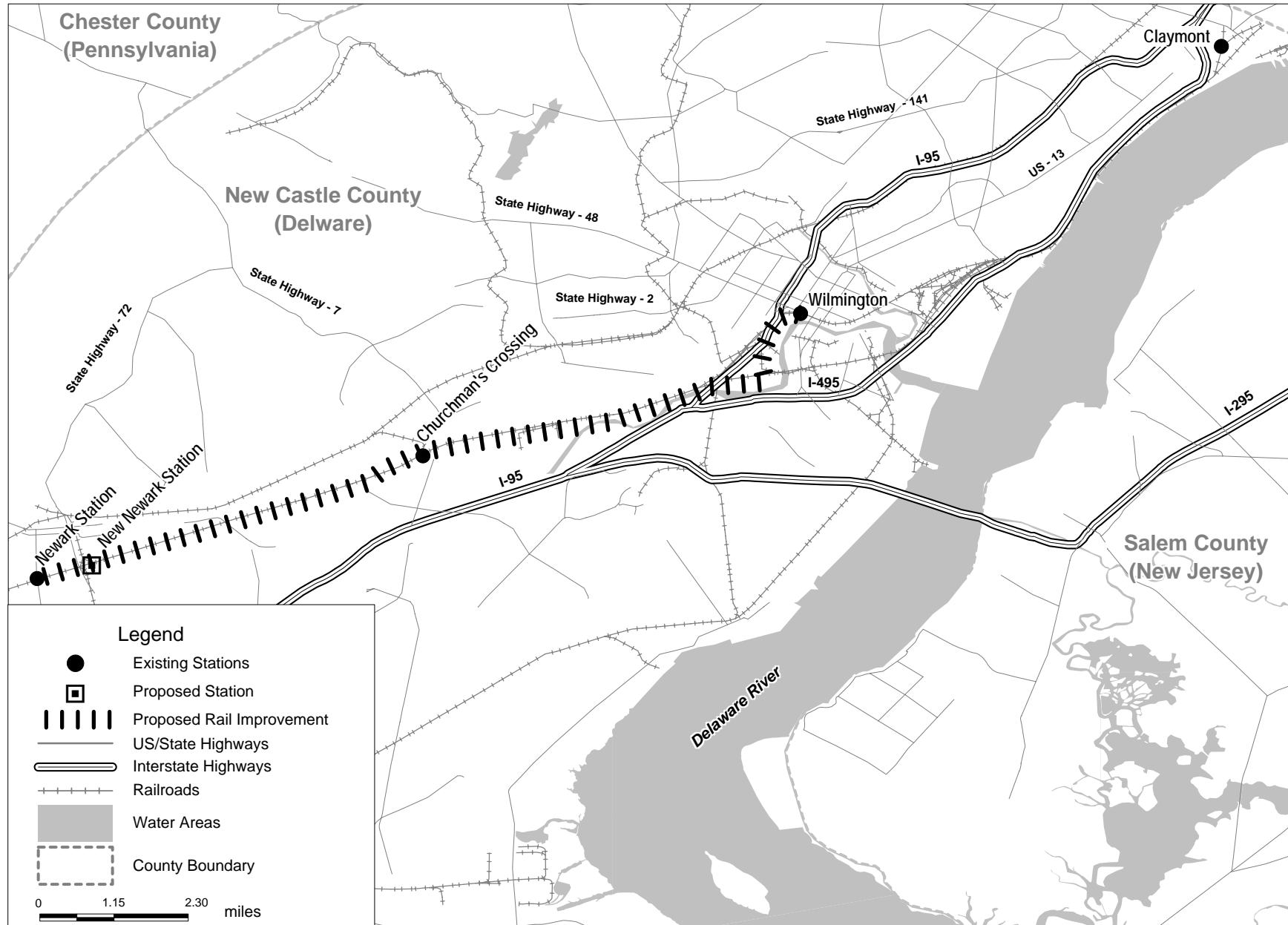
FTA approved DTC's request to enter preliminary engineering for the Wilmington to Newark Commuter Rail Improvements project in April 2004. FTA agreed the project qualified as a categorical exclusion in September 2006. FTA approved entry into final design in February 2007. Start-up of the enhanced service is anticipated in late 2012.

<b>Locally Proposed Financial Plan</b>		
<b><u>Source of Funds</u></b>	<b><u>Total Funds (\$million)</u></b>	<b><u>Percent of Total</u></b>
<b>Federal:</b>		
Section 5309 New Starts	\$24.99	31.9 %
FHWA Sec. 117	\$4.92	6.3%
FHWA Sec. 1702	\$5.00	6.4%
Section 5309 Fixed Guideway Modernization	\$3.98	5.1%
<b>State:</b>		
Delaware State Transportation Trust Fund	\$39.53	50.4%
<b>Total:</b>	<b>\$78.42</b>	<b>100.0%</b>

**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





# Central Florida Commuter Rail Transit – Initial Operating Segment

## Orlando, Florida

### (November 2008)

The Florida Department of Transportation (FDOT) is proposing to construct a new commuter rail system along the existing CSX “A” line Corridor from Volusia County through Lake County and Seminole County, to Orange County and downtown Orlando. The Central Florida Commuter Rail Transit (CFCRT) project would operate entirely at-grade, sharing track with existing freight and Amtrak services. The project includes the purchase of 15 vehicles and construction of 12 stations and approximately 2,100 parking spaces. In the opening year, service would operate every 30 minutes in the peak period and every 120 minutes during the off-peak, with no weekend service. By the forecast year of 2030, service would operate every 15 minutes in the peak period and every 30 minutes during the off-peak, with service every 60 minutes in the evenings and weekends.

The CFCRT runs parallel to Interstate 4 (I-4) and US 17-92, the region’s primary north-south travel routes and the location of much of the region’s population and employment. I-4 is scheduled for reconstruction, and the proposed project is intended to serve as a congestion mitigation measure, as well as more broadly provide a high capacity transit alternative to north-south travel in the corridor.

Summary Description	
<b>Proposed Project:</b>	Commuter Rail 32 Miles 12 Stations
<b>Total Capital Cost (\$YOE):</b>	\$357.22 Million (includes \$900,000 in finance charges)
<b>Section 5309 New Starts Share (\$YOE):</b>	\$178.61 Million (50.0%)
<b>Annual Forecast Year Operating Cost:</b>	\$55.31 Million
<b>Ridership Forecast (2030):</b>	7,400 Average Weekday Boardings 3,700 Daily New Riders
<b>Opening Year Ridership Forecast (2012):</b>	4,300 Average Weekday Boardings
<b>FY 2010 Local Financial Commitment Rating:</b>	Medium
<b>FY 2010 Project Justification Rating:</b>	Medium
<b>FY 2010 Overall Project Rating:</b>	Medium

The rating described herein is based on information submitted when the project was rated for entry into final design in 2008. The project encountered schedule delays due to an inability to execute the negotiated railroad agreements with CSX pending passage of liability legislation by the Florida State Legislature. In December 2009, the State Legislature passed the necessary legislation and the project is expected to now move forward.

Before an FFGA will be awarded, FDOT must provide documentation of fully executed and completed railroad and other third party agreements. FDOT must then update the project scope, design, cost, schedule, and operating plans to reflect any changes necessitated by the executed railroad agreements as well as the recent change in vehicle type from low-floor, FRA-compliant, Diesel Multiple Unit vehicles to traditional push-pull commuter rail vehicles. FDOT must also provide FTA with updated information to ensure that Americans with Disabilities Act (ADA) and National Environmental Policy Act (NEPA) requirements continue to be addressed appropriately. Lastly, FDOT must update the financial plan to

address the issues described in FTA’s draft financial capacity assessment and maintain a sufficient New Starts rating.

### **Project Development History and Current Status**

FDOT completed an alternatives analysis on a 61-mile corridor in May 2004. An Environmental Assessment (EA) was prepared for the entire 61-mile corridor in May 2006, with a Finding of No Significant Impact (FONSI) signed by FTA in April 2007. A 54-mile, 15-station project Locally Preferred Alternative was approved into Preliminary Engineering (PE) in March 2007. A Supplemental EA was prepared to assess the potential impacts of several project scope changes and to include a general analysis of the environmental impacts of moving freight from the CSX “A” Line to the “S” Line. FTA approved and signed the Supplemental EA in May 2008, and an addendum to the FONSI was issued by FTA in July 2008. During PE, FDOT decided to pursue entry into final design for only the current 32-mile, 12 station project, which was approved into final design in August 2008.

### **Significant Changes Since FY 2010 Evaluation (November 2008)**

The proposed vehicle type changed from low-floor, FRA-compliant, Diesel Multiple Unit (DMU) vehicles to traditional push-pull commuter rail vehicles as a result of the selected vendor for the DMUs going out of business. In addition, the footprint of several stations locations changed slightly, necessitating supplemental environmental review.

### **Project Justification Rating: Medium**

The project justification rating is based on the average of the ratings for cost effectiveness and transit-supportive land use. Per FTA’s 2006 *Final Guidance on New Starts Policies and Procedures*, once a project has been approved into final design, the project is not subject to any changes in New Starts policy, guidance, and procedures. Thus, the revised weighting of the project justification criteria that took effect in July 2009 does not apply to this project.

### **Cost Effectiveness Rating: Medium-Low**

The cost effectiveness rating reflects the level of travel-time benefits (5,100 hours each weekday) relative to the project’s annualized capital and operating costs based on a comparison to a baseline alternative. Due to the unique nature of the project, its travel forecast carries significant uncertainty.

<b>Cost Effectiveness</b>	
	<b><u>New Start vs. Baseline</u></b>
Cost per Hour of Transportation System User Benefit	\$29.88*
Incremental Cost per Incremental Trip	\$35.74

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

### **Transit-Supportive Land Use Rating: Medium**

The rating is based upon the average of the ratings assigned to the subfactors below, each of which contribute one-third to the land use rating.

#### **Existing Land Use: Medium-Low**

- Population density within ½-mile of the station areas is approximately 2,130 persons per square mile. The project has approximately 78,700 jobs within ½-mile of the proposed stations. The project provides direct service to the central business district (CBD), which contains approximately 729,700 jobs.
- The stations in the City of Orlando and Winter Park can be considered destination stations, with significant levels of development within walking distance and a pedestrian-friendly character.

Development levels within walking distance of the remaining suburban stations are low and land use is highly auto-oriented.

- Parking supplies in the corridor are high, even at stations within the City of Orlando, although parking rates at garages in downtown are high.

#### **Transit-Supportive Plans and Policies: Medium**

- The State of Florida Growth Management Act (SB 360) 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.
- The City of Orlando’s downtown redevelopment plan coordinates transportation and other public infrastructure improvements with private development, embodies “new urbanism” as a guiding principle, and emphasizes mixed land use, pedestrian connectivity, strong neighborhoods, and transit. The only other community along the corridor that has a specific development plan for the station area is Lake Mary, where a master plan has been developed for a small suburban town center. The comprehensive plans for several other corridor communities identify sections of the station areas for development at higher densities, with a varying degree of transit-supportive characteristics.
- Zoning in the downtown Orlando and Winter Park station areas requires higher development densities and transit-supportive character, including mixed uses and pedestrian-friendly design. Several other municipalities in the corridor have zoning provisions allowing reduced parking in activity centers or areas with high levels of transit service.
- Many efforts have been made to reach out to stakeholders. The project sponsor has coordinated station planning and design with major property and facility owners in station areas, including hospitals and utility companies.

#### **Performance and Impacts of Policies: Medium**

- Major redevelopment is occurring in downtown Orlando. Although they are subject to the policies incorporated in the downtown revitalization plan, many of the projects and proposals include substantial new parking supplies and thus are not strongly transit-supportive.
- Transit-supportive development at stations beyond Orlando and Winter Park has been minimal.

<b>Mobility Improvements Rating: Medium-Low</b>	
<b>Transportation System User Benefits Per Passenger Mile (Minutes)</b>	<b><u>New Start vs. Baseline</u></b> 3.5
<b>Number of Transit Dependents Using the Project</b>	1,400
<b>Transit Dependent User Benefits per Passenger Mile (Minutes)</b>	2.9
<b>Environmental Benefits Rating: Medium</b>	
<b><u>Criteria Pollutant Status</u></b>	<b><u>EPA Designation</u></b> Maintenance or Attainment for all Pollutants

**Local Financial Commitment Rating: Medium**

The local financial commitment rating is based on the weighted average of the ratings assigned to each of the following criteria: the New Starts share of project costs is weighted 20 percent; the strength of the capital finance plan is weighted 50 percent; and the strength of the operating finance plan is weighted 30 percent.

***Section 5309 New Starts Share of Total Project Costs: 50.0%******Rating: Medium***

<b>Locally Proposed Financial Plan</b>		
<b><u>Source of Funds</u></b>	<b><u>Total Funds (\$million)</u></b>	<b><u>Percent of Total</u></b>
<b>Federal:</b> Section 5309 New Starts	\$178.61	50.0%
<b>State:</b> Florida New Starts Transit Program	\$89.31	25.0%
<b>Local:</b> Volusia County	\$6.60	1.8%
Seminole County	\$45.56	12.8%
City of Orlando	\$13.47	3.8%
Orange County	\$23.68	6.6%
<b>Total:</b>	<b>\$357.22</b>	<b>100.0%</b>

**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 rating is based upon the weighted average of the ratings assigned to each of the subfactors listed below. The agency capital condition is weighted 25 percent, the commitment of capital funds is weighted 25 percent, and the capital cost estimate, planning assumptions and capital funding capacity subfactor is weighted 50 percent.

**Agency Capital Condition: Medium-High**

- FDOT does not have a bus fleet.
- FDOT's General Obligation bonds are rated as follows: Standard & Poor's Corporation A+, Moody's Investor Service Aa, and Fitch AA-.

**Commitment of Capital Funds: High**

- All of the non-New Starts funding is committed or budgeted. The non-New Starts share will be covered by state transportation trust funds and funds from Volusia, Seminole, and Orange counties and the City of Orlando.

**Capital Cost Estimate, Planning Assumptions, and Financial Capacity: Medium-Low**

- Assumptions in the capital plan are reasonable.
- The current project cost estimate is considered reasonable at this stage of development.
- There is no plan for cost increases greater than five percent of project cost.

***Operating Finance Plan Rating: Medium***

The operating finance plan rating is based upon the weighted average of the ratings assigned to each of the subfactors listed below. The agency operating condition is weighted 25 percent, the commitment of operating funds is weighted 25 percent, and the operating cost estimates, planning assumptions and operating funding capacity subfactor is weighted 50 percent.

**Agency Operating Condition: High**

- The current ratio of assets to liabilities as reported for the State Government Transportation Fund in its most recent audited financial statement is 2.7.

**Commitment of Operating Funds: Medium-High**

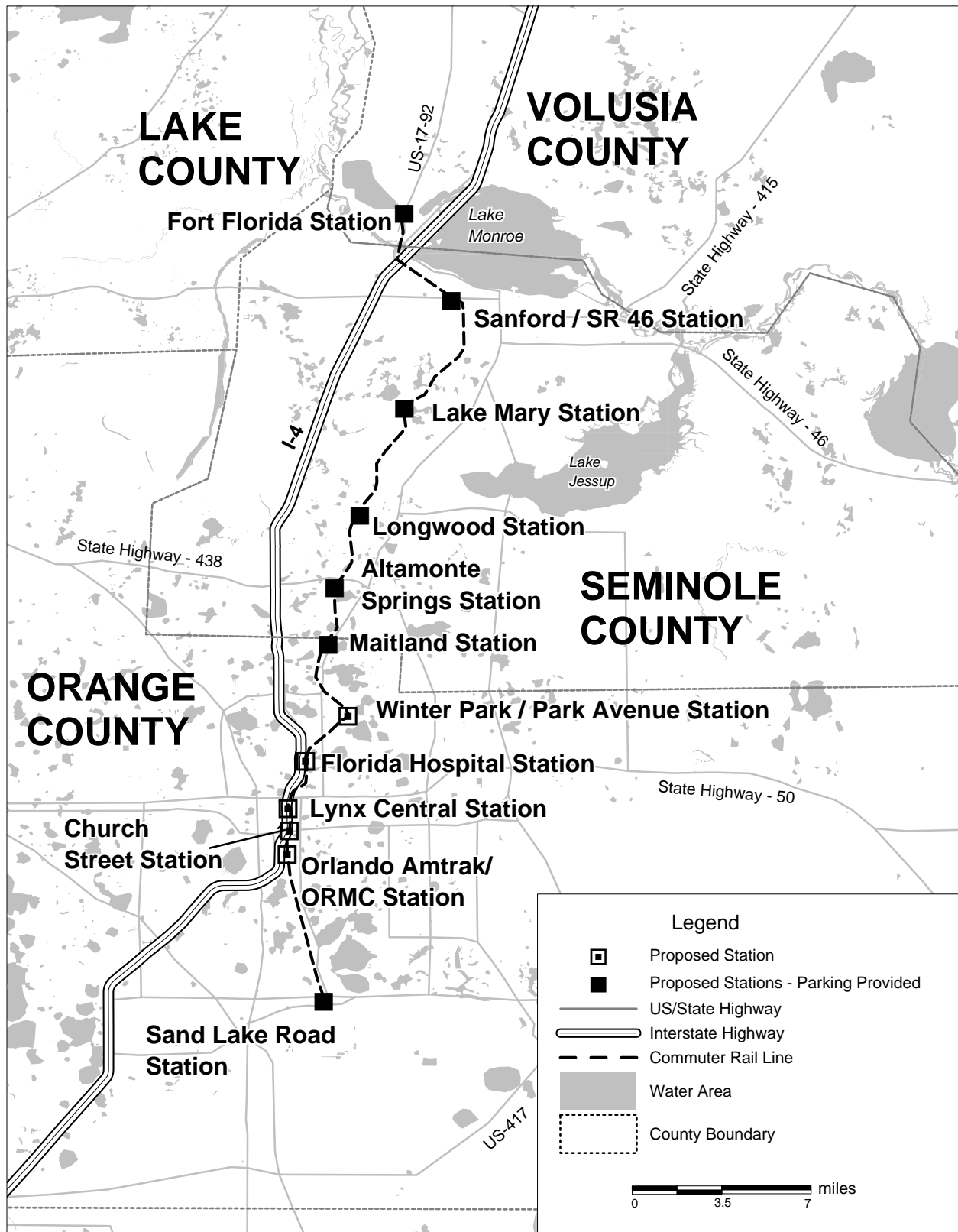
- The majority of operating funding is committed. For the initial seven years of operation, FDOT will fund all operating subsidies through its Strategic Intermodal System program using revenues from the State Transportation Trust Fund. Thereafter, operating subsidies will be provided by Volusia, Seminole, and Orange counties and the City of Orlando.

**Operating Cost Estimates, Planning Assumptions, and Financial Capacity: Medium-Low**

- Operating and maintenance costs have been lowered from those assumed last year and appear optimistic compared to other commuter rail systems around the country.
- Inflation assumptions are reasonable compared to historic trends.
- The financial plan shows a balanced budget throughout the 20-year plan.

# Central Florida Commuter Rail Transit - Initial Operating Segment

Orlando, Florida



## Access to the Region's Core

### Northern New Jersey

(November 2009)

The New Jersey Transit Corporation (NJT) is proposing to construct a new 9.0-mile commuter rail line adjacent to the existing Northeast (Rail) Corridor (NEC) between Secaucus, New Jersey, and Manhattan. The Trans Hudson Express Tunnel, also known as Access to the Region's Core (ARC), includes the construction of two new tunnels under the Hudson River; new rail tracks between Secaucus Junction and New York Penn Station (PSNY); a new rail station underneath 34<sup>th</sup> Street in midtown Manhattan (with pedestrian linkages to PSNY); a storage yard in Kearny, New Jersey; and the purchase of specialized dual-powered rail locomotives (electric and diesel) and bi-level coaches.

The NEC is the only Hudson River commuter rail crossing into midtown Manhattan. Already near capacity, the NEC currently experiences significant travel-time delays whenever there is a train malfunction incident; one train disruption of 15 minutes, for example, can delay as many as 15 other NJT and Amtrak trains. As passenger demand increases, congestion and service reliability are expected to worsen. Other Trans-Hudson facilities are similarly at or near capacity with limited ability to absorb additional demand. In addition, commuter rail passengers on NJT's Bergen County, Main, Pascack Valley, Port Jervis, and Raritan Valley commuter rail lines today must transfer at either Secaucus Junction or in Hoboken to reach New York City. The purpose of the ARC project is to double rail capacity between New Jersey and New York City, thereby relieving congestion and transit delays, while providing for more direct, one-seat service to midtown Manhattan.

Summary Description	
<b>Proposed Project:</b>	Commuter Rail 9.0 Miles 1 Station
<b>Total Capital Cost (\$YOE):</b>	\$8,699.98 Million
<b>Section 5309 New Starts Share (\$YOE):</b>	\$3,000.00 Million (34.5%)
<b>Annual Forecast Year Operating Cost:</b>	\$209.00 Million
<b>Ridership Forecast (2030):</b>	254,200 Average Weekday Boardings 24,800 Daily New Riders
<b>Opening Year Ridership Forecast (2017):</b>	203,000 Average Weekday Boardings
<b>FY 2011 Local Financial Commitment Rating:</b>	Medium
<b>FY 2011 Project Justification Rating:</b>	Medium-High
<b>FY 2011 Overall Project Rating:</b>	Medium-High

The proposed New Starts share of \$3 billion would be the largest commitment for a single project in the history of the New Starts Program. Prior to FTA's consideration of an FFGA, the long term availability of the local funding provided by the Port Authority of New York and New Jersey and the New Jersey Transportation Trust Fund will need to be reviewed. In addition, a funding plan for the Portal Bridge project over the Hackensack River will need to be provided since the ARC project's operating plan is dependent on improvements to the Portal Bridge. Other issues that require NJT actions during final design include finalizing railroad agreements with Amtrak and engineering and project management considerations.

## Project Development History and Current Status

NJT completed a major investment study on the ARC corridor in 2003. A new Hudson River rail tunnel and expanded Penn Station capacity alternative was selected as the locally preferred alternative (LPA) in early 2006. FTA approved the LPA into preliminary engineering (PE) in August 2006. A Draft Environmental Impact Statement (EIS) was published in February 2007. Because of changes to the project alignment made in response to the comments received on the Draft EIS and from the PE effort, a Supplemental EIS was prepared and published in March 2008. The Final EIS was published in November 2008, with a Record of Decision issued in January 2009. The ARC project was approved into final design in January 2009. In August 2009, an Early System Work Agreement was awarded by FTA to allow NJT to advance the first of three tunnel segment construction contract packages for the project as well as several other activities necessary to maintain the project schedule and cost.

NJT has put together an experienced design team and performed a thorough analysis of project requirements. The project scope is complex, and some uncertainties remain. At this stage of project development, scope and cost are considered reasonable.

## Significant Changes Since FY 2010 Evaluation (April 2009)

The project financial plan was revised to reflect the availability of funding from the American Recovery and Reinvestment Act of 2009.

## Project Justification Rating: Medium-High

The project justification rating is based on the average of the ratings for cost effectiveness and transit-supportive land use. Per FTA's 2006 *Final Guidance on New Starts Policies and Procedures*, once a project has been approved into final design, the project is not subject to any changes in New Starts policy, guidance, and procedures. Thus, the revised weighting of the project justification criteria that took effect in July 2009 does not apply to this project.

## Cost Effectiveness Rating: Medium

The cost effectiveness rating reflects the level of travel-time benefits (104,000 hours each weekday) relative to the project's annualized capital and operating costs based on a comparison to a baseline alternative.

Cost Effectiveness	
	<u>New Start vs. Baseline</u>
Cost per Hour of Transportation System User Benefit	\$20.62*
Incremental Cost per Incremental Trip	\$41.87

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

## Transit-Supportive Land Use Rating: High

The rating is based upon the average of the ratings assigned to the subfactors below, each of which contribute one-third to the land use rating.

### Existing Land Use: High

- The eastern terminus of the project is PSNY, in one of the most densely-developed commercial centers and intensively-used transportation hubs in the nation. The station area includes intense office and mixed-use commercial and ground-floor retail development, as well as some warehouses and large utilities. A dense network of sidewalks serves the area, which has an exceptionally high level of pedestrian activity, while parking is expensive and relatively scarce. Virtually all of Manhattan's streets and avenues include sidewalks with appropriately-graded curb

cuts to facilitate access for persons with disabilities. The station area includes 30,900 housing units, population density exceeds 36,000 persons per square mile, and the project will serve over 9.7 million employees, well above the thresholds for a “high” rating according to FTA criteria.

**Transit-Supportive Plans and Policies: High**

- New York City policies, reflected in the City's comprehensive Zoning Resolution, emphasize the concentration of new development in areas well-served by transit and the preservation of the historic and unique character of local neighborhoods. The project is intended to reinforce the core of Manhattan as the center of regional economic activity, thereby reducing pressures for the continued decentralization of development to outlying areas.
- The State of New Jersey has taken significant steps to promote smart growth, reduce suburban sprawl, and preserve natural areas and working farms. The State's Development and Redevelopment Plan (SDRP) emphasizes infill development near transit stations and the preservation of open space in rural and fringe areas. The principles of the SDRP have been incorporated into local and regional master plans and into the policies and funding procedures of state agencies.
- The City's land use policies encourage transformation of the section of the station area with the potential for higher-intensity redevelopment into a mixed-use community of residential, commercial, and cultural land use that takes advantage of access to Penn Station and adjacent subways. The City has rezoned the West Side of Manhattan between Penn Station and the Hudson River to extend the Midtown Central Business District, as a strategy for developing a dynamic, transit-oriented urban center with high-density mixed commercial, residential, and cultural uses and a revitalized Hudson River Waterfront.
- The City's most powerful tool to implement land use policies is its Zoning Resolution. Additional tools applied to promote transit-supportive development include property tax incentives, housing development, designation of a Special Transit Land Use District, direct intervention by sale or lease of City property, financial support, property condemnation for redevelopment, and mitigation of development impacts on transit through the environmental review process.

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

- In Manhattan, 25 major projects were identified for development by 2025. NJT's leadership of the Transit Village Initiative has helped to spur development in a number of designated Transit Villages in towns in rail corridors.
- Rezoning of sections of the station area will further increase the intensity of land uses, which already have highly transit-supportive densities and characteristics. The project will help to relieve crowding on existing transportation systems connecting New Jersey communities with Manhattan, thereby helping to sustain the economy of the metropolitan area's central core and reducing pressures for decentralized urban sprawl. By 2030, total population within the PSNY station area is estimated to increase by more than 20,000 persons to 65,000. Total station area employment in 2030 is projected to increase by over 115,000 jobs to 536,000.

Mobility Improvements Rating: Medium-High		
Transportation System User Benefits Per Passenger Mile (Minutes)	New Start vs. Baseline	
	4.0	
Number of Transit Dependents Using the Project	44,500	
Transit Dependent User Benefits per Passenger Mile (Minutes)	5.3	
Environmental Benefits Rating: High		
Criteria Pollutant Status	EPA Designation	
8-Hour ozone (O <sub>3</sub> )	Non-attainment Area	
Particulate Matter (PM <sub>2.5</sub> )	Non-attainment Area	
Operating Efficiencies Rating: N/A		
System Operating Cost per Passenger Mile (current year dollars)	Baseline	New Start
	N/A	N/A

### **Local Financial Commitment Rating: Medium**

The local financial commitment rating is based on the weighted average of the ratings assigned to each of the following criteria: the New Starts share of project costs is weighted 20 percent; the strength of the capital finance plan is weighted 50 percent; and the strength of the operating finance plan is weighted 30 percent.

***Section 5309 New Starts Share of Total Project Costs: 34.5%***

***Rating: High***

<b>Locally Proposed Financial Plan</b>		
<b><u>Source of Funds</u></b>	<b><u>Total Funds (\$million)</u></b>	<b><u>Percent of Total</u></b>
<b>Federal:</b>		
Section 5309 New Starts	\$3,000.00	34.5%
FHWA Flexible Funds (CMAQ/NHS)*	\$1,319.98	15.2%
American Recovery and Reinvestment Act Section 5307 funds	\$130.00	1.5%
<b>State:</b>		
Port Authority of New York and New Jersey	\$3,000.00	34.5%
New Jersey Turnpike Authority	\$1,250.00	14.4%
<b>Total:</b>	<b>\$8,699.98</b>	<b>100.0%</b>

**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.

\* The Federal flexible funds committed by the North Jersey Transportation Planning Authority to the project will be 100 percent Federal funds that will be "soft matched" by toll revenue credits.

***Capital Finance Plan Rating: Medium***

The capital finance plan rating is based upon the weighted average of the ratings assigned to each of the subfactors below. The agency capital condition is weighted 25 percent, the commitment of capital funds is weighted 25 percent, and the capital cost estimate, planning assumptions and capital funding capacity subfactor is weighted 50 percent.

**Agency Capital Condition: Medium**

- The average age of NJT's bus fleet is 7.5 years, which is slightly older than the industry average. The average ages of the LRT and commuter rail fleets are 6.2 and 17.4 years, respectively.
- NJT's good bond rating, which was issued in April 2008, is as follows: Fitch A+.

**Commitment of Capital Funds: High**

- All non-New Starts funding is committed or budgeted. Funding sources include CMAQ, FTA formula funds, formula funds from the American Recovery and Reinvestment Act, New Jersey Turnpike Authority toll revenues, and Port Authority of New York and New Jersey funding.

**Capital Cost Estimate, Planning Assumptions, and Financial Capacity: Medium-Low**

- Capital revenue and cost assumptions in the financial plan are in line with historical experience.
- The financial plan shows a balanced budget. The plan includes a non-allocated reserve fund, which contains \$643 million during the time period of ARC construction that could be used to help with cost overruns or funding shortfalls.
- The current project cost estimate is considered reliable at this stage of development.
- One shortcoming of the capital plan is the inability of the New Jersey Transportation Trust Fund (TTF) to support additional capital investment of any magnitude.

***Operating Finance Plan Rating: Medium***

The operating finance plan rating is based upon the weighted average of the ratings assigned to each of the subfactors listed below. The agency operating condition is weighted 25 percent, the commitment of operating funds is weighted 25 percent, and the operating cost estimates, planning assumptions and operating funding capacity subfactor is weighted 50 percent.

**Agency Operating Condition: Medium**

- NJT's current ratio of assets to liabilities as reported in its most recent audited financial statement (FY 2008) is 0.6. This is due to Notes Payable and Obligations under Capital Leases being classified as current liabilities, while the funds to pay for them are classified as non-current assets. When calculated correcting for this discrepancy, the current ratio is 1.15. The agency experienced funding shortfalls in four of the past five fiscal years (2004-2008) that were covered with operating reserves.

**Commitment of Operating Funds: Medium**

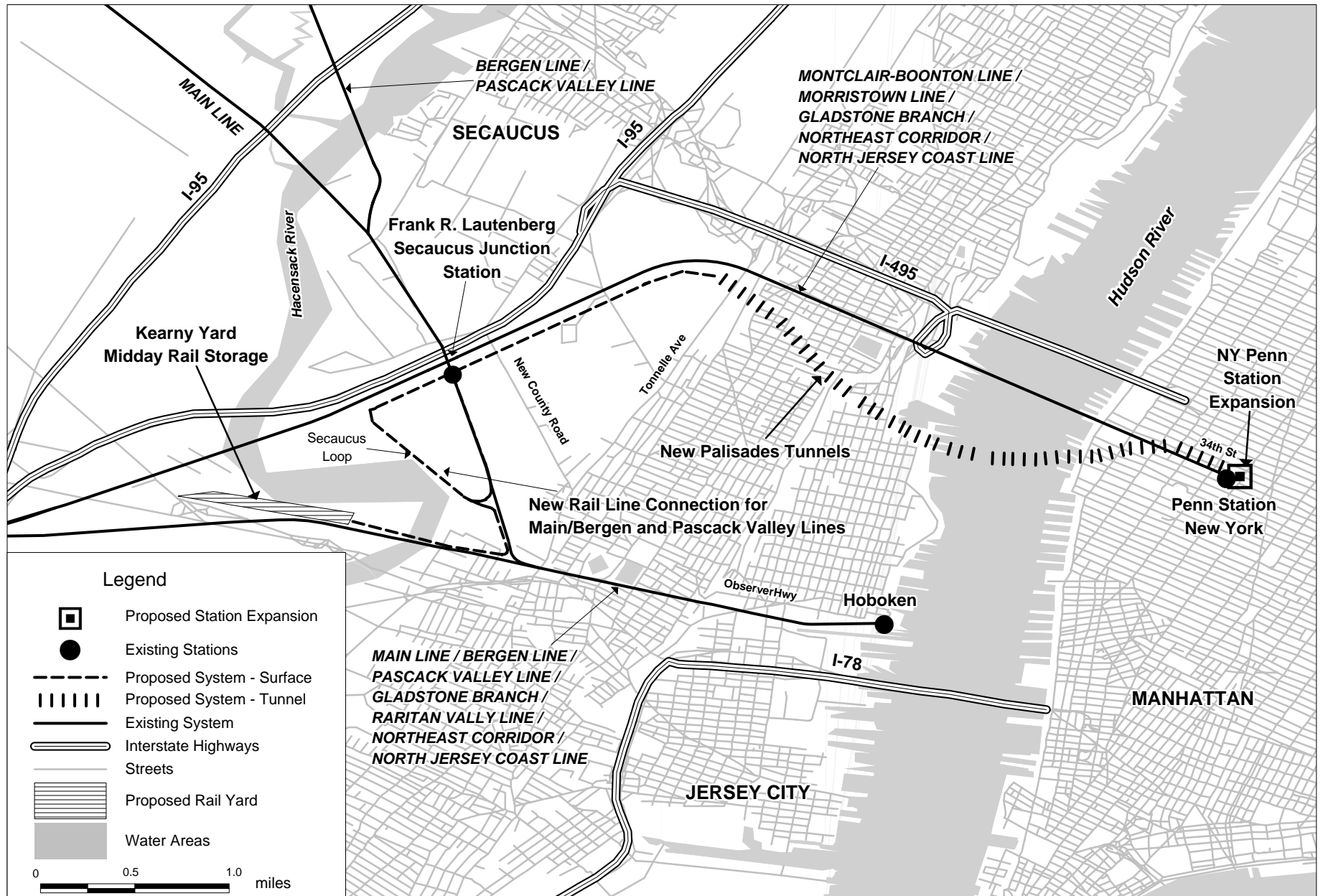
- Over 71 percent of operating funding is committed. Funding sources include fare revenues, capital transfers and project cost reimbursement from state and Federal funds, state operating assistance, and other operating revenues.

**Operating Cost Estimates, Planning Assumptions, and Financial Capacity: Medium-Low**

- State operating assistance comes from annual appropriations from the state's General Fund. While the assumptions on growth in state operating assistance are reasonable compared to historical experience, there is no legislative mandate that guarantees this additional funding.
- Operating and maintenance costs, inflation, and fare increase assumptions are reasonable compared to historical trends.
- NJT has no cash reserves or projected cash balances built into the operating plan.

# Access to the Region's Core

## Northern New Jersey



## South County Commuter Rail

### Providence, Rhode Island

(November 2009)

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. This section of 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 Route 1/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 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 the 15 trains operating between Providence and Boston today. 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 \$49.15 million, with a proposed Section 5309 New Starts share of \$24.90 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	
<b>Proposed Project:</b>	Commuter Rail Extension 20 Miles, 1 Station
<b>Total Capital Cost (\$YOE):</b>	\$49.15 Million
<b>Section 5309 New Starts Share (\$YOE):</b>	\$24.90 Million (50.7%)
<b>Ridership Forecast (2020):</b>	2,300 Average Weekday Boardings

### 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 1989 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 (SCCR) Project is a continuation of a bi-state goal to improve mobility within a shared corridor.

FTA approved the SCCR project into preliminary engineering in March 2004. Since then, five commuter rail coaches with independent utility were taken out of the project scope to support the existing

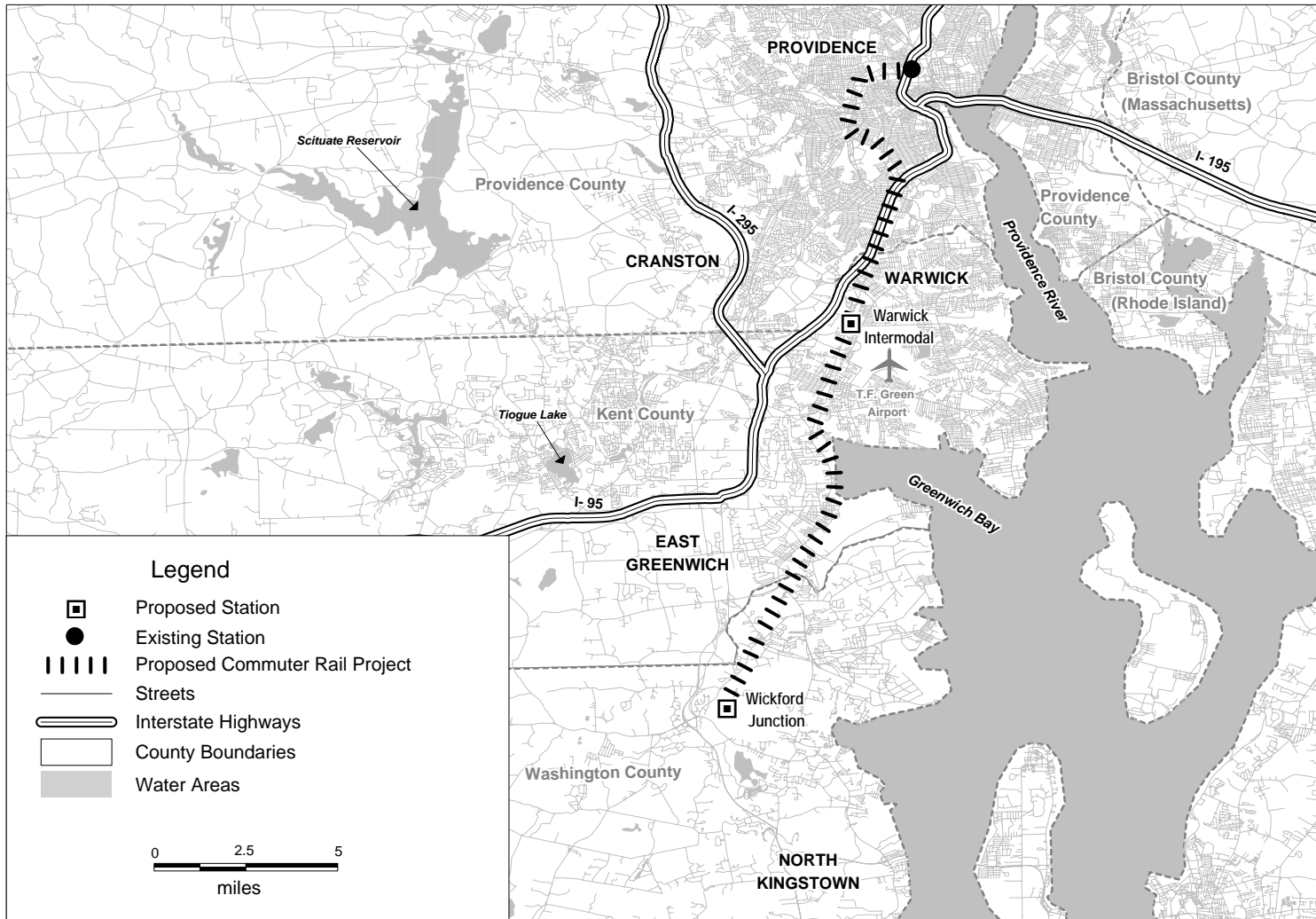
Providence to Boston service. FTA approved the project into final design in August 2007. Revenue operation is anticipated in mid-2011.

<b>Locally Proposed Financial Plan</b>		
<b><u>Source of Funds</u></b>	<b><u>Total Funds (\$million)</u></b>	<b><u>Percent of Total</u></b>
<b>Federal:</b>		
Section 5309 New Starts	\$24.90	50.7%
FHWA Flexible Funds (CMAQ)	\$3.00	6.1%
FHWA FY 2006 Approp. for SCRR	\$3.96	8.1%
Section 5309 Fixed Guideway Modernization	\$7.45	15.1%
<b>State:</b>		
Commuter Rail Bonds	\$7.00	14.2%
Highway Bonds to Match CMAQ	\$2.84	5.8%
<b>Total:</b>	<b>\$49.15</b>	<b>100.0%</b>

**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 LRT

## Houston, Texas

(November 2009)

The Metropolitan Transit Authority of Harris County (METRO) is proposing to construct a 5.2-mile, eight station, light rail transit (LRT) line from the existing University of Houston-Downtown station in the Houston central business district (CBD) to the Northline Mall Transit Center. The LRT line would operate in an exclusive guideway with limited mixed traffic operations. The majority of the LRT line would operate at-grade (4.2 miles), while the remaining 0.86 miles would be elevated to avoid two freight railroads (the Southern Pacific Railroad and the Burlington-Northern Santa Fe Railway). The project also includes the purchase of 24 light rail vehicles. Service would operate every six minutes during peak and off peak periods, including weekends, and would interline with the current METRO Rail Red Line in the CBD. No parking spaces would be built as part of the project. The project would be the first operable segment of an LRT line that METRO plans to eventually extend to George Bush Intercontinental Airport.

The corridor runs parallel to and immediately east of Interstate 45. Due to poor local roadway connectivity within the corridor, current bus service is subject to congested conditions and cannot provide reasonable travel time savings or serve the current and forecasted demand for transit. Compared to current local bus service, the LRT line would offer faster service to core activity centers and would provide a one-seat ride into downtown Houston from the city's transit-dependent northern areas. The corridor links four academic institutions and a major retail development (Northline Mall). The two largest job markets in the Houston region – downtown Houston and the Texas Medical Center (TMC) – draw large numbers of North Corridor residents to jobs in the CBD and TMC.

### Summary Description

<b>Proposed Project:</b>	Light Rail Transit 5.28 Miles 8 Stations
<b>Total Capital Cost (\$YOE):</b>	\$756.00 Million (includes \$45.8 million in finance charges)
<b>Section 5309 New Starts Share (\$YOE):</b>	\$450.00 Million (59.5%)
<b>Annual Forecast Year Operating Cost:</b>	\$7.69 Million
<b>Ridership Forecast (2030):</b>	29,000 Average Weekday Boardings 7,500 Daily New Riders
<b>Opening Year Ridership Forecast (2013):</b>	17,400 Average Weekday Boardings
<b>FY 2011 Local Financial Commitment Rating:</b>	Medium
<b>FY 2011 Project Justification Rating:</b>	Medium
<b>FY 2011 Overall Project Rating:</b>	Medium

METRO will use an innovative project delivery method whereby a Facility Provider, comprised of a team of engineering, construction, construction management and vehicle manufacturing firms, will complete design, finalize the construction phasing approach, and expedite construction of several rapid transit lines throughout Houston. The Facility Provider will also be responsible for operation and maintenance of the proposed LRT line. METRO's schedule anticipates a Full Funding Grant Agreement (FFGA) for the project in early 2010. METRO provided updated information to FTA in late November 2009 as part of its FFGA application, which is still under review. Hence, the rating described herein reflects conditions as of August 2009, when the project was approved into final design. The capital cost of the project in METRO's latest submission is not substantially different from that assumed at entry into final design.

## Project Development History and Current Status

METRO completed an alternatives analysis study on the North Corridor in November 2003. LRT was the locally preferred alternative. The project is included in the Houston-Galveston Area Council's 2035 *Regional Transportation Plan* and the 2008-2011 Transportation Improvement Program. The project is also included in the 2025 *METRO Solutions Plan* that was passed by voters in November 2003.

In April 2005, FTA approved the North Corridor LRT project into preliminary engineering (PE). In August 2005, METRO notified FTA that it was redirecting the PE effort from LRT to bus rapid transit (BRT). In October 2006, FTA approved the BRT project into PE. In October 2007, METRO's Board voted to implement LRT in the North Corridor. In late November 2007, FTA notified METRO that the LRT project could not retain the PE status that was extended to the BRT project. In January 2007, FTA issued a Final Environmental Impact Statement (FEIS) for BRT. FTA issued an environmental Record of Decision (ROD) for BRT in February 2007. In late November 2007, FTA withdrew the February 2007 ROD since METRO was no longer pursuing BRT. A supplemental FEIS for LRT was released in May 2008. FTA issued a ROD in July 2008. FTA approved final design for the project in August 2009.

## Significant Changes Since FY 2010 Evaluation (November 2008)

METRO completed PE on the North Corridor LRT project in early 2009. FTA completed a risk assessment of the project's budget, schedule and scope in April 2009. As a result, the project's capital cost estimate was revised to reflect the higher level of design and to include an increased level of contingency. The financial plan was revised to reflect the updated capital cost estimate, including an adjusted estimate of finance charges.

## Project Justification Rating: Medium

The project justification rating is based on the average of the ratings for cost effectiveness and transit-supportive land use. Per FTA's 2006 *Final Guidance on New Starts Policies and Procedures*, once a project has been approved into final design, the project is not subject to any changes in New Starts policy, guidance, and procedures. Thus, the revised weighting of the project justification criteria that took effect in July 2009 does not apply to this project.

## Cost Effectiveness Rating: Medium-High

The cost effectiveness rating reflects the level of travel-time benefits (11,100 hours each weekday, including special events) relative to the project's capital and operating costs based upon a comparison to a baseline alternative.

Cost Effectiveness	
	<u>New Start vs. Baseline</u>
Cost per Hour of Transportation System User Benefit	\$16.26*
Incremental Cost per Incremental Trip	\$18.58

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

***Transit-Supportive Land Use Rating: Medium-Low***

The rating is based upon the average of the ratings assigned to the subfactors below, each of which contribute one-third to the land use rating.

**Existing Land Use: Medium-Low**

- The North Corridor is characterized by low-density commercial, light industrial, and mixed residential development laid out on a grid pattern of streets. Auto-oriented commercial uses generally line the major roadways. Population densities are low to moderate, averaging 6,400 people per square mile.
- There are significant numbers of vacant parcels as well as underutilized properties. Pedestrian access is hindered by drainage ditches, wide streets, a lack of curb cuts, expansive parking lots, and a lack of sidewalks in many residential neighborhoods. A large mall is at the northern terminus while underused industrial buildings and an abandoned rail yard slated for redevelopment are at the southern end of the corridor.
- A total of 12,600 jobs are located in proximity to the proposed stations, while an estimated 130,000 jobs are directly served in the Houston CBD.

**Transit-Supportive Plans and Policies: Medium-Low**

- Limited efforts have been made at regional planning and growth management. In 2005 the Houston-Galveston Area Council (H-GAC) joined with the citizen-led Blueprint Houston to undertake Envision Houston Region, an initiative designed to create a regional “vision” for the future growth of the area. The results informed the long-range transportation plan update, but have not led to further implementation activities to shape regional land use patterns.
- Some station area planning activities have been initiated. METRO is undertaking a Station Area Work Program to address barriers to station area development, tools to leverage development, and policies for the development of each station area. The City of Houston is developing an Urban Corridor Planning Ordinance, which will provide a planning framework for development in high capacity transit corridors and in specific station areas. METRO established a joint development/transit-oriented development (TOD) program that will initiate specific development projects.
- The City of Houston is not zoned. However, private deed restrictions are often used for both residential and commercial land development to ensure that standards for land use are maintained. While covenants will guide the development of future major projects in the North Corridor such as the Hardy/Near Northside reinvestment zone, most neighborhoods in the North Corridor currently lack such covenants. Existing neighborhood plans show some support for TOD, but do not identify implementation mechanisms aside from financing infrastructure improvements.

**Performance and Impacts of Policies: Medium**

- Local officials believe the existing Main Street LRT / Red Line, which opened in January 2004, has been a catalyst for residential and commercial development in the city’s downtown and Midtown areas. However, aside from some scattered townhouse development there is no evidence to date of transit-supportive development in the North Corridor.
- The Hardy Rail Yards redevelopment site just north of downtown is proposed for a major transit-supportive, high-density, mixed-use development. Small and large vacant and underutilized lots throughout the corridor provide additional development potential, if land use policies and market forces can be aligned.

**Other Project Justification Criteria**

Mobility Improvements Rating: Medium-High		
Transportation System User Benefits Per Passenger Mile (Minutes)	<u>New Start vs. Baseline</u>	
	7.1	
	11,600	
Number of Transit Dependents Using the Project		
Transit Dependent User Benefits per Passenger Mile (Minutes)	7.1	
Environmental Benefits Rating: High		
<u>Criteria Pollutant Status</u> 8-Hour Ozone (O <sub>3</sub> )	<u>EPA Designation</u> Severe Non-Attainment Area	
Operating Efficiencies Rating: N/A		
System Operating Cost per Passenger Mile (current year dollars)	<u>Baseline</u>	<u>New Start</u>
	N/A	N/A

**Local Financial Commitment Rating: Medium**

The local financial commitment rating is based on the weighted average of the ratings assigned to each of the following criteria: the New Starts share of project costs is weighted 20 percent; the strength of the capital finance plan is weighted 50 percent; and the strength of the operating finance plan is weighted 30 percent.

***Section 5309 New Starts Share of Total Project Costs: 59.5%******Rating: Medium-High***

Section 3043(h)(1) in SAFETEA-LU states, “for the purpose of calculating the non-Federal share of the net project cost of any new fixed guideway capital project currently included in the Advanced Transit Program (“Metro Solutions Plan”) sponsored by the Metropolitan Transit Authority of Harris County, Texas, the Secretary shall include \$324,000,000 in State and local funds expended for the design and construction of the Red Line Light Rail Transit system that operates in Harris County, Texas.” METRO has decided to apply \$162 million of its contribution to the Red Line as credit toward the North Corridor LRT project. Application of the credit allowed for in the legislative language lowers the New Starts share to approximately 49 percent. The credit increases the share rating from *Medium* to *Medium-High*.

<b>Locally Proposed Financial Plan</b>		
<b><u>Source of Funds</u></b>	<b><u>Total Funds (\$million)</u></b>	<b><u>Percent of Total</u></b>
<b>Federal:</b> Section 5309 New Starts	\$450.00	59.5%
<b>Local:</b> METRO Dedicated Sales Tax	\$306.00	40.5%
<b>Total:</b>	<b>\$756.00</b>	<b>100.0%</b>

**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 rating is based upon the weighted average of the ratings assigned to each of the subfactors listed below. The agency capital condition is weighted 25 percent, the commitment of capital funds is weighted 25 percent, and the capital cost estimate, planning assumptions and capital funding capacity subfactor is weighted 50 percent.

#### **Agency Capital Condition: Medium-Low**

- The average age of METRO's bus fleet is 8.8 years, which is slightly older than the industry average.
- METRO has no outstanding debt. Therefore, no bond ratings have been issued.

#### **Commitment of Capital Funds: High**

- METRO's sales tax revenues, which are existing and committed, will cover the entire non-New Starts share of the North Corridor LRT project.

#### **Capital Cost Estimate, Planning Assumptions, and Financial Capacity: Medium**

- Assumptions on sales tax growth, inflation, and Federal funding are reasonable compared to historical experience.
- The capital cost estimate is reasonable.

### ***Operating Finance Plan Rating: Medium***

The operating finance plan rating is based upon the weighted average of the ratings assigned to each of the subfactors listed below. The agency operating condition is weighted 25 percent, the commitment of operating funds is weighted 25 percent, and the operating cost estimates, planning assumptions and operating funding capacity subfactor is weighted 50 percent.

#### **Agency Operating Condition: Medium-Low**

- METRO's current ratio of assets to liabilities, as reported in its most recent audited financial statements, was just over 1.0 in FY 2008.
- METRO's transit services have increased in the last five years.

#### **Commitment of Operating Funds: High**

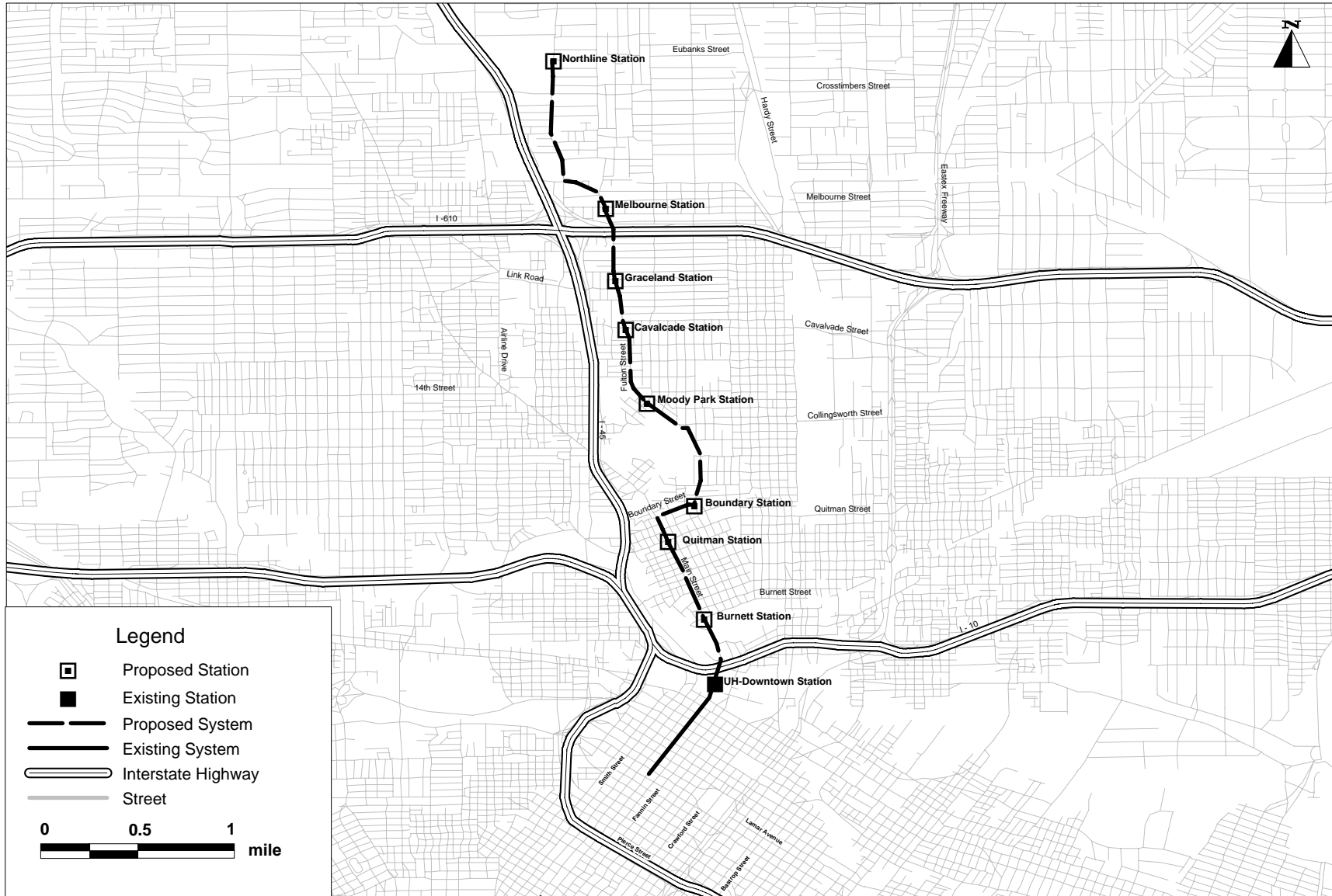
- Over 75 percent of operating funding, including fare revenues, sales tax revenues, operating grants, miscellaneous revenue (advertising and ID card fees), and interest income, is committed.

#### **Operating Cost Estimates, Planning Assumptions, and Financial Capacity: Medium-Low**

- Projections of growth in operating and maintenance costs and farebox revenues are optimistic compared to historical experience.
- The financial plan shows projected cash balances exceeding 25 percent of annual operating costs.

# North Corridor LRT

## Houston, Texas



# Southeast Corridor LRT

## Houston, Texas

(November 2009)

The Metropolitan Transit Authority of Harris County (METRO) is proposing to construct a 6.5-mile, light rail transit (LRT) line from the Houston central business district (CBD) to the Palm Center in the vicinity of Martin Luther King, Jr. Boulevard/Griggs Road. The proposed LRT line would operate in an exclusive guideway with limited mixed traffic operations. The majority of the LRT line would operate at-grade (6.42 miles), while the remaining 0.14 miles would be elevated to avoid a natural habitat (Brays Bayou). The project includes the purchase of 29 light rail vehicles and construction of 13 stations and a maintenance facility. Service would operate every six minutes during peak and off peak periods, including weekends, and would provide a transfer to the current METRO Rail Red Line via the existing Main Street Square station in the CBD. No parking spaces would be built as part of the project. The proposed Palm Center terminus would be adjacent to METRO's current Southeast Transit Center that includes a 1,100-space park-n-ride lot. The project would be the first operable segment of an LRT line that METRO plans to eventually extend to Hobby Airport.

The corridor is bounded by Interstate 45 to the east, one of the most heavily-traveled freeways in the nation, State Highway 288 to the west, and Interstate 610 to the south. The corridor includes a major portion of downtown Houston, including its commercial core and growing residential population. The corridor's street network is discontinuous and does not provide sufficient connectivity to major activity centers. Although the frequency of corridor bus service is high, many of the routes are circuitous with many stops so that transit travel times are not competitive with auto travel. The corridor represents five percent of METRO's service area, but includes 25 percent of METRO's total bus ridership.

Summary Description	
<b>Proposed Project:</b>	Light Rail Transit 6.5 Miles 10 Stations
<b>Total Capital Cost (\$YOE):</b>	\$822.91 Million (includes \$55.6 million in finance charges)
<b>Section 5309 New Starts Share (\$YOE):</b>	\$450.00 Million (54.6%)
<b>Annual Forecast Year Operating Cost:</b>	\$12.50 Million
<b>Ridership Forecast (2030):</b>	28,700 Average Weekday Boardings 4,500 Daily New Riders
<b>Opening Year Ridership Forecast (2013):</b>	17,200 Average Weekday Boardings
<b>FY 2011 Local Financial Commitment Rating:</b>	Medium
<b>FY 2011 Project Justification Rating:</b>	Medium
<b>FY 2011 Overall Project Rating:</b>	Medium

METRO will use an innovative project delivery method whereby a Facility Provider, comprised of a team of engineering, construction, construction management and vehicle manufacturing firms, will complete design, finalize the construction phasing approach, and expedite construction of several rapid transit lines throughout Houston. The Facility Provider will also be responsible for operation and maintenance of the proposed LRT line. METRO's schedule anticipates a Full Funding Grant Agreement (FFGA) for the project in early 2010. METRO provided updated information to FTA in late November 2009 as part of its FFGA application, which is still under review. Hence, the rating described herein reflects conditions as

of August 2009, when the project was approved into final design. The capital cost of the project in METRO's latest submission is not substantially different from that assumed at entry into final design.

### **Project Development History and Current Status**

METRO completed an alternatives analysis study on the Southeast-Universities-Hobby Corridor in November 2003. LRT was the locally preferred alternative. The project is included in the Houston-Galveston Area Council's *2035 Regional Transportation Plan* and the 2008-2011 Transportation Improvement Program. The project is also included in the *2025 METRO Solutions Plan* that was passed by Houston-area voters in November 2003.

In April 2005, FTA approved the Southeast Corridor LRT project into preliminary engineering (PE). In August 2005, METRO notified FTA that it was redirecting the PE effort from LRT to bus rapid transit (BRT). In October 2006, FTA approved the BRT project into PE. In October 2007, METRO's Board voted to implement LRT in the Southeast Corridor. In late November 2007, FTA notified METRO that the LRT project could not retain the PE status that was extended to the BRT project. In January 2007, FTA issued a Final Environmental Impact Statement (FEIS) for BRT. FTA issued an environmental Record of Decision (ROD) for BRT in February 2007. In late November 2007, FTA withdrew the February 2007 environmental ROD since METRO was no longer pursuing BRT. A supplemental FEIS for the LRT was prepared and released in May 2008. FTA issued a ROD in July 2008. FTA approved final design for the project in August 2009.

### **Significant Changes Since FY 2010 Evaluation (November 2008)**

METRO completed PE on the Southeast Corridor LRT project in early 2009. FTA completed a risk assessment of the project's budget, schedule and scope in April 2009. As a result, the project's capital cost estimate was revised to reflect the higher level of design and to include an increased level of contingency. The financial plan was revised to reflect the updated capital cost estimate, including an adjusted estimate of finance charges.

### **Project Justification Rating: Medium**

The project justification rating is based on the average of the ratings for cost effectiveness and transit-supportive land use. Per FTA's 2006 *Final Guidance on New Starts Policies and Procedures*, once a project has been approved into final design, the project is not subject to any changes in New Starts policy, guidance, and procedures. Thus, the revised weighting of the project justification criteria that took effect in July 2009 does not apply to this project.

### ***Cost Effectiveness Rating: Medium***

The cost effectiveness rating reflects the level of travel-time benefits (7,000 hours each weekday, including special events) relative to the project's capital and operating costs based upon a comparison to a baseline alternative.

<b>Cost Effectiveness</b>	
	<b><u>New Start vs. Baseline</u></b>
Cost per Hour of Transportation System User Benefit	\$23.07*
Incremental Cost per Incremental Trip	\$25.95

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

***Transit-Supportive Land Use Rating: Medium-Low***

The rating is based upon the average of the ratings assigned to the subfactors below, each of which contribute one-third to the land use rating.

**Existing Land Use: Medium-Low**

- Outside of the high-density CBD, most of the Southeast Corridor is characterized by low-density commercial, light industrial, and mixed residential development laid out on a grid pattern of streets.
- Pedestrian access is hindered by drainage ditches, wide streets, a lack of curb cuts, expansive parking lots, and in some cases, missing sidewalks. Two universities are present, with many of their athletic facilities, housing and academic buildings within a half mile of the proposed alignment.
- Station area population densities rate “low” by FTA benchmarks, averaging 3,200 persons per square mile. A total of 150,000 jobs are located in proximity to the corridor’s stations, mostly in the Houston CBD, which has a total employment of 130,000.

**Transit-Supportive Plans and Policies: Medium-Low**

- Limited efforts have been made at regional planning and growth management. In 2005 the Houston-Galveston Area Council (local metropolitan planning organization) joined with the citizen-led Blueprint Houston to undertake Envision Houston Region, an initiative designed to create a regional “vision” for the future growth of the area. The results informed the long-range transportation plan update but have not led to further implementation activities to shape regional land use patterns.
- Some station area planning activities have been initiated. METRO is undertaking a Station Area Work Program to address barriers to station area development, tools to leverage development, and policy for the development of each station area. The City of Houston is developing an Urban Corridor Planning Ordinance, which will provide a planning framework for development in high capacity transit corridors and in specific station areas. METRO has established a joint development/transit-oriented development program that will initiate specific development projects.
- The City of Houston is not zoned. Private deed restrictions are often used for both residential and commercial land development to ensure that standards for land use are maintained, but many of the neighborhoods in the Southeast Corridor lack such covenants. Plans for two Tax Increment Reinvestment Zones in the corridor include design guidelines to promote a more densely developed, pedestrian-friendly, walkable environment, but do not identify implementation mechanisms aside from financing infrastructure improvements.

**Performance and Impacts of Policies: Medium**

- Local officials believe the existing Red Line, which opened in January 2004, has been a catalyst for residential and commercial development in the city’s downtown and Midtown areas. However, aside from a significant amount of townhouse development just east of the CBD there is no evidence to date of transit-supportive development in the Southeast Corridor.
- Strong growth is forecast for the corridor and small and large vacant and underutilized lots throughout the corridor provide additional development potential, if land use policies and market forces can be aligned.

**Other Project Justification Criteria**

Mobility Improvements Rating: Medium		
Transportation System User Benefits Per Passenger Mile (Minutes)	<u>New Start vs. Baseline</u>	
	3.2	
	14,200	
Number of Transit Dependents Using the Project		
Transit Dependent User Benefits per Passenger Mile (Minutes)	3.2	
Environmental Benefits Rating: High		
<u>Criteria Pollutant Status</u> 8-Hour Ozone (O <sub>3</sub> )	<u>EPA Designation</u> Severe Non-Attainment Area	
Operating Efficiencies Rating: N/A		
System Operating Cost per Passenger Mile (current year dollars)	<u>Baseline</u>	<u>New Start</u>
	N/A	N/A

**Local Financial Commitment Rating: Medium**

The local financial commitment rating is based on the weighted average of the ratings assigned to each of the following criteria: the New Starts share of project costs is weighted 20 percent; the strength of the capital finance plan is weighted 50 percent; and the strength of the operating finance plan is weighted 30 percent.

***Section 5309 New Starts Share of Total Project Costs: 54.6%******Rating: Medium-High***

Section 3043(h)(1) in SAFETEA-LU states, “for the purpose of calculating the non-Federal share of the net project cost of any new fixed guideway capital project currently included in the Advanced Transit Program (“Metro Solutions Plan”) sponsored by the Metropolitan Transit Authority of Harris County, Texas, the Secretary shall include \$324,000,000 in State and local funds expended for the design and construction of the Red Line Light Rail Transit system that operates in Harris County, Texas.” METRO has decided to apply \$162 million of its contribution to the Red Line as credit toward the Southeast Corridor LRT project. Application of the credit allowed for in the legislative language lowers the New Starts share to approximately 49 percent. The credit increases the share rating from *Medium* to *Medium-High*.

<b>Locally Proposed Financial Plan</b>		
<b><u>Source of Funds</u></b>	<b><u>Total Funds (\$million)</u></b>	<b><u>Percent of Total</u></b>
<b>Federal:</b> Section 5309 New Starts	\$450.00	54.6%
<b>Local:</b> METRO Dedicated Sales Tax	\$372.91	45.4%
<b>Total:</b>	<b>\$822.91</b>	<b>100.0%</b>

**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 rating is based upon the weighted average of the ratings assigned to each of the subfactors listed below. The agency capital condition is weighted 25 percent, the commitment of capital funds is weighted 25 percent, and the capital cost estimate, planning assumptions and capital funding capacity subfactor is weighted 50 percent.

#### **Agency Capital Condition: Medium-Low**

- The average age of METRO's bus fleet is 8.8 years, which is slightly older than the industry average.
- METRO has no outstanding debt. Therefore, no bond ratings have been issued.

#### **Commitment of Capital Funds: High**

- METRO's sales tax revenues, which are existing and committed, will cover the entire non-New Starts share of the first minimum operable segment of the Southeast Corridor LRT project.

#### **Capital Cost Estimate, Planning Assumptions, and Financial Capacity: Medium**

- Assumptions on sales tax growth, inflation, and Federal funding are reasonable compared to historical experience.
- The capital cost estimate is reasonable.

### ***Operating Finance Plan Rating: Medium***

The operating finance rating is based upon the weighted average of the ratings assigned to each of the subfactors listed below. The agency operating condition is weighted 25 percent, the commitment of operating funds is weighted 25 percent, and the operating cost estimates, planning assumptions and operating funding capacity subfactor is weighted 50 percent.

#### **Agency Operating Condition: Medium-Low**

- METRO's current ratio of assets to liabilities, as reported in its most recent audited financial statements, was just over 1.0 in FY 2008.
- METRO's transit services have increased in the last five years.

#### **Commitment of Operating Funds: High**

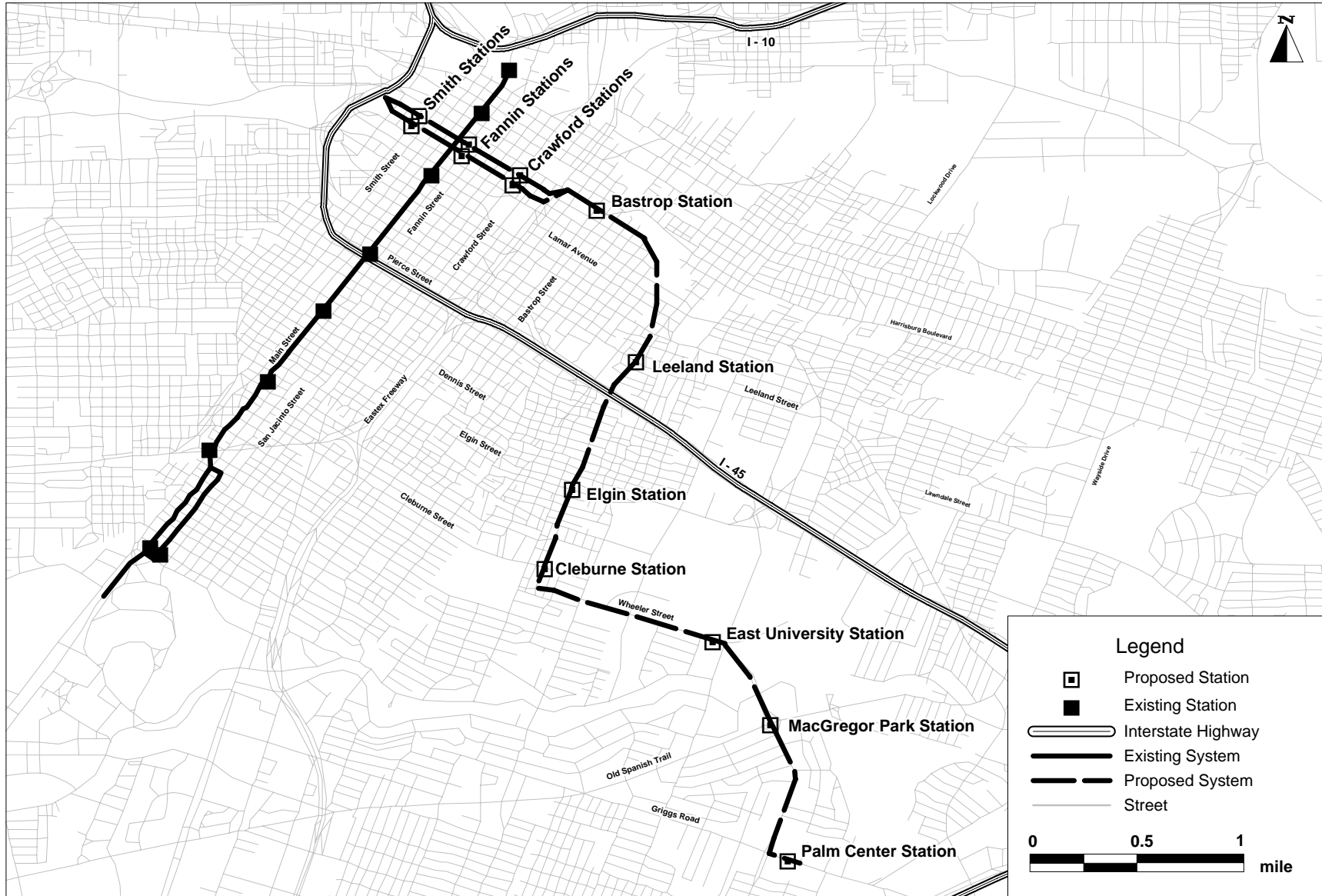
- Over 75 percent of operating funding, including fare revenues, sales tax revenues, operating grants, miscellaneous revenue (advertising and ID card fees), and interest income, is committed.

#### **Operating Cost Estimates, Planning Assumptions, and Financial Capacity: Medium-Low**

- Projections of growth in operating and maintenance costs and farebox revenues are optimistic compared to historical experience.
- The financial plan shows projected cash balances exceeding 25 percent of annual operating costs.

# Southeast Corridor LRT

## Houston, Texas



# **Preliminary Engineering**

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## South Corridor Phase 2

### Sacramento, California

(November 2009)

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, 4.3-mile project would operate in an exclusive, primarily at-grade right-of-way requiring six street crossings along the alignment. The proposed extension will use existing RT vehicles and operate on 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 Phase 2 project 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.

Summary Description	
<b>Proposed Project:</b>	Light Rail Transit 4.3 Miles 4 Stations
<b>Total Capital Cost (\$YOE):</b>	\$270.00 Million
<b>Section 5309 New Starts Share (\$YOE):</b>	\$135.00 Million (50.0%)
<b>Annual Forecast Year Operating Cost:</b>	\$12.21 Million
<b>Ridership Forecast (2030):</b>	10,000 Average Weekday Boardings 2,500 Daily New Riders
<b>Opening Year Ridership Forecast (2013):</b>	7,400 Average Weekday Boardings
<b>FY 2011 Local Financial Commitment Rating:</b>	Medium-Low
<b>FY 2011 Project Justification Rating:</b>	Medium
<b>FY 2011 Overall Project Rating:</b>	Medium-Low

### Project Development History and Current Status

The South Sacramento Corridor was identified as a candidate for a future extension of LRT as early as 1991. 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. Following further refinements of the project scope south and east of Meadowview, and work with local stakeholders to further identify transit-oriented development opportunities in the corridor, RT submitted a request to enter preliminary engineering for the South Corridor Phase 2 project, which was approved in February 2005.

The Sacramento RT published a Final Environmental Impact Statement in October 2008. A Record of Decision was issued in February 2009.

### **Significant Changes Since FY 2010 Evaluation (November 2008)**

FTA completed an assessment of the project risks and adjusted the project cost estimate to account for inflation, environmental mitigation, utility relocation, and increased contingency. All of these changes resulted in a total capital cost increase from \$226.2 million to \$270.0 million. The original financial plan for the project assumed a substantial portion of funding from the State of California that is no longer available due to severe economic conditions in the State. Over the last year, the RT has had to identify other sources of funds for the project and for maintaining system-wide operations, which has included raising fares.

### **Project Justification Rating: Medium**

The project justification rating is based on the weighted average of the ratings assigned to each of the following criteria: the cost-effectiveness criterion is weighted 20 percent; the transit supportive land use criterion is weighted 20 percent; the economic development criterion is weighted 20 percent; the mobility improvements criterion is weighted 20 percent; the environmental benefits criterion is weighted 10 percent; and the operating efficiencies criterion is weighted 10 percent.

### ***Cost Effectiveness Rating: Medium***

The cost-effectiveness rating reflects the level of travel-time benefits (2,300 hours each weekday) relative to the project's annualized capital and operating costs based upon a comparison to a baseline alternative.

<b>Cost Effectiveness</b>	
	<b><u>New Start vs. Baseline</u></b>
Cost per Hour of Transportation System User Benefit	\$19.50*
Incremental Cost per Incremental Trip	\$17.50

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

### ***Transit-Supportive Land Use Rating: Low***

The land use rating reflects the population and employment densities within ½-mile of proposed station areas.

- Population density within ½-mile of the station areas is approximately 5,100 people per square mile and the total number of employees within ½-mile of the proposed station areas is approximately 1,800. Employment in the Sacramento CBD, to which the project provides a direct connection, is about 105,000.
- 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 Consumnes River College to downtown Sacramento.
- 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.

***Economic Development Rating: Medium***

The economic development rating is based upon the average of the ratings assigned to the subfactors below.

**Transit-Supportive Plans and Policies: Medium**

- The Sacramento Area Council of Governments (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 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 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**

- 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, and is under construction at the Consumnes River College Station.
- 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.

Mobility Improvements Rating: Medium-Low		
Transportation System User Benefit Per Passenger Mile (Minutes)	<u>New Start vs. Baseline</u>	
	3.8	
	1,200	
Number of Transit Dependents Using the Project		
Transit Dependent User Benefits per Passenger Mile (Minutes)	3.7	
Environmental Benefits Rating: High		
<u>Criteria Pollutant Status</u> 8-Hour Ozone (O <sub>3</sub> ) Particulate Matter (2.5)	<u>EPA Designation</u>	
	Serious Non-attainment Area	
	Non-attainment Area	
Operating Efficiencies Rating: Medium		
System Operating Cost per Passenger Mile (current year dollars)	<u>Baseline</u>	<u>New Start</u>
	\$0.17	\$0.15

### **Local Financial Commitment Rating: Medium-Low**

The local financial commitment rating is based on the weighted average of the ratings assigned to each of the following criteria: the New Starts share of project costs is weighted 20 percent; the strength of the capital finance plan is weighted 50 percent; and the strength of the operating finance plan is weighted 30 percent.

***Section 5309 New Starts Share of Total Project Costs: 50.0%***

***Rating: Medium***

<b>Locally Proposed Financial Plan</b>		
<b><u>Source of Funds</u></b>	<b><u>Total Funds (\$million)</u></b>	<b><u>Percent of Total</u></b>
<b>Federal:</b>		
Section 5309 New Starts	\$135.00	50.0%
FHWA Flexible Funds (CMAQ)	\$7.10	2.9%
STIP Funds*	\$4.31	1.6%
<b>State:</b>		
Traffic Congestion Relief Program	\$8.10	3.0%
Proposition 1B	\$19.18	7.1%
State Transit Assistance	\$0.15	0.1%
<b>Local:</b>		
Measure A	\$32.04	11.8%
Elk Grove, West Laguna, Vineyard CFD Developer Fees	\$6.23	2.3%
Certificates of Participation	\$57.90	21.4%
<b>Total:</b>	<b>\$270.00</b>	<b>100.0%</b>

**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-Low***

The capital finance plan is rating is based upon the weighted average of the ratings assigned to each of the subfactors listed below. The agency capital condition is weighted 25 percent, the commitment of capital funds is weighted 25 percent, and the capital cost estimate, planning assumptions and capital funding capacity subfactor is weighted 50 percent.

#### **Agency Capital Condition: Medium**

- The average age of RT's bus fleet is 6.6 years, which is younger than the industry average. The average age of the light rail fleet is 12 years.
- RT's bond rating, which was issued in February 2008, is as follows: Moody's Investors Service A2.

#### **Commitment of Capital Funds: Medium-Low**

- Approximately 45 percent of the non-New Starts funding is committed or budgeted, and the remaining sources are planned. Sources of non-New Starts funding include Congestion Mitigation and Air Quality Improvement Program (CMAQ) funds, State Transportation Improvement Program (STIP) funds, State Traffic Congestion Relief Program funds, funds from the Elk Grove/West Vineyard Transit Development Fee, the Laguna Community Facilities District, the Measure A Developer fee, and Certificates of Participation.

#### **Capital Cost Estimate, Planning Assumptions, and Financial Capacity: Medium-Low**

- Assumptions in the capital plan are optimistic compared to historical experience including growth in Federal urbanized area formula funds, State transit assistance, Measure A, and other unidentified federal and local funds.
- The capital cost estimate has been refined following the risk assessment process to increase project contingency and mitigate project risks.

***Operating Finance Plan Rating: Medium-Low***

The operating finance plan rating is based upon the weighted average of the ratings assigned to each of the subfactors listed below. The agency operating condition is weighted 25 percent, the commitment of operating funds is weighted 25 percent, and the operating cost estimates, planning assumptions and operating funding capacity subfactor is weighted 50 percent.

**Agency Operating Condition: Medium-Low**

- RT's current ratio of assets to liabilities as reported in its most recent financial statement is 1.2.
- RT has reduced bus service for three consecutive years and significantly increased fares to adapt to increased operating costs from new light rail service and reduced transit funds from the State of California, as well as declining sales tax revenues.

**Commitment of Operating Funds: Medium-Low**

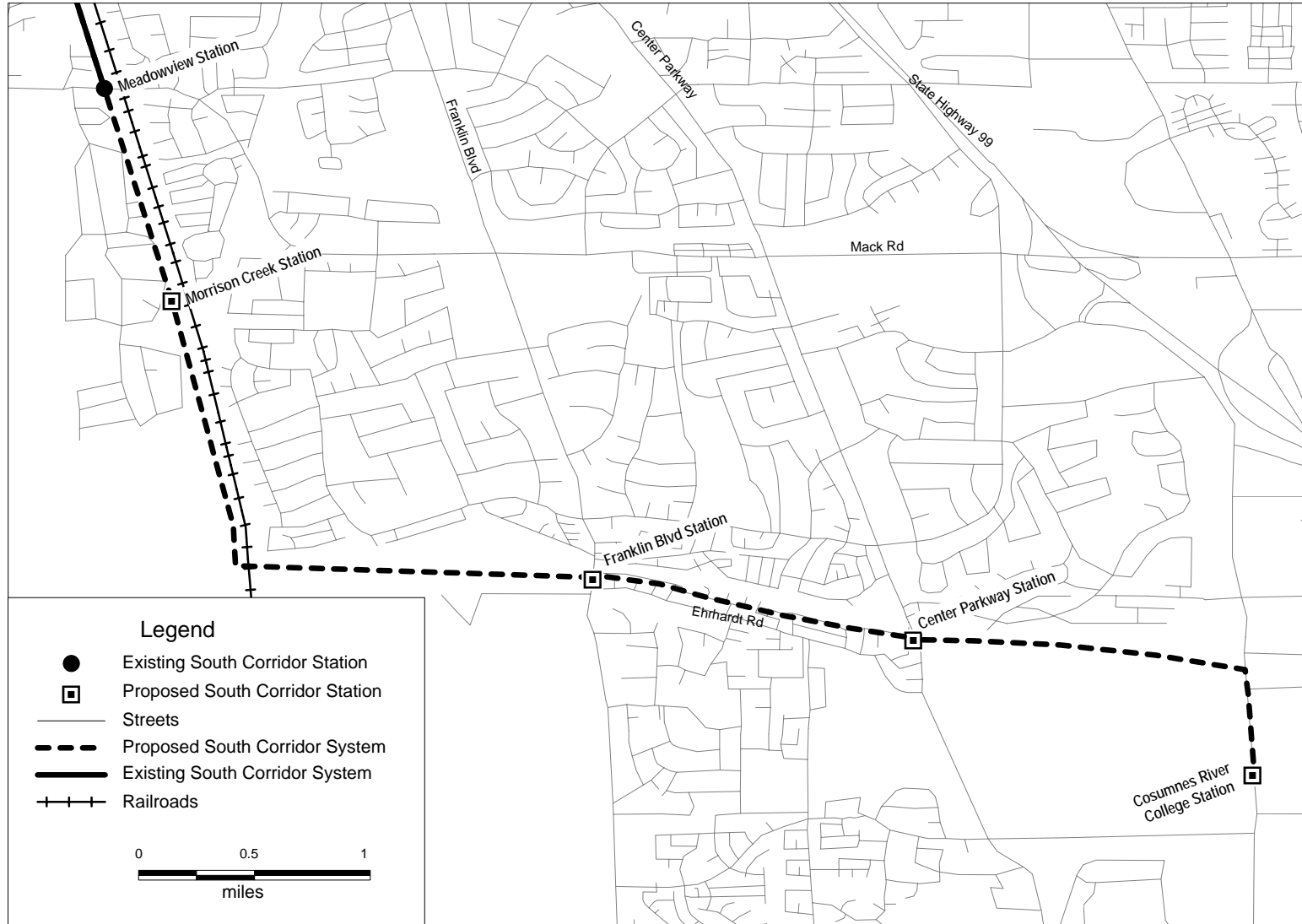
- Approximately 32 percent of operating funds are committed or budgeted. Sources of operating funds include Federal Section 5307 Formula Funds, Section 5309 Fixed Guideway Modernization, Congestion Mitigation and Air Quality, State Transit Assistance, fare revenues, dedicated sales tax revenues, and advertising and investment income.

**Operating Cost Estimates, Planning Assumptions, and Financial Capacity: Medium-Low**

- Assumptions regarding growth in fare revenues, parking revenues, operating costs, sales tax revenues, and State transit assistance are optimistic compared to historical experience.
- The project has only a minimal impact on overall system-wide operating costs. However, the issuance of the certificates of participation (backed by farebox revenues) for construction of the project would further strain RT's operating revenue sources.

# South Corridor Phase 2

Sacramento, California





# Silicon Valley Berryessa Extension

San Jose, California

(November 2009)

The Santa Clara Valley Transportation Authority (VTA) proposes to build a 10.2-mile two-station extension of the Bay Area Rapid Transit (BART) heavy rail system from Fremont to Berryessa Road in San Jose. Called the Silicon Valley Berryessa Extension (SVBX), the project will be built on former Union Pacific freight railroad right-of-way from the future Warm Springs BART station in Fremont (currently under construction) to two new stations, one in Milpitas adjacent to the existing VTA Montague light rail station and one at Berryessa. The SVBX will be a two-track, third rail exclusive guideway heavy rail system operating under automatic train control. The project scope includes purchase of 40 new BART passenger cars for operation on the extension and improvements to the existing BART Hayward rail car storage and maintenance yard. When completed, the SVBX will provide direct transit service over a future 119-mile BART network connecting Santa Clara County with San Mateo, San Francisco, Contra Costa and Alameda counties.

The SVBX is intended to provide increased transit access to and from Santa Clara employment and activity centers for both Santa Clara residents and residents from throughout the San Francisco Bay Area. Regional transit connectivity will be improved by extending and interconnecting BART with VTA light rail and other existing transit services in Santa Clara County. Increasing transit service in the SVBX corridor will provide improved travel alternatives to the severely congested and worsening travel routes of Interstate 880 (I-880) and I-680 between Alameda and Santa Clara counties.

Santa Clara County expects eventually to extend BART an additional six miles from Berryessa to downtown San Jose, San Jose International Airport and the City of Santa Clara.

Summary Description	
<b>Proposed Project:</b>	Heavy Rail 10.2 Miles 2 Stations
<b>Total Capital Cost (\$YOE):</b>	\$2,509.13 Million (Includes \$305.78 million in finance charges)
<b>Section 5309 New Starts Share (\$YOE):</b>	\$900.00 Million (35.9%)
<b>Annual Forecast Year Operating Cost:</b>	\$96.90 Million
<b>Ridership Forecast (2030):</b>	41,900 Average Weekday Boardings 8,900 Daily New Riders
<b>Opening Year Ridership Forecast (2018):</b>	23,900 Average Weekday Boardings
<b>FY 2011 Local Financial Commitment Rating:</b>	Medium
<b>FY 2011 Project Justification Rating:</b>	Medium
<b>FY 2011 Overall Project Rating:</b>	Medium

## Project Development History and Current Status

In November 2000, Santa Clara County voters approved a 30-year one-half cent sales tax to raise funds for a twenty-mile extension of BART from Fremont to San Jose. In 2001, the Santa Clara Valley Transportation Authority (VTA) conducted a Major Investment Study/Alternatives Analysis (MIS/AA) for the Silicon Valley Rapid Transit Corridor (SVRTC) resulting in selection by VTA of a locally

preferred 16-mile project alternative that would extend BART from Warm Springs—a new BART station and 5-mile extension from the existing Fremont BART station to be built independently of the SVRTC project—through Milpitas to San Jose and Santa Clara.

In September 2002, FTA approved VTA's request for entry of the SVRTC project into preliminary engineering. In March 2004, a Draft Environmental Impact Statement (DEIS) was published. FTA raised concerns about performing an environmental review on the SVRTC while the Warm Springs extension was still under environmental review. Thus, VTA suspended the SVRTC environmental review process.

In December 2005, due to FTA concerns about funding and operations of the SVRTC, VTA withdrew the project from New Starts preliminary engineering. In mid-2007, following completion of the Warm Springs extension environmental review, FTA concurred with VTA's request to resume environmental clearance of the SVRTC project, including a shorter 10-mile alternative from Warm Springs to Berryessa—the current SVBX project. A Notice of Intent (NOI) to prepare an EIS on the project was published on September 21, 2007. The DEIS was published on March 13, 2009.

On July 23, 2008, the Metropolitan Transportation Commission approved the SVRTC, including the SVBX project, in the financially constrained long range Transportation 2035 Plan for the San Francisco Bay Area. In November 2008, Santa Clara voters approved an additional one-eighth cent sales tax for operation of the SVRTC. Collection of this tax is dependent on execution of a Full Funding Grant Agreement.

In September 2009, VTA applied for entry into preliminary engineering. FTA notified Congress of its intent to approve the project into preliminary engineering in November 2009 and took formal approval action in December 2009. Issuance of a FEIS is expected in early-2010.

### **Project Justification Rating: Medium**

The project justification rating is based on the weighted average of the ratings assigned to each of the following criteria: the cost-effectiveness criterion is weighted 20 percent; the transit supportive land use criterion is weighted 20 percent; the economic development criterion is weighted 20 percent; the mobility improvements criterion is weighted 20 percent; the environmental benefits criterion is weighted 10 percent; and the operating efficiencies criterion is weighted 10 percent.

### ***Cost Effectiveness Rating: Medium-Low***

The cost effectiveness rating reflects the level of travel-time benefits (12,626 hours each weekday) relative to the project's capital and operating costs based on a comparison to a baseline alternative.

<b>Cost Effectiveness</b>	
	<b><u>New Start vs. Baseline</u></b>
Cost per Hour of Transportation System User Benefit	\$30.88*
Incremental Cost per Incremental Trip	\$43.98

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

### ***Transit-Supportive Land Use Rating: Medium-Low***

The land use rating reflects the population and employment densities within ½-mile of proposed station areas.

- In 2005, station area population density was 6,027 persons per square mile. In 2005, station area employment was 10,634 and the San Francisco Central Business District (CBD) employment was 318,163.
- Existing land use consists of industrial, parking, low-density residential, the Great Mall and the San Jose Flea Market. There are a few areas with high residential density. Neither station area is pedestrian friendly due to high volume roads, noise, lack of pedestrian attractions, and discontinuous or nonexistent sidewalks. In addition, station area character for both sites is minimal. There appears to be an ample supply of free parking.

### ***Economic Development Rating: Medium-High***

The economic development rating is based upon the average of the ratings assigned to the subfactors below.

#### **Transit-Supportive Plans and Policies: Medium-High**

- BART has adopted strong policies tying rail system expansion to transit supportive land use policies. Adopted in 1999, and updated in 2003, the policies encourage transit oriented development (TOD) around existing and proposed rail stations. Other board policy statements have expressed an advocacy role for BART in promoting region wide transit supportive initiatives. Several BART plans and policies complement the regional plans and policies.
- The *Silicon Valley Rapid Transit SVRT Station Areas Vision Plan* (VTA 2008) was developed with participation from cities, local officials, and community members to create a shared vision that accommodates BART station facilities and supporting TOD plans. The *Santa Clara General Plan—Charting a Course for Santa Clara County's Future: 1995-2010*, The City of Milpitas General Plan (April 2002 update), and a general plan update entitled *Envision San Jose 2040* all support development in the corridor and station areas. VTA is required, and continues, to plan and design consistent with BART Facilities Standards.
- The San Jose General Plan allows for establishing TOD corridors and BART station area nodes. TOD is to be promoted in designated special strategy areas, which typically are centered on exiting or planned light rail, major bus, and BART stations. The plan identifies Berryessa, Santa Clara Street/28th Street (near the proposed Alum Rock BART Station), and downtown San Jose as BART station nodes. The purpose of designating BART station nodes well in advance of any approval of an extension is to direct transit-oriented and pedestrian friendly development near proposed BART stations. Development types can range from high density residential to mixed-use to high intensity office/commercial. The greatest densities should be adjacent to a station, with overall TOD densities at minimum 20 units per acre and 55 units per acre if possible. The Milpitas General Plan also designates TOD Overlay Zones in anticipation of the project.
- Extensive public outreach efforts have been conducted for the community, government agencies and developers such as community meetings, community working groups, advisory committees, a joint development program and promotional materials.

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

- More than 7,437 transit oriented development housing units have been constructed between 1990 and 2009 within the SVBX corridor along designated transit routes and identified transit nodes.
- Within the SVBX corridor, approximately 2,700 residential units, 415,000 square feet of office space, and 239,000 square feet of retail space could be built near the Milpitas Station; and 2,900 residential units, 180,000 square feet of office space, and 93,000 square feet of retail space could be built near the Berryessa Station.

Mobility Improvements Rating: Medium-Low		
Transportation System User Benefit Per Passenger Mile (Minutes)	<u>New Start vs. Baseline</u>	
	0.6	
	4,600	
Number of Transit Dependents Using the Project		
Transit Dependent User Benefits per Passenger Mile (Minutes)	0.6	
Environmental Benefits Rating: High		
<u>Criteria Pollutant Status</u>	<u>EPA Designation</u>	
8-Hour Ozone (O <sub>3</sub> )	Marginal	
Particulate Matter (PM)	Non-attainment Area	
Operating Efficiencies Rating: Medium		
System Operating Cost per Passenger Mile (current year dollars)	<u>Baseline</u>	<u>New Start</u>
	\$0.36	\$0.35

### **Local Financial Commitment Rating: Medium**

The local financial commitment rating is based on the weighted average of the ratings assigned to each of the following criteria: the New Starts share of project costs is weighted 20 percent; the strength of the capital finance plan is weighted 50 percent; and the strength of the operating finance plan is weighted 30 percent.

***Section 5309 New Starts Share of Total Project Costs: 35.9%***

***Rating: Medium-High***

<b>Locally Proposed Financial Plan</b>		
<b><u>Source of Funds</u></b>	<b><u>Total Funds (\$million)</u></b>	<b><u>Percent of Total</u></b>
<b>Federal:</b> Section 5309 New Starts	\$900.00	35.9%
<b>State:</b> Traffic Congestion Relief Program (Gasoline Tax)	\$365.59	14.6%
<b>Local:</b> Measure A Sales Tax	\$1,243.54	49.6%
<b>Total:</b>	<b>\$2,509.13</b>	<b>100.0%</b>

**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 rating is based upon the weighted average of the ratings assigned to each of the subfactors listed below. The agency capital condition is weighted 25 percent, the commitment of capital funds is weighted 25 percent, and the capital cost estimate, planning assumptions and capital funding capacity subfactor is weighted 50 percent.

**Agency Capital Condition: Medium**

- The average age of VTA's bus fleet is 9.1 years, which is older than the industry average.
- VTA's good bond ratings, which were issued in 2008, are as follows: Moody's Investors Service Aa3 and Standard & Poor's Corporation AA+.

**Commitment of Capital Funds: High**

- All of the non-Section 5309 New Starts funds are committed, including allocations to the project from the State of California Traffic Congestion Relief Program and the 0.5 percent Measure A sales tax revenues and bond proceeds.

**Capital Cost Estimate, Planning Assumptions, and Financial Capacity: Low**

- The assumptions regarding sale tax revenue collections are considered reasonable. However, the cash flow for the Measure A sales tax program is tight due to the need to transfer funds to VTA's Enterprise Fund (its transit operations fund) in order to avoid deficits in that fund.
- The capital cost estimate is considered reasonable.
- VTA has very little additional capital financing capacity to cover cost overruns or funding shortfalls should they occur.

***Operating Finance Plan Rating: Medium***

The operating finance plan rating is based upon the weighted average of the ratings assigned to each of the subfactors listed below. The agency operating condition is weighted 25 percent, the commitment of operating funds is weighted 25 percent, and the operating cost estimates, planning assumptions and operating funding capacity subfactor is weighted 50 percent.

**Agency Operating Condition: Medium**

- VTA's current ratio of assets to liabilities as reported in its most recent audited financial statement for the Enterprise Fund is very good at 2.7.
- VTA faces a deteriorating outlook, reflecting the impact of the national economic recession, as well as the temporary loss of State Transit Assistance Program funds. VTA ended FY 2009 with an operating deficit that was funded from its operating reserve. VTA raised its fares in October 2009 and has approved an 8 percent reduction in bus service and a 6.5 percent reduction in light rail service, effective January 2010.

**Commitment of Operating and Maintenance Funding: High**

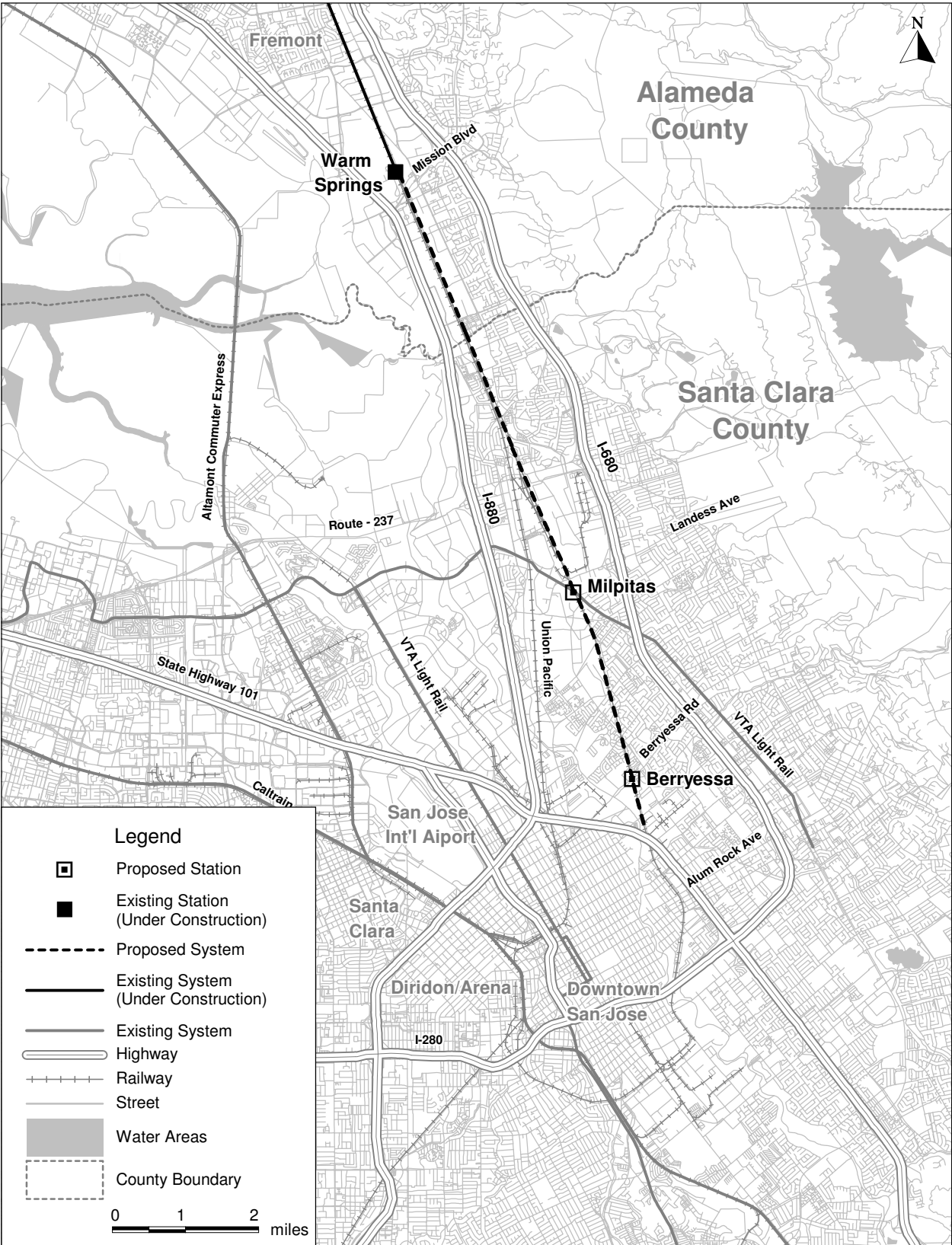
- Over 95 percent of operating funding is committed. The main revenue sources are: fares; sales tax revenues from Measure A, Measure B, and VTA's originating legislation; Local Transportation Fund revenues, which are derived from a ¼-cent statewide sales tax; State Transit Assistance (STA) program funds; regional High Occupancy Toll (HOT) lane revenues; and other operating revenues including advertising, interest, joint development and parking income.

**Operating Cost Estimates, Planning Assumptions, and Financial Capacity: Low**

- Assumed growth in fare revenues, BART unit operating costs, and other operating income is optimistic compared to historical experience. Specifically, the amount of HOT lane revenues and joint development income are considered uncertain since both require much time to implement, and are sensitive to many influences outside VTA's control.
- Even with these optimistic assumptions, the financial plan indicates negative operating cash flows for the majority years examined for the existing system. However, operation of the proposed project is not impacted since the Measure B sales tax limits use of the revenues to only this project.

# Silicon Valley Berryessa Extension

San Jose, California





# East Corridor

## Denver, Colorado

### (November 2009)

The Denver Regional Transportation District (RTD) is planning a 22.8-mile commuter rail electric multiple unit (EMU) line from downtown Denver through Denver, Globerville/Swansea/Elyria, North Park Hill, Stapleton, Aurora/Fitzsimons, Montebello, and Gateway to Denver International Airport. Six new stations and approximately 3,500 park and ride spaces would be constructed and 22 vehicles would be purchased. Service would operate at 7.5 minute frequencies during peak periods, and 15 minute frequencies during off peak periods.

The East Corridor contains a limited number of transportation thoroughfares in the east-west direction with Interstate 70 being the primary thoroughfare. Existing arterial streets traveling through the corridor are not continuous, making local grid bus service connecting all consecutive neighborhoods infeasible. The East Corridor project will provide an additional transportation option in the corridor.

The East Corridor is part of RTD's FasTracks expansion program of major transit investments in the Denver region. It will be constructed as part of the larger RTD project known as the East and Gold Line Enterprise (Eagle Project) utilizing a design-build-finance-operate-maintain project delivery method. A Concessionaire Team (CT) composed of engineering, construction, construction management, financial advisors and vehicle firms would design and construct the Eagle Project, help to finance the project, and have an equity stake. The CT, in cooperation with RTD, would operate the East Corridor project, though a 50 year concessionaire agreement. The project is part of FTA's Public Private Partnership Pilot Program.

Summary Description	
<b>Proposed Project:</b>	Commuter Rail EMU 22.8 Miles 6 Stations
<b>Total Capital Cost (\$YOE):</b>	\$1,765.10 Million (includes \$46.10 million in finance charges)
<b>Section 5309 New Starts Share (\$YOE):</b>	\$850.44 Million (48.2%)
<b>Annual Forecast Year Operating Cost:</b>	\$31.91 Million
<b>Ridership Forecast (2030):</b>	43,400 Average Weekday Boardings 11,450 Daily New Riders
<b>Opening Year Ridership Forecast (2017):</b>	27,500 Average Weekday Boardings
<b>FY 2011 Local Financial Commitment Rating:</b>	Medium
<b>FY 2011 Project Justification Rating:</b>	Medium
<b>FY 2011 Overall Project Rating:</b>	Medium

### Project Development History and Current Status

A Major Investment Study for the East Corridor was initiated in 1997. In 2004, the corridor was adopted into the "FasTracks" plan to expand rail and bus service throughout the RTD service area. In November 2004, voters approved the FasTracks plan and tax increase. A Locally Preferred Alternative was identified in 2007, and adopted into the metropolitan planning organization's fiscally constrained long range transportation plan. RTD issued a Draft Environmental Impact Statement (EIS) on the East Corridor in January 2009. FTA approved the East Corridor into preliminary engineering in April 2009.

A Final EIS was completed in August 2009. A Record of Decision was approved in November 2009. Entry into final design is anticipated in April 2010.

### **Significant Changes Since FY 2010 Evaluation (November 2008)**

RTD recalibrated its travel forecasting model and updated its ridership estimates. The revised forecasts showed 43,400 average weekday riders in 2030 as compared to the forecast of 37,900 average weekday riders assumed at the time of preliminary engineering approval. RTD also determined that fewer rail vehicles were necessary, which allowed for construction of a smaller rail fleet maintenance facility. These factors, in combination with lower assumed material prices due to current market conditions, lower escalation costs, and lower contingencies contributed to a 16 percent lower capital cost estimate of \$1,765.00 million compared to last year's cost estimate of \$2,043.70 million.

### **Project Justification Rating: Medium**

The project justification rating is based on the weighted average of the ratings assigned to each of the following criteria: the cost-effectiveness criterion is weighted 20 percent; the transit supportive land use criterion is weighted 20 percent; the economic development criterion is weighted 20 percent; the mobility improvements criterion is weighted 20 percent; the environmental benefits criterion is weighted 10 percent; and the operating efficiencies criterion is weighted 10 percent.

### ***Cost Effectiveness Rating: Medium***

The cost effectiveness rating reflects the level of travel-time benefits (9,000 hours each weekday) relative to the project's capital and operating costs based on a comparison to a baseline alternative.

<b>Cost Effectiveness</b>	
	<b><u>New Start vs. Baseline</u></b>
Cost per Hour of Transportation System User Benefit	\$18.14*
Incremental Cost per Incremental Trip	\$13.52

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

### ***Transit-Supportive Land Use Rating: Medium-Low***

The land use rating reflects the population and employment densities within ½-mile of proposed station areas.

- Existing land uses in the new station areas include primarily industrial with some residential and commercial uses. Average population density across new station areas is 1,100 persons per square mile. Total employment served is 121,400 (including 102,700 in the Denver CBD). In the CBD, the ratio of parking spaces to employees is 0.44. Parking costs average \$7 per day in the Denver CBD, and generally parking is free and available in other station areas except Denver International Airport (DIA) where parking costs \$9 to \$27 per day.
- Pedestrian facilities are present in the established neighborhoods in the two station areas closest to the Denver CBD but few sidewalks exist in other station areas. Despite its proximity to the Stapleton Airport traditional neighborhood redevelopment area, a recently-developed shopping center in the Central Park Station area is largely auto-oriented with low-rise buildings and large parking lots.

***Economic Development Rating: Medium-High***

The economic development rating is based upon the average of the ratings assigned to the subfactors below.

**Transit-Supportive Plans and Policies: Medium-High**

- Land use in the corridor is controlled by the City and County of Denver and City of Aurora. Area plans exist for half the station areas, and planning is underway for the other proposed stations. The current area and sub-area plans generally encourage increased development and transit-oriented projects. Multiple regional plans support increasing density in urban centers, and Denver Union Station is undergoing development into a mixed-use transportation hub with 1.3 million square feet of new development planned.
- Existing zoning at the two stations closest to the Denver CBD allows low to moderate density of seven to 15 units per acre. Denver has established several residential and commercial mixed-use zones, as well as a Transit-Mixed Use zone (T-MU-30). An area zoned T-MU-30, permitting FAR of 5.0 and parking reductions of 25 percent, is at the core of the Denver Union Station area, and the Central Park and 40<sup>th</sup>/Airport Station areas include some mixed-use zones. Denver's zoning code is undergoing a comprehensive update anticipated to support TOD and expected in late 2008. The City of Aurora, which will have jurisdiction over all or part of two stations, has established zoning with a maximum FAR for the core of a city center subarea of 1.4, and is providing guidance on transit-oriented character.

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

- Extensive development has occurred in the past decade near Denver Union Station, and examples of TOD are increasing in other existing station areas in the Denver region. Development opportunities at the 40<sup>th</sup>/40<sup>th</sup> and Colorado Stations are primarily infill or adaptive reuse projects, and several residential and retail projects have been proposed at the 40<sup>th</sup>/40<sup>th</sup> Station.
- Three station areas have significant undeveloped or underutilized land (Central Park, Peoria, and 40<sup>th</sup>/Airport). Large-scale redevelopment plans of more than 4,000 acres each, including residential and commercial development, are planned and underway in the areas that include the Central Park and 40<sup>th</sup>/Airport Stations. The stations also benefit from proximity to freeways which may aid marketability.
- DIA is forecast to add significant new employment and to more than double the number of enplanements by 2030.

**Other Project Justification Criteria**

Mobility Improvements Rating: Medium-Low		
Transportation System User Benefit Per Passenger Mile (Minutes)	<u>New Start vs. Baseline</u>	
	1.0	
	2,500	
Transit Dependent User Benefits per Passenger Mile (Minutes)	1.0	
Environmental Benefits Rating: High		
<u>Criteria Pollutant Status</u> 8-Hour Ozone (O <sub>3</sub> )	<u>EPA Designation</u> Non-attainment Area	
Operating Efficiencies Rating: Medium		
System Operating Cost per Passenger Mile (current year dollars)	<u>Baseline</u>	<u>New Start</u>
	\$0.51	\$0.46

**Local Financial Commitment Rating: Medium**

The local financial commitment rating is based on the weighted average of the ratings assigned to each of the following criteria: the New Starts share of project costs is weighted 20 percent; the strength of the capital finance plan is weighted 50 percent; and the strength of the operating finance plan is weighted 30 percent.

**Section 5309 New Starts Share of Total Project Costs: 48.2%**

**Rating: Medium-High**

<b>Locally Proposed Financial Plan</b>		
<b><u>Source of Funds</u></b>	<b><u>Total Funds (\$million)</u></b>	<b><u>Percent of Total</u></b>
<b>Federal:</b>		
Section 5309 New Starts	\$850.44	48.2%
FHWA Flexible Funds (CMAQ)	\$20.85	1.2%
<b>Local:</b>		
Bond Proceeds	\$76.64	4.3%
Sales & Use Tax	\$275.19	15.6%
Concessionaire Financing – Private	\$505.50	28.6%
Equity and Debt		
Local Jurisdiction Share	\$36.48	2.1%
<b>Total:</b>	<b>\$1,765.10</b>	<b>100.0%</b>

**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 rating is based upon the weighted average of the ratings assigned to each of the subfactors listed below. The agency capital condition is weighted 25 percent, the commitment of capital funds is weighted 25 percent, and the capital cost estimate, planning assumptions and capital funding capacity subfactor is weighted 50 percent.

**Agency Capital Condition: Medium-High**

- The average age of RTD's bus fleet is 5.5 years, which is younger than the industry average.
- RTD's good bond ratings, which were issued in 2008, are as follows: Moody's Investors Service Aa3; Standard & Poor's Corporation AAA; and Fitch AA.

**Commitment of Capital Funds: Medium-High**

- Approximately 41 percent of the non-New Starts funding is committed. The sources of non-Section 5309 New Starts funds for the project are Congestion Mitigation and Air Quality (CMAQ) funds, revenues derived from the local sales and use tax, bond proceeds backed by the sales tax, concessionaire equity and debt, and local government contributions.

**Capital Cost Estimate, Planning Assumptions, and Financial Capacity: Medium-Low**

- RTD has redefined the schedule of FasTracks to fit within the combination of substantial cost increases and less than anticipated sales and use tax revenues.
- Many capital planning assumptions and cost estimates are optimistic.
- The financial plan shows that RTD has the financial capacity to cover only minor cost increases or funding shortfalls equal to 10 percent or less of the estimated project cost.

***Operating Finance Plan Rating: Medium***

The operating finance plan rating is based upon the weighted average of the ratings assigned to each of the subfactors listed below. The agency operating condition is weighted 25 percent, the commitment of operating funds is weighted 25 percent, and the operating cost estimates, planning assumptions and operating funding capacity subfactor is weighted 50 percent.

**Agency Operating Financial Condition: Medium**

- RTD's current ratio of assets to liabilities as reported in its most recent audited financial statement is excellent at 4.9.
- RTD has recently made minor service reductions and unscheduled fare increases due to the economic recession.

**Commitment of Operating and Maintenance Funds: High**

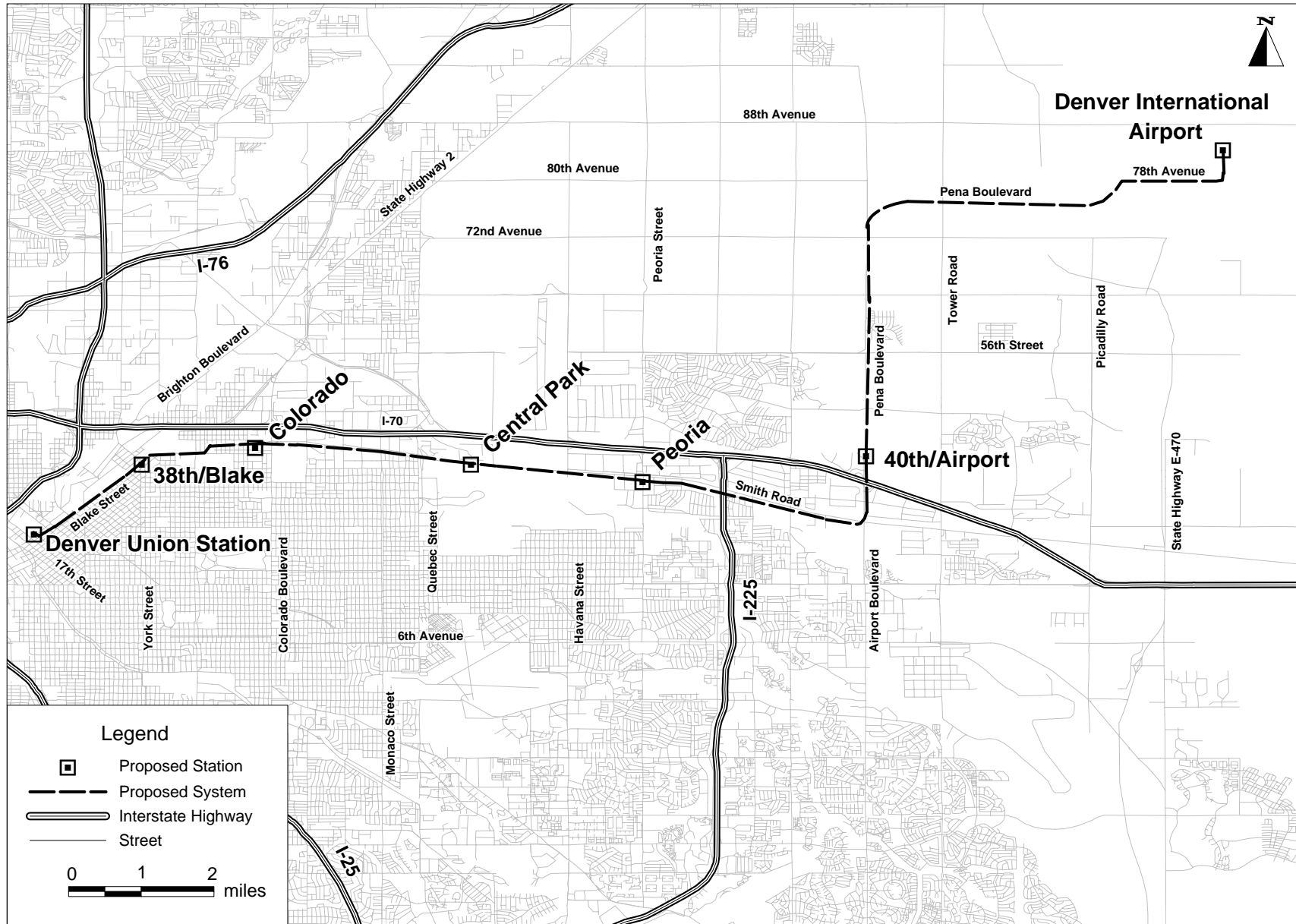
- All operating funding is committed, including fare revenues, increased sales and use tax revenues, and parking revenues.

**Operating Cost Estimates, Planning Assumptions, and Financial Capacity: Medium-Low**

- Several operating cost estimates and revenue forecasts are optimistic relative to historical experience.
- Projected cash balances and reserve accounts are less than eight percent (one month) of annual systemwide operating expenses.

# East Corridor

## Denver, Colorado



# Gold Line

## Denver, Colorado

### (November 2009)

The Denver Regional Transportation District (RTD) is planning a 10.8-mile commuter rail line using electric multiple unit vehicles from downtown Denver westward to Ward Road in Wheat Ridge. Seven new stations and 2,250 park and ride spaces would be constructed and 22 vehicles would be purchased. When completed, the Gold Line would connect the communities of Wheat Ridge, Arvada and Adams to downtown Denver. Service would operate at 15 minute frequencies.

Currently there is a lack of continuous street connections between the project corridor and downtown Denver, resulting in traffic using north-south arterials and Interstates 70 and 25 to access downtown Denver. Travel time by transit is currently 20 minutes by express bus on I-70 and I-25 from Ward Road to downtown Denver, however, this time can vary by as much as eight minutes due to congestion. All other major east to west arterials do not provide, and are not planned to provide, direct connections into downtown over the next 20 years. The Gold Line is intended to provide direct, fast and frequent service as a convenient alternative to automobile use.

The Gold Line is part of RTD's FasTracks expansion program of major transit investments in the Denver region. It will be constructed as part of the larger RTD project known as the East and Gold Line Enterprise (Eagle Project) utilizing a design-build-finance-operate-maintain project delivery method. A Concessionaire Team (CT) composed of engineering, construction, construction management, financial advisors and vehicle firms would design and construct the Eagle Project, help to finance the project, and have an equity stake. The CT, in cooperation with RTD, would operate the Gold Line project, though a 50 year concessionaire agreement. The project is part of FTA's Public Private Partnership Pilot Program.

Summary Description	
<b>Proposed Project:</b>	Commuter Rail EMU 10.8 Miles 7 Stations
<b>Total Capital Cost (\$YOE):</b>	\$715.53 Million (includes \$87.90 million in finance charges)
<b>Section 5309 New Starts Share (\$YOE):</b>	\$180.00 Million (25.2%)
<b>Annual Forecast Year Operating Cost:</b>	\$17.83 Million
<b>Ridership Forecast (2030):</b>	14,000 Average Weekday Boardings 3,000 Daily New Riders
<b>Opening Year Ridership Forecast (2017):</b>	10,100 Average Weekday Boardings
<b>FY 2011 Local Financial Commitment Rating:</b>	Medium
<b>FY 2011 Project Justification Rating:</b>	Medium
<b>FY 2011 Overall Project Rating:</b>	Medium

### Project Development History and Current Status

A Major Investment Study for the Gold Line was initiated in 1998. In 2004, the corridor was adopted into the "FasTracks" plan to expand rail and bus service throughout the RTD service area. In November 2004, voters approved the FasTracks plan and tax increase. A Locally Preferred Alternative was identified in 2007, and adopted into the metropolitan planning organization's fiscally constrained long range transportation plan. RTD issued a Draft Environmental Impact Statement (EIS) on the Gold Line in July 2008. FTA approved the Gold Line into preliminary engineering in April 2009. A Final EIS was

issued in March 2009. A Record of Decision was approved in November 2009. Entry into final design is anticipated in April 2010.

The capital cost estimate in some instances excludes costs associated with shared operations with other lines. For example, RTD is going to rebuild Denver Union Station (DUS) downtown as part of a separate multimodal project to accommodate commuter rail service. In addition, the trackway and electrification between DUS and Pecos will be built as part of RTD's locally funded Northwest Rail Corridor Project, which is anticipated to be constructed in advance of the completion of the Gold Line. In other instances, the capital cost estimate includes shared costs for funding the completion of the commuter rail maintenance facility.

### **Significant Changes Since FY 2010 Evaluation (November 2008)**

RTD recalibrated its travel forecasting model and updated its ridership estimates. The revised forecasts show 14,000 average weekday riders in 2030 as compared to the forecast of 16,800 average weekday riders assumed at the time of preliminary engineering approval. RTD also determined that fewer rail vehicles were necessary, which allows for construction of a smaller rail fleet maintenance facility. These factors, in combination with lower assumed material prices due to current market conditions, lower escalation costs, and lower contingencies contributed to a 20 percent lower capital cost estimate of \$716.00 million compared to last year's cost estimate of \$860.00 million.

### **Project Justification Rating: Medium**

The project justification rating is based on the weighted average of the ratings assigned to each of the following criteria: the cost-effectiveness criterion is weighted 20 percent; the transit supportive land use criterion is weighted 20 percent; the economic development criterion is weighted 20 percent; the mobility improvements criterion is weighted 20 percent; the environmental benefits criterion is weighted 10 percent; and the operating efficiencies criterion is weighted 10 percent.

### ***Cost Effectiveness Rating: Medium***

The cost effectiveness rating reflects the level of travel-time benefits (2,348 hours each weekday) relative to the project's capital and operating costs based on a comparison to a baseline alternative.

<b>Cost Effectiveness</b>	
	<b><u>New Start vs. Baseline</u></b>
Cost per Hour of Transportation System User Benefit	\$24.90*
Incremental Cost per Incremental Trip	\$17.52

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

### ***Transit-Supportive Land Use Rating: Medium-Low***

The land use rating reflects the population and employment densities within ½-mile of proposed station areas.

- Average population density across new station areas is 2,400 persons per square mile. Total employment served is 114,900 (including 102,700 in the Denver CBD. In the Denver CBD, the ratio of parking spaces to employees is 0.44, and generally parking is free and available in other station areas.
- Existing land uses in the new station areas include primarily industrial with some areas of low- to moderate-density, single-family residential and commercial uses. Pedestrian facilities are limited in most station areas, except in the few established residential neighborhoods and the Olde Town Arvada Station area with an existing historic town center.

***Economic Development Rating: Medium-High***

The economic development rating is based upon the average of the ratings assigned to the subfactors below.

**Transit-Supportive Plans and Policies: Medium-High**

- Land use in the corridor is controlled by the City and County of Denver, Adams County, City of Arvada, and City of Wheat Ridge. Neighborhood transit-oriented development (TOD) plans have been completed or are underway for each of the seven station areas, and will serve as the basis for rezoning and other improvements. All current area and sub-area community land use plans contain objectives that explicitly support the transit project and that generally encourage transit-oriented projects, pedestrian orientation, and dense, mixed-use patterns of development.
- Multiple regional plans support increasing density in urban centers, and Denver Union Station is undergoing development into a mixed-use transportation hub with 1.3 million square feet of new development planned. Incentives to promote corridor development under consideration include density bonuses, reduced parking requirements, tax-increment financing, and urban renewal districts.
- Existing zoning ordinances throughout the corridor permit low to moderate density residential development, ranging from 6 to 20 units per acre. Denver has established a Transit-Mixed Use zone permitting a floor area ratio of 5.0 and parking reductions of 25 percent, which is at the core of the Denver Union Station area. In each of the jurisdictions, rezoning efforts have been initiated or are planned for 2009 to support station area planning efforts, which will include higher-density and mixed-use districts and improved transit-oriented character in station areas.

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

- Extensive development has occurred in the past decade near Denver Union Station, and examples of TOD are increasing in other existing station areas in the Denver region. New residential and retail development and redevelopment has recently been completed in three of the proposed station areas along the Gold Line.
- Significant opportunities for development and redevelopment exist at four station areas with 50 percent or more undeveloped or underutilized land (Pecos, Federal, Arvada Ridge, and Ward). Limitations exist at the Pecos Station area that falls within historical landfill areas so new development would require mitigation. The three other stations in the corridor have more potential for infill development and less vacant land. They also benefit from proximity to freeways which may aid marketability. Improved connections between established residential areas in the Sheridan and 38th Station areas may support transit demand, although the 38<sup>th</sup> Street Station area is bisected by rail yards with only one current pedestrian connection.

**Other Project Justification Criteria**

Mobility Improvements Rating: Medium-Low		
Transportation System User Benefit Per Passenger Mile (Minutes)	1.8	
Number of Transit Dependents Using the Project	1,300	
Transit Dependent User Benefits per Passenger Mile (Minutes)	1.7	
Environmental Benefits Rating: High		
<u>Criteria Pollutant Status</u> 8-Hour Ozone (O <sub>3</sub> )	<u>EPA Designation</u> Non-attainment Area	
Operating Efficiencies Rating: Medium		
System Operating Cost per Passenger Mile (current year dollars)	<u>Baseline</u> \$0.46	<u>New Start</u> \$0.46

**Local Financial Commitment Rating: Medium**

The local financial commitment rating is based on the weighted average of the ratings assigned to each of the following criteria: the New Starts share of project costs is weighted 20 percent; the strength of the capital finance plan is weighted 50 percent; and the strength of the operating finance plan is weighted 30 percent.

**Section 5309 New Starts Share of Total Project Costs: 25.2%**

**Rating: High**

<b>Locally Proposed Financial Plan</b>		
<u>Source of Funds</u>	<u>Total Funds (\$million)</u>	<u>Percent of Total</u>
<b>Federal:</b>		
Section 5309 New Starts	\$180.00	25.2%
FHWA Flexible Funds (CMAQ)	\$13.96	2.0%
<b>Local:</b>		
Bond Proceeds	\$19.34	2.7%
Sales & Use Tax	\$144.89	20.3%
Concessionaire Financing – Private	\$342.67	47.9%
Equity and Debt		
Local Jurisdiction Share	\$14.67	2.1%
<b>Total:</b>	<b>\$715.53</b>	<b>100.0%</b>

**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 rating is based upon the weighted average of the ratings assigned to each of the subfactors listed below. The agency capital condition is weighted 25 percent, the commitment of capital funds is weighted 25 percent, and the capital cost estimate, planning assumptions and capital funding capacity subfactor is weighted 50 percent.

**Agency Capital Condition: Medium-High**

- The average age of RTD's bus fleet is 5.5 years, which is younger than the industry average.
- RTD's good bond ratings, which were issued in 2008, are as follows: Moody's Investors Service Aa3; Standard & Poor's Corporation AAA; and Fitch AA.

**Commitment of Capital Funds: Medium**

- Approximately 33 percent of non-New Starts funding is committed or budgeted. The sources of non-Section 5309 New Starts funds for the project are Congestion Mitigation and Air Quality (CMAQ) funds, revenues derived from the local sales and use tax, bond proceeds backed by a 0.4 percent sales and use tax, as provided for by FasTracks, concessionaire equity and debt, and local government contributions.

**Capital Cost Estimate, Planning Assumptions, and Financial Capacity: Medium-Low**

- RTD has stretched the schedule of FasTracks to fit within the combination of substantial cost increases and underperforming sales and use tax revenue.
- Many capital planning assumptions and cost estimates are optimistic.
- The financial plan shows that RTD has the financial capacity to cover only minor cost increases or funding shortfalls equal to 10 percent or less of the estimated project cost.

***Operating Finance Plan Rating: Medium***

The operating finance plan rating is based upon the weighted average of the ratings assigned to each of the subfactors listed below. The agency operating condition is weighted 25 percent, the commitment of operating funds is weighted 25 percent, and the operating cost estimates, planning assumptions and operating funding capacity subfactor is weighted 50 percent.

**Agency Operating Financial Condition: Medium**

- RTD's current ratio of assets to liabilities as reported in its most recent audited financial statement is excellent at 4.9.
- RTD has recently made minor service reductions and unscheduled fare increases due to the economic recession.

**Commitment of Operating and Maintenance Funds: High**

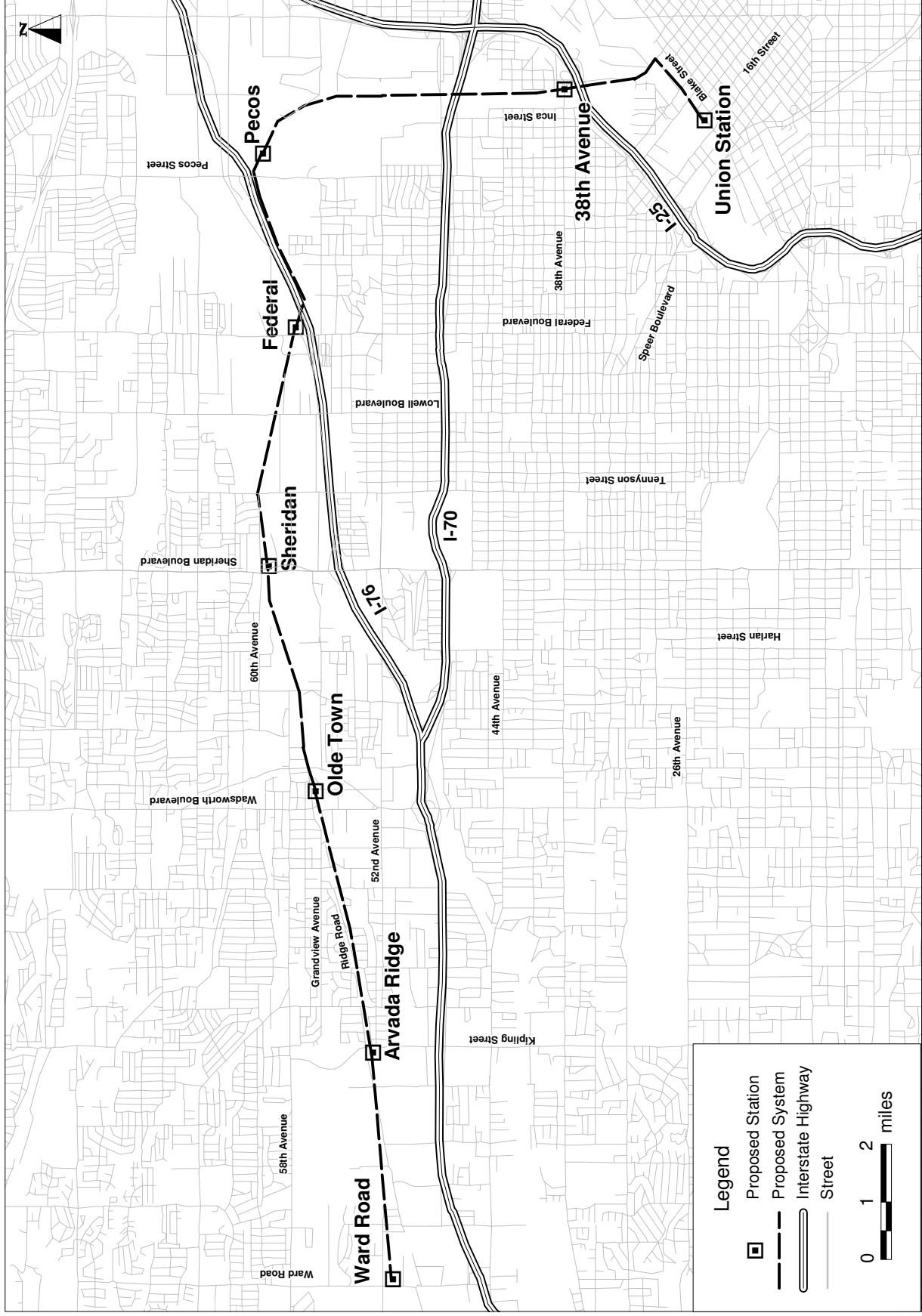
- All operating funding is committed, including fare revenues, increased sales and use tax revenues, and parking revenues.

**Operating Cost Estimates, Planning Assumptions, and Financial Capacity: Medium-Low**

- Several operating cost estimates and revenue forecasts are optimistic relative to historical experience.
- Projected cash balances and reserve accounts are less than eight percent (one month) of annual systemwide operating expenses.

# Gold Line

## Denver, Colorado



## **Orange Line Phase 2: North Corridor Metrorail Extension**

### **Miami, Florida**

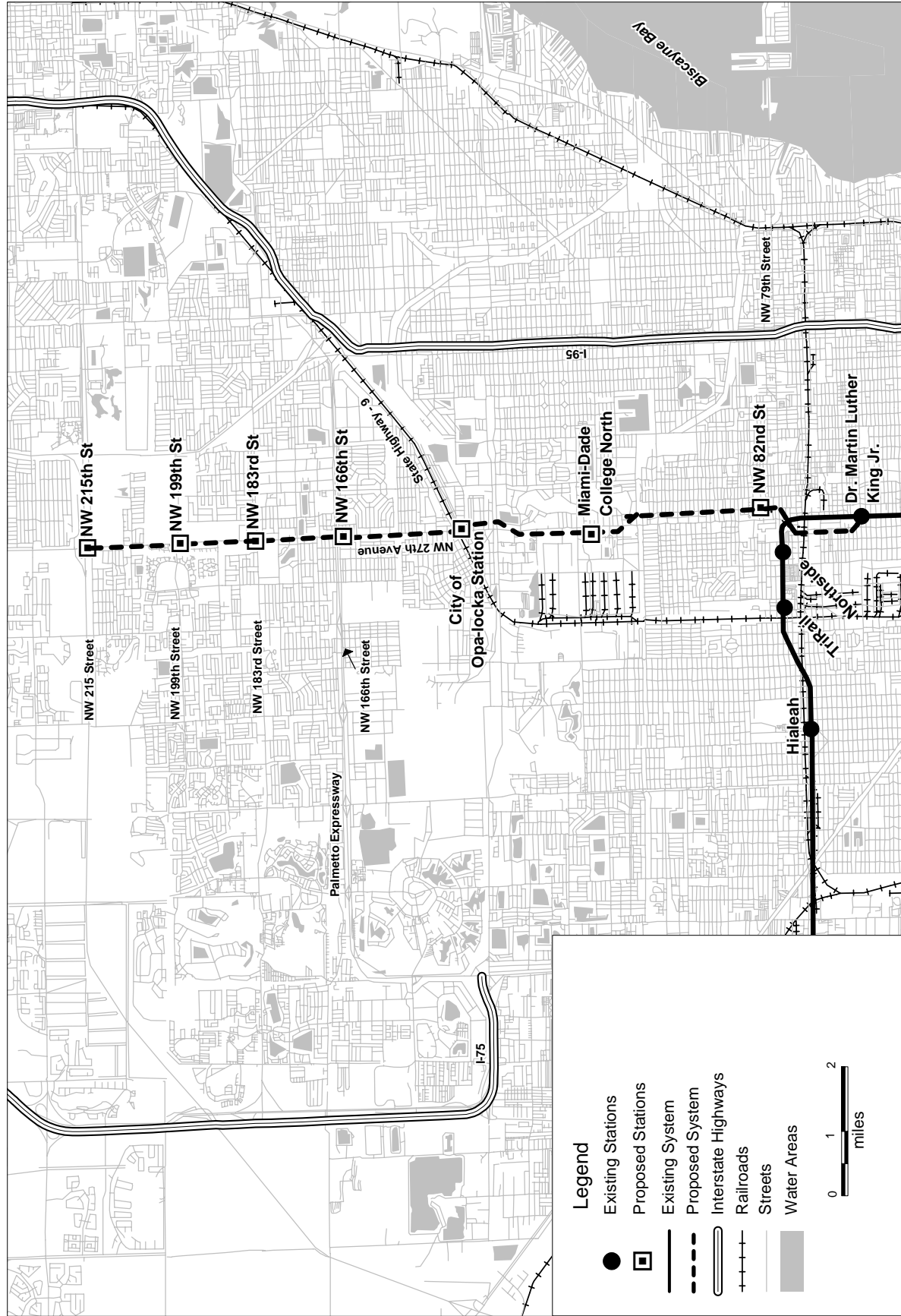
(November 2009)

Miami-Dade Transit (MDT) is proposing the construction of a 9.2-mile Metrorail extension along Northwest 27<sup>th</sup> 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 3,900 spaces, and 28 railcars. Peak period Metrorail service along the North Corridor would operate at 6.5-minute frequencies. The North Corridor Metrorail Extension is considered locally as Phase 2 of a regional rail expansion program, which also includes the Miami Intermodal Center (MIC) currently under construction and the proposed East-West Metrorail Extension to Florida International University.

A major investment along Northwest 27<sup>th</sup> Avenue has been in preliminary engineering (PE) for over 10 years. The financial plan MDT submitted to FTA in November 2008 included \$5.9 billion from revenue sources that do not currently exist. A viable strategy for funding MDT's current and proposed capital and operating expenses has not been presented to FTA during the past year. If a robust financial plan is not provided to FTA by September 2010, the North Corridor project will be removed from the New Starts program.

# Orange Line Phase 2 : North Corridor Metrorail Extension

## Miami, Florida



# High Capacity Transit Corridor Project

## Honolulu, Hawaii

(November 2009)

The City and County of Honolulu (the City) proposes to construct the High-Capacity Corridor Transit Project, a 20.1-mile rail line with 21 stations. The project would serve the south shore of Oahu from a western terminus in Kapolei, past Pearl Harbor and Honolulu International Airport, through downtown Honolulu, to an eastern terminus at Ala Moana Center. The electrified (third rail) line will be almost entirely on elevated structure in existing public rights of way – primarily arterial streets. Rail service would extend over 20 hours each day with automated trains running every three minutes in the weekday peak periods and six minutes during most off-peak hours.

The corridor is geographically constrained by the ocean to the south and two mountain ranges to the north. Pearl Harbor reaches well inland from the ocean and pinches the already-narrow corridor near its mid-point. Severe highway congestion persists on H-1, a freeway that extends through the length of the corridor, and on the limited number of major arterials that serve the corridor. In the urban core around downtown Honolulu, street capacity is similarly limited by the scarcity of continuous arterials. The Honolulu bus system provides service throughout the corridor. Per-capita ridership is among the top five in the country, reflecting heavy traffic congestion, high parking costs in the urban core, and high-frequency bus service. Service quality suffers substantially from mixed-traffic operations, however, and increasing traffic congestion continues to degrade schedule reliability, increase operating costs, and exacerbates the bus-capacity limitations on the highest-ridership bus routes. The proposed project would be fully grade-separated, provide higher-speed and more reliable transit service, and produce substantial reductions in travel times for large numbers of transit riders in the corridor.

### Summary Description

<b>Proposed Project:</b>	Elevated rail line with 3 <sup>rd</sup> -rail electrification 20.1 Miles 21 Stations
<b>Total Capital Cost (\$YOE):</b>	\$5,347.68 Million (Includes \$290.3 million in finance charges)
<b>Section 5309 New Starts Share (\$YOE):</b>	\$1,550.00 Million (29.0%)
<b>Annual Forecast Year Operating Cost:</b>	\$125.92 Million
<b>Ridership Forecast (2030):</b>	116,000 Average Weekday Boardings 64,000 Daily New Riders
<b>Opening Year Ridership Forecast (2019):</b>	97,000 Average Weekday Boardings
<b>FY 2011 Local Financial Commitment Rating:</b>	Medium
<b>FY 2011 Project Justification Rating:</b>	Medium
<b>FY 2011 Overall Project Rating:</b>	Medium

### Project Development History and Status

The City completed an alternatives analysis for the corridor in November 2006, and identified a 20-mile elevated fixed-guideway as a starter project with future extensions both east and west. In May 2007, the Oahu Metropolitan Planning Organization amended the transportation plan for Oahu to include this initial project. In April 2008, the City chose steel-wheel-on-steel-rail as the technology and, in November 2008, completed a Draft Environmental Impact Statement for the project. FTA approved entry into preliminary engineering in October 2009. The City and FTA are currently working to complete the Final

Environmental Impact Statement. The City's schedule anticipates a request for entry into Final Design in mid-2010, and a Full Funding Grant Agreement (FFGA) for the project in 2011.

### **Project Justification Rating: Medium**

The project justification rating is based on the weighted average of the ratings assigned to each of the following criteria: the cost-effectiveness criterion is weighted 20 percent; the transit supportive land use criterion is weighted 20 percent; the economic development criterion is weighted 20 percent; the mobility improvements criterion is weighted 20 percent; the environmental benefits criterion is weighted 10 percent; and the operating efficiencies criterion is weighted 10 percent.

### ***Cost Effectiveness Rating: Medium***

The cost effectiveness rating reflects the project's travel-time savings (63,700 hours each weekday) relative to the project's annualized capital and operating costs compared to a baseline alternative.

<b>Cost Effectiveness</b>	
	<b><u>New Start vs. Baseline</u></b>
<b>Cost per Hour of Transportation System User Benefits</b>	\$16.24*
<b>Cost per Incremental Transit Trip</b>	\$16.17

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

### ***Transit-Supportive Land Use Rating: Medium***

The land use rating reflects the population and employment densities within ½-mile of proposed station areas:

- Average population density across all station areas is 8,300 persons per square mile. Total employment served is at least 164,000 (including 48,000 in the central business district (CBD).)
- Ranging from west to east, existing land uses in the station areas typically include open, agricultural land; low-density, single-family residential; moderate-density, multi-family residential; light-commercial and harbor front industrial; high-density commercial and retail, and moderate-density, mixed-use retail and residential.
- Pedestrian facilities in the corridor's station areas are non-existent in the undeveloped western end of the corridor, but generally improve towards the east. Many station areas suffer from wide arterial streets, considerable surface parking, disconnected residential subdivisions, and segregated development patterns. The corridor's eastern areas have adequate pedestrian infrastructure and better pedestrian amenities and design.
- Parking is scarce and expensive in the CBD, but generally free and available in most other areas.

### ***Economic Development Rating: Medium-High***

The economic development rating is based upon the average of the ratings assigned to the subfactors below.

### ***Transit-Supportive Plans and Policies: Medium***

- Land use in the corridor is controlled by only two entities – the State of Hawaii and the City and County of Honolulu. Honolulu has specifically sought to concentrate new development in the Honolulu primary urban center and to establish a secondary urban area to the east in the community of Kapolei, at the eastern end of the proposed alignment. City and state-developed regional and subarea plans that cover the corridor include urban growth boundaries with strong

protections for agricultural and preserved land outside these boundaries. The majority of the developable urban area was built up in the 1940s to 1960s and has been redeveloped since.

- All current area and sub-area community land use plans contain objectives that explicitly support the project and that generally encourage transit-oriented projects, pedestrian orientation, and dense, mixed-use patterns of development. Neighborhood transit-oriented development (TOD) plans are being developed for each of the station areas, and will serve as the basis for rezoning and other improvements.
- In 2006, the City Council of Honolulu amended its *Revised Ordinances* to define a *Transit-Oriented Development Ordinance*. The ordinance is intended to guide development in and around transit stations and is currently under development by the city.
- Existing zoning statutes allow for relatively high commercial and residential densities and relatively low parking requirements compared to most suburban areas in the U.S., and in some cases allow for mixed-use development. Some planned-unit developments and special districts have provisions for pedestrian amenities, but for the most part pedestrian-oriented design requirements and guidelines are not included in existing zoning regulations.
- Of the several comprehensive plans covering corridor communities, only the initial TOD Ordinance definition in the *Revised Ordinances* proposes incentives to explicitly promote transit-oriented development, including the use of floor area ratio bonuses, shared parking requirements, and reductions in external trips. Honolulu is currently engaged in a TOD planning process for the proposed station areas to develop more detailed plans and amendments to zoning ordinances to implement land use policies and encourage appropriate development.

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

- Opportunities for redevelopment are greatest near the termini of the alignment in the Ewa Plain to the west and the Kaka'ako Community Development District (CDD) to the east. The Ewa Plain has master plans for major development projects including high densities, a mix of uses, and pedestrian-friendly design in the vicinity of three proposed stations.
- The Kaka'ako CDD has seen an abundance of pedestrian/transit friendly development projects recently including expansion of open air, pedestrian retail strips, major commercial and shopping centers located at existing bus transit stations (and the site of a proposed station), and high-density, live-work developments within walking distance of downtown. In addition, the area has undergone upgrades to its street network and infrastructure to add or replace sidewalks and improve the flow of pedestrian and vehicular traffic.
- The greatest impact of the transit project, outside of the Ewa Development Area, will be the redevelopment of existing land uses. Policies and market forces are at work within the Kaka'ako CDD to encourage infill and TOD redevelopment. However, areas near stations in the Waipahu, Pearl City, and Salt Lake communities may be the least adaptable to redevelopment due to the concentration of industrial/light-commercial uses, U.S. military and state property, and lower demand than other areas.

Mobility Improvements Rating: Medium-High		
Transportation System User Benefit Per Passenger Mile  Daily Trips by Transit Dependents Using the Project  Transit Dependent User Benefits per Passenger Mile	<u>New Start vs. Baseline</u>	
	3.9	
	18,600	
	1.5	
Environmental Benefits Rating: Medium		
<u>Criteria Pollutant Status</u> 8-Hour Ozone (O <sub>3</sub> ) Carbon Monoxide (CO)	<u>EPA Designation</u> Attainment Area Attainment Area	
Operating Efficiencies Rating: Medium		
System Operating Cost per Passenger Mile (current year dollars)	<u>Baseline</u>	<u>New Start</u>
	\$0.41	\$0.34

### **Local Financial Commitment Rating: Medium**

The local financial commitment rating is based on the weighted average of the ratings assigned to each of the following criteria: the New Starts share of project costs is weighted 20 percent; the strength of the capital finance plan is weighted 50 percent; and the strength of the operating finance plan is weighted 30 percent.

***Section 5309 New Starts Share of Total Project Costs: 29.0%***

***Rating: High***

<b>Locally Proposed Financial Plan</b>		
<b><u>Source of Funds</u></b>	<b><u>Total Funds (\$million)</u></b>	<b><u>Percent of Total</u></b>
<b>Federal:</b>		
Section 5309 New Starts	\$1,550.00	29.0%
Section 5307 Urbanized Area Formula Funds	\$300.72	5.6%
American Recovery and Reinvestment Act (ARRA)	\$4.00	0.1%
<b>State/Local:</b>		
General Excise Tax (GET)	\$3,492.96	65.4%
<b>Total:</b>	<b>\$5,347.68</b>	<b>100.0%</b>

**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 rating is based upon the weighted average of the ratings assigned to each of the subfactors below. The agency capital condition is weighted 25 percent, the commitment of capital funds is weighted 25 percent, and the capital cost estimate, planning assumptions and capital funding capacity subfactor is weighted 50 percent.

**Agency Capital Condition: Medium**

- The average age of the City's bus fleet is 9.2 years, which is older than the industry average.
- The City's good general obligation bond ratings, which were issued in 2009, are as follows: Moody's Investors Service Aa2, Standard & Poor's Corporation AA, and Fitch AA.

**Commitment of Capital Funds: High**

- Approximately 91 percent of non-New Starts funding is committed. Federal sources include Section 5307 Formula funds and funds from the American Recovery and Reinvestment Act. Local funds derive from the general excise tax (GET).

**Capital Cost Estimates, Planning Assumptions, and Financial Capacity: Low**

- Assumptions regarding growth in GET revenues and Section 5309 bus discretionary funds are optimistic compared to historical experience. Financing costs appear to be understated.
- The capital cost estimate is considered reasonable.
- The financial plan show the City has little ability to address funding shortfalls or cost increases. The GET surcharge revenues that will be applied to project-related debt service provide very slim coverage.

***Operating Finance Plan Rating: Medium***

The operating finance plan rating is based upon the weighted average of the ratings assigned to each of the subfactors listed below. The agency operating condition is weighted 25 percent, the commitment of operating funds is weighted 25 percent, and the operating cost estimates, planning assumptions and operating funding capacity subfactor is weighted 50 percent.

**Agency Operating Condition: Medium**

- Financial reporting for the operation of transit services by the City of Honolulu is reported in the City's Public Transportation System Fund. The current ratio of assets to liabilities for that fund as reported in its most recent audited financial statements is 1.32.
- The City has no recent service cutbacks.

**Commitment of Operating Funds: High**

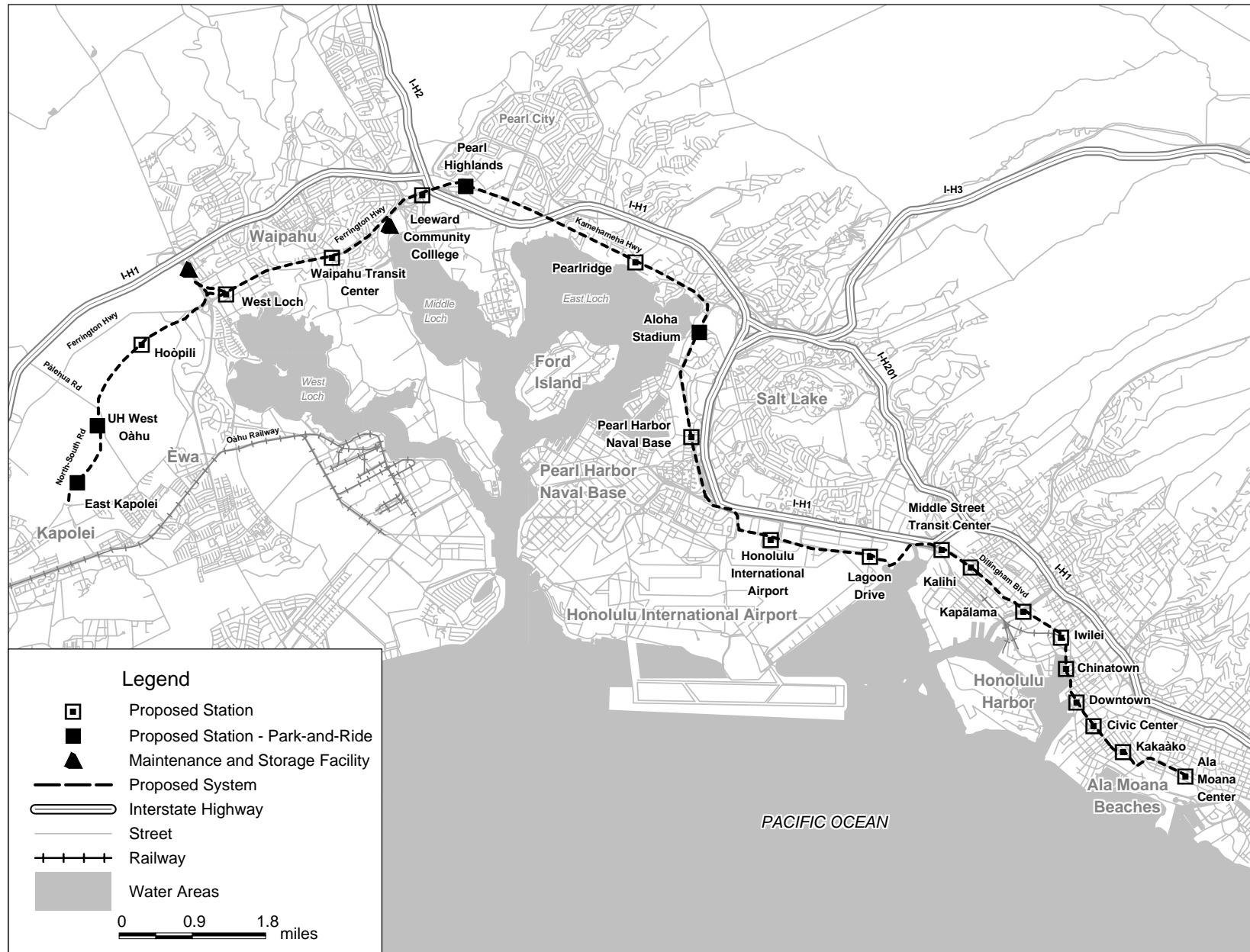
- All operating funds are considered committed, including Federal formula funds, fare revenues and other operating income, and subsidies from the City's General Fund and Highway Fund.

**Operating Cost Estimates, Planning Assumptions, and Financial Capacity: Medium-Low**

- Assumptions regarding state operating subsidies and growth in rail unit operating costs and bus and paratransit operating costs are optimistic compared to historical experience.
- The operating cash flow assumes a balanced budget, with no accrual of an operating surplus or reserve.

# High Capacity Transit Corridor Project

Honolulu, Hawaii



# Assembly Square Station

## Boston, Massachusetts

(November 2009)

The Massachusetts Bay Transportation Authority (MBTA) proposes to build a new Assembly Square Station on the existing MBTA heavy rail Orange Line between the existing Sullivan Square and Wellington stations in the City of Somerville, Massachusetts. Assembly Square Station will serve an adjacent mixed-use transit oriented development consisting of approximately 2,100 housing units, 1.75 million square feet of office space, 1.06 million square feet of retail space, and a 200-room hotel on 145 acres. The Assembly Square redevelopment project is expected to generate approximately 45,000 vehicle trips per day, with the goal of this station project to divert as many of them to transit as possible. No additional MBTA rail cars will be needed in order to provide service to this additional station. The MBTA Orange Line will provide approximately five minute headways during peak periods, eight minute headways during mid-days, and 13 minute headways during evenings and late night service.

The development site is bounded by Interstate 93 and state Route 28 on the south and west, by the Mystic River on the north, and the MBTA Orange Line heavy rail and Haverhill commuter rail routes on the east. Although located close to downtown Boston in a high-volume commuter corridor surrounded by densely populated communities, the Assembly Square site is physically isolated from surrounding communities by highways, rail lines and the adjacent river. The proposed Assembly Square Station will provide improved public access to this currently under-utilized but developable site.

The total capital cost of the Assembly Square Station is estimated to be \$47.69 million with a proposed Section 5309 New Starts share of \$24.99 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 USC 5309(e)(1)(B)).*

Summary Description	
<b>Proposed Project:</b>	Heavy Rail Transit Station 1 Station
<b>Total Capital Cost (\$YOE):</b>	\$47.69 Million
<b>Section 5309 New Starts Share (\$YOE):</b>	\$24.99 Million (52.4%)
<b>Ridership Forecast:</b>	Not Available

### Project Development History and Current Status

MBTA, the Boston Region Metropolitan Planning Organization (MPO), the City of Somerville and the Assembly Square developer have coordinated the proposed development and station project with Massachusetts' "Sustainable Development Principles," and with the City of Somerville's Assembly Square Revitalization Plan and Mixed-Use Development Zoning District requirements. For over two decades, a series of developers sought to gain approvals for major redevelopment of Assembly Square. In 2007, the City of Somerville and principle community groups reached agreement with the private developer who currently controls the site. Assembly Square Station will be funded by a public-private partnership. The project was included in the Long Range Transportation Plan of the Boston Region MPO in June 2007. FTA approved the project into preliminary engineering in September 2008 and issued a Categorical Exclusion for environmental clearance of the project in April 2009.

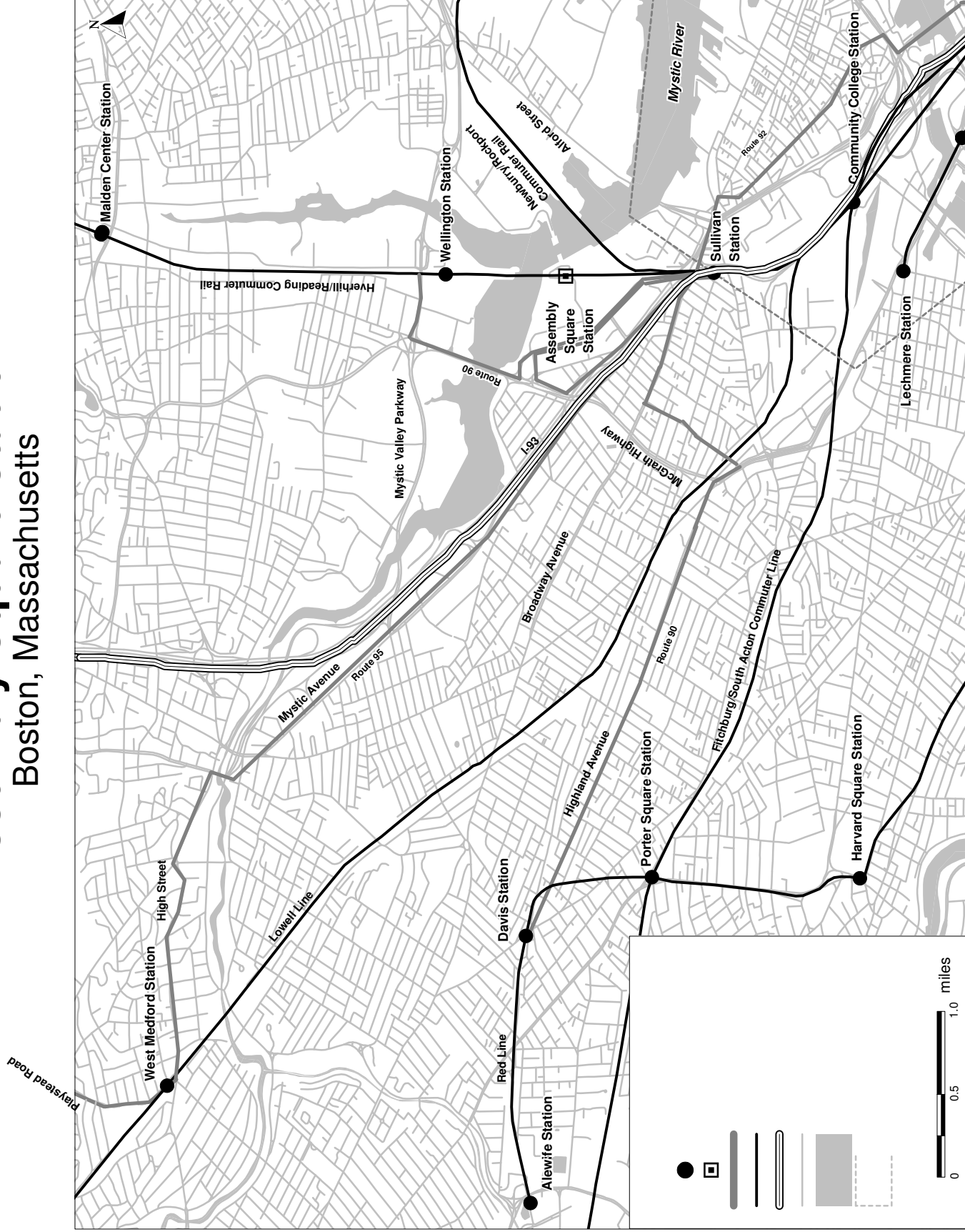
### Locally Proposed Financial Plan

<u>Source of Funds</u>	<u>Total Funds (\$million)</u>	<u>Percent of Total</u>
<b>Federal:</b>		
Section 5309 New Starts	\$24.99	52.4%
CMAQ or STP Funds	\$7.69	16.1%
<b>Local:</b>		
Private Developer	\$15.00	31.5%
<b>Total:</b>	<b>\$47.69</b>	<b>100.0%</b>

**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.

# Assembly Square Station

Boston, Massachusetts





## **Silver Line Phase III**

### **Boston, Massachusetts**

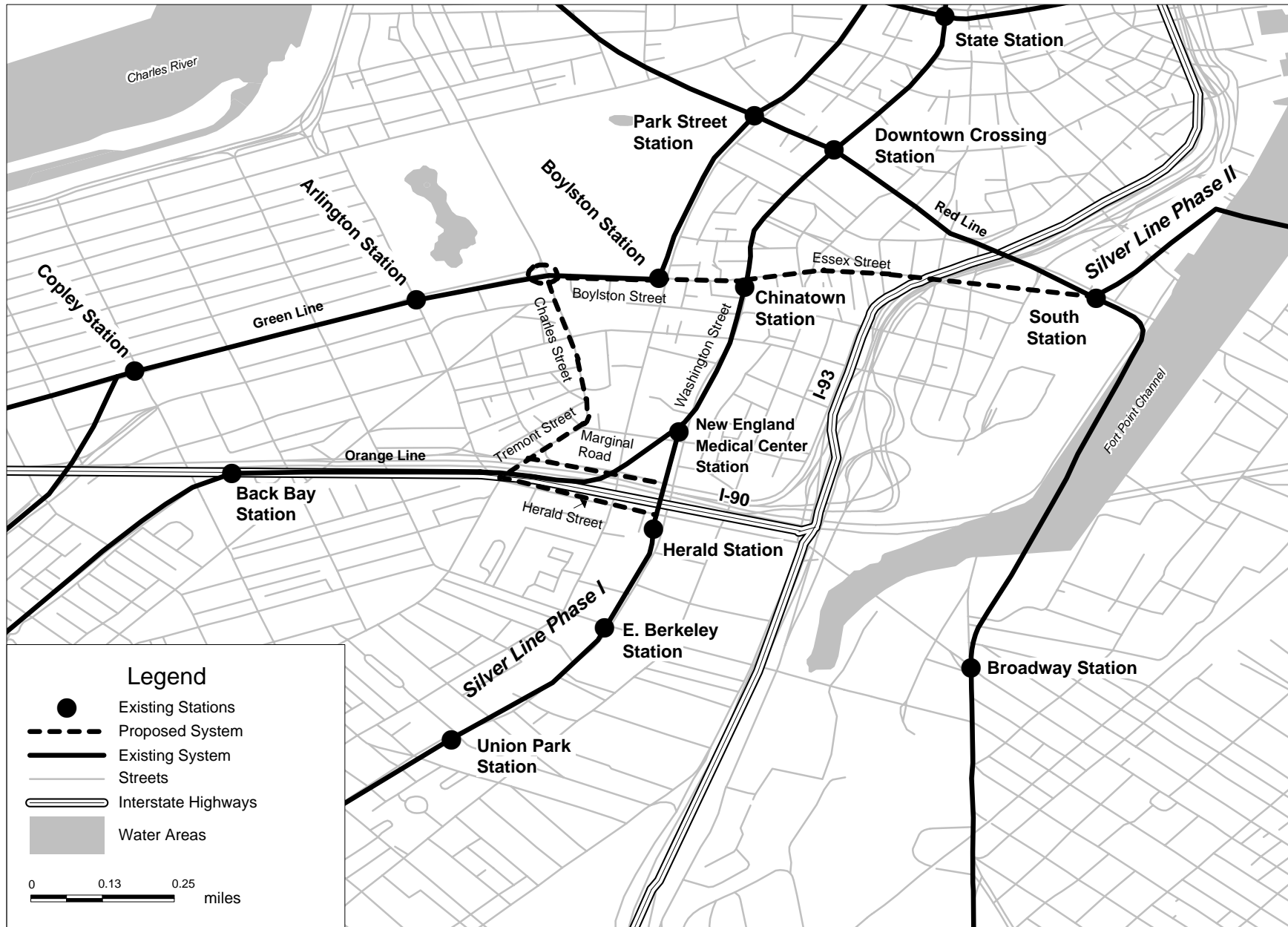
(November 2009)

The Massachusetts Bay Transportation Authority (MBTA) proposes to implement Phase III of its Silver Line bus rapid transit (BRT) system in downtown Boston. The Phase III project consists of a tunnel segment, a tunnel portal, contra-flow surface bus lanes and new platforms at two existing underground rapid transit stations. The 0.8-mile core tunnel segment lies between the existing South Station (which connects to the Silver Line Phase II service that opened in December 2004) and Boylston Station, under Essex and Boylston Streets. This core segment includes new passenger platforms to interface with existing subway lines at the Chinatown (Orange Line) and Boylston (Green Line) stations. The 0.4-mile portal segment extends under South Charles Street to a portal at Tremont Street between Jefferson and Church Streets. From Tremont Street, the Phase III project runs east-west on surface bus contra-flow lanes on Marginal Road and Herald Street, parallel to the Massachusetts Turnpike, with a dedicated bus lane on the Tremont Street Bridge. The project links with Silver Line Phase I service on Washington Street. Forty-nine dual-mode BRT buses would also be procured for the project. Once Phase III is implemented, the completed Silver Line would feature seven BRT routes operating at three to ten minute peak-period headways.

The Silver Line Phase III project has been in preliminary engineering off and on since 2002. No new information has been submitted to FTA since 2008. The project has encountered significant schedule delays and a capital cost increase of approximately 80 percent. The amount of New Starts funding proposed for the project has increased 80 percent as well, and exceeds \$1 billion, which is of concern to FTA. The project's financial plan depends heavily on MBTA borrowing that would result in net debt service coverage of less than 1.0 and insufficient cash to cover future operating needs let alone capacity to support additional capital bonds. Further, FTA is aware of other major capital projects being considered in the local area that appear to be higher priority than this project. Thus, MBTA must submit updated information to FTA on or before September 2010 addressing the concerns identified by FTA last year, or the project will be removed from the New Starts program.

# Silver Line Phase III

## Boston, Massachusetts



# Central Corridor LRT

## St. Paul-Minneapolis, Minnesota

(November 2009)

The Metropolitan Council (MC), in cooperation with the Ramsey and Hennepin Counties Regional Rail Authorities (RCRRA and HCRRA), proposes to construct a 9.8-mile, double-track light rail transit (LRT) line that would link the downtowns of St. Paul and Minneapolis. The LRT line would also serve a number of major activity centers, including the University of Minnesota-St. Paul, the State Capitol, and major event venues (Target Center, Metrodome). From Minneapolis, the LRT line would share 1.2 miles of existing track with the Hiawatha LRT line before turning east in its own right of way across the Mississippi River on the existing Washington Avenue Bridge to St. Paul, and generally follow University Avenue to the State Capitol area and terminate at the Union Depot in downtown St. Paul. The MC would procure 31 light rail vehicles that would operate at 7.5-minute peak period frequencies. A vehicle maintenance facility would be constructed in St. Paul.

The Central Corridor links two central business districts (CBD). Existing corridor transit service includes express buses operating on Interstate 94 serving both downtowns, limited-stop local buses on University Avenue, and a local bus route with stops every few blocks on a parallel arterial. Current transit service utilizes reverse-flow lanes in downtown Minneapolis, bus-only freeway shoulder lanes and freeway entrance bypass ramps. Ridership on the routes totals nearly 40,600 each weekday, with roughly equal directional travel during peak periods. However, these services are impacted by high traffic volumes at major intersections along University Avenue during peak periods. On-time reliability in 2007 for the local bus services on University Avenue and the parallel arterial was 88 percent. Roadway expansion is not included in the region's long-range transportation plans.

Summary Description	
<b>Proposed Project:</b>	Light Rail Transit 9.8 Miles 15 Stations
<b>Total Capital Cost (\$YOE):</b>	\$941.32 Million (includes \$17.9 million in finance charges)
<b>Section 5309 New Starts Share (\$YOE):</b>	\$466.16 Million (49.5%)
<b>Annual Forecast Year Operating Cost:</b>	\$39.29 Million
<b>Ridership Forecast (2030):</b>	41,700 Average Weekday Boardings 6,300 Daily New Riders
<b>Opening Year Ridership Forecast (2014):</b>	36,600 Average Weekday Boardings
<b>FY 2011 Local Financial Commitment Rating:</b>	<b>Medium-High</b>
<b>FY 2011 Project Justification Rating:</b>	<b>Medium-High</b>
<b>FY 2011 Overall Project Rating:</b>	<b>Medium-High</b>

The MC may add one or more stations to the project in St. Paul, although the current cost estimate does not reflect this. Additional station(s) would impact the project scope, schedule and budget. As of late November 2009, local officials had not decided whether additional stations would be added.<sup>1</sup>

<sup>1</sup> As of January 2010, the Metropolitan Council has announced its intent to add three infill stations to better serve all communities along the alignment. Such changes will be reflected when the project is evaluated and rated for entry into Final Design.

## Project Development History and Current Status

The RCRRA, in cooperation with the MC, completed an alternatives analysis / Draft Environmental Impact Statement (AA/DEIS) in April 2006. LRT was chosen as the locally preferred alternative. FTA approved the Central Corridor LRT project into preliminary engineering in December 2006. During 2008, local officials analyzed several scope changes to reduce the project's budget. A supplemental DEIS that examined the environmental impacts of these scope changes was completed in July 2008. A Final EIS was released in June 2009. An environmental Record of Decision was issued in August 2009. Final design approval is anticipated in early 2010.

The project's scope has not been finalized. Uncertainty remains for major work items including: traffic mitigations; integration into the existing Hiawatha LRT line; LRT run times; real estate; and a University of Minnesota Memorandum of Understanding. Significant risks also remain in the areas of escalation and contingency.

## Significant Changes Since FY 2010 Evaluation (November 2008)

The project's cost estimate increased from \$914.9 million to \$941.3 million due to several scope changes. In April 2009, the MC and Minnesota Public Radio (MPR) agreed to a mitigation plan to address the noise and vibration impacts of the LRT to MPR's Broadcast Center in St. Paul. The agreement includes a new 700-foot "floating slab" to mitigate vibration and noise impacts to MPR and two historic churches. In summer 2009, local officials decided to purchase the property near the proposed 4<sup>th</sup> Street / Cedar Street station and surrounding parcels. The previous scope only included the demolition of the building and surrounding structures in that area.

## Project Justification Rating: Medium-High

The project justification rating is based on the weighted average of the ratings assigned to each of the following criteria: the cost-effectiveness criterion is weighted 20 percent; the transit supportive land use criterion is weighted 20 percent; the economic development criterion is weighted 20 percent; the mobility improvements criterion is weighted 20 percent; the environmental benefits criterion is weighted 10 percent; and the operating efficiencies criterion is weighted 10 percent.

## Cost Effectiveness Rating: Medium

The cost effectiveness rating reflects the level of travel-time benefits (8,200 hours each weekday) relative to the project's capital and operating costs based upon a comparison to a baseline alternative.

Cost Effectiveness	
	<u>New Start vs. Baseline</u>
Cost per Hour of Transportation System User Benefit	\$24.81*
Incremental Cost per Incremental Trip	\$32.54

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

## Transit-Supportive Land Use Rating: Medium-High

The land use rating reflects the population and employment densities within ½-mile of proposed station areas.

- Population density is approximately 8,600 people per square mile in the corridor, and total employment in project station areas is approximately 280,100 jobs. In 2000, employment in the Minneapolis CBD was 146,500 and is expected to increase to 193,600 by 2030. CBD employment in St. Paul was estimated at 47,500 and is anticipated to increase to 77,900 by 2030.

- The corridor serves the region's largest job centers including the Minneapolis and St. Paul CBDs, Target Center, State Capitol complex, and the University of Minnesota-St. Paul, among others.
- In both CBDs, virtually all streets are fully equipped with curb cuts and Americans with Disabilities Act compliant sidewalks. Most major streets, including those with bridges, include pedestrian accommodations. The majority of major streets also have designated bicycle and pedestrian lanes.

### ***Economic Development Rating: High***

The economic development rating is based upon the average of the ratings assigned to the subfactors below.

#### **Transit-Supportive Plans and Policies: High**

- Throughout the corridor numerous station area, small area, and neighborhood plans have been adopted and contain numerous growth management strategies as a result of the 2030 Regional Development Framework Plan.
- Established regional growth boundaries (known locally as urban service boundaries), including regional investments in programs such as Livable Communities, have helped to encourage investment in higher intensity, mixed-use transit-supportive land development.
- The adopted Regional Development and Transportation Plan, the Regional Transit-Oriented Development (TOD) Handbook, the Metropolitan Council's land use grant program, and the LRT/Land Use Coordination process all support increased corridor and station area development, including pedestrian facilities and transit-friendly character.
- Numerous regulatory and financial incentives also promote transit-supportive development throughout the corridor.

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

- There are numerous projects planned or under construction in the station areas, including mixed uses and urban villages that include increased housing densities and other transit-supportive elements.
- In 2002 a study was completed that assessed the potential for redevelopment within a ¼-mile of each proposed station area along the corridor. The report detailed redevelopment and infill development opportunities station by station. The findings revealed that the majority of planned station areas have strong TOD potential.

**Other Project Justification Criteria**

Mobility Improvements Rating: Medium		
Transportation System User Benefit Per Passenger Mile (Minutes)	<u>New Start vs. Baseline</u>	
	2.6	
	17,700	
Transit Dependent User Benefits per Passenger Mile (Minutes)	2.6	
Environmental Benefits Rating: Medium		
<u>Criteria Pollutant Status</u>	<u>EPA Designation</u> Maintenance or Attainment Area for all pollutants	
Operating Efficiencies Rating: Medium		
System Operating Cost per Passenger Mile (current year dollars)	<u>Baseline</u>	<u>New Start</u>
	\$0.86	\$0.75

**Local Financial Commitment Rating: Medium-High**

The local financial commitment rating is based on the weighted average of the ratings assigned to each of the following criteria: the New Starts share of project costs is weighted 20 percent; the strength of the capital finance plan is weighted 50 percent; and the strength of the operating finance plan is weighted 30 percent.

**Section 5309 New Starts Share of Total Project Costs: 49.5%**

**Rating: Medium**

<b>Locally Proposed Financial Plan</b>		
<b><u>Source of Funds</u></b>	<b><u>Total Funds (\$million)</u></b>	<b><u>Percent of Total</u></b>
<b>Federal:</b>		
Section 5309 New Starts	\$466.16	49.5%
Congestion Mitigation Air Quality	\$4.50	0.5%
<b>State:</b>		
General Obligation Bonds	\$94.14	10.0%
<b>Local:</b>		
Counties Transit Improv. Board	\$282.39	30.0%
RCRRA	\$65.89	7.0%
HCRRA	\$28.24	3.0%
<b>Total:</b>	<b>\$941.32</b>	<b>100.0%</b>

**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 rating is based on the weighted average of the ratings assigned to each of the subfactors listed below. The agency capital condition is weighted 25 percent, the commitment of capital funds is weighted 25 percent, and the capital cost estimate, planning assumptions and capital funding capacity subfactor is weighted 50 percent.

**Agency Capital Condition: Medium-High**

- The average age of the bus fleet is 7.3 years, which is in line with the industry average.
- The very good bond ratings, which were issued in 2009, are as follows: Moody's Investors Service Aaa and Standard & Poor's Corporation AAA.

**Commitment of Capital Funds: High**

- Nearly all (98 percent) of the non-Section 5309 New Starts funds are committed. Sources of funds include CMAQ funds, General Obligation bond revenues from the State, dedicated sales tax and sales tax bond revenues from the Counties Transit Improvement Board (CTIB), and property tax bond revenues from RCRRA and HCRRA.

**Capital Cost Estimate, Planning Assumptions, and Financial Capacity: Medium**

- Revenue assumptions are in line with historical data, including State General Obligation bonds, and CTIB and property tax bond revenues from the local regional rail authorities.
- The capital cost estimate is considered optimistic. Significant risks remain for major cost drivers, including project scope and environmental mitigation. The MC may add at least one station in St. Paul to address local environmental justice concerns, which would impact the project's schedule and budget. The MC and the University are negotiating an agreement on electromagnetic interference mitigation and trackwork mitigation through the University's campus, which could result in an increase to the capital cost estimate.

***Operating Finance Plan Rating: Medium-High***

The operating finance plan rating is based upon the weighted average of the ratings assigned to each of the subfactors listed below. The agency operating condition is weighted 25 percent, the commitment of operating funds is weighted 25 percent, and the operating cost estimates, planning assumptions and operating funding capacity subfactor is weighted 50 percent.

**Agency Operating Condition: High**

- The MC's current ratio of assets to liabilities as reported in its most recent audited financial statement is 2.4.

**Commitment of Operating and Maintenance Funding: High**

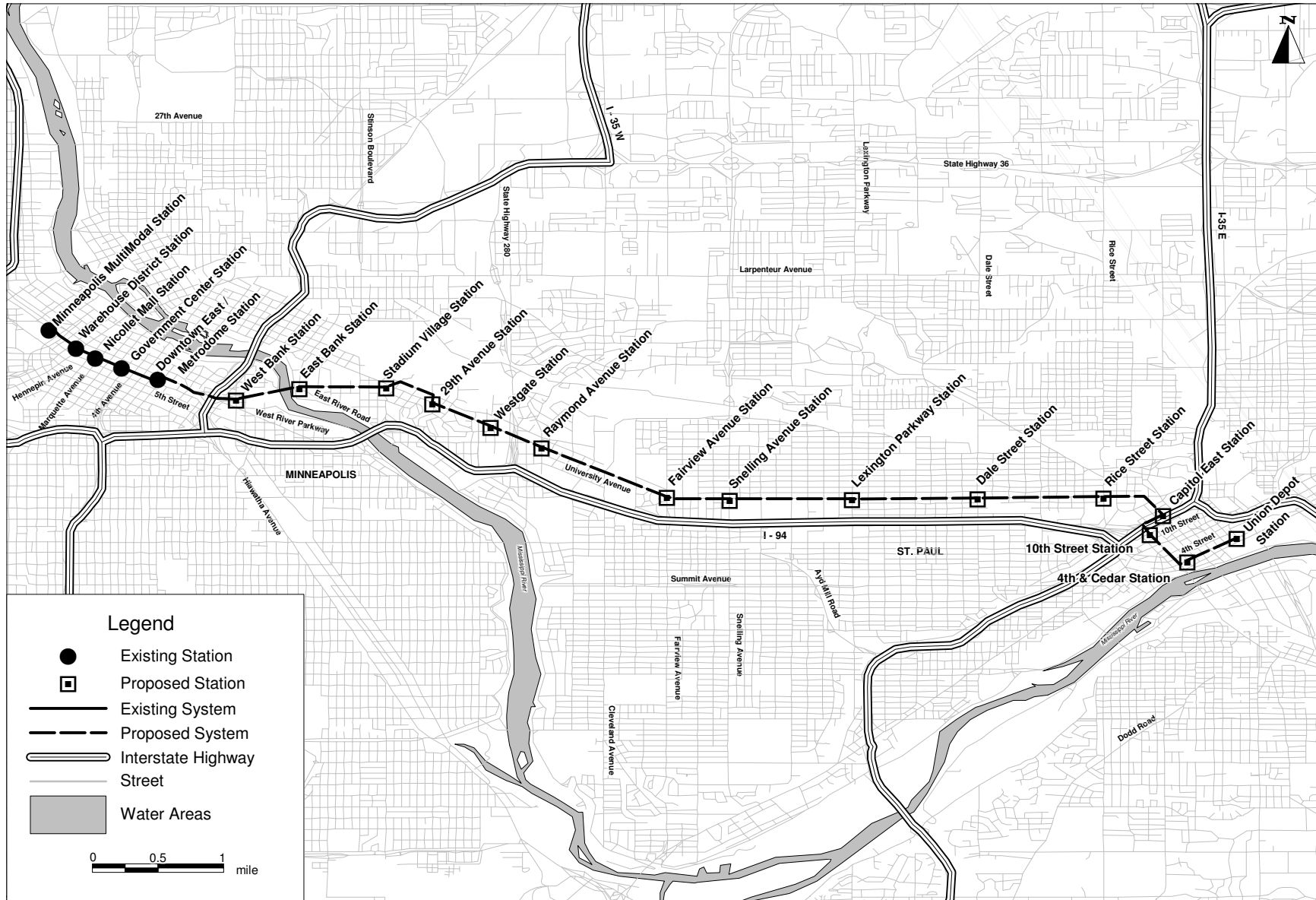
- Over 80 percent of operating funding is committed, while the remainder is budgeted. The main revenue sources are fares, motor vehicle sales tax revenues, State/local operating assistance and other transit-related revenue.

**Operating Cost Estimates, Planning Assumptions, and Financial Capacity: Medium**

- Assumed growth in operating expenses is optimistic compared to historical experience. However, assumed farebox collections and sales tax revenues are in line with historical experience.

# Central Corridor LRT

## St. Paul-Minneapolis, Minnesota



# Northeast Corridor Light Rail Project

## Charlotte, North Carolina

(November 2009)

The Charlotte Area Transit System (CATS) is proposing the construction of a 10.6-mile light rail transit (LRT) line that would extend from Uptown Charlotte, the region's central business district (CBD), northeast to the US 29 interchange of Interstate 485 (I-485) near the University of North Carolina-Charlotte (UNCC). The inner segment of the proposed line follows active Norfolk Southern and North Carolina Railroad right-of-way while the outer part follows US 29 (North Tryon Street), before leaving US 29 right-of-way to proceed to and through the campus of UNCC. The Northeast Corridor Light Rail Project includes 13 stations, 26 railcars, and seven park-and-ride lots that would provide a total of 4,500 spaces. Peak period light rail service along the Northeast Corridor would initially operate at 7.5-minute frequencies.

The purpose of the project is to improve transit travel times in a congested travel corridor that is expected to experience significant growth in the coming years. The project would result in improved transit service to key employment, entertainment, cultural, and retail areas of Charlotte, including Center City Charlotte, professional sports and entertainment facilities, the Charlotte Convention Center, the NASCAR Hall of Fame, and both UNCC and its Uptown campus.

Summary Description	
<b>Proposed Project:</b>	Light Rail 10.6 Miles 13 Stations
<b>Total Capital Cost (\$YOE):</b>	\$1,180.03 Million (includes \$40.8 million in finance charges)
<b>Section 5309 New Starts Share (\$YOE):</b>	\$590.02 Million (50.0%)
<b>Annual Forecast Year Operating Cost:</b>	\$20.14 Million
<b>Ridership Forecast (2030):</b>	23,800 Average Weekday Boardings 12,900 Daily New Riders
<b>Opening Year Ridership Forecast (2019):</b>	17,561 Average Weekday Boardings
<b>FY 2011 Local Financial Commitment Rating:</b>	Medium
<b>FY 2011 Project Justification Rating:</b>	Medium
<b>FY 2011 Overall Project Rating:</b>	Medium

## Project Development History and Current Status

The Northeast Corridor Light Rail Project is the result of a series of studies focused on transit improvements in the corridor and in the Charlotte-Mecklenburg region as a whole. CATS initiated a Draft Environmental Impact Statement (EIS) in the corridor in 2005, resulting in the selection of LRT as the locally preferred alternative (LPA) in June 2006. After continued environmental, engineering, and other technical work, as well as reconfirmation of CATS' dedicated sales tax revenue source to expand its system, the project was approved by FTA into preliminary engineering in November 2007. The current financial plan, recently revised to reflect lower sales tax revenue due to the national economic downturn, would support the start of revenue operations in 2019. However, the schedule for completing the environmental review in March 2011 and advancing to a FFGA in 2012 has not been adjusted to reflect the change in the financial plan. CATS remains hopeful that a 2016 opening year is still possible if sales

tax revenue – the primary source of funding for CATS – exceeds current expectations. FTA is monitoring CATS' reconciliation of the 3-year discrepancy between the financial plan and the construction schedule.

### **Significant Changes Since FY 2009 Evaluation (November 2007)**

The capital cost of the project increased substantially – from \$750 million (YOE) to the current estimate of \$1,180 million (YOE). The ridership projections have also increased substantially – from 10,500 to 23,800 forecasted average daily riders. The cost increases are due in large part to design changes aimed to accommodate higher ridership projections such as increasing the number of railcars, increasing the length of station platforms, adding a new parking garage, and adding several grade separations. The higher ridership projections are based on the experience of the South Corridor project, which introduced light rail to Charlotte in November 2007. The South Corridor had significantly higher-than-expected ridership.

### **Project Justification Rating: Medium**

The project justification rating is based on the weighted average of the ratings assigned to each of the following criteria: the cost-effectiveness criterion is weighted 20 percent; the transit supportive land use criterion is weighted 20 percent; the economic development criterion is weighted 20 percent; the mobility improvements criterion is weighted 20 percent; the environmental benefits criterion is weighted 10 percent; and the operating efficiencies criterion is weighted 10 percent.

### ***Cost Effectiveness Rating: Medium***

The cost effectiveness rating reflects the level of travel-time benefits (9,600 to 12,700 hours each weekday) relative to the project's capital and operating costs based upon a comparison to a baseline alternative. Note the modeling approach taken by CATS acknowledges the uncertainty in predicting how travelers will respond to improved transit service. The result is a range of benefit estimates. Both ends of the range garner a *Medium* rating.

<b>Cost Effectiveness</b>	
	<b><u>New Start vs. Baseline</u></b>
Cost per Hour of Transportation System User Benefit	\$16.01 to \$20.45*
Incremental Cost per Incremental Trip	\$1.96 to \$15.28

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

### ***Transit-Supportive Land Use Rating: Low***

The land use rating reflects the population and employment densities within ½-mile of proposed station areas.

- There are 59,000 employees in the Charlotte CBD, a total of 76,000 jobs served, and average station area population densities of 2,300 persons per square mile. UNCC, with an enrollment of 21,500 students, represents a major trip generator.
- The CBD has a compact, high-density commercial core and a considerable amount of new residential development, as well as vacant land and parking lots awaiting development. Four stations abut industrial areas and rail yards on one side, and older, gridded residential neighborhoods of moderate densities (primarily single-family) on the other. The remaining stations are generally low-density and suburban in character. Pedestrian accessibility is generally poor as many street frontages lack sidewalks and many intersections lack marked and signalized crossings. Ample surface parking is generally provided.

***Economic Development Rating: Medium-High***

The economic development rating is based upon the average of the ratings assigned to the subfactors below.

**Transit-Supportive Plans and Policies: Medium-High**

- In the mid-1990s, the City of Charlotte and Mecklenburg County endorsed a regional growth strategy entitled “Centers and Corridors,” which is designed to increase development density in five growth corridors served by fixed guideway transit and target most commercial and multi-family development to these corridors. The city and county have developed more specific development policies to support these plans, including minimum densities and pedestrian-friendly design guidelines for station areas.
- Draft Station Area Concepts have been completed for 12 of the 14 station areas in the Northeast Corridor and will serve as an interim step towards developing more detailed station area plans. With the exception of some existing single-family neighborhoods, these plans will require high density transit-supportive development, including minimum densities consistent with regional policies (15 to 20 dwelling units per acre and 0.5 to 0.75 floor area ratio or FAR).
- Existing zoning varies widely. Mixed-use districts allowing high densities and including pedestrian design requirements encompass most of the CBD. Other zoning includes a mix of single family, multi-family at 17 to 22 units per acre, and commercial development with maximum FARs from 0.5 to 1.0.
- In 2003, the Charlotte City Council adopted three transit oriented development (TOD) districts that allow mixed-use development, require minimum densities, and have reduced minimum setbacks, parking requirements, and pedestrian design requirements. The city has applied these to some properties in the South Corridor.
- The city has allocated \$50 million for South Corridor LRT station area infrastructure improvements and will request a similar program of improvements for the Northeast Corridor Light Rail Project. Other tools to support TOD include funds for acquisition of land and affordable housing, gap financing, project-specific planning assistance, and a streamlined development review process.

**Performance and Impacts of Policies: Medium**

- The Charlotte CBD has seen a considerable amount of residential as well as commercial development in recent years. In the South Corridor, the pace of development has been slow but is accelerating with \$300 million in projects completed and over \$1.5 million proposed in station areas outside of Uptown.
- Strong regional growth is forecast (75 percent by 2030) and a market analysis for the Northeast Corridor suggested that just over 5,000 acres (84 percent of station area land) had the potential for redevelopment. Current market conditions in most Northeast Corridor station areas are relatively weak, however, and barriers exist that appear to limit development potential in the near term.

**Other Project Justification Criteria**

Mobility Improvements Rating: Medium-High		
Transportation System User Benefits Per Passenger Mile (Minutes)	<u>New Start vs. Baseline</u> 5.2	
Number of Transit Dependents Using the Project	4,700	
Transit Dependent User Benefits per Passenger Mile (Minutes)	6.3	
Environmental Benefits Rating: High		
<u>Criteria Pollutant Status</u> 8-hour Ozone (O <sub>3</sub> )	<u>EPA Designation</u> Moderate Non-attainment Area	
Operating Efficiencies Rating: Medium		
System Operating Cost per Passenger Mile (current year dollars)	<u>Baseline</u> \$0.77	<u>New Start</u> \$0.67

**Local Financial Commitment Rating: Medium**

The local financial commitment rating is based on the weighted average of the ratings assigned to each of the following criteria: the New Starts share of project costs is weighted 20 percent; the strength of the capital finance plan is weighted 50 percent; and the strength of the operating finance plan is weighted 30 percent.

**Section 5309 New Starts Share of Total Project Costs: 50.0%**

**Rating: Medium**

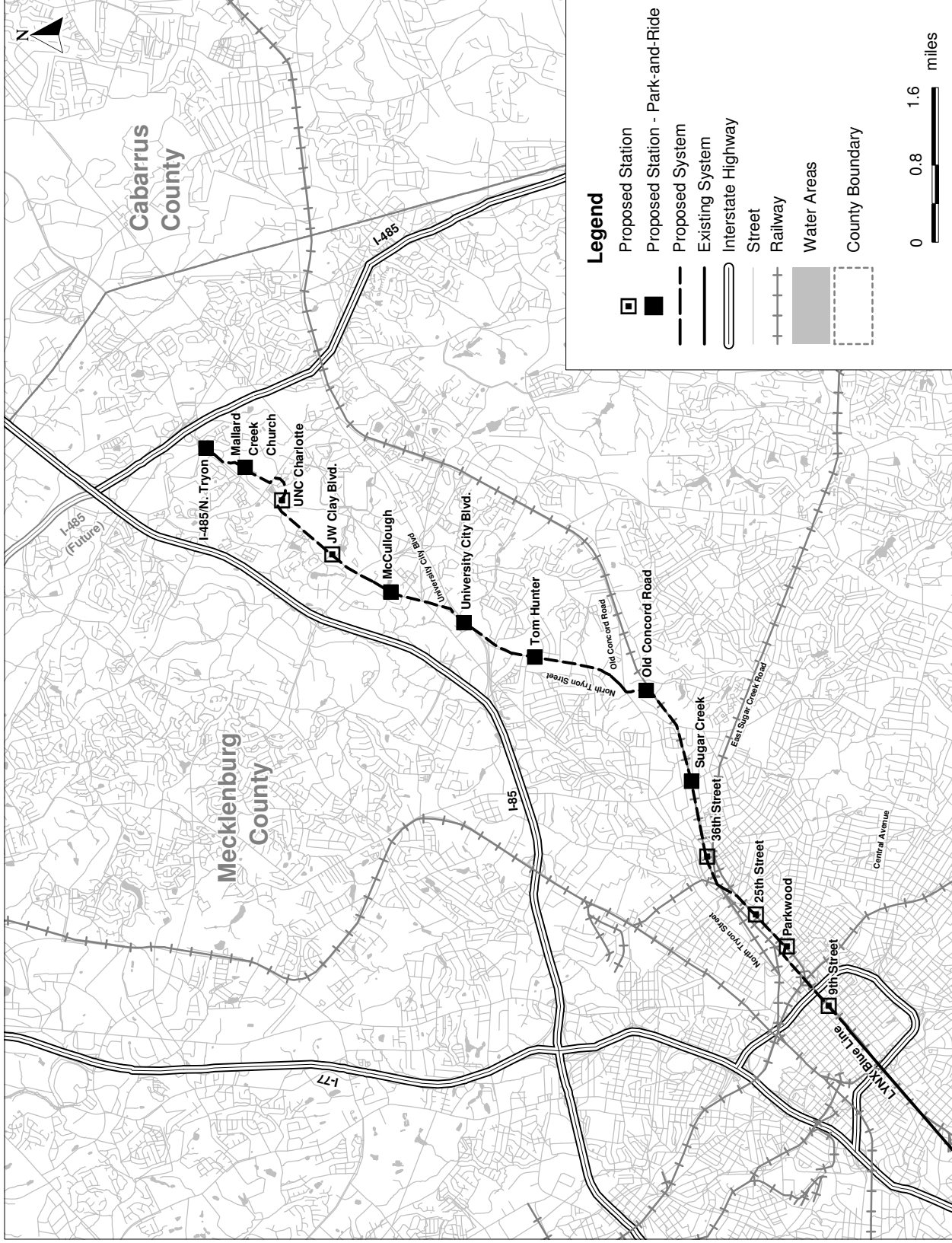
<b>Locally Proposed Financial Plan</b>		
<b><u>Source of Funds</u></b>	<b><u>Total Funds (\$million)</u></b>	<b><u>Percent of Total</u></b>
<b>Federal:</b> Section 5309 New Starts	\$590.02	50.0%
<b>State:</b> State Full Funding Grant Agreement	\$295.00	25.0%
<b>Local:</b> ½ Cent Sales Tax	\$295.00	25.0%
<b>Total:</b>	<b>\$1,180.03</b>	<b>100.0%</b>

**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.



# Northeast Corridor Light Rail Project

Charlotte, North Carolina



# Portland-Milwaukie LRT

## Portland, Oregon

(November 2009)

The Tri-County Metropolitan Transportation District of Oregon (TriMet) proposes to construct a 7.3-mile, double-track light rail transit (LRT) extension of the existing Yellow Line from the downtown Portland transit mall across the Willamette River, to southeast Portland, the city of Milwaukie, and urbanized areas of Clackamas County. The project includes construction of a new multimodal bridge across the Willamette River (a 1.3-mile segment that will include joint operations for buses, light rail and streetcars), ten new stations, two 1,000-space structured park-n-ride facilities, expansion of an existing maintenance facility, and the acquisition of 21 Light Rail Vehicles (LRVs). The majority of the extension would be at grade (5.5 miles), with 1.8 miles below grade along an existing Union Pacific Railroad right-of-way.

The project will link downtown Portland with regional educational institutions, dense urban neighborhoods, and emerging growth areas in East Portland and Milwaukie. Service will operate at 7.5-minute peak period frequencies. The project is Phase II of a major transit investment strategy for the South Corridor. The South Corridor I-205/Portland Mall LRT represents Phase I.

The Willamette River separates most of the corridor from downtown Portland and the South Waterfront. The corridor's only highway (Highway 99E), which provides access to downtown Portland via the existing Ross Island, Hawthorne, Morrison, and Burnside bridges, is limited to two through-lanes in each direction for much of the segment between Milwaukie and central Portland, most of which is congested. The corridor's transit network is structured around five north/south and three east/west trunk bus lines with approximately 7,600 and 10,600 passenger trips across the Willamette River each weekday, respectively. All of the north-south trunk routes operate across the Hawthorne Bridge, which has slow operating speeds due to congestion, narrow clearances and frequent lift span openings. The east-west trunk routes cross the Ross Island Bridge, which has congested approaches. None of the existing river crossings provide easy access to key markets in the corridor such as the South Waterfront and the Oregon Museum of Science and Industry. The LRT extension, via the new multimodal bridge, would provide more direct access to key markets and provide faster and more reliable travel times than bus service.

### Summary Description

<b>Proposed Project:</b>	Light Rail Transit 7.3 Miles 10 Stations
<b>Total Capital Cost (\$YOE):</b>	\$1,471.76 Million (includes \$257.1 million in finance charges)
<b>Section 5309 New Starts Share (\$YOE):</b>	\$735.86 Million (50.0%)
<b>Annual Forecast Year Operating Cost:</b>	\$10.18 Million
<b>Ridership Forecast (2030):</b>	27,400 Average Weekday Boardings 10,200 Daily New Riders
<b>Opening Year Ridership Forecast (2016):</b>	22,000 Average Weekday Boardings
<b>FY 2011 Local Financial Commitment Rating:</b>	Medium
<b>FY 2011 Project Justification Rating:</b>	Medium-High
<b>FY 2011 Overall Project Rating:</b>	Medium-High

## Project Development History and Current Status

TriMet included the Milwaukie LRT line in the North Corridor/South Corridor Draft Environmental Impact Statement (DEIS) that was published in 1998 and updated as the South Corridor supplemental DEIS in December 2002. The South Corridor was selected as the locally preferred alternative (LPA) in 2003. The LPA was reaffirmed in the Metro Council's (local metropolitan planning organization-MPO) long-range plan in May 2003 and again in July 2008. The LPA was included in the MPO's financially-constrained long-range plan in June 2007.

In April 2003, the Metro Council adopted a two-phased major transit investment strategy for the South Corridor. The Interstate 205/Portland Mall LRT line was selected as Phase I, followed by the Portland-Milwaukie LRT as Phase II. Phase I opened for revenue service in September 2009. Phase II would connect with Phase I along the Portland Mall.

FTA approved the Portland-Milwaukie LRT project into preliminary engineering in March 2009. The schedule assumes publication of a Final EIS in February 2010, a Record of Decision (ROD) in July 2010, and final design approval in late 2010.

There are several items related to the scope of the planned multimodal bridge across the Willamette River, including bridge location, design, environmental issues, navigational issues, transit operational issues, construction, and costs that must be resolved during preliminary engineering. In addition, the project has several freight railroad interfaces (Union-Pacific Railroad and Oregon Pacific Railroad) where the proposed LRT route crosses or parallels existing railroad facilities. These items could delay the completion of the Final EIS and ROD if not resolved in a timely manner, and could adversely impact the project's overall schedule and budget.

## Project Justification Rating: Medium-High

The project justification rating is based on the weighted average of the ratings assigned to each of the following criteria: the cost-effectiveness criterion is weighted 20 percent; the transit supportive land use criterion is weighted 20 percent; the economic development criterion is weighted 20 percent; the mobility improvements criterion is weighted 20 percent; the environmental benefits criterion is weighted 10 percent; and the operating efficiencies criterion is weighted 10 percent.

### Cost Effectiveness Rating: Medium

The cost effectiveness rating reflects the level of travel-time benefits (9,400 hours each weekday) relative to the project's capital and operating costs based upon a comparison to a baseline alternative.

Cost Effectiveness	
	<u>New Start vs. Baseline</u>
Cost per Hour of Transportation System User Benefit	\$20.78*
Incremental Cost per Incremental Trip	\$16.19

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

### ***Transit-Supportive Land Use Rating: Medium***

The land use rating reflects the population and employment densities within ½-mile of proposed station areas.

- Population density in proposed station areas averages 4,900 persons per square mile. Including LRT segments already completed or under construction, the proposed extension would provide a one-seat ride connecting 60,000 residents and 160,000 jobs.
- The majority of the corridor's downtown section is already built out at high densities and includes a pedestrian-friendly environment, a 200-foot grid street pattern, and wide sidewalks. The eastside station areas feature a mix of older medium-density single-family neighborhoods, pedestrian-friendly commercial development along several north-south streets (including some recent infill development), and a number of large industrial areas, some of which are directly adjacent to proposed station areas. Other auto-oriented uses, represented by a mix of industrial, warehouse, and commercial establishments, exists around two stations.

### ***Economic Development Rating: High***

The economic development rating is based upon the average of the ratings assigned to the subfactors below.

#### **Transit-Supportive Plans and Policies: High**

- Oregon's comprehensive planning system has been in place for more than 30 years. Land use laws play a major role in determining how cities and regions grow. Metro's Urban Growth Management Functional Plan requires that cities and counties define minimum densities for all residential zones, with typical policy targets of 45 to 60 persons per acre in transit station areas designated as growth centers. All of the jurisdictions within the corridor have adopted minimum densities (typically 80 percent of maximum allowed densities, consistent with policy targets).
- A number of area plans, neighborhood plans, and district plans explicitly incorporate the proposed Portland-Milwaukie LRT project as a central component of local areas' overall transportation and land use concepts. The proposed South Waterfront and Milwaukie stations serve designated local or regional centers, where a mix of land uses and transit-oriented development (TOD) are specified.
- Zoning in downtown Milwaukie allows maximum floor area ratios (FAR) of up to 4:1. Higher densities are allowed in the South Waterfront area. In Portland east of the Willamette River, maximum permitted residential densities along the main commercial corridors range from 40 to 125 dwelling units per acre. In the surrounding neighborhoods permitted residential densities range from approximately nine to 17 units per acre. Commercial development is permitted at FARs up to 3:1.
- Oregon has adopted tax abatement legislation that allows local jurisdictions to adopt ordinances that provide tax abatement for transit-supportive developments, and Portland has done this. Three of the proposed stations are in Urban Renewal Areas, entitling developers to additional financing tools such as tax-increment financing.

#### **Performance and Impacts of Policies: High**

- The region's urban growth boundary has helped protect open space from rapid, low-density development, while new LRT stations combined with supportive land use policies have spurred a variety of infill projects and new TODs. TriMet estimates that LRT in the region has spurred over \$6 billion in investment along transit corridors. The Metro Council's TOD Program has assisted 29 development projects currently under construction or completed.
- Although the project will connect a number of residential areas that are already built out, it will also pass directly through several major redevelopment areas. TriMet estimates that an additional five million square feet of development may occur over a 20-year period following completion of planned new developments. Strong regional growth is also forecast.

**Other Project Justification Criteria**

Mobility Improvements Rating: Medium-High		
Transportation System User Benefit Per Passenger Mile (Minutes)	<u>New Start vs. Baseline</u>	
	20.6	
	16,200	
Number of Transit Dependents Using the Project		
Transit Dependent User Benefits per Passenger Mile (Minutes)	6.4	
Environmental Benefits Rating: Medium		
<u>Criteria Pollutant Status</u>	<u>EPA Designation</u> Maintenance or Attainment Area for all pollutants	
Operating Efficiencies Rating: Medium		
System Operating Cost per Passenger Mile (current year dollars)	<u>Baseline</u>	<u>New Start</u>
	N/A	N/A

**Local Financial Commitment Rating: Medium**

The local financial commitment rating is based on the weighted average of the ratings assigned to each of the following criteria: the New Starts share of project costs is weighted 20 percent; the strength of the capital finance plan is weighted 50 percent; and the strength of the operating finance plan is weighted 30 percent.

**Section 5309 New Starts Share of Total Project Costs: 50.0%****Rating: Medium**

<b>Locally Proposed Financial Plan</b>		
<b><u>Source of Funds</u></b>	<b><u>Total Funds (\$million)</u></b>	<b><u>Percent of Total</u></b>
<b>Federal:</b> Section 5309 New Starts FHWA Flexible Funds (CMAQ / STP) – GARVEE Bonds	\$735.86	50.0%
	\$72.50	4.9%
<b>Local:</b> Oregon DOT/TriMet Bonds Other Local Funds Oregon DOT/TriMet Debt Service In Kind Contributions	\$280.00	19.0%
	\$175.40	11.9%
	\$170.00	11.6%
	\$38.00	2.6%
<b>Total:</b>	<b>\$1,471.76</b>	<b>100.0%</b>

**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 rating is based on the weighted average of the ratings assigned to each of the subfactors listed below. The agency capital condition is weighted 25 percent, the commitment of capital funds is weighted 25 percent, and the capital cost estimate, planning assumptions and capital funding capacity subfactor is weighted 50 percent.

**Agency Capital Condition: Medium**

- The average age of the bus fleet is 10.6 years, which is older than the industry average.
- TriMet's good bond ratings, which were issued in 2007, are as follows: Moody's Investors Service Aa3 and Standard & Poor's Corporation AAA.

**Commitment of Capital Funds: Medium-High**

- More than 50 percent of non-New Starts funding is committed. The sources of non-Section 5309 New Starts funds for the project are Surface Transportation Program (STP) and Congestion Mitigation and Air Quality (CMAQ)-backed GARVEE bonds, revenues derived from the local sales and use tax, State and TriMet bond proceeds, in kind contributions, and other (to-be-determined) local funds.

**Capital Cost Estimate, Planning Assumptions, and Financial Capacity: Medium-Low**

- Assumptions regarding tax revenue growth and expense growth are optimistic compared to historical experience. In addition, the plan does not adequately address how capital cost overruns or funding shortfalls could be addressed.
- Capital cost estimates were developed using unit costs consistent with historical and current construction costs in the Portland area.

***Operating Finance Plan Rating: Medium***

The operating finance plan rating is based upon the weighted average of the ratings assigned to each of the subfactors listed below. The agency operating condition is weighted 25 percent, the commitment of operating funds is weighted 25 percent, and the operating cost estimates, planning assumptions and operating funding capacity subfactor is weighted 50 percent.

**Agency Operating Condition: Medium-High**

- TriMet's current ratio of assets to liabilities as reported in its most recent audited financial statement is 3.13.
- TriMet is in excellent financial condition, demonstrating no historical cash flow shortages and no recent service cutbacks.

**Commitment of Operating and Maintenance Funding: High**

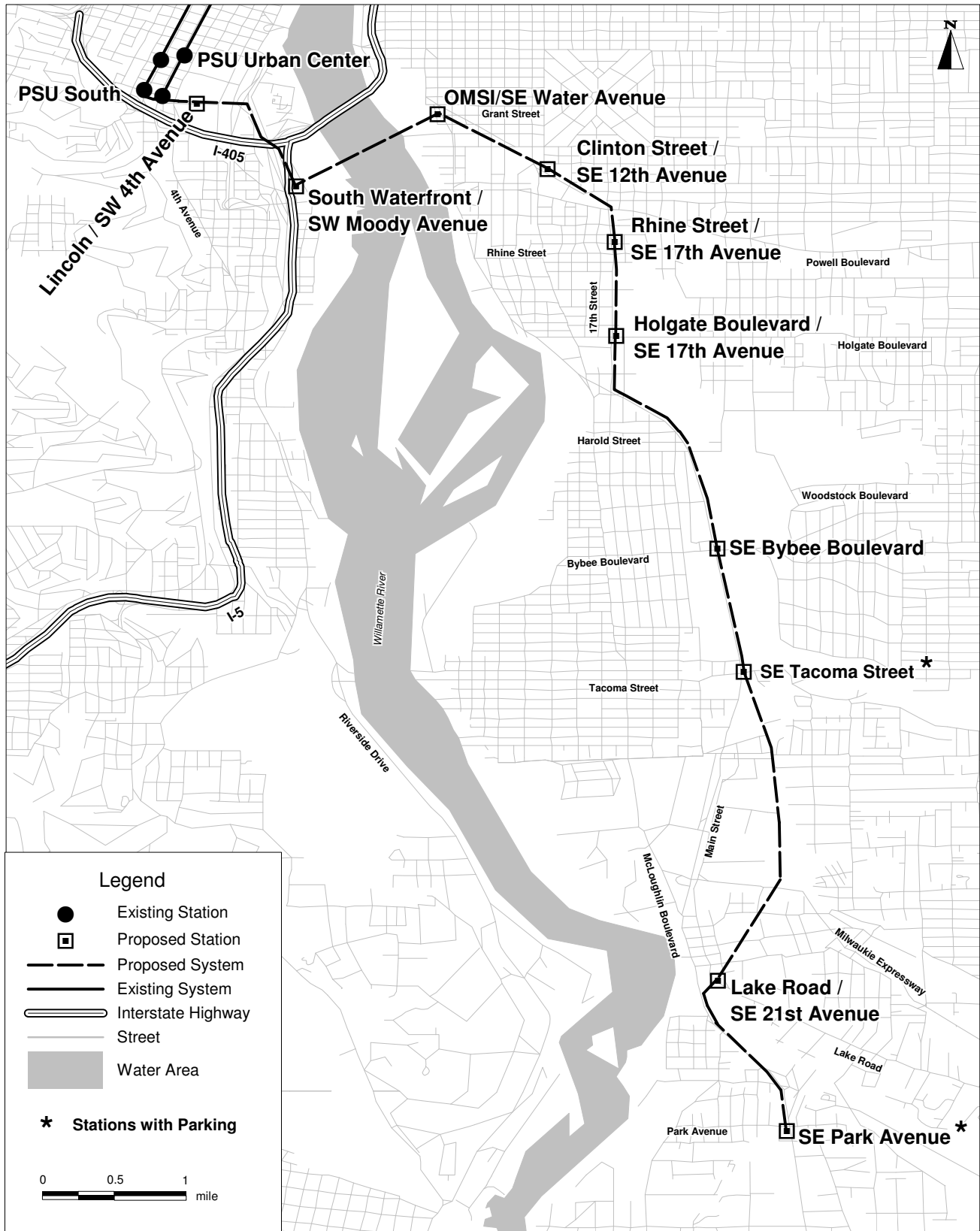
- All operating funding is committed, including fare revenues, increased sales and use tax revenues, and parking revenues.

**Operating Cost Estimates, Planning Assumptions, and Financial Capacity: Medium-Low**

- Several operating cost estimates and revenue forecasts are optimistic relative to historical experience.
- Projected cash balances and reserve accounts are more than 12 percent (1.5 months) of annual systemwide operating expenses.

# Portland-Milwaukie LRT

Portland, Oregon



# University Corridor LRT

## Houston, Texas

(November 2009)

The Metropolitan Transit Authority of Harris County (METRO) is proposing to construct an 11.3-mile, 19-station, light rail transit (LRT) line from the Hillcroft Transit Center to the Eastwood Transit Center. The LRT line would operate in an exclusive guideway with limited mixed traffic operations. The majority of the LRT line would operate at-grade (11 miles), while the remaining 0.36 miles would be elevated to avoid Union Pacific Railroad's tracks (between the proposed Newcastle and Wesleyan stations) and US 59 near the proposed Cummins Station. The project also includes the purchase of 32 light rail vehicles. Service would operate every six minutes during peak and off peak periods, including weekends, and would provide a transfer to the current METRO Rail Red Line for trips to downtown Houston and the Texas Medical Center. A total of 3,000 parking spaces would be also built.

Three major roads serve the corridor: US 59 (freeway), Westpark Road (major arterial) and Richmond Avenue (minor arterial). Currently, most segments of US 59 in the project corridor are very congested during peak hours. Traffic delays along Westpark Road and Richmond Avenue are excessive due to low roadway capacity and a large number of signalized intersections. Fifteen local bus routes currently serve the corridor with a combined ridership of 57,000 daily boardings. The LRT line would improve transit travel time and travel time reliability over enhanced bus service in the corridor because it will operate in a semi-exclusive right of way.

Summary Description	
<b>Proposed Project:</b>	Light Rail Transit 11.36 Miles 19 Stations
<b>Total Capital Cost (\$YOE):</b>	\$1,496.94 Million (includes \$170.2 million in finance charges)
<b>Section 5309 New Starts Share (\$YOE):</b>	\$748.47 Million (50.0%)
<b>Annual Forecast Year Operating Cost:</b>	\$15.84 Million
<b>Ridership Forecast (2030):</b>	49,000 Average Weekday Boardings 11,100 Daily New Riders
<b>Opening Year Ridership Forecast (2014):</b>	32,100 Average Weekday Boardings
<b>FY 2011 Local Financial Commitment Rating:</b>	Medium
<b>FY 2011 Project Justification Rating:</b>	Medium
<b>FY 2011 Overall Project Rating:</b>	Medium

METRO plans to use an innovative project delivery method. A Facility Provider team of engineering, construction management, and vehicle firms would complete design, finalize the construction phasing approach, and expedite construction. METRO and FTA plan to work closely to facilitate this project implementation approach.

## Project Development History and Current Status

METRO completed a Draft Environmental Impact Statement (DEIS) in August 2007. LRT was the preferred alternative. The DEIS did not include a recommendation for a specific route. In July 2008, in response to local community concerns regarding neighborhood disruption to an historic area, METRO altered an LRT alignment option in the corridor's eastern segment on Wheeler Avenue east of the current

Main Street LRT line. METRO plans to complete a Final EIS in early 2010. The project is included in the Houston-Galveston Area Council's 2035 *Regional Transportation Plan* and the 2008-2011 Transportation Improvement Program. The project is also included in the 2025 *METRO Solutions Plan* that was passed by voters in November 2003. FTA notified Congress of its intent to approve the project into preliminary engineering in November 2009 and took formal approval action in December 2009.

### **Project Justification Rating: Medium**

The project justification rating is based on the weighted average of the ratings assigned to each of the following criteria: the cost-effectiveness criterion is weighted 20 percent; the transit supportive land use criterion is weighted 20 percent; the economic development criterion is weighted 20 percent; the mobility improvements criterion is weighted 20 percent; the environmental benefits criterion is weighted 10 percent; and the operating efficiencies criterion is weighted 10 percent.

### ***Cost Effectiveness Rating: Medium***

The rating reflects the level of travel-time benefits (14,300 hours each weekday, including special events) relative to the project's capital and operating costs based upon a comparison to a baseline alternative.

<b>Cost Effectiveness</b>	
	<b><u>New Start vs. Baseline</u></b>
Cost per Hour of Transportation System User Benefit	\$19.71*
Incremental Cost per Incremental Trip	\$22.00

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

### ***Transit-Supportive Land Use Rating: Medium-Low***

The land use rating reflects the population and employment densities within ½-mile of proposed station areas.

- A total of 99,500 jobs are located in proximity to the University Corridor's stations, with the largest concentration near the stations serving Greenway Plaza. Population densities are moderate, averaging 8,000 people per square mile.
- Although development is intensifying in certain proposed station areas, most of the University Corridor is characterized by low-density commercial, light industrial, and mixed residential development. Streets are generally in a grid pattern, but pedestrian access is hindered by wide streets, elevated highways and overpasses, expansive parking lots, and in some cases missing sidewalks. Two universities are present, with many of their athletic facilities, housing and academic buildings within a half mile of the planned LRT route.

### ***Economic Development Rating: Medium***

The economic development rating is based upon the average of the ratings assigned to the subfactors below.

### ***Transit-Supportive Plans and Policies: Medium-Low***

- Limited efforts have been made at regional planning and growth management. In 2005 the Houston-Galveston Area Council (H-GAC) – local metropolitan planning organization – joined with the citizen-led Blueprint Houston to undertake Envision Houston Region, an initiative designed to create a regional "vision" for the future growth of the area. The results informed the 2035 Regional Transportation Plan to increase transit, but have not yet led to further implementation activities to shape regional land use patterns.

- Some station area planning activities have been initiated. METRO is undertaking a Station Area Work Program to address barriers to station area development, tools to leverage development, and a policy for the development of each station area. The City of Houston is developing an Urban Corridor Planning Ordinance, which will provide a planning framework for development in high capacity transit corridors and in specific station areas. METRO has established a joint development/transit-oriented development (TOD) program that will initiate specific development projects.
- The City of Houston is not zoned. Private deed restrictions are often used for both residential and commercial land development to ensure that standards for land use are maintained, but many of the neighborhoods in the University Corridor lack such covenants. Plans for the Tax Increment Reinvestment Zones (TIRZ) in the corridor include design guidelines to promote a more densely developed, pedestrian-friendly, walkable environment, but do not identify implementation mechanisms aside from financing infrastructure improvements.

#### **Performance and Impacts of Policies: Medium**

- Local officials believe the existing Red Line, which opened in January 2004, has been a catalyst for residential and commercial development in the city's downtown and Midtown areas. Moderate to strong growth is forecast for the University Corridor and small and large vacant and underutilized lots throughout the corridor provide additional development potential, if land use policies and market forces can be aligned.

#### ***Other Project Justification Criteria***

Mobility Improvements Rating: Medium-High		
Transportation System User Benefits Per Passenger Mile (Minutes)	<u>New Start vs. Baseline</u>	
	5.5	
	20,500	
Number of Transit Dependents Using the Project		
Transit Dependent User Benefits per Passenger Mile (Minutes)	6.5	
Environmental Benefits Rating: High		
<u>Criteria Pollutant Status</u> 8-Hour Ozone (O <sub>3</sub> )	<u>EPA Designation</u> Severe Non-Attainment Area	
Operating Efficiencies Rating: Medium		
System Operating Cost per Passenger Mile (current year dollars)	<u>Baseline</u>	<u>New Start</u>
	0.34	0.34

## **Local Financial Commitment Rating: Medium**

The local financial commitment rating is based on the weighted average of the ratings assigned to each of the following criteria: the New Starts share of project costs is weighted 20 percent; the strength of the capital finance plan is weighted 50 percent; and the strength of the operating finance plan is weighted 30 percent.

### ***Section 5309 New Starts Share of Total Project Costs: 50.0%***

#### ***Rating: Medium***

<b>Locally Proposed Financial Plan</b>		
<b><u>Source of Funds</u></b>	<b><u>Total Funds (\$million)</u></b>	<b><u>Percent of Total</u></b>
<b>Federal:</b> Section 5309 New Starts	\$748.47	50.0%
<b>Local:</b> METRO Dedicated Sales Tax	\$748.47	50.0%
<b>Total:</b>	<b>\$1,496.94</b>	<b>100.0%</b>

**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 rating is based upon the weighted average of the ratings assigned to each of the subfactors listed below. The agency capital condition is weighted 25 percent, the commitment of capital funds is weighted 25 percent, and the capital cost estimate, planning assumptions and capital funding capacity subfactor is weighted 50 percent.

#### **Agency Capital Condition: Medium-Low**

- The average age of METRO's bus fleet is 8.8 years, which is slightly older than the industry average.
- METRO has no outstanding debt. Therefore, no bond ratings have been issued.

#### **Commitment of Capital Funds: Medium**

- The non-Section 5309 New Starts funds would be provided by bond proceeds backed by sales tax revenues. The amount of bond financing contemplated in METRO's financial plan exceeds METRO's current authorized debt capacity, and it is likely that voter approval will be required for METRO to take on the additional debt beyond the currently approved limit. Thus, the funds are considered planned.

#### **Capital Cost Estimate, Planning Assumptions, and Financial Capacity: Medium**

- Assumptions on sales tax growth, inflation, and Federal funding are reasonable compared to historical experience.
- The capital cost estimate is reasonable.

### ***Operating Finance Plan Rating: Medium***

The operating finance plan rating is based upon the weighted average of the ratings assigned to each of the subfactors listed below. The agency operating condition is weighted 25 percent, the commitment of operating funds is weighted 25 percent, and the operating cost estimates, planning assumptions and operating funding capacity subfactor is weighted 50 percent.

**Agency Operating Condition: Medium-Low**

- METRO's current ratio of assets to liabilities, as reported in its most recent audited financial statements, was just over 1.0 in FY 2008.
- METRO's transit services have increased in the last five years.

**Commitment of Operating Funds: High**

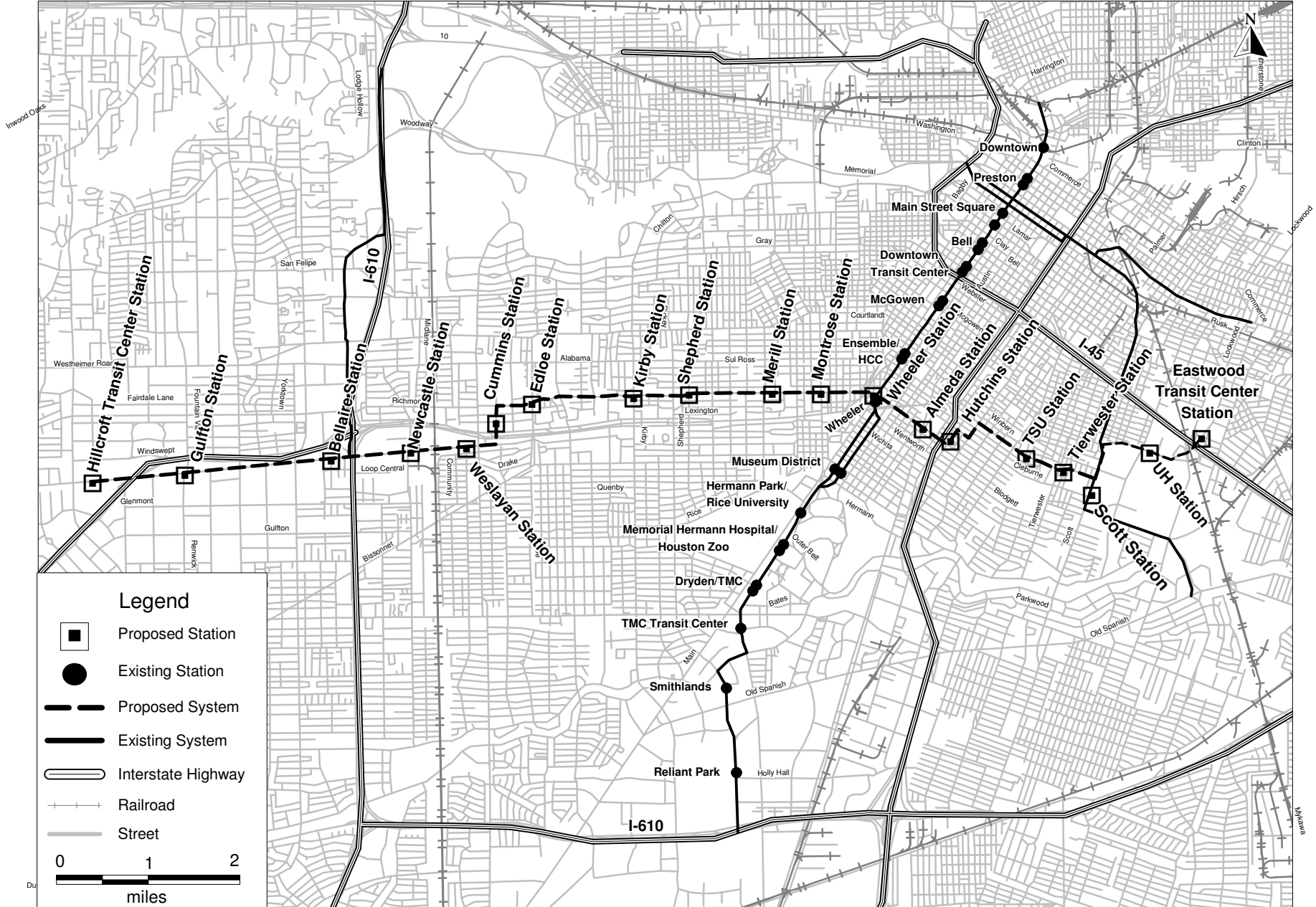
- Over 75 percent of operating funding, including fare revenues, sales tax revenues, operating grants, miscellaneous revenue (advertising and ID card fees), and interest income, is committed.

**Operating Cost Estimates, Planning Assumptions, and Financial Capacity: Medium-Low**

- Projections of growth in operating and maintenance costs and farebox revenues are optimistic compared to historical experience.
- The financial plan shows projected cash balances exceeding 25 percent of annual operating costs.

# University Corridor LRT

## Houston, Texas



# Draper Transit Corridor

## Draper, Utah

(November 2009)

The Utah Transit Authority (UTA) proposes to construct the Draper Transit Corridor, a three station, 3.8-mile light rail transit (LRT) extension to the existing North-South TRAX LRT line, which would operate primarily in existing and abandoned railroad right-of-way between the City of Sandy and the City of Draper. The LRT would run parallel to Interstate 15 (I-15), the primary transportation link between Salt Lake City, the University of Utah, Murray, Sandy, and Draper. The project scope includes the procurement of five new light rail vehicles and construction of three stations with park-and-ride lots totaling 1,400 spaces.

Draper is constrained by the Wasatch Front mountain range to the east and south and I-15 to the west. Major north-south roadways in the corridor, including State Street and I-15, are projected to have increased congestion due to a 35 percent population increase by 2030, coupled with job growth. Most of the area's growth is occurring in the eastern half of the City of Draper and north of the City of Sandy. Existing transit service connecting Draper to growth centers to the north is indirect and operates in a constrained roadway network. The proposed LRT extension will provide more direct service with better reliability to these high growth areas.

Summary Description	
<b>Proposed Project:</b>	Light Rail Transit 3.8 Miles 3 Stations
<b>Total Capital Cost (\$YOE):</b>	\$212.21 Million (Includes \$19.29 million in finance charges)
<b>Section 5309 New Starts Share (\$YOE):</b>	\$169.77 Million (80.0%)
<b>Annual Forecast Year Operating Cost:</b>	\$5.79 Million
<b>Ridership Forecast (2030):</b>	6,800 Average Weekday Boardings 1,400 Daily New Riders
<b>Opening Year Ridership Forecast (2013):</b>	2,275 Average Weekday Boardings
<b>FY 2011 Local Financial Commitment Rating:</b>	Medium
<b>FY 2011 Project Justification Rating:</b>	Medium
<b>FY 2011 Overall Project Rating:</b>	Medium

## Project Development History and Current Status

In 1992, UTA purchased the Union Pacific Railroad Company's Provo Industrial Lead right-of-way (ROW) located in Salt Lake County. In 2000, a South Salt Lake County Transit Corridors Analysis identified a transit corridor from the existing Sandy LRT station at 10000 South to 14600 South using the existing UTA purchased ROW. UTA included the Draper Transit Corridor in its FrontLines 2015 long range transit plan and program of projects in 2006. A Draper Transit Corridor alternatives analysis was prepared in 2007, which identified a minimal operating segment (MOS) from 10000 South to Draper Town Center. A locally preferred alternative for a light rail alignment running from 1000 South to 14600 South was adopted in 2008 by the Wasatch Front Regional Council.

FTA notified Congress of its intent to approve the project into preliminary engineering in November 2009 and took formal approval action in December 2009. The current project schedule assumes publication of

the Draft Environmental Impact Statement (EIS) in December 2009, and a Final EIS in June 2010. Final design approval is anticipated in summer 2010.

### **Project Justification Rating: Medium**

The project justification rating is based on the weighted average of the ratings assigned to each of the following criteria: the cost-effectiveness criterion is weighted 20 percent; the transit supportive land use criterion is weighted 20 percent; the economic development criterion is weighted 20 percent; the mobility improvements criterion is weighted 20 percent; the environmental benefits criterion is weighted 10 percent; and the operating efficiencies criterion is weighted 10 percent.

### ***Cost Effectiveness Rating: Medium-Low***

The cost effectiveness rating reflects the level of travel-time benefits (1,500 hours each weekday) relative to the project's annualized capital and operating costs based on a comparison to a baseline alternative.

<b>Cost Effectiveness</b>	
	<b><u>New Start vs. Baseline</u></b>
<b>Cost per Hour of Transportation System User Benefit</b>	\$25.48*
<b>Incremental Cost per Incremental Trip</b>	\$26.91

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

### ***Transit-Supportive Land Use Rating: Medium-Low***

The land use rating reflects the population and employment densities within ½-mile of proposed station areas.

- Existing land use along the corridor is primarily suburban residential. This land use pattern consists of single-family homes, suburban strip malls, and what remains of an agricultural past. Buildings are typically setback from the roadway or sidewalk, and in some instances there are no pedestrian facilities available. There are two station locations where land surrounding the proposed station sites is currently undeveloped.
- Average population density at proposed station areas is 6,500 persons per square mile. Total employment served is 62,862 (including 57,905 in the Salt Lake City Central Business District [CBD]). In the Salt Lake City CBD, the ratio of parking spaces to employees is 0.55, and generally parking is free and available in other station areas.

### ***Economic Development Rating: Medium***

The economic development rating is based upon the average of the ratings assigned to the subfactors below.

### ***Transit-Supportive Plans and Policies: Medium-Low***

- The region has placed a lot of emphasis on growth management and land conservation but has yet to realize its effects on actual growth. The Wasatch Front Regional Council and Envision Utah have both created documents that discuss strategies focused on growth management and land conservation, including possible implementation strategies. These strategies focus on increasing the transit options available, promoting redevelopment of existing developed land, and increasing density where appropriate. All of the regional localities have endorsed these strategies, but have not taken steps to create policies that would implement the strategies.

- The Draper Town Center area has received a special land use classification that is focused on promoting development centered on transit. The Draper planning commission and city council have held joint work sessions on transit-oriented development (TOD) around the light-rail station. These officials anticipate further changes to the city's development code to encourage and integrate appropriate land uses around transit stations.
- Existing zoning ordinances throughout the corridor permit low to moderate density residential development. Both the City of Draper and the City of Sandy have added zoning ordinances that allows for higher density mixed-use development at the Town Center and Civic Center transit station sites respectively. The other station sites along the alignment did not have zoning changes and will retain the low-density suburban residential character currently in place.
- A study examining the feasibility of TOD at the Draper Town Center found that the existing zoning ordinance would only allow for 12 dwelling units per acre of residential development on the proposed site after the required parking for the station had been sited. The study concluded that the zoning ordinance should be revised to allow for more density to make development more economically feasible for a private developer.

**Performance and Impacts of Policies: Medium**

- There are a number of developments currently being constructed in Salt Lake City along both existing TRAX light rail lines and extensions. For example, Gateway, which is developed along the existing TRAX line in Downtown Salt Lake City is a 30 acre mixed use development containing 684,000 square feet of retail space and 152 residences located in a 12 story tower. City Creek Center is another mixed use project under construction in Downtown adjacent to the existing light rail, developing up to 324,000 square feet of retail and 700 residences in high rise towers. Daybreak, which is a mixed use project being developed along a TRAX extension, will have 1.6 million square feet of retail, 2.6 million square feet of office space and 20,000 residences clustered around three stations.
- While there are some station locations where expanded development may be difficult because of existing residential neighborhoods, other locations have land that could be potentially developed when economic conditions are ideal. The Sandy Civic Center Station, the 11800 South Station and the Draper Town Center Station all have land that could be developed in the future. These sites could begin as park-and-ride lots, and be redeveloped into mixed-use development once conditions support such a development.

Mobility Improvements Rating: Medium		
Transportation System User Benefit Per Passenger Mile (Minutes)	<u>New Start vs. Baseline</u>	
	4.9	
	338	
Number of Transit Dependents Using the Project		
Transit Dependent User Benefits per Passenger Mile (Minutes)	8.9	
Environmental Benefits Rating: High		
<u>Criteria Pollutant Status</u> Particulate Matter (PM <sub>2.5</sub> )	<u>EPA Designation</u> Non-attainment Area	
Operating Efficiencies Rating: Medium		
System Operating Cost per Passenger Mile (current year dollars)	<u>Baseline</u>	<u>New Start</u>
	\$0.61	\$0.60

### **Local Financial Commitment Rating: Medium**

The local financial commitment rating is based on the weighted average of the ratings assigned to each of the following criteria: the New Starts share of project costs is weighted 20 percent; the strength of the capital finance plan is weighted 50 percent; and the strength of the operating finance plan is weighted 30 percent.

***Section 5309 New Starts Share of Total Project Costs: 80.0%***

***Rating: Low***

<b>Locally Proposed Financial Plan</b>		
<b><u>Source of Funds</u></b>	<b><u>Total Funds (\$million)</u></b>	<b><u>Percent of Total</u></b>
<b>Federal:</b> Section 5309 New Starts	\$169.77	80.0%
<b>Local:</b> UTA Local Sales Tax	\$38.24	18.0%
Right-of-Way Contribution	\$4.20	2.00%
<b>Total:</b>	<b>\$212.21</b>	<b>100.0%</b>

**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 rating is based upon the weighted average of the ratings assigned to each of the subfactors below. The agency capital condition is weighted 25 percent, the commitment of capital funds is weighted 25 percent, and the capital cost estimate, planning assumptions and capital funding capacity subfactor is weighted 50 percent.

**Agency Capital Condition: Medium**

- The average age of UTA's bus fleet is 6.8 years, which is in line with the industry average.
- UTA's bond ratings, issued in 2009, are as follows: Moody's Investors Service Aa3, Standard & Poor's AAA, and Fitch AA.

**Commitment of Capital Funds: High**

- All of the non-New Starts funding is committed or budgeted. Funding sources include revenues from UTA's dedicated sales tax and an in-kind contribution of the right-of-way previously purchased.

**Capital Cost Estimates, Planning Assumptions, and Financial Capacity: Medium**

- Sales tax revenue growth rate assumptions are in line with historical experience.
- The capital cost estimate of the project is considered current and reliable.
- UTA has adequate reserves and available debt capacity to cover cost increases or funding shortfalls greater than 12.5 percent of the estimated project cost.

***Operating Finance Plan Rating: Medium-High***

The operating finance plan rating is based upon the weighted average of the ratings assigned to each of the subfactors listed below. The agency operating condition is weighted 25 percent, the commitment of operating funds is weighted 25 percent, and the operating cost estimates, planning assumptions and operating funding capacity subfactor is weighted 50 percent.

**Agency Operating Condition: High**

- UTA's current ratio of assets to liabilities as reported in its most recent audited financial statement is 2.9.
- UTA is in excellent operating condition, demonstrating no historical cash flow shortages and no recent service cutbacks.

**Commitment of Operating Funds: High**

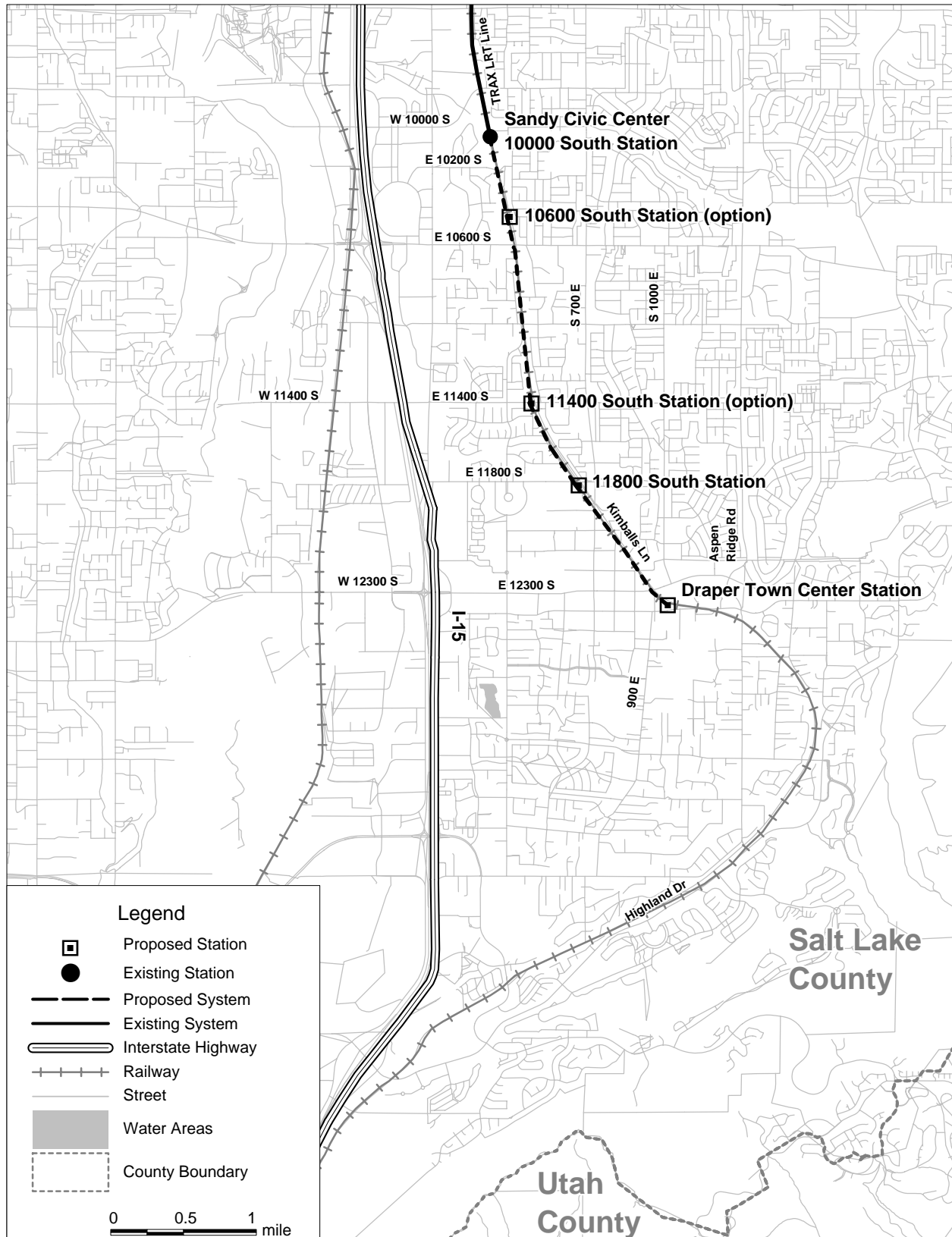
- The funds needed to operate and maintain UTA's systemwide operating costs are 99 percent committed. The primary operating funding source is the dedicated sales and use tax collected in the five counties served by UTA. Other sources include fare revenues, Section 5307 preventative maintenance funding, joint development income, advertising income and interest earnings.

**Operating Cost Estimates, Planning Assumptions, and Financial Capacity: Medium**

- Assumptions regarding growth in operating costs and sales tax revenues are consistent with historical experience.
- Farebox recovery is assumed to improve significantly over time due to assumed frequent fare increases.
- The project's financial plan shows ending cash balances and available reserve funds that equal 2.5 months of system-wide operating expenses.

# Draper Transit Corridor

## Salt Lake City, Utah



# Vancouver – Columbia River Crossing

## Vancouver, Washington

(November 2009)

The Washington State Department of Transportation (WSDOT) proposes to construct the Columbia River Crossing, an approximately \$5 billion multimodal project that includes replacement of Interstate 5 (I-5) bridges, new interchanges, variable electronic tolls across the new bridge, park-and-ride lots, and an extension of the existing light rail system. Partner agencies include the Oregon Department of Transportation, Tri-County Metropolitan Transportation District (TriMet), Southwest Washington Regional Transportation Council (the metropolitan planning organization for Clark County), Portland Metro (the metropolitan planning organization for the Portland region), Clark County Public Transit Benefit Area Authority (C-TRAN), and the cities of Vancouver and Portland. The transit portion of the project includes a 2.9-mile extension of TriMet's Yellow Line from the existing Expo Station in north Portland to Clark College in downtown Vancouver. The line includes an elevated transit structure over the North Portland Harbor, an elevated structure over the Columbia River via the new multimodal bridge and an at-grade portion in Vancouver. It also includes procurement of 16 light rail vehicles (LRVs) and construction of five stations and approximately 2,900 park-and-ride spaces. In addition, TriMet's current maintenance facility at Ruby Junction in the City of Gresham would be expanded. TriMet would operate the service under contract to C-TRAN.

I-5 is the primary north/south highway and the only crossing of the Columbia River in the corridor. It includes two drawbridges. Currently, congestion on I-5 reduces bus travel speeds and reliability. Congestion worsens when the bridges open to allow large river vessels to pass through. The LRT line would connect Portland and Vancouver – and link the region's largest and most concentrated employment area (downtown Portland) with the commercial and residential areas of Clark County. The transit project would provide direct links to the region's other LRT lines, streetcar lines, aerial tram, Amtrak passenger rail service and most TriMet and C-TRAN bus routes.

### Summary Description

<b>Proposed Project:</b>	Light Rail Transit 2.9 Miles 5 Stations
<b>Total Capital Cost (\$YOE):</b>	\$945.75 Million (Includes \$116.00 million in finance charges)
<b>Section 5309 New Starts Share (\$YOE):</b>	\$750.00 Million (79.3%)
<b>Annual Forecast Year Operating Cost:</b>	\$4.36 Million
<b>Ridership Forecast (2030):</b>	19,700 Average Weekday Boardings 10,900 Daily New Riders
<b>Opening Year Ridership Forecast (2018):</b>	13,800 Average Weekday Boardings
<b>FY 2011 Local Financial Commitment Rating:</b>	Medium
<b>FY 2011 Project Justification Rating:</b>	Medium
<b>FY 2011 Overall Project Rating:</b>	Medium

### Project Development History and Current Status

In 1993, FTA, in cooperation with Portland Metro began studying high-capacity transit in the "South/North Corridor" from Clackamas and Milwaukie, Oregon to Vancouver, Washington. The Draft Environmental Impact Statement (DEIS) was published in 1998 that identified a variety of LRT

alignments. Subsequent funding challenges, including a failed voter referendum in 1998, did not allow construction of the entire corridor to occur, but did allow for implementation of TriMet's Yellow Line through North Portland in 2004. The Governors of Washington and Oregon appointed a bi-state task force in 2001 to address concerns about congestion on I-5 between Portland and Vancouver. In June 2002, a Final Strategic Plan to improve transportation in the I-5 corridor between the I-405 interchange in Portland and the I-205 interchange in North Vancouver was adopted. A Draft EIS for the Columbia River Crossing project was published in May 2008. The Vancouver and Portland metropolitan planning organizations adopted the locally preferred alternative into their fiscally constrained long range transportation plans in July 2008. The U.S. Department of Transportation designated the multimodal project as a "high priority project" under Executive Order 13274 for Environmental Stewardship and Transportation Infrastructure Reviews.

FTA notified Congress of its intent to approve the project into preliminary engineering in November 2009 and took formal approval action in December 2009. The Final EIS is anticipated to be published in June 2010, with receipt of a Record of Decision anticipated in August 2010.

### **Project Justification Rating: Medium**

The project justification rating is based on the weighted average of the ratings assigned to each of the following criteria: the cost-effectiveness criterion is weighted 20 percent; the transit supportive land use criterion is weighted 20 percent; the economic development criterion is weighted 20 percent; the mobility improvements criterion is weighted 20 percent; the environmental benefits criterion is weighted 10 percent; and the operating efficiencies criterion is weighted 10 percent.

### ***Cost Effectiveness Rating: Medium***

The cost effectiveness rating reflects the level of travel-time benefits (6,100 hours each weekday) relative to the project's annualized capital and operating costs based on a comparison to a baseline alternative.

<b>Cost Effectiveness</b>	
	<b><u>New Start vs. Baseline</u></b>
<b>Cost per Hour of Transportation System User Benefit</b>	\$22.40*
<b>Incremental Cost per Incremental Trip</b>	\$13.82

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

### ***Transit-Supportive Land Use Rating: Medium***

The land use rating reflects the population and employment densities within ½-mile of proposed station areas.

- Station area population densities average 2,400 persons per square mile. Including Yellow Line segments that are existing or under construction, the project would provide a one-seat ride to nearly 43,000 residents and over 145,000 jobs.
- Three of the five proposed stations are in the Vancouver, WA Central Business District (CBD), the second largest in the region after Portland, OR, which features a grid street pattern, complete sidewalk network, and numerous pedestrian amenities, and contains over 12,000 jobs, over 95 percent of which would be within 1/2 mile of a station. The Clark College Station area is well-served by trails and sidewalks but lacks a grid street network, and most of the land uses closest to the station are athletic fields or open space. The Hayden Island Station is surrounded by a major highway interchange, massive shopping mall, and some low- to medium-density housing.

***Economic Development Rating: High***

The Economic Development rating is based upon the average of the ratings assigned to the subfactors below.

**Transit-Supportive Plans and Policies: High**

- Oregon’s comprehensive planning system has existed for more than 30 years and land use laws play a major role in determining how cities and regions grow. Portland Metro’s Urban Growth Management Functional Plan requires that cities and counties define minimum densities for all residential zones, with typical policy targets of 45 to 60 persons per acre in transit station areas designated as growth centers. Portland updated its comprehensive plan and implemented ordinances in order to comply with regional requirements.
- On the Washington side, state, county, municipal, and district plans and policies all promote transit- and pedestrian-friendly design and development character. Compact, mixed-use downtowns, complete streets, and downtown pedestrian amenities are all reflected in the Community Framework Plan as well as the Comprehensive Plan for Vancouver and the Vancouver City Center Vision & Subarea Plan. The city’s Transit Overlay District imposes minimum densities, increased maximum densities, and parking maximums. The Downtown District Plan also limits parking facilities, designates pedestrian corridors, and permits increased building heights.
- The City of Vancouver offers a multi-family housing tax exemption in the downtown area. The city has also designated two Revenue Development Areas (RDAs) which can be used to finance infrastructure improvements and has worked with private developers on large developments in both RDAs. Developments within the Transit Overlay District are eligible for up to 24 percent in transit impact fee reductions if certain conditions are met. Vancouver is also implementing an expedited permitting process.

**Performance and Impacts of Policies: High**

- TriMet estimates that light rail in the region has spurred over \$6.0 billion in investment along corridors in the Portland region. Metro’s Transit Oriented Development Program has assisted 29 development projects currently under construction or completed.
- In Vancouver, most of the land area within 1/2 mile of the four proposed stations falls within the CBD. A number of new projects in the southern part of downtown have already been completed, and many have taken advantage of reduced parking requirements and density bonuses allowed in the Transit Overlay District. Development goals, supported by a recent development capacity study, aim for over 3.5 million square feet of new commercial and institutional space, and 1,400 new residential units, in downtown Vancouver by 2023.

<b>Mobility Improvements Rating: Medium</b>	
<b>Transportation System User Benefit Per Passenger Mile (Minutes)</b>	<b><u>New Start vs. Baseline</u></b> 9.9
<b>Number of Transit Dependents Using the Project</b>	2,100
<b>Transit Dependent User Benefits per Passenger Mile (Minutes)</b>	9.7

Environmental Benefits Rating: Medium		
<u>Criteria Pollutant Status</u>	<u>EPA Designation</u> Maintenance or Attainment Area for all pollutants	
Operating Efficiencies Rating: Medium		
System Operating Cost per Passenger Mile (current year dollars)	<u>Baseline</u> 0.35	<u>New Start</u> 0.29

### **Local Financial Commitment Rating: Medium**

The local financial commitment rating is based on the weighted average of the ratings assigned to each of the following criteria: the New Starts share of project costs is weighted 20 percent; the strength of the capital finance plan is weighted 50 percent; and the strength of the operating finance plan is weighted 30 percent.

### ***Section 5309 New Starts Share of Total Project Costs: 79.3%***

#### ***Rating: High***

Section 173 of the FY 2010 Transportation, Housing and Urban Development Appropriations Act directs FTA to base the New Starts share rating for interstate, multi-modal projects located in an interstate highway corridor on the unified finance plan for the multi-modal project rather than only on the transit element of the plan. While the New Starts percentage reflected above and in the table below is calculated based solely on the transit project, the rating assigned reflects the legislative language, which lowers the New Starts share to 18.3 percent of the total cost of the multi-modal project (\$4,096.1 million).

<b>Locally Proposed Financial Plan</b>		
<b><u>Source of Funds</u></b>	<b><u>Total Funds (\$million)</u></b>	<b><u>Percent of Total</u></b>
<b>Federal:</b>		
Section 5309 New Starts	\$750.00	79.3%
Section 5307 Urbanized Area Formula Funds	\$57.34	6.1%
<b>State:</b>		
Transportation Partnership Account	\$10.02	1.1%
Toll Revenue Bonds	\$128.38	13.5%
<b>Total:</b>	<b>\$945.75</b>	<b>100.0%</b>

**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 rating is based upon the weighted average of the ratings assigned to each of the subfactors below. The agency capital condition is weighted 25 percent, the commitment of capital funds is weighted 25 percent, and the capital cost estimate, planning assumptions and capital funding capacity subfactor is weighted 50 percent.

**Agency Capital Condition: Medium**

- The average age of TriMet's bus fleet is 10.6 years, which is older than the industry average. The average age of C-TRAN's bus fleet is 6.4 years, which is in line with the industry average.
- WSDOT's good bond ratings, which were issued in July 2008, are as follows: Fitch AA, Moody's Investors Service A1, and Standard & Poor's Corporation AA+.

**Commitment of Capital Funds: Medium**

- Approximately five percent of the non-New Starts funding for the transit project is committed or budgeted. Funding sources include Washington Transportation Partnership funds, toll revenues and bond proceeds, and as yet-to-be-determined state and/or local funds.

**Capital Cost Estimates, Planning Assumptions, and Financial Capacity: Medium-Low**

- The interest rates and financing terms used were reasonable when the submittal was prepared. However, given current market conditions, the assumptions are now optimistic.
- The capital cost estimate is consistent with TriMet's methodologies, protocols, and unit costs, which are based on its recent experience completing the I-205/Portland Mall LRT project. Risks must be closely monitored as project development continues.

***Operating Finance Plan Rating: Medium***

The operating finance plan rating is based upon the weighted average of the ratings assigned to each of the subfactors listed below. The agency operating condition is weighted 25 percent, the commitment of operating funds is weighted 25 percent, and the operating cost estimates, planning assumptions and operating funding capacity subfactor is weighted 50 percent.

**Agency Operating Condition: Medium-High**

- TriMet's current ratio of assets to liabilities as reported in its most recent audited financial statement is 3.1. However, this includes assets and liabilities that are restricted to the Wilsonville to Beaverton Commuter Rail and I-205/Portland Mall LRT projects. After adjusting for these restricted items, the adjusted current ratio is 1.6. C-TRAN's current ratio of assets to liabilities as reported in its most recent audited financial statement is excellent at 9.23.
- TriMet has covered annual cash flow shortfalls during a prolonged regional recession with local funding sources and cash reserves. TriMet has increased paratransit and rail service significantly in the last few years along with minor increases in fixed route bus service. CTRAN has also increased service in recent years.

**Commitment of Operating Funds: High**

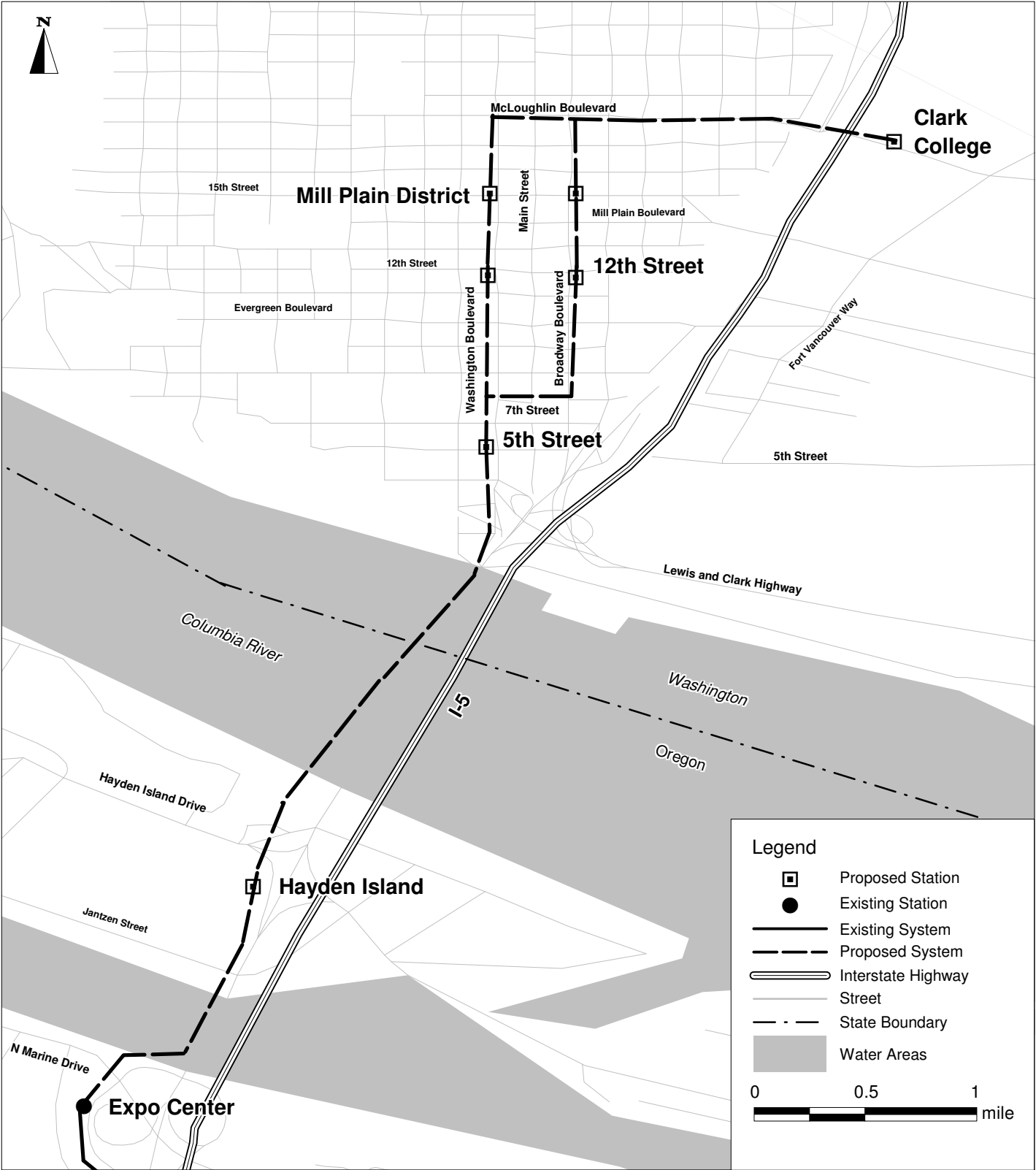
- Over 75 percent of operating funding, including fare revenues, sales tax revenues, operating grants, miscellaneous revenue (advertising), and interest income, for both TriMet and CTRAN is committed.

**Operating Cost Estimates, Planning Assumptions, and Financial Capacity: Medium-Low**

- Several assumptions supporting the operating and maintenance cost estimates and revenue forecasts are optimistic relative to historical experience, especially in the short term.

# Vancouver - Columbia River Crossing

Vancouver, Washington



# Project Development

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# East Bay BRT

## Oakland, California

(November 2009)

The Alameda-Contra Costa Transit District (AC Transit) is planning the East Bay Bus Rapid Transit (BRT) project, a 17-mile BRT line from Downtown Berkeley, through Downtown Oakland, to San Leandro, terminating at the San Leandro Bay Area Rapid Transit (BART) station on the southern end of the alignment. Forty-nine new stations would be constructed along the East Bay BRT and thirty-one buses would be purchased to augment the existing fleet. When completed, the East Bay BRT would provide a continuous 17-mile BRT system connecting the heavily transit-dependent communities of Berkeley, Oakland, and San Leandro.

The East Bay BRT would improve transit service to one of the densest, and most transit dependent, areas in the San Francisco Bay area. The corridor is served by extensive local and express service (Routes 1 and 1R) that operate with very frequent headways, but existing bus services are delayed by traffic congestion and constraints caused by operating in mixed traffic conditions. Additionally, there is a large population of transit dependent people; approximately 46 percent of the corridor residents are below the poverty level and 20 percent do not own a car. The proposed East Bay BRT will improve transit travel times significantly by providing over 14 miles of dedicated right-of-way for rapid bus service to major employment centers in Oakland and Berkeley for residents from Oakland, San Leandro, and other communities along the corridor.

Summary Description	
<b>Proposed Project:</b>	Bus Rapid Transit 16.9 Miles 49 Stations
<b>Total Capital Cost (\$YOE):</b>	\$234.55 Million
<b>Section 5309 Small Starts Share (\$YOE):</b>	\$75.00 Million (32.0%)
<b>Annual Operating Cost (YOE\$):</b>	\$4.90 Million
<b>Opening Year Ridership Forecast (2016):</b>	42,600 Average Weekday Boardings 6,800 Daily New Riders
<b>FY 2011 Local Financial Commitment Rating:</b>	High
<b>FY 2011 Project Justification Rating:</b>	Medium-High
<b>FY 2011 Overall Project Rating:</b>	High

There have been no significant changes to the scope, cost, or ridership estimates since the East Bay BRT was approved into project development in December 2008. Thus, no new information was submitted to FTA. However, FTA's process for rating project justification has changed since that time. This profile reflects the new process.

### Project Development History and Current Status

In 1999, AC Transit began a Major Investment Study to evaluate various alternative transportation solutions to improve mobility in the Broadway, Telegraph, International, and Shattuck Avenue corridors. In August 2001, the AC Transit board adopted BRT as the locally preferred alternative using Broadway and International Avenue alignments. In May 2004, AC Transit began preparation of a Draft Environmental Impact Statement (EIS) to evaluate BRT alternatives along Telegraph Avenue,

International Boulevard, and East 14<sup>th</sup> Street through Berkeley, Oakland, and San Leandro. The DEIS was published in May of 2007. FTA approved the project into Small Starts project development in December 2008.

The project's capital cost estimate appears reliable. The allocated contingency of 54 percent of construction costs should be more than adequate. However, risks associated with utility relocation, the use of allowances for right-of-way acquisition, and escalating labor and material prices will be addressed during project development

### **Project Justification Rating: Medium-High**

The project justification rating is based on the weighted average of the ratings assigned to each of the following criteria: the cost-effectiveness criterion is weighted 33 percent; the transit supportive land use criterion is weighted 33 percent and the economic development criterion is weighted 33 percent.

### ***Cost Effectiveness Rating: High***

The cost effectiveness rating reflects the level of travel-time benefits (6,800 hours each weekday) relative to the project's annualized capital and operating costs based on a comparison to a baseline alternative.

<b>Cost Effectiveness</b>	
	<b><u>New Start vs. Baseline</u></b>
Cost per Hour of Transportation System User Benefit	\$ 9.74*
Incremental Cost per Incremental Trip	\$ 9.71

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

### ***Transit-Supportive Land Use Rating: Medium***

The land use rating reflects the population and employment densities within ½-mile of proposed station areas.

- In 2000, the station area employment was 171,600. The CBD area employment was 65,000. In 2000, the station area population density was 13,900 persons per square mile.
- Existing development is variable in character. Major activity centers have highly urban characteristics including a mix of uses and pedestrian-friendly design. Lower density residential areas exist in the corridor and lack the necessary pedestrian and transit amenities. Daily parking in downtown Oakland is expensive. Parking around the University of California is extremely scarce.

### ***Economic Development Rating: Medium***

The economic development rating is based upon the average of the ratings assigned to the subfactors below.

### ***Transit-Supportive Plans and Policies: Medium-Low***

- The Metropolitan Transportation Commission has adopted a transit-oriented development policy that would be applied to transit expansion projects throughout the Bay Area.
- The FOCUS program provides an opportunity for local governments and regional agencies to work together to create livable, complete communities. The program designates near-term priority development areas as locations where development is encouraged and priority conservation areas as locations which include regionally significant open spaces for which there exists a broad consensus for long-term protection.

- Zoning codes around each of the proposed BRT stations is strongly supportive of transit-oriented development. Permitted residential densities range from 30 units per acre to 300 units per acre although some areas (especially in San Leandro) have zoned densities as low as 20 units per acre.
- High density areas in downtown Oakland have no minimum parking requirements; however all of the other areas along the corridor do have minimum parking requirements.
- Downtown Oakland has a maximum commercial Floor Area Ratio of 20.0.
- The City of Oakland is beginning a citywide review of its zoning along transit corridors in order to make them more transit friendly. However, the zoning codes around the majority of the proposed BRT stations include language that encourages mixed uses, pedestrian-oriented neighborhoods, and high densities.

#### **Performance and Impacts of Policies: Medium**

- The Fruitvale Transit Village in East Oakland is a four story mixed-use development with housing (including affordable units), office space, community services and a retail plaza.
- Despite its high level of existing development, more than 15,000 households, 40,000 residents, and 35,000 jobs are expected in the corridor by 2025. The growth rate for population and housing units in the corridor is projected to mirror the rate of Alameda County as a whole; however, the estimated employment growth rate is projected to be slower than in the County.
- There are many vacant or underutilized parcels in the corridor available for redevelopment.
- Market support for development in the corridor is strong in Oakland because of the area's central location, good accessibility, relatively affordable space costs and land prices, relatively affordable housing, accessibility to a well-educated workforce, proximity to a major university, and the availability of space and land for expansion with pre-existing infrastructure.

#### **Local Financial Commitment Rating: High**

The local financial commitment rating is based upon AC Transit's acceptable financial condition; a reasonable plan for funding for the non-Small Starts share of capital costs; and evidence that the operations and maintenance cost of the project is less than five percent of the agency's operating budget.

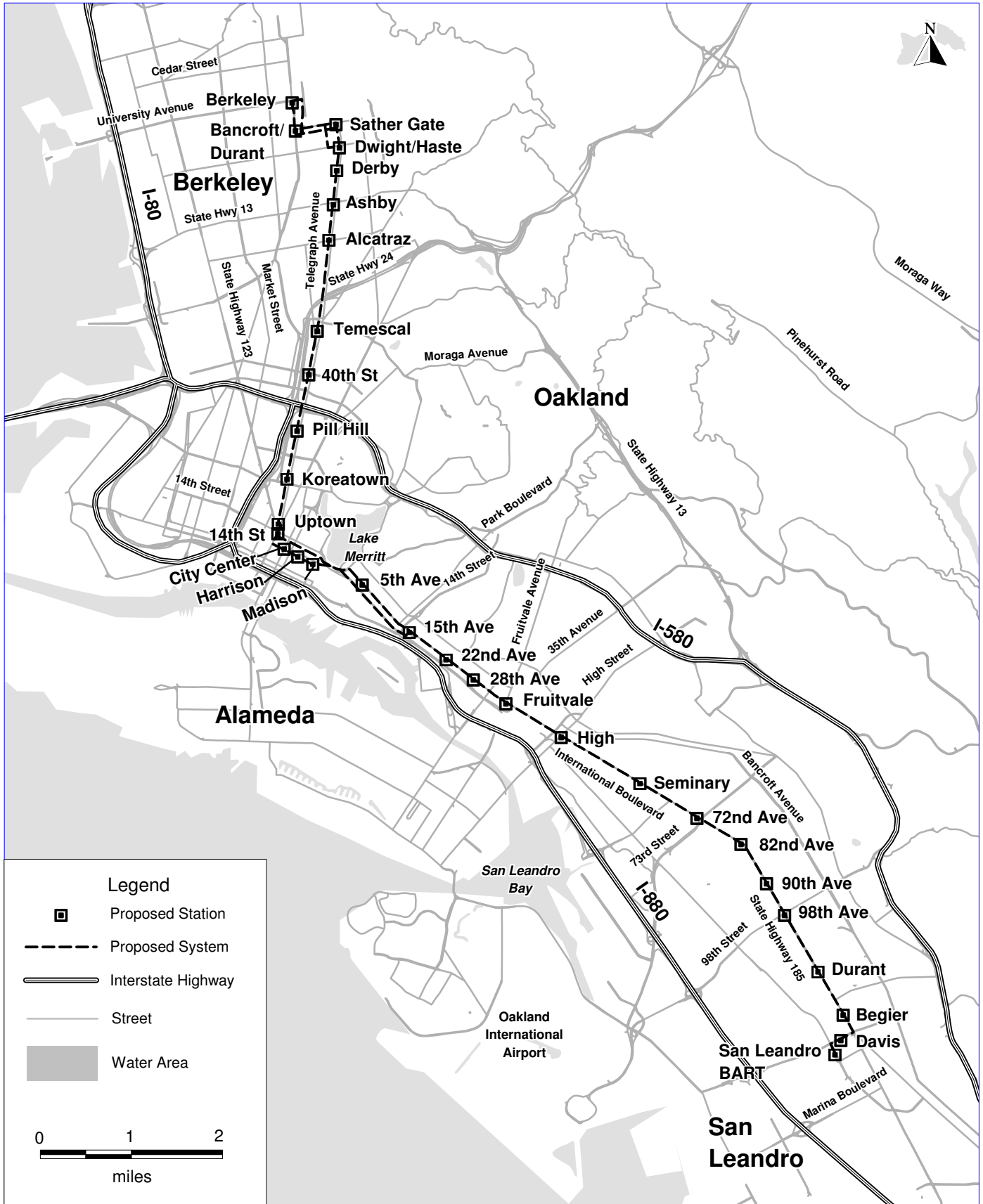
<b>Locally Proposed Financial Plan</b>		
<b><u>Source of Funds</u></b>	<b><u>Total Funds (\$million)</u></b>	<b><u>Percent of Total</u></b>
<b>Federal:</b>		
Section 5309 New Starts	\$75.00	32.0%
FHWA Flex Funds	\$35.00	14.9%
Section 5309 Bus Discretionary	\$2.09	0.9%
STIP Funds*	\$52.70	22.0%
<b>Local:</b>		
Regional Measure 2	\$48.74	20.8%
Alameda County Measure BAC Transit	\$20.98	8.9%
Capital Funding	\$0.04	0.5%
<b>Total:</b>	<b>\$234.55</b>	<b>100.0%</b>

**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.

\*State Transportation Improvement Program (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.

# East Bay BRT

## Oakland, California



## Perris Valley Line

### Riverside, California

(November 2009)

The Riverside County Transportation Commission (RCTC), in conjunction with the Southern California Regional Rail Authority, is proposing to construct a 24.35-mile extension to the Metrolink regional commuter rail system. The project is an extension of the existing Route 91 commuter rail line between Los Angeles and downtown Riverside southeast in an alignment parallel to the Ramona Expressway (I-215), serving the communities of Alessandro, Moreno Valley, and Perris, terminating at South Perris. The project includes four new stations and park-and-ride lots to accommodate 1,810 vehicles, as well as the acquisition of three bi-level coaches. The proposed project would operate with 30-minute headways during the morning and evening peak periods, as well as a single mid-day train, in the anticipated opening year of 2012.

Summary Description	
<b>Proposed Project:</b>	Commuter Rail 24.35 Miles 4 Stations
<b>Total Capital Cost (\$YOE):</b>	\$232.69 Million
<b>Section 5309 Small Starts Share (\$YOE):</b>	\$75.00 Million (32.2%)
<b>Annual Operating Cost (\$YOE):</b>	\$6.47 Million
<b>Opening Year Ridership Forecast (2012):</b>	4,300 Average Weekday Boardings 1,600 Daily New Riders
<b>FY 2011 Local Financial Commitment Rating:</b>	High
<b>FY 2011 Project Justification Rating:</b>	Medium
<b>FY 2011 Overall Project Rating:</b>	Medium-High

### Project Development History and Current Status

In 2002, RCTC initiated an alternatives analysis/Environmental Assessment to evaluate transportation strategies to alleviate congested conditions in a 38 mile corridor along Interstate 215, the major commuter route from Riverside County to San Bernardino and Orange Counties. In June 2003, the RCTC board adopted a 22-mile commuter rail extension as the locally preferred alternative (LPA). The LPA was adopted into the Southern California Association of Governments (SCAG) long-range plan in July 2004. Working with FTA, RCTC updated the SCAG regional travel model to produce reliable forecasts; this work was completed in early 2007. FTA approved the Perris Valley Line into Small Starts project development in December 2007.

### Significant Changes Since FY 2010 Evaluation (November 2008)

The capital cost of the project increased from \$168.88 million to \$232.69 million. RCTC made several changes to the project as a result of public comments and agency coordination during the environmental review process. A station was removed from the project near the University of California Riverside and a portion of the alignment was relocated near the northern termini. In addition, the cost estimate was updated to reflect a higher level of engineering, more defined project scope, and additional safety elements required by the Southern California Regional Rail Authority.

## **Project Justification Rating: Medium**

The project justification rating is based on the average of the ratings for cost effectiveness and transit-supportive land use. The revised weighting of the project justification criteria that took effect in July 2009 does not apply to this project. Per FTA's 2006 *Final Guidance on New Starts Policies and Procedures*, when FTA proceeds with policy/guidance changes, it ensures existing projects far along in the development process are not adversely impacted by allowing them to continue to be evaluated and rated under the old methodology.

### ***Cost Effectiveness Rating: Medium***

The rating is based on the level of travel-time benefits (3,060 average weekday hours) relative to the project's capital and operating costs based on a comparison to a baseline alternative.

<b>Cost Effectiveness</b>	
	<b><u>New Start vs. Baseline</u></b>
Cost per Hour of Transportation System User Benefit	\$17.82
Incremental Cost per Incremental Trip	\$24.88

### ***Transit-Supportive Land Use Rating: Medium-Low***

The rating is based upon the average of the ratings assigned to the subfactors below, each of which contribute one-third to the land use rating.

#### **Existing Land Use: Low**

- Total employment served in the Perris Valley Line station areas is 10,600. Average population density in station areas is 2,900 persons per square mile.
- The existing Metrolink terminus station in downtown Riverside serves a moderately-sized central business district containing 6,200 jobs and a number of institutional uses. The proposed stations are located in areas that are low-density residential, small scale neighborhood commercial, light industrial and manufacturing land uses. Three station areas are largely undeveloped.

#### **Transit-Supportive Plans and Policies: Medium-Low**

- One existing and one proposed station area are in traditional downtowns, each of which has a downtown specific plan that is supportive of transit, including creation of a pedestrian "promenade" in downtown Perris.
- Zoning in most areas outside of downtown Riverside is low to medium density. Future land uses in the three largely undeveloped station areas are planned to include commercial and industrial parks and park-and-ride lots.
- The State of California provides funding for transit-oriented development via a competitive grant application process. Visioning efforts have been conducted at the metropolitan (six-county) and county levels, involving multiple stakeholders.
- Some existing state, regional, and local economic and community development programs are available for general use in promoting development, such as tax increment financing, Enterprise Zones, and Assessment Districts; a few examples of their application were noted in downtown Riverside.

#### **Performance and Impacts of Policies: Medium-Low**

- Recent examples of transit-supportive development are found along the University Avenue Corridor in Riverside. Two projects to rehabilitate historic buildings have also been completed in the downtown area.
- Some new developments are proposed or underway, including commercial and residential development in downtown Riverside, and commercial development near Spruce Station.

However, no evidence was provided suggesting that recent or proposed developments in any of the proposed new station areas are transit-supportive.

- Most station areas include a significant amount of undeveloped land, and high regional and county growth rates support a market for future development (county population is forecast to grow 70 percent between 2000 and 2030).

### **Local Financial Commitment Rating: High**

The local financial commitment rating is based upon the RCTC's acceptable financial condition; a reasonable plan for funding for the non-Small Starts share of capital costs; evidence that the operations and maintenance cost of the project is less than five percent of the agency's operating budget; and a Small Starts share of less than 50 percent.

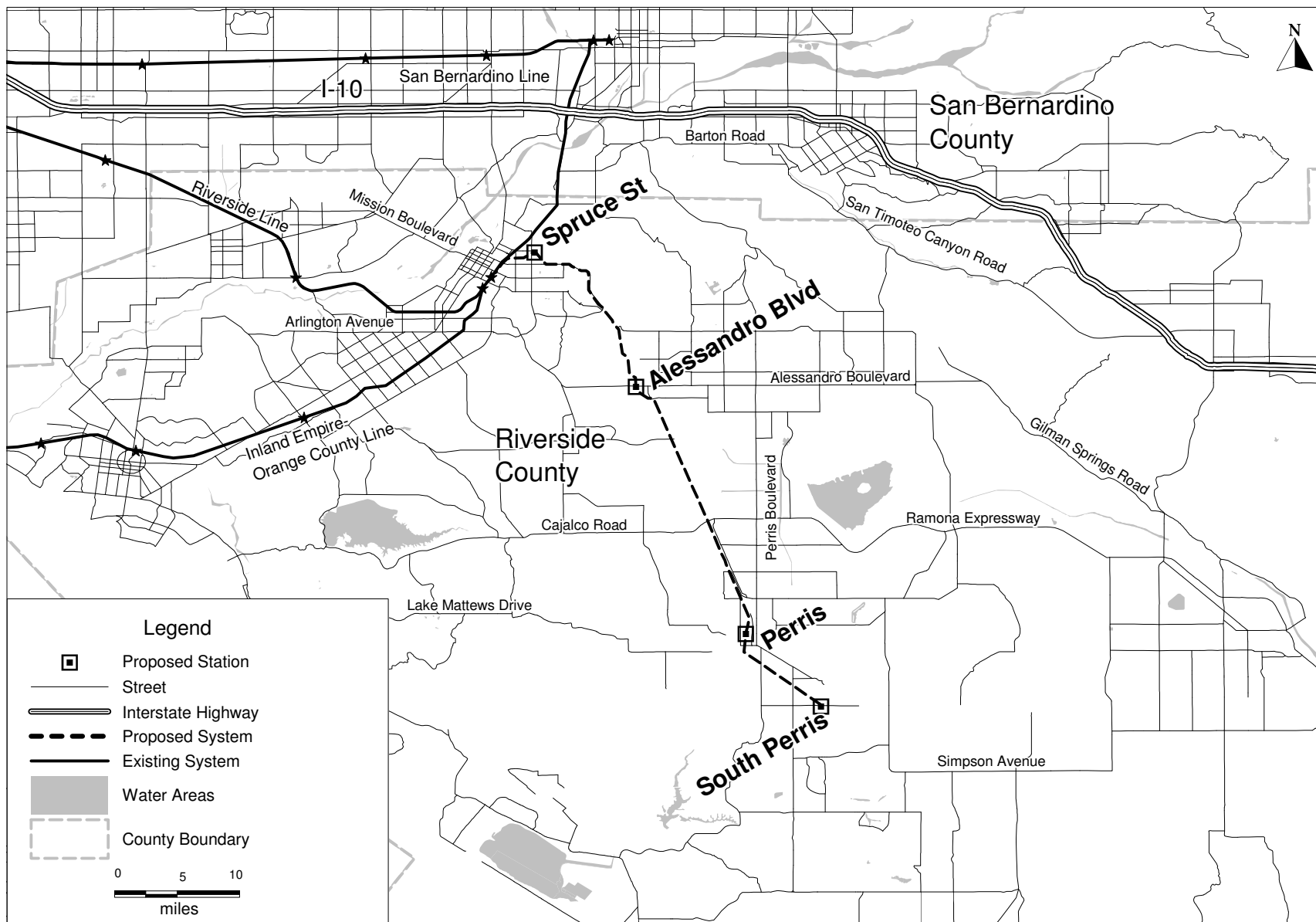
<b>Locally Proposed Financial Plan</b>		
<b><u>Source of Funds</u></b>	<b><u>Total Funds (\$million)</u></b>	<b><u>Percent of Total</u></b>
<b>Federal:</b>		
Section 5309 Small Starts	\$75.00	32.2%
Section 5307	\$26.16	11.2%
Section 5309 Fixed Guideway Modernization	\$9.51	4.1%
FHWA Flexible Funds (CMAQ and STP)	\$6.41	2.5%
STIP funds*	\$57.67	24.7%
<b>Local:</b>		
Measure A – Rail Capital Program	\$42.66	18.3%
Property Tax Sale Proceeds	\$15.28	6.6%
<b>Total:</b>	<b>\$232.69</b>	<b>100.0%</b>

**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.

\*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.

# Perris Valley Line

## Riverside, California



## **E Street Corridor sbX BRT**

### **San Bernardino, California**

(November 2009)

Omnitrans, the transit provider in San Bernardino County and the City of San Bernardino are proposing to construct a 15.7-mile bus rapid transit (BRT) project along E Street in San Bernardino. The proposed BRT project would provide a dedicated bus travel lane through the majority of the corridor from north of California State University at San Bernardino (CSUSB), generally following Kendall Drive south to E Street, through downtown San Bernardino, the City of Loma Linda, and through the Loma Linda University Medical Center to the VA Hospital, where the project would terminate. The project includes 16 new stations, improvements to E Street to accommodate exclusive BRT operations, and 14 new low-floor buses. Service would operate at 10-minute headways during weekday peak periods and 15 minute off-peak headways. The proposed E Street corridor project is the centerpiece for redevelopment plans for downtown San Bernardino and expansion plans for the Loma Linda University and Medical Center.

#### **Summary Description**

<b>Proposed Project:</b>	Bus Rapid Transit 15.7 Miles 16 Stations
<b>Total Capital Cost (\$YOE):</b>	\$191.71 Million (Includes \$5 million in finance charges)
<b>Section 5309 Small Starts Share (\$YOE):</b>	\$75.00 Million (39.1%)
<b>Annual Operating Cost (\$YOE):</b>	\$4.41 Million
<b>Opening Year Ridership Forecast (2013):</b>	5,600 Average Weekday Boardings 1,002 Daily New Riders
<b>FY 2011 Local Financial Commitment Rating:</b>	<b>Medium-High</b>
<b>FY 2011 Project Justification Rating:</b>	<b>Medium</b>
<b>FY 2011 Overall Project Rating:</b>	<b>Medium-High</b>

#### **Project Development History and Current Status**

The City of San Bernardino began an alternatives analysis in early 2004 to evaluate transportation options in a corridor served by Omnitrans Route 2, the highest performing bus route in the Omnitrans system. Omnitrans considered a variety of transit alternatives to serve the corridor from the CSUSB campus, through downtown San Bernardino, and south to Loma Linda. In December 2005, local stakeholders selected an exclusive guideway BRT as the locally preferred alternative (LPA). During 2005 and 2006, Omnitrans worked with local stakeholders to identify funding sources and station locations. FTA approved the project into project development in December 2007. FTA issued a Finding of No Significant Impact on September 4, 2009.

#### **Significant Changes Since FY 2010 Evaluation (November 2008)**

The capital cost estimate increased from \$163.39 million to \$191.71 million to reflect a higher level of design, increased contingency, inflation, and finance costs.

## **Project Justification Rating: Medium**

The project justification rating is based on the weighted average of the ratings assigned to each of the following criteria: the cost-effectiveness criterion is weighted 33 percent; the transit supportive land use criterion is weighted 33 percent and the economic development criterion is weighted 33 percent.

### ***Cost Effectiveness Rating: High***

The rating is based on the level of travel-time benefits (1,800 average weekday hours) relative to the project's annualized capital and operating costs based on a comparison to a baseline alternative.

<b>Cost Effectiveness</b>	
	<b><u>New Start vs. Baseline</u></b>
Cost per Hour of Transportation System User Benefit	\$ 12.24
Incremental Cost per Incremental Trip	\$ 29.87

### ***Transit-Supportive Land Use Rating: Medium-Low***

The land use rating reflects the population and employment densities within ½-mile of proposed station areas.

- Total employment served by all stations along the BRT project is 37,000, including the small downtowns of San Bernardino and Loma Linda which contain approximately 8,500 and 2,300 jobs respectively. The average population density for all station areas is 4,400 persons per square mile. Parking is generally available for free or at low cost.
- The proposed project corridor traverses the most intensively developed portions of the Cities of San Bernardino and Loma Linda and the San Bernardino Valley. Land uses and densities are varied along the corridor, and include two major university and medical campuses, low to medium density residential development, the historic downtown core of San Bernardino, and office complexes surrounded by surface parking. Most of the corridor is pedestrian-accessible, with sidewalks, signalized crossings, and amenities such as street trees and landscaping.

### ***Economic Development Rating: Medium-Low***

The economic development rating is based upon the average of the ratings assigned to the subfactors below.

#### **Transit-Supportive Plans and Policies: Medium-Low**

- During the E Street Corridor planning process, Omnitrans worked closely with the cities and corridor stakeholders to locate the stations at major existing activity centers or in areas with potential for transit-supportive uses. In addition, the LPA report includes transit-supportive land use guidelines as well as conceptual plans for six station areas.
- San Bernardino adopted a new general plan in 2005 which includes transit-supportive principles, including mixed-use development and incentives for pedestrian amenities and shared parking. In general, the highest densities of development are targeted towards the sbX corridor. Loma Linda has drafted a general plan with transit-supportive principles.
- Some commercial zoning categories allow mixing of uses. Both cities in the corridor are developing revised zoning regulations consistent with their general plan updates.
- The City of San Bernardino has incentives in its General Plan, such as density bonuses, to promote transit supportive uses and design. Nearly all of the proposed stations are in areas in which tax increment financing and other development incentives can be utilized. However, no examples were provided of the application of these incentives to leverage transit-supportive development.

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

- While several recent examples of transit-supportive development have occurred in the Southern California region, none were noted within the E Street Corridor. A major mixed-use redevelopment project is planned for the site of an aging mall in downtown San Bernardino and a proposed intermodal transit center will include joint development opportunities.
- A large portion of the proposed station areas (4,000 acres) lies within designated redevelopment areas. Commercial or institutional buildout of these areas could result in close to 30 million square feet and over 45,000 housing units of new development. Portions of Riverside and San Bernardino Counties are expected to add more than one million residents in the next 20 years, seeing the greatest percentage of growth in population for period 2000 to 2025 in the Southern California region. However, to date, there is little evidence that local growth is transit-supportive.

**Local Financial Commitment Rating: Medium-High**

The project's operating cost would be greater than five percent of Omnitrans' operating budget, and was therefore subject to an assessment of its local financial commitment. The local financial commitment rating is based on the weighted average of the ratings assigned to each of the following criteria: the New Starts share of project costs is weighted 20 percent; the strength of the capital finance plan is weighted 50 percent; and the strength of the operating finance plan is weighted 30 percent.

***Section 5309 New Starts Share of Total Project Costs: 39.1%******Rating: Medium-High***

<b>Locally Proposed Financial Plan</b>		
<b><u>Source of Funds</u></b>	<b><u>Total Funds (\$million)</u></b>	<b><u>Percent of Total</u></b>
<b>Federal:</b>		
Section 5309 Small Starts	\$75.00	39.1%
FHWA Flexible Funds (CMAQ)	\$11.60	6.0%
Section 5307	\$40.93	21.3%
STIP Funds*	\$5.00	2.6%
<b>State:</b>		
Proposition 1B Funds	\$10.74	5.6%
Transit Assistance Fund	\$1.30	0.6%
<b>Local:</b>		
San Bernardino County Measure 1	\$23.64	12.3%
City of San Bernardino, City of Loma Linda	\$7.11	3.7%
Local Transportation Fund	\$8.40	4.3%
Omnitrans	\$7.00	3.6%
<b>Private Sector:</b>		
Developer Contributions	\$0.98	0.1%
<b>Total:</b>	<b>\$191.71</b>	<b>100.0%</b>

**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.

\*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-High***

The capital finance plan rating is based upon the weighted average of the ratings assigned to each of the subfactors listed below. The agency capital condition is weighted 25 percent, the commitment of capital funds is weighted 25 percent, and the capital cost estimate, planning assumptions and capital funding capacity subfactor is weighted 50 percent.

**Agency Capital Condition: Medium**

- The average age of Omnitrans' bus fleet is seven years, which is in line with the industry average.
- Omnitrans has never issued bonds.

**Commitment of Capital Funds: High**

The majority of capital funding sources is committed. Sources of funds include: Federal Section 5307, 5309 Bus, and proposition 1B; local transportation funds, Measure I sales tax revenues, and in-kind contributions.

**Capital Cost Estimate, Planning Assumptions and Financial Capacity: Medium-High**

- Assumptions in the capital plan are in line with historical trends. Measure I sales tax revenue assumptions are more conservative than recent historical experience.
- The project's cost estimate reflects a high level of design and includes adequate project contingency.

***Operating Finance Plan Rating: Medium-High***

The operating finance plan rating is based upon the weighted average of the ratings assigned to each of the subfactors listed below. The agency operating condition is weighted 25 percent, the commitment of operating funds is weighted 25 percent, and the operating cost estimates, planning assumptions and operating funding capacity subfactor is weighted 50 percent.

**Agency Operating Condition: Medium-High**

- Omnitrans' current ratio of assets to liabilities as reported in its most recent audited financial statement is 2.3.
- Omnitrans is in good operating condition, with positive cash balances in 2007 and 2008.

**Commitment of Operating Funds: High**

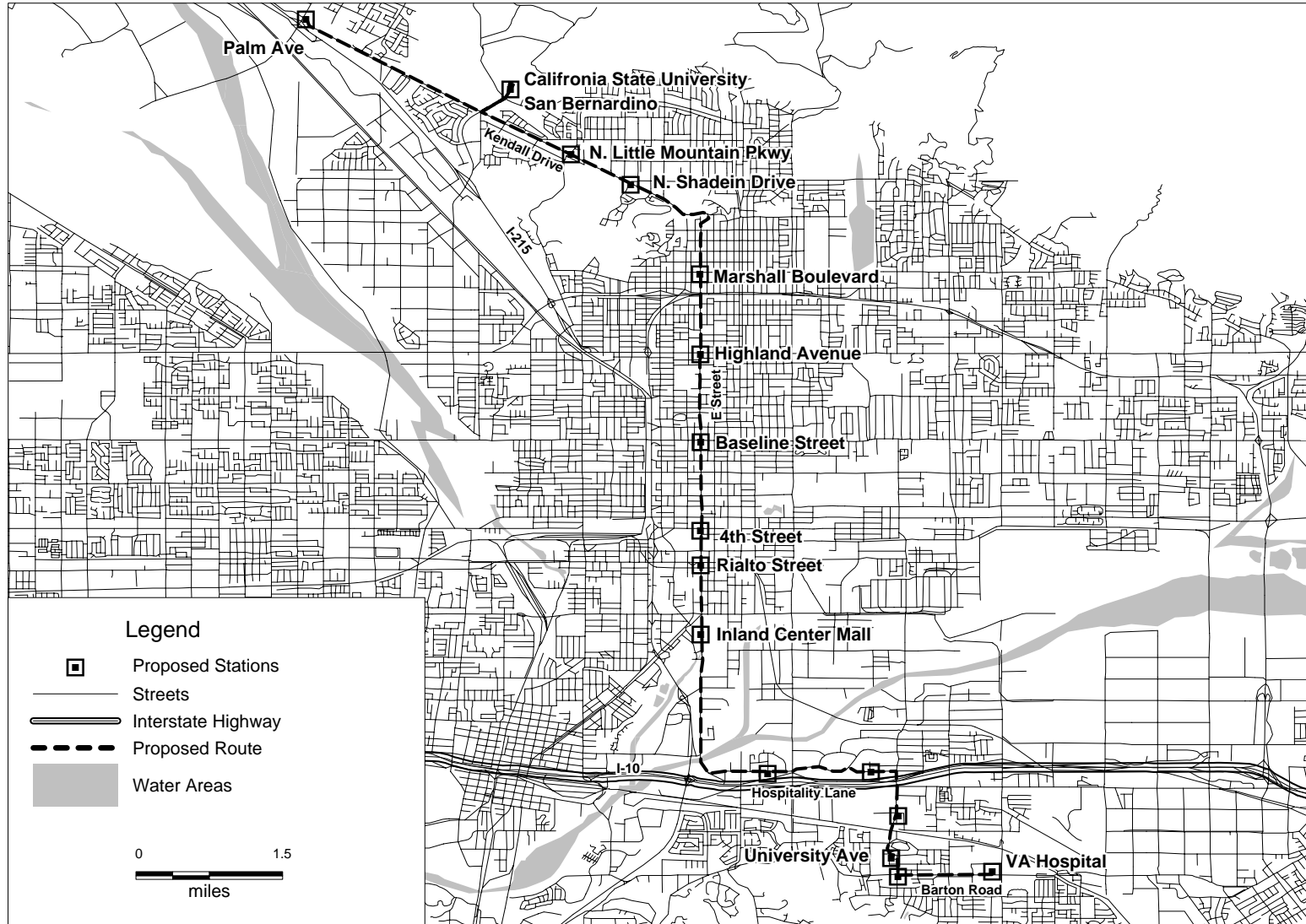
All operating funds are committed. Sources of funds include local transportation funds, Measure I sales tax revenues, fare revenues, and advertising and investment income.

**Operating Cost Estimates, Planning Assumptions, and Financial Capacity: Medium**

Operating cost assumptions are consistent with historical trends. Fare revenue assumptions are optimistic compared to historical experience. Other operating revenue assumptions including state and local subsidies are in line with historical trends.

# E Street Corridor sbX BRT

San Bernardino, California





## Van Ness Avenue BRT

### San Francisco, California

(November 2009)

The San Francisco County Transportation Authority (SFCTA) is proposing to implement a two mile exclusive guideway bus rapid transit (BRT) facility on Van Ness Avenue. The system would be operated by the San Francisco Municipal Transportation Agency (SFMTA). The dedicated transit lane originates at the intersection of Van Ness Avenue and Mission Street and extends north to Union Street near Fort Mason and the Fisherman's Wharf area. In addition to guideway construction, the Van Ness Avenue BRT project includes traffic signal pre-emption, pedestrian crossings, nine stations, and 60 new vehicles. Service would operate at five-minute headways during weekday peak periods in 2011, the opening year of the project.

Summary Description	
<b>Proposed Project:</b>	Bus Rapid Transit 2 Miles 9 Stations
<b>Total Capital Cost (\$YOE):</b>	\$118.60 Million
<b>Section 5309 Small Starts Share (\$YOE):</b>	\$74.72 Million (63.4%)
<b>Annual Operating Cost (\$YOE):</b>	\$27.00 Million
<b>Opening Year Ridership Forecast (2014):</b>	52,400 Average Weekday Boardings 1,600 Daily New Riders
<b>FY 2011 Local Financial Commitment Rating:</b>	Medium
<b>FY 2011 Project Justification Rating:</b>	High
<b>FY 2011 Overall Project Rating:</b>	Medium-High

### Project Development History and Current Status

In 2005, the SFCTA, in conjunction with the SFMTA, began an alternatives analysis to evaluate transportation capacity strategies along Van Ness Avenue, which is one of the most significant north-south arterials in San Francisco. The study evaluated options for improving SFMTA routes 40 and 49, Golden Gate Transit express service, and other transit in the corridor. In early 2007, the SFCTA selected BRT with a dedicated right-of-way, reduced station spacing, signal pre-emption, and low-floor buses as the locally preferred alternative. FTA approved the project into project development in December 2007. In July 2008, the San Francisco Metropolitan Planning Commission adopted a new long range plan that identified the Van Ness BRT as a Small Starts priority project for the region. SFMTA plans to complete a Draft Environmental Impact Statement in June 2010.

### Significant Changes Since FY 2010 Evaluation (November 2008)

The capital cost estimate increased slightly from \$118.2 million to \$118.6 million to reflect changes in the project scope includes increasing the number of buses from 46 to 60 and a reduction in the number of stations from eleven to nine. The capital cost will be further refined during the environmental review and project development processes. SFCTA will manage the project through completion of the environmental review process and preliminary engineering. SFMTA will manage final design, construction, and operation of the proposed BRT service.

## **Project Justification Rating: High**

The project justification rating is based on the weighted average of the ratings assigned to each of the following criteria: the cost-effectiveness criterion is weighted 33 percent; the transit supportive land use criterion is weighted 33 percent and the economic development criterion is weighted 33 percent.

### ***Cost Effectiveness Rating: High***

The rating is based on the level of travel-time benefits (3,700 average weekday hours) relative to the project's annualized capital and operating costs based on a comparison to a baseline alternative.

<b>Cost Effectiveness</b>	
	<b><u>New Start vs. Baseline</u></b>
Cost per Hour of Transportation System User Benefit	\$ 5.13*
Incremental Cost per Incremental Trip	\$ 17.52

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

### ***Transit-Supportive Land Use Rating: High***

The land use rating reflects the population and employment densities within ½-mile of proposed station areas.

- Population density is approximately 110,000 people per square mile in the corridor, and total employment in project station areas is approximately 92,000.
- The San Francisco CBD is the densest and most transit accessible downtown on the west coast. The Civic Center area is a major destination area in the city with dense pedestrian and transit-oriented development.

### ***Economic Development Rating: High***

The economic development rating is based upon the average of the ratings assigned to the subfactors below.

#### **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.
- San Francisco's existing land use pattern includes dense development along 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.

#### **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 corridor is very dense and is largely developed, with little room for additional development.

### **Local Financial Commitment Rating: Medium**

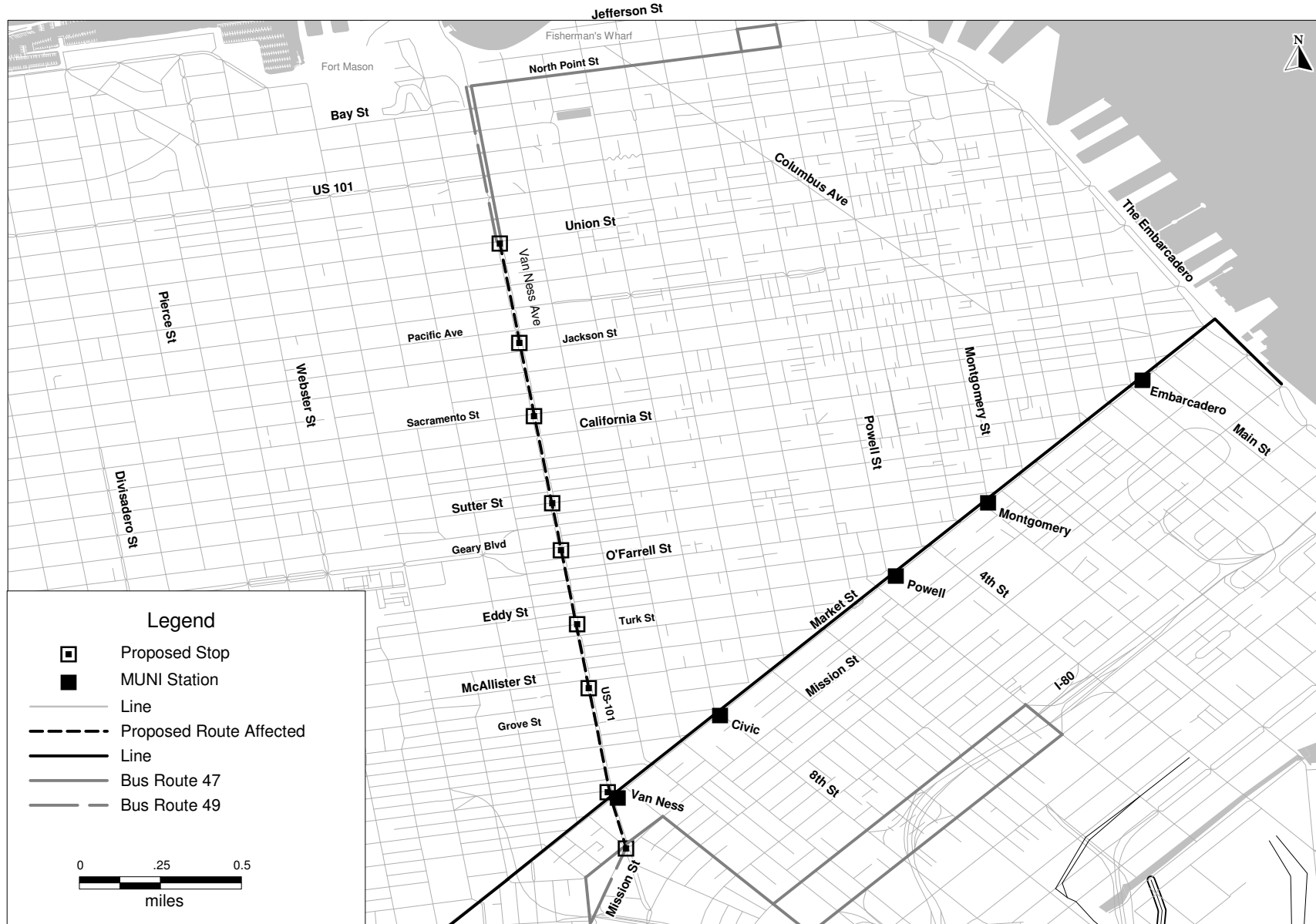
The local financial commitment rating is based upon SFMTA's acceptable financial condition; a reasonable plan for funding for the non-Small Starts share of capital costs; and evidence that the operations and maintenance cost of the project is less than five percent of the agency's operating budget.

<b>Locally Proposed Financial Plan</b>		
<b><u>Source of Funds</u></b>	<b><u>Total Funds (\$million)</u></b>	<b><u>Percent of Total</u></b>
<b>Federal:</b> Section 5309 Small Starts	\$74.72	63.4%
<b>Local:</b> Proposition K Sales Tax	\$20.46	17.3%
Other (Parking Revenues, Bridge Tolls, Development Impact fees)	\$23.43	19.7%
<b>Total:</b>	<b>\$118.60</b>	<b>100.0%</b>

**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.

# Van Ness Avenue BRT

San Francisco, California



# Mason Corridor BRT

## Fort Collins, Colorado

(November 2009)

The City of Fort Collins, Colorado, is proposing a 5.0-mile bus rapid transit (BRT) system within its Mason Transportation Corridor (MTC) which extends from Maple Street in downtown Fort Collins to Harmony Road. The “Mason Express” or “MAX” right-of-way (ROW) is parallel to, and a few hundred feet west of, College Avenue (US 287), the city’s primary north-south arterial, and adjacent to Burlington Northern Santa Fe (BNSF) railway tracks, which currently accommodate six to eight freight trains per day.

MAX BRT would operate at-grade in mixed traffic from the existing North Transit Center 1.2 miles to the northern edge of Colorado State University (CSU) and continue in a 3.8-mile exclusive ROW to the proposed South Transit Center. Service would operate at ten-minute peak frequencies. The project includes construction of the South Transit Center, traffic signal priority in general purpose lanes, a bus guideway facility, eight transit stations, four enhanced bus stops, modifications to the existing Downtown Transit Center, 250 park-and-ride spaces, unique MAX project branding, and five new low-floor vehicles.

Summary Description	
<b>Proposed Project:</b>	Bus Rapid Transit 5.0 Miles 8 Stations, 4 stops, 1 Transit Center and Station, modifications to Downtown Transit Center
<b>Total Capital Cost (\$YOE):</b>	\$81.97 Million
<b>Section 5309 Small Starts Share (\$YOE):</b>	\$65.58 Million (80.0%)
<b>Annual Operating Cost (\$YOE):</b>	\$1.62 Million
<b>Opening Year Ridership Forecast (2010):</b>	3,900 Average Weekday Boardings 400 Daily New Riders
<b>FY 2011 Local Financial Commitment Rating:</b>	Medium
<b>FY 2011 Project Justification Rating:</b>	Medium
<b>FY 2011 Overall Project Rating:</b>	Medium

## Project Development History and Current Status

The BRT project is the result of a citizens’ initiative begun in 1996 that produced the Mason Street Transportation Corridor Master Plan in January 1999. BRT was selected as the locally preferred alternative in October 2000. The MTC BRT project was approved into preliminary engineering in 2001, but dropped out in 2005 when a series of local ballot initiatives failed. With the infusion of capital from the Colorado Department of Transportation in 2007, the City of Fort Collins sought to advance the project as a Small Start. FTA approved the project into project development in December 2007. An Environmental Assessment for the project was initiated in August 2002, which resulted in a Finding of No Significant Impact (FONSI) issued in 2008. A PCGA is anticipated by fall 2010.

## Significant Changes Since FY 2010 Evaluation (November 2008)

No significant changes have occurred since last year's Small Starts project evaluation.

### **Project Justification Rating: Medium**

The project justification rating is based on the weighted average of the ratings assigned to each of the following criteria: the cost-effectiveness criterion is weighted 33 percent; the transit supportive land use criterion is weighted 33 percent and the economic development criterion is weighted 33 percent.

### ***Cost Effectiveness Rating: Medium***

The rating is based upon the level of travel time benefits (600 average weekday hours) relative to the project's capital and operating costs based upon a comparison to a baseline alternative.

<b>Cost Effectiveness</b>	
	<u>New Start vs. Baseline</u>
Cost per Hour of Transportation System User Benefit	\$23.26*
Incremental Cost per Incremental Trip	\$31.90

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

### ***Transit-Supportive Land Use Rating: Medium-Low***

The land use rating reflects the population and employment densities within ½-mile of proposed station areas.

#### **Existing Land Use: Medium-Low**

- Population density within the corridor is approximately 3,100 persons per square mile and employment density within the corridor is approximately 4,800 employees per square mile, both of which reflect poor transit-supportive conditions. Only 25,000 jobs are located within ½ mile of proposed station areas.
- There are provisions for the disabled, such as ramps and curb cuts, throughout the corridor. The city identified missing sidewalks, arterial crossing conflicts and other pedestrian conflicts as part of the update to the Transportation Master Plan completed in 2004, and is working to obtain local, State and Federal grants to complete the projects.

### ***Economic Development Rating: Medium-High***

The economic development rating is based upon the average of the ratings assigned to the subfactors below.

#### **Transit-Supportive Plans and Policies: Medium-High**

- The Plan for the Area Between Loveland and Fort Collins, a policy document adopted by the City of Fort Collins, the City of Loveland and Larimer County, calls for a community separator area between the two cities that would be kept rural rather than absorb urban development. The city has agreements with Larimer County that have extended the growth area boundaries beyond the city limits and into the county to govern the development occurring there. Other nearby municipalities are also cooperating with the City of Fort Collins.
- Policies in the City Plan stipulate that higher intensities of development will be located in major transit station areas, such as those in the MTC. The land use code has specific requirements regarding residential, commercial, mixed-use and institutional land use intended to promote transit- and pedestrian-friendly design. The City of Fort Collins has adopted parking-related requirements for both autos and bicycles throughout the city. Maximum parking space

requirements have been established for all non-residential land uses, but there are no minimum parking space requirements.

- The zoning code is structured to create communities, not just to manage individual development projects. Station areas comprise one type of community to which appropriate parts of the code are being applied. One ongoing effort of local land use planning is an analysis of current zoning and land use regulations at station areas to determine if any changes are needed to make the areas more conducive to transit-oriented development.
- Members of the development community, the Fort Collins Downtown Development Authority, the Chamber of Commerce, the Fort Collins Economic Development Corporation, and the Visitors Bureau, as well as individual property and business owners, have been involved in creating the city's and MTC's plans from their inception.

#### **Performance and Impacts of Policies: Medium**

- Under the transit-supportive City Plan and implementation-related zoning ordinances, several major city and county buildings have been constructed to create the Downtown Civic Center. Forthcoming projects include a mixed office, retail, and residential medium-high density development on a vacant parcel adjacent to the north end of the MTC. The South Transit Center agreement has been completed and the city now owns the property.
- In 2004, an examination of infrastructure needs provided an assessment of all the properties along the corridor with regard to their potential for redevelopment. The result showed a significant number of properties that had good redevelopment potential under the existing zoning. Even more redevelopment would be expected with future transit-supportive zoning changes.

### **Local Financial Commitment Rating: Medium**

The local financial commitment rating is based on the weighted average of the ratings assigned to each of the following criteria: the New Starts share of project costs is weighted 20 percent; the strength of the capital finance plan is weighted 50 percent; and the strength of the operating finance plan is weighted 30 percent.

#### ***Section 5309 Small Starts Share of Total Project Costs: 80.0%***

#### ***Rating: Low***

<b>Locally Proposed Financial Plan</b>		
<b><u>Source of Funds</u></b>	<b><u>Total Funding (\$million)</u></b>	<b><u>Percent of Total</u></b>
<b>Federal:</b> Section 5309 Small Starts	\$65.58	80.0%
<b>State:</b> Senate Bill 1 State Funding	\$8.56	10.4%
<b>Local:</b> General Fund	\$6.04	7.4%
Existing Land Purchase for South Transit Center	\$1.20	1.5%
<b>Private:</b> Downtown Development Authority	\$0.60	1.0%
<b>Total:</b>	<b>\$81.97</b>	<b>100.0%</b>

**NOTE:** Funding statements reflected in this table have been made by project sponsors and are not DOT or FTA assumptions. 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 rating is based upon the weighted average of the ratings assigned to each of the subfactors listed below. The agency capital condition is weighted 25 percent, the commitment of capital funds is weighted 25 percent, and the capital cost estimate, planning assumptions and capital funding capacity subfactor is weighted 50 percent.

**Agency Capital Condition: Medium**

- The average age of Transfort's bus fleet is 10.6 years in age, which is older than the industry average.
- The City of Fort Collins' good bond ratings, which were issued in 2007, are as follows: Moody's Investor Service Aa2 and Fitch AA.

**Commitment of Capital Funds: High**

All non-Small Starts funding is committed. Sources of funding include state Senate Bill 1 funding, local general funds, state funds, a land contribution from the City, and funding from the Downtown Development Authority.

**Capital Cost Estimate and Planning Assumptions: Medium**

- City General Fund assumptions in the capital plan are in line with historical experience. Other capital revenue sources are assumed to be one time grants.
- The capital cost estimate is considered reasonable for this phase of project development.

***Operating Finance Plan Rating: Medium***

The operating finance plan rating is based upon the weighted average of the ratings assigned to each of the subfactors listed below. The agency operating condition is weighted 25 percent, the commitment of operating funds is weighted 25 percent, and the operating cost estimates, planning assumptions and operating funding capacity subfactor is weighted 50 percent.

**Agency Operating Condition: Medium**

The City transit system's current ratio of assets to liabilities is greater than 2.0.

**Commitment of Operating Funds: High**

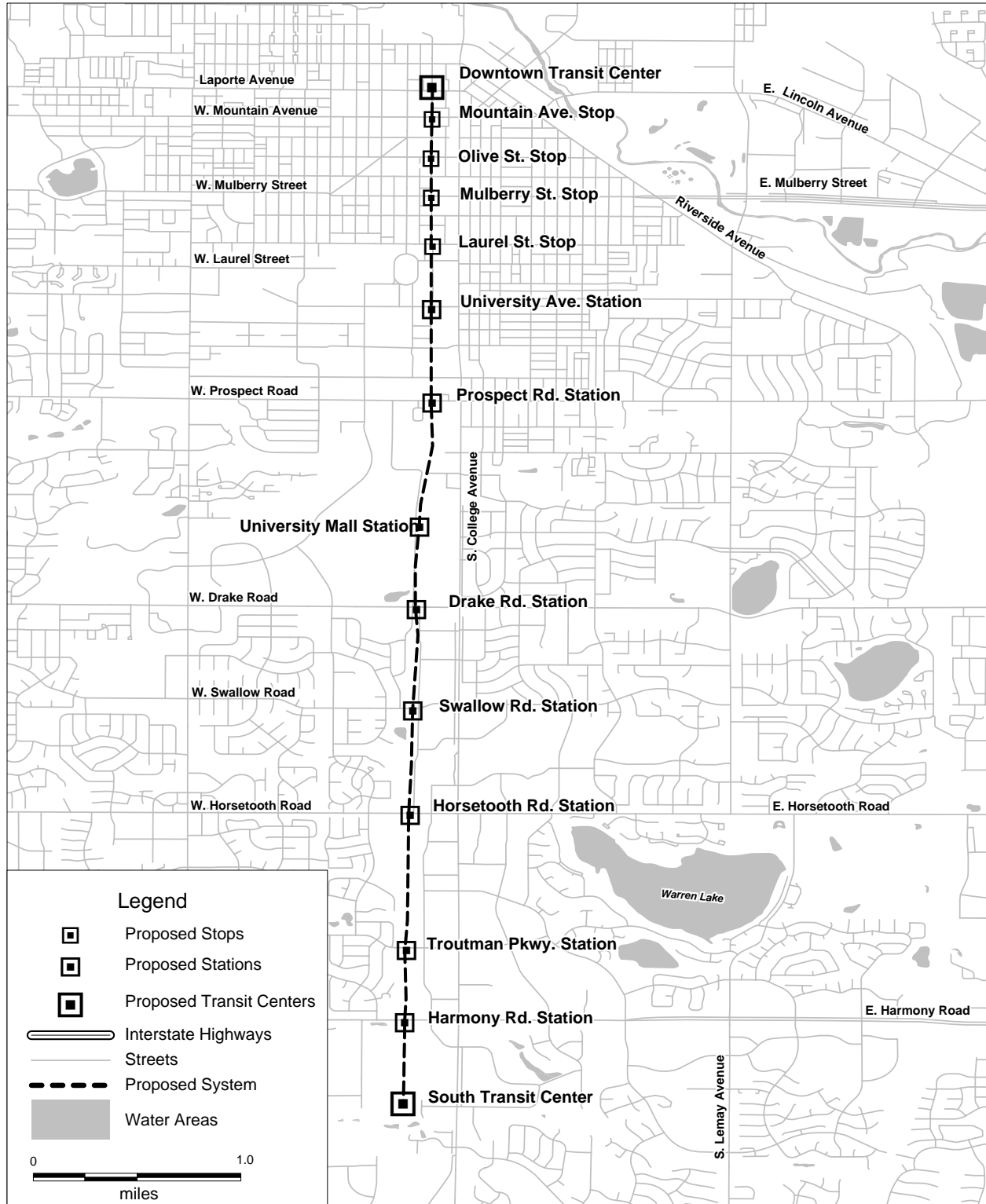
All operating funding is committed. Funding sources include fare revenues, City General Fund revenues, Section 5307 formula funds, and advertising revenues.

**Operating Cost Estimates, Planning Assumptions, and Financial Capacity: Medium-Low**

Assumptions about growth in operating and maintenance costs are optimistic compared to historical experience. Operating revenue assumptions are reasonable compared to historical trends.

# Mason Corridor BRT

## Fort Collins, Colorado





# BRT Project

## Roaring Fork Valley, Colorado

(November 2009)

The Roaring Fork Transportation Authority (RFTA) is planning a 38.8-mile Bus Rapid Transit (BRT) line from Aspen to Glenwood Springs. When completed, the project is expected to provide faster transit service connecting the communities of Aspen, Snowmass Village, Woody Creek, Basalt, El Jebel, Carbondale and Glenwood Springs. Nine new stations and 300 park and ride spaces would be constructed as part of the project, and fifteen low-floor buses would be purchased to augment the existing fleet.

The Roaring Fork Valley contains several communities connected by a single transportation corridor, State Highway 82 (SH 82). SH 82 is the only continuous roadway serving these communities. Growth in the corridor has increased transit demand between Aspen, Glenwood Springs and all communities in between. Congestion on SH 82 is expected to increase, which would further degrade current transit services. The project will use existing high occupancy vehicle lanes and traffic signal priority to provide faster, more reliable transit service, and will include branded stations and vehicles.

Summary Description	
<b>Proposed Project:</b>	Bus Rapid Transit 38.8 Miles 9 Stations
<b>Total Capital Cost (\$YOE):</b>	\$43.97 Million
<b>Section 5309 Small Starts Share (\$YOE):</b>	\$24.97 Million (56.8%)
<b>Annual Forecast Year Operating Cost:</b>	\$5.17 Million
<b>Opening Year Ridership Forecast (2013):</b>	3,700 Average Weekday Boardings
<b>FY 2011 Local Financial Commitment Rating:</b>	Medium-High
<b>FY 2011 Project Justification Rating:</b>	Medium
<b>FY 2011 Overall Project Rating:</b>	Medium-High

### Project Development History and Current Status

Previous studies in the corridor include a Corridor Investment Study in 2003 and a re-evaluation of the State Highway 82/Entrance to Aspen Final Environmental Impact Statement and Record of Decision in 2007. The locally preferred alternative (LPA) was selected in 2003. An alternatives analysis to refine the LPA was completed in 2008. The project was adopted as part of the 2030 Statewide Plan in 2008, and is included in the financially constrained State Transportation Improvement Program. The project was approved into Small Starts project development in December 2008. A Finding of No Significant Impact is anticipated in late summer 2010, with receipt of a Project Construction Grant Agreement by December 2010.

### Significant Changes Since FY 2010 Evaluation (November 2008)

The capital cost of the project decreased from \$46.40 million to \$43.97 million due to the removal of the maintenance facility from the project. An existing facility will instead be expanded as part of a separate project to accommodate the agency's entire bus fleet.

## **Project Justification Rating: Medium**

The project justification rating is based on the weighted average of the ratings assigned to each of the following criteria: the cost-effectiveness criterion is weighted 33 percent; the transit supportive land use criterion is weighted 33 percent and the economic development criterion is weighted 33 percent.

### ***Cost Effectiveness Rating: Medium***

The Roaring Fork Valley BRT Project is a Very Small Start. The project includes low-cost elements such as service branding, low-floor buses operating at improved frequencies, transit stations with real-time passenger information, and traffic signal priority, all of which FTA has determined to be cost-effective by their very nature and therefore, the project receives a *Medium* rating for cost effectiveness.

### ***Transit-Supportive Land Use and Economic Development Ratings: Medium***

FTA considers Very Small Starts projects that meet the minimum existing ridership threshold of 3,000 daily boardings/benefiting riders to be, by definition, in corridors with transit-supportive land use appropriate to the proposed level of investment; and therefore, FTA has assigned these projects a *Medium* rating for transit-supportive land use and economic development.

## **Local Financial Commitment Rating: Medium-High**

The project's operating cost would be greater than five percent of RFTA's operating budget, and was therefore subject to an assessment of its local financial commitment. The local financial commitment rating is based on the weighted average of the ratings assigned to each of the following criteria: the New Starts share of project costs is weighted 20 percent; the strength of the capital finance plan is weighted 50 percent; and the strength of the operating finance plan is weighted 30 percent.

### ***Section 5309 New Starts Share of Total Project Costs: 56.8%***

#### ***Rating: Medium***

<b>Locally Proposed Financial Plan</b>		
<b><u>Source of Funds</u></b>	<b><u>Total Funds (\$million)</u></b>	<b><u>Percent of Total</u></b>
<b>Federal:</b> Section 5309 Small Starts	\$24.97	56.8%
<b>Local:</b> Sales tax	\$18.99	43.2%
<b>Total:</b>	<b>\$43.97</b>	<b>100.0%</b>

**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 rating is based upon the weighted average of the ratings assigned to each of the subfactors listed below. The agency capital condition is weighted 25 percent, the commitment of capital funds is weighted 25 percent, and the capital cost estimate, planning assumptions and capital funding capacity subfactor is weighted 50 percent.

#### **Agency Capital Condition: Medium-High**

The average age of RFTA's bus fleet is less than six years, which is in line with the industry average.

**Commitment of Capital Funds: High**

All non-Section 5309 funding sources are committed, including dedicated sales taxes and bond proceeds backed by the sales taxes.

**Capital Cost Estimate, Planning Assumptions and Financial Capacity: Medium**

- Sales tax revenue growth assumptions are in line with historical experience.
- and the ability of the ending cash balance to withstand funding shortfalls or cost overruns.
- The capital cost estimate is lacking sufficient detail.

***Operating Finance Plan Rating: Medium-High***

The operating finance plan rating is based upon the weighted average of the ratings assigned to each of the subfactors listed below. The agency operating condition is weighted 25 percent, the commitment of operating funds is weighted 25 percent, and the operating cost estimates, planning assumptions and operating funding capacity subfactor is weighted 50 percent.

**Agency Operating Condition: High**

- RFTA's current ratio of assets to liabilities as reported in its most recent audited financial statement is 2.92.
- RFTA is in excellent operating condition, with positive cash balances from 2002 to 2007.

**Commitment of Operating Funds: High**

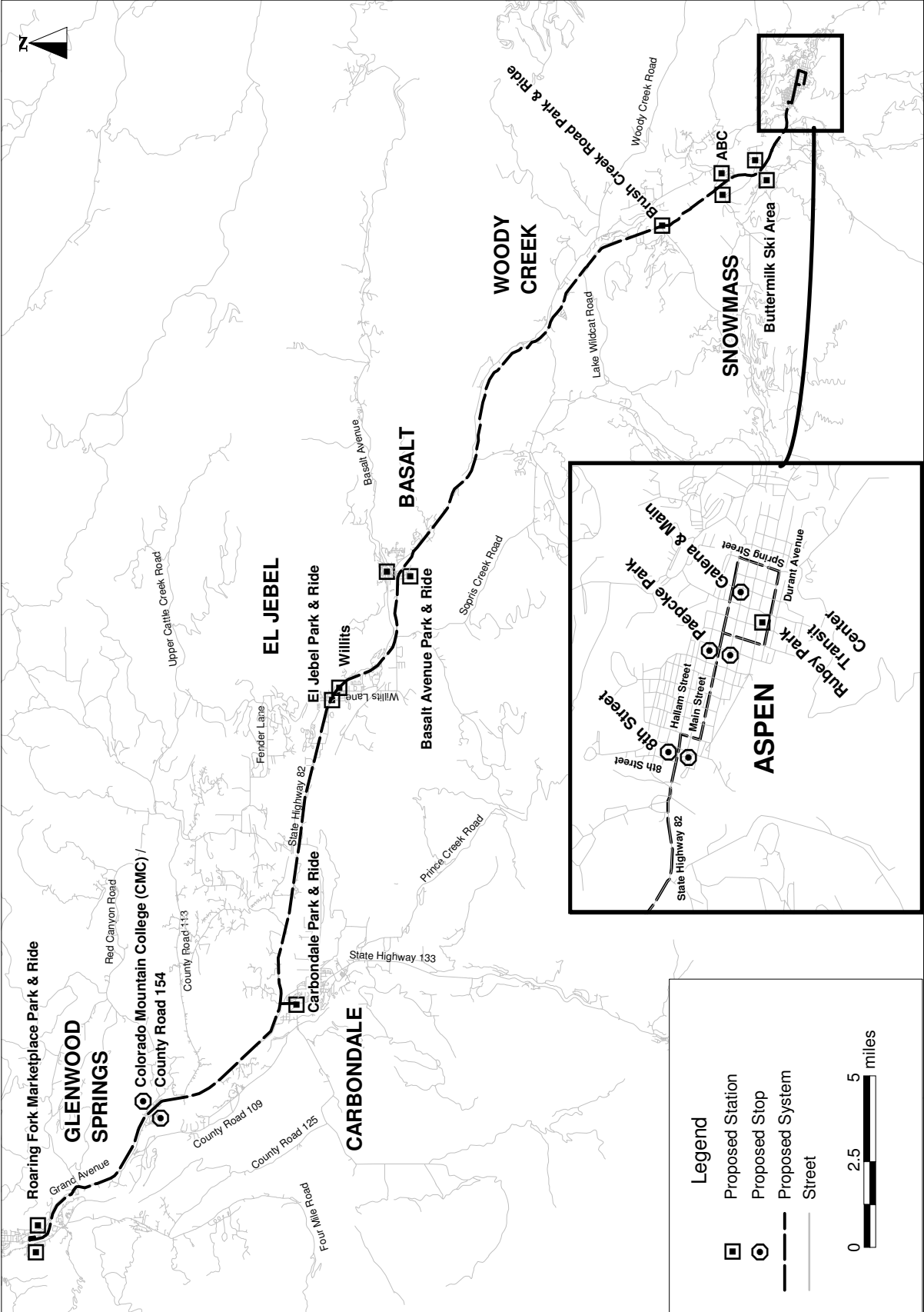
All operating funds are committed. Sources of funds include local sales tax revenues, Section 5311 funds, fare revenues, service contract income, vehicle registration fees, investment income, and rental income.

**Operating Cost Estimates, Planning Assumptions, and Financial Capacity: Medium-Low**

The operating plan includes optimistic assumptions about growth in ridership and fare revenues compared to historical experience.

# BRT Project

## Roaring Fork Valley, Colorado



## Division Avenue BRT

### Grand Rapids, Michigan

(November 2009)

The Interurban Transit Partnership (*The Rapid*) is proposing to implement a 9.8-mile street-running bus rapid transit (BRT) line along Division Avenue from the Grand Rapids central business district (CBD) to 60<sup>th</sup> Street/Division Avenue. The project includes 19 new stations with a real-time passenger information system, signal priority, off-board fare collection and the purchase of ten hybrid-fueled low-floor branded vehicles. An existing bus maintenance facility would also be expanded to accommodate the BRT vehicles. The proposed service would operate with ten-minute headways during peak periods and 15-minute headways during weekday off-peak periods.

The project will reduce travel time and improve reliability for existing and new transit riders from residential areas in the Division Avenue Corridor to major employment and educational centers in the CBD. The existing local route on Division Avenue is the busiest non-university route in *The Rapid's* system. Travel times from 54<sup>th</sup> Street to Wealthy Street would be reduced from approximately 25 minutes during peak periods today, to only 20 minutes with implementation of the project.

Summary Description	
<b>Proposed Project:</b>	Bus Rapid Transit
	9.8 Miles
	19 Stations
<b>Total Capital Cost (\$YOE):</b>	\$36.68 Million (Includes \$1.0 million in finance charges)
<b>Section 5309 Small Starts Share (\$YOE):</b>	\$29.35 Million (80.0%)
<b>Annual Operating Cost (\$YOE):</b>	\$2.40 Million
<b>Opening Year Ridership Forecast (2012):</b>	7,200 Average Weekday Boardings
	1,300 Daily New Riders
<b>FY 2011 Local Financial Commitment Rating:</b>	Medium
<b>FY 2011 Project Justification Rating:</b>	Medium
<b>FY 2011 Overall Project Rating:</b>	Medium

There have been no significant changes to the scope, cost, or ridership estimates since the project was approved into project development in December 2007. Thus, no new information was submitted to FTA. However, FTA's process for rating project justification has changed since that time. This profile reflects the new process.

### Project Development History and Current Status

In January 2007 *The Rapid* completed an alternatives analysis study that identified BRT as the locally preferred alternative (LPA) in the South Corridor. The LPA was included in the Grand Valley Metropolitan Council's (local metropolitan planning organization) long-range transportation plan in April 2007. FTA approved the Division Avenue BRT (formerly known as the South Corridor BRT) into project development as a Very Small Start in December 2007. An Environmental Assessment is currently underway.

## Significant Changes Since FY 2010 Evaluation (November 2008)

A referendum for a millage increase in May 2009 was defeated. As a result, the project schedule was extended assuming passage of the millage ballot in November 2010, receipt of a Project Construction Grant Agreement in 2011, and start of revenue operations in summer 2013.

## **Project Justification Rating: Medium**

The project justification rating is based on the weighted average of the ratings assigned to each of the following criteria: the cost-effectiveness criterion is weighted 33 percent; the transit supportive land use criterion is weighted 33 percent and the economic development criterion is weighted 33 percent.

## ***Cost Effectiveness Rating: Medium***

The Division Avenue BRT project qualifies as a Very Small Start. The project includes low-cost elements such as service branding, low-floor buses operating at higher frequencies, transit stations with real-time passenger information, off-board fare collection and traffic signal priority to speed service, all of which FTA has determined to be cost-effective by their very nature, and therefore, the project receives a *Medium* rating for cost effectiveness.

## ***Transit-Supportive Land Use and Economic Development Ratings: Medium***

FTA considers Very Small Starts projects that meet the minimum existing ridership threshold of 3,000 daily boardings/benefiting riders to be, by definition, in corridors with transit-supportive land use appropriate to the proposed level of investment; and therefore, FTA has assigned these projects a *Medium* rating for transit-supportive land use and economic development.

## **Local Financial Commitment Rating: Medium**

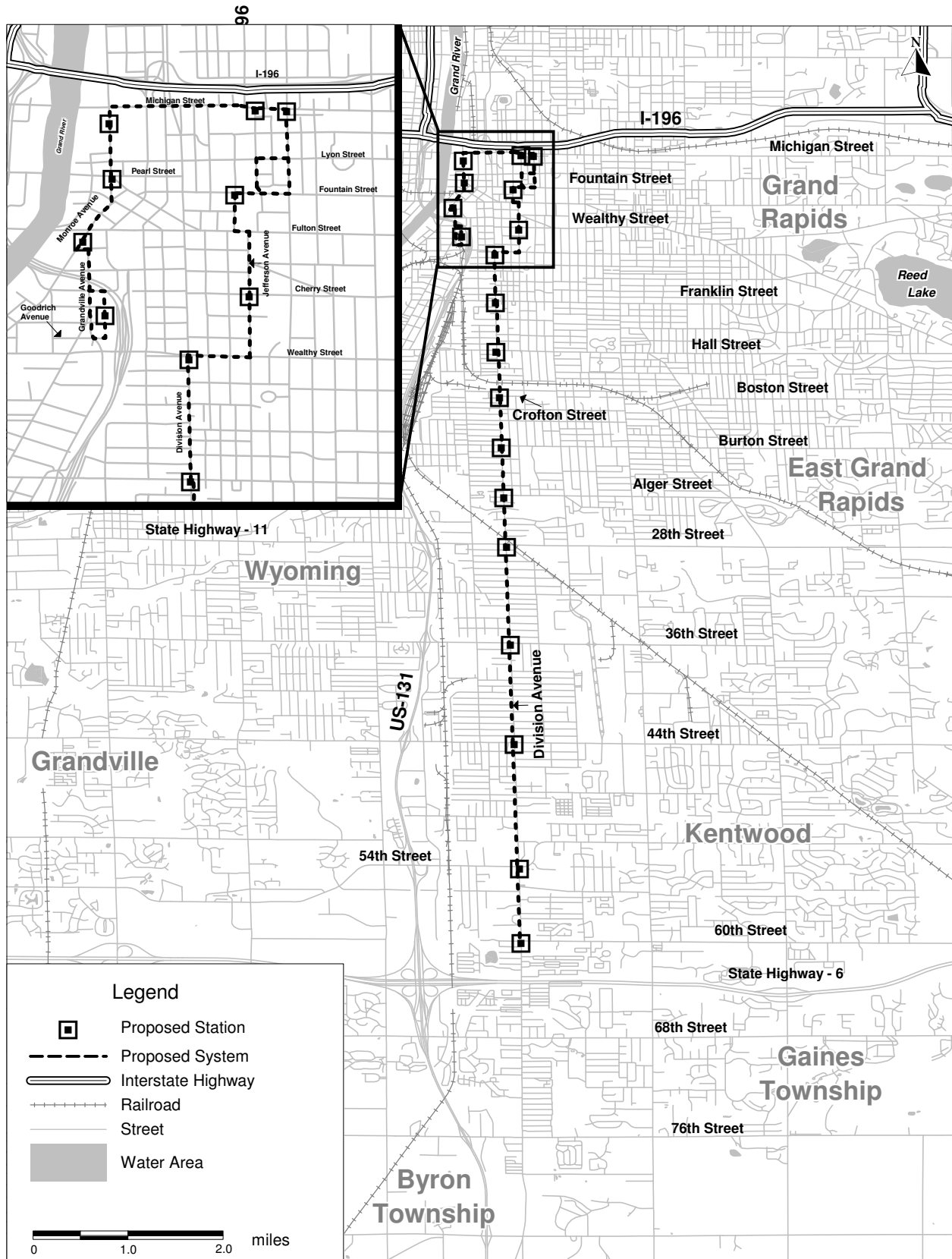
The local financial commitment rating is based on *The Rapid's* acceptable financial condition and a reasonable plan for funding the non-Small Starts share of capital costs. The operating cost of the project exceeds the five percent of the systemwide operating and maintenance cost threshold which would qualify the project for a streamlined financial review. Therefore, FTA performed additional reviews to determine the sufficiency of the project's local financial commitment. While acceptable for the purposes of advancing into project development, *The Rapid* must establish a consistent stream of operating revenues before the project can be considered for a Project Construction Grant Agreement.

<b>Locally Proposed Financial Plan</b>		
<b>Source of Funds</b>	<b>Total Funds (\$million)</b>	<b>Percent of Total</b>
<b>Federal:</b>		
Section 5309 Small Starts	\$29.35	80.0%
<b>State:</b>		
Comprehensive Transportation Fund Appropriation	\$7.33	20.0%
<b>Total:</b>	<b>\$36.68</b>	<b>100.0%</b>

**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.

# Division Avenue BRT

## Grand Rapids, Michigan





# Nostrand Avenue BRT

## New York, New York

(November 2009)

The New York City Department of Transportation (NYCDOT), in cooperation with the Metropolitan Transportation Authority – New York City Transit (MTA-NYCT), is proposing to construct the Nostrand Avenue Bus Rapid Transit (BRT) Project, a 9.3-mile BRT line from Sheepshead Bay to the Williamsburg Bridge in Brooklyn. The project includes seven pairs (14 total) of newly-constructed BRT stations and 5.0 miles of exclusive, solid red painted BRT lanes along Nostrand, Rogers, and Bedford Avenues. The project includes marking the BRT lanes, implementing transit signal priority, and constructing bus lane “bulbs” – curb extensions that allow buses to load passengers without pulling out of the travel lane. Service would operate from 5:30 AM to 10:00 PM on weekdays, with 3-minute headways during peak periods and 7-minute headways during off-peak periods.

The Nostrand Avenue BRT project will provide fast and reliable bus service along a key north-south route in Brooklyn, connecting densely-populated residential areas with multiple subway lines, bus routes, shopping areas, two colleges, and two major hospitals. Traffic congestion in the corridor combined with heavy passenger volumes at key stops resulting in long boarding times, leads to slow and unreliable bus service. The project will improve service in the corridor by offering higher frequencies, exclusive BRT lanes along a portion of the alignment, and off-vehicle fare collection, which will reduce travel time and improve schedule reliability. The project will serve the 17,000 daily riders on the existing B44 Limited service and will attract additional riders who currently avoid bus service due to slow speeds and a lack of reliability.

Summary Description	
<b>Proposed Project:</b>	Bus Rapid Transit 9.3 Miles 14 Stations
<b>Total Capital Cost (\$YOE):</b>	\$39.87 Million (includes \$600,000 in finance charges)
<b>Section 5309 Small Starts Share (\$YOE):</b>	\$28.40 Million (71.2%)
<b>Annual Operating Cost (YOE\$):</b>	\$6.12 Million
<b>Opening Year Ridership Forecast (2011):</b>	17,000 Average Weekday Boardings
<b>FY 2011 Local Financial Commitment Rating:</b>	Medium
<b>FY 2011 Project Justification Rating:</b>	High
<b>FY 2011 Overall Project Rating:</b>	Medium-High

### Project Development History and Current Status

In October 2006, NYCDOT selected Nostrand Avenue BRT in Brooklyn as one of five New York City “BRT Demonstration Corridors” – one corridor in each borough – for implementation. The project was adopted into the New York Metropolitan Transportation Council’s fiscally-constrained long-range regional transportation plan in December 2008. FTA approved the project into Small Starts project development in February 2009.

## Significant Changes Since FY 2010 Evaluation (April 2009)

The project entered Small Starts project development as a bus-corridor project, but has since been slightly re-scoped to include a peak period fixed guideway portion for more than half of the project corridor. This change allows the project to qualify as a fixed guideway Small Starts project. Other changes to the project in the past year include: the 50 buses required to operate the proposed service have been removed from the project and will be purchased without federal funds as part of a broader, MTA-NYCT agency-wide procurement; and, station design refinement has resulted in a modest \$10 million cost increase. Finally, the project schedule has been extended six months so that revenue operations will now commence in 2012 rather than in 2011.

## Project Justification Rating: High

The project justification rating is based on the weighted average of the ratings assigned to each of the following criteria: the cost-effectiveness criterion is weighted 33 percent; the transit supportive land use criterion is weighted 33 percent and the economic development criterion is weighted 33 percent.

## Cost Effectiveness Rating: High

The rating is based on the level of travel-time benefits (1,460 hours each weekday) relative to the project's capital and operating costs based on a comparison to a baseline alternative. A computation error underestimated the benefits in last year's *Annual Report*.

Cost Effectiveness	
Cost per Hour of Transportation System User Benefit	<u>New Start vs. Baseline</u> \$11.71*

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

## Transit-Supportive Land Use Rating: High

The land use rating reflects the population and employment densities within ½-mile of proposed station areas.

- Total employment served by the BRT project (within a ½ mile radius of stations) is 116,600, but hundreds of thousands of additional jobs can be reached through a subway transfer to the Brooklyn and Manhattan central business districts. Population served is 536,600 at an average density of 49,900 persons per square mile.
- The Nostrand Avenue BRT corridor runs north-south through Brooklyn and consists mostly of mixed-use development including three- to six-story multiple dwellings with retail or other commercial uses located on the ground floor, with greater commercial activity located at a number of key nodes. The corridor also has a number of educational and medical institutions. The corridor is designed to accommodate pedestrians, with sidewalks, pedestrian signals, and other pedestrian amenities located throughout the area. Parking along the corridor is typically on-street, with parking meters located in the densest commercial districts.

## Economic Development Rating: Medium-High

The economic development rating is based upon the average of the ratings assigned to the subfactors below.

## Transit-Supportive Plans and Policies: Medium-High

- PlaNYC, adopted in April 2007, is a plan for the sustainability of New York City, outlining the 25-year vision for the city and setting priorities for the refurbishment of city infrastructure. One of the main objectives of the plan is to create healthier and more transit-accessible communities by

unlocking the potential of unrealized housing capacity, underutilized and unfinished parks, and contaminated land. The plan's rezoning strategy identifies primary avenues and boulevards near transportation hubs whose width and access to transit enable them to support additional density. PlaNYC aims to fully restore and enhance the Brooklyn transit network (stations and transit lines) to a state of good repair, including making pedestrian improvements in the vicinity of stations.

- Transit-supportive corridor or station area planning activities have not been explicitly undertaken for the Nostrand Avenue corridor. However, zoning for the corridor is already highly transit-supportive as evidenced by the scale and character of existing development. Parking requirements are extremely low. In addition, there have been three significant recent planning and rezoning efforts affecting neighborhoods in the corridor: These efforts are directed at preserving existing neighborhood scale and character while allowing opportunities for residential and commercial growth as appropriate. Commercial district overlays throughout the corridor allow mixed-use development.
- Some general economic development tools are available through the city but these have seen relatively little application in the corridor given the limited development opportunities. The city assisted with land assembly on a recent shopping center.

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

- For the most part, land within the corridor was developed decades or even more than a century ago in a strongly transit-supportive manner and there is little opportunity for new construction or redevelopment. However, there are two recent significant developments along the corridor: a 300,000 square foot shopping center adjacent to the planned Flatbush Ave/Brooklyn College BRT Station, in a single three-story building with no surface parking; and a condominium-apartment building (43 apartments in a four-story structure) three blocks from the planned southern terminus of the BRT route.
- Most available land consists of small properties scattered across the corridor, and for this reason land assembly into large parcels is difficult. The greatest concentration of vacant land is near the Flushing Avenue Station in a historically light manufacturing area. While this area is not currently targeted for rezoning, the strong residential real estate market in New York City in recent years has led to the rezoning of some manufacturing areas to allow residential use, and rapid subsequent redevelopment.

### **Local Financial Commitment Rating: Medium**

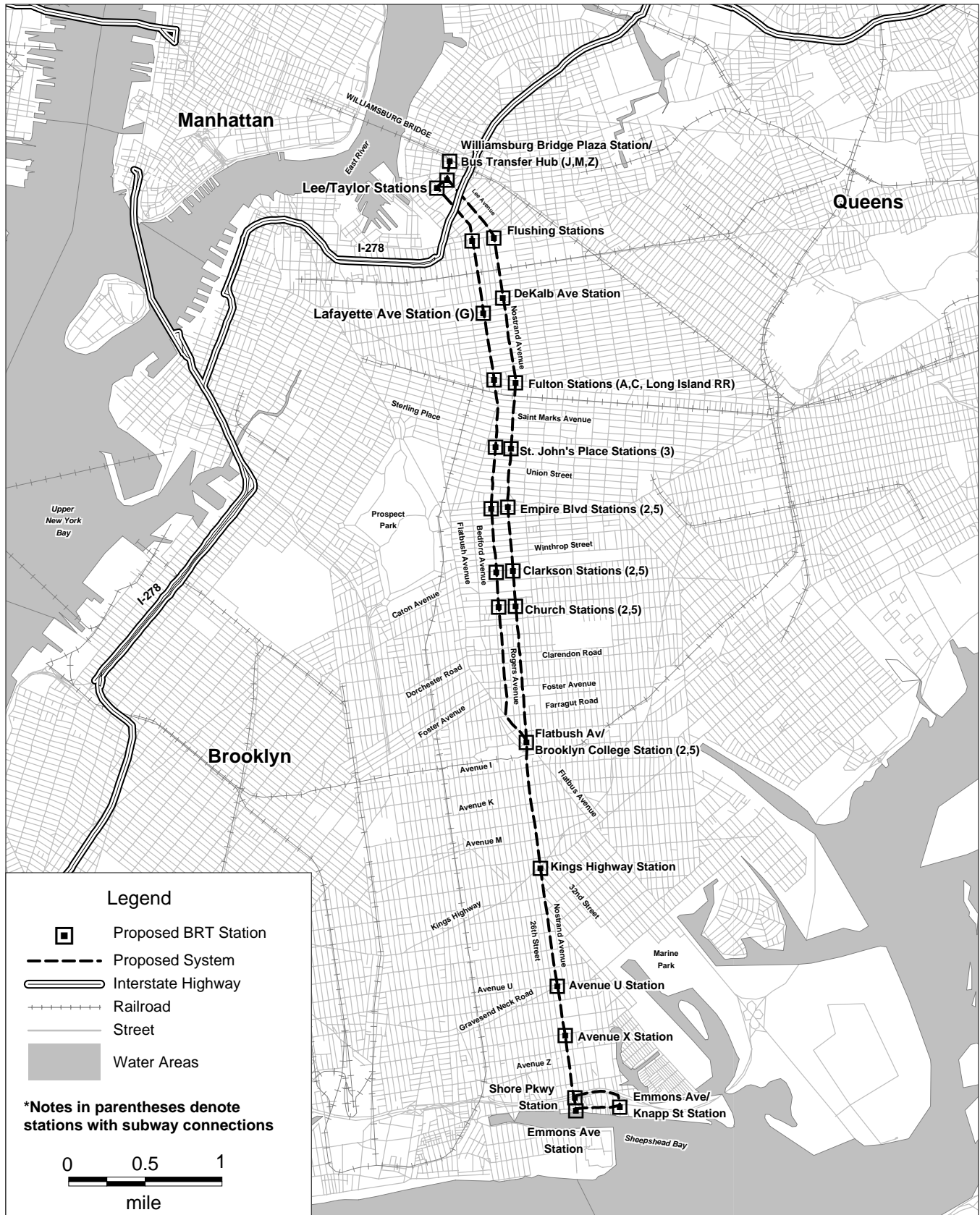
The local financial commitment rating is based upon acceptable financial conditions of both NYCDOT and MTA-NYCT; a reasonable plan for funding for the non-Small Starts share of capital costs; and evidence that the operations and maintenance cost of the project is less than five percent of the MTA-NYCT's operating budget.

<b>Locally Proposed Financial Plan</b>		
<b><u>Source of Funds</u></b>	<b><u>Total Funds (\$million)</u></b>	<b><u>Percent of Total</u></b>
<b>Federal:</b>		
Section 5309 Small Starts	\$28.40	71.2%
Section 5309 Bus Discretionary	\$0.43	1.1%
FHWA Flexible Funds (CMAQ)	\$1.79	4.5%
<b>Local:</b>		
MTA-NYCT Bonds, other cash and capital funds	\$0.95	2.4%
MTA-NYCT Operating Budget	\$0.17	0.4%
NYC Income, Sales and Property Taxes	\$5.56	13.9%
NYC Other Revenues	\$2.57	6.4%
<b>Total:</b>	<b>\$39.87</b>	<b>100.0%</b>

**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.

# Nostrand Avenue BRT

## New York, New York





## ***MetroRapid BRT***

### **Austin, Texas**

(November 2009)

The Capital Metropolitan Transportation Authority (CMTA) proposes to construct a 37.5-mile street-running bus rapid transit (BRT) system along two interconnected corridors: the 21-mile North Lamar/South Congress Corridor and the 16.5-mile Burnet/South Lamar Corridor. The North Lamar/South Congress Corridor extends from the North Interstate Highway 35 park-n-ride lot at Tech Ridge to the planned South IH-35 Transit Center. The Burnet-South Lamar Corridor extends from St. David's North Austin Medical Center to 38<sup>th</sup> Street at West Avenue near the Medical Center. The BRT lines would share a 3-mile segment in central Austin between 38<sup>th</sup> Street, north of the University of Texas-Austin, and Cesar Chavez Street at the southern end of downtown Austin. The project is the first phase of CMTA's *All Systems Go (ASG)* ten-corridor long-range transit plan.

The project includes 18 paired stations in the North Lamar/South Congress Corridor and 17 paired stations in the Burnet/South Lamar Corridor, with a real-time passenger information system, traffic signal priority and the purchase of 40 low-floor, multi-door, branded vehicles. Several BRT stations would also link with CMTA's locally-funded commuter rail line (currently under construction). The BRT system would operate via existing arterial streets and would parallel the region's main highways that serve central Austin: I-35 to the east and Loop-1 to the west. The service would operate with ten-minute headways during peak periods and 15-minute headways during off-peak periods. An existing bus maintenance facility would be used to accommodate the BRT vehicles.

<b>Summary Description</b>	
<b>Proposed Project:</b>	Bus Rapid Transit
	37.5 Miles
	35 Stations
<b>Total Capital Cost (\$YOE):</b>	\$47.00 Million
<b>Section 5309 Small Starts Share (\$YOE):</b>	\$37.60 Million (80.0%)
<b>Annual Operating Cost (\$YOE):</b>	\$1.82 Million
<b>Opening Year Ridership Forecast (2012):</b>	20,300 Average Weekday Boardings
<b>FY 2011 Local Financial Commitment Rating:</b>	Medium
<b>FY 2011 Project Justification Rating:</b>	Medium
<b>FY 2011 Overall Project Rating:</b>	Medium

## **Project Development History and Current Status**

In August 2004, CMTA updated its long-range transit plan. In June 2005, the *ASG* plan was incorporated into the Capital Area Metropolitan Planning Organization's long-range transportation plan (*Mobility 2030*). The long-range plans envision several transit improvements, including commuter rail, BRT, express buses and other transit investments. Initially, CMTA planned to implement the BRT system with local funds; however, after a review of the plan in 2008, CMTA chose to pursue Small Starts funds. A simplified alternatives analysis was completed in summer 2008. FTA approved the *MetroRapid* BRT project into project development as a Very Small Start in February 2009. FTA issued a Categorical Exclusion in March 2009. A project construction grant agreement is anticipated in June 2010. Revenue operations are scheduled to begin in March 2012 for the North Lamar/South Congress corridor and in March 2013 for the Burnet/South Lamar corridor.

### Significant Changes Since FY 2010 Evaluation (April 2009)

The capital cost of the project has remained nearly the same, decreasing slightly from \$47.03 million to \$47.00 million. However, the schedule changed due to significantly less than anticipated sales tax revenue collections resulting from the economic recession. Rather than revenue operations of both corridors beginning in 2011, the dates are now March 2012 for the North Lamar/South Congress corridor and March 2013 for the Burnet/South Lamar corridor. Escalation cost increases resulting from the longer schedule were offset by reductions in materials, construction and vehicle costs.

### **Project Justification Rating: Medium**

The project justification rating is based on the weighted average of the ratings assigned to each of the following criteria: the cost-effectiveness criterion is weighted 33 percent; the transit supportive land use criterion is weighted 33 percent and the economic development criterion is weighted 33 percent.

### ***Cost Effectiveness Rating: Medium***

The project qualifies as a Very Small Start. The project includes low-cost elements such as service branding, low-floor buses operating at improved frequencies, substantial transit stations with real-time passenger information, and traffic signal priority to speed service, all of which FTA has determined to be cost-effective by their very nature, and therefore, the project receives a *Medium* rating for cost effectiveness.

### ***Transit-Supportive Land Use and Economic Development Rating: Medium***

FTA considers Very Small Starts projects that meet the minimum existing ridership threshold of 3,000 daily boardings/benefiting riders to be, by definition, in corridors with transit-supportive land use appropriate to the proposed level of investment. Therefore, FTA has assigned these projects a *Medium* rating for transit-supportive land use and economic development.

### **Local Financial Commitment Rating: Medium**

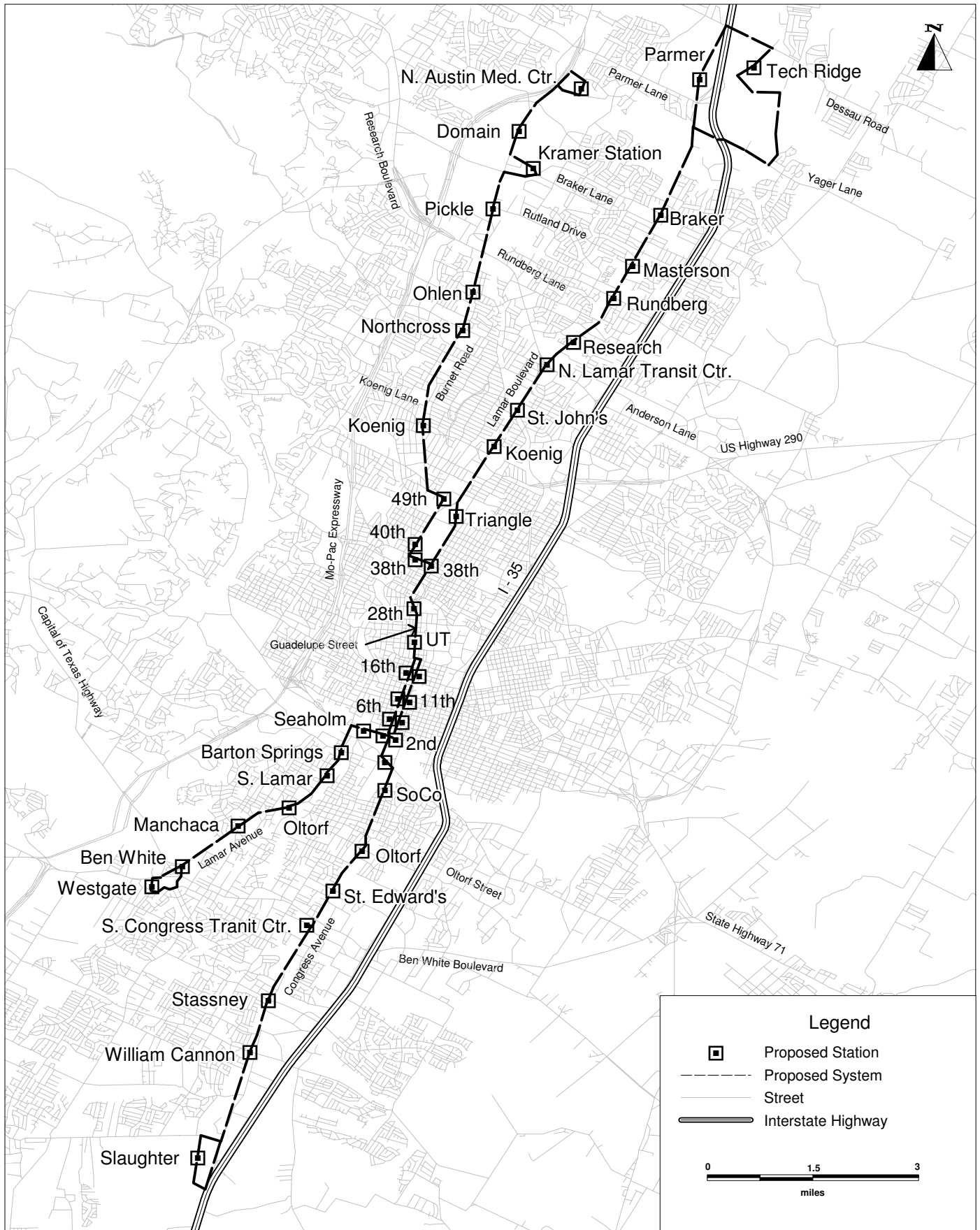
The rating for local financial commitment, based upon CMTA's acceptable financial condition; a reasonable plan for funding for the non-New Starts share of capital costs; and evidence that operations and maintenance costs of the proposed project is less than five percent of the agency's operating budget.

<b>Locally Proposed Financial Plan</b>		
<b><u>Source of Funds</u></b>	<b><u>Total Funds (\$million)</u></b>	<b><u>Percent of Total</u></b>
<b>Federal:</b>		
Section 5309 Small Starts	\$37.60	80.0%
<b>Local:</b>		
Dedicated Sales Tax	\$9.40	20.0%
<b>Total:</b>	<b>\$47.00</b>	<b>100.0%</b>

**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.

# MetroRapid BRT

Austin, Texas





# West Seattle BRT

## King County, Washington

(November 2009)

The King County Department of Transportation, Metro Transit Division (King County Metro) proposes to construct a 12-mile street-running bus rapid transit (BRT) line from Westwood Village in West Seattle to the central business district in downtown Seattle. The BRT line will directly upgrade a local service operating with 20 to 30 minute peak period headways and an express service operating with 10 to 30 minute peak period headways; these and other routes in the corridor carry over 15,000 daily riders today. The project includes 12 high-amenity station pairs, traffic signal priority, and transit bypass lanes, as well as 15 low-floor, branded, diesel-hybrid vehicles. The proposed service will operate with 10-minute headways during peak hours and 15-minute headways during non-peak hours.

Summary Description	
<b>Proposed Project:</b>	Bus Rapid Transit
	12.0 Miles
	12 Station pairs, 1 Station, 15 Stops
<b>Total Capital Cost (\$YOE):</b>	\$28.37 Million
<b>Section 5309 Small Starts Share (\$YOE):</b>	\$21.27 Million (75.0%)
<b>Annual Operating Cost (\$YOE):</b>	\$9.00 Million
<b>Opening Year Ridership Forecast (2011):</b>	3,500 Average Weekday Boardings
<b>FY 2011 Local Financial Commitment Rating:</b>	Medium
<b>FY 2011 Project Justification Rating:</b>	Medium
<b>FY 2011 Overall Project Rating:</b>	Medium

## Project Development History and Current Status

King County Metro identified bus rapid transit as a viable transportation strategy in the 2002 Six-Year Transit Development Plan and, more recently, identified five corridors for BRT implementation in the Strategic Plan for Public Transportation, 2007 – 2016. The West Seattle BRT project is one of the five corridors that together form the *RapidRide* system. FTA concurred that the project qualifies as a categorical exclusion in August 2009. FTA notified Congress of its intent to approve the project into Small Starts project development in November 2009 and took formal approval action in December 2009.

## **Project Justification Rating: Medium**

The project justification rating is based on the weighted average of the ratings assigned to each of the following criteria: the cost-effectiveness criterion is weighted 33 percent; the transit supportive land use criterion is weighted 33 percent and the economic development criterion is weighted 33 percent.

### ***Cost Effectiveness Rating: Medium***

The West Seattle BRT project qualifies as a Very Small Start. The project includes low-cost elements such as service branding, low-floor buses operating at improved frequencies, substantial transit stations with real-time passenger information, and traffic signal priority to speed service, all of which FTA has determined to be cost-effective by their very nature, and therefore, the project receives a *Medium* rating for cost effectiveness.

### ***Transit-Supportive Land Use and Economic Development Ratings: Medium***

FTA considers Very Small Starts projects that meet the minimum existing ridership threshold of 3,000 daily boardings/benefiting riders to be, by definition, in corridors with transit-supportive land use appropriate to the proposed level of investment. Therefore, FTA assigns these projects a *Medium* rating for transit-supportive land use and economic development.

## **Local Financial Commitment Rating: Medium**

The local financial commitment rating is based upon King County Metro's acceptable financial condition; a reasonable plan for funding for the non-New Starts share of capital costs; and evidence that operations and maintenance costs of the proposed project is less than five percent of the agency's operating budget.

<b>Locally Proposed Financial Plan</b>		
<b><u>Source of Funds</u></b>	<b><u>Total Funds (\$million)</u></b>	<b><u>Percent of Total</u></b>
<b>Federal:</b>		
Section 5309 Small Starts	\$21.27	75.0%
<b>Local:</b>		
Dedicated Sales and Use Tax	\$7.09	25.0%
<b>Total:</b>	<b>\$28.37</b>	<b>100.0%</b>

**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.

# West Seattle BRT

King County, Washington





# **Appendix B**

## **FY 2011 Evaluation and Rating Process**

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## FY 2011 New Starts and Small Starts Evaluation and Rating Process

This document describes the methodology that the Federal Transit Administration (FTA) uses to evaluate and rate candidate New Starts and Small Starts projects as of July 2009, including FTA's evaluations for the *FY 2011 Annual Report*. This methodology is a departure from the process used in the evaluation of projects included in the *Annual Reports* for fiscal years 2004-2010 due to the passage of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) Technical Corrections Act of 2008 (Pub. L. 110-244), which amends 49 U.S.C. 5309 and specifies that all project justification criteria be given "comparable but not necessarily equal weights." These changes are intended to reflect as much of the spirit of SAFETEA-LU as can be implemented prior to completion of the statutorily-required rulemaking process as well as FTA-initiated (and industry-requested) efforts to streamline the reporting and evaluation processes. FTA is continuing to explore additional streamlining opportunities through regulation and policy guidance. The changes made to the rating and evaluation process since the FY 2010 *Annual Report* are as follows:

- **Adjusted Project Justification Criteria Weights.** As announced in the [July 2009 final policy guidance](#), to comply with the SAFETEA-LU Technical Corrections Act, FTA has modified the weights assigned to each of the project justification criteria. The new weights are as follows: cost effectiveness, 20 percent; land use, 20 percent; economic development, 20 percent; mobility improvements, 20 percent; operating efficiencies, 10 percent; and, environmental benefits, 10 percent.
- **Operating Efficiencies Criterion.** As announced in the [July 2009 final policy guidance](#), FTA is again considering operating efficiencies as a stand-alone project justification criterion, giving it comparable weight to the other criteria per the requirements of the SAFETEA-LU Technical Corrections Act. Previously, FTA did not include operating efficiencies as a stand alone criterion, but instead considered it as part of the cost-effectiveness criterion.
- **Other Factors.** FTA is no longer emphasizing specific items that it will consider when determining whether to modify a project's justification rating based on "other" factors. Rather, FTA is considering "other" factors on a project-by-project basis. Thus, FTA is no longer calling out congestion management strategies, with automobile pricing strategies in particular, or the contents of a "make-the-case" document as items it will specifically consider or formally rate as "other" factors. In addition, FTA is not formally and explicitly rating the reliability of information provided on costs and travel forecasts, but is still considering reliability of the information when determining whether the project justification rating should be changed based on "other factors".
- **Operating Financial Plan Rating.** FTA has determined that the type of contracting arrangement used or considered by a project sponsor is not useful or appropriate in determining the strength of the overall project. Thus, FTA eliminated a project sponsor's use or consideration of contracting out operations and maintenance when evaluating and rating the operating financial plan.
- **Annual Inflation Adjusted Cost Effectiveness Breakpoints.** FTA has conducted its annual inflation adjustment to the breakpoints for rating the cost effectiveness of

proposed New Starts projects based on the Gross Domestic Product Index (also known as the GDP deflator), which is an alternative to the consumer price index.

*Section I* of this document 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.

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 criteria. These materials are posted on FTA's website under *New Starts Project Planning and Development*: [http://www.fta.dot.gov/planning/newstarts/planning\\_environment\\_2620.html](http://www.fta.dot.gov/planning/newstarts/planning_environment_2620.html).

Project evaluation is an on-going process. It is based on an analysis of the documentation submitted to FTA by local agencies to support their proposed project. As New Starts and Small Starts projects proceed through project development, the estimates of costs, benefits, and impacts are refined. The project ratings are updated annually by FTA as necessary to reflect new information, changing conditions, and refined financing plans. If project information has not changed from the previous year, a new evaluation and rating is not required.

## **I. LEGISLATIVE BACKGROUND**

SAFETEA-LU continues the evaluation process provisions first established by the Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21) in 1998. SAFETEA-LU requires the U.S. Department of Transportation to submit an annual report to Congress that includes the Secretary's evaluation, ratings, and 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 and new Small Starts projects.

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." This approval is based, in large part, on an evaluation of the proposed project's New Starts criteria. Specifically, a project must achieve an overall rating of at least *Medium* in order to advance into each stage of development. Likewise, Small Starts projects must receive FTA approval to advance from "alternatives analysis" to "project development," a single development phase that incorporates the features of both preliminary engineering and final design. Small Starts projects must also receive at least a *Medium* overall rating to advance. FTA also evaluates and rates projects for the purposes of developing its annual funding recommendations.

FTA's evaluation includes a review of the information submitted to support each proposed project and the assignment of a rating to each evaluation criterion. Based on these criteria-

specific ratings, FTA assigns candidate New Starts projects summary ratings for project justification and local financial commitment, and develops the overall project rating. FTA also assigns ratings to Small Starts projects based on a subset of the New Starts evaluation criteria. *Sections 1.A* and *1.B* below present the criteria used by FTA in its New Starts and Small 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.

#### ***1.A Project Justification Criteria***

SAFETEA-LU Section 3011(a) amended 49 U.S.C. 5309(d) to require that projects proposed for New Starts funding be justified based on a comprehensive review of the following criteria, as had been the case under TEA-21:

- Mobility Improvements;
- Environmental Benefits;
- Operating Efficiencies;
- Cost Effectiveness;
- Transit Supportive Land Use;
- Economic Development Effects; and
- Other Factors.

49 U.S.C. 5309(e) requires that Small Starts projects be evaluated on the basis of the following project justification criteria:

- Cost Effectiveness;
- Transit Supportive Land Use;
- Economic Development; and
- Other Factors.

The development of this information is intended to be less complex than required for New Starts. A subset of very simple and low cost transit projects, termed “Very Small Starts” projects, will be evaluated and rated using an even more simplified process. These Very Small Starts have the following features:

- Substantial transit stations,
- Traffic signal priority/pre-emption, to the extent, if any, that there are traffic signals on the corridor,
- Low-floor vehicles or level boarding,
- “Branding” (distinguishing through marketing and physical characteristics) of the proposed service,
- 10 minute peak/15 minute off peak frequencies or better while operating at least 14 hours per weekday (not required for commuter rail or ferries),
- Corridors with existing riders who will benefit from the proposed project that exceed 3,000 per average weekday, and
- A total capital cost less than \$50 million (including all project elements) and less than \$3 million per mile, exclusive of rolling stock.

Very Small Starts projects that meet these criteria, adequately documented in the Small Starts project submission to FTA, will receive a rating of *Medium* for project justification. FTA finds

that projects which meet these characteristics are by their nature cost effective and have transit supportive land-use and economic development effects appropriate to the proposed level of investment.

Section III of this appendix presents the specific measures FTA is currently using to represent each of the project justification criteria, and how FTA will evaluate them. As announced on January 13, 2010, FTA intends in the near term to initiate a rulemaking to better define and account for the wide range of benefits of major transit investments.

### ***I.B Local Financial Commitment***

Continuing the approach under TEA-21, SAFETEA-LU Section 3011(a) amended 49 U.S.C. 5309(d) to require 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) further allows for an evaluation of the extent to which the project proposes a local financial commitment that exceeds the required non-Federal share of the cost of the project.

The measures used for the evaluation of the local financial commitment to a proposed project are:

- The proposed share of total project costs from sources other than the Section 5309 New Starts or Small Starts programs, including Federal formula and flexible funds, the local match required by Federal law, and any additional capital funding;
- The strength of the proposed capital financial plan; and
- The ability of the sponsoring agency to fund operation and maintenance of the entire system as planned once the project is built.

Section IV describes how FTA will use these measures in its evaluation of candidate New Starts projects.

Small Starts projects may qualify for a highly simplified financial evaluation if the project sponsor can demonstrate the following:

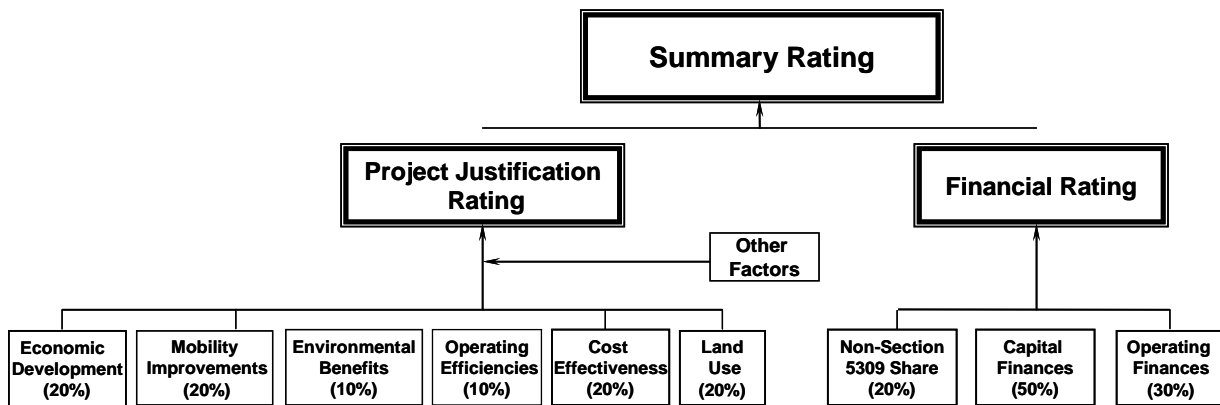
- A reasonable plan to secure funding for the local share of capital costs or sufficient available funds for the local share (all non-Small Starts funding must be committed before receiving a Project Construction Grant Agreement);
- The additional operating and maintenance cost to the agency of the proposed Small Starts project is less than 5 percent of the agency's system-wide operating budget; and
- The agency is in reasonably good financial condition.

Small Starts projects that meet these criteria and request greater than 50 percent Small Starts funding to cover project construction costs will receive a local financial commitment rating of *Medium*. Small Starts projects that meet these criteria and request 50 percent or less in Small Starts funding will receive a *High* rating for local financial commitment. Small Starts projects which cannot qualify for this highly simplified financial evaluation will be evaluated and rated in the same manner as other Small 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. Small Starts are evaluated against a subset of these measures including cost effectiveness, land use, economic development effects, other factors, and local financial commitment. 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 document, respectively.

**Figure I-1 New Starts Evaluation Process**



### I.D Overall Project Ratings

SAFETEA-LU amendments to Sections 5309(d) and (e) of Title 49 require that FTA assign overall ratings on a five-tier scale of *High*, *Medium-High*, *Medium*, *Medium-Low*, or *Low* to each New Starts or Small Starts project.

The overall project rating is determined by averaging the rating for project justification and local financial commitment. When the average of these ratings is unclear (e.g. project justification rating of *Medium-High* and local financial commitment rating of *Medium*), FTA will round up the overall rating to the higher rating (e.g. project justification rating of *Medium-High* and local financial commitment rating of *Medium* yields an overall rating of *Medium-High*) except in the following circumstances:

- A *Medium* overall rating requires a rating of at least *Medium* for both project justification and local financial commitment.
- A *Medium-Low* overall rating requires a rating of at least *Medium-Low* for both project justification and local financial commitment.

### 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 as necessary (if project information has not changed from the previous year, a new evaluation and rating is not required) in support of budget recommendations presented in the *Annual Report* and when a project sponsor requests FTA approval to advance their proposed New Starts project into preliminary engineering and final

design or Small Starts project into project development. Consequently, as proposed New Starts and Small 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. As announced on January 13, 2010, FTA intends in the near term to initiate a rulemaking to better define and account for the wide range of benefits of major transit investments.

### 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:

**Table II-1 New Starts and Small Starts Project Justification Criteria**

Criterion	Measures/Categories
Mobility Improvements (New Starts only)	<ul style="list-style-type: none"> <li>• Number of Transit Trips</li> <li>• User Benefits per Passenger Mile</li> <li>• Number of Transit Dependents Using the Project</li> <li>• Transit Dependent User Benefits per Passenger Mile</li> <li>• Transit Dependents Compared to Share of Transit Dependents in the Region</li> </ul>
Environmental Benefits (New Starts only)	<ul style="list-style-type: none"> <li>• EPA Air Quality Designation</li> </ul>
Operating Efficiencies (New Starts only)	<ul style="list-style-type: none"> <li>• Incremental difference in system-wide operating cost per passenger mile between the build and the baseline alternatives</li> </ul>
Cost Effectiveness (New Starts and Small Starts)	<ul style="list-style-type: none"> <li>• Incremental Cost per Hour of Transportation System User Benefit between the baseline and build alternatives</li> </ul>
Transit Supportive Land Use (New Starts and Small Starts)	<ul style="list-style-type: none"> <li>• Existing Land Use</li> </ul>
Economic Development Effects (New and Small Starts)	<ul style="list-style-type: none"> <li>• Transit Supportive Plans and Policies</li> <li>• Performance and Impacts of Policies</li> </ul>

For mobility improvements, 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 numerative 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. The mobility improvements ratings process is described in greater detail in *Sections 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*). Transit Supportive Land Use factors are presented in *Section II.C*, decision rules for the environmental benefits criterion are described in *Sections II.E*, and consideration of “other factors” is described in *Section II.F*.

FTA assigns weights to the project justification criteria as follows: mobility improvements (20%), environmental benefits (10%), operating efficiencies (10%), cost effectiveness (20%), public transportation supportive land use (20%), and economic development effects (20%).

FTA is working with the transit community to: 1) develop more robust methodologies for measuring economic development effects so as to distinguish them from land use benefits and avoid double counting; and 2) develop more robust measures for environmental benefits. The proposed measures for these criteria in this guidance are intended to be an interim approach. In October 2008, FTA published a “Discussion Paper on the Evaluation of Economic Development” to consider one possible approach for better capturing a project’s economic development effects. FTA is reviewing the comments received on that proposal and will be considering them as part of New Starts streamlining activities. FTA convened a panel of experts in October 2008, to explore ways in which environmental benefits of New Starts projects might be considered and weighed in the rating process. A report of that panel’s deliberations was released in April 2009. As announced on January 13, 2010, FTA intends in the near term to initiate a rulemaking to better define and account for the wide range of benefits of major transit investments.

If well documented, and considered by FTA to be a significant benefit to a proposed project that is not otherwise captured in the other evaluation criteria, “other factors” may increase or decrease a summary project justification rating by no more than one step (for example, from *Medium-Low* to *Medium* or from *Medium-High* to *High*.)

Failure to submit acceptable information (for example, reliable travel forecasts) 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 currently considers the incremental cost per hour of transportation system user benefits in the forecast year.

Transportation system user benefits reflect the improvements in regional mobility (as measured by the weighted in- and out-of-vehicle changes in travel-time to users of the regional transit system) caused by the implementation of the proposed New Starts project. The cost

effectiveness measure is calculated by (a) estimating the incremental “base-year” annualized capital and operating costs of the project (over a lower cost “baseline” of transit service), and then (b) dividing these costs by the projected user benefits. The result of this calculation is a measure of project cost per hour of projected user (i.e. travel-time) benefits expected to be achieved if the project is added to the regional transit system. Proposed projects with a lower cost per hour of projected travel-time benefits are evaluated as more cost effective than those with a higher cost per hour of projected travel-time benefits.

Table II-2 below presents the thresholds FTA will use in FY 2011 for assigning a *High, Medium-High, Medium, Medium-Low* or *Low* cost effectiveness rating for each proposed project. FTA publishes updates to these breakpoints annually to reflect the impact of inflation.

**Table II-2 Cost Effectiveness Breakpoints**

High	\$12.49 and under
Medium-High	\$12.50 - \$15.99
Medium	\$16.00 - \$24.99
Medium-low	\$25.00 - \$30.99
Low	\$31.00 and over

The breakpoints that FTA uses to assign cost effectiveness ratings are based, fundamentally, on the value of the project’s benefits (cost per hour of transportation system user benefits with an adjustment to account for congestion benefits and non-mobility benefits). U.S. Department of Transportation (USDOT) guidance (*Departmental Guidance for the Valuation of Travel time in Economic Analysis, April 9, 1997*) describes, in detail, the derivation of the standard values of time to be used by all USDOT Administrations in the economic evaluation of proposed projects. Consistent with this departmental guidance, FTA values travel time-savings at 50 percent of Median Household Income published by the Census Bureau, divided by 2,000 hours.

When the cost effectiveness breakpoints were initially established in fall 2002 for the FY 2004 *Annual Report*, the most recent data available from the U.S. Census was year 2000. At that time, the median household income reported by the U.S. Census was \$42,148. Using 2000 hours per year as specified in USDOT guidance, the value of time in year 2000 was calculated at \$10.54 per hour. However, FTA acknowledged that the time savings for transit users alone did not capture the full range of benefits of major transit projects. Pending improved reliability of the estimates of highway congestion relief, FTA assumed that congestion relief adds about 20 percent to the travel time savings generated by the project. Hence, each hour of transit time savings would represent a total direct benefit of about \$12.65 per hour in year 2000 dollars to all users of the transportation system. Further, indirect benefits (economic development, safety improvements, pollutant reductions, energy savings, etc.) increased that value. Assuming that indirect benefits are approximately equal to the direct transportation benefits, FTA increased the value of each hour of transit travel time by a factor of two to about \$25 in year 2000 dollars. FTA used this value to establish the breakpoint between a "Low" and "Medium-Low" rating for cost effectiveness. Since that time, the breakpoints have been inflated annually based on the Gross Domestic Product Index (also known as the GDP deflator), which is an alternative to the consumer price index.

The establishment of the breakpoints described above attempted through broad assumptions to capture the non-mobility related benefits of transit projects. FTA's premise that mobility and non-mobility benefits are exactly equal was necessarily an estimate because of limited and unreliable data then available about non-mobility benefits. Thus, as announced on January 13, 2010, FTA intends in the near term to initiate a rulemaking to better define and account for the wide range of benefits of major transit investments. The intent is to better quantify non-mobility benefits so that, if possible, they can be included along with the mobility benefits in the comparison to cost to determine the cost effectiveness of a proposed investment.

Very Small Start projects include low-cost elements such as service branding, low-floor buses operating at improved frequencies, transit stations with real-time passenger information, and traffic signal priority, all of which FTA has determined to be cost effective by their very nature. Therefore, Very Small Starts projects automatically receive a *Medium* rating for cost effectiveness.

### ***II.C Transit-Supportive Existing Land Use and Economic Development Effects***

In its evaluation of New Starts projects, FTA explicitly considers the following transit supportive land use and economic development factors:

#### **Land Use Factors**

1. Existing corridor and station area development;
2. Existing corridor and station area development character;
3. Existing station area pedestrian facilities, including access for persons with disabilities; and
4. Existing corridor and station area parking supply.

#### **Economic Development Effects Factors**

1. 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.
2. 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 project sponsors to submit information in support of an optional "other land use considerations" category.

The evaluation of transit supportive land use and economic development effects is similar for Small Starts projects, but eliminates the growth management and "other land use considerations" factors and simplifies the reporting of information supporting the remaining factors. More information on the land use evaluation process for Small Starts projects can be found in Appendix A of the *Interim Guidance and Instructions for Small Starts*.

FTA considers Very Small Starts projects which meet the minimum existing ridership threshold of 3,000 daily boardings to be in corridors with transit-supportive land use and economic

development effects appropriate to the proposed level of investment. Therefore, Very Small Starts projects automatically receive *Medium* ratings for transit supportive land use and economic development effects.

Based on information submitted to FTA by local agencies, FTA gauges each category by the factors identified above. FTA assigns numerical ratings from one of five (“1” to “5”) for each of the factors. Each factor is weighted equally within its category, averaged, and combined into category-specific ratings. These category ratings are then combined equally and converted to a descriptive rating of *High*, *Medium-High*, *Medium*, *Medium-Low* or *Low* to determine the overall land use or economic development effects rating.

Additional detail on FTA’s land use and economic development effects rating process is contained in *Guidelines and Standards for Assessing Transit-Supportive Land Use and Economic Development Effects*. Table II-3 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**

<b>I. EXISTING LAND USE</b>		
<i>Existing Land Use</i>		
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: <ul style="list-style-type: none"> <li>Existing corridor and station area development;</li> <li>Existing corridor and station area development character;</li> <li>Existing station area pedestrian facilities, including access for persons with disabilities; and</li> <li>Existing corridor and station area parking supply.</li> </ul>		

**Table II-3 Ratings Applied in Assessment of Economic Development Effects Criterion**

<b>II. TRANSIT-SUPPORTIVE PLANS AND POLICIES</b>		
<i>Growth Management</i> (DOES NOT APPLY TO SMALL STARTS)		
Phase of Project Development		
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: <ul style="list-style-type: none"> <li>• Concentration of development around established activity centers and regional transit; and</li> <li>• Land conservation and management.</li> </ul>		

**Table II-3 Ratings Applied in Assessment of Economic Development Effects Criterion (cont.)**

<b>II. TRANSIT-SUPPORTIVE PLANS AND POLICIES</b>		
<i>Transit-Supportive Corridor Policies</i>		
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: <ul style="list-style-type: none"> <li>• Plans and policies to increase corridor and station area development;</li> <li>• Plans and policies to enhance transit-friendly character of corridor and station area development;</li> <li>• Plans to improve pedestrian facilities, including facilities for persons with disabilities; and</li> <li>• Parking policies.</li> </ul>		

**Table II-3 Ratings Applied in Assessment of Economic Development Effects Criterion (cont.)**

<b>II. TRANSIT-SUPPORTIVE PLANS AND POLICIES</b>		
<i>Supportive Zoning Regulations Near Transit Stations</i>		
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: <ul style="list-style-type: none"> <li>• Zoning ordinances that support increased development density in transit station areas;</li> <li>• Zoning ordinances that enhance transit-oriented character of station area development and pedestrian access; and</li> <li>• Zoning allowances for reduced parking and traffic mitigation.</li> </ul>		

**Table II-3 Ratings Applied in Assessment of Economic Development Effects Criterion (cont.)**

<b>II. TRANSIT-SUPPORTIVE PLANS AND POLICIES</b>		
<i>Tools to Implement Land Use Policies</i>		
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.
Ratings based on assessment of the following: <ul style="list-style-type: none"> <li>• Outreach to government agencies and the community in support of land use planning;</li> <li>• Regulatory and financial incentives to promote transit-supportive development; and</li> <li>• Efforts to engage the development community in station area planning and transit-supportive development.</li> </ul>		

**Table II-3 Ratings Applied in Assessment of Economic Development Effects Criterion (cont.)**

<b>III. PERFORMANCE AND IMPACTS OF LAND USE POLICIES</b>		
<i>Performance of Land Use Policies</i>		
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: <ul style="list-style-type: none"> <li>• Demonstrated cases of development affected by transit-oriented policies; and</li> <li>• Station area development proposals and status.</li> </ul>		

**Table II-3 Ratings Applied in Assessment of Economic Development Effects Criterion (cont.)**

<b>III. PERFORMANCE AND IMPACTS OF LAND USE POLICIES</b>		
<i>Potential Impact of Transit Project on Regional Land Use</i>		
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: <ul style="list-style-type: none"> <li>• Adaptability of station area land for development; and</li> <li>• Corridor economic environment.</li> </ul>		

As Table II-3 indicates, FTA takes into consideration the stage of development of a proposed project in its evaluation of land use and economic development effects 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***

Five measures are applied to estimate mobility improvements: (1) the number of transit trips using the project; (2) their user benefits per passenger mile on the project; (3) the number of trips by transit dependent riders using the project; (4) their user benefits per passenger mile on the project; and (5) the share of user benefits received by transit dependents compared to the share of transit dependents in the region.

#### **Number of Transit Trips Using the Project**

The number of transit trips on the project indicates whether or not the project provides benefits for a large number of users. All else being equal, projects that benefit more trips are more effective mobility improvements than projects that benefit fewer trips.

#### **User Benefits per Passenger Mile on the Project**

User benefits quantify traveler mobility benefits for all users of the transit system, expressed in terms of travel time savings. In order to rate projects in comparison to one another, this measure is normalized by the annual passenger miles traveled on the New Starts project in the forecast year. The result is a measure of the intensity of the user benefits.

### **Number of Trips by Transit Dependents Using the Project**

The number of trips by transit dependent riders indicates whether or not the project provides benefits for a large number of transit dependent people. All else being equal, projects that benefit more transit dependent people are more effective mobility improvements for transit dependents than projects that benefit fewer transit dependent people.

### **Transit Dependent User Benefits per Passenger Mile**

This measure indicates whether the New Starts project would result in significant benefits for the average transit dependent passenger. User benefits to transit dependents are quantified as the user benefits for the lowest socio-economic stratum reflected in the local travel forecasting model (usually based on auto-ownership or income).

### **Share of User Benefits Received by Transit Dependents Compared to the Share of Transit Dependents in the Region**

This measure indicates whether or not a project is in a relatively transit dependent corridor for the particular metropolitan area. The numerator is calculated by taking the amount of user benefits received by the lowest socio-economic stratum and dividing by the total amount of user benefits for the project. The denominator is calculated by taking the number of person-trips made regionally by the lowest socio-economic stratum and dividing by the total person-trips made regionally.

After reviewing the ratios submitted for the fifth measure (share of user benefits received by transit dependents compared to the share of transit dependents in the region), FTA did not believe the quality of the data was sufficient to warrant including the metric in the mobility rating calculation. For each of the remaining four measures, projects were aligned in order and categorized into five groups, separated by the logical breakpoints indicated by the submitted data for the measure. Projects in the highest grouping received a “5,” while projects in the lowest grouping received a “1.” To arrive at the mobility improvements rating, FTA assigned the following weights to the four measures: (1) the number of transit trips using the project, 37.5%; (2) user benefits per passenger mile on the project, 37.5%; (3) the number of trips by transit dependent riders using the project, 12.5%; and (4) transit dependent user benefits per passenger mile on the project, 12.5%.

### ***II.E Environmental Benefits***

In its evaluation of environmental benefits that would be realized through the implementation of a proposed project, FTA currently only considers the Environmental Protection Agency’s current air quality designation of the metropolitan area in which the project is located. This measure is defined for each of the transportation-related pollutants (ozone, CO, and PM-10), 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. Specifically, FTA follows the following decision rule when assigning ratings for environmental benefits:

- Projects in non-attainment areas for any transportation-related pollutants receive a *High* rating.
- Projects that are in attainment areas receive a *Medium* rating.

As announced on January 13, 2010, FTA intends in the near term to initiate a rulemaking to better define and account for the wide range of benefits of major transit investments.

## ***II.F Other Factors***

Consistent with 49 U.S.C. 5309(d) and (e), FTA also includes other factors when evaluating project justification. This may include any other factor which the project sponsor believes articulates the benefits of the proposed major transit capital investment but which is not captured within the other project justification criteria.

As described in FTA's September 2009 *Guidance on New Starts/Small Starts Policies and Procedures*, FTA is no longer emphasizing specific items that it will consider when determining whether to modify a project's justification rating based on "other" factors. Rather, FTA is considering "other" factors on a project-by-project basis. Thus, FTA is no longer calling out congestion management strategies, with automobile pricing strategies in particular, or the contents of a "make-the-case" document as items it will specifically consider or formally rate as "other" factors. In addition, FTA is not formally and explicitly rating the reliability of information provided on costs and travel forecasts, but is still considering reliability of the information when determining whether the project justification rating should be changed based on "other factors".

The overall "other factors" rating is introduced *after* the assignment of an initial project justification rating. FTA may increase this initial project justification rating by a maximum of one step (i.e. from *Medium* to *Medium-High*) if there are compelling "other factors". In less compelling cases, other factors may be reported alongside other project information in the *Annual Report*, but not formally considered in the project's evaluation and rating. Where information in support of being considered as an "other factor" is not determined to be worthy of such recognition, it is neither considered in FTA's evaluation nor reported.

## **III. SUMMARY LOCAL FINANCIAL COMMITMENT RATING**

The following provides a summary of FTA's process for evaluating the local financial commitment of proposed New Starts and Small Starts projects. Small Starts projects that meet the criteria described in *Section I.B* receive a summary local financial commitment rating of *Medium* or *High*, depending on the Small Starts share. Those Small Starts projects that cannot meet those criteria must be evaluated and rated based on the criteria described in this section.

### **III.A Local Financial Commitment Rating**

FTA assigns a summary local financial commitment 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-Section 5309 New Starts funding;**
2. Stability and reliability of the proposed project's **capital finance plan**, including the following factors:
  - Current capital condition;
  - Commitment of capital funds;
  - Reasonable capital planning assumptions and cost estimates and sufficient capital funding capacity.
3. Stability and reliability of the proposed project's **operating finance plan**, including the following factors:
  - Current operating financial condition;
  - Commitment of operations and maintenance (O&M) funds;
  - Reasonable operations planning assumptions and cost estimates and sufficient O&M funding capacity.

These ratings are based on an analysis of the financial plans 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.

As noted at the beginning of this document, FTA has determined that the type of contracting arrangement used or considered by a project sponsor is not useful or appropriate in determining the strength of the overall project. Thus, FTA eliminated a project sponsor's use or consideration of contracting out operations and maintenance when evaluating and rating the operating financial plan.

The summary local financial commitment rating considers as one criterion the Section 5309 New Starts funding share of project capital costs. The following ratings are assigned to this criterion:

- >60 percent Section 5309 New Starts funding share = *Low* rating
- 50-60 percent Section 5309 New Starts funding share = *Medium* rating
- 35-49 percent Section 5309 New Starts funding share = *Medium-High* rating
- < 35 percent Section 5309 New Starts funding share = *High* rating

FTA rates the capital and operating finance plans 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*.

Numerical ratings from 1 to 5 (*Low* to *High*) are assigned to each of the three subfactors under the capital and operating finance plan measures. These subfactors are weighted as follows to

arrive at summary ratings for the capital and operating finance plan measures: (1) current capital/operating condition 25%; (2) commitment of capital/operating funds 25%; and (3) cost estimates/planning assumptions/capacity 50%. FTA weighs the proposed non-New Starts share as 20 percent of the summary local financial commitment 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 as 30 percent of the rating. These ratings are combined and converted by FTA into a summary local financial commitment rating of *High, Medium-High, Medium, Medium-Low* or *Low*.

Small Starts projects which do not qualify for the streamlined financial evaluation process presented in *Section I.B* of this appendix are subject to the full financial evaluation and must meet the “PE” standards described in Tables III-1 and III-2 before entering project development and the final design criteria before receiving a Project Construction Grant Agreement.

Failure to submit either a capital or operating financial plan for evaluation will result in a *Low* rating for local financial commitment.

**Table III-1 Capital Plan Rating Standards**

	<b>High</b>	<b>Medium-High</b>	<b>Medium</b>	<b>Medium-Low</b>	<b>Low</b>
<b>Current capital condition</b>	- 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	- 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	- 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	- 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	- 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
<b>Commitment of capital funds</b>	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.	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.	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.	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.	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.
<b>Capital cost estimates and planning assumptions/ Capital funding capacity</b>	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.	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.	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 estimated project costs.	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.	Financial plan contains capital planning assumptions and cost estimates that are far more optimistic than recent history suggests.

**Table III-2 Operating Plan Rating Standards**

	<b>High</b>	<b>Medium-High</b>	<b>Medium</b>	<b>Medium-Low</b>	<b>Low</b>
<b>Current Operating Financial Condition</b>	<ul style="list-style-type: none"> <li>- Historical and actual positive cash flow. No cash flow shortfalls.</li> <li>- Current operating ratio exceeding 2.0</li> <li>- No service cutbacks in recent years.</li> </ul>	<ul style="list-style-type: none"> <li>- Historical and actual balanced budgets. Any annual cash flow shortfalls paid from cash reserves or other committed sources.</li> <li>- Current operating ratio is at least 1.5</li> <li>- No service cutbacks in recent years.</li> </ul>	<ul style="list-style-type: none"> <li>- Historical and actual balanced budgets. Any annual cash flow shortfalls paid from cash reserves or annual appropriations.</li> <li>- Current operating ratio is at least 1.2</li> <li>- No service cutbacks or only minor service cutbacks in recent years</li> </ul>	<ul style="list-style-type: none"> <li>- Historical and actual cash flow show several years of revenue shortfalls. Any annual cash flow shortfalls paid from short term borrowing.</li> <li>- Current operating ratio is at least 1.0</li> <li>- Major Service cutbacks in recent years</li> </ul>	<ul style="list-style-type: none"> <li>- Historical and actual cash flow show several years of revenue shortfalls, or historical information not provided.</li> <li>- Current operating ratio is less than 1.0</li> <li>- Major service cutbacks in recent years</li> </ul>
<b>Commitment of O&amp;M Funds</b>	<p>For final design - 100% of the funds needed to operate and maintain the proposed transit system are committed or budgeted.</p> <p>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.</p>	<p>For final design - Over 75% of the funds needed to operate and maintain the proposed transit system are committed or budgeted.</p> <p>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.</p>	<p>For final design – Over 50% of the funds needed to operate and maintain the proposed transit system are committed or budgeted.</p> <p>For PE – While no additional O&amp;M funding has been committed, a reasonable plan to secure funding commitments has been presented.</p>	<p>For final design - Sponsor has identified reasonable potential funding sources, but has received less than 50% commitments to fund transit operations and maintenance.</p> <p>For PE - Sponsor does not have a reasonable plan to secure O&amp;M funding. No unspecified sources.</p>	<p>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.</p> <p>For PE - Sponsor has not identified any reasonable funding sources for the operation and maintenance of the proposed transit system.</p>
<b>Operating Cost Estimates and Planning Assumptions/ O&amp;M Funding Capacity</b>	<p>The assumptions supporting the operating and maintenance cost estimates and revenue forecasts are very conservative relative to historical experience.</p> <p>Projected cash balances, reserve accounts, or access to a line of credit exceeding 50 percent (6 months) of annual systemwide operating expenses.</p>	<p>The assumptions supporting the operating and maintenance cost estimates and revenue forecasts are conservative relative to historical experience.</p> <p>Projected cash balances, reserve accounts, or access to a line of credit exceeding 25 percent (3 months) of annual systemwide operating expenses.</p>	<p>The assumptions supporting the operating and maintenance cost estimates and revenue forecasts are consistent with historical experience.</p> <p>Projected cash balances, reserve accounts, or access to a line of credit exceeding 12 percent (1.5 months) of annual systemwide operating expenses.</p>	<p>The assumptions supporting the operating and maintenance cost estimates and revenue forecasts are optimistic relative to historical experience.</p> <p>Projected cash balances, reserve accounts, or access to a line of credit are less than 8 percent (1 month) of annual systemwide operating expenses.</p>	<p>The assumptions supporting the operating and maintenance cost estimates and revenue forecasts are far more optimistic than historical experience suggests is reasonable.</p> <p>Projected cash balances are insufficient to maintain balanced budgets.</p>

### **III.B Local Financial Commitment Rating Decision Rules**

In addition to the non-Section 5309 New Starts program share, capital and operating financial rating considerations and weights described above, FTA uses the following decision rules to calculate the overall local financial commitment rating.

- If the Section 5309 New Starts share, which accounts for 20 percent of the local financial commitment rating, brings the overall local financial commitment rating to less than *Medium*, it will be excluded from the calculation. In other words, a New Starts funding 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 FY 2007 in order to respond to direction in SAFETEA-LU that FTA evaluate the percent of the Section 5309 New Starts program 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 either of a proposed project's capital or operating finance plan receives a *Medium-Low* or *Low* rating, the summary local financial commitment rating for the project cannot be higher than a *Medium-Low*.
- To receive a summary local financial commitment rating of *Medium-High*, both the capital and operating finance plans must be rated at least *Medium-High*.

## **IV. RATINGS AND FUNDING RECOMMENDATIONS**

The information below contains principles FTA adheres to when making funding recommendations.

49 U.S.C. 5309(d)(1)(B)(ii) directs FTA to consider proposed New Starts projects for Full Funding Grant Agreements (FFGA) and proposed Small Starts for Project Construction Grant Agreements (PCGA), only if they receive a *Medium*, *Medium-High*, or *High* overall project 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 or PCGA. A rating of *Medium* or higher does not translate directly into a funding recommendation in any given fiscal year. Proposed projects that are rated *Medium* or higher will be eligible for multi-year funding recommendations in the Administration's proposed budget only if other requirements have been met (i.e., completion or nearing 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.

When determining annual funding allocations among proposed New Starts and Small Starts, the following general principles are applied:

- Any project recommended for new funding commitments should meet the project justification, local financial commitment, and process criteria established by Sections 5309(d) and 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 and PCGA define the terms of the Federal commitment to a specific project, including funding. Upon completion of an FFGA or PCGA, 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 or PCGA 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 program, the Section 5307 Urbanized Area Formula program, the Section 5339 Alternatives Analysis program, or from Title 23 “flexible funding” sources.
- Firm funding commitments, embodied in FFGAs or PCGAs, will not be made until projects demonstrate that they are ready for such an agreement, i.e. the project’s development and design has progressed to the point where its scope, costs, benefits, and impacts are considered firm and final.
- Funding should be provided to the most qualified 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 project justification, local financial commitment, and overall project ratings, and considerations such as project readiness and the availability of funds.
- Small Starts projects that request less than \$25 million in total Small Starts funding or whose request can be met with a single year appropriation or with existing appropriations are generally proposed to be funded under a one-year capital grant rather than a PCGA.

Again, FTA emphasizes that project evaluation and rating is an on-going process. As proposed New Starts and Small 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.

# **Appendix C**

## **Paul S. Sarbanes Transit in Parks Program**

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## **Paul S. Sarbanes Transit in Parks Program**

### **Background**

Section 5320 of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) as amended by the SAFETEA-LU Technical Corrections Act of 2008 (June 6, 2008; 122 Stat. 1572) established the Paul S. Sarbanes Transit in Parks Program (Transit in Parks Program), formally known as the Alternative Transportation in Parks and Public Lands (ATPPL) program. The program is administered by the Federal Transit Administration (FTA) in partnership with the Department of the Interior (DOI) and the U.S. Department of Agriculture's Forest Service. Congress appropriated \$26,900,000 for the program's fourth year, Fiscal Year 2009.

The Transit in Parks Program funds capital and planning expenses for alternative transportation systems such as shuttle buses in national parks and other federal lands. Federal land management agencies and State, local, and tribal governments are eligible recipients. The goals of the program are to conserve natural, historical, and cultural resources; reduce congestion and pollution; improve visitor mobility and accessibility; enhance visitor experience; and ensure access to all, including persons with disabilities.

Section 5320 stipulates that the Secretary of Transportation annually submit a report on the allocation of Transit in Parks Program funds. The section further stipulates that this report be part of FTA's *Annual Report*. As such, this section of the *Annual Report* describes the project selection process that has been used during FY 2009.

### **Project Evaluation and Funding**

As demand far exceeded available funds, FTA's staff worked closely with federal land management agency representatives to develop a process that would select the most meritorious projects – those that were both strong transportation projects and best met the unique needs of federal lands. A total of 80 proposals were received totaling \$71.5 million, almost three times the amount available, indicating high competition for funds. Nine projects were withdrawn at the request of the federal land management agencies leaving 71 projects for \$68.15 million to evaluate. The evaluation criteria used were (1) demonstration of need, (2) visitor mobility and experience benefits, (3) environmental benefits, and (4) operational efficiency and financial sustainability.

FTA has not completed the FY 2009 evaluation process, but anticipates announcing successful applicants in the *Federal Register* once project selections have been finalized.

#### *Planning vs. Capital Projects*

The 71 alternative transportation projects that remain in the competition for funding represent a diverse set of capital and planning projects across the country. Fifty-four of the projects (totaling \$62.89 million) are capital projects and 17 (totaling \$5.26 million) are planning projects.

#### *Distribution by Federal Land Management Agency*

As predicted by the August 2001 Department of Transportation (DOT) – Department of Interior (DOI) study on alternative transportation needs in public lands, the National Park Service had the highest need for alternative transportation. The National Park Service has the most existing

alternative transportation systems and has had an alternative transportation program in place since 1997. During FY 2009, FTA received proposals from five Federal land management agencies which include the National Park Service, U.S. Fish and Wildlife Service, U.S. Forest Service, Army Corps of Engineers, and the Bureau of Reclamation.

#### *Types of Projects*

SAFETEA-LU allows a broad range of projects under this program. The types of projects proposed are consistent with the types of projects selected in the past and include purchase of buses for new transit service, replacement of old buses and trams, construction of a bicycle and pedestrian pathways, installation of accessible bus stops, intelligent transportation system components, and planning studies.

#### *New vs. Existing Systems*

The proposed projects include funding for both existing alternative transportation systems – through projects such as purchasing replacement buses – and funding for brand new systems. Proposals were submitted from existing alternative transportation systems such as those in Cape Code National Seashore and Mount Rainier National Park. Proposals were also submitted that would enable the program to fund brand new systems – such as shuttle service at Golden Gate National Recreation Area and a non-motorized pathway connection that will allow visitors to access sites in Valley Forge National Historic Park by bicycle and foot rather than by car.

#### *Geographic Distribution*

The proposed projects are located in 26 different states. There are projects in all major geographic regions – northeast, south, midwest, and west. The list includes projects in both rural and urban areas. Project funding requests vary in size from a \$33,000 to seven million dollars.

#### **Technical Assistance, Research, and Planning**

49 USC 5320 allows DOT, in consultation with DOI, to use up to 10 percent of program funds for technical assistance, research, and planning activities to support the program as a whole. FTA will use a percentage of the FY 2009 appropriation to fund on-site technical assistance in transportation planning to federal land management agencies and to fund the technical assistance center which was awarded to Western Transportation Institute at Montana State University on April 22, 2009. The National Technical Assistance Center for the Paul S. Sarbanes Transit in the Parks program will develop and oversee multiple technical assistance products to support land management agencies, States, and local and tribal governments that are in the process of planning and implementing alternative transportation projects serving federally managed parks and public lands. FTA has developed this program in order to provide comprehensive technical assistance for land management units and transit providers presently and in future fiscal years.