Recommendations of the Steering Committee: Preferred Alternative for High Capacity Transit in the South Valley Corridor

Spokane County Washington

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Executive Summary

The Light Rail Project Steering Committee was established by the Boards of the Spokane Transit Authority and the Spokane Regional Transportation Council. It was charged to assist in the development of the Light Rail Project for the south valley corridor from downtown Spokane east to Liberty Lake and to guide the project through design, construction, and start-up. This report documents the development of alternatives and contains the Steering Committee's recommendation for a preferred alternative. This recommendation is the conclusion of the most recent phase of planning, conceptual design and environmental analysis which began in 2001. Previous studies of high capacity transit in the region began in the early 1970s and continued during the '80s and '90s leading up to this most recent effort.

The project has *four core purposes*:

- Help implement the Spokane region's strategy to promote and encourage mixed and transit-oriented land uses.
- 2. Provide additional transportation mode choice in the South Valley Corridor to create an integrated, balanced regional transportation system.
- Link important activity centers in the Spokane region to enhance regional mobility for the growing population and labor force by taking advantage of available publicly owned former railroad right-of-way, which lies along the South Valley Corridor.
- 4. Use integrated regional transportation planning as a catalyst for growth management and economic development. The issues are timesensitive and need attention in the near term in order to respond proactively to growing regional populations and dynamic market forces.

The *Alternatives considered* in this report are:

- No Build No development of a high capacity transit system, but continued expansion of the existing transportation system as currently planned
- Separate Track Light Rail Transit (LRT) – 16 mile double-track electrified light rail system with 2-car trains, largescale stations, several new bridges and full amenities serving the corridor at a cost of \$658 million
- Shared Track Light Rail Transit (LRT)

 15.5 mile diesel light rail system initially using single-track with passing tracks for 2-way operations, with a range of design options using either single-car or 2-car trains, sharing sections of track with freight railroads, utilizing smaller-scale stations, including no new bridges and reduced amenities at a cost from \$226 to \$408 million depending on selected design options
- Bus Rapid Transit Alternative (BRT) A corridor focused premium bus system using existing roadways with bypasses of congested intersections, up-scale stations with enhanced amenities for passenger boarding only at limited stops, and premium buses for a project cost up to \$65 million depending on the route and station locations selected
- University City LRT (Minimum Operable Segment) with BRT to Liberty Lake – A combination of diesel LRT from downtown Spokane to University City with BRT continuing to Liberty Lake at a cost of \$157 million

Other alternatives previously considered and rejected include high-occupancy vehicle lanes on I-90 and the development of exclusive busways.

Following conceptual design, systems and operational planning, and environmental analysis of the alternatives, a draft environmental impact statement (DEIS) was produced, certified by the Federal Transit Administration (FTA) and then circulated for public comment on January 18, 2006. The DEIS documents the detailed analysis of each of the alternatives and evaluates them according to a list of goals that were previously adopted by the Steering Committee and STA Board of Directors.

The goals against which the alternatives were evaluated are:

- 1. Maximize mobility improvements
- 2. Maximize environmental benefits
- 3. Maximize cost effectiveness
- 4. Maximize operating efficiencies
- 5. Maximize mutual support between transit and land use
- 6. Provide project affordability: limit the estimated capital and annual operation and maintenance costs to amounts the community is able to fully fund
- 7. Maximize potential for economic development
- 8. Maximize community development potential
- 9. Respond to community preferences for HCT

An extensive public involvement program was conducted throughout the planning process. The process engaged the public in conversation about the project to achieve a level of public awareness and understanding about the impacts and benefits of the proposed alternatives. Elements of the public involvement program included:

- Public Discussions approximately 300 presentations, workshops, meetings, open houses and public forums since August 2001
- Community Displays ten project display boards and a large display unit which were rotated throughout the community
- Newsletters produced three times since 2002 and circulated in the Spokesman-Review and used as handouts at meetings
- Visual simulations and animations still and animated photo-realistic renderings of project alternative designs produced and used in various presentations, kiosks and on the website
- Project Website <u>www.spokanelightrail.com</u> has been available throughout the project to provide information, meeting notices, and an interactive community bulletin board
- Interactive Public Kiosks Three selfcontained kiosks placed in high-traffic public areas including shopping centers that contain interactive touch-screen video displays providing public information and soliciting opinions

 Public opinion surveys – both formal (statistically valid) and informal surveys conducted periodically throughout the project development process, soliciting opinions on need for the project, preferred mode and the public's willingness to pay for its development

The Steering Committee was advised throughout the process by a Citizens Advisory Committee (CAC) composed of members who live in Liberty Lake, Spokane Valley and Spokane as well as representatives from various agencies and nonprofits in the region. In addition, a Technical Advisory Committee composed of agency staff from the local jurisdictions involved in the project provided advice and technical support.

Following the circulation of the DEIS on January 18, 2006, a 45-day public review period extended to March 3, 2006. During this period, the public was invited to attend four meeting/open houses to discuss and comment on the proposed alternatives. Comments received have been summarized and are available as input to the preferred alternative decision process.

Recommendations of the Steering Committee

The project Steering Committee recommends to the Boards of Directors of STA and SRTC that the following steps be taken with respect to high capacity transit in the South Valley Corridor:

- Develop light rail from downtown Spokane through Spokane Valley to the City of Liberty Lake over an alignment of approximately 15.5 miles. Recommended characteristics include:
- Up to 14 passenger stations with 7 park and ride facilities
- Forego electrification and procure diesel powered light rail vehicles
- Use single-car operations with vehicles capable of connecting into multiple unit trains
- Initially develop a single-track alignment with passing tracks for two-way operations
- Provide for simple, modest station platforms, shelters and passenger amenities

- 2. Plan the system for expansion in the future to double-track with longer stations for multiple-car trains
- Limit the initial capital cost to not exceed a ceiling of \$300 million expressed in 2006 dollars
- 4. Develop an equitable, diversified funding strategy that includes existing resources, private sector participation, and revenues derived from any new taxes subject to approval by voters
- Adopt an implementation timeline that achieves revenue service operations by 2014

LRT Vehicle in Oceanside, CA



Preferred Alternative Alignment and Station Locations



Rationale for the Recommendation

This recommendation is made on the basis of multiple phases of planning and alternatives analysis conducted over the past several years. The recommendation is drawn from the conclusion that the public desires development of a light rail system.

Primary reasons cited include:

- Light rail is desired by the public as an additional alternative to travel by automobile or bus.
- Experience from other cities that have developed light rail systems and from surveys conducted in Spokane demonstrates that the public prefers light rail over other modes of travel when it is convenient and reliable.
- Development of a starter light rail system for the Spokane region is considered a proactive approach to meeting future transportation needs in a manner that is also consistent with the established comprehensive land use plans published by the affected jurisdictions.
- It is anticipated that ultimately, a regional light rail system will be far less costly and have less potential for adverse impacts if it is implemented concurrent with or ahead of the growth that is already occurring, thereby helping to positively shape that growth rather than reacting to its adverse effects when future congestion demands relief.

 Studies have shown that development of light rail can serve as a significant catalyst for economic development in the region and in particular, along the corridor. A regional investment in light rail can create new jobs and leverage economic benefits in the form of increased sales and profits to private businesses, increased property values, and growth in tax revenues that accrue to the local jurisdictions.

Napa Station with potential new development



- Light rail transit can assist in the revitalization of under-developed segments of the corridor and help to satisfy the regional vision for a livable community through further development of more dense, mixed-use walkable activity centers and neighborhoods that accommodate auto travel but are less dependent upon it.
- The light rail system can make use of existing railroad rights of way that are currently available and much of which is in public ownership instead of having to purchase right of way in the future.

Other Considerations

It is recommended that the Spokane light rail system be developed generally utilizing the shared track alternative alignment and incorporating cost savings measures associated with the *single track option*. There is substantial interest in including a variety of enhancements to the base alignment which will be assessed during preliminary engineering activities to follow. Examples include longer station platforms at the outset to better accommodate future capacity, greater length of passing track to reduce operational constraints, minimized lengths of shared freight/light rail operations, and consideration for a bridge structure to improve safety and traffic flow at the Argonne-Dishman Mica intersection in Spokane Valley. Substantial trade-offs exist associated with the determination of what enhancements can or should be included in the initial construction of the project. The recommended capital cost ceiling in conjunction with availability of funding will largely determine what can be included in the initial scope.

Project Funding

Implementation of the Spokane light rail system requires a comprehensive financial plan that can ensure that adequate financial capacity exists to design, build, operate and maintain the system. In addition, continued operation and expansion of the regional bus system by the Spokane Transit Authority must also be assured. Surveys of voters in the region demonstrated that they are not likely to approve full funding for this system solely from increases in sales tax revenue.

It has been concluded that obtaining a large percentage of funding from Federal New Starts Funding is unlikely. It is therefore recommended that the financial plan be developed with the following characteristics:

- A diversified funding package focused on local control.
- Preservation of options for federal funding depending on future policies, but not dependent on New Starts funding at this time.
- Reallocation of federal formula funding that is currently available for regional transit funding to provide a portion of funds for the project.
- Pursue a combination of funding sources anticipated to include:
 - Some level of revenue from additional tax sources (sales tax, property tax, etc.).
 - Participation by property owners and businesses that would directly benefit from implementation of the project.
 - Revenue from advertising and sponsorship of components of the project.
 - Participation by local governments along the corridor.
 - Tax increment financing.
 - Funding from the State of Washington.

Implementation Milestones and Timeline

Several key activities and milestones must be achieved to implement the preferred alternative recommendation. Following formal acceptance by the STA Board, the following milestones are among the key steps to project implementation. Based on the public's stated interest for near-term implementation of light rail ¹ it is recommended that a schedule be developed to achieve revenue service of the light rail project by 2014.

- Adoption of the Preferred Alternative by the Spokane Transit Authority Board of Directors;
- Development of Financial Plan for implementation of the Preferred Alternative;
- Development of Project Management Plan;
- Development of Intergovernmental Agreements;

- Public vote for local tax support;
- Legislative actions, yet to be determined that may be required to enable financial plan implementation;
- Other local government actions to implement financial plan recommendations;
- Preliminary engineering;
- Completion of the final environmental impact statement (FEIS);
- Final design;
- Vehicle procurement;
- Right of way acquisition;
- Construction;
- Safety certification and testing; and
- Revenue service.

¹ Moore Information Survey, January 2006

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Purpose of Report

This document summarizes the alternatives considered for HCT (High Capacity Transit) in Spokane's South Valley Corridor. The *Preferred Alternative Report* is intended to summarize the results of five years of concept development and technical analysis of high-capacity transit alternatives for what is referred to as the South Valley Corridor. It is the formal means by which the Steering Committee reports its recommended actions to the Spokane Transit Authority (STA) Board of Directors and the general public to use in forming a locally preferred alternative for addressing HCT needs in the Spokane region. This report will:

- $\sqrt{}$ Provide background information about the corridor;
- Outline the purpose and need for HCT in Spokane's South Valley corridor;
- Describe the alternatives included in the analysis and the related environmental impact assessment;
- Review the evaluation criteria applied in recommending a preferred alternative;
- ✓ Summarize the resulting evaluation of alternatives; and
- $\sqrt{}$ Present the Steering Committee's recommendations.

Downtown Spokane



Corridor Description

The South Valley Corridor extends approximately 16 miles east from downtown Spokane through the City of Spokane Valley to its termination point in the City of Liberty Lake. The corridor lies entirely within Spokane County and contains both active and former railroad rights-of-way along most of its length. The westernmost portion of the corridor through Spokane's central business district is developed with primarily office and commercial uses, designed for easy access to both pedestrians and motor vehicles. Development in the remainder of the corridor is low density, with a mix of commercial, industrial and residential uses, primarily oriented to motor vehicle use. The eastern portions of the corridor, between Spokane Valley and Liberty Lake, are partially undeveloped. Some areas between downtown Spokane and Liberty Lake are primed for redevelopment. Large vacant or underdeveloped properties are sprinkled throughout the mid-section of the corridor. One such example is the University City Mall, a shopping center built in the 1960s that is now largely vacant but beginning to show signs of redevelopment.

The City of Spokane Valley's draft Comprehensive Plan anticipates a new "City Center" designation in this location. The boundaries of the project area encompass the corridor that the Spokane region selected as its highest priority for HCT (Figure 1-1). Downtown Spokane, at the western end of the corridor, is the largest employment center within the corridor. The City of Liberty Lake, at the eastern end, is the eastern-most municipality in the Spokane region. In time, there would likely be consideration for extending HCT east to Coeur d'Alene in Kootenai County, Idaho, at least as far west as the airport, and to the north side of Spokane (Figure 1-2).



Figure 1-1: Spokane South Valley Corridor

Figure 1-2: Regional Vision for High-Capacity Transit



Corridor Planning History

The South Valley Corridor planning history is summarized in Figure 1-3. Spokane leaders have been engaged in HCT planning for over 30 years. This is largely in response to sustained population and employment growth rates that are projected to continue and possibly increase over the foreseeable future. The driving goal is to have a balanced transportation system that will support a compact land-use and development pattern well into the future



Figure 1-3: South Valley Corridor Planning History



The Problem

A survey conducted by the STA in November 2004² indicates that 81% of the community thinks that traffic congestion is a problem in the region. The survey also revealed that 89% of those surveyed believe that government should look for a solution to congestion.

How should these issues be addressed? What is Spokane's public transportation vision for the future? How will outlying communities and activity centers be connected to Spokane's central core? These are among the many important questions that local leaders, planners and Spokane Transit (STA) are seeking to answer. Several years ago, leaders in Spokane recognized the growing road congestion problems in the region and decided to act before it becomes a crisis. Spokane County grew by more than 15% in the last decade, the fourth fastest among Washington counties. The economic region, comprised of both Spokane and Kootenai counties, has a combined population of 521,000 people and is forecast to grow by at least 35% by 2025.

² Critical Data Inc., 2004

Figure 2-1: Spokane Metropolitan Region



Despite aggressive development of a traditional road network, the Spokane region has experienced a 300 percent increase in measured traffic congestion since 1990, with an estimated annual cost of \$32 million³. Moreover, in 1998, the region was designated a serious non-attainment area for air quality due to high levels of carbon monoxide.

Recently the region has improved its air quality through transportation programs and related projects. However, the region must continue to work to prevent or reduce congestion associated with traffic growth and its negative impacts on air quality.

³ Texas Transportation Institute, May 2005

Spokane Traffic



In the future, from Cheney to Coeur d'Alene and from north Spokane to the South Hill, the region will be an integrated array of cities, towns and neighborhoods that blend borders and connect in various ways. Giving residents and businesses a range of travel choices will build stronger communities and enhance economic development throughout the entire region.

How does the region begin to proactively plan community and economic development to ensure that the region's cities, towns and communities grow in a cohesive way? Identifying key transit corridors to address traffic congestion while considering population growth and land use is one such approach to enhance regional travel mobility and promote economic development. The South Valley Corridor Project is seeking to provide additional transportation choices for the region. The options are designed to promote positive and sustainable growth patterns that can stimulate economic development opportunities for businesses, residents and land owners along the corridor. The South Valley Corridor project is a proactive first step in mitigating traffic congestion, air quality and growth impacts

before the issues become much more difficult to manage.

Employment Trends

Employment forecasts indicate that growth and development will continue to expand between Spokane and Coeur d'Alene, Idaho. The Spokane Regional Transportation Council (SRTC) projects an additional 45,000 jobs will be created in the service and manufacturing sector by 2025. Much of this growth will occur in the South Valley and will result in significant increases in travel demand between Spokane and Kootenai Counties.

Downtown Spokane has expanded its role in the regional economy through public and private development. The regional economy has diversified to include a technology sector involving aerospace and research. Major area employers include legal, insurance and medical services, the Spokane School District, and government activities. The City of Liberty Lake, a center for the technology sector, includes two regional employment centers. These are the Liberty Lake Center and Liberty Lake Corporate Park.

Regional employment centers in the corridor are in downtown, in Spokane Valley and in Liberty Lake. In 1991, downtown Spokane hosted approximately 13% of the region's workforce and 48% of the County's leasable office space (Downtown Spokane Ventures Association). In recent years, development and employment growth have been strongest in downtown Spokane and in Liberty Lake. Areas in unincorporated Spokane County and the City of Spokane Valley have suffered due to leapfrogging development patterns.

Downtown Spokane



Transportation Trends

Following the typical model for growth, the Spokane region is currently building a North-South freeway and adding lane capacity to Interstate 90 (I-90). Total eastwest travel demand in the corridor is projected to grow from approximately 306,000 average daily person-trips in 2000 to approximately 452,000 in 2025. This is an increase of 48%. Total average daily person-trips in the Spokane region are projected to grow from approximately 2.9 million in 2000 to approximately 4 million in 2025. This is a 41% increase.

Development Trends

Without this project, continued development in the Spokane region would be more likely to continue as lower-density and autooriented. Net residential density in the corridor is now about 4.5 dwelling units per acre. Together with the implementation of local policies intended to encourage mixed use development, Light rail transit (LRT) could stimulate higher density development in the South Valley Corridor, particularly within a roughly 1/2-mile radius of LRT station nodes where such development would be supported by good regional transit access.

The City of Spokane Valley is a newly incorporated city along the South Valley Corridor and the eighth largest city in the State of Washington. The city is currently in the process of adopting a new Comprehensive Plan. The new plan includes strong policy support for mixed use development along the HCT transit corridor, concentrated at station nodes. As part of that planning effort, the City is also seeking to identify a "City Center" area, which would serve as a new mixed-use downtown. Locations in the corridor such as University City and Pines/Sprague and other areas are being considered for this City Center designation.

Spokane Valley City Center Concept Design



Studies show that most people are willing to walk ¼ to ½ mile to or from convenient transit stations. With the right combination of uses, districts close to transit stations can become a hub of activity where people will choose to live, shop and work. Restaurants, shopping, offices and a variety of housing types all contribute to the success of a transit oriented neighborhood.

In July 2005, STA completed a report outlining the socioeconomic and revenue impacts of a light rail system in the South Valley corridor⁴. In particular, the study identifies potential for LRT stimulated economic development.

Based on existing patterns, the following areas appear to be best positioned for transit oriented development:

⁴ Marketek & Applied Economics, 2005

- Area west of Liberty Lake
- Area south of the County Fairgrounds
- Spokane's Riverpoint Campus area
- University City area in Spokane Valley

University City TOD Concept



Preferred Alternative for HCT In the South Valley Corridor

The SRTC and STA have jointly undertaken the South Valley Corridor project to explore HCT options. The proposed project seeks to improve the quality of life in Spokane County by improving the region's air quality, linking centers and destinations, serving as a positive influence for new development or redevelopment, and taking advantage of potentially significant economic development benefits in the form of more jobs, higher property values and increased retail sales.

Economic Development Report Conclusions:

- Positive economic development potential along the corridor and around stations.
- A significant amount of multi-family, retail and office development in areas around the new stations.
- The creation of more than 8,400 new jobs.
- Increased property values and retail sales in the area.
- Millions of dollars worth of new sales tax and property tax revenue.

Project Purpose

This project has four core purposes:

1. Help implement the Spokane region's strategy to promote and encourage mixed and transit-oriented land uses.

All of the jurisdictions within the South Valley Corridor including the unincorporated areas of Spokane County, City of Spokane, City of Spokane Valley and the City of Liberty Lake see potential to shift growth patterns within the corridor away from the existing precedent of low-density, auto-oriented development. Working together, these jurisdictions will help shape new growth, making more efficient use of land and resources. The four jurisdictions in the corridor have completed the strategy's first step. All jurisdictions have adopted comprehensive planning policies and zoning regulations supporting mixeduse, transit-oriented development. The addition of HCT will further incentivize private investment and more in-fill redevelopment along the corridor.

2. Provide additional transportation mode choice in the South Valley Corridor to create an integrated, balanced regional transportation system.

Local transportation and land use plans identify the east/west HCT alignment as key to accommodating regional growth over the long term. The corridor already has access to auto-oriented modes of transportation including the I-90 freeway and an extensive road network. The corridor is also served by STA's conventional fixed-route and express bus service. The existing land use patterns in the corridor currently do not promote non-auto mobility for residents. HCT will not only provide access to an additional mode of transportation, it will also strengthen connections for pedestrians and bicyclists in close proximity to the planned HCT stations. A balanced and integrated transportation network would lessen environmental impacts associated with the existing auto-dominated system. An HCT option could also serve to postpone the need for further roadway expansion in some areas and reduce parking demand near activity centers near station locations. This, in turn, promotes additional development in areas along the corridor that are currently underdeveloped.

- 3. Link important activity centers in the Spokane region to enhance regional mobility for the growing population and labor force by taking advantage of available publicly owned former railroad right-of-way, which lies along the South Valley Corridor.
 - **Downtown Spokane**. Downtown Spokane is the region's principal employment center and contains most of the region's major cultural and civic facilities, including the 100acre Riverfront Park, Opera House, Civic Theater, Museum of Arts and Culture (MAC), Metropolitan Performing Arts Center, Spokane Symphony, the Convention and Trade Centers, and the Spokane Veterans Memorial Arena.



• University District. The district includes Washington State University's Spokane Campus, Gonzaga University, the Spokane Intercollegiate Research and Technology Institute, and Eastern Washington University. Ample parcels remain available for new development and revitalization.



 The Spokane County Fair and Expo Center. This area includes Avista Stadium, home to the popular Spokane Indians minor league baseball team. The Fair and Expo complex itself is currently booked with more than 200 exposition events per year. The Fairgrounds are bordered on the south by the UPRR Spokane Yard. The Bridging the Valley Project proposes to relocate this RR yard. In this scenario, approximately 80 – 100 acres would be available for mixed-use development.



• University City. The newly incorporated City of Spokane Valley is considering locations to develop its "City Center" including the possibility to redevelop the shopping center at this location into a major mixed-use, transit-oriented development that will accommodate either light rail or bus rapid transit options.



• Liberty Lake. This is a rapidly growing city at the eastern-terminus of the South Valley Corridor. Liberty Lake includes two regional employment centers. These are the Liberty Lake Center and Liberty Lake Corporate Park. Large parcels are currently available for development in both locations.



The South Valley corridor knits these important regional activity centers together, creating a new transportation framework. HCT will provide a vital link between the centers, enhancing access to employment, commercial and residential districts along the corridor. All of these elements will create favorable opportunities for compact, mixed-use development around the major activity centers indicated below.





The corridor contains vacant, preserved railroad right-of-way between Dishman-Mica Road in Spokane Valley and the project's eastern terminus in the City of Liberty Lake. In addition, the corridor contains existing freight railroad right-of-way owned by the Burlington Northern-Santa Fe (BNSF) Railroad and Union Pacific Railroad (UPRR). The existing pattern of right-of-way can be a tool to further connect the corridor to help meet key objectives such as growth management and economic development where the existing right-of-way intersects with existing activity centers. Designing projects around existing railroad right-ofway can reduce capital costs because, in many cases, real estate will not need to be purchased for the new HCT alignment. Available linear right-of-way allows development of the HCT system at a lower initial cost.





4. Use integrated regional transportation planning as a catalyst for growth management and economic development. The issues are time-sensitive and need attention in the near term in order to respond proactively to growing regional populations and dynamic market forces.

While policies have been adopted by local agencies to encourage higher density mixed-use development, without supportive transportation infrastructure such as HCT, the real estate market is unlikely to respond in a manner that would support these policies. The existing low-density growth trends would likely continue into the future, leading to further sprawl and pressure to expand the Growth Management Boundary for the Spokane region. This project provides a proactive aspect to growth management issues facing the Spokane region. HCT has great potential to shape Spokane's urban form, opening opportunities for urban infill and more compact growth patterns. This is positive for Spokane over the long term.

A balanced and integrated public transportation network would help lessen environmental impacts associated with the existing autodominated system. Furthermore, HCT could attract additional residents and employers to the Spokane region by offering transportation choices that, in turn, enhance livability and quality of life.

Project Goals

The STA Board of Directors adopted these goals for the project on July 28, 2004.

- 1. Maximize mobility improvements;
- 2. Maximize environmental benefits;
- 3. Maximize cost effectiveness;
- 4. Maximize operating efficiencies;
- 5. Maximize mutual support between Transit and Land Use;
- 6. Ensure Project Affordability: limit the initial and recurring costs to amounts the community is able to fully fund;
- 7. Maximize Potential for Economic Development;
- 8. Maximize Potential for Community Development; and
- 9. Respond to Community Preferences regarding high-capacity transit.



The five alternatives developed for detailed consideration during the current phase of the project are:

Project Alternatives

- No-Build Alternative
- Separate Track Light Rail Transit (LRT) Alternative
- Shared Track LRT Alternative
 - Single Track Design Option
- Bus Rapid Transit (BRT) Alternative
 - Sprague Design Option
 - Trent Design Option
- University City LRT with BRT to Liberty Lake Alternative (also known as the Minimum Operable Segment (MOS) Alternative)
 - Light Rail Only Design Option

No-Build Alternative

The No-Build Alternative was developed to define how the existing transit service might operate into the future in the event that a "build" alternative is not selected. This alternative was used to compare the effectiveness of the build alternatives with the improvements that are programmed or have been recently implemented in the service plan for the existing transit system, consistent with the SRTC's Metropolitan Transportation Plan for Spokane County.

No-Build Alternative – Includes enhanced bus service throughout the region



Major Elements

The following projects are programmed in the region's transportation plan and assumed in the No-Build Alternative:

- Roadway improvement projects to address increased traffic demand.
- Transportation System Management (TSM) Projects that are intended to improve the efficiency of the overall transportation system, including improvements to signal timing, etc.
- Travel Demand Management (TDM) Projects, including the addition of carpool programs, rideshare-matching programs, telecommuting promotion, etc.
- Ongoing bus transit service changes to address growth and updated service demand. STA is developing a Comprehensive Transit Plan that will address a 15-year planning horizon for transit in the Spokane region.

Separate Track Light Rail Transit Alternative

The Separate Track LRT Alternative would provide passenger rail service between STA's Plaza Transit Center in downtown Spokane and the City of Liberty Lake, over a route 16.1 miles long. The Separate Track LRT Alternative would operate on its own set of tracks, separate from tracks used by active freight railroads.

It would consist of separate eastbound and westbound LRT tracks. At various segments along the route, the line would operate:

- Within existing streets;
- Within existing freight rail right-of-way;
- Along vacant right-of-way formerly used for rail service; or
- Along new right-of-way that parallels existing freight rail.



Figure 3-1: Separate Track LRT Route

The Separate Track LRT Alternative would provide a high level of transit service by running two-car trains every 10 minutes, using pre-boarding fare collection, exclusive right-of-way that includes four separate elevated bridge structures, and possibly using traffic signal priority where it crosses streets and roads at grade. Either electric or diesel vehicles could be used in the LRT Separate Track Alternative but the capital, and Operations and Maintenance (O&M) cost estimates are based on a fleet of 22 electric vehicles that draw power from overhead wires.

Figure 3-2: Cross Section of Separate Track Option at University City Station (showing electric LRT vehicles and pedestrian bridge to transit center.)



Shared Track Light Rail Transit Alternative

The Shared Track LRT Alternative would provide passenger rail service using two-car trains every 15 minutes between STA's Plaza Transit Center in downtown Spokane and the City of Liberty Lake, over a route of 15.5 miles. One major difference is that the design would be a single-track whereby eastbound and westbound trains would use the same tracks, except at five locations, where passing tracks would be incorporated into the design. A second major difference is that LRT trains would "share" UPRR tracks between Fancher Road and Argonne Road. Light rail passenger service and freight railroad service would have to be time-separated in order to comply with the requirements of the Federal Transit Administration (FTA) and the Federal Railway Administration (FRA). The Shared Track Alternative would use diesel light rail vehicles, also referred to as Diesel Multiple Units or DMUs. A fleet of 15 vehicles is required. The Shared Track Alternative would be at-grade and therefore does not propose construction of any new bridges.

Figure 3-3: Shared Track LRT Route



Single Track Design Option

A lower cost design option of this alternative is referred to as the "Single Track Design Option." It is similar to the Shared Track Alternative with lower cost characteristics such as the use of single-unit diesel light rail vehicles, shorter passing tracks and further scaled back station and park and ride facilities.

Shared Track Alternative in Downtown Spokane



Bus Rapid Transit Alternative

The Bus Rapid Transit (BRT) Alternative would provide "premium, enhanced" bus service between STA's Plaza Transit Center in downtown Spokane and STA's Liberty Lake park and ride transit facility, over a route 16 miles in length. Premium, enhanced service means providing amenities and design features that emulate rail transit service at a significantly lower cost.



Figure 3-4: BRT Route

Trent/Sprague Inset


Sprague and Trent Design Options

The BRT service, Sprague and Trent design options, would operate on existing roadways (primarily Sprague Avenue), sharing existing lanes with other traffic. The BRT Alternative would expedite service by running vehicles at least every fifteen minutes, with a limited number of stops, using pre-boarding fare collection, receiving priority at some traffic signals and "jumping" traffic queues at congested intersections.

BRT Alternative Adjacent to Redeveloped Site at Pines Road/Sprague



University City LRT (Minimum Operable Segment) with BRT to Liberty Lake Alternative

This alternative would provide LRT service in the western half of the corridor and BRT

service in the eastern half. Light rail would operate between STA's Plaza Transit Center in downtown Spokane and the Valley Transit Center in Spokane Valley. over a route 7.9 miles in length. BRT would operate between the Valley Transit Center and the Liberty Lake park and ride facility, over a route 8.5 miles in length. Except for the differences described below, this alternative would be a combination of the Shared Track LRT Alternative and the BRT Alternative. This alternative is also called the Minimum Operable Segment (MOS) Alternative. MOS refers to the minimum length of light rail necessary to provide viable high-capacity transit service.

Typical BRT Bus



Light Rail Only Design Option

The LRT only design option would likely be an interim strategy based on funding limitations with a further extension of light rail to Liberty Lake expected to follow as soon as funding is available.



Figure 3-5: University City LRT with BRT to Liberty Lake (MOS) Route

	Table 3	-1 Summary o	f Build Alternative	Characteristic	cs
Feature or Impact	Separate Track Light Rail Transit	Shared Track Light Rail Transit	Bus Rapid Transit, Spraque Option	Bus Rapid Transit, Trent Option	Minimum Operable Segment
Mode	Light rail transit (LRT)	Light rail transit (LRT)	Bus rapid transit (BRT)	Bus rapid transit (BRT)	LRT to University City, BRT to Liberty Lake
Length (miles)	16.1	15.5	15.5	16	16.4 (7.9 miles LRT, 8.5 miles BRT)
Eastern terminus	New Transit Center at Molter Road in Liberty Lake	Vicinity of Existing Liberty Lake Transit Center	Existing Liberty Lake Transit Center	Existing Liberty Lake Transit Center	LRT segment: Valley Transit Center; BRT segment: Existing Liberty Lake Transit Center
Tracks	Separate east and west tracks, separate from freight railroad tracks	Single track for both EB and WB with passing tracks. Uses UPRR tracks between Fancher and Argonne Roads	N/A	N/A	Single track for both EB and WB with passing track locations. Uses UPRR tracks between Lacey and Havana Streets and between Fancher and Argonne Roads
Number of stations	14	14	13 pairs	14 pairs	LRT 8 BRT 6 pairs
Park and ride lots/spaces	7/2,450	7/2,450 and 7/1,015*	6/815	6/815	7/1,015
Number of major bridges	4	0	0	0	0
Service	M-S: every 10 mins. 7AM-8PM; every 30 mins. 5AM-7AM & 8PM- 11PM. Sundays: every 30 mins. 5AM-11PM	M-S: every 15 min. 7AM-8PM; every 30 min. 5AM-7AM & 8PM-11PM. Sundays: every 30 min. 5AM- 11PM.	M-S: every 15 min. 7AM-7PM; 30 min. 5AM-7AM & 7PM- 11PM. Sundays: every 30 min. 5AM- 11PM.	M-S: every 15 min. 7AM-7PM; 30 min. 5AM- 7AM & 7PM- 11PM. Sundays: every 30 min. 5AM- 11PM.	M-S: every 15 min. 7AM- 8PM; every 30 min. 5AM- 7AM & 8PM-11PM. Sundays: every 30 min. 5AM-11PM
Vehicles**	22, electric	15 diesel/ 8 diesel*	9 low-floor buses	10 low-floor buses	5 diesel LRT vehicles & 5 buses
Maintenance and Storage	75,000 sq. ft. facility on 20.5- acres at either Playfair Race Track site or site south of Fairgrounds	Similar to Separate Track option, but with smaller facility on 15-acre site	One-acre site at Playfair Race Track site, site south of Fairgrounds, or Boone Facility, or use of existing Fleck Service Center	Same as Sprague Option	LRT: 5-acre site at Playfair Race Track site, site south of Fairgrounds, or use of existing Fleck Service Center. BRT: .75-acre site at Playfair Race Track site, site south of Fairgrounds, Boone Facility, or use of existing Fleck Service Center

* Data corresponding to the single track design option.

** The alternatives were priced assuming the vehicles described in this table. Electric or diesel vehicles could be selected for any of the alternatives.

Other Alternatives Considered

In the early to mid 1990s, various alternatives were considered for HCT in the Spokane region. Planners evaluated alternatives for both the location and mode of HCT. These alternatives are summarized below:

Corridors

The South Valley Corridor was selected in 1994, when the *High Capacity* Transportation System Plan Phase I Study and Phase II HCT System Plan were published. The planning process identified corridors and activity centers with the most potential for a successful HCT system. Activity centers could be redeveloped into compact, mixed-use, transit-compatible designs. SRTC's standing Technical Advisory Committee (TAC) identified and ranked all the metropolitan area activity centers and corridors in order of importance and determined which modes of travel were appropriate for the corridors and centers. The ranking exercise narrowed consideration to the following four corridors:

- I-90, east of downtown, with two options east of the I-90/Sprague interchange (either I-90 or the Sprague Avenue/South Valley Arterial)
- North/South Freeway Corridor
- Division Street
- Maple/Ash Couplet.

Highest Ranking Activity Centers

- City of Spokane central business district
- University City Shopping Center and surrounding area
- Liberty Lake area adjacent to the I-90 corridor.

The *Phase II HCT System Plan* concluded that the South Valley Corridor had the best potential for a HCT system. The selected corridor would support land use goals at the key activity centers, take advantage of the abandoned Milwaukee Road railroad right of way, and was shown in preliminary studies to have a lower cost per rider than the North/South Freeway Corridor due to fewer right of way impacts. In addition, the planned North/South Freeway would provide transportation opportunities to the north.

The SRTC held a series of public meetings in 1992 and 1993, prior to adoption of the *Phase II HCT System Plan*. Comments at a 1997 public workshop reaffirmed support for the Board's decision. Citizens were asked to identify which of the four corridors they preferred and explain why. Of the total respondents, 53.8 percent favored the South Valley Corridor. They saw it as the least disruptive, causing the fewest displacements, the most cost-effective, and the most sensible, because it would use existing rights-of-way.

Mode

The South Valley Corridor High Capacity Transportation Investment Study evaluated in detail three alternative modes, after narrowing the range from a broader list. The three were:

- 1. High-Occupancy Vehicle (HOV) lanes on I-90;
- 2. Express Busways; and
- 3. Light Rail Transit (LRT)

Selection of Preferred Mode

The regional transportation planning process was seeking to achieve four primary goals:

- 1. Address existing and future highway congestion
- 2. Address air quality attainment and maintenance
- 3. Reduce consumption of raw land (sprawl)
- 4. Provide for the mobility of people through transportation choices

The SRTC Board of Directors and the public preferred LRT because it would:

- Help protect highways, arterials, and collectors from future congestion;
- Promote air quality goals by reducing future congestion;
- Promote land use goals by helping develop and link activity centers;
- Expand transportation mode choice by creating a balanced transportation network; and
- Take advantage of available right of way.

The public preferred the LRT alternative, as demonstrated by:

- Questionnaires completed at group presentations from 8/96 to 5/97;
- Response to a detailed questionnaire distributed at a 5/97 public workshop; and
- Input from a 60-citizen focus group.



Table 4-1 lists selected data and qualitative comparisons among the proposed build alternatives. These are drawn from the environmental impacts that are described in the project's Draft Environmental Impact Statement (DEIS) published in December 2005. Included are selected direct, indirect, and cumulative impacts of the high capacity transit build alternatives and how they compare with potential project benefits. The evaluation applied the nine criteria which the STA Board adopted in summer 2004 as goals for the project, as described earlier in Chapter 2.

	Table 4-1	Summary Compa	arison of Build Alt	ernatives	
Feature or Impact	Separate Track Light Rail Transit	Shared Track Light Rail Transit	Bus Rapid Transit, Sprague Option	Bus Rapid Transit, Trent Option	Minimum Operable Segment
MOBILITY IMPROVI	EMENTS				
Year 2025 daily boardings on new mode*	4,890	3,394	3,250	2,989	3,000
Travel time savings – hours of net transportation system user benefit (in comparison with No-Build)	3,033	1,920	890	1,126	1,818
Length of corridor served by dedicated fixed- guideway LRT	16.1 miles	15.5 miles	0	0	7.9 miles
ENVIRONMENTAL I	MPACTS				
Air Quality – Reduction in regional daily generation of CO based on VMT	Reduced by 324 lbs.	Reduced by 209 lbs.	Reduced by 143 lbs.	Reduced by 130 lbs.	Reduced by 165 lbs.
Noise Impact – Number of impacted properties / number of impacted properties where impacts cannot be mitigated	248/0	398/0	0	0	43/0
Water Quality – new impervious surface area created (acres)	20.1	20.1	5.32	5.43	6.32
Historic – Number of potentially historic properties impacted	One site potentially impacted	One site potentially impacted	No impact	No impact	One site potentially impacted

^{*}Differences in predicted ridership for the Separate Track and Shared Track alternatives are attributable to the difference in peak-hour service frequency of 10 minutes and 15 minutes, respectively.

	Table 4-1	Summary Compa	rison of Build Alt	ernatives	
Feature or Impact	Separate Track Light Rail Transit	Shared Track Light Rail Transit	Bus Rapid Transit, Sprague Option	Bus Rapid Transit, Trent Option	Minimum Operable Segment
Railroad interfaces – Miles of alignment assumed to share tracks with freight railroads	0	1.8 miles	0	0	2.9 miles
Private property – displacements required	4 businesses	3 businesses	1 business	1 business	2 businesses
COST EFFECTIVE	NESS				
Annualized cost (capital and operations) per transit rider (new mode)	\$45.2	\$20.5* and \$40.3	\$8.6	\$10.3	\$20.0
OPERATING EFFIC					
Operations & Maintenance (O&M) cost per revenue vehicle hour (new mode)	\$234.9	\$237.3** and \$196.7	\$95.9	\$95.9	\$158
Total boarding rides per vehicle hour	20.1	18.8	24.7	20.9	23.8

*Lower number reflects estimates associated with "Single-Track" LRT Design Option. Higher number is associated with the Shared Track LRT Alternative.

**Larger number reflects estimates associated with the "Single-Track" LRT Design Option. Lower number is associated with the Shared Track LRT Alternative.

	Table 4-1	Summary Compa	rison of Build Alt	ernatives	
Feature or Impact	Separate Track Light Rail Transit	Shared Track Light Rail Transit	Bus Rapid Transit, Sprague Option	Bus Rapid Transit, Trent Option	Minimum Operable Segment
TRANSIT SUPPOR	TIVE LAND USE				
Consistency with local government plans and policies regarding transit-oriented development and land use	Consistent: Full corridor development of light rail anticipated to positively influence transit supportive land use development	Consistent: Full corridor development of light rail anticipated to positively influence transit supportive land use development	Consistent: BRT anticipated to influence development of transit supportive land uses	Consistent: BRT anticipated to influence development of transit supportive land uses	Consistent: Partial corridor development of light rail anticipated to positively influence transit supportive land use development
PROJECT AFFORI	DABILITY				
Total capital cost of proposed alternative (2008 dollars), in millions	\$658	\$226* and \$408	\$61	\$65	\$157
Annual operating and maintenance cost of proposed alternative (2004 dollars), in millions	\$16.6	\$6.2* and 10.3	\$3.7	\$4.0	\$5.8
Total capital cost per mile of proposed improvement (2008 dollars), in millions	\$40.9	\$14.6* and \$26.3	\$3.3	\$3.6	\$9.8

*Lower number reflects estimates associated with the "Single-Track" LRT Design Option. Higher number is associated with the Shared Track LRT Alternative.

	Table 4-1	Summary Compa	arison of Build Alt	ernatives	
Feature or Impact	Separate Track Light Rail Transit	Shared Track Light Rail Transit	Bus Rapid Transit, Sprague Option	Bus Rapid Transit, Trent Option	Minimum Operable Segment
	LOPMENT POTENTI	AL			
Relative potential for significant economic development benefits	More potential based on studies concluding that LRT would positively influence property value, new development, redevelopment and local government sales tax and property tax revenues *	More potential based on studies concluding that LRT would positively influence property value, new development, redevelopment and local government sales tax and property tax revenues*	Some potential based on studies concluding that BRT would not as significantly influence new development or property values*	Some potential based on studies concluding that BRT would not as significantly influence new development or property values*	Potential, but less than other light rail alternatives since this alternative only has LRT in a portion of the corridor*
COMMUNITY DEVI	ELOPMENT POTEN	TIAL			
Degree of influence in promoting pedestrian use of the alternative (new mode)	Most likely to promote greater pedestrian use, measured by the number who walk to transit as recorded in the transportation modeling results	More likely to promote greater pedestrian use, measured by the number who walk to transit as recorded in the transportation modeling results	Promotes pedestrian use, measured by the number who walk to transit as recorded in the transportation modeling results	Promotes pedestrian use, measured by the number who walk to transit as recorded in the transportation modeling results	Likely to promote greater pedestrian use, measured by the number who walk to transit as recorded in the transportation modeling results
COMMUNITY PREI	FERENCES FOR HC	т			
Responses to surveys in Project Web site, newsletter, and information kiosks	Majority of respondents preferred a LRT Alternative	Majority of respondents preferred a LRT Alternative	Minority of respondents preferred a BRT Alternative	Minority of respondents preferred a BRT Alternative	Majority of respondents preferred a LRT Alternative

* Marketek /Applied Economics, July 2005, Socioeconomic and Revenue Impacts on a Proposed Light Rail System for Spokane, Washington, p. ii.



Throughout the 1990s, the Spokane Regional Transportation Council (SRTC) led several HCT planning efforts for the region. These included the High Capacity Transportation System Plan in 1993, the HCT System Plan Phase 2 in 1994 and the South Valley Corridor Major Investment Study in 1997. Several public meetings were held during that period to vet those projects with the public. In 2000, STA and SRTC jointly initiated an Environmental Assessment for the project. In 2002 the effort was re-scoped in a public session to kick-off development of a Draft Environmental Impact Statement.

Public Involvement Program

The objective of STA's public involvement program for the South Valley Corridor Project is to engage the public in conversation about the project using a variety of communication methods in order to achieve a level of public awareness and understanding about the impacts and benefits of the project alternatives.

Project Public Involvement Goals Increase the public's awareness of the scope and features of the proposed build alternatives; Provide the public with project technical information including costs, station area designs, alignment, ridership information, service levels and vehicle characteristics; Create a dialog that enables the community to weigh the issues surrounding the project; Provide multiple venues for the public to comment and receive responses to questions on the scope, features, and technical data for the proposed alternatives; Engage the media in the project's progress and community involvement; and Comply with the public involvement requirements of the National Environmental Policy Act;

Keep local, state and federal officials informed of the project's progress

Public Involvement Elements

Public Discussions

Since August 2001, approximately 300 personal and community presentations, workshops, open meetings, open houses and public forums have taken place. This outreach included a broad, diverse spectrum of individuals and groups in the Spokane region including private citizens, businesses, organizational groups, nonprofit agencies and public officials. Over 3,000 citizens have directly participated in these discussions. This has resulted in hundreds of questions and comments. Most of the comments and questions can be categorized into five areas: feasibility of the project in Spokane; concerns and suggestions regarding the proposed alignment; ridership to support the project; cost issues specifically regarding the State and Federal portion of the funding plan; and the relationship between the existing bus system and proposed light rail transit.

Community Display Events

Ten project display boards highlighting the project have been circulated throughout the community. They have been available through the City and County libraries, community centers, senior centers and major community gathering places. A large, informative display has been rotated throughout the region specifically targeting high traffic areas such as the Spokane Valley Mall during the holiday season, the City of Spokane City Hall and the Spokane Valley Community Center. The project staff has also participated in numerous community events such as the Spokane Interstate Fair, the Spokane Valley Fest and the South Perry Street Fair.

<text>

Figure 5-1: Project Display at the Plaza Transit Center

Project Newsletters

STA produced three project newsletters since 2002. These were distributed as inserts in the Spokane Spokesman-Review newspaper. They were also used as handouts for meetings and presentations.

Figure 5-2: Examples of Project Newsletters



Visual Simulations

Eleven animated simulations of the project alignment and alternatives were generated by project consultants. These simulations were produced by superimposing the design alternatives onto 3-dimensional computer models of existing conditions in segments of the corridor. In addition to display of the alternatives in key locations, the simulations also describe a possible transit oriented development concept at the University City area. The simulations are helpful in conveying technical design and operating system characteristics while further facilitating discussions about possibilities for the project.

Figure 5-3: Visual Simulation



Project Website

Project information has been available throughout the duration of the project at <u>www.spokanelightrail.com</u>. All relevant meeting notices, project graphics and informational links are also available. The website contains an interactive community bulletin board that is available to receive project comments and questions. In 2005, the website was further enhanced to incorporate the visual simulations described above.

Figure 5-4: Project Website



Interactive Public Kiosk

In summer 2005, STA developed interactive public kiosks featuring the simulations. The kiosks offered interactive touch-screen control of a looping video, access to the latest project information and collected public responses to a simple three-question survey. Three kiosks were placed in two regional shopping malls and the STA's Plaza transit center in downtown Spokane.

Figure 5-5: Northtown Mall Kiosk

Figure 5-6: Interactive Kiosk



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Informal Public Survey – Summer/Fall 2005

In July 2005, STA launched an informal survey ⁵ through the interactive kiosks, project newsletter, postcard responses, and website feedback. The respondents to the survey are self-selecting and therefore the results are not statistically valid. Only those who voluntarily visited the kiosks, returned a newsletter survey, mailed in a postcard, or

visited the website were included in the results. However, the regularly monitored feedback proved helpful when framing the public outreach efforts during 2005. The results below are documented responses gathered through October 12, 2005.

WHAT WOULD YOU BE WILLING TO PAY IN SUPPORT OF YOUR PREFERRED OPTION?



WHICH OPTION DO YOU THINK WORKS BEST FOR OUR COMMUNITY?



WHEN SHOULD YOUR PREFERRED OPTION BE AVAILABLE?



⁵ Spokane Transit Authority, 2005

Statistical Survey

A valid survey with a +/- 4% error rate at the 95% confidence level was conducted in January 2006 among active voters from within the Spokane region's Public Transportation Benefit Area (PTBA).⁶ Key results from that survey are provided as follows





Construction of a Light Rail System: <i>Key Subgroups -1</i>				
All	<u>Favor</u> 48%	<u>Don't know</u> 24%	Oppose 28%	<u>Net favo</u> +20%
Area				
City of Spokane	44%	25%	31%	+13%
Spokane Valley	56%	22%	22%	+34%
Other	50%	23%	27%	+23%
Gender				
Men	43%	20%	37%	+6%
Women	53%	28%	19%	+34%
Age				
18-64	53%	22%	25%	+28%
		2001	0.50/	



⁶ Moore Information, 2006









Summary and Highlights: Anticipated Benefits and Ridership

- A light rail system is expected to have a greater economic benefit to the region than a bus rapid transit system.
- Both systems are expected to help reduce traffic congestion between downtown Spokane and Liberty Lake.
- Respondents indicated they are more likely to use a light rail system than a bus rapid transit system.

Community and Agency Partnering

Steering Committee

A Project Steering Committee has been in formation for the duration of the project. The group meets monthly and is charged with:

- Developing a detailed project definition and strategies for implementation;
- Working with the Project Management Team to guide the project through design, construction and start-up;
- Making recommendations for managing available funding/staff resources in the most cost-effective way;
- Making recommendations for appropriate implementation strategies.

The Committee includes representatives from the STA Board of Directors, SRTC Board of Directors, Washington State Department of Transportation (WSDOT), local elected officials and citizens. Membership is also selected to ensure Spokane County and the Cities of Spokane, Spokane Valley, and Liberty Lake have at least one representative on the Committee.

Citizen Advisory Committee

A Citizen Advisory Committee (CAC) was formed to offer feedback, guidance and suggestions to the Steering Committee. The CAC is composed of 14 members who live in Liberty Lake, Spokane and Spokane Valley. The group also includes representatives from various agencies and nonprofits.

Technical Advisory Committee

The project's Technical Advisory Committee (TAC) consists of agency staff representatives from:

- Cities of Spokane, Spokane Valley, and Liberty Lake
- Spokane County
- SRTC
- WSDOT
- Downtown Spokane Partnership

The group provides technical support and and agency perspectives for the Steering Committee, project manager, and project consultants.

DEIS Public Comment

The project DEIS was approved by the Federal Transit Administration in December 2005 and published in mid-January 2006. The DEIS provides analysis of project alternatives and identifies impacts to the environment, mobility, land use cultural resources, safety and economic/community development potential. The public comment period extended from January 18 to March 3, 2006. The public was invited to attend four public meetings/open houses to comment on the DEIS during the month of February 2006. All DEIS comments received during the public comment period will be addressed in the Final EIS.

Figure 5-7: South Valley Corridor DEIS



Preferred Alternative Process

The Steering Committee and CAC began evaluating project alternatives jointly in October and November, 2005. The groups met in two joint workshops to discuss tradeoffs associated with project options including mode, alignment location, vehicle propulsion source, fleet size, etc. These workshops helped inform discussions at monthly meetings in January and February, leading to the release of the Steering Committee's preferred alternative recommendation in March 2006.

Figure 5-8: Joint Steering Committee and Citizens Advisory Committee Workshop October 2005





Summary Description

The following is a summary of the key components of the Steering Committee's recommended Locally Preferred Alternative. The recommendations are derived from years of conceptual engineering, computer modeling, systems analysis, and community discussions. Additional oversight was provided through periodic reviews by a Citizens Advisory Committee and Technical Advisory Committee comprised of engineering & planning staff from the jurisdictions.

- Develop Light Rail from Downtown Spokane through Spokane Valley to the City of Liberty Lake over an alignment of approximately 15.5 miles.
- Forego electrification and procure diesel powered light rail vehicles
- Use single-car operations with vehicles capable of connecting into multiple unit trains

- Initially develop a single-track alignment with passing tracks for two-way operations
- Provide for simple, modest station platforms, shelters and passenger amenities
- Plan for expansion in the future to double-track with longer stations for multiple-car trains
- Limit the initial capital cost to not exceed a ceiling of \$300 million expressed in 2006 dollars
- Develop an equitable, diversified funding strategy that includes existing resources, private sector participation, and revenues derived from any new taxes subject to approval by voters
- Adopt an implementation timeline that achieves revenue service operations by 2014

Rationale for the Recommendation

This recommendation is made on the basis of multiple phases of planning and alternatives analysis conducted over the past several years. That process resulted in the preparation of a draft environmental impact statement (DEIS) that describes the alternatives, identifies their associated impacts and provides a comparative evaluation of the alternatives. The DEIS was circulated to the public beginning January 18, 2006. Numerous opportunities for public comment were provided through public meetings, open houses, and public expression at regular STA Board meetings. All relevant comments regarding the DEIS were collected and documented. Over the course of this planning process, the public in the Spokane region were formally and informally surveyed several times as described in chapter five of this document. The recommendation is drawn from the conclusion that the public desires development of a light rail system and that this recommendation will help solve the regional transportation problems cited in this report.

Primary reasons cited include:

 Light rail is desired by the public as an additional alternative to travel by automobile or bus. It will provide additional options to satisfy the regional travel demand for those who choose to use it. Experience from other cities that have developed light rail systems often demonstrates that the public prefers light rail over other modes of travel when it is convenient and reliable. That preference, often referred to as "rail bias", was also reflected in the various statistical surveys and documented feedback from the Spokane region.

Development of a starter light rail • system for the Spokane region is considered a proactive approach to meeting future transportation needs in a manner that is also consistent with the established comprehensive land use plans published by the affected jurisdictions. It is anticipated that ultimately, a regional light rail system will be far less costly and have less potential for adverse impacts if it is implemented concurrent with or ahead of the growth that is already occurring, thereby helping to positively shape that growth rather than reacting to its adverse effects when future congestion demands relief.

Simulation on Riverside at Napa Street with Enhanced Development Concept



- Studies have shown that development of light rail can serve as a significant catalyst for economic development in the region and in particular, along the corridor within a 1/4 to 1/2 mile radius of the respective station locations. A regional investment in light rail can create new jobs and leverage economic benefits in the form of increased sales and profits to private businesses, increased property values, and growth in tax revenues that accrue to the local jurisdictions.
- Light rail has the greatest potential to be used as a tool to guide future development in a form that optimizes the beneficial relationship between transportation and land use. Light rail transit can assist in the revitalization of under-developed segments of the corridor and help to satisfy the regional vision for a livable community through further development of more dense, mixed-use walkable activity centers and neighborhoods that accommodate auto travel but are less dependent upon it.
- If an implementation decision is made and steps are taken to preserve current opportunities, the light rail system can make use of existing railroad rights of way that are currently available and much of which is in public ownership instead of having to purchase right of way in the future.

Recommended Mode

The recommended mode is a system comprised of Light Rail Transit (LRT) that is integrated with the existing fixed-route bus system and existing road network. This would consist of driver operated vehicles riding on steel rails (standard railroad tracks). The vehicles are capable of operating singly or in multiple unit trains. The scale of the system is intended to fit into the urban fabric of the community, such that smaller light rail vehicles are used rather than the more massive heavy rail or commuter rail vehicles. Passenger boarding stations will consist of low-level platforms of sufficient length and width to accommodate waiting and boarding functions. The stations will include basic amenities such as simple shelters, benches and furnishings. The recommended project is intended to be a *low-cost start up light* rail system that can be upgraded and expanded in the future consistent with the region's growth in accompanying increased travel demand. Initially, it is recommended that the Spokane light rail system operate single-unit light rail vehicles at the following frequency of service, subject to actual schedule integration with existing public bus transit:

- Peak Hours; every 15 minutes Monday through Saturday from 7:00 AM to 8:00 PM.
- Off-Peak Hours; every 30 minutes Monday through Saturday from 5:00 AM to 7:00 AM and from 8:00 PM to 11:00 PM.
- Sundays & Holidays; every 30 minutes All day from 5:00 AM to 11:00 PM.

PRINTER

Diesel Light Rail Vehicle to be used in Oceanside, CA

Vehicles and Propulsion

Two primary types of vehicle propulsion systems are used in light rail systems today. These are electric and diesel. The recommended propulsion system for the Spokane light rail system is the use of diesel technology. This eliminates the need for an electrical power distribution system and can be developed at substantially lower cost. Alternative sources of internal combustion fuels like bio-diesel are becoming more readily available and could eventually lessen the system's dependency on fossil fuels. The use of bio-diesel is also associated with fewer environmental impacts and a potentially significant economic benefit to the regional economy of Eastern Washington. The actual power system / component configuration within the diesel vehicles will be determined during preliminary engineering on the basis of available technology, cost, performance and other considerations. Throughout the alternatives analysis process, there was

substantial interest in selection of an electrically powered system. Arguably, the biggest determining factor in recommending diesel propulsion was a substantial estimated cost saving for initial construction and recurring maintenance costs. However, due to the long-term implications associated with selection of this critical system characteristic, further confirmation of the recommended diesel propulsion system, including a refined analysis of the trade-offs, should occur during the ensuing preliminary engineering phase to ensure this discussion is completed at full depth.

The light rail vehicles will be "doubleended", meaning that they will include an operator cab on both ends so that the vehicle can be driven in either direction. Typical light rail vehicles range from 85 feet to 125 feet in length with seating for 60 or more passengers. They have a maximum capacity including standees of 140 or more passengers. Vehicles for Spokane would likely be selected through a competitive procurement process.

- Eight diesel light rail vehicles are needed for initial operations.
- The vehicles will initially operate as single units, but will be procured with the ability to train-line for multiple-unit operations.
- Vehicles will be procured with low floors for level boarding with low level station platforms.

 It is desired that standard ("off-theshelf") technology that can be competitively procured will be used for the Spokane light rail system.

Simulation at Argonne and Appleway



The Riverline Diesel Light Rail System – New Jersey



Alignment and Stations

It is recommended that the Spokane light rail system be developed generally utilizing the shared track alternative alignment and incorporating cost savings measures associated with the single track option. A "Base Alignment" describes the minimum requirements for the recommended system. The cost of this base alignment is anticipated to be below the recommended budget cap for development of the system. There is substantial interest in including a variety of enhancements to the base alignment which will be assessed during preliminary engineering activities to follow. Examples include longer station platforms at the outset to better accommodate future capacity, greater length of passing track to reduce operational constraints, minimized lengths of shared freight/light rail operations, and consideration for a bridge structure to improve safety and traffic flow at the Argonne-Dishman Mica intersection in Spokane Valley. It is noted that substantial trade-offs exist associated with the determination of what enhancements can or should be included in the initial construction of the project. The recommended capital cost ceiling in conjunction with availability of funding will largely determine what can be included in the initial scope.

The *recommended Base Alignment* is approximately 15.5 miles in length and is described below. From west to east geographic characteristics include:

 A western terminus at the intersection of Post and Riverside in downtown Spokane.

- Location of light rail track(s) in the center of Riverside Avenue preserving at least one automobile traffic lane in each direction from Post to Division.
- The City of Spokane is planning a phased extension of Riverside Avenue east of Division. The LRT alignment would be located in an exclusive median being reserved by the City for this purpose.
- Exclusive alignment north of the BNSF railway tracks between Division and Madelia Streets.
- Exclusive use of the existing roadway underpass of the BNSF railway tracks for light rail at Madelia Street.
- Location of exclusive light rail track(s) in the center of Riverside Avenue from Madelia Street to Lacey Street.
- Location on or adjacent to the UPRR "Yard Lead" tracks from Lacey Street to the UPRR Spokane Yard east of Havana Street.
- Passage through or adjacent to the UPRR Spokane Yard between Havana Street and Fancher Road.
- Location on or adjacent to the UPRR track known as the "Wallace Branch" between Fancher Road and Dishman Mica Road.
- Location in exclusive right of way along the south side of Appleway Boulevard from Dishman Mica Road to University Road.
- Location in the former Milwaukee Railroad right of way (currently vacant) from University Road to the eastern project terminus in Liberty Lake at Signal Road.



Figure 6-1: Preferred Alternative Alignment Characteristics

Fourteen light rail passenger station locations are recommended for base alignment. These are short, simple stations that accommodate single unit operations ("single-car trains"). It is desired to eventually upgrade the system to allow twocar train operations when justified by ridership. As such, the initial development of stations is intended to plan for increased length and upgrading at the least possible cost. Recommended station locations are:

- **Plaza** On Riverside Avenue, between Post Street and Wall Street, adjacent to the STA Plaza transit center.
- **Convention Center** On Riverside Avenue, between Bernard Street and Browne Street.
- **Riverpoint (Trent)** North of the BNSF Railway tracks at the WSU Riverpoint Campus.
- **Napa** On Riverside Avenue east of it's intersection with Napa Street.
- East Central In the UPRR right of way east of Freya Street.
- Fairgrounds East of Havana, south of the Spokane County Fair and Expo Center complex. This station will include construction of a new park and ride facility.
- **Park** In the UPRR right of way west of Park Road. Consideration of it being an optional station location in the initial phase.

- **Argonne** In the northwest quadrant of the intersection of Argonne Road and Appleway Boulevard. This station will include construction of a new park and ride facility.
- University City Adjacent to the STA Valley Transit Center, in the southwest quadrant of the intersection of University Road and Appleway Boulevard. This station will capitalize on the existing park and ride facility at this location.
- **Pines** In the currently vacant, former railroad right of way, east of Pines Road. This station will include construction of a new park and ride facility.
- Evergreen In the currently vacant, former railroad right of way, east of Evergreen Road.
- Sullivan In the currently vacant, former railroad right of way on either side of the intersection with Sullivan Road. This station is intended to include development of a park and ride facility at a site to be determined during preliminary engineering (see "Issues to be Resolved").
- **Appleway** Located in right of way to be purchased, in the southwest quadrant of the I-90 interchange with Appleway Avenue / Country Vista Road. This station will include construction of a new park and ride facility.



Figure 6-2 Preferred Alternative Alignment and Station Locations

• Liberty Lake – In the currently vacant, former railroad right of way, in the southwest quadrant of the intersection of Appleway Avenue and Signal Road. This station will include interface with or be expanded to replace the existing functions provided by the STA park and ride facility located to the south of the station site.

General characteristics of the recommended base alignment include:

- The trackway will be reserved exclusively for light rail throughout its length except for at-grade crossings with roadways and in segments where it may be shared with freight railroad operations.
- All vehicular crossings of the light rail trackway are planned to be controlled either by traffic signals (when operating in paved roadway sections) or by train signals and gates (when operating in alignments separate from roadways.
- When portions of the trackway are shared with railroad operations, the two modes will be separated by time (temporal separation). Exclusivity of the systems will be further ensured through the use of automated signal systems and strict operating rules.
- The base alignment for light rail will initially utilize a single-track alignment with short passing tracks allowing twoway operations. It is desired to increase the length of passing track (doubletrack) to the greatest extent that the budget will allow, and to eventually upgrade the entire alignment to a double-track system.

- The "Bridging the Valley" project being implemented to include joint use of the BNSF corridor by the UPRR throughout Spokane may eventually include the elimination of the UPRR Spokane Yard and yard lead tracks. It is anticipated, however, that the UPRR Wallace branch line east of the yard will remain in use. The recommended base alignment has been defined to jointly use both of these sections of UPRR trackage. It is desired to minimize direct interfaces with operating railroads through design adjustments and right of way purchases to be determined during preliminary engineering.
- The base alignment will generally utilize • at-grade operations with no newly constructed bridges for the project. It will make use of existing bridges and underpasses for grade separation of roadway and railway crossings where available. However, it is intended that a bridge structure may be developed to grade-separate the LRT crossings of the roadway intersections at Appleway / Dishman Mica / Argonne / Mullan Roads in Spokane Valley. The final configuration of this crossing will be determined during preliminary engineering.

- The City of Spokane Valley is currently considering options for development of the former railroad right of way east of University road to include the possible extension of Appleway Boulevard. During preliminary engineering, close coordination of the light rail project with the City will be required. This right of way is currently owned by Spokane County.
- The LRT alignment and stations will be located to minimize the need for right-ofway acquisition and dislocation of existing development by using existing public rights-of-way to the greatest extent available. Right of way should be preserved for full expansion of the system to double-track operations with two-car station platform lengths. Right of way should also be preserved for future expansion of park and ride facilities.
- The LRT project will require some relocation of utilities that are directly impacted by construction. The cost for relocation or protection of public utilities will be borne by the project. Private utilities located in publicly owned rightsof-way which are affected by the project will be relocated at the utility owner's expense. The status of "franchised" utilities will need to be resolved during the preliminary engineering phase.
- In segments where the LRT project interfaces with existing roadways, it is intended that the impacted roadways will only be re-paved in the area disturbed by construction of the tracks (not curb-to-curb). However, this will require further coordination with the jurisdictions during the preliminary engineering phase to ensure compliance with other established policies and procedures.
- The recommended base alignment definition does not include improvements to adjacent right-of-way, including corridor landscaping. A landscape allowance will be provided at station locations.

Figure 6-3: Issues for Analysis During Preliminary Engineering


Operations and Maintenance Center

The Spokane Light Rail System will require an operations and maintenance center capable of storing and servicing the initial fleet of light rail vehicles. This center will also serve as a central control and dispatching location. It is recommended that conversion of Spokane Transit's "Fleck Service Center" be pursued to satisfy this function. The facility is located adjacent to the recommended light rail alignment just east of its intersection with Bowdish Road.

Figure 6-4: STA Fleck Service Center – Proposed LRT Operations and Maintenance Center



The existing facility includes a building with bus maintenance bays, a wash bay, offices, locker rooms, parts storage capability and fueling facilities. It appears to be convertible to serve the intended purposes and of a size that can accommodate initial system needs. Activities during preliminary engineering will need to verify the suitability and availability of this location for the light rail operations and maintenance center.

Preferred Alternative for HCT In the South Valley Corridor Consideration should also be given to other, larger locations that can better accommodate long-term future expansion of the system.

Project Cost

As previously stated, the recommended project is intended to be a *low-cost start up light rail system* that can be upgraded and expanded in the future. It is recommended that a budget for project implementation be established not-toexceed \$300M (2006 \$). The actual budget will depend on resources made available through development of a financial plan that is to be developed (see next section).

It is anticipated that development of the "Base Alignment" along with some additional enhancements is achievable within this recommended budget cap. During alternatives analysis, the cost of the "single track option" (most similar to the base alignment) was estimated to be \$226.5 million in 2008 dollars. However, there are several risks for cost escalation that are not accommodated in that estimate, including:

- Recent worldwide increases in the cost of steel and concrete.
- Costs for acquisition of railroad rights of way and trackage rights that have not yet been negotiated.
- Financing costs that depend on the actual plan for funding that is not yet developed.
- Assumptions regarding timing for completion of the Bridging the Valley project that are now unlikely to be achieved.

- Enhancements in the project definition that may be desired or required by project sponsors and local jurisdictions.
- Preservation of opportunities for future project expansion, including right of way purchases.
- Other likely unforeseen issues to be resolved during preliminary engineering and later stages of project implementation.

Because of these uncertainties as well as the need to provide the highest quality system that is locally affordable, it is recommended that the \$300M budget cap be established for (capital cost) project implementation. This includes final design, vehicle procurement, real estate acquisition, construction, testing and start-up activities. It is recommended the project's work program during preliminary engineering resolve the outstanding issues regarding project definition, perform an assessment of risks and include an analysis of trade-offs regarding options for enhancement of the base alignment described herein.

Annual cost for operation of the project is estimated to be \$6.2 Million (2004 dollars). This cost will need to be verified during preliminary engineering. Both capital and operating costs will need to be accommodated by the project's financial plan.

Project Funding

Implementation of the Spokane light rail system requires a comprehensive financial plan that can ensure that adequate financial capacity exists to design, build, operate and maintain the system. In addition, continued operation and expansion of the regional bus system by the Spokane Transit Authority must also be assured. Surveys of voters in the region demonstrated that they are not likely to approve full funding for this system solely from increases in sales tax revenue. The most recent survey indicated that over 90 percent of those who support an investment in light rail desire that it be available in 10 years or less.

The federal "New Starts" program administered by the Federal Transit Administration provides significant funding to many rail transit projects around the country. The amount of available funding from this source is far less than the demand for new projects around the country. In addition, federal policy dictates that these limited funds be directed only to cities with the greatest amount of existing traffic congestion. It has been concluded that obtaining a large percentage of funding from this source is unlikely.

It is therefore recommended that the financial plan be developed with the following characteristics:

- A diversified funding package focused on local control.
- Preservation of options for federal funding depending on future policies, but not dependent on New Starts funding at this time.
- Reallocation of federal formula funding that is currently available for regional

transit funding to provide a portion of funds for the project.

- Pursue a combination of funding sources anticipated to include:
 - Some level of revenue from additional tax sources (sales tax, property tax, etc.).
 - Participation by property owners and businesses that would directly benefit from implementation of the project.
 - Revenue from advertising and sponsorship of components of the project.
 - Participation by local governments along the corridor.
 - Tax increment financing.
 - Funding from the State of Washington.

Implementation Milestones and Timeline

Several key activities and milestones must be achieved to implement the preferred alternative recommendation. The boards of directors of the Spokane Regional Transportation Council and the Spokane Transit Authority, as joint sponsors of the project, must first confirm their acceptance of the recommendation as presented or as they may choose to modify. As the lead local agency designated by these boards, the STA Board must then formally act. Following formal acceptance by the STA Board, the following milestones are among the key steps to project implementation. Based on the public's stated interest for near-term implementation of light rail ⁷ it is recommended that a schedule be developed to achieve revenue service of the light rail project by 2014.

- Adoption of the Preferred Alternative by the Spokane Transit Authority Board of Directors;
- Development of Financial Plan for implementation of the Preferred Alternative;
- Development of Project Management Plan;
- Development of Intergovernmental Agreements;
- Public vote for local tax support;

- Legislative actions, yet to be determined that may be required to enable financial plan implementation;
- Other local government actions to implement financial plan recommendations;
- Preliminary engineering;
- Completion of the final environmental impact statement (FEIS);
- Final design;
- Vehicle procurement;
- Right of way acquisition;
- Construction;
- Safety certification and testing; and
- Revenue service.

⁷ Moore Information Survey, January 2006

Preferred Alternative for HCT In the South Valley Corridor



Following the circulation of this draft report to the public, the STA Board of Directors and the SRTC Board of Directors in mid-March 2006, several follow-up actions have taken place up to the preparation of this final report in June 2006.

A joint meeting of the Boards of Directors of STA and SRTC was held on March 30, 2006. The purpose of the meeting was to discuss the recommendations of the Light Rail Steering Committee as presented in this report and to discuss possible actions that the respective Boards might take in response. This section presents the resolutions adopted by these two Boards as well as action taken by the City Council of the City of Liberty Lake. These resolutions are presented in chronological order of the dates on which the respective actions were taken.

Liberty Lake City Council Resolution

On April 18, 2006 the City Council of the City of Liberty Lake adopted Resolution No. 06-88-A, included in the Appendix to this report. The resolution addressed the following areas:

- "Adoption of Locally Preferred Alternative. The High Capacity Transit mode preferred by the City of Liberty Lake has the following characteristics:
 - Light Rail extending from downtown Spokane to Spokane Valley and Liberty Lake;
 - Follows the Shared Track Alignment, providing access to many neighborhoods with opportunities for economic development;
 - c. Utilizes Diesel Multiple Units, preferably consuming biodiesel;
 - d. Costs no more than \$300 million (in 2006 dollars);
 - e. Taps multiple sources of funding; and
 - f. Begins revenue service no later than in the year 2014.
- A light rail system which utilizes the "shared track alternative" alignment and incorporating the cost saving measures associated with the "single track option" would satisfy the requirements of this LPA."

- <u>"Planning Requirement</u>. It is the policy of the City of Liberty Lake that the Spokane Transit Authority should continue planning for other High Capacity Transit corridors, in the forms most conducive to expanding transit access to and from the City of Liberty Lake, through other areas of the Spokane-Kootenai Region, including, but not limited to:
 - a. North Idaho, including Post Falls and Coeur d'Alene
 - North Spokane, potentially near the future US 395, US 2, and Maple-Ash corridors;
 - c. West Plains, including the Spokane International Airport, and potentially the Cities of Airway Heights and Cheney; and
 - d. Spokane's South Hill."
- "Project Right-of-Way. The City of Liberty Lake encourages all affected jurisdictions to make available all necessary rights of way to, and enter into partnership with, Spokane Transit for the construction of the preferred alternative, where property is currently in public ownership. The City of Liberty Lake acknowledges that it owns a segment of land on the proposed corridor which is wider than is necessary for light rail construction. The City understands that STA may determine this land is needed for the Project. If so, it is the understanding of the City that STA will pay just compensation for the property."

SRTC Board Resolution

On May 11, 2006 the Board of Directors of the Spokane Regional Transportation Council (SRTC) adopted Resolution No. 01-06, included in the Appendix to this report. The resolution addressed the following areas:

- "<u>Purpose</u>: To formally support elements of the Light Rail Steering Committee's recommendation for a locally preferred alternative for high-capacity transit in the South Valley Corridor between the central business district of Spokane, through Spokane Valley, to the City of Liberty Lake, Washington."
- "Project Scope and Direction: The SRTC Board supports selection of the low-cost light rail system recommended by the Light Rail Steering Committee and as approved by the STA Board; that the STA Board take actions to advance engineering and design efforts necessary to establish a right of way plan for the purposes of identifying and acquiring rights of way to protect the corridor for future light rail transportation; continue development of a financial funding strategy to implement the locally preferred alternative; and when appropriate, present to voters within the PTBA a ballot measure to determine the financial willingness of the public to implement the locally preferred alternative."
- "<u>Funding</u>: The STA Board should provide the funds necessary to support the identified work efforts contained (above) with FTA Section 5307 funding and the required local match."

STA Board Resolution

On May 18, 2006 the Spokane Transit Authority Board of Directors adopted Resolution No. 616-06, included in the Appendix to this report. The resolution addressed the following areas:

- <u>Purpose</u>: "...accepts the locally preferred routing for high-capacity transit in the south valley corridor between the central business district of Spokane, through Spokane Valley, to the City of Liberty Lake, Washington, and furthermore, directs staff to focus its remaining resources on the Locally Preferred Alternative as presented by the Light Rail Steering Committee..."
- <u>Direction</u>: The Light Rail Steering Committee and Project Manager are to "...bring forth viable funding alternatives for consideration by the STA Board of Directors for the cost of land, for the cost of construction of capital improvements and for the cost of operation and maintenance of the Locally Preferred Alternative."

At its June 15, 2006 meeting the STA Board of Directors was presented the results of consultant studies that outlined a conceptual implementation schedule, provided updated cost estimates, assessed major risk events that could adversely impact the project, and identified potential funding sources and financing options for the Project, as directed by the Board at its May 2006 meeting. This set of conclusions is documented in the Consultant's report, "Report on Financing of a Light Rail System for Spokane, Washington" dated June 2006.



Chapter Eight: Appendix

- > Acknowledgements
- > Reference Documents
- Resolutions

Acknowledgements

Light Rail Steering Committee

Chair Phyllis Holmes Citizen/Spokane

Vice Chair Council Member Brian Sayrs STA Board/Liberty Lake

Council Member Rich Munson STA Board/Spokane Valley

Commissioner Mark Richard STA Board/Spokane County

Jerry Lenzi WSDOT

Spokane

Chair Don Cain

Frankie Arteaga

Liberty Lake

Rich Bryant

Jim Chase

Ed Foote

Spokane Valley

Spokane Valley

Spokane Valley

Council Member Gary Schimmels SRTC Board/Spokane Valley

Council Member Brenda Redell SRTC Board/ Medical Lake

Amy Jo Sooy Citizen/Cheney

Gary Connor Citizen/Spokane

Keith LaMotte Citizen/Spokane

Citizen Advisory Committee

Bill Goetter Spokane Valley

Gail Kogle Spokane Valley

A. Michele Maher Unincorporated Area

Dan Mortensen Unincorporated Area

Yvonne Lopez Morton Unincorporated Area

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Doug Pottratz Citizen/Unincorporated Area

Richard Schoen, Citizen/Millwood

ALTERNATES:

Keith Metcalf WSDOT

Council Member Brad Stark STA Board/Spokane

Dick Raymond Citizen/Unincorporated Area

John Mueller Unincorporated Area

Nick Nickoloff Liberty Lake

Larry Swartz Spokane

Harold Vanderpool Rice, WA

Preferred Alternative for HCT In the South Valley Corridor June 30, 2006

Technical Advisory Committee

Chair Kim C. Traver Spokane Transit

Ross Kelley Spokane County

Deborah LaCombe SRTC

Keith Metcalf WSDOT

John Mercer City of Spokane

Marina Sukup City of Spokane Valley **Mary Ann Ulik** Downtown Spokane Partnership

Steve Worley City of Spokane Valley

Ken Brown City of Spokane

Mike Frucci WSDOT

Eve Nelson SRTC John Pederson/ Paul Jensen Spokane County

Neil Kersten City of Spokane Valley

Greg McCormick City of Spokane Valley

Doug Smith City of Liberty Lake

Reference Documents

References cited in this report:

Critical Data, Inc. Spokane Transit Authority HCT Study. November 2004.

Marketek/Applied Economics, Inc. Socioeconomic and Revenue Impacts of a Proposed Light Rail System for Spokane, Washington, Final Report, July 2005.

Texas Transportation Institute. Urban Mobility Report, May 2005.

Moore Information. *Spokane Transit Authority Public Transportation Benefit Area Survey,* February 1, 2006.

Spokane Transit Authority. Summary of Informal Surveys, 2005.

Reference materials developed by David Evans and Associates, Inc., (General Management and Engineering Consultant) for STA during period from April, 2001 through March, 2006:

Management, Public Information and Controls Tasks

Preliminary Project Management Plan	2001
Conceptual Project Implementation Schedules	2001-2005
Preliminary Quality Management Plan	2001
Project CAD Standards Manual	2001
Cost Estimate Methodologies	2001
Project Cost Estimate (Separate Track Alternative)	2001
Project Cost Estimate (Shared Track Alternative)	2002
Cost Report for MOS and BRT Alternatives (capital and O&M)	2004
Cash flow analysis requirements for MOS and BRT Alternatives	2004
Conceptual Cost Report for "Single-Track" Option	2004
Comparative cost estimates supporting selected flag issues	2002
Monthly Progress Reports	2001-2005
Report on Industry Procurement Practices	2001
Spokane LRT Procurement Approach Report	2001
Free-standing Public Display	2002
Free-standing Public Display Updates	2003-2004
Information packets for brainstorming workshops	2003
Notes from brainstorming workshops	2003
Informational Kiosks	2005
Project Video with Voice Over	2005

Clearance Tasks

Real Estate Requirements Inventory	2001
Real Estate Requirements For "Low Cost (Shared Track)" Alt.	2002
Real Estate Matrix for "Low Cost (Shared Track)" Alt.	2002
Guidelines for Real Estate Valuation	2001
Tech Memo Documenting Real Estate Valuation	2004
Railroad Interfaces Inventory	2001
Tech. memo - Railroad Interfaces (Shared Track Alternative)	2002
Tech. Memo – UPRR Track Condition	2003
Letters documenting meetings UPRR, BNSF	2002-2004
Intergovernmental Agreements Requirements	2001
Preliminary Project Funding Approach	2001
Assessment of Potential Funding Sources	2004
Recommendations for Federal Environmental Documentation	2001
Recommendations for State Environmental Documentation	2001
Draft Environmental Assessment	2002
Air Quality Analysis Reports	2003-2005
Noise and Vibration Analysis Reports	2003-2005
Traffic and Transportation Analysis Reports	2003-2005
Historic and Cultural Impacts Reports	2003-2005
Draft Environmental Impact Statement (DEIS)	2005
Plan for Hazardous Materials Investigations/Analyses	2001
List of Anticipated Project Permit Requirements	2001
Documentation for Review of Previous Ridership Estimates	2001
Documentation of mode choice model for transfer to Spokane	2002
Coded Base Year Highway and Transit Networks	2002
Preliminary Ridership Estimates	2002-2004
Modeling Ridership/Traffic Forecasts, User Benefits Results	2005
Economic Impact & Benefits Report	2005
Draft Alternatives Analysis Planning Report	2005

Civil Design Tasks

Project Corridor Aerial Photography	2001
Project Corridor Base Mapping and Control Survey	2001
Preliminary Civil Design Criteria	2001
Conceptual Design Criteria for "Low Cost (Shared Track)" Alt.	2002
MOS Rail Alternative Design Criteria Assumptions	2003
Inventory of Major Utilities	2001
Technical Memo: Low-cost utility interface strategy for MOS Rail	2003
LRT Alignment Plan and Profile (Separate Track Alt.)	2001
Plan for Geotechnical Explorations	2001
Conceptual Project Geotechnical Information Summary	2001
Conceptual Design Plans (Separate Track Alternative)	2001
Conceptual Design Report (Separate Track Alternative)	2001
Report to Steering Committee "Low Cost (Shared Track)" Alt.	2002
Conceptual Design Plans for "Low Cost (Shared Track)" Alt.	2002
Conceptual Design Report "Low Cost (Shared Track)" Alt.	2002
Conceptual Design Plans for MOS Alternative	2004
Conceptual Design Report for MOS Alternative	2004
Conceptual Design Plans for BRT Alternative	2004
Conceptual Design Report for BRT Alternative	2004
Inventory Data for Potential Station Locations	2001
Preliminary Station Area Planning Studies (3 locations)	2001
Appleway Station TOD Potential Study Report	2003
TOD Conceptual Master Plan and Report U-City Station	2004
TOD Conceptual Master Plan and Report Liberty Lake Station	2004
Assembly of Preliminary Traffic Analysis Data	2001
Documentation for Project Definition Charette	2001
Quantities Documentation for Capital Cost Estimate	2001
Documentation of Review of Bus Operations Interface Plan	2001
Memo describing bus service for "Low Cost(Shared Track)" Alt.	2002
Bus Network Interface and Service Plan Memorandum	2005
Technical Memo: Low-cost utility interface strategy for MOS Rail	2001-2005
Map Animations of Project Alignment	2001-2005
Visual Simulations of Project Views	2001-2005
Visual Animation of Selected Project Segments	2001-2005
Technical memoranda for Various "Flag Issues"	2002-2003
VISSIM simulations of traffic operations at selected intersections	2002-2003
Station Interface Reports for each Station	2003
Land use/zoning Recommendations	2003

Systems Planning Tasks

Preliminary Systems Design Criteria	2001
Conceptual Design Assumptions for Light Rail Vehicle	2001
Light Rail Vehicle Fleet Requirements	2001
Alternative Approaches for LRT Vehicle Procurement	2001
Baseline Assumptions for the Traction Electrification System	2001
Baseline Assumptions for the Train Signal System	2001
Systems Design Report for "Low Cost (Shared Track)" Alt.	2002
Systems Design Report for MOS Rail Alternative	2003
Conceptual Systems and Operations Study for "Single Track" Option	2004
Technical Memo: O&M site selection study	2002
Technical Memo: MOS Rail Operations & Maintenance Facility	2003
Updated LRT run-time simulation for alignment, station location	2002

Reference documents developed by STA:

Citizen Participation Plan Project Newsletters Project Website Public Information Surveys

Reference documents by others:

Light Rail Study for Spokane County (WSDOT)	1974
HCT Systems Planning Studies (SRTC)	1993-1994
Major Investment Study (SRTC)	1997
Moore Information Survey	2006

Resolutions

RESOLUTION 06-88-A

CITY OF LIBERTY LAKE, SPOKANE COUNTY, WASHINGTON

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF LIBERTY LAKE, SPOKANE COUNTY, WASHINGTON, AMENDING RESOLUTION NO. 06-88 ADOPTING A LOCALLY PREFERRED ALTERNATIVE FOR HIGH CAPACITY TRANSIT IN THE SOUTH VALLEY CORRIDOR, AND OTHER MATTERS PROPERLY RELATED THERETO.

WHEREAS, the Washington State Department of Transportation first studied Light Rail in the Spokane region 32 years ago;

WHEREAS, the Spokane Regional Transportation Council studied High Capacity Systems over a decade ago, and conducted a Major Investment Study in 1997 which concluded that light rail was the most preferred form of high capacity transportation for the South Valley Corridor;

WHEREAS, the public expects their government and their elected officials to anticipate traffic congestion and implement methods to decrease it;

WHEREAS, the choice of Locally Preferred Alternative ("LPA") should be driven by the mandates of the adopted comprehensive plans of the affected jurisdictions;

WHEREAS, the selection of a Light Rail alternative supports the regional transportation planning and implementation process;

WHEREAS, the selection of a Light Rail alternative is consistent with, and implements specific goals of, the comprehensive plan for the City of Liberty Lake;

NOW, THEREFORE, be it resolved by the City Council of the City of Liberty Lake, Washington, as follows:

<u>Section 1.</u> Adoption of Locally Preferred Alternative. The High Capacity Transit mode preferred by the City of Liberty Lake has the following characteristics:

- a) Light Rail extending from downtown Spokane to Spokane Valley and Liberty Lake;
- b) Follows the Shared Track Alignment, providing access to many neighborhoods with opportunities for economic development;
- c) Utilizes Diesel Multiple Units, preferably consuming biodiesel;
- d) Costs no more than \$300 million (in 2006 dollars);
- e) Taps multiple sources of funding; and
- f) Begins revenue service no later than in the year 2014.

A light rail system which utilizes the "shared track alternative" alignment and incorporating the cost saving measures associated with the "single track option" would satisfy the requirements of this LPA.

Section 2. Planning Requirement. It is the policy of the City of Liberty Lake that the Spokane Transit Authority should continue planning for other High Capacity Transit corridors, in the forms most conducive to expanding transit access to and from the City of Liberty Lake, through other areas of the Spokane-Kootenai Region, including, but not limited to:

- a) North Idaho, including Post Falls and Coeur d'Alene
- b) North Spokane, potentially near the future US 395, US 2, and Maple-Ash corridors;
- c) West Plains, including the Spokane International Airport, and potentially the Cities of Airway Heights and Cheney; and
- d) Spokane's South Hill.

Section 3. Project Right-of-way. The City of Liberty Lake encourages all affected jurisdictions to make available all necessary rights of way to, and enter into partnership with, Spokane Transit for the construction of the preferred alternative, where property is currently in public ownership. The City of Liberty Lake acknowledges that it owns a segment of the land on the proposed corridor which is wider than is necessary for light rail construction. The City understands that STA may determine this land is needed for the Project. If so, it is the understanding of the City that STA will pay just compensation for the property.

Approved by the City Council this _/ 8 def of April. 200

Mayor, Steve Peterson

Attest City

Approved as to Form:

RESOLUTION NO. 01-06

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE SPOKANE REGIONAL TRANSPORTATION COUNCIL IMPLEMENTING THE RECOMMENDATIONS OF THE LIGHT RAIL STEERING COMMITTEE AND RECOMMENDING THE PREFERRED ALTERNATIVE TO THE SPOKANE TRANSIT AUTHORITY BOARD AND THE CONTINUED DEVELOPMENT OF LIGHT RAIL TRANSIT FOR THE SOUTH VALLEY CORRIDOR AND OTHER MATTERS PROPERLY RELATED THERETO

> SPOKANE REGIONAL TRANSPORTATION COUNCIL Spokane County, Washington

BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE SPOKANE REGIONAL TRANSPORTATION COUNCIL:

WHEREAS, the Spokane Regional Transportation Council (SRTC) is a regional transportation planning organization pursuant to RCW 47.80.020 of the laws of the State of Washington; and

WHEREAS, the Spokane Regional Transportation Council (SRTC) is a metropolitan planning organization authorized and required in accordance with Title 23 United States Code, Section 134; and

WHEREAS, stated goals of the Growth Management Act and the Spokane County Countywide Planning Policies, adopted December 22, 1994, recognize that efficient transportation systems are necessary to reduce sprawl and improve the efficient movement of people, goods, and services; and

WHEREAS, the Spokane Region, planning in accordance with the Growth Management Act, anticipates significant population growth over the next 20 years; and

WHEREAS, the Countywide Planning Policies necessitate the designation of specific transportation corridors which can support high capacity transportation; and

WHEREAS, SRTC has projected the Spokane Valley as a future major growth sector of the metropolitan area in both housing and employment; and

WHEREAS, the High Capacity Transportation Study (HCT, Phase I) was completed by the SRTC in 1993 to evaluate existing land use plans and zoning ordinances, including regional and local policies; and

WHEREAS, the HCT, Phase I was followed by HCT, Phase II, completed in 1994 that evaluated high capacity transportation corridors; and

Spokane Regional Transportation Council - Resolution No. 01-06 - 5-2006 WHEREAS, SRTC completed the South Valley Transportation Study in 1995 and concluded that increasing highway congestion, air quality, consumption of urban land for parking, mobility of transit-dependent people, and access issues required the identification and acquisition of prospective development sites to serve and facilitate transportation services; and

WHEREAS, one of the recommendations of the South Valley Transportation Study was the selection of the South Valley Corridor between Liberty Lake and Spokane's central business district as a potential HCT corridor, which led to the Spokane Valley Corridor Major Investment Study, completed in 1997 and updated in 1998, to evaluate reasonable HC alternatives in the corridor, and

WHEREAS, SRTC and STA by motions adopted at a joint meeting on June 1, 2000 authorized the solicitation of proposals for a consultant to assist STA and SRTC in the implementation of a Light Rail Project; and

WHEREAS, the eventual selection of a single transportation locally preferred alternative will represent the initial phase of an implementation strategy that could ultimately lead to future expansion of the transportation network; and

WHEREAS, SRTC and STA by motions adopted at a joint meeting on September 9, 2004 reaffirmed the scope and direction of the Light Rail Project and the supporting actions of the Light Rail Steering Committee; and

WHEREAS, the Federal Transit Administration, Region X, found the Draft Environmental Impact Statement for the South Valley Corridor Project provides a complete, objective and technically sufficient analysis of the potential impacts on the human, economic, and social environmental and therefore approved it for public comment on December 29, 2005; and

WHEREAS, numerous opportunities for public comment on the Draft Environmental Impact Statement were provided during the period January 18 to March 3, 2006, and those comments have been documented; and

WHEREAS, the Light Rail Steering Committee submitted its report titled Recommendations of the Steering Committee: Preferred Alternative for High Capacity Transit in the South Valley Corridor to the STA Board of Directors on March 16, 2006; and

WHEREAS, the SRTC and STA Boards considered the recommendations of the Light Rail Steering Committee at a joint meeting on March 30, 2006;

NOW, THEREFORE, be it resolved by the Board of Directors of the Spokane Regional Transportation Council:

Spokane Regional Transportation Council - Resolution No. 01-06 - 5-2006

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Section 1 – Purpose: To formally support elements of the Light Rail Steering Committee's recommendation for a locally preferred alternative for high-capacity transit in the South Valley Corridor between the central business district of Spokane, through Spokane Valley, to the City of Liberty Lake, Washington. Section 2 - Project Scope and Direction: The SRTC Board supports selection of the low-cost light rail system recommended by the Light Rail Steering Committee and as approved the STA Board; that the STA Board take actions to advance engineering and design efforts necessary to establish a right of way plan for the purposes of identifying and acquiring rights of way to protect the corridor for future light rail transportation; continue development of a financial funding strategy to implement the locally preferred alternative; and when appropriate, present to voters within the PTBA a ballot measure to determine the financial willingness of the public to implement the locally preferred alternative. Section 3 – Funding: The STA Board should provide the funds necessary to support the identified work efforts contained in Section 2 with FTA Section 5307 funding and the required local match. Section 4 - Term: This resolution shall remain in effect indefinitely, or until rescinded by subsequent SRTC Board action. ADOPTED by SRTC at a regular meeting thereof held on the 11th day of May 2006. SPOKANE REGIONAL TRANSPORTATION COUNCIL ATTES Spokane Regional Transportation 3 Council - Resolution No. 01-06 - 5-2006

RESOLUTION NO. 616 -06

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE SPOKANE TRANSIT AUTHORITY DIRECTING THE LIGHT RAIL STEERING COMMITTEE TO BRING FORTH POTENTIAL FUNDING ALTERNATIVES FOR THEIR LOCALLY PREFERRED ALTERNATIVE FOR A HIGH CAPACITY TRANSIT SYSTEM IN THE SOUTH VALLEY CORRIDOR AND OTHER MATTERS PROPERLY RELATED THERETO

SPOKANE TRANSIT AUTHORITY Spokane County, Washington

BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE SPOKANE TRANSIT AUTHORITY:

WHEREAS, the Spokane Transit Authority (STA) is a public transportation benefit area organized and operating pursuant to the laws of the State of Washington;

WHEREAS, the Spokane Regional Transportation Council (SRTC) is a metropolitan planning organization authorized and organized in accordance with RCW 47.80.020 and Title 23 United States Code;

WHEREAS, stated goals of the Growth Management Act, enacted by the State of Washington in 1990, are reduction of urban sprawl, adequate provision of efficient multi-modal transportation systems, and promotion of economic opportunity;

WHEREAS, pursuant to the Growth Management Act, the Spokane County Countywide Planning Policies recognize that efficient transportation systems are necessary to manage growth, reduce sprawl and improve the efficient movement of people, goods, and services;

WHEREAS, the Spokane Region, planning in accordance with the Growth Management Act, anticipates significant population growth over the next 20 years;

WHEREAS, the Countywide Planning Policies necessitate the designation of specific transportation corridors which can support high capacity transportation;

WHEREAS, the Countywide Planning Policies require that each jurisdiction should coordinate its housing and transportation strategies to support existing, or develop new, public multimodal transportation systems;

WHEREAS, SRTC has projected the Spokane Valley as a future major growth sector of the metropolitan area in both housing and employment;

WHEREAS, SRTC completed a series of studies to evaluate the potential development of high capacity transportation facilities and services to serve metropolitan Spokane, including Light Rail;

WHEREAS, the High Capacity Transportation Study (HCT, Phase I) was completed by the SRTC in 1993 to evaluate existing land use plans and zoning ordinances, including regional and local policies; WHEREAS, the HCT, Phase I, Study was followed by HCT, Phase II, completed in 1994 that evaluated high capacity transportation corridors;

WHEREAS, SRTC completed the South Valley Transportation Study in 1995 and concluded that increasing highway congestion, air quality, consumption of urban land for parking, mobility of transit-dependent people, and access issue required the identification and acquisition of prospective development sites to serve and facilitate transportation service. The SRTC study concluded that the Valley's existing transportation system could not support proposed land uses;

WHEREAS, one of the recommendations of the South Valley Transportation Study was the selection of the South Valley Corridor between Liberty Lake and Spokane's central business. district as a potential HCT corridor. This led to the Spokane Valley corridor Major Investment Study, completed in 1997 and updated in 1998, to evaluate reasonable HCT alternatives in the corridor;

WHEREAS, SRTC and STA by motions adopted at a joint meeting on June 1, 2000 authorized the solicitation of proposals for a consultant to assist STA and SRTC in the implementation of a Light Rail Project;

WHEREAS, STA has, by Resolution No. 527-00, adopted on June 28, 2000, established and empowered a Light Rail Steering Committee to oversee the contracted consultant project management team to assist in the development of the Light Rail Project by working with the consultant and such other duties and responsibilities as may be assigned from time to time;

WHEREAS, the eventual selection of a single transportation locally preferred alternative, will represent the initial phase of an implementation strategy that could ultimately lead to future expansion of the transportation network, if approved;

WHEREAS, SRTC and STA by motions adopted at a joint meeting on September 9, 2004 reaffirmed the scope and direction of the Light Rail Project and the supporting actions of the Light Rail Steering Committee;

WHEREAS, STA has, by Resolution No. 582-04, adopted on September 22, 2004, directed the Light Rail Steering Committee and Project Manager to present completed work on alternatives analysis for high capacity transit in the South Valley Corridor to the STA Board of Directors for consideration of a locally preferred transportation alternative as soon as possible after completion of the Draft Environmental Impact Statement, including any required public comment periods;

WHEREAS, the Board approved, on December 15, 2005, an extension of the General Management and Engineering Consultant (GMEC) contract with DEA through June 30, 2006, to complete the feasibility and the preliminary development of high-capacity transit alternatives;

WHEREAS, the Federal Transit Administration, Region X, found that the Draft Environmental Impact Statement for the South Valley Corridor Project provides a complete, objective and technically sufficient analysis of the potential impacts on the human, economic, and social environment and therefore approved it for public comment on December 29, 2005; WHEREAS, numerous opportunities for public comment on the Draft Environmental Impact Statement were provided during the period January 18 to March 3, 2006, and those comments have been documented;

WHEREAS, the Light Rail Steering Committee submitted its report titled Recommendations of the Steering Committee: Preferred Alternative for High Capacity Transit in the South Valley Corridor to the STA Board of Directors on March 16, 2006;

WHEREAS, the SRTC and STA Boards considered the recommendations of the Light Rail Steering Committee at a joint meeting on March 30, 2006;

NOW, THEREFORE, be it resolved by the Board of Directors of the Spokane Transit Authority . as follows:

<u>Section 1 – Purpose</u>: For the purposes of continued planning, the STA Board accepts the locally preferred routing for high-capacity transit in the south valley corridor between the central business district of Spokane, through Spokane Valley, to the City of Liberty Lake, Washington, and furthermore, directs staff to focus its remaining resources on the Locally Preferred Alternative as presented by the Light Rail Steering Committee with specific direction to be described as follows.

<u>Section 2 – Direction</u>: The Light Rail Steering Committee and Project Manager are directed to bring forth viable funding alternatives for consideration by the STA Board of Directors for the cost of land, for the cost of construction of capital improvements and for the cost of operation and maintenance of the Locally Preferred Alternative.

Section 3 - Term: This resolution shall remain in effect indefinitely unless it is rescinded by subsequent STA Board action.

ADOPTED by STA at a regular meeting thereof held on the 18th day of May, 2006.

ATTEST:

Naomi Chester Acting Clerk of the Authority

Approved as to form

Vaura D. McAloon Attorney for Spokane Transit Authority

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SPOKANE TRANSIT AUTHORITY

Brian A. Sayrs Chairman of the Board

Preferred Alternative for HCT In the South Valley Corridor