

# **Technical Memorandum**

## **Downtown/Riverfront Streetcar Studies**

### **City of West Sacramento**

## **Refined Objectives and Evaluation Criteria**

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## 1.0 Introduction

The purpose of the refinement of the objectives and development of evaluation criteria is to assure that the alternative alignments are properly correlated with and reflective of the Purpose and Need and the Goals and Objectives. The principal result is a rating or measurement scale for each criterion to be applied after other study elements are prepared. These elements are route studies, service criteria, equipment analysis, ridership and constraints analysis. Once the evaluation criteria were approved by the PSC and TAC, they were applied to overall alignment alternatives and/or individual segments, as were applicable.

The Request for Proposal (RFP) set forth a basic list of potential evaluation criteria. It was a “long list” intended to cover a wide range of potential conditions and considerations. Any given alignment or segment was to:

- Demonstrate funding feasibility (fundability)
- Serve key destinations (“Where people want to go”)
- Meet anticipated ridership – existing and potential
- Demonstrate cost-effectiveness
- Activate development/redevelopment opportunities
- Enhance pedestrian activity
- Allow for potential extensions
- Minimize traffic delays and safety concerns
- Integrate with available and planned light rail/transit operations
- Minimize utility impacts
- Minimize visual impacts
- Minimize environmental impacts
- Minimize historic and cultural resource impacts
- Support identified community goals and objectives
- Support of existing land use, redevelopment or specific plans
- Reflect neighborhood compatibility
- Show potential for private financial participation
- Distribute costs among partners
- Support timely project delivery
- Minimize construction delays
- Minimize business impacts

This technical memorandum documents the process of refining objectives and developing evaluation criteria. In most cases, the intent is to identify the means to activate the Purpose and Need and the proposed Goals and Objectives.

## 2.0 Refined Objectives

As a basis for refining the objectives and developing the criteria, a review of the Purpose and Need is instructive. For this study,

- The **purpose** of the streetcar project is to improve transit service and local circulation to connect, support, and shape existing and proposed development in the core areas of West Sacramento, Sacramento, and the Riverfront.
- The **need** is for a unique transportation mode that increases diverse ridership, promotes desired connectivity, attracts private investment participation, serves as a development and redevelopment catalyst, and fosters placemaking.

Within the context of the Purpose and Need, the previously-developed objectives that are most germane to establishing evaluation criteria are highlighted, and in some cases, enhanced. Any such enhancement or change will be shown in **bold text**. The objectives are grouped under:

### Mobility and Connectivity

- **Enhance** connectivity between existing and new **downtown** housing in both cities and the major employment, commercial, recreational, and cultural activity centers
- **Offer** a convenient and attractive means of transportation for residents, workers, customers, and visitors
- Improve access and opportunities for **all existing and potential transit rider groups**
- **Enhance access to the riverfront**

### Sustainable Transit and Development Investments

- Implement a **streetcar** project that supports the existing and planned built environment
- **Capitalize fully on the streetcar's demonstrated** powerful placemaking **attributes**
- Link all possible key destinations in the **study area**
- **Support adopted goals, objectives and plans**
- Minimize negative impacts on historic, archaeological, traditional cultural places, parklands, public recreation areas, **traffic, and businesses**

### Efficiency and Effectiveness

- Attract new riders to the local and regional transit system, **including an increase ridership in the downtowns by offering fast and frequent** service
- **Inter-line with the light rail system to help meet the desired headways and to “extend” streetcar service with limited capital investment**
- **Enhance ridership by connecting the streetcar with all regional transit modes and intercity rail**
- **Locate streetcar stops close to areas of high existing and potential pedestrian activity**
- **Accommodate** logical and efficient future expansion opportunities

### Affordable and Expedited Delivery

- Minimize capital costs **with simple stops, in-street running** operations, no grade separations, and no park and ride lots
- Minimize net operating and maintenance costs **by using existing light rail tracks and maintenance facilities where practical**
- Fast track the planning, design, and construction period to total five years or less
- Maximize public-private partnership opportunities, including funding

## 3.0 3.0 Evaluation Criteria

This section devises criteria for reviewing and evaluating candidate alignments. In section 1.0, the “long list” of criteria was displayed. This section organizes those 21 criteria into five sub-categories that demonstrate complementary relationships. Each criterion has a rating or measurement scale of “Low”, “Medium” or “High”, or in some instances “Low” and “High”. Whenever possible, quantifiable measures are presented, as a means of evaluation. The final list was reviewed and approved by the Technical Advisory Committee (TAC).

### 3.1 Fundability

#### 3.1.1 Demonstrates Funding Feasibility

- Low – Few sources for potential funding
- Medium – Several sources for potential funding
- High – Many sources for potential funding

#### 3.1.2 Shows Potential for Private Financial Participation

- Low – No routes through areas of high development and/or redevelopment potential
- Medium – Some routed through areas of high development and/or redevelopment potential
- High – Most routes through areas of high development and/or redevelopment potential

#### 3.1.3 Distributes Costs among Public Partners

- Low – Limited length of route and 25% or less of alignment within either city
- Medium – Near equal length and percentage of alignment between cities
- High – Equivalent length of route miles and percentage of alignment between cities

### 3.2 Cost Effectiveness

#### 3.2.1 Affordability and Constructability

- Low – Does not employ simplicity in project design, construction methods, or does not integrate with the existing light rail tracks and facilities
- Medium – Employs simplicity in project design and construction methods, but does not integrate with the existing light rail tracks and facilities

- High – Employs simplicity in project design and construction methods, and integrates with existing light rail tracks and facilities

### 3.2.2 Designed to Accommodate Potential Extensions

- Low – Limited ability to extend the alignment and with no connectivity to existing light rail lines
- Medium – Good future alignment extensions with connectivity to existing light rail
- High – Conscious effort to promote future alignment extensions and with maximum connectivity to existing light rail, and complements proposed Sacramento Regional Transit light rail extension plans and City of West Sacramento transit plans

## 3.3 Construction and Cost Impact Minimization

### 3.3.1 Minimizes Underground Utility Impacts

- Low – Cost of utility relocation is low
- Medium – Cost of utility relocation is low
- High – Cost of utility relocation is low

### 3.3.2 Minimizes Visual Impacts

- Low – Requires excessive use of catenaries; use of grade separations; negatively impacts sensitive locations
- Medium – Uses some catenaries but relies on other methods (connections to building, light standards, and other vertical elements) for overhead contact system; no use of grade separations
- High – Limited use of catenaries and maximizes use of other methods (connections to building, light standards, public art, and other vertical elements) for overhead contact system; no use of grade separations

### 3.3.3 Minimizes Environmental Impacts

- Low – Route traverses areas of significant impact
- High – Avoids environmental features and/or proposes mitigation

### 3.3.4 Minimizes Historic and Cultural Resource Impacts

- Low – Ignores the historic design of the Tower Bridge and other historic resources along the route
- High – Reflects the original design of, and track location on, the Tower Bridge; respects other historic resources along the route

### 3.3.5 Minimizes Traffic Delays and Safety Concerns

- Low – Impacts intersections with capacity constraints, degrades current level of service, blocks building service entries, or traverses high-accident pedestrian areas
- High – Minimizes impacts to intersections with capacity constraints, does not degrade current level of service, generally avoids blocking building service entries and minimizes impact on high-accident pedestrian areas

### 3.3.6 Minimizes Business Impacts

- Low – Impacts business customer entry/service locations, disrupts operations of more than 50% of businesses, or requires extensive adjustments to business entry/service locations
- High – Minimizes impacts to business customer entry/service locations, disrupts operations of less than 50% of businesses, minimizes extensive adjustments to business entry/service locations

## 3.4 Maximize Development Opportunities

### 3.4.1 Serves Key Destinations

- Low – Access or service to less than 50% of the existing and proposed major activity centers
- Medium – Access or service to at least 50% of the existing and proposed major activity centers
- High – Access or service to over 75% of the existing and proposed major activity centers

### 3.4.2 Accesses Development/Redevelopment Locations

- Low – Provides access or service to less than 50% of the potential employment or residential resources in existing and proposed redevelopment areas
- Medium – Provides access or service to at least 50% of the potential employment or residential resources in existing and redevelopment areas
- High – Provides access or service to over 75% of the potential employment or residential resources in existing and proposed and redevelopment areas

### 3.4.3 Enhances Pedestrian Activity

- Low – Provides access or service to less than 50% of the existing or proposed high pedestrian activity areas, and has significant barriers to access
- Medium – Provides access or service to at least 50% of the existing or proposed high pedestrian activity areas, and has some barriers to access
- High – Access or service to over 75% of the existing or proposed high pedestrian activity areas, and mitigates barriers to access

## 3.5 Relationships to Local Goals

### 3.5.1 Supports Adopted Community Goals and Objectives

- Low – Not responsive to adopted community goals and objectives that promote and provide public and private transit systems, cohesive urban structure neighborhood development and pedestrian convenience, the waterfront as an urban core, mixed use development/ redevelopment/infill along transit lines, and transportation choice
- High – Positively implements adopted community goals and objectives objectives that promote and provide public and private transit systems, cohesive urban structure

neighborhood development and pedestrian convenience, the waterfront as an urban core, mixed use development/ redevelopment/infill along transit lines, and transportation choice

### **3.5.2 Supports Existing Land Use, Redevelopment or Specific Plans**

- Low – Not responsive to adopted Land Use, Redevelopment or Specific Plans
- High – Responsive to adopted Land Use, Redevelopment or Specific Plans

### **3.5.3 Reflects Neighborhood Compatibility**

- Low – Route and equipment type are not responsive to existing and planned neighborhood scale and character
- High – Route and equipment type are responsive to existing neighborhood scale and character

### **3.5.4 Promotes Accessibility to the Sacramento River**

- Low – Does not provide or promote direct access to Riverfront locations, minimizes visual access
- High – Maximizes direct access to Riverfront locations, maximizes visual access

## 4.0 Application of Criteria

Once the analyses of route studies, service criteria, equipment analysis, and constraints were completed, the alignments were evaluated against the objectives and evaluation criteria in a formal decision-making process involving the Policy Steering Committee (PSC) and TAC. The screening methodology was a three level approach.

- **Level 1 Transportation Performance** – Screen to rate options by the level of improved interconnectivity at existing transport nodes, streetcar patronage, impact on other rail activity
- **Level 2 Redevelopment and Economic Benefits** – Assess the benefits of each alternative for transit oriented development and economic impacts, positive and negative
- **Level 3 Technical Complexity/Viability** – Initial consideration of technical viability of options and order of magnitude cost estimates.