Successful Transportation Systems

**Multi-Modal**

- Create Quality Pedestrian Environments
- Provide Transit Integration
- Accommodate Vehicle Traffic
- Provide Safe Bicycle Facilities
Corridor & Station Examples

Portland Streetcar – Downtown

Portland Streetcar – Eastside Loop

Branch Avenue Station – WMATA
Portland Streetcar

Opened in 2001
- Links PSU, Core, Pearl District
- Stimulated greater level of development

Extensions in ‘04, ‘05 & ‘07
- Service to South Waterfront
- Tram connection to OHSU
Corridor Characteristics

• Pedestrian Environment
  ▶ High density mixed-use development along the corridor
  ▶ Streets on a 200-foot grid
  ▶ Most intersections signalized
  ▶ Slow to moderate traffic speeds

• Transit Integration
  ▶ Platforms very accessible to adjacent development
  ▶ Interconnected transit options – bus and LRT
Portland Streetcar - Downtown

Corridor Characteristics

- **Vehicle Traffic**
  - Primarily local
  - No significant congestion

- **Bicycling Environment**
  - Significant bicycle use
  - Bike lane network
  - Slow to moderate traffic speeds
Portland Streetcar - Downtown

Strategy: Provide Focused Improvements

Pedestrian Environment

- Enhance pedestrian connections
- Stops in pleasant and accessible locations
- Streetcar to extend pedestrian “reach”
Portland Streetcar – Downtown

Strategy: Provide Focused Improvements

Transit Integration

- Creation of common bus/streetcar stops
- Pedestrian access between streetcar, LRT and bus
- Adjacent development
Portland Streetcar – Downtown

**Strategy: Provide Focused Improvements**

**Vehicle Traffic**

- Congestion related to new development
- Significant amount caused by the streetcar
Portland Streetcar - Downtown

Strategy: Provide Focused Improvements

Bicycling Environment
- Learning curve
- Rail hazards
- Platform conflicts
Portland Streetcar - Eastside

Eastside Loop
Planning ‘07

Future Southern River Connection with Downtown
Portland Streetcar - Eastside

Corridor Characteristics

- Pedestrian Environment
  - Generally not pedestrian-friendly
  - Auto-oriented roadways
  - Moderate to high traffic speeds
  - Less mixed-use and concentrated use districts
    - Rose Quarter - special events
    - Lloyd District/Convention Center – office, regional retail, events
    - Eastside – commercial/industrial
Portland Streetcar - Eastside

Corridor Characteristics

- Transit Integration
  - Inconsistent
  - Interconnected transit options – bus and LRT
Portland Streetcar - Eastside

Corridor Characteristics

- Vehicle Traffic
  - Major regional roadway corridors
  - Significant congestion along the corridor
  - Truck routes
Portland Streetcar - Eastside

Corridor Characteristics

- Bicycling Environment
  - Significant bicycle use
  - Bike lane network gaps
  - Moderate to high traffic speeds
Portland Streetcar - Eastside

**Strategy:** Create Quality Pedestrian Centers

**Pedestrian Is Key**
- Place to visit – not just travel through
- Create an identity
Portland Streetcar - Eastside

*Strategy: Create Quality Pedestrian Centers*

**Integrate Transit**
- Improve passenger convenience and comfort
- Create focus areas for multi-modal connectivity
Portland Streetcar - Eastside

Strategy: Create Quality Pedestrian Centers

Tame the Traffic

- Signalization
- Reduce speeds while maintaining capacity
- Pedestrian crossings
Portland Streetcar - Eastside

Strategy: Create Quality Pedestrian Centers

Public/Private Partnership
- Align streetcar with public/private investment
- Focus areas
- Catalyst sites
Branch Avenue Station

Station Area Characteristics
- Southern D.C. Metro Area
- Built as a park-and-ride
- Orientation to cars and buses using major arterial routes
Branch Avenue Station

Station Area Characteristics

- Auto-oriented uses near Branch Avenue
- Existing low density neighborhoods in area
- New high density residential nearby
- Andrews AFB
Branch Avenue Station

Station Area Characteristics

• Pedestrian Environment
  ▶ Inconsistent facilities
  ▶ Significant gaps
  ▶ Generally poor environment
Branch Avenue Station

Station Area Characteristics

• Transit Interaction
  ▶ High-density residences within easy walking distance
  ▶ Poor connectivity with neighboring land uses
  ▶ Good bus-rail
  ▶ Park-and-ride popular
Branch Avenue Station

Station Area Characteristics

- Vehicle Traffic
  - On-site congestion at peak hours
  - Adequate local street capacity
Branch Avenue Station

Station Area Characteristics

• Bicycling Environment
  ▶ Limited bicycle use
  ▶ No dedicated bike network
  ▶ Moderate to high traffic speeds
  ▶ Some bike parking
Branch Avenue Station

Strategy: Integrate Modes

Orient Transit to Surrounding Development
- Residential
- Commercial
- Government
Branch Avenue Station

Strategy: Integrate Modes

Pedestrian Accommodation

- Direct and welcoming pedestrian connections
- Maximize safety, convenience, and comfort
- Active uses facing pedestrian routes
Branch Avenue Station

*Strategy: Integrate Modes*

Integrate Cars with Pedestrians
- Safe crossings
- Slower speeds near the station
Summary
Plan for All Modes

Pedestrian Environment

- Eliminate gaps
- Make it convenient
- Enhance the experience
Summary

Plan for All Modes

Transit Integration

- Make it convenient
- Accommodate all modes
- Orient transit to development
**Summary**

**Plan for All Modes**

**Vehicle Traffic**

- Establish a balance with other modes
- Plan for development stimulated by transit
- Retain capacity
Summary
Plan for All Modes

Don’t Underestimate the Bike

- 2-5 mile range
- Coordinated transit-bike planning/design
- Safe connections
- Convenient and secure parking