SODO ACTION AGENDA

May 18, 2009

City of Seattle • Gregory J. Nickels, Mayor
Office of Economic Development

SODO BUSINESS ASSOCIATION

MIC
MANUFACTURING INDUSTRIAL COUNCIL

AHBL

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Prepared by: AHBL

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CMA CGM
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4 AVE S
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ONLY

Executive Summary

The SODO Action Agenda is the result of a planning project that was led by the City of Seattle's Office of Economic Development. The goal of the Action Agenda is to support the businesses and employees that make up the SODO business community by helping them to better define their priorities for transportation and public safety. While planning for land use, parks, arts and culture are also important to the SODO community, they are not within the scope of this Action Agenda.

The SODO area is located south of Downtown Seattle's office core and contains most of the Duwamish Manufacturing/Industrial Center (M&IC), one of Seattle's two designated M&ICs. SODO extends from Jackson Street on the north to Dawson Street on the south, and is bounded by Puget Sound and the Duwamish River on the west and I-5 on the east. The SODO area contains the majority of the City's industrial land base and associated industrial employment, but also contains some office, retail and entertainment uses. The area is also a freight hub, including Port of Seattle container shipping terminals, rail lines, two rail yards, and major highways and City-designated major truck streets. It also contains a large number of transit and passenger rail services and facilities, including the E-3 busway and the new SODO LINK Light Rail stations where light rail service will begin in 2009.

There are multiple agencies involved in transportation and infrastructure planning in the SODO area, including the Seattle Department of Transportation (SDOT), the Washington State Department of Transportation (WSDOT), King County, and the Port of Seattle. In addition, the Puget Sound Regional Council (PSRC) is the region's Metropolitan Planning Organization, and has a role in regional transportation planning and funding. Areas designated M&ICs by the PSRC are eligible to receive funding to enhance freight mobility and other transportation projects. Finally, two private railroads--BNSF and Union Pacific-- also have a stake in SODO area issues.

Opposite: View along S Holgate Street facing west

SODO's Safeco Field and cargo container cranes front the Olympics

The Action Agenda builds on a number of prior plans addressing the SODO area. These include nine City of Seattle plans, and one King County planning document. The projects resulting from these plans together represent over $1 billion in program and infrastructure investment over the past nine years. While many of the recommendations in these prior plans have been implemented (are complete or in progress), several key recommendations have yet to be enacted. The key recommendation yet to enacted is the grade separation of S Lander Street.

The SODO Action Agenda overlaps with several concurrent planning processes being conducted in the City of Seattle, including development of the Seattle Pedestrian Master Plan, implementation of the Seattle Bicycle Master Plan, and the Duwamish Multi-modal Action Committee's (DMMAC) 1st Avenue South Improvement Study. The Action Agenda supports these processes as they relate to SODO and incorporates many of their recommendations.

Table ES-1 is a prioritized list of the Action Agenda's recommendations. There are two sets of recommendations: Critical Recommendations, which have the highest priority for the SODO community, and Other Recommendations. While many of the recommendations focus on freight mobility, the Action Agenda also considers general transportation, non-motorized travel, transit access, parking and public safety in the broader context of SODO as a major employment area and home to stadium and special event facilities. Recommendations relating to these topics are included to ensure safety and efficiency while supporting the primary role of SODO as an industrial area.

The SODO Action Agenda recommendations arise primarily from community stakeholders. The City of Seattle Office of Economic Development (OED) will coordinate with the relevant City departments to act on those recommendations that are viable and consistent with City policies.

Figure ES-1 shows the location of capital projects included in the Critical Recommendations that address freight mobility; these include the SODO-area projects in Critical Recommendations I and II.

Table ES-1: Summary of SODO Action Agenda Recommendations

#	Recommendation	Priority
Critical Recommendations		
I	Construct S Lander Street grade separation, Ready-to-Go, and Council-recommended freight mobility projects	Critical
II	Ensure the Alaskan Way Viaduct (AWV) South End project final design, and the Central Waterfront recommendation, incorporate appropriate measures to address issues specific to SODO	Critical
III	Provide ongoing interagency coordination and coordination with stakeholders	Critical
IV	Manage parking to address "hide and rides," expected increases in parking demand, and loss of parking with AWV project	Critical
V	Implement a shuttle/circulator that connects SODO-area employers to LINK Light Rail and north/south bus routes	Critical
VI	Improve safety conditions on key non-motorized routes	Critical
Other Recommendations - Transportation		
T-1	Keep S Holgate St open for all modes between 1st and 4th Avenues and improve S Horton St	High
T-2	Improve coordination and communication systems: better, comprehensive, immediate, information for traffic/construction	High
T-3	Improve intersection design to better facilitate truck movements	High
T-4	Replace South Park Bridge	High
T-5	Improve pavement conditions for freight, general transportation and bicycles	Medium
T-6	Create a baseline profile of the SODO area with business, land use and demographic data	High

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#	Recommendation	Priority
Other Recommendations - Public Safety		
PS-1	Provide simple public restrooms with “snail” entry and staffing	Medium
PS-2	Improve communications to include better, comprehensive, real-time information about public safety incidents	High
PS-3	Extend Central Core Alcohol Impact Area to include SODO	Medium
PS-4	Install surveillance cameras on pedestrian routes	Low
PS-5	Inform businesses to install no vehicle camping and no trespassing signage where needed to facilitate enforcement	Medium
PS-6	Require property owners to maintain property where facing a public right-of-way	Medium
PS-7	Establish an anti-graffiti strategy	Low
PS-8	Encourage or require Crime Prevention through Environmental Design (CPTED) review of development projects	Medium
PS-9	Develop a coordinated system for light replacement notification	Medium
PS-10	Provide technical assistance for seismic upgrades of buildings	Medium

Legend

- Critical Recommendation I: S Lander Street Grade Separation
- Critical Recommendation I, Council Recommended: Spokane Street Viaduct Widening and Loop Ramp (Ready- to-Go Project)
- Critical Recommendation I & II, Council Recommended: Alaskan Way Viaduct
- Critical Recommendation I, Council Recommended: Airport Way over Argo Bridge Rehabilitation
- Critical Recommendation I, Council Recommended: East Duwamish Waterway Bridge Rehabilitation
- C ritical Recommendation I, Council Recommended: 1st Avenue S 2008 Paving Contract 1
- Critical Recommendation I, Council Recommended: SR 519 Phase 2 Intermodal Access
- Critical Recommendation I, Council Recommended: East Marginal and Spokane Street Grade Separation (Ready-to-Go Project)

Figure ES-1: Locations of Recommendation Critical Roadway Improvement Projects


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1 Introduction

The SODO Action Agenda is the result of a planning project that was led by the City of Seattle's Office of Economic Development. The Action Agenda builds on prior planning efforts involving the City, SODO community, industry organizations, and other agencies to provide a single, up-to-date set of the SODO community's priority recommendations for transportation and public safety. Many previous plans have addressed the SODO area, including the Greater Duwamish Manufacturing Industrial Center Plan, Access Duwamish, Freight Mobility Action Plan, Mayor's Action Agenda for Manufacturing and Maritime Sectors, and others. This Action Agenda reviewed these prior plans to determine what has been implemented, which projects are still in progress, and which projects are no longer relevant.

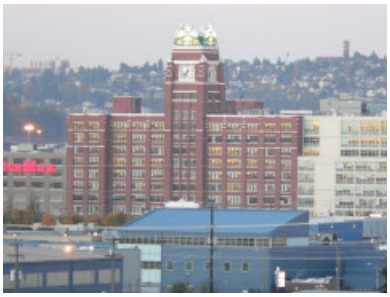
This Action Agenda will aid the City's efforts to support the 1,224 businesses and 44,765 jobs that make up the SODO community through program and infrastructure improvements.[1] The Action Agenda defines priorities for transportation and public safety. The community's priorities were developed into a list of recommendations and this Action Agenda document in the fall of 2008. The Action Agenda will provide input into the Industrial Jobs Initiative, and transportation and public safety initiatives.

The Action Agenda involved the following agencies and organizations, many of which have been involved in prior planning efforts:

- City of Seattle Office of Economic Development
- City of Seattle Department of Transportation
- Seattle Police Department
- SODO Business Association
- Manufacturing Industrial Council of Seattle (MIC)
- Duwamish Multi-Modal Advisory Coalition (DMMAC)
- Duwamish Transportation Management Association (TMA)

1 Source: Employment Security Department, first quarter 2007 covered employment data, geocoded by Puget Sound Regional Council

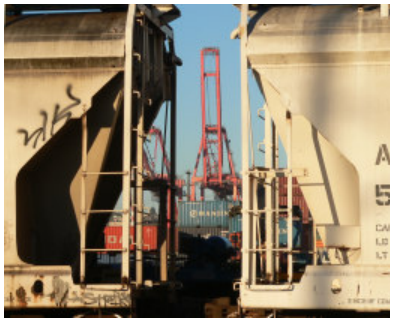
Opposite: SODO railyards at dawn



Starbucks Center

- SODO Action Agenda Advisory Committee
- Consultant Team, including AHBL (prime), Heffron Transportation, Communique Northwest

The SODO Action Agenda Advisory Committee, a committee of SODO area stakeholders, was convened in summer and fall 2008 and was the primary entity working with the City of Seattle to guide the Action Agenda planning process. Section 2.3 of this Action Agenda report describes the committee's role in greater detail.



A cargo container crane, as viewed between railcars.

1.1 Description of SODO Area

The SODO area is located south of the core of Downtown Seattle, and contains most of the Duwamish Manufacturing/Industrial Center (M&IC), one of Seattle's two designated M&ICs. (The Duwamish M&IC also includes Harbor Island and land along the western Duwamish shoreline.) SODO extends from Jackson Street on the north to Dawson Street on the south, and is bounded by Puget Sound and the Duwamish River on the west and I-5 on the east. Figure 1.1 shows the extent of SODO.

The SODO area contains the majority of the City's industrial land base and associated industrial employment, but also contains some office, retail entertainment uses. Entertainment uses include two major sports stadiums–Qwest Field and Safeco Field—as well as several night clubs. Additionally, SODO includes the southern portion of the Pioneer Square neighborhood at the south end of Downtown. While SODO is primarily a non-residential area, Pioneer Square includes a growing number of multi-family residences.

There are multiple agencies and jurisdictions that are involved in transportation and infrastructure planning in the SODO area, including SDOT, WSDOT, King County, and the Port of Seattle. In addition, the Puget Sound Regional Council (PSRC) is the region's Metropolitan Planning Organization and has a role in regional planning and transportation funding. Areas designated M&ICs by the PSRC are eligible to receive funding to enhance freight mobility and other transportation projects. Two private railroads – BNSF and Union Pacific – also have a stake in SODO area issues.

Major employers in SODO include Starbucks corporate headquarters, K2 Sports corporate headquarters, McKinstry Company, Charlie's Produce, the United States Postal Service, the Port of Seattle, Tully's Coffee, and many more.

Figure 1.1: SODO Area Aerial Photo

The area is also a freight hub, including the Port of Seattle's Terminals 25, 30 and 46 cargo facilities, and two rail yards—BNSF's Seattle International Gateway Rail Yard located west of Colorado Avenue, and Union Pacific's Argo Rail Yard, which cuts diagonally across the southern portion of SODO roughly from East Marginal Way S and S Spokane Street on the northwest, to Airport Way S and S Lucille Street on the southeast. The BNSF Mainline runs north-south through SODO between Occidental Avenue S and 3rd Avenue S.

SODO contains a number of major roadways that provide crucial routes for both freight and general transportation. Highways and City-designated major truck routes in SODO include: the Alaskan Way Viaduct, East Marginal Way S, SR 519 (S Royal Brougham Way), S Holgate Street, S Spokane Street and the West Seattle Freeway, 1st Avenue S, 4th Avenue S, 6th Avenue S, Airport Way S, Railroad Way S, S Dearborn Street, and portions of 7th Avenue S and Maynard Avenue S.

Bridges serving SODO include the West Seattle Bridge, the West Seattle Swing Bridge (lower bridge), the 1st Avenue S Bridge, and the South Park Bridge.

SODO also contains a large number of transit and passenger rail services and facilities, which are described below:

- In 2009, Sound Transit's Link Light Rail will begin service. This passenger rail line will serve SODO via three stations:

The Sounder Commuter Rail travels through SODO on its way to King Street Station.

- A new SODO Station, located at the E-3 Busway and S Lander Street,
- A new Stadium Light Rail station near S Royal Brougham Way.
- The Chinatown/International District Station, built as part of the Downtown Seattle Bus Tunnel and also a stop on the Link Light Rail.

- The E-3 Busway, a dedicated bus facility located along 5th Avenue S.
- SODO is served by King County Metro bus routes 21, 22, 23, 32, 35, 38, 39, 56, 57, 85, 101, 106, 116, 118, 119, 123, 131, 132, 134, 150, 152, 170, 174, 177, 190, 191, 196, and 280, and Sound Transit bus routes 590, 591, 592, 594, and 595.
- Amtrak's King Street Station, which also serves Sounder Commuter Rail. Sounder and Amtrak trains use the BNSF mainline through SODO.
- The new Link Light Rail Operations and Maintenance Facility near S Forest Street and Airport Way S.

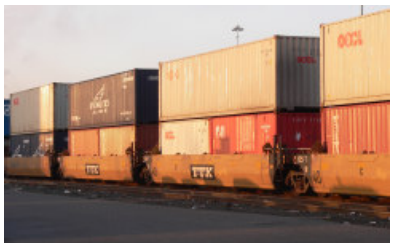
Safeco Field and SODO from the Beacon Avenue S overpass.

Finally, the Port of Seattle's Terminal 30 also currently serves cruise ships.

1.2 Project Goals

Four goals were defined at the outset of the planning process:

- Provide the community with an overview of improvements for transportation and public safety that are ongoing or have been implemented.
- Conduct broad outreach to businesses, employees, agencies, and advocates to determine community priorities for defined categories of improvements. While the categories for recommendations were originally defined as Freight Mobility, General Transportation, Pedestrian Safety and Public Safety, the planning process focused on freight, and looked at general transportation, non-motorized travel, transit, parking and public safety and efficiency in the broader context of the SODO community as a major employment area and the location of major stadium and special event facilities.
- Bring diverse groups together to define priority improvements that can be pursued for the identified topics.
- Provide input to City of Seattle and other agencies to implement Action Agenda priority projects and programs which have broad community support.



Rail and trucks move freight within and through SODO.

1.3 Major Topics Addressed

The Action Agenda addresses the following major topic areas: freight mobility, transit, non-motorized travel (pedestrian and bicycle), parking, programmatic measures, and public safety. As stated above, freight is the primary priority, but other topics are important for safety and efficiency. Following is a summary of each of these topics.

1.3.1 Freight Mobility

SODO is a hub for freight, including three cargo terminal facilities, and two major rail yards and rail lines and freight the first priority of the Action Agenda. Many rail trips and long-haul truck trips originate or end in SODO. Short-haul trucking within the area also contributes to the overall volume of trips. Many SODO area businesses depend on the ability of freight to move rapidly in and out of the area. The Action Agenda makes recommendations to help keep freight moving and to reduce conflicts between freight and other modes.

1.3.2 Transit

SODO contains a number of transit facilities and services, although many of the existing facilities are currently focused on moving people through the area, rather than to or from locations within it. Transit is a growing mode choice, and the Action Agenda makes recommendations to increase its usability in SODO. Transit is addressed in the Action Agenda to ensure the safety of employees and special event attendees, and to support area businesses.

1.3.3 Non-Motorized Travel

This category includes pedestrian and bicycle travel. Similar to transit, non-motorized travel is addressed in the Action Agenda to ensure the safety of employees and special event attendees, and to support area businesses. With the opening of LINK Light Rail serving SODO in 2009, the number of pedestrians in the area is expected to increase. Pedestrian safety will be a key component for transit users, since many will be walking from SODO area stations to a destination within SODO. This includes employees, customers of SODO retailers, and visitors to the stadiums and other entertainment uses. Key components of pedestrian safety are: sidewalks, lighting, and wayfinding.

Bicycles are a growing transportation choice for many people in the region, and the City's recent adoption of a Bicycle Master Plan calls attention to

the need for safe bicycle facilities. Public safety (addressed separately in the Action Agenda) is also important to non-motorized travelers.

1.3.4 Parking

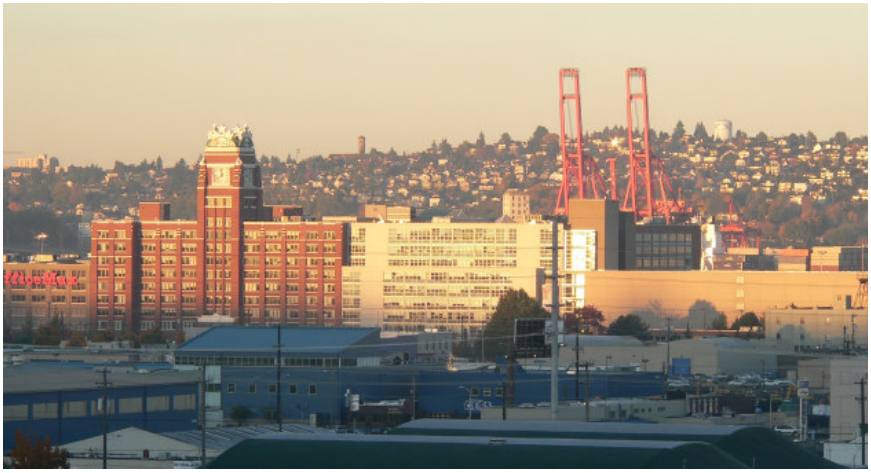
Parking is a concern of many SODO area businesses and employees, and illegal parking can interfere with freight mobility. The Action Agenda makes recommendations regarding parking management.

1.3.5 Programmatic Measures

The Action Agenda addresses several programmatic measures to support freight and keep people and goods moving to, from and through SODO.

1.3.6 Public Safety

Because the SODO area is primarily an employment area, it has limited nighttime population. Historically, it has also been an area with limited pedestrian use. Many industrial uses have a relatively low employment density, also contributing to a sparse population in some areas. The relatively low levels of employment density and pedestrian activity can lead to a perception of public safety issues. However, with increasing fuel prices and new light rail service, many more people are expected to use SODO streets as pedestrians. Additionally, stadium and other special events bring large growing numbers of pedestrians to the area, including those who walk from many private parking lots to stadium events, and those who use transit to get to events. Public safety is also an important issue for SODO area businesses and property owners. The Action Agenda includes recommendations focused on public safety, which are aimed reducing the potential for personal and property crimes.



Starbucks Center and shipping container cranes dominate the SODO skyline at sunset.


XTRA
XTRA

2 Planning Process

2.1 Review of Prior Plans and Recommendations

The Action Agenda builds on a number of prior plans addressing the SODO area. These include nine City of Seattle plans, and one King County planning document. The projects resulting from these plans together represent over $1 billion in program and infrastructure investment over the past nine years. The Action Agenda planning process included a review of these prior planning documents and their key recommendations for improvements in the SODO area. An overview of each plan is shown below. Following the overview, Table 2-1 summarizes the number of recommended and implemented actions from each plan that are relevant to SODO, and the key SODO area projects not yet implemented. Appendix A is a more detailed matrix summarizing these plans, listing all of the recommended actions relevant to SODO and their status.

2.1.1 Livable South Downtown Study Final Environmental Impact Statement (May 2008)

Author: City of Seattle, Department of Planning and Development

The EIS assessed environmental impacts of the Livable South Downtown Planning Study, a study for south Downtown of Seattle, an area of diverse neighborhoods including Pioneer Square, Chinatown and some industrial areas. The purpose of this plan is to evaluate issues and opportunities relating to future growth in this area and to make land use recommendations.[2]

The EIS included mitigation strategies relating to: transportation demand management, the arterial street system, transit, freight, pedestrian and bicycle travel, and events that were relevant to the SODO Action Agenda planning process. Key recommendations include development of a mitigation payment approach, funding Major Truck Street design improvements, local truck access improvements, ITS, signal priority improvements, bus service improvements, dedication HOV or bus lanes, a number of pedestrian and bicycle improvements, and the formation of a transportation management association (TMA).

Opposite: Trucks stop at the BNSF Intermodal Facility in SODO.

2 Summary from *Urban Mobility Plan Briefing Book*, May 2008

The majority of these recommendations are in progress, have been implemented, or are part of an ongoing program. The key outstanding recommendations are to development a Mitigation Payment Approach for transportation impacts, and to restricting driveway access on major corridors.

Internet Link: http://www.seattle.gov/dpd/Planning/South_Downtown/Overview/default.asp

2.1.2 Urban Mobility Plan Briefing Book (May 2008; plan in process)

Author: SDOT

The Urban Mobility Plan is focused on resolving the longstanding needs of the Alaskan Way Viaduct and related projects in a manner capable of being broadly supported and implemented. The intention is to develop a recommended approach by December 2008, with the full collaboration and support of the City of Seattle, King County and State of Washington; for consideration by the appropriate legislative bodies during 2009. The Urban Mobility Plan, along with all other alternatives being evaluated for the Central Waterfront in the previously established planning process for the AWV, expands the focus of the AWV project beyond highway capacity in the SR 99 corridor to a system of transportation enhancements from Elliott Bay to Lake Washington. Alternatives are being designed around six guiding principles.

Seattle Urban Mobility Plan

Urban Mobility Plan

Briefing Book

Introduction

Well before the Nisqually earthquake shook the Alaskan Way Viaduct, the City of Seattle had adopted a policy that put Seattle on a path toward a dramatically different future for how people access and move through Center City. Seattle's downtown is the heart of the region and a focus of much of the state's economic energy. In the next half century, downtown employment is projected to roughly double, and residency to more than triple. Regardless of the future of the viaduct, environmental concerns, energy concerns and raw growth projections demand a comprehensive systems approach to move people and goods efficiently in downtown's highly constrained rights-of-way.

The Urban Mobility Plan (UMP) is an opportunity to ensure Seattle's Center City will continue to grow in size, economic vitality and accessibility because existing infrastructure is made more efficient, inviting, and accommodating. The Plan also recognizes the importance of the effective movement of goods, protection and support of industry, facilitation of Port activities, and continued attraction of large and small business.

The Nisqually earthquake reinforced the need to look at alternatives to the current Alaskan Way Viaduct, which divides Seattle's waterfront from its downtown core. The goal of the Urban Mobility Plan is to develop one option for removal of the Alaskan Way Viaduct, consisting of a combination of physical and service-oriented improvements and policy changes designed to optimize the movement of goods and people to and through Center City, without requiring a new elevated viaduct or replacement highway tunnel.

While the Urban Mobility Plan is a project of the City of Seattle, it is being completed with the full cooperation of the King County and the Washington State Departments of Transportation (WSDOT). Many of the concepts developed for the Urban Mobility Plan are likely to be included in other alternatives for viaduct replacement, as all alternatives developed and evaluated through the Collaborative Process for the Central Waterfront (described below) are expected to include multi-modal elements and enhancements to the transportation system.

The Urban Mobility Plan and the Collaborative Process for the Central Waterfront

The Collaborative Process is intended to resolve the longstanding needs of the Alaskan Way Viaduct and related projects in a manner capable of being broadly supported and implemented. The intention is to develop a recommended approach by December 2008, with the full collaboration and support of the City of Seattle, King County and State of Washington; for consideration by the appropriate legislative bodies during 2009.

The Urban Mobility Plan will deliver a surface and transit alternative to the Collaborative Process, which will allow this option to be evaluated along with other alternatives. The full range of alternatives considered in the Collaborative Process are likely to include options for replacing the viaduct with another aerial structure, as well as one or more tunnel options. All alternatives will be evaluated using a consistent set of goals and objectives and a consistent set of evaluation measures developed jointly by the three primary agencies involved in the Collaborative Process – Seattle Department of Transportation, King County Department of Transportation and WSDOT.

The Urban Mobility Plan, along with all other alternatives being evaluated through the Collaborative Process, expands the focus beyond highway capacity in the SR 99 corridor to a system of transportation enhancements from Elliott Bay to Lake Washington. All alternatives will be designed around six guiding principles. These principles are as follows:

January 2008 1A-1

The Urban Mobility Plan is focused on resolving the longstanding needs of the Alaskan Way Viaduct and related projects in a manner capable of being broadly supported and implemented.

- Improve Public Safety.
- Provide efficient movement of people and goods.
- Maintain or improve downtown Seattle, the region and state economies.
- Enhance Seattle's waterfront as a place for people.
- Create solutions that are fiscally responsible.
- Foster environmentally sound approaches.

This plan lists planned transportation improvements in SODO, which are relevant to the Action Agenda process, but its chief importance is in guiding the final design for the AWV project along the Central Waterfront. Key recommendations include the SR 519, AWV, Spokane Street Viaduct, and Lander Street grade separation projects. All are in progress except for the Lander project.

2.1.3 Mayor's Industrial Jobs Initiative (August 2007)

Author: City of Seattle

The Industrial Jobs Initiative was launched by the Mayor in 2007 to support Seattle's industrial and manufacturing and maritime jobs. At the heart of the Mayor's initiative are economic development, land use and planning strategies that will safeguard industrial lands and encourage industrial businesses and job growth. Key recommendations include changes to the Seattle Municipal Code that would limit office and retail uses in industrially zoned areas, clarify the definition of research and development, and reconsider zoning designation for industrially zoned sites along the edges of industrial centers. Identified projects are either in progress or have been completed.

As a precursor to the Industrial Jobs Initiative, in April of 2004 the Mayor developed an Action Agenda for Manufacturing and Maritime Sectors. This Action Agenda focuses on protecting the industrial land base, retaining and expanding the City's manufacturing and maritime sectors, providing user-friendly permitting, and improving transportation to keep freight moving. Relevant to the SODO Action Agenda, the Mayor's plan includes ensuring consistent transportation planning, addressing freight needs, and improving pedestrian safety and transit use for businesses and employees. Identified projects are either in progress or have been completed.

2.1.4 Bicycle Master Plan (May 2007)

Author: SDOT

This recently adopted plan seeks to develop a comprehensive network of bicycle facilities that connects all parts of Seattle, providing residents and visitors with safe, convenient access to transit stations, workplaces, parks, commercial areas and many other destinations throughout the City. The SODO area has several designated bicycle routes, including 1st Ave S, E Marginal Way S, 5th Ave S (E3 Busway), 6th Ave S, S Holgate St, and S Lander St. Bicycle lanes are planned on S Holgate St, S Lander St, and 6th Ave S. In addition to designating bicycle routes, the master plan includes specific recommendations related to the E3 Busway trail, Airport Way S, Alaskan Way/East Marginal Way S, S Royal Brougham Way, 6th Avenue S, S Holgate Street, S Lander Street, and 1st Avenue S. The majority of these recommendations are in progress although two are delayed. The key outstanding recommendation, for which implementation has not been started, is to acquire abandoned rail right-of-way (ROW) for extension of E-3 Busway and trail to the south.

Internet Link: http://www.seattle.gov/transportation/bikemaster.htm

2.1.5 King County Metro 49 Actions to Mitigate Impacts of Reconstruction of Alaskan Way Viaduct (January 2007)

Author: King County Metro

Metro produced a list of 49 transit-related actions that when combined with new investments in transit service and the arrival of LINK light rail, will work toward mitigating the impacts of the reconstruction of the Alaskan Way Viaduct. The transit blueprint has the potential for taking as many as 35,000 vehicles off the viaduct each day, which is 30 percent of all vehicles that use the viaduct. These actions relate to transit priority, signal phasing, business access and transit (BAT) lanes, bus monitoring systems, and intersection improvements. Of these recommendations, several are in progress and several are no longer relevant. Key incomplete recommendations include: Dearborn Avenue S/Airport Way S intersection improvements, prioritizing transit movements to and from bases and along Airport Way/Dearborn Ave/Holgate, and providing designated transit lane hours on the West Seattle Bridge.

Internet Link: http://www.metrokc.gov/exec/news/2007/pdf/49pointstable.pdf

Freight Mobility is essential for the continued success of this industrial area.

2.1.6 Freight Mobility Strategic Action Plan (June 2005)

Author: City of Seattle, Department of Transportation

As part of Mayor Nickels 2004 Manufacturing and Maritime Action Plan, SDOT developed this action agenda to protect and grow the industrial job base by guiding SDOT efforts to improve freight mobility. The plan contains 22 specific actions, including railroad grade separations, truck guide signing, street improvements, and ongoing communication with the Seattle freight community via the Seattle Freight Mobility Advisory Committee. Key recommendations include major projects such as AWV, SR 519 and Spokane Street Viaduct; a number of ITS improvements; a number of operational and maintenance measures such as keeping inventories of specific issues; and policy measures. The key outstanding recommendation is grade separation of S Lander Street.

Internet Link: http://www.seattle.gov/transportation/ freight.htm#plan

2.1.7 Mayor's Action Agenda for Manufacturing and Maritime Sectors (April 2004)

Author: City of Seattle

Recognizing that the manufacturing and maritime sectors provide a large amount of family-wage jobs, generate significant amounts of tax revenue, and contribute to diversification of the city's economy, the mayor launched the Manufacturing and Maritime Sectors Action Agenda in 2004. The objective of the mayor's Action Agenda is to protect the industrial land base, retain and expand the City's manufacturing and maritime sectors, provide user-friendly permitting, and improve transportation to keep freight moving. Relevant recommendations relate to the AWV project, S Spokane St, reducing choke points at railroad crossings, and strengthening the voice of the industrial community. The majority of these are in progress and one is complete. S Lander Street grade separation is the key outstanding recommendation.

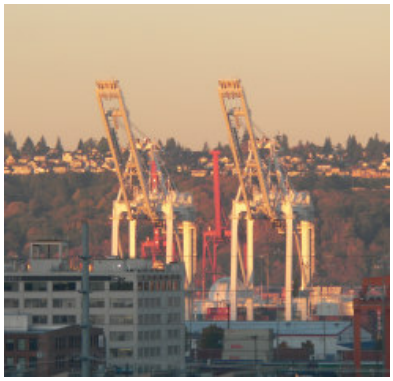
SODO is a major industrial land base for Seattle.

2.1.8 Access Duwamish (June 2000)

Author: SDOT

The Access Duwamish Plan identified and analyzed the access and mobility problems of transportation corridors within the North Duwamish (that area between I-5 and the Duwamish River, north of S Michigan St and south of the Central Business District), and evaluated a wide range of specific solutions aimed at alleviating congestion, reducing modal conflicts and eliminating safety problems. The plan identified a number of issues and potential strategies for the SODO area that were relevant to the Action Agenda process. It provided a basis for many of the planning processes that followed. Key recommendations include the AWV, SR 519 and Spokane Street Viaduct projects. The majority of recommendations are in progress, and one is complete. S Lander Street grade separation is the key outstanding recommendation.

A passenger vehicle and freight trucks wait at a stoplight in SODO.



Cargo container cranes at sunrise.

2.1.9 Greater Duwamish Manufacturing Industrial Center Plan (1999)

Author: Greater Duwamish Planning Committee and City of Seattle, Department of Neighborhoods

This plan recommended specific goals and policies intended to ensure the viability and expansion of manufacturing and industrial activity in the Greater Duwamish Manufacturing and Industrial Center (M&I Center). The plan identified 10 top transportation capital investment priorities. These included the SR 519 and Spokane Street Viaduct project. The plan also recommended grade separation of S Lander Street. With the exception of S Lander Street, all transportation recommendations are in progress (including study of Holgate Street grade separation) or have been superseded by other projects. The plan also identified several recommended public safety actions. Of those, two are complete and the status of others is unknown.

2.1.10 Summary of Prior Recommendations

As shown in Table 2.1, the majority of the recommendations in these prior plans are in progress or have been completed; however, Lander Street grade separation is a key recommendation that has not yet been implemented. Appendix A contains a list of all of the of recommendations from these prior plans. Appendix A also shows which recommendations have been implemented, and which are in progress, incomplete, or no longer relevant because of other actions.

Table 2-1: Summary of Prior Recommendations

	Recommendations Applicable to SODO Area		
Plan or Policy Document	**Number of Recommendations**	**Status**	**Key Outstanding Recommendations**
Transportation			
Access Duwamish (June 2000)	10	• 1 complete • 7 in progress • 1 no longer relevant	• S Lander Street grade separation
Greater Duwamish Manufacturing Industrial Center Plan (1999)	20	• 16 in progress • 1 complete • 2 no longer relevant (superseded by AWV project)	• S Lander Street grade separation
Mayor's Industrial Jobs Initiative (August 2007)	3	• 1 complete • 2 in progress	• N/A
Mayor's Action Agenda for Manufacturing and Maritime Sectors (April 2004)	11	• 1 complete • 9 in progress	• S Lander Street grade separation
Freight Mobility Action Plan (June 2005)	27	• 11 complete • 14 in progress	• S Lander Street grade separation • Maintain an inventory of Infrastructure Height Restrictions for trucks
Livable South Downtown Study FEIS (May 2008)	23	• 1 complete • 18 in progress • 2 status not known	• Development Mitigation Payment Approach for Transportation Impacts • Access Management Policies restricting access from major corridors
Urban Mobility Briefing Book (May 2008; plan in progress)	5	• 4 in progress	• S Lander Street grade separation

Continued on next page

Table 2.1, continued from previous page

	Recommendations Applicable to SODO Area		
Plan or Policy Document	**Number of Recommendations**	**Status**	**Key Outstanding Recommendations**
King County Metro 49 Actions to Mitigate Impacts of Reconstruction of Alaskan Way Viaduct (January 2007)	14	• 5 in progress • 4 no longer relevant • 2 status not known	• Improve Dearborn Avenue S/Airport Way S intersection • Designate West Seattle Bridge transit lane from 6:00 am to 7:00 pm • Improve transit movements to/from bases along Airport Way/Dearborn Ave/Holgate Rd
Bicycle Master Plan (May 2007)	16	• 11 in progress • 1 no longer relevant (superseded by SR 519 project) • 2 delayed	• Acquire abandoned rail ROW for extension of E-3 Busway and trail to the south (process not yet started) • Signage for Southwest Spokane Street Swing Bridge
Public Safety			
Greater Duwamish Manufacturing Industrial Center Plan (1999)	9	• 2 complete • 7 status not known	• N/A

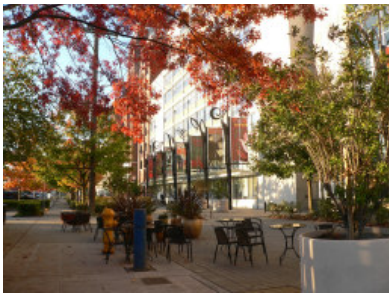
2.2 Relationship to Concurrent Planning Processes

The SODO Action Agenda planning process overlaps with several concurrent planning processes being conducted in the City of Seattle. These other planning processes also address the SODO area and include some of the same stakeholders.

2.2.1 Seattle Pedestrian Master Plan

Author: City of Seattle, Department of Transportation

The City is embarking on a process to develop a Pedestrian Master Plan to encourage more walking and improve the safety of pedestrians. The City is engaging public health experts, law enforcement representatives, issue advocates, community advisors, environmental leaders and the general public to incorporate the best practices, most current research and design strategies into the Pedestrian Master Plan.[3]



Utah Avenue Plaza in SODO offers pedestrian amenities.

Input from the SODO Action Agenda planning process is being used in developing the Pedestrian Master Plan. Pedestrian Master Plan staff from SDOT attended Action Agenda Advisory Committee and Roundtable meetings where pedestrian safety was discussed. Key pedestrian routes in SODO have been mapped as part of the Action Agenda and will feed into the Pedestrian Master Plan process. These are shown in Chapter 3, Critical Recommendation VI. The Action Agenda makes specific recommendations to improve pedestrian safety in SODO, and recommends that these actions be considered in the Pedestrian Master Plan.

Internet Link: http://www.seattle.gov/transportation/ped_masterplan.htm

2.2.2 Duwamish Multi-modal Action Committee (DMMAC)

The DMMAC is a community-based effort to identify solutions to multi-modal conflicts on 1st Avenue South. It is a project of the Duwamish TMA and includes representatives from industry groups, Duwamish area businesses, and the community. The SODO Action Agenda Advisory Committee included several representatives from the DMMAC.

3 Summary from *Urban Mobility Plan Briefing Book*, May 2008

Some Action Agenda recommendations overlap with DMMAC recommendations. These are noted in Chapter 3: Recommendations. Overlapping recommendations relate to:

- Grade separation of S Lander Street,
- Keeping S Holgate Street open,
- Coordination of major construction projects,
- Improving conditions on Utah Avenue S and Occidental Avenue S,
- Improving sidewalks and connections to the new LINK Light Rail Station,
- Implementing parking management, and
- Improving communications about construction and other closures.

The DMMAC also made additional recommendations (beyond those made in the Action Agenda) for several of these issues and locations. DMMAC preliminary recommendations on 1st Avenue S and related issues/locations are included in Appendix B.

A truck at the BNSF Intermodal Facility.

Shipping containers in SODO at sunrise.

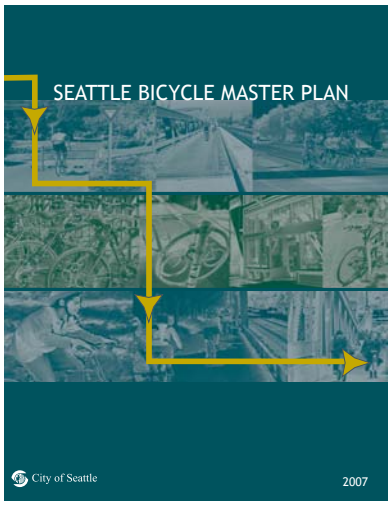
2.2.3 Mayor's Industrial Jobs Initiative – SDOT Response to Resolution 31206

SDOT's role in the Initiative is to support industrial activity and employment by ensuring mobility for freight and goods. Resolution 31206, pertaining to the Mayor's Industrial Jobs Initiative, directed SDOT to, "...identify a minimum of ten projects, anticipated in the Transportation Capital Improvement Plan or new, designed to improve freight mobility that could be completed within the next five years." A stakeholder outreach process from March through May 2008 informed the project list developed by SDOT. Industrial and freight stakeholders included the Freight Mobility Advisory Committee (FMAC), Ballard Interbay Northend Manufacturing Industrial Center (BINMIC) Action Committee, Duwamish Transportation Management Association (TMA) and Port of Seattle. Comments were also received by the Seattle MIC and the SODO Business Association. The resulting project list was presented to the Council in July 2008, with the intent of informing decision-making on the 2009-2010 budget. The list includes 16 Transportation Capital Improvement Plan (TCIP) projects, and three partnership projects which are led by other agencies. The majority of project on the list are located in SODO, and others directly or indirectly serve freight associated with the SODO area. The Action Agenda recommendations address implementation of SDOT's top freight mobility project list.

2.2.4 Seattle Bicycle Master Plan Implementation

Author: City of Seattle, Department of Transportation

This recently adopted plan seeks to develop a comprehensive network of bicycle facilities that connects all parts of Seattle, providing residents and visitors with safe, convenient access to transit stations, workplaces, parks, commercial areas and many other destinations throughout the City. The Plan establishes a vision for how to create a Bicycle Facility Network and develop the supporting facilities and programs necessary to make bicycling a central feature of Seattle's multi-modal transportation system. A key goal of the plan is to put 95% of Seattle's residents within one-quarter mile of a bicycle facility.[4]



The Seattle Bicycle Master Plan.

The Bicycle Master Plan was developed in 2007 and is currently being implemented. The SODO area has several designated bicycle routes, including 1st Ave S, E Marginal Way S, 5th Ave S (E4 busway), 6th Ave S, S Holgate St, and S Lander St. The E Marginal Way S and 5th Ave S routes currently have bicycle lanes while the 1st Ave S route will have sharrows rather than dedicated bicycle lanes. Bicycle lanes are planned on S Holgate St, S Lander St, and 6th Ave S. Of the routes listed above only E Marginal Way S and 5th Ave S are signed bicycle routes. The Action Agenda recommendations address implementation of high priority bicycle projects identified in the Bicycle Master Plan within SODO.

Internet Link: http://www.seattle.gov/transportation/ bikemaster.htm

2.3 Role of Advisory Committee

The SODO Action Agenda Advisory Committee was the primary entity working with the City of Seattle to guide the Action Agenda planning process. The Advisory Committee consisted of representatives from SODO area businesses, public agencies, community organizations, the Port of Seattle, and railroads. The members represented a cross-section of the SODO community, with concerns about a variety of issues including freight, transit, pedestrians, industry, stadium access, environment, etc.

A meeting of the SODO Action Agenda Advisory Committee.

4 Summary from *Urban Mobility Plan Briefing Book*, May 2008

Members of the Advisory Committee met to identify key issues and define recommended actions.

The role of the Advisory Committee has been to:

- Meet to review key issues and findings, identify recommendations, and review draft documents of the Action Agenda at key project milestones.
- Speak for their respective groups.
- Work between committee meetings to circulate materials and obtain input from their colleagues and constituents.
- Serve as the primary community outreach mechanism.

The Committee met twice during the summer of 2008 and once during fall 2008.

The first Advisory Committee meeting was held on July 17, 2008. The purpose of the meeting was to discuss the planning process, hear the major concerns of Committee members, and identify key issues. The Committee initially expressed concern about the multiple planning processes addressing the SODO area. Their preference was to provide the City with a few big recommendations, recognizing that there are many related issues among the numerous competing transportation projects affecting the SODO area. Committee members were quick to identify their key concerns and recommendations. The result of the meeting was a preliminary list of issues and recommendations. This list was supplemented by input from a meeting for the general public held as part of the planning process known as the "Big Event" (see Section 2.4.1 below), and input from three focused roundtable discussions (see Section 2.4.2).

The second Advisory Committee meeting was held on August 21, 2008. The purpose of this meeting was to review the preliminary list of recommendations produced at the first meeting and supplemented by input from the Big Event and Roundtable Discussions. The meeting resulted in a revised list of recommendations along with more specific strategies and locations.

The third Advisory Committee meeting was held on November 20, 2008. The purpose of the meeting was to review the Draft Action Agenda. The Advisory Committee felt strongly that freight is the most significant issue, that other issues should be addressed in the context of ensuring that the SODO business and industry community continues to thrive, and that certain key recommendations should be considered critical and should receive the highest priority. Comments from the meeting were incorporated into this final draft of the Action Agenda document.

2.4 Summary of Public Involvement

A participant provides input on important issues at the Public Safety station.

2.4.1 Big Event

A public meeting known as the "Big Event" was held at Qwest Field on July 9, 2008. The purpose of the event was to present information about the Action Agenda planning process and to get public input regarding issues and priorities. The Big Event was publicized by the SODO Business Association and held concurrently with their annual meeting. The Big Event also provided an opportunity for SDOT and SPD to share information about transportation and public safety in SODO. More than 75 members of the public attended.

Attendees of the Big Event were asked to visit four "stations," each addressing one of the four categories of the SODO Action Agenda (general transportation, freight mobility, pedestrian safety, public safety). At each station, they identified the issues most important to them by placing colored dots on a display board. They were also given an opportunity to locate specific issues on a map at each of the four stations.

The top five issues for each category were:

General Transportation
- Traffic during viaduct construction and other major projects
- Accessible bicycle network
- Pavement and bridge conditions
- General condition of infrastructure
- East-west connections

Freight Mobility
- Pavement and bridge conditions
- Traffic during viaduct construction and other major projects
- East-west connections
- Traffic during stadium events
- Truck turning radii

Pedestrian Safety
- Street crossing conditions
- Access to transit
- Sidewalks
- At-grade rail crossings
- Sidewalk amenities

A participant provides input about a specific location.

Public Safety

- Access to transit
- Vandalism/Graffiti
- Vehicle camping/transients
- Personal safety/street crimes/muggings and assaults
- Nuisances such as public drinking, litter, lack of restrooms

Input from the Big Event was incorporated into the issues that were reviewed by the Advisory Committee at their first meeting, and into the draft recommendations that were reviewed at the second Advisory Committee meeting.

A full summary of the "dot" exercise and the specific issues identified on the maps, as well as other general comments from the Big Event, is included in Appendix C.

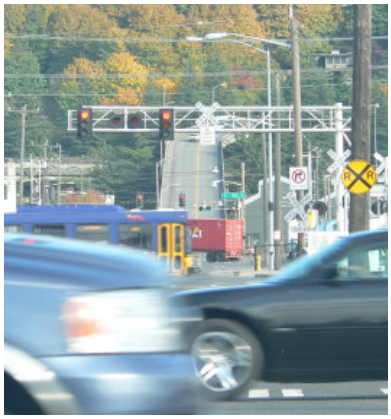
2.4.2 Roundtable Discussions

Three facilitated focus-group type discussions, known as Roundtable Discussions, were held in July 2008 in order to obtain more detailed input on Action Agenda priorities from stakeholders and the general public. Roundtable participants were recruited through sign-up at the Big Event, by Advisory Committee members and Big Event attendees, and through email notification by the SODO Business Association. SDOT and SPD staff also participated in the Roundtable Discussions, since they provided expertise on specific aspects as well as information on existing City strategies. While a summary of the issues discussed at each Roundtable Discussion is presented below, an overview of issues identified in the Action Agenda planning process is included in Section 2.5 below.

The Pedestrian Safety Roundtable was held on July 24, 2008. It included attendance by SDOT staff involved in the City's Pedestrian Master Plan. In addition to providing input for the SODO Action Agenda, this Roundtable also provided input for the Pedestrian Master Plan. Roundtable participants identified several key pedestrian routes on a map, including routes to and from existing transit and the future SODO LINK Light Rail Station. The group also discussed data sources to ensure all key routes would be identified in the Pedestrian Master Plan. In addition to identifying routes, the discussion addressed the sidewalks, wayfinding, street crossing conditions, lighting, maintenance of street lights, and pedestrian needs during special events.

The Public Safety Roundtable was held on July 29, 2008. It included attendance by several SPD staff members. The discussion addressed a variety of issues, including:

- Safe and appealing pedestrian routes
- Nighttime pedestrian routes
- Access to transit
- Lighting
- Maintenance of street lights
- Communication regarding public safety issues and tracking crime statistics
- Crime Prevention Through Environmental Design (CPTED)
- Surveillance cameras
- Maintenance of private property
- Graffiti
- Alcohol impact area
- The perception of safety
- Public health
- Public restrooms
- Property crimes (trespassing, vandalism)
- Vehicle camping
- Earthquake safety and seismic upgrades

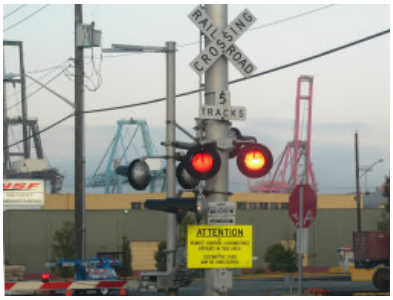


Routes from transit to employment sites were a key topic of the Pedestrian Safety Roundtable.

The General Transportation and Freight roundtable was held on July 30, 2008. It included attendance by SDOT staff involved in the City's parking management study, major project coordination, freight mobility, and other SODO issues.

The discussion addressed:

- Bicycle network
- Secondary streets
- Paving, including the City's Paving Partnership Program
- Major project coordination
- Stadium event transportation
- Intelligent Transportation Systems
- Communication about transportation issues and construction
- Parking
- Light rail
- Condition of Occidental and Utah avenues
- Drayage
- South Park Bridge



Multiple at-grade rail crossings affect east-west connections.

Input from the Roundtable Discussions was incorporated into the recommendations that were reviewed by the Advisory Committee at their second meeting.

2.5 Identification of Issues

The planning process for the SODO Action Agenda included a review of issues identified in past plans. This review of issues was the basis for initial discussion with stakeholder groups and for gathering input from the general public at the Big Event. Input from the Advisory Committee meetings, roundtable discussions and Big Event clarified and added detail to these issues. The issues described below were confirmed by the planning process.

2.5.1 Freight Mobility

While the focus of the following issues is on freight, these issues affect all modes of travel.

Alaskan Way Viaduct Project Impacts - Impacts from the Alaskan Way Viaduct project and its final design were specifically called out as affecting freight. Impacts may occur at various locations in SODO. This issue is tied to many other issues, such as parking capacity, east-west connections, and defining and improving alternate routes for local circulation.

East-West Connections - The efficiency of east-west connections is a priority issue for freight mobility in the SODO area, affecting both trucks and rail. Currently, there are six at grade mainline rail crossings. Additionally, rail blockages on East Marginal Way affect dray traffic from the Port terminals to the rail yards, and the proposed expansion of Amtrak's Northwest Maintenance Facility could result in potential road closures on S Holgate Street.

Major Projects - Over the next 10 years, a number of major projects will affect the SODO area, requiring road closures and detours, as well as attention to transportation demand management (TDM).

Alternate Routes – There is a need for alternate north-south routes, particularly during major construction projects such as the Viaduct project. A recent successful example is the use of Airport Way S as an alternate route during I-5 construction in the summer of 2007. 3rd Avenue S was specifically identified as having potential to address this issue.

Roadway Design - Specific street design issues include truck turning

radii at intersections that impact freight mobility, the location of curb cuts on arterials, and potentially parking and utility pole location where it has the potential to impede truck movement.

Drayage – Dray trucks sometimes idle for long periods, creating unnecessary emissions, or queue on city streets, creating congestion. Specific locations include Spokane St, Atlantic St, E Marginal St, and Royal Brougham Way.

The SODO LINK light rail station.

2.5.2 Transit

Light Rail Station - The LINK Light Rail station located on the E-3 Busway at S Lander Street will open in 2009. Ensuring access to the station for pedestrians and vehicles is important to ensure the utility of the station.

Local Transit Connections and East-West Transit – In SODO, the distances between bus stops and destinations are often large. Frequency of service and the need for additional east-west service were also identified as issues.

2.5.3 Non-Motorized Travel

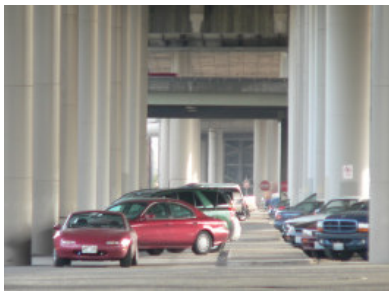
East-West Connections – East-west connections in SODO for pedestrians and bicycles can be difficult due to the BNSF mainline tracks. Demand for pedestrian east-west connections will increase with the opening of the SODO LINK Light Rail Station in 2009.

Access to Transit – Non-motorized routes to key transit stops, including safe crossings, wayfinding signage and other amenities are key issues.

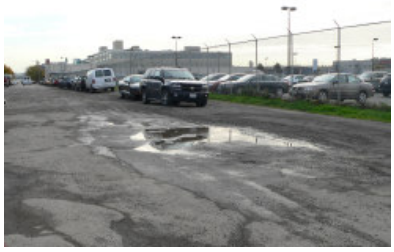
Stadium Event Access – Many event attendees walk to the stadiums from private parking lots located several blocks to the south. Safe pedestrian routes are a key issue.

Sidewalks, Street Crossings, and Lighting – These issues are key aspects of safe pedestrian routes.

Accessible Bicycle Networ*k* – East-west connections and completion of planned trails are key issues.



Cars parked under the Alaskan Way viaduct.



Pavement conditions on 3rd Avenue S.

2.5.4 Parking

Parking Demand - Parking demand will increase with implementation of the Livable South Downtown planning efforts. The new light rail station could also result in an increase in hide-and-rides, people who drive to SODO where parking is relatively inexpensive and then ride transit into downtown for the workday or other activities.

Parking Capacity - The SODO area will lose approximately 1,300 stalls as a result of the Alaska Way Viaduct project.

2.5.5 General Transportation & Programs

Pavement and Bridge Conditions – Key bridges include Airport Way Bridge over Argo Yard, East Marginal Way Bridge near S Horton St, and E Duwamish Waterway Bridge. Several of these will be addressed with major upcoming projects. Key locations for pavement repair, restoration, maintenance or conditions at abandoned rail tracks include East Marginal Way, Occidental Avenue S, Utah Avenue S, and S Horton Street.

Data – The SODO area is extensive and complete data on the number of businesses and their size is not currently available.

Communications – Informing SODO businesses, employees and visitors of changing transportation conditions is crucial to ensuring mobility. Some businesses and people who would benefit from them are not included in current communications.

2.5.6 Public Safety

Lighting - Adequate street lighting is an important factor in ensuring public safety and reducing the potential for nuisances and property crimes.

Access to Transit - Public safety issues related to transit access overlap with transportation issues identified as part of the Action Agenda.

Property Crimes – This issue includes vandalism, graffiti, trespassing, car prowls, car thefts, and burglaries. Precinct boundaries that put SODO into two police precincts can mean less ability to address these issues for the area as a whole.

Personal Safety – Personal safety issues are associated with the area's limited nighttime population, parking areas, and less frequented bus stops.

Drug Activity and Prostitution – These issues are also associated with the area's limited population.

Nuisances – Nuisances include public drinking, litter, and public urination.

Vehicle Camping/Transients and Abandoned Vehicles – Limited population in some parts of SODO makes some areas attractive for vehicle camping, and also as locations for abandoned vehicles.

Earthquake Safety/Seismic Design – This issue affects a number of buildings in SODO.

3 Recommendations

The recommendations of the SODO Action Agenda were identified through stakeholder input during the summer and fall of 2008. They are organized as six Critical Recommendations, which all address transportation issues, and a number of Other Recommendations addressing both transportation and public safety. The six Critical Recommendations are categorized by the primary mode or sub-topic they address, including freight mobility, transit, non-motorized travel (pedestrian and bicycle), parking, and programmatic measures. While the Critical Recommendations are numbered, they all have the highest level of priority.

Each Critical Recommendation includes:

- The purpose and background for the recommendation, including relation to other planning processes where applicable;
- Strategies and specific locations;
- Benefits that would result from implementation;
- Other modes addressed by the recommendation;
- Illustrations and maps where relevant;
- An implementation overview, including priority, time frame, responsible agencies, and a cost estimate where available.

Each of the Other Recommendations is summarized more briefly. The Other Recommendations are prioritized as High, Medium or Low. Priority reflects their importance to the SODO community, but does not necessarily reflect a time frame for implementation. The Other Recommendations were prioritized based on a qualitative evaluation of a number of criteria:

- Potential to improve freight operations (increased efficiencies and reliability and/or reduced travel time) *(for Transportation recommendations)*
- Potential to improve safety
- Potential to reduce impacts to the environment
- Extent of affected area
- Support for secondary modes
- Consistency with existing policies/plans
- Whether the current situation is functional
- Cost

Opposite: A cargo ship leaves port, framed by the Olympic Mountains and Alaskan Way Viaduct.

- Feasibility of implementation (whether there is an existing design, existing programmatic structure, or partial funding)
- Potential to improve the business climate or increase the tax base (for Public Safety recommendations)

The SODO Action Agenda recommendations arise primarily from community stakeholders. The City of Seattle Office of Economic Development (OED) will coordinate with the relevant City departments to act on those recommendations that are viable and consistent with City policies.

Critical Recommendation I – Freight Mobility

Construct S Lander Street grade separation, Ready-to-Go projects, and Council-recommended freight mobility projects

Purpose & Background
To improve freight mobility and other modes, the Action Agenda recommends moving forward with the several key capital projects.

S Lander Street - Grade separation of S Lander Street is a top priority for the Action Agenda. It would address east-west connections, a priority issue for the SODO community for both general transportation and freight mobility. There are currently six at-grade rail crossings in SODO. Grade separation on S Lander Street has the support of both businesses and railroads. This is an existing strategy identified in the Mayor's Action Agenda for Manufacturing and Maritime Sectors, the Freight Mobility Strategic Action Plan, and other past plans; however, final design and funding are not in place. Grade separation of Lander Street is also recommended by the DMMAC 1st Avenue S Improvements Study (DMMAC Study) to serve both freight and pedestrians. Their recommendation is for grade separation from the BNSF mainline tracks to the Allied Waste facility. More information on the S Lander Street grade separation project can be found on SDOT's project web page: http://www.seattle.gov/transportation/southlanderdraft.htm. Figure 3.1 shows the location of this project.

Ready-to-Go Projects – The Action Agenda supports the Ready-to-Go projects that are included in the City's recommended project list for a national economic recovery initiative which would help to fund local and regional transportation projects having significant positive impacts to freight mobility, climate change and the economy. Only projects at 100% design are included in that list.

In SODO, the list includes the Spokane Street Viaduct and East Marginal Way Grade Separation projects.

Council Recommended Projects - Seattle City Council Resolution 31026 (Section 4) directed SDOT to "...identify a minimum of ten projects, anticipated in the Transportation Capital Improvement Plan (TCIP) or new, designed to improve freight mobility that could be completed within the next five years." SDOT identified 16 existing projects and programs in the TCIP that benefit freight. Additionally, there are three partnership projects for which SDOT is actively coordinating with external agencies. While not all of these projects are in SODO, they all affect freight mobility and the Action Agenda recommends that SDOT work with partner agencies to fulfill the Council Resolution. The two Ready-to-Go projects located in SODO are included in the Council-recommended list.

Figure 3.1: S Lander Street Grade Separation

Strategies/Specific Locations

- Construct grade separation of S Lander Street from 4th Avenue S to Occidental Avenue S.
- Construct the Council-recommended and Ready-to-Go projects (Ready-to-Go projects are asterisked):
- The 16 TCIP projects are:
  - Spokane Street Viaduct Widening and Loop Ramp*
  - Duwamish Intelligent Transportation Systems (ITS)
  - ITS Plan Implementation
  - Alaskan Way Viaduct & Seawall Replacement Program – South Segment
  - Mercer Corridor Project
  - Airport Way over Argo Bridge Rehabilitation
  - East Duwamish Waterway Bridge Rehabilitation
  - East Marginal Way at South Horton Street Bridge Rehabilitation
  - Jose Rizal Bridge Rehabilitation
  - Ballard Bascule Bridge Seismic Retrofit
  - Albro Bridge over Airport Way Seismic Retrofit
  - 1st Avenue S 2008 Paving Contract 1 (Dearborn-Stacey, Spokane-East Marginal)
  - 15th Avenue and Elliott Avenue 2008 Paving
  - Duwamish Truck Mobility Improvement Program
  - 14th Avenue South Street Improvements
  - Greenwood Avenue North Street Improvements

- The three partnership projects are:
  - SR 519 Phase 2 Intermodal Access (State lead)
  - East Marginal and Spokane Street Grade Separation (Port lead)*
  - South Park Bridge (King County lead)

*Ready-to-Go project

Benefits of S Lander Street Grade Separation

- Improves safety on a road that currently crosses BNSF railroad tracks by separating vehicles and pedestrians from train activities.
- Improves access to the SODO and Duwamish industrial areas.
- Reduces traffic delays caused by train crossings, improving mobility and reliability for travel east and westbound between key south and northbound corridors.
- Enhances access to one of the largest port operations in the United States.
- Helps keep traffic moving during the replacement of the Alaskan Way Viaduct.
- Eliminates rail blockages of east-west traffic. In 2007, the street was blocked by 78 trains per day with a blockage time of 325 minutes.
- Allows east-west transit.

Also Addresses:

Major projects benefit all modes.

IMPLEMENTATION	
Priority	*High for all projects*
Responsibility	*SDOT (with partners are identified)*
Time Frame	*10+ YRS for Lander* *0-5 YRS for other projects*
Estimated Cost	*$75 million for Lander project*

S Lander Street rail crossing

Critical Recommendation II – Freight Mobility

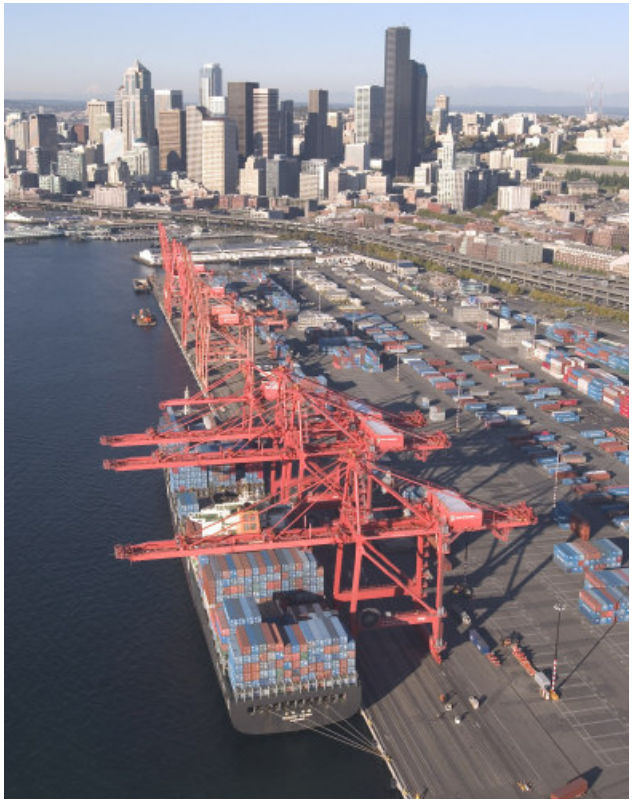
Ensure the Alaskan Way Viaduct (AWV) South End project final design, and the Central Waterfront recommendation, incorporate appropriate measures to address issues specific to SODO

Purpose & Background

The Washington State Department of Transportation (WSDOT) and the Seattle Department of Transportation (SDOT) are finalizing the design for the South End Viaduct project which will replace the existing viaduct between S King Street and S Holgate Street.

SDOT, WSDOT and the King County Department of Transportation are working with stakeholders to develop and evaluate alternative solutions for replacement of the Central Waterfront portion of the viaduct. The Viaduct Stakeholder Advisory Committee is made up of approximately 30 people representing business, neighborhood, freight, commuter, environmental and other constituencies. The Central Waterfront planning process is addressing the replacement of the Alaskan Way Viaduct through a comprehensive, multi-modal approach that looks at moving people and goods within a broad study area that includes much of Seattle. A final recommendation by the Mayor, Governor and County Executive is expected by the end of the year.

Early mitigation projects and programs have been identified to address: capital funding for key freight corridors, Intelligent Transportation Systems (ITS), traveler information, Transportation Demand Management (TDM), and transit service to assist in mitigating congestion of the South End project and other Moving Forward projects of the AWV Program.



The Alaskan Way Viaduct is a major vehicle route through SODO.
Photo: Don Wilson

Strategies/Specific Locations

- Continue working with the Stakeholder Advisory Committee (or subsequent stakeholder committees), State and County to ensure appropriate implementation of the recommended solution for the Central Waterfront, including additional mitigation and phasing of projects in advance of removal of the existing viaduct.
- Review plans for implementation of mitigation, including funds allocated for added Metro bus service, ITS, and TDM programs to address impacts in SODO
- Review traffic control and routing to address localized traffic impacts, including truck access, to ensure SODO-specific issues are addressed during construction.

Benefits

- Creates safe, seismically-sound replacement structures for the Viaduct and seawall.
- Maintains traveler mobility within and through Seattle.

Also Addresses

All modes

IMPLEMENTATION	
Priority	High
Responsibility	WSDOT w/ KCDOT, SDOT and Alaskan Way Viaduct Stakeholder Advisory Committee
Time Frame	0-10 YRS
Estimated Cost	TBD

Figure 3.2: Alaskan Way Viaduct Project Location

Critical Recommendation III – Programmatic Measures

Provide ongoing interagency coordination and coordination with stakeholders

Purpose & Background

SODO is a unique business district, with the transportation challenges of moving people and a very substantial amount of freight within an industrial area. While SDOT currently staffs the Freight Mobility Advisory Committee (FMAC) and the Freight, Pedestrian, Bicycle Ad Hoc Committee, which work to address these challenges citywide, the SODO community recommends greater coordination to address ongoing transportation issues specific to SODO. These issues include: parking management, improved transit service, better non-motorized connections between light rail and job sites, and immediate and long-term construction coordination. The community also identified a need for more coordination with intergovernmental technical staff, added agency capacity to receive community input and improved overall information-sharing.

Strategies/Specific Locations

- Form a SODO Stakeholders Forum to address ongoing transportation challenges in the area. This group will have regular meetings and will be staffed by SDOT.
- A community organization will be designated as the lead for this stakeholder forum.
- Meetings will be issue-driven with agendas developed by the lead community organization in consultation with SDOT.
- SDOT will draw on appropriate staff resources to inform agenda topics. These could include representatives from other transportation agencies: WSDOT, Port of Seattle, and King County Metro, as well as other City departments.
- The forum will be supported with existing staff and resources.
- Participation of interest groups representing SODO in the meetings is the responsibility of the designated community lead of the stakeholder committee.

Benefits

- Increased communication and mutual education between SODO businesses, stakeholder organizations and the public transportation agencies that serve SODO.
- More focused level of technical analysis from agency staff.
- More opportunities to develop creative solutions for both long-standing and newly-emerging transportation challenges in SODO.
- Greater community support as projects move forward.

Participants

- The Duwamish TMA is a potential lead community partner. The MIC and SODO Business Association will also be involved.
- Public Agencies (City of Seattle, WSDOT, King County, the Port of Seattle).
- Representatives from the two privately-operated railroads, Amtrack and Sounder.

IMPLEMENTATION	
Priority	High
Responsibility	SDOT and partner agencies
Time Frame	0-5 YRS (as needed)
Estimated Cost	Funded under existing programs

Critical Recommendation IV – Parking

Manage parking to address "hide and rides," expected increases in parking demand, and the loss of parking from the AWV project

Purpose & Background
SDOT is working on parking issues in SODO through two existing programs: Light Rail Station Neighborhood Parking Plans and the Community Parking Program. The need to manage parking in SODO is based on:

- Loss of approximately 1300 stalls with AWV project.
- Increased demand with implementation of Livable South Downtown.
- Concerns about existing "hide and rides" and increased potential with the 2009 opening of the LINK light rail stations at Lander Street (SODO Station) and Royal Brougham Way (Stadium Station).

Light Rail Station Neighborhood Parking Plans - To ensure that on-street parking spaces used by businesses and residents are not filled by commuters, SDOT and Sound Transit started working with neighborhoods in April 2008 to design parking regulations, such as time limits, restricted parking zones, and load zones around each station. Specific proposals for the SODO and Stadium stations are still under development. For more information on station area parking planning see: http://www.seattle.gov/transportation/parking/lightrailparking.htm

Community Parking Program – In the longer term, on-street parking management in SODO will be assessed through SDOT's Community Parking Program, which is a multi-year effort to engage communities to improve on-street parking management in Seattle business districts and adjacent residential areas. A parking assessment for SODO is scheduled to begin in 2010–2011. The program will include working with community members to identify on-street parking challenges and opportunities, develop parking recommendations, and implement on-street regulation changes. For more information on this program see: http://www.seattle.gov/transportation/parking/communityparking.htm

The *DMMAC Study* also includes a recommendation to study parking in the short term (0-5 years), and manage it when warranted in the medium term (5-10 years).

Additionally, some existing businesses in the SODO area do not have sufficient parking for employees. There may be a need for the private sector to provide off-street paid parking for use by area employees.

Parking near Safeco field.

Strategies/Specific Locations

- Implement this recommendation through SDOT's Light Rail Station Neighborhood Parking Plans and Community Parking Program, which are or will be developing specific strategies.

Specific strategies recommended in the DMMAC 1st Avenue S Improvement Study parking management include:

- Consider new management measures that would allow long-term parking for area employees but discourage commuter parking.
- When warranted, implement parking management measures along streets fronting retail uses. Potential strategies could include time limited parking (two or one-hour time limits), or installing parking pay stations to improve compliance with existing time limits.

Benefits

- Retains parking for employees and customers in SODO.

Also Addresses

General transportation

IMPLEMENTATION	
Priority	High
Responsibility	SDOT Sound Transit is also involved in light rail station area parking planning
Time Frame	0 - 10 YRS
Estimated Cost	Funded under existing programs

Critical Recommendation V - Transit

Implement a shuttle/circulator that connects SODO-area employers to LINK Light Rail and north/south bus routes

Purpose & Background

A shuttle/circulator would enhance the service provided by the LINK light rail station by helping employees to get from the station to their jobs. It would also improve circulation within SODO and provide alternatives to single-occupant vehicles for east-west travel, as well as for shoppers and customers of SODO businesses. In addition to the LINK light rail station, it also should serve the Ferry Terminal. Existing transit service is not frequent enough, distances between bus stops and businesses are too large, and better east-west service is needed to support the new LINK light rail station.

Successful examples of shuttle/circulators include:

- Metro Route 200 serving Issaquah
- Metro Route 51 serving West Seattle
- Starbucks employee shuttle
- Children's Hospital shuttle
- University of Washington Night Ride and South Lake Union shuttles
- Privately-provided shuttles, provided by Transia, which serve several employers in Seattle
- Private shuttles provided by South Lake Union employers and property owners

The DMMAC Study includes a number of related recommendations for improving transit service in SODO (see the Pedestrian Facilities and Transit Service Sections of Appendix B).

Strategies/Specific Locations

- OED and/or SDOT should work with the SODO Business Association and other organizations to find state or federal funding for a study and pilot program.
- A study to determine ridership and how a shuttle/circulator would operate is recommended.
- A pilot project should be implemented following the study.
- The shuttle/circulator could be publicly or privately operated.
- It could be a fixed route or a fixed route with some flexibility based on ridership and time of day.

The DMMAC Study (Appendix B) recommends a transit connection from Starbucks Center to the Royal Brougham Way LINK station via Edgar Martinez Drive.

Benefits

A shuttle/circulator would support light rail and transit use, potentially increasing ridership, by offering safe and convenient access to other parts of SODO from the light rail station.

Also Addresses

General transportation, pedestrians

IMPLEMENTATION	
Priority	High
Responsibility	City of Seattle, Metro, Sound Transit, SODO Business Association and Private Provider
Time Frame	0 - 5 YRS
Estimated Cost	TBD

Critical Recommendation VI – Non-motorized Transportation

Improve safety conditions on key non-motorized routes

Purpose & Background

Although freight has priority in the SODO area, non-motorized transportation improvements are recommended in key locations in order to improve the safety of the area's employees and customers who walk, bicycle, and take transit to get to destinations within SODO. This recommendation also addresses safety of special event attendees.

The Pedestrian Safety Roundtable held as part of the SODO Action Agenda planning process identified routes where improvements to sidewalks, lighting, street crossings, and wayfinding should be considered as part of the Pedestrian Master Plan. Key pedestrian routes are generally located in the vicinity of the future LINK light rail station, the E-3 Busway, other bus routes, major employers, and retailers. Some routes allow for connections between bus routes. Improvements should be coordinated with Sound Transit. The Pedestrian Master Plan will identify and prioritize locations for specific improvements. The DMMAC Study also includes a number of related recommendations for improving pedestrian routes in SODO (see the Pedestrian Facilities Section of Appendix B).

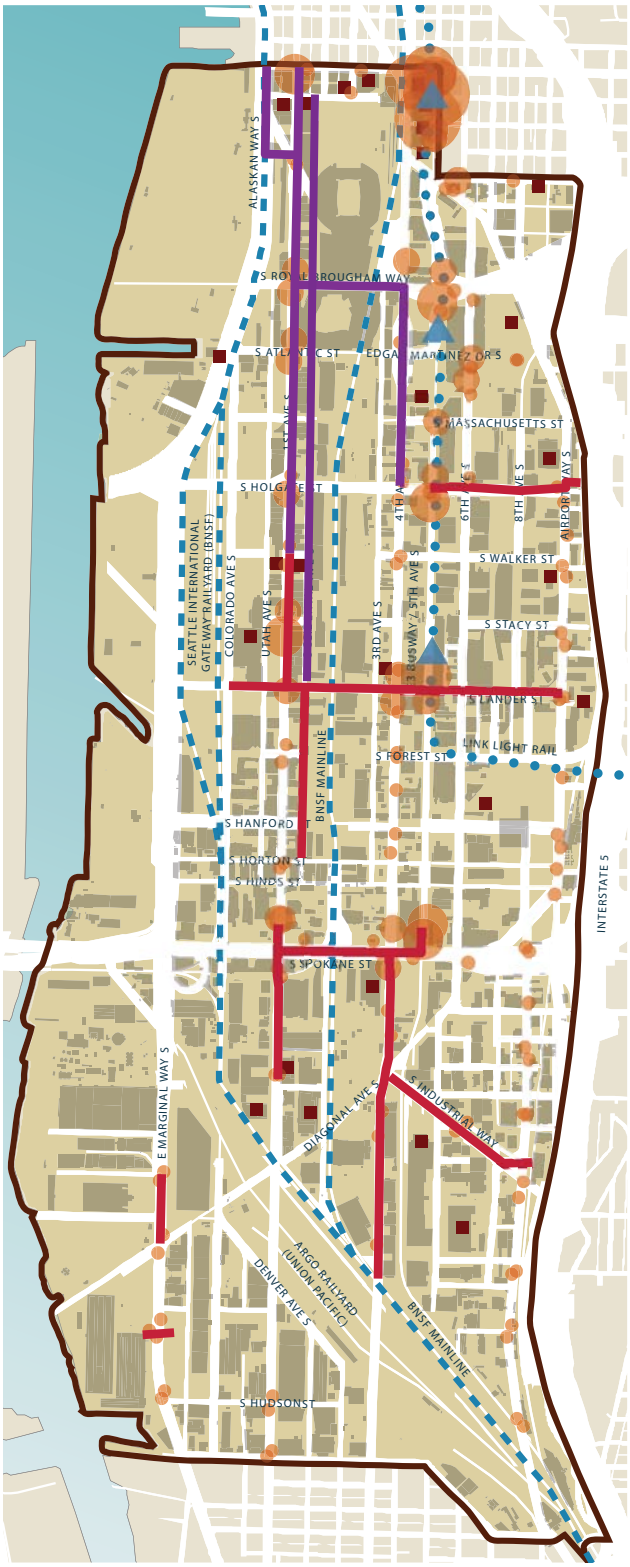
Starbucks Center is located on a key pedestrian route.

The Bicycle Master Plan, adopted in 2007, seeks to develop a comprehensive network of bicycle facilities that connects all parts of Seattle, providing residents and visitors with safe, convenient access to transit stations, workplaces, parks, commercial areas, and many other destinations throughout the City. The SODO area has several designated bicycle routes, including 1st Avenue S, E Marginal Way S, 5th Avenue S (E3 Busway), 6th Avenue S, S Holgate St, and S Lander St. Bicycle lanes are planned on S Holgate St, S Lander St, and 6th Avenue S. Implementation of key improvements recommended in the Bicycle Master Plan will ensure safe connections for SODO area employees visitors and employees, and will also support connections through SODO to other destinations where necessary. The DMMAC Study identified the need for improved bicycle wayfinding in SODO.

Strategies and Specific Locations

Key areas for sidewalk and lighting improvements include:

- Lander Street, from Airport Way to Colorado Avenue S (DMMAC Study emphasizes the need for sidewalk improvements along the north side of Lander)
- Holgate Street
- Spokane Street (areas serving bus way connections)
- Occidental Avenue S (used by stadium event attendees)
- Portions of 1st Avenue (bus stops)
- 4th Avenue (bus stops)
- Airport Way, from Lander to Spokane



Legend

- Commute Trip Reduction Business
- LINK Light Rail Station

Pedestrian Routes*

- Key Employment Pedestrian Routes
- Key Event Pedestrian Routes

Bus Stop Activity**

- 0 – 100
- 101 – 500
- 501 – 1500
- 1501 – 4000
- 4001 – 8500

* *Key routes were identified by stakeholders based on discussion at the Pedestrian Safety Roundtable.*

** *Activity represents total boardings and alightings in a single weekday*

Figure 3.3: Bus stop Activity and Key Pedestrian Routes

IMPLEMENTATION	
Priority	High for light rail access Medium for other routes Low for Bicycle Master Plan recommendations
Responsibility	SDOT, Sound Transit, Metro, Seattle Police Department, Seattle City Light, SODO Business Association
Time frame	0-5 YRS for pedestrian light rail access 5-10 YRS for other routes
Estimated Cost	TBD, partially funded under existing programs

- Lighting on the E-3 Busway, or other areas with less-frequented bus stops and bus stops where there are not many “eyes on the street”
- Pedestrian-scale lighting to supplement conventional overhead street lighting is recommended only in specific locations such as where S Lander Street provides access to the LINK light rail station.

The Bicycle Master Plan identified two High Priority Bicycle Projects in the SODO Area:

- Improve bicycle lanes on Alaska Way S/E Marginal Way S between S Spokane Street and downtown
- Complete the E-3 Busway Trail between S Spokane Street and Downtown.

Benefits

- Improved accessibility to LINK light rail station and bus stops.
- Improved pedestrian safety and comfort.
- Reduced share of trips using single-occupant vehicles (SOVs).
- Also provides public safety benefits.
- Improved bicycle access for commuters to SODO.
- Improved bicycle access for commuters who must travel through SODO, such as from West Seattle to Downtown.

Metro buses on the E-3 Busway near SODO Station.


Pedestrians near SODO Station


The Lander Street crossing of 1st Avenue S is part of a key pedestrian route.

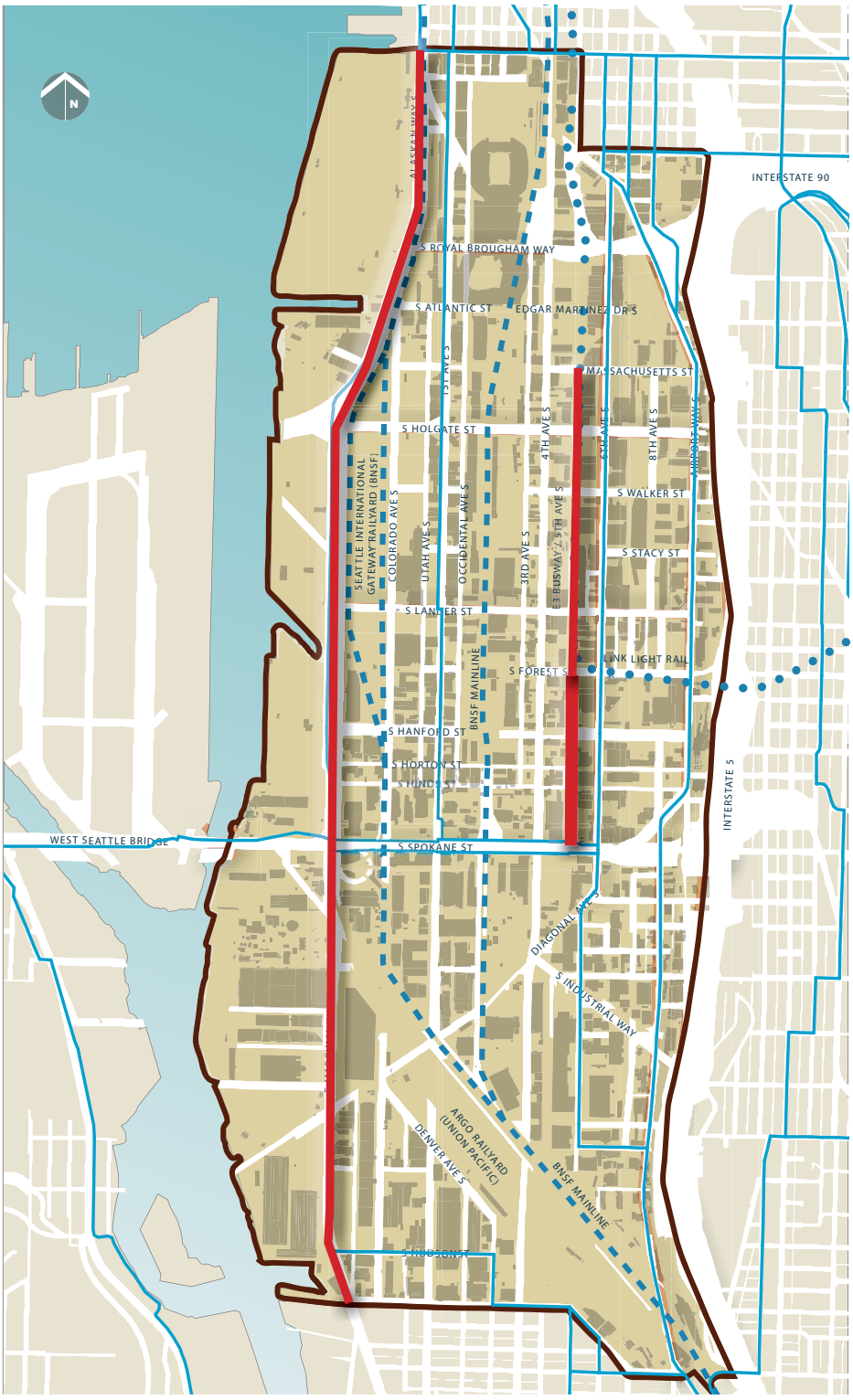


Figure 3.4: Key Bicycle Master Plan Recommendations in SODO

Other Recommendations

The following Other Recommendations were identified during the planning process as reflecting needs within the SODO community. However, they are less crucial than the Critical Recommendations. They are prioritized as High, Medium, or Low. Six of the Other Recommendations address transportation, and are numbered T-1 through T-6. The remaining ten address public safety issues, and are numbered PS-1 through PS-10.

As stated previously, the SODO Action Agenda recommendations arise primarily from community stakeholders. The City of Seattle Office of Economic Development (OED) will coordinate with the relevant City departments to act on those recommendations that are viable and consistent with City policies.

Recommendation T-1

Freight Mobility – East-West Connections

Keep S Holgate Street open for all modes between 1st and 4th Avenues and improve S Horton Street

S Holgate Street - Keeping S Holgate Street open between 1st Avenue S and 4th Avenue S is an existing strategy to address east-west connections for freight mobility and all travel modes. Amtrak and BNSF had requested that the City consider the closure of S Holgate Street between Occidental and 3rd Avenue S to improve railroad operations on the mainline and accommodate the expansion of the Amtrak Northwest Maintenance Facility. The frequency of future rail blockages could effectively result in Holgate's closure. SDOT has previously determined that S Holgate Street is critical for vehicular movements until other projects in the area (SR 519 Phase 2, the Alaskan Way Viaduct, and S Lander Street) are completed. SDOT has committed to keeping Holgate open through Viaduct construction. During that time an SDOT study will identify the best long-term solution, which will depend on rail use of the BNSF mainline. The City would only consider closing Holgate after the Viaduct project is completed. Keeping Holgate open maintains some east-west capacity until other major projects in the area are completed, provides a connection from 1st Avenue S to Beacon Hill, and can help maintain the predictability of bus service and schedules. This is also recommended in the DMMAC Study.

S Horton Street - Pavement improvements to S Horton Street are recommended to facilitate use of Horton as a key east-west connection. While Horton does not provide a through-route between Colorado Avenue S and Airport Way S, it still provides a beneficial connection that could support more use. Improvements to paving are needed between Colorado Avenue S and 3rd Avenue S (also see Recommendation T-5 regarding pavement conditions). Benefits would include improved function to accommodate trucks, and reduced long-term maintenance.

IMPLEMENTATION	
Priority	High for Holgate Medium for Horton
Responsibility	SDOT
Time Frame	10+ YRS for Holgate 0-5 YRS for Horton
Estimated Cost	None for Holgate TBD for Horton

Figure 3.5: Location of S Holgate Street and S Horton Street Recommendations

Recommendation T-2

Programmatic Measures – Communication & Coordination

Improve the communication system and coordination with the community for construction projects and traffic to provide better, more comprehensive, and more immediate, information

Communication - Updates regarding SODO traffic are disseminated via an existing email listserv notification system run by SDOT. However, additional businesses, employees and customers would benefit from this information. Additionally, the information could be improved, especially given the number of concurrent major construction projects occurring in SODO in the present and near future. Improved communication regarding construction closures and major projects would help to minimize construction impacts and conflicting detour routes, as well as, reduce trips and associated congestion during construction.

Coordination with SODO Community - This is an existing strategy, and SDOT coordinates with the SODO freight and business community on an ongoing basis. Existing coordination efforts include ongoing construction management, agency coordination, GIS mapping, notification, and the Center City Construction Coordination "4C" Program.

Major Construction Projects - Communication and coordination should address the transportation impacts of projects including but not limited to those listed below and shown in Figure 3.6. Many projects will occur simultaneously or in overlapping time frames. Direct project impacts, impacts during construction of offsite mitigations, and improved education regarding alternate routes should all be addressed.

Many businesses are located along 1st Avenue S, where SDOT is the process of repaving.

IMPLEMENTATION	
Priority	High
Responsibility	SDOT, SODO Business Association
Time Frame	0-5 YRS
Estimated Cost	Funded Under Existing Program

Road construction projects affect freight movement and commuter traffic.

Major construction projects include but are not limited to:

- AWV and Seawall reconstruction
- SR 519
- S Spokane Street Viaduct
- East Marginal Way Grade Separation
- Argo overpass
- East Waterway Bridge
- 1st Avenue S
- Intelligent Transportation Systems (ITS)
- Private development
- Seattle City Light upgrades
- Railroad improvements

Strategies for implementing this recommendation include:

- Utilize existing communications and coordination programs.
- Coordinate expanded listserv, allowing sign up for the listserv via SDOT or SODO Business Association website)
- Expand outreach to businesses and employees so they know about the listserv
- Integrate with ITS through direct messaging of ITS information
- Develop communication tools for construction-related traffic impacts

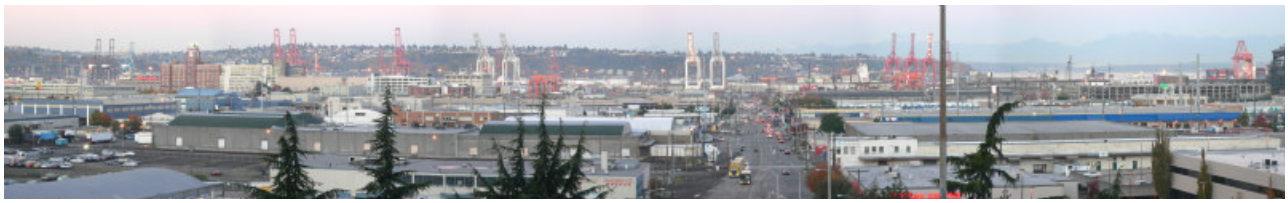
Specific communications and coordination strategies recommended in the DMMAC Study for Construction Management include:

- Maintain the SDOT Construction web page to include the latest construction traffic information. www.seattle.gov/transportation/sodo_construction.htm
- Promote the construction notification e-mail alerts that SDOT uses to disseminate real-time information related to construction impacts and incidents. Expand the number of businesses and individuals in the neighborhood that receive those alerts. Consolidate construction traffic information.
- Provide alerts related to major construction closures or lane changes with as much advance notice as possible. This allows businesses to plan for deliveries in the event that additional drivers or equipment are needed.
- Retain the SODO Community Liaison within Seattle Department of Transportation (SDOT) to be a “one stop shop” for troubleshooting construction-related issues for community members and businesses.
- Extend the Traffic Management Task Force that was established for the SR 519 project.
- Support Duwamish Transportation Management Association (TMA) efforts to reduce commuter trips in the neighborhood.

Also see Critical Recommendation III regarding interagency coordination.

Benefits of improved communication and construction coordination include:

- Provides construction alerts to businesses so they can plan accordingly.
- Coordinates project schedules to minimize construction impacts or conflicting detour routes.
- Reduces trips during construction.
- Reduces congestion during construction.



While the road network in the SODO area is basically a grid, there are relatively few east-west connections spanning its width. Thus, good communication about construction projects is crucial.

Figure 3.6: Major Construction Projects

Recommendation T-3

Freight Mobility – Roadway Design and Operations

Improve intersection design to better facilitate truck movements

A number of intersections on industrial area truck routes have turning radii that are not adequate, causing larger trucks to use multiple lanes and reducing operational efficiency, and affecting overall freight mobility. In addition to improving turning radii at specific locations, roundabouts and curb bulbs should be avoided at sites that might compromise truck operations. Though curb bulbs are helpful to pedestrians, detailed analysis should be conducted at each site before installation. This recommendation should be implemented through the Duwamish Truck Improvement Program and SDOT's ongoing operational and capital programs. Benefits include improved intersection operations, improved safety when trucks don't cross the centerline or encroach on the pedestrian area when turning, and Reduced potential for damage to property and infrastructure.

The Freight Mobility Action Plan (2005) recommended that the City maintain an updated inventory of known obstacles identified by the trucking community. A 2008 Trucker Mobility Survey, as part of the Duwamish Truck Improvement Program, identified two locations in SODO as needing intersection geometry improvements. The Freight Mobility Advisory Committee supported both the program and the survey. The two locations are:

- SW corner of 6th Avenue S & S Holgate Street
- Spokane Street westbound, right turn onto 1st Avenue S (improvement is part of the S Spokane Street project)

Other locations should be included if identified under the Duwamish Truck Improvement Program. Related strategies include avoiding curb bulbs on truck routes and relocating utility poles and street furniture that are too close to the outside travel lane.

Many trucks use SODO streets.

IMPLEMENTATION	
Priority	Medium
Responsibility	SDOT
Time Frame	Ongoing
Estimated Cost	Funded under existing programs

Container trucks require a larger turning radius than many other vehicles.

Figure 3.7: Truck Turning Radii Improvement Locations

Recommendation T-4

Freight Mobility – Pavement and Bridge Conditions

Replace South Park Bridge

This is an existing project and is identified in the Freight Mobility Action Plan (2005) and other plans. There are limited river crossings in the industrial area, and the South Park Bridge is crucial to the flow of traffic in and around SODO, including freight traffic, providing a critical link across the Duwamish and benefiting all modes of travel. Replacement of the bridge will prevent traffic diversions to other congested routes such as the 1st Avenue S Bridge. King County has contracted with a consultant to complete the design for the replacement bridge. Design is expected to be completed in early 2010. Construction could begin at that time if funding is available. A Final EIS and Record of Decision are expected to be issued by the end of 2009. The City of Seattle is working closely with King County staff during the design process. This project is included in the list of freight mobility projects identified in response to Resolution 31026 for implementation with the next five years.

South Park Bridge

IMPLEMENTATION	
Priority	Medium
Responsibility	KCDOT w/ SDOT as partner
Time Frame	0 - 5 YRS
Estimated Cost	Funded primarily by King County

Recommendation T-5

General Transportation/Programmatic Measures – Pavement and Bridge Conditions

Improve pavement conditions for freight, general transportation and bicycles

Paving improvements are needed in several areas, including 3rd Avenue S, Occidental Avenue S, Utah Avenue S, and some east-west streets. Additionally, "orphan" tracks from defunct railways and spurs that are no longer needed create difficult paving conditions, require considerable maintenance, and are a safety hazard for bicycles. It can be difficult to determine who owns these rails or should be responsible for their removal. It can also be difficult to remove them once asphalt paving is installed around them. The bicycle issue is important on Occidental Avenue S and Utah Avenue S.

3rd Avenue is continuous through much of SODO; however, roadway and drainage conditions are poor in some areas. With paving improvements, drainage improvements may be required. Low impact development techniques to address stormwater, such as bioswales, should be considered where drainage improvements are required. Swales would most likely be located on the BNSF setback. Addressing pavement conditions along 3rd Ave S would improve local circulation and support policies to limit access along arterials such as 4th Ave S.

Occidental Avenue S provides an alternate north-south route for local circulation. In addition to being used by businesses, this street is frequently used by stadium event attendees. The DMMAC Study recommendations include a number of related recommendations for improving Occidental Avenue S that go beyond bicycle safety and parking enforcement. See 4.4 in Appendix B.

Addressing pavement conditions along Occidental Ave S would improve local circulation and support policies to limit access along arterials such as 1st Ave S.

Utah is a north-south route west of 1st Avenue S. It provides local circulation to many businesses, including the Starbucks Center garage. It could be an alternative route for bicyclists commuting to SODO-area businesses. "Orphan" tracks were specifically identified here as a safety hazard for bicycles. The DMMAC Study recommendations include a number of related recommendations for improving Utah Avenue S that go beyond bicycle safety and parking enforcement. See 4.3 in Appendix B. Note: SDOT is currently working with Outdoor Research (a SODO-area business) to address this issue. Addressing pavement conditions along Occidental Ave S would improve local circulation and support policies to limit access along arterials such as 1st Ave S, as well as improve conditions for bicyclists.

Poor pavement conditions on 3rd Avenue S

Some east-west streets could be improved to handle truck traffic. Some roads that are being used by freight may not have been built for it, contributing to heavy wear and tear. Streets constructed for truck traffic include all arterials and Major Truck Streets. Addressing pavement conditions on east-west routes would improve function of these streets for freight movement while improving safety for bicyclists, as well as reduce long-term maintenance.

Though the City's annually allocates funds for repaving of arterials under an established program, several of the streets in SODO that would benefit from paving improvements are not arterials, and are therefore not eligible under the arterial paving program.

Strategies for implementing this recommendation include:

- For arterials, implement this recommendation through the arterial paving program.
- Expand the arterial paving program to include non-arterials.
- For non-arterials, also consider implementation through the City's Paving Partnership Program. The Program provides matching funds for small, local paving projects suggested and supported by local businesses and property owners.

Unused "orphan" tracks are located along Utah Avenue S and in other parts of SODO.

Specific improvements recommended include:

3rd Avenue S

- Improve roadway shoulders from Horton Street to Royal Brougham, particularly from the 2000 block to S Holgate Street
- Pave roadway S between S Walker Street and S Stacy Street, where it is currently unpaved and heavily potholed
- Consider low impact development techniques to address drainage.
- Work with Duwamish River Cleanup Coalition
- Enforce illegal parking on shoulders.

Occidental Avenue S

- Improve paving conditions from S Massachusetts Street to S Horton Street
- Improve paving for pedestrians between Edgar Martinez Drive and S Holgate Street
- Remove "orphan" tracks
- Address transient community that parks along street
- Install signage to allow parking enforcement within the six block north and south of Starbucks Center

Specific strategies recommended in the DMMAC Study related to this recommendation for Occidental Avenue S include:

- Organize the haphazard parking and loading areas along the street. Prohibit parking in areas where it can block access to business loading docks.
- Prepare a street master plan for Occidental Avenue S to guide improvements that could be made as properties redevelop.

Utah Avenue S

- Remove "orphan" tracks

Specific strategies recommended in the DMMAC Study related to this recommendation for Utah Avenue S include:

- Remove abandoned rail tracks where possible. If removal is not possible, improve pavement at crossings to reduce potential "tripping" hazard for bicycles.

East-West Streets

- Examine existing street conditions to determine where streets are and aren't built to handle truck loads.
- Improve pavement on S Horton, which was identified by the Advisory Committee.

IMPLEMENTATION	
Priority	Medium
Responsibility	SDOT
Time Frame	Ongoing for arterials 0-5 YRS for non-arterials
Estimated Cost	Funded for arterials under existing program TBD for non-arterials

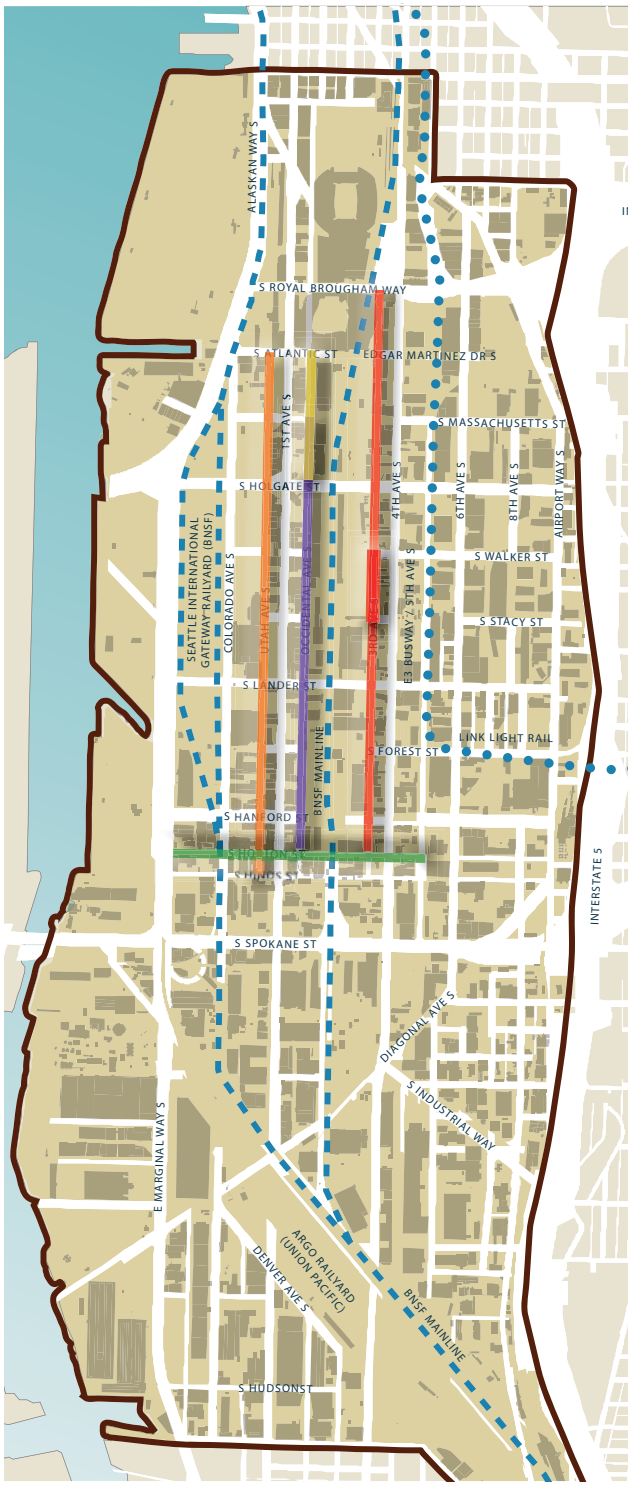


Figure 3.8: Pavement Improvement Locations

Recommendation T-6

General Transportation / Programmatic Measures – Data

Create a baseline profile of the SODO area with business, land use and demographic data

Data are needed to support future transportation-related initiatives in SODO. Data should include but not be limited to: truck and auto traffic volumes, number of businesses, number of employees, rail blockages of intersections and parking demand. It is expected that upcoming major roadway construction and other projects will affect SODO area demographics. Data should be updated periodically. There are some existing sources of data, including data collected by the MIC, Port, used in the Livable South Downtown EIS, and data collected for commute trip reduction (CTR) purposes. Suggestions for collecting additional data include a simple questionnaire with City of Seattle business license applications and renewals.

IMPLEMENTATION	
Priority	High
Responsibility	DPD, SDOT, MIC, SODO Business Association
Time Frame	0-5 YRS
Estimated Cost	TBD

SODO includes some non-industrial employers such as Seattle Public Schools.

SODO contains many small and medium-sized industrial businesses.

Recommendation PS-1

Public Safety – Improvements

Provide simple public restrooms with "snail" entry and staffing

Hi-tech restrooms have proved to not be a good solution to the need for public restrooms in some areas of the City. One low-tech solution may be a restroom that provides privacy through a snail-type entry but does not have a door that can be locked. Another option is a more traditional public restroom that is staffed with an attendant. Snail-entry restrooms could also be staffed if budgets allow. All of these approaches would minimize the potential for public urination and for criminal activity at public restrooms. To implement this recommendation, siting criteria should be developed and potential designs should be reviewed for their ability to minimize crime.

One example of a snail entry restroom in Europe. Snail-type entries can be used on more substantial structures, for both the main entry and for individual stalls.

IMPLEMENTATION	
Priority	Medium
Responsibility	Seattle Public Utilities
Time Frame	2010
Estimated Cost	TBD

Recommendation PS-2

Public Safety – Communication

Improve communications to include better, comprehensive, real-time information about public safety incidents

IMPLEMENTATION	
Priority	High
Responsibility	SPD, SODO Business Association, City of Seattle
Time Frame	0-5 YRS
Estimated Cost	TBD

Information regarding public safety incidents is useful to employees, customers of SODO businesses, and attendees of special events and area night clubs. The SODO Business Association website currently provides information only on crime prevention strategies. The City of Seattle website does not have SODO-specific information on public safety. Precinct boundaries that put SODO into two police precincts make incident tracking and reporting somewhat challenging.

More location-specific information could be provided, as well as information on pedestrian routes, CPTED, and other measures to improve public safety. The existing SDOT Traffic email notification system could be expanded to include public safety information or a separate listserv established. Outreach to businesses and employees regarding the availability of the listserv should be expanded, and sign up should be available via the City and/or SODO Business Association websites. Additionally, information kiosks would allow pedestrians, including employees and customers of SODO businesses, quick access to public safety information. Kiosks could also provide information on transit, pedestrian routes, etc. Siting criteria for information kiosks should also be developed. Implementation of this recommendation would improve awareness regarding potential public safety hazards and prevention measures and contribute toward a safer and more user-friendly pedestrian environment for employees, customers, transit users and stadium area event attendees.

Example of an information kiosk in Juanita Village, Kirkland

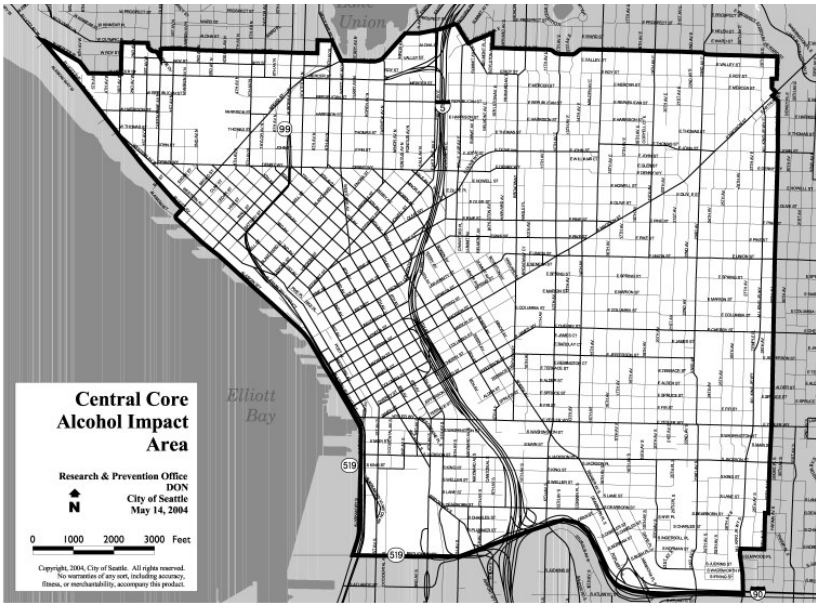
Recommendation PS-3

Public Safety – Regulations, Monitoring and Enforcement

Extend Central Core Alcohol Impact Area to include SODO

IMPLEMENTATION	
Priority	Medium
Responsibility	City of Seattle, State Liquor Control Board
Time Frame	0-5 YRS
Estimated Cost	TBD

The City has existing Alcohol Impact Areas (AIA) approved by the Washington State Liquor Control Board. Sale of alcoholic beverages is restricted in the AIAs such that beverages with high alcohol content are restricted; this includes relatively inexpensive, fortified beer and wine. The goal of the AIAs is to reduce chronic public drinking and inebriation. The Central Core AIA currently includes Pioneer Square, extending as far south as Royal Brougham. The Action Agenda recommends extending it to include SODO.



The existing Central Core Alcohol Impact Area extends to S Royal Brougham Way ***Source:*** City of Seattle Legislative Information Service

Recommendation PS-4

Public Safety – Regulations, Monitoring and Enforcement

Install surveillance cameras on pedestrian routes

Cameras have been installed in some areas of the City to deter crime and monitor streets. While ongoing monitoring may not be practical due to cost, recorded images can provide evidence if a crime does occur. Cameras could be privately or publicly owned, installed and monitored, and the City or SODO Business Association could partner with businesses to find funding. SPD should help to determine key locations. Increased perception of safety can result in more pedestrians and therefore more "eyes on the street" and safer streets, benefiting employees, customers, pedestrians and transit users

IMPLEMENTATION	
Priority	Low
Responsibility	City of Seattle, State Liquor Control Board
Time Frame	0-5 YRS
Estimated Cost	TBD

Recommendation PS-5

Public Safety – Regulations, Monitoring and Enforcement

Inform businesses to install no vehicle camping and no trespassing signage where needed to facilitate enforcement

SPD responds to complaints about vehicle camping. However, a response typically takes approximately 72 hours. Signs facilitate enforcement when camping occurs on private property. If a property is posted with a no trespassing sign, SPD can enforce trespassing violations without having to contact the property owner first. Otherwise, business and property owners must complete a 'Trespass Authorization Form' before SPD may enter the property's common areas to remove transients and their belongings. Both of these measures speed up SPD's response. The SODO Business Association currently has information about these strategies on its website. However, greater outreach with this information, along with providing signs for businesses to post, would facilitate better and faster enforcement

Source: http://picasaweb.google.com/soaringeagles71/ClipArtFolder-AZ#5229193276026071794

IMPLEMENTATION	
Priority	Medium
Responsibility	SODO Business Association, SPD
Time Frame	10+ YRS
Estimated Cost	TBD

Recommendation PS-6

Public Safety – Regulations, Monitoring and Enforcement

Require property owners to maintain property where facing a public right-of-way

Property owners currently must comply with a variety of regulations related to public health and safety. Additionally, the City has an existing regulation regarding removal of graffiti. However, maintenance standards for property are not specifically established in the code. Establishing a maintenance standard for property adjacent to a public right-of-way would allow for greater enforceability and would reduce the appearance of derelict or uncared for properties and have a deterrent effect on crime. This recommendation could be implemented by enacting a property maintenance ordinance, or by establishing a Local Improvement District.

IMPLEMENTATION	
Priority	Medium
Responsibility	DPD
Time Frame	0-5 YRS
Estimated Cost	TBD

Property frontage along 3rd Avenue S

Recommendation PS-7

Public Safety – Regulations, Monitoring and Enforcement

Establish an anti-graffiti strategy

Property owners currently must comply with a variety of regulations related to public health and safety. Additionally, the City has an existing regulation regarding removal of graffiti. However, a comprehensive approach to graffiti is recommended in SODO. This includes greater outreach and education of business and property owners regarding graffiti regulations, removal, and strategies for prevention. An organized approach to reporting graffiti on public property is also recommended. Benefits would include improved response time for removing graffiti and improved perception of safety.

IMPLEMENTATION	
Priority	Low
Responsibility	SODO Business Association, SPD
Time Frame	5-10 YRS
Estimated Cost	TBD

Graffiti in SODO

Recommendation PS-8

Public Safety – Programmatic Measures

Encourage or require Crime Prevention through Environmental Design (CPTED) review of development projects

When new buildings or other improvements are permitted, the City can require or encourage the applicant to follow CPTED design principles. The aim of CPTED is to reduce the potential for crime by minimizing dark or hidden spaces and spaces that have unclear ownership, and by minimizing features such as blank walls that create a "no man's land" where crime is more likely to occur. Three major strategies of CPTED include: natural surveillance, natural access control, and territoriality/defensible space. It is recommended that CPTED review occur with permit review for new development and redevelopment. An additional benefit would be improved understanding on the part of property owners and developers of factors in the built environment that contribute to reduced crime.

IMPLEMENTATION	
Priority	Medium
Responsibility	DPD, SPD
Time Frame	0-5 YRS
Estimated Cost	TBD

Blank walls can contribute to poor CPTED design.

Good CPTED design includes defined areas with good visibility that reduce the appearance of a "no man's land."

Recommendation PS-9

Public Safety – Programmatic Measures

Develop a coordinated system for light replacement notification

The City has typically relied on community members to report street lights that need replacement. The person notifying the City needed to provide the light pole number, nearest address, and provide their name and phone number. The City is currently launching a new program to check lights every four years; however, it will still respond to community notification. A coordinated system would utilize the community to ensure that lights are checked on a more frequent basis and complete information is provided. Possible strategies include: a yearly or more frequent night-out walk through, in which volunteer teams would walk through specific areas of SODO and report lights needing replacement, or an adopt-a-light program under which businesses or community groups would be responsible for notification about specific lights. These strategies should be considered in the Pedestrian Master Plan process

IMPLEMENTATION	
Priority	Medium
Responsibility	Seattle City Light, SODO Business Association
Time Frame	0-5 YRS
Estimated Cost	TBD

Overhead street lights provide lighting in many areas of Seattle.

Each overhead light has a light pole number.

Recommendation PS-10

Public Safety – Programmatic Measures

Provide technical assistance for seismic upgrades of buildings

There are potentially a number of buildings in SODO needing seismic upgrades. The City has an existing program to provide technical assistance to homeowners, and currently has a program for businesses called Disaster Resistant Businesses; however, this program focuses primarily on disaster preparedness, not on seismic retrofits. SODO businesses and property owners would benefit from additional assistance on seismic retrofits focused in the SODO area. Recommended strategies may include: conducting an inventory of buildings at risk for seismic hazards, providing technical assistance, updating the OED grant to SODO Business Association to include public information on this topic, and providing incentives for upgrades. Benefits would include improved awareness, increased property values, and increased disaster preparedness.

IMPLEMENTATION	
Priority	Medium
Responsibility	DPD, Seattle Office of Emergency Management, SODO Business Association
Time Frame	5-10 YRS
Estimated Cost	TBD

Appendices

Appendix A

Summary of Recommendations from Prior Plans

Appendix B

DMMAC 1st Avenue S Improvement Study

Appendix C

Public Involvement Materials from the Big Event

Appendix A

Summary of Recommendations from Prior Plans

SODO Action Agenda - Recommended Actions from Prior Plans

December 23, 2008

This document summarizes recommended actions that were listed in prior plans.

Prior Recommended Action	Included in:									Status	Notes
	Access Duwamish (June 2000)	Greater Duwamish Manufacturing Industrial Center Plan (1999)	Mayor's Industrial Jobs Initiative (August 2007)	Mayor's Action Agenda for Manufacturing and Maritime Sectors (April 2004)	Freight Mobility Action Plan (June 2005)	Livable South Downtown Study Final Environmental Impact Statement (May 2008)	Urban Mobility Briefing Book (May 2008; planning still in process)	King County Metro 49 Actions to Mitigate Impacts of Reconstruction of Alaskan Way Viaduct (January 2007)	Bicycle Master Plan (May 2007)		
TRANSPORTATION											
Fast Corridors, Highway Access and Grade Separations											
Alaskan Way Viaduct and Seawall Replacement				x	x		x			In progress	Construction starts south segment 2008. Emergency Traffic Management and Closure Plan issued in 2005.
Alaskan Way realignment under viaduct to accommodate SR 519 improvement		x								No longer relevant.	Superseded by AWV plan and southend interchange design
SR 519 Phase 2	x	x			x		x			In progress	Construction starting fall 2008
Spokane Street Viaduct Widening	x	x		x	x		x			In progress	Construction started summer 2008. To be completed prior to AWV replacement
Ramps between East Marginal Way and SR-99	x									In progress	Moving forward as part of the Port's E Marginal Way grade separation project
S Lander Street Grade Separation	x	x		x	x		x			Incomplete (Deferred due to funding shortfall)	Design started; put on hold due to funding shortfall
Holgate Street grade separation.		x			x					Study in progress	Lander was identified as preferred location for grade separation; however, SDOT will investigate closing options for Holgate with appropriate mitigation.
I-5 Pavement Reconstruction and Bottleneck Improvement (WSDOT, expected completion 2017)							x			In progress	WSDOT lead. See WSDOT website
N Waterfront Access (Broad Street)	x									No longer relevant.	Superseded by AWV plan to include some connection between AWV and Western
SR-99 Half Interchange On-Ramp	x									In progress (as part of AWV)	Part of AWV with some design modifications
Southbound on-ramp to SR 99 at or north of Royal Brougham		x								No longer relevant	Superseded by AWV Southend interchange design. Access to and from south on SR 99 provided to King Street.
SR99 Northbound on-ramp at Hanford Street		x								Incomplete	Has never progressed beyond idea stage--correct
Directional Signs to Port Terminals	x									Completed	
At critical locations through out the MIC, implement operational, minor capital, and safety measures to improve local accessibility to regional transportation facilities		x								In progress	Funded through various CIP and O&M programs

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Arterial Improvements											
Pavement Rehabilitation	x									In progress	Bridging The Gap funded 1st Ave; summer 2008 start
Construction Notification System	x					x				In progress	Developed in spring 2008; presented to stakeholders
Access Management policies restricting/prohibiting direct access to and from major corridors (1st Avenue S and 4th Avenue S north of Royal Brougham, and Rainier Avenue S north of S Dearborn Street) with right in right out only access if no other access exists						x				Incomplete	
Upgrades to Airport Way		x								In progress	Signal timing and signing has been improved
Intersection Improvements											
Intersection turning radius improvements		x		x	x					In progress	Truck spot improvements funded through Freight Mobility Improvement Program. 1st/Atlantic Planned as part of SR 519 Phase 2 Project.
Advanced Technology and Signal Timing											
Automated travel signs and VMS technology at key points in arterial and freeway system	x	x			x	x				In progress	Currently at 60% design, planned to be operational in September 2009
Traffic Management Strategies: providing signal priority along freight routes; devote a higher percentage of signal green time to serve established freight movements at the expense of competing movements along S Dearborn Street, Airport Way S, 1st Avenue S, 4th Avenue S, or S Atlantic Street corridors; improve communications, including dispatching of commercial vehicles and dissemination of real-time traffic information to avoid delays					x	x				In progress	1st and 4th Avenues have been completed. S Dearborn was just optimized in 2008. S Atlantic Street will be rebuilt both by SR 519 phase one project and the South End Alaskan Way project. The SR 519 phase one just completed the 100% plan and South End Alaskan Way project just completed 60% design. A left-turn signal was installed at 4th/Industrial Way.
Initiate Railroad Supportive Elements of Duwamish ITS at the BNSF Railroad Mainline - special traffic control strategies; connections and coordination between railroad crossing signals and adjacent traffic signals; traffic signal timing at the east/west BNSF mainline crossings					x					Completed	
Support the BNSF Railway Company Third Mainline Track and Signal Improvements in Coordination with Sound Transit - install advance signal control at South Royal Brougham Way and South Spokane Street. Sound Transit will construct a third mainline track and improved gated crossings at City streets between 1st Avenue S and 4th Avenue S. Five at-grade crossings will be improved					x					Completed	
Parking Management											
On street parking management in the vicinity of special event facilities in cooperation with local businesses and property owners		x								In progress	Parking spaces removed west of sports complexes; Alaskan Way and E Marginal parking has been modified; parking limit signs installed in SODO area; SDOT is conducting a parking study for Lander light rail station
On-street Parking Removal / Additional Time of Day Restrictions						x				In progress	Part of parking operations program
Install Commercial/passenger Load Zones, Where Appropriate					x					In progress	Part of parking operations program

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Transit and Rail Passenger Operations											
Local transit services in MIC		x								In progress	City has concluded that at this time there is insufficient transit demand to warrant BAT Lane on 1st Ave S. King County Metro will modify two south end routes in 2009 following opening of LINK Light Rail that will improve east-west connectivity in SODO via Edgar Martinez Drive. Future east-west improvements require the Land Street Overpass to be completed.
Local bus frequency and span of service: 15 min frequency along Rainier Avenue S and Yesler Way; expanding service along 12th Avenue S by a few hours; increase capacity (larger buses, or shorter headways in all major corridors except Rainier Avenue S and 5th Avenue S,						x				In progress	Rainier Ave S considered high priority corridor for transit improvements. Scheduled for 2009-2010
Dedicated HOV or Bus Lanes: to improve speed and reliability of the transit system investigate removing on-street parking or general lanes along 1st Avenue S, 4th Avenue S, Rainier Avenue S, and S Jackson Street.						x				In progress	SDOT, King County Metro and stakeholders have concluded that BAT Lane on 1st Ave S is not warranted now. 1st Ave S will be repaved and striped as it is today. Rainier Ave S will receive significant transit improvements in 2009-2010.
Transit Signal Priority complemented with Queue bypass lanes: along 1st Avenue S, 4th Avenue S, S Jackson Street, and Rainier Avenue S.						x				In progress	Improvements have been completed on S Jackson/12th and will be undertaken on Rainier in 2009-2010
Bus Bulb / In-line Stops						x				In progress	Rainier Ave S will receive in-lane bus stops as part of major transit improvement project scheduled for 2009-2010.
Real-Time Information and Transit Amenities						x				In progress	A bus monitoring system is being installed as part of AWV mitigation. KC Metro is the lead.
Create in-lane stops along Jackson St corridor by constructing bus bulbs								x		In progress	
Add transit priority treatments along Jackson St corridor								x		In progress	Limited to curb bulbs. Some signal improvements were made at 12th & Jackson.
Improve Dearborn Avenue/Airport Way Intersection								x		Incomplete	Still considered important
Improve 5th/Jackson intersection, add NB LT								x		No longer relevant	Would not benefit transit
Provide priority treatments on Royal Brougham between 4th Ave S and E-3 Busway to facilitate transit movements between 4th Ave to the Transit Tunnel and between E-3 and 4th Avenue								x		In progress	Part of SR 519 project
Add transit priority treatment at 1st Ave S/Atlantic St to prioritize WB LT for transit								x		In progress	Part of SR 519 project
In the absence of new grade separated railroad crossing at Lander or Spokane St, provide all day BAT lanes on 1st Ave S between Spokane and Atlantic St in both directions, all day BAT lanes on Atlantic St between 1st and 4th Avenues with transit priority treatments at 1st & Spokane, 1st & Atlantic, Atlantic SPUI.								x		No longer relevant	SDOT and King County Metro have determined that BAT Lane on 1st Ave S is not warranted at this time.
If a new 4th Ave loop ramp with transit lane is constructed from Spokane, all day BAT lane is needed on 1st Avenue southbound from Atlantic to Spokane St. Priority treatment on Atlantic St and at the intersections of 1st/Spokane, 1st/Atlantic, & Atlantic SPUI will be the same as for 40A but only in the outbound direction.								x		No longer relevant	SDOT and King County Metro have determined that BAT Lane on 1st Ave S is not warranted at this time.

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Improve West Seattle Bridge transit lane by eliminating weaving section prior to the 1st Ave S ramp.								x		Status not known	
Designate West Seattle Bridge transit lane to operate 6 am to 7 pm								x		Incomplete	Unknown whether recommendation is still relevant.
Modify signal phasing to accommodate transit movements								x		Status not known	Analysis for Bus Rapid Transit priority in SODO didn't recommend special phasing. There is Transportation Strategic Planning along 1st Ave S
Install bus monitoring system at the main entry point (all routes)								x		In progress	King County Metro is the lead
Provide transit lane treatment on the pavement along all day transit corridor to discourage non-transit users (all routes)								x		No longer relevant	Superceded by studies recommending more specific treatments and improvements
Improve and prioritize transit movements to and from bases and along Airport Way/Dearborn Ave/Holgate (all routes)								x		Incomplete	Still considered important
Industrial/Business District Identifiers											
Support the development of district/industrial/business activity centers within the MIC through signage and/or urban design treatments for identification, circulatory routes, or parking areas. Implement signage on IO-5, SR 99, SR 509, Alaska Way Viaduct, Spokane St Bridge, and other regional freeway systems for exit directions and on local arterials form the freeway ramps install direction signage in coordination with the district identifiers		x								In progress	Wayfinding and street name signs have been installed in SODO area; no signs yet on freeways.
Pedestrian Improvements											
Implement and prioritize pedestrian crossing treatments in the MIC to reduce or eliminate conflicts with vehicular traffic and goods mobility		x								In progress	Topic for consideration in Pedestrian Master Plan
Sidewalk Improvements and Maintenance: sidewalk maintenance, installation or replacement of ADA curb ramps, and filling in missing sidewalks						x				In progress	Topic for consideration in Pedestrian Master Plan. In addition, sidewalk rehabilitation and pedestrian programs can respond to site specific and area-wide requests.
Pedestrian Crossings and Linkages: address linkages to the Stadiums, waterfront, and adjoining neighborhoods. Installing a pedestrian crossing along 4th Avenue S near S Atlantic Street to join in to the pedestrian staircase leading up to the elevated S Atlantic Street overpass; consider installing or enhancing other crossings along 1st Avenue S north of S Royal Brougham Way; Also along Airport Way S and S Dearborn Street; linkages to the waterfront trail along Alaskan Way could be promoted and improved; access to neighborhood activity centers could be emphasized.						x				In progress (Ongoing per Pedestrian Master Plan)	Topic for consideration in Pedestrian Master Plan
Pedestrian Scale Facilities: lighting, landscaping treatments, street furniture; increased sidewalk widths to accommodate facilities; in larger developments providing for convenient pedestrian passage through the site.						x				In progress (Ongoing per Pedestrian Master Plan)	Topic for consideration in Pedestrian Master Plan

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Bicycle Improvements and Shared Use											
Bicycle lanes: 7th Avenue S (I-90 trail to S Dearborn Street); Airport Way S (I-90 trail extension to 6th Avenue S); S Royal Brougham Way (up to the new pedestrian structure associated with the SR 519 Phase 2 project)						x				In progress (Ongoing per Bike Master Plan)	Each year SDOT prioritzes bike facility improvement projects for implementation the following year. Consult Pedestrian/Bicycle Program for annual work program.
Stripping Sharrows: 6th Avenue S (from Airport Way S to S Jackson Street and S Washington Street to Yesler Way); 7th Avenue S (from S Dearborn Street to S Jackson Street); Yesler Way (from Alaskan Way S to 2nd Avenue and from 3rd Avenue to 8th Avenue); S King Street (from 5th Avenue S to Rainier S Avenue S); 4th Avenue S (from Jackson Street to Yesler Way); S Jackson Street (from Alaska Way S to 5th Avenue S); Maynard Avenue S (from S Dearborn Street to S Jackson Street)						x				In progress (Ongoing per Bike Master Plan)	Each year SDOT prioritzes bike facility improvement projects for implementation the following year. Consult Pedestrian/Bicycle Program for annual work program.
Multi-Use Path: Extend the I-90 multi-use trail to completion						x				In progress (Ongoing per Bike Master Plan)	Each year SDOT prioritzes bike facility improvement projects for implementation the following year. Consult Pedestrian/Bicycle Program for annual work program.
Identify improvements to bike facilities through the MIC that separate truck and vehicular traffic from bike travel		x								In progress (Ongoing per Bike Master Plan)	Bike plan adopted
Work with Sound Transit, WSDOT, KC Transit, and other partners to acquire abandoned railroad ROW to continue existing E-3 Busway Trail south between S Forest Street and Spokane Street.									x	Incomplete (not started)	
Study east/west connections across I-5 at Spokane Street. These connections could be made in conjunction with extending the Chief Sealth Trail across I-5 toward Downtown Seattle.									x	In progress	SDOT plans the extension of the trail to downtown pending future funding. In addition, each year SDOT prioritzes bike facility improvement projects for implementation the following year. Consult Pedestrian/Bicycle Program for annual work program.
Study potential locations to construct a crossing of I-5 to connect the Chief Sealth Trail towards Downtown Seattle. The crossing could be at any location between S Spokane Street and S Snoqualmie Street. The precise location of the pedestrian/bicycle overpass/underpass across I-5 at the west end of the future Chief Sealth Trail extension should take advantage of topography and existing infrastructure.									x	In progress	SDOT plans the extension of the trail pending future funding. Each year SDOT prioritzes bike facility improvement projects for implementation the following year. Consult Pedestrian/Bicycle Program for annual work program.
Airport Way S between I-90 and Military Road S: When the roadway is reconstructed, the city should consider a combination of adding new shoulders, side paths, and/or wide outside lanes, as appropriate, to improve bicycle safety and access in this corridor. Also address the problem of standing water that accumulates on Airport Way S when it rains.									x	In progress	Each year SDOT prioritzes bike facility improvement projects for implementation the following year. Consult Pedestrian/Bicycle Program for annual work program.
Reconstruct Alaskan Way/E Marginal Way S with well-designed bicycle lanes on both sides. There is an existing bicycle lane on the east side of Alaskan Way/E Marginal Way S, but no bicycle lane on the west side of this roadway.									x	In progress	As part of AWV south replacement, a new bike/ped path will connect to the bicycle path at Olympic Sculpture Park

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Include bicycle facilities as a part of any future roadway and bridge reconstruction projects on S Lander Street and S Holgate Street. These two roadways are critical connections across the area south of Downtown Seattle and must provide safe and convenient bicycle access.									x	Incomplete (Delayed)	Bike facilities were included in S. Lander design before it was put on hold due to a funding shortfall
Improve wayfinding signage and pavement markings and make surface and other maintenance improvements on the West Seattle Low-Level Bridge Trail.									x	Incomplete	
Consider providing a track or trough beside the stairs between the intersection of S Spokane Street and Airport Way S and Beacon Hill. This would make it much easier for bicyclists to travel with their bicycles up and down the hill.									x	In progress	Each year SDOT prioritzes bike facility improvement projects for implementation the following year. Consult Pedestrian/Bicycle Program for annual work program.
Look for opportunities to add multi-use trail facilities when any section of the I-5 corridor is reconstructed.									x	In progress	Each year SDOT prioritzes bike facility improvement projects for implementation the following year. Consult Pedestrian/Bicycle Program for annual work program.
Bicycle lanes along S Royal Brougham Way, 6th Avenue S, S Holgate Street, S Lander Street.										Incomplete (Delayed)	Bike facilities were included in S. Lander design before it was put on hold due to a funding shortfall
Sharrow along 1st Avenue S									x	In progress	Part of repaving project
Overpass from 4th Avenue S to 1st Avenue S along S Royal Brougham									x	No longer relevant	Superceded by SR 519 project
Multi-use trail along 5th Ave S, S Spokane St, and I-5 corridor.									x	In progress	Each year SDOT prioritzes bike facility improvement projects for implementation the following year. Consult Pedestrian/Bicycle Program for annual work program.
Signed bicycle route along Alaskan Way S - E Marginal Way S									x	In progress	Each year SDOT prioritzes bike facility improvement projects for implementation the following year. Consult Pedestrian/Bicycle Program for
Bicycle lane along Alaskan Way S north of Spokane Street									x	In progress	As part of AWV south replacement, a new bike/ped path will connect to the bicycle path at Olympic Sculpture Park
Travel lane rechannelization and bicycle lane or climbing lane along 6th Avenue S north of Spokane Street									x	In progress	Each year SDOT prioritzes bike facility improvement projects for implementation the following year. Consult Pedestrian/Bicycle Program for annual work program.
Transportation Needs in Transitional Areas											
Implement traffic management measures in transitional residential/industrial areas, and through improvements identified in truck circulation and local access to regional facilities, truck impacts would be significantly minimized in residential areas		x								In progress	Georgetown business community has asked for a road diet on Airport Way S, north of Michigan. Using DON Match Grant to develop streetscape design. Airport way is a major truck route.

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Operations and Maintenance											
Extended 5-10 year term Street End Permits					x					In progress (Ongoing)	
Repair existing roadway surfaces and install water drainage systems		x								In progress	SDOT Pavement Management Program evaluates pavement conditions of arterial streets and prioritizes improvements.
In coordination with SEATRANS, establish a program that identifies localized maintenance and preservation of public roadways and sidewalks within the MIC.		x								In progress	SDOT Pavement Management Program evaluates pavement conditions of arterial streets and prioritizes improvements. In addition, Sidewalk Rehabilitation Program and other SDOT sidewalk programs conduct a similar process to identify projects, prioritize and construct. The future BTG-Funded Pedestrian Master Plan will play a very significant role in project identification and implementation.
Review and evaluate vehicular and pedestrian safety at critical intersections and substandard streets within the MIC		x								In progress	Safety issues addressed through Traffic Management programs.
Form a Transportation Management Association						x				Complete	Completed - Duwamish TMA
Coordinate with Seattle's Freight Community - monthly meetings with Seattle FMAC during 2005					x					Completed	Completed
Actively Participate in Regional and State Forums Seeking Freight Funding					x					Completed	Completed
Maintain an Updated Inventory of Known Obstacles Identified by the Trucking Community					x					Complete	Conducted in 2004.
Maintain an Inventory of Infrastructure Height Restrictions Facing Trucks Operating in the City					x					Incomplete	
Maintain a list of Truck Weight Restrictions on Seattle Bridges and Other Structures					x					Complete	List is located at http://www.seattle.gov/transportation/bridgesrestricted.htm
Incorporate Freight Operational Design Needs For Major Truck Streets and Non-Major Truck Streets into the draft Update of the ROW Improvements Manual					x					Complete	Completed, see http://www.seattle.gov/Transportation/rowmanual/
Include an Over legal Vehicle Design Standard in the Update of the ROW Improvements Manual					x					Complete	Completed???, see http://www.seattle.gov/Transportation/rowmanual/
Review 2006 Paving Priorities with the Freight Community					x					Complete	Completed????, see http://www.seattle.gov/transportation/streetmaintenance.htm#asp http://www.seattle.gov/transportation/docs/AACPavingPlan2008.pdf
Continue to Include Freight Needs as Criteria in Prioritizing Street Pavement Rehabilitation Work					x					Complete	Included on Major Truck Sreets and other arterials with high traffic volumes
Solicit Freight Community Involvement in the Paving Partnership Program					x					In progress (Ongoing)	Done on annual basis
Design and Construct 2005 CIP Projects that Benefit Freight					x					Complete	http://www.seattle.gov/transportation/2008projects.htm
Identify Measures to Minimize Conflicts between Trucks and Other Transportation Modes - truck spot improvements, street design standard revisions, and design specifications for potential large capital projects.					x					In progress	SDOT and SODO stakeholders are in ongoing communication to identify trouble spots, incorporate "freight-friendly" design elements where consistent with "complete streets" policy.

Prior Recommended Action	Included in:									Status	Notes
	Access Duwamish (June 2000)	Greater Duwamish Manufacturing Industrial Center Plan (1999)	Mayor's Industrial Jobs Initiative (August 2007)	Mayor's Action Agenda for Manufacturing and Maritime Sectors (April 2004)	Freight Mobility Action Plan (June 2005)	Livable South Downtown Study Final Environmental Impact Statement (May 2008)	Urban Mobility Briefing Book (May 2008; planning still in process)	King County Metro 49 Actions to Mitigate Impacts of Reconstruction of Alaskan Way Viaduct (January 2007)	Bicycle Master Plan (May 2007)		
Policy Recommendations											
Ensure consistent Land Use and Transportation Planning: Review the City's Transportation Strategic Plan to ensure that its strategies are consistent with the recommended land use changes included here.			x							In progress	Next TSP update 2010
Address Freight Needs: Revise the Right-of-Way Manual to address specific design needs of freight and oversized vehicle traffic on routes that have high freight volumes. Use the revised designs when constructing or improving streets in the industrial area, such as when implementing projects that are part of the 'Bridging the Gap' transportation initiative.			x							Complete	Completed major update approximaltey 3 years ago
Improve Pedestrian Safety and Transit Use: Program Capital Improvement Plan funds to make improvements that will provide for pedestrian safety and facilitate transit use by employees in industrial areas.			x			x				In progress	Topic for consideration in Pedestrian Master Plan
Secure funding for key projects such as the Alaskan Way Viaduct and Seawall, the Spokane Street Viaduct and Mercer Street				x						In progress	AWV construction starts south segment 2008. Spokane St utility work underway. Off-ramp funded.
Implement 17 critical transportation projects including West Seattle Swing Bridge				x						Completed	
Leverage regional FAST (Freight Action Strategy) funds to improve Port access, railroad operating conditions and truck traffic flow				x	x					In progress	Obtained FAST Partners commitment of $1,750,000 from FY 05 Federal Earmark Funds
Keep goods and services moving to and through the industrial centers during and after Alaskan Way Viaduct and Seawall construction				x						In progress (part of AWV project)	
Strengthen the mfg industrial voice through the Freight Advisory Committee				x						In progress	Freight Advisory Committee is active. There may be actions that can improve their voice.
Reduce truck choke points at rail crossings by improving BNSF railroad operation conditions				x						In progress (Ongoing)	Part of ongoing negotiations with railroad
Continue to implement the Freight Mobility Action Plan including: faster, easier permits for trucking businesses, and improving freight routes by more thorough review of street design and traffic changes to reduce potential obstacles for trucks.				x						In progress	See Freight Mobility Project List in Response to Resolution 31026, Section 4 (7/31/08 Memo to Council Member Sally Clark)
FAST Funds for: Port of Seattle access, railroad operating conditions and alleviating congestion choke points					x					In progress	Truck spot improvement program didn't receive FAST corridor funds
Development Mitigation Payment Approach for Transportation Impacts.						x				Incomplete	Programs in place in S. Lake Union and Northgate
Fund Major Truck Streets Design Improvements: upgrading street infrastructure to accommodate wider turning radii, signal upgrades, relocation of utility poles or other obstacles, more frequent pavement overlays, and installation of concrete.						x				In progress	SDOT CIP freight mobility projects and annual programs achieve these objectives.

Prior Recommended Action	Included in:									Status	Notes
	Access Duwamish (June 2000)	Greater Duwamish Manufacturing Industrial Center Plan (1999)	Mayor's Industrial Jobs Initiative (August 2007)	Mayor's Action Agenda for Manufacturing and Maritime Sectors (April 2004)	Freight Mobility Action Plan (June 2005)	Livable South Downtown Study Final Environmental Impact Statement (May 2008)	Urban Mobility Briefing Book (May 2008; planning still in process)	King County Metro 49 Actions to Mitigate Impacts of Reconstruction of Alaskan Way Viaduct (January 2007)	Bicycle Master Plan (May 2007)		
Local Truck Access: new development could plan for loading docks; intersections at local streets could have turning radii for fire trucks, sanitation trucks, and light delivery vehicles; curb parking on both sides of the local street must not obstruct accessibility; controls or special lanes could channelize heavier trucks away from areas designed for automobiles or light pick up trucks.						x				Status not known	
Support the Port with Implementing Container Terminals Ground Access Improvements						x				In progress	This is an ongoing activity
Improve Freight Dependent Business Access.						x				Status not known	
SDOT will Continue to coordinate with the freight community and appropriate City staff to outline strategies that help facilitate more efficient local goods delivery					x					In progress	SDOT participates in several freight groups to discuss these and other issues. For example, SDOT has revised design and location of truck load-zones.
PUBLIC SAFETY											
Funding for education, outreach campaign, including mailers, newsletters, briefings, web site		x								Status not known	
Establish greater Duwamish Public Safety Advisory Committee. Seek funding for staffing and professional services		x								Status not known	
Host Public Safety Forums in each of the three local districts and host one area-wide		x								Status not known	
Support development of a West Seattle Police Precinct		x								Complete	New Southwest Precinct building opened in 2003.
Establish local community policing storefronts in each of the area business districts.		x								Status not known	
Establish wayfinding systems throughout the Greater Duwamish Valley		x								Complete (for SODO area)	Wayfinding and street name signs have been installed in SODO area; no signs yet on freeways
Support traffic control and traffic directing mechanisms.		x								Status not known	
Provide a range of street, alley, and bus stop lighting investments through the greater Duwamish.		x								Status not known	
Retain Aid Unit for Station 14		x								Status not known	

Appendix B

DMMAC 1st Avenue S Improvement Study

1ST AVENUE SOUTH IMPROVEMENT STUDY

Prepared for the:
Duwamish Multi-Modal Advisory Coalition

Convened by:

5509 1st Ave S, Seattle WA 98108
(206) 762-2470

Prepared by:

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ph: (206) 523-3939 fax: (206) 523-4949

SEPTEMBER 26, 2008

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1. BACKGROUND

The Duwamish industrial area is experiencing an increasing mix of pedestrian, vehicle and freight traffic generated by a unique mix of economic activities vital to the South Downtown and City of Seattle. In addition, the community will be impacted by a number of major transportation construction projects slated for the Duwamish area in the next decade including the 1st Avenue S Paving projects, the Spokane Street Viaduct reconstruction, the Alaskan Way Viaduct replacement, SR 519 Phase 2, and various bridge rehabilitation projects. Over the long term the area would also be impacted by a Lander Street Overpass project and I-5 repair and repaving.

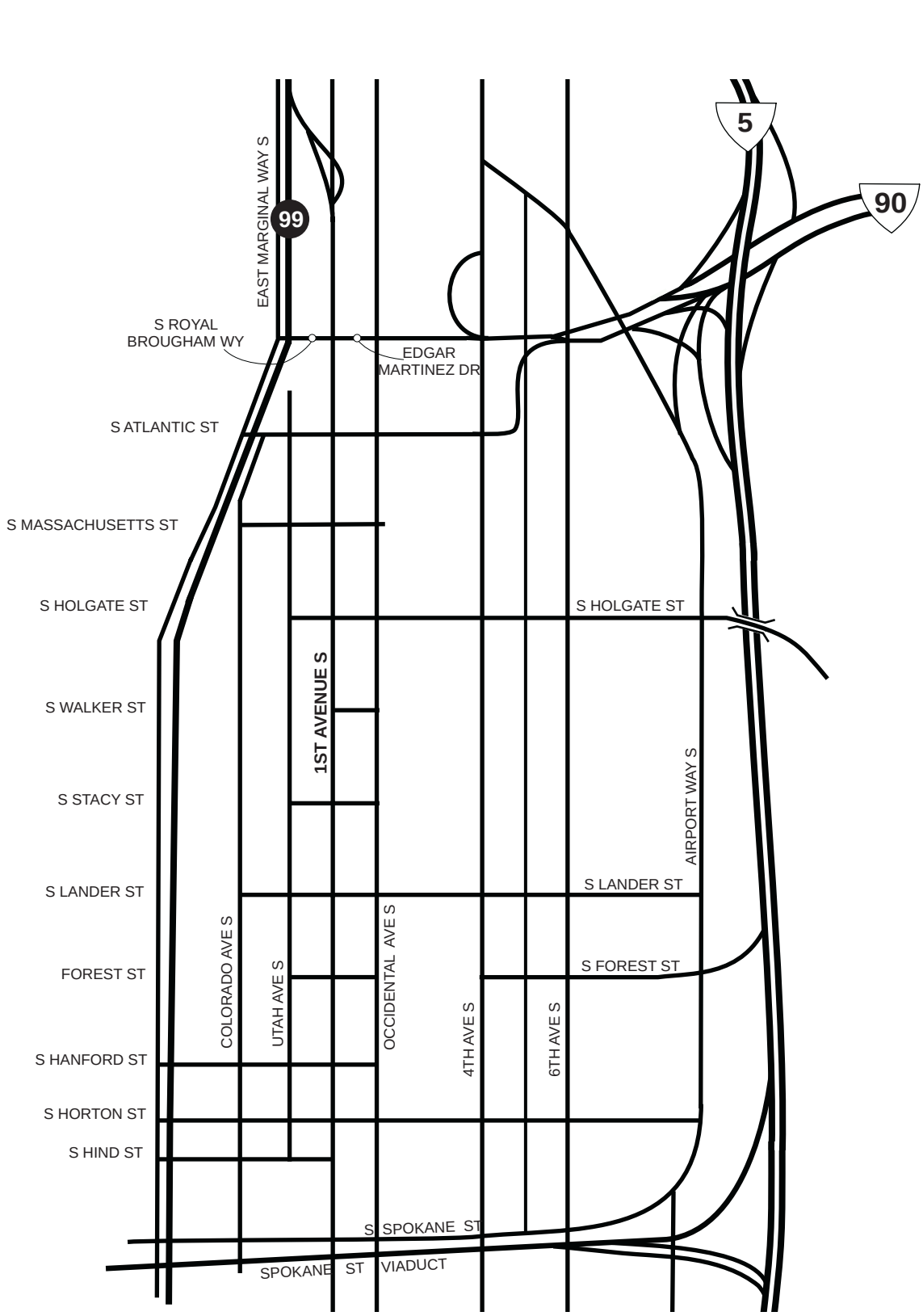
To address these critical issues, the business community formed the Duwamish Multi-Modal Advisory Coalition (DMMAC). Members of the DMMAC are listed in Appendix A. The first project undertaken by the DMMAC was to reach consensus on potential improvements for the 1st Avenue S corridor between S Spokane Street and Royal Brougham Way. Funding for this project was obtained from the Small and Simple Projects grant from the City of Seattle Neighborhood Matching Fund Program.

The DMMAC met four times during the study. The meetings followed a sequential progression in order to reach a comprehensive set of recommendations for the corridor. The primary focus of each meeting is listed below.

Meeting #1: Existing Issues and Needs (April 2008)
Meeting #2: Initial Improvement Concepts (May 2008)
Meeting #3: Preliminary Recommendations (July 2008)
Meeting #4: Final Recommendations (September 2008)

The results of both the technical information prepared for the DMMAC and the transportation issues of concern raised by the DMMAC are presented in this report. The recommendations will be delivered to the Seattle Department of Transportation (SDOT) and the Seattle City Council.

The corridor study area extends from S Spokane Street to S Royal Brougham Way and includes Utah Avenue S and Occidental Avenue S. The corridor and vicinity is shown in Figure 1.



1st AVENUE S
Improvement Study

Figure 1

Vicinity Map

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07.14.08

2. EXISTING CONDITIONS AND NEEDS

A detailed street inventory was prepared to facilitate discussions with the DMMAC, and therefore includes features of concern expressed by the DMMAC. Examples include the poor definition of driveways and sidewalks, the underutilized two-way left turn lane, access and loading needs for industrial and manufacturing businesses, and lack of bicycle facilities. The street inventory is presented below followed by a summary of the DMMAC issues and needs.

2.1. Street Inventory

Heffron Transportation prepared a detailed inventory of all street features and land uses along 1st Avenue S. Detailed maps for ten segments are in Appendix B of this report. The existing right-of-way on 1st Avenue S between Royal Brougham Way and S Spokane Street is 100 feet, and the curb-to-curb width is 68 feet. The inventory identified all street features within the street right-of-way such as travel lanes, parking, active and inactive driveways, landscaping, sidewalks and bus stops. Land uses include industrial, manufacturing, wholesale and retail building supplies, the Starbuck's Center, and off-street parking lots. There is curb-side parking along much of 1st Avenue S, and most of it is signed with time limits for the duration that a vehicle can park. Parking is prohibited during the PM peak period southbound, beginning just north of S Hanford Street and extending to S Spokane Street. The curb space is actively used for load/unload activities by the industrial and manufacturing businesses and building supply stores.

2.2. Issues and Needs

This section includes a summary of the transportation issues and needs discussed at the first two DMMAC meetings. Photographs with examples are presented in Figure 2.

Traffic Operations, Safety, and Mobility

- The South Downtown (SODO) area needs enough routes to satisfy all modes and therefore reduce the need for 1st Avenue S to satisfy all the volume from all modes.
- Increasing traffic volumes and the resulting congestion are reducing mobility.
- The following three intersections on 1st Avenue S were identified as high priority for improving operations and safety: at S Atlantic Street, at S Lander Street, and at Spokane Street.
- The pavement on S Stacy Street east of 1st Avenue S needs to be replaced or improved.
- Truck mobility during construction of the many major projects in the vicinity is a concern. The DMMAC has limited knowledge of mitigation plans and needs to know in order to provide feedback to protect freight mobility.
- Conditions on Colorado Avenue S are terrible (poor pavement, narrow width). This is the main access to the North SIG Yard.
- Some businesses require both customer and truck access directly from 1st Avenue to function because access behind the business is restricted.
- Better signage is needed.

Pedestrian Conditions

- Improve pedestrian environment to encourage walking.
- Improve pedestrian safety including the "perception of safety" to encourage walking.
- Pedestrian safety is a major concern at 1st Avenue South and S Lander Street. Pedestrian safety is also a concern on 1st Avenue S at S Stacy Street and S Walker Street.
- Increasing traffic volume and congestion is a detriment to the pedestrian environment and safety.

Bicycle Movement

- Need better understanding of origins and destinations and preferred routes by bicycles in order to identify the more cost effective bicycle facility investments.

Transit Service

- There is a major concern with the reliability of transit. There is currently no east-west transit service in SODO, and the rail crossing of S Lander Street prevents this route from providing a reliable connection between 1st Avenue S and 4th Avenue S. In addition, buses on 1st Avenue are frequently off-schedule.
- The origin of many employees is not well served by transit on 1st Avenue S.
- Consider strategies to shift more drivers to transit to reduce traffic volumes on 1st Avenue S. Transit service solutions are needed to capture more riders.

Parking

- There is a lot of free and unorganized parking. Free parking encourages employees to drive to work.
- Unorganized and unofficial parking on the back side of buildings (along Occidental Avenue S and Utah Avenue S), restricts truck access to businesses.
- All available parking fills up during Stadium events. Businesses cannot function and parking takes away from serving customers.
- SDOT is considering transit -only lanes on 1st Avenue S, with peak period parking elimi-nated. Loss of on-street loading for some businesses would be a major concern. *Postscript:* SDOT will **not** implement those lanes in the short-term as part of the 1st Avenue S repaving project. They could be implemented in the long-term if and when transit service increases to warrant them.

Figure 2. Photos of Street Conditions – 1st Avenue South

Example of poor condition of sidewalk and driveways, including driveways no longer in use.

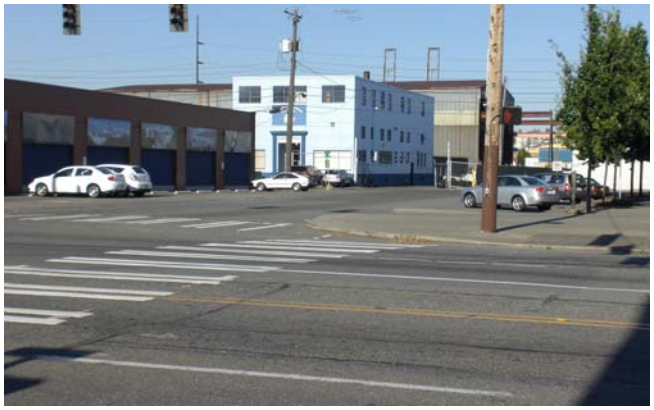
Typical Example of Driveway no longer in use.

East side of 1st Avenue S north of S Lander Street – example of parking outside of roadway.

Example of southbound car at S Lander Street stopped in crosswalk.

Example of vehicle in crosswalk with pedestrians.

Example of side street parking on S Forest Street, west leg.

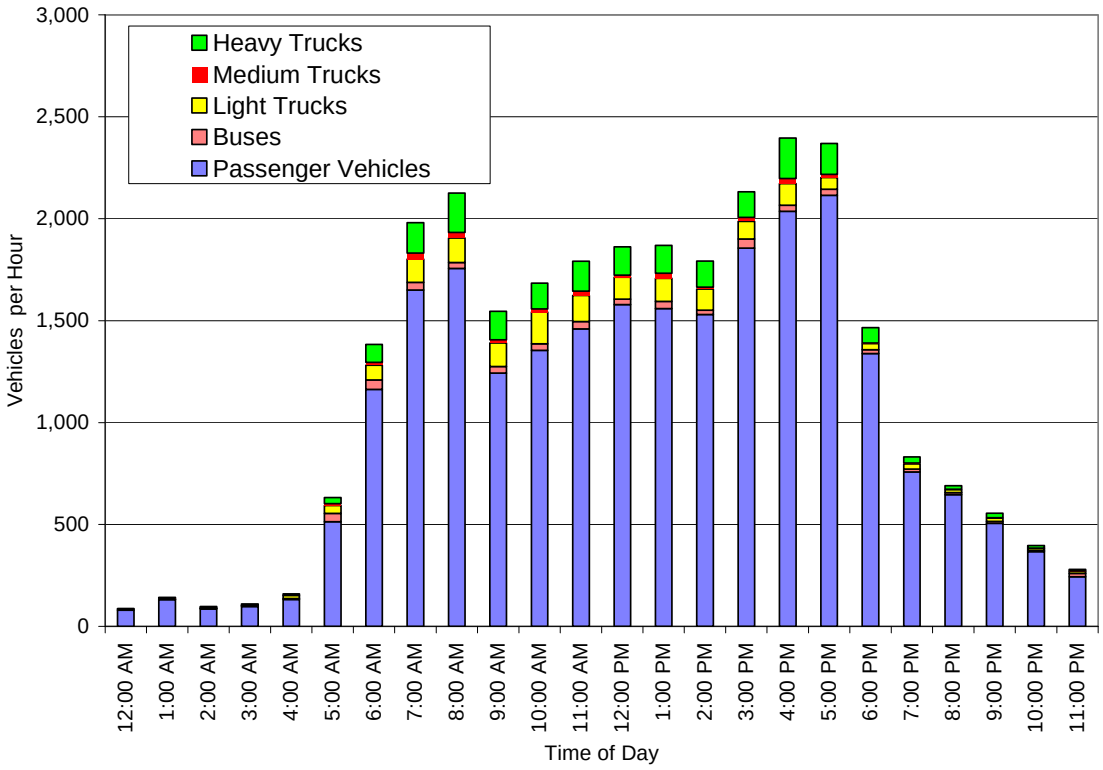


Source: Photos by Heffron Transportation, Inc., May, and July 2008.

2.3. Existing Traffic Volumes

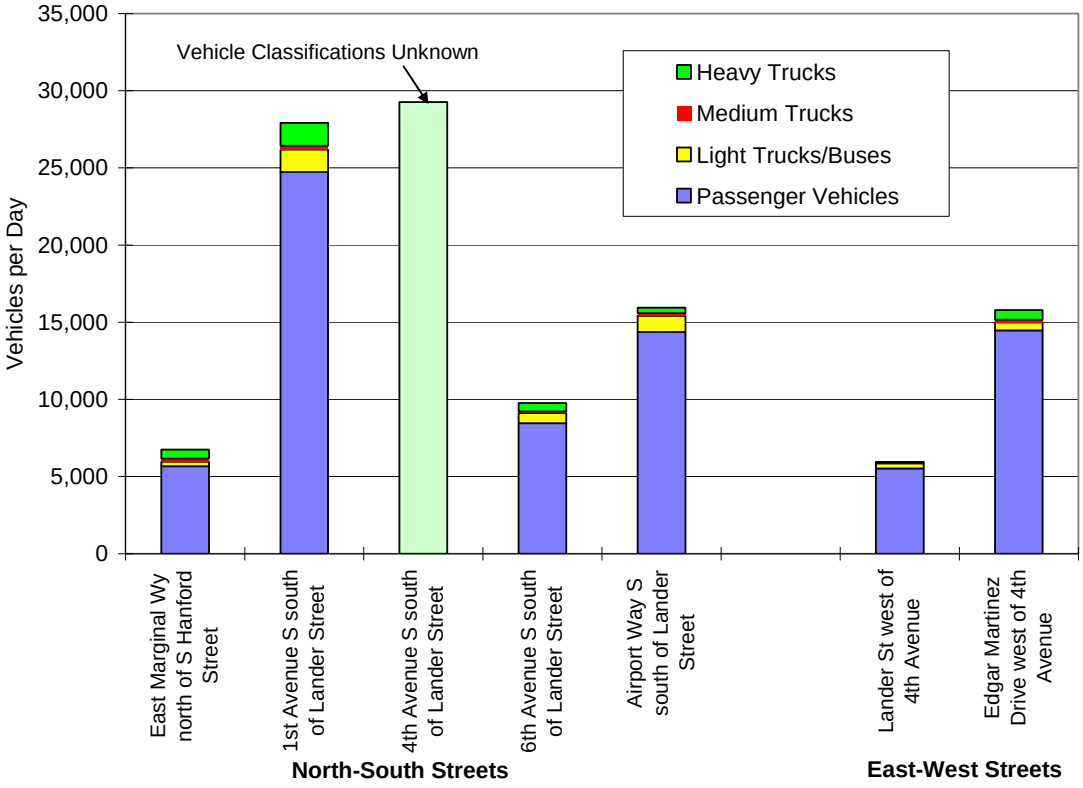
Hourly traffic volume data were obtained from SDOT on 1st Avenue S, south of S Lander Street and are presented in Figure 3. The hourly traffic volumes show both the AM and PM peak periods for commuter traffic as well as relatively high volume midday of industrial and manufacturing centers. Heavy trucks use 1st Avenue S during the both the midday and peak commute periods. Typically arterials show lower heavy vehicle volumes during peak commute periods than midday. Daily traffic volumes on 1st Avenue S relative to other streets in the vicinity are shown in Figure 4.

Figure 3. Existing (2007) Hourly Traffic Volumes on 1st Avenue S



Source: Count performed by Traffic Count Consultants, Inc., May 2007. Compiled by Heffron Transportation, Inc.

Figure 4. Comparison of Existing (2007) Daily Arterial Traffic Volumes

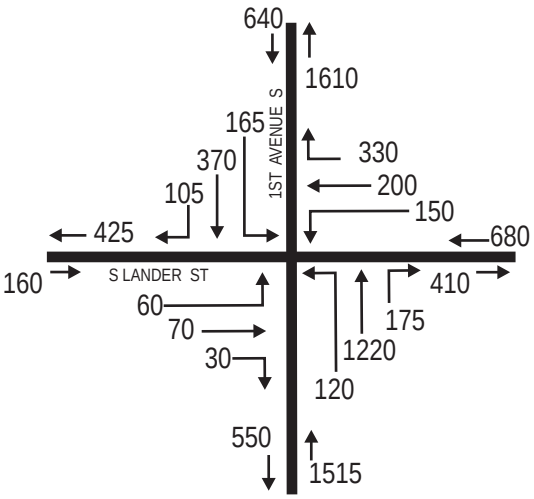


Source: Counts performed by Traffic Count Consultants, Inc , May and June 2007. Compiled by Heffron Transportation, Inc.

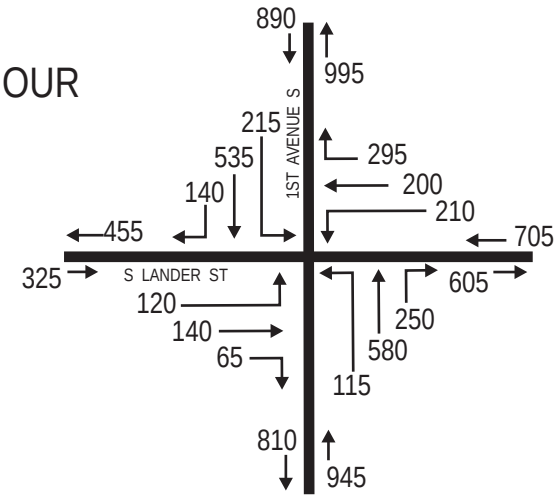
Hourly turning movement traffic volumes at the S Lander Street/1st Avenue S intersection were collected as part of the Lander Street Grade Separation project. The AM, midday, and PM peak hour traffic volumes are shown in Figure 5. This is the highest volume intersection on 1st Avenue S between S Atlantic Street and S Spokane Street. During all three peak periods, the highest conflicting movements, also called the "critical movements" at an intersection because these movements dictate the signal timing. The critical movements are the northbound through movement and the southbound left turn movement from 1st Avenue to eastbound Lander Street.

N

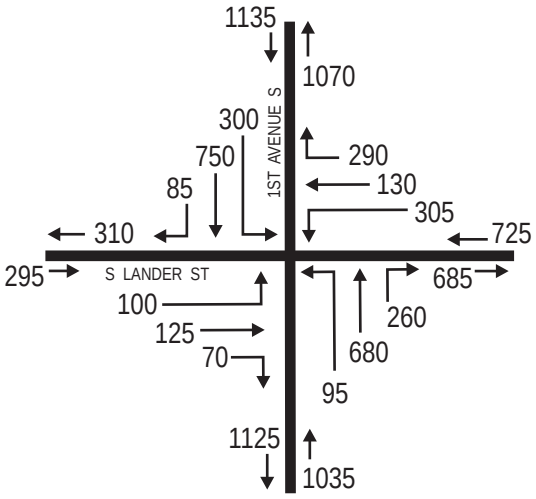
AM PEAK HOUR



MIDDAY PEAK HOUR



PM PEAK HOUR



Source: *South Lander Street Grade Separation Project, Transportation Technical Report*, Heffron Transportation, Inc., January 30, 2008.

1st AVENUE S Improvement Study

Figure 5
Existing (2007) Peak Hour Traffic Volumes
at the S Lander Street/1st Avenue S Intersection

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09.24.08

2.4. Transit Service and Bus Stop Locations

There are nine King County Metro bus routes on 1st Avenue S. Routes 21 and 22 provide service from Roxhill and White Center to North Downtown. Route 35 provides service from Harbor Island to North Downtown via 4th Avenue S, 1st Avenue S, and S Lander Street. Routes 56 and 57 provide service from West Seattle to Downtown with Alaskan Way Viaduct express service. Routes 116, 118, and 119 provide service from Vashon Island to North downtown. Route 132 provides limited service from Des Moines and Highline Community College to North Downtown. Bus routes on 1st Avenue S carry a mix of commuters going through SODO as well as with destinations within SODO.

There are seven bus stops in each direction along this approximately 1.43-mile section, from S Spokane Street to S Royal Brougham Way. The average bus stop spacing is 0.20 miles. This compares to Metro's minimum standard that all bus stops be located such that any walk distance to a bus stop is no more than 0.25 miles. Bus stops could be up to 0.50 miles apart to meet this standard. Closely spaced bus stops result in significant delay to bus travel times.

According to model data from the Puget Sound Regional Council (PSRC), transit carries approximately 19% of all trips to SODO. Table 1 shows the split in transit versus vehicle trips.

Table 1. SODO Daily Vehicle and Transit Trips (2006)

Mode	To SODO
Transit	12,180
Vehicle	50,670
Total	62,850
Percent Transit	19%

Source: Puget Sound Regional Council Emme2 Model, May 2007. Includes all daily transit trips from King, Pierce, Snohomish, and Kitsap Counties plus external to these counties.

2.5. Traffic Collision History

Collision data for study area intersections and street segments on 1st Avenue S were obtained from Seattle Department of Transportation (SDOT). These data were examined to determine if there are any traffic safety conditions that could be addressed with improvements to 1st Avenue S. The City of Seattle collision data reflect the period between January 1, 2003 and March 12, 2008 (a little over five years). Intersection collision data are summarized in Table 3 and roadway segment collision data are summarized in Table 4.

Table 2. Collision Summary at Intersections (January 1, 2003 – March 12, 2008)

Intersection With 1st Avenue S	Rear End	Side-Swipe	Right Turn	Left Turn	Right Angle	Ped/ Bicyclist [1]	Other [2]	Total for 5.3 Years	Avg/ Year
Signalized Intersections									
S Royal Brougham Way	1	6	0	3	1	4PX/1BX	0	16	3.0
S Atlantic St	3	2	1	23	1	1PX	5	36	6.8
S Holgate St	0	2	1	1	2	1PS	0	7	1.3
S Stacy St	0	0	0	0	2	1PX	1	4	0.8
S Lander St	1	3	0	11	4	2PX	0	21	4.0
S Forest St	0	0	0	0	0	0	1	1	0.2
S Hanford St	0	7	0	1	1	1PX	0	10	1.9
S Horton St	1	0	0	0	2	0	1	4	0.8
S Spokane St (westbound roadway)	2	2	0	2	8	1PX	2	17	3.2
S Spokane St (eastbound roadway)	1	18 [3]	0	0	14	0	24 [c]	57	10.8
Unsignalized Intersections									
S Massachusetts St	1	1	0	1	3	1PNX	0	7	1.3
S Walker St	2	0	0	0	1	0	1	4	0.8
S Hinds St	0	1	0	1	0	0	0	2	0.4

Source: City of Seattle Department of Transportation, March 2008.

1. *PX = pedestrian in crosswalk, BX = bicyclist in crosswalk, PS = pedestrian standing, PNX = pedestrian crossing at an unmarked crosswalk.*
2. *"'Other" collisions includes vehicles making illegal maneuvers, vehicles overturning or spun out, vehicle hitting object either on or off the roadway or moving vehicle hitting a parked car.*
3. *At this intersection 15 of the 18 sideswipe collisions and all of the 'Other' collisions appear to involve illegal right or left turns. At this intersection there are four eastbound travel lanes. Two of the lanes originate from the Spokane Street viaduct off-ramp and two of the lanes originate from the Spokane Street south roadway.*

The highest collision rate occurred on the south roadway of S Spokane Street where the number of collisions average 10.8 per year. The SDOT considers 10 collisions per year at an intersection as a high collision location. At this intersection, 15 of the 18 collisions were sideswipes and all of the other collisions appear to involve illegal right or left turns. This is likely due to the unusual lane configuration where four lanes come together: two lanes originate from the Spokane Street viaduct off-ramp and two lanes originate from the Spokane Street south roadway. On the south Spokane Street north roadway, four of the seventeen collisions involved vehicles traveling eastbound, against the one-way westbound traffic flow.

The highest number of pedestrian collisions occurred at S Royal Brougham Way, followed by S Lander Street. There was one pedestrian collision at S Massachusetts Avenue in 2006 that was a pedestrian crossing without a marked crosswalk.

Table 3. Collision Summary by Street Segment (January 1, 2003 – March 12, 2008)

Street Segment Along 1st Avenue S	Head-On	Rear-End	Side-Swipe	Right Turn	Left Turn	Right Angle	Pedestrian or Bicyclist[1]	Parked Vehicle	Object	Other[2]	Total for 5.3 Years	Average Per Year
Royal Brougham Way and S Atlantic St	1	12	7	0	3	2	2PS	2	1	2	32	6.0
S Atlantic St and S Massachusetts St	0	3	7	0	1	1	1PX	3	0	1	17	3.2
S Massachusetts St and S Holgate St	0	7	0	0	1	1	2PS/1OR	6	2	1	21	4.0
S Holgate St and S Walker St	1	2	5	0	1	0	0	5	0	0	14	2.6
S Walker St and S Stacy St	0	6	1	0	0	1	0	1	1	1	11	2.1
S Stacy St and S Lander St	0	3	4	1	0	2	0	5	0	4	19	3.6
S Lander St and S Forest St	0	3	9	0	4	1	1	0	0	0	18	3.4
S Forest St and S Hanford St	0	0	0	0	0	0	0	3	0	0	3	0.6
S Hanford St and S Horton St	0	6	4	0	0	1	0	1	0	0	12	2.3
S Horton St and S Hinds St	0	3	2	0	1	0	0	0	2	0	8	1.5
S Hinds St and S Spokane NR St	1	4	9	1	5	5	1PS	0	2	2	29	5.5
Spokane St NR and Spokane St SR	0	0	1	0	1	0	0	0	1	0	3	0.6

Source: City of Seattle Department of Transportation, March 2008

1. *PX = pedestrian in crosswalk, CX = bicyclist in crosswalk, PS = pedestrian standing, PMX = pedestrian crossing at an unmarked crosswalk, OR = bicyclist off road.*
2. *"Other" collisions includes vehicles making illegal maneuvers, vehicles overturning or spun out, or no diagram included with collision report.*

The highest collision rate for a street segment was 6.0 collisions per year between S Royal Brougham Way and S Atlantic Street. Most of these collisions were sideswipes. The next highest rate was 5.5 collisions per year between S Hinds Street and the S Spokane Street on the north roadway. Most of these collisions were also sideswipes.

Field observations were performed at 1st Avenue S and S Landers Street during the morning commute to identify sources of vehicle/pedestrian conflict so that safety counter measures could be recommended. The following pedestrian safety concerns were observed.

- Many vehicles entered the intersection at the end of the yellow phase and were still within the intersection when the signal turned red.

- The highest volume of pedestrians was observed in the morning crossing westbound across the north leg of 1st Avenue S. This flow likely reverses to eastbound during the afternoon due to the location of the Starbucks Center.

- Most right turning vehicles made a rolling stop at all corners. Thus, many vehicles were within the crosswalk at the same time as pedestrians.

- The westbound right turning motorist attempted to complete the right as soon as possible, inching out around the westbound pedestrian and violating RCW 46.61.235.[1]

- Some pedestrians were observed crossing S Lander Street when vehicles on 1st Avenue S had a green arrow for a left turn. The pedestrians had a Do Not Cross signal, but appeared confused as to why the walk phase was not displayed when there was apparently no east-west through traffic.

3. FRAMEWORK FOR IMPROVEMENTS

Any changes to the 1st Avenue S corridor must consider a complex array of plans, programs, near term and long term projects, and transit plans. The DMMAC's recommendations fit within the framework of the City's adopted street classifications as well as King County Metro's transit plans. Both of these are described below.

The community will be impacted by a number of major transportation construction projects slated for the Duwamish area in the next decade including the 1st Avenue S Paving projects, the Spokane Street Viaduct reconstruction, the Alaskan Way Viaduct replacement, SR 519 Phase 2, and various bridge rehabilitation projects. Over the long term the area would also be impacted by a Lander Street Overpass project and I-5 repair and repaving. The DMMAC also considered the needs and potential impacts of these other projects in its recommendation.

3.1. Street Classifications

1st Avenue S is a Principal Arterial and serves both local and through traffic associated with industrial and manufacturing businesses, the Port of Seattle and supporting businesses, commuters to SODO and downtown, local retail and wholesale customers, buses, pedestrians, and bicyclists. The parallel streets of Utah Avenue S to the west and Occidental Avenue S to the east provide some local circulation function for the neighborhood, but do not serve much, if any, through traffic due to their lack of continuity north and south of the neighborhood and extremely poor condition.

There area six other north-south arterials in the SODO district. The street classification for 1st Avenue S and the other north-south arterials is summarized in Table 4. The City of Seattle's street classification systems identifies a hierarchy for each street based on the need to serve all modes of traffic.

1. Revised Code of Washington (RCW) 46.61.235. The operator of an approaching vehicle shall stop and remain stopped to allow a pedestrian or bicycle to cross the roadway within an unmarked or marked crosswalk when the pedestrian or bicycle is upon or within one lane of the half of the roadway upon which the vehicle is traveling or onto which it is turning. For purposes of this section "half of the roadway" means all traffic lanes carrying traffic on one direction of travel, and includes the entire width of a one-way roadway.

Table 4. SODO North-South Street Designation

Arterial	Arterial Classification[1]	Freight Classification[2]	Annual Tonnage Class[3]	Transit Classification[4]	Current Peak Bus Headways[5]	Bicycle Facility Recommendation[6]
SR 99	Principal	Major Truck Street	T3: 300 to 4,000	Major Transit Street	4 at 9-15 minutes 3 at 20-24 minutes 1 at 30 mintues[5a]	Existing Bike lane overlaid with Signed Bike Route plus project #70
East Marginal Way	Minor	Major Truck Street	T1: over 10,000	Minor Transit Street	none	Not classified
1st Avenue S	Principal	Major Truck Street	T2: 4,000 to 10,000	Major Transit Street	7 at 30 minutes 1 at 60 minutes	Sharrow (wide lane shared with vehicles)
4th Avenue S	Principal	Major Truck Street	T1: over 10,000	Principal Transit Street	4 at 30 minutes 1 at 15-20 minutes	Not classified
E3 Busway	Not classified	Not Classified	Not Classified	Local Transit Street	4 at 5-30 minutes	Existing multi-use trail over-laid and Signed Bike Route[6a]
6th Avenue S	Minor	Major Truck Street	T3: 300 to 4,000	Local Transit Street north of Holgate	(routes north of Holgate)	Bicycle Lane
Airport Way South	Principal	Major Truck Street	T1: over 10,000	Major Transit Street	1 at 30 minutes 2 at 60 minutes	Further study needed

1. *Seattle Arterial Classifications Planning Map, December 22, 2003.*
2. *Freight Mobility Strategic Action Plan, SDOT, June 2005, page 11.*
3. *Annual tonnage class per SDOT Freight and Goods Transportation System map, Roadway 2007, Washington State Department of Transportation*
4. *Seattle Transit Classifications map, 2006*
5. *King County Metro Service Planning May 2008. 5a) Estimated from Metro Schedules.*
6. *Seattle Bicycle Master Plan. Project #27 is acquisition of abandoned railroad right-of-way to continue existing E-3 Busway Trail south between S Forest Street and Spokane Street.*

3.2. SDOT - 1st Avenue S Paving Project

SDOT plans to repave 1st Avenue S as part of its *Bridging the Gap* program. This will be completed in three phases. The first phase, started in 2008, will repave the segment between S Dearborn and S Stacy Streets. This same phase includes paving south of S Spokane Street to East Marginal Way S. The second phase, scheduled for 2009, would repave the segment between S Stacy Street and S Horton Street. This segment requires complete reconstruction (including removal of the subsurface) to address structural, drainage, and severe crown issues. The third and final phase will repave the segment between S Horton Street and S Spokane Street. This is scheduled to occur in 2009-2011 with construction of the Spokane Street Viaduct improvements.

During the first phase of repaving, much of the work will occur at night and traffic impacts would be minimal. However, during Phase 2 when full reconstruction of the street is required, there will be severe impacts during construction with lane closures that would occur during daytime hours. It is expected that there will be two northbound lanes and one southbound lane from approximately January to July. Overall construction could last for 10 to 11 months, but SDOT is attempting to shorten construction to six months.

The repaving project will not change the curb to curb width or lane configuration on this street. The width will remain at 68 feet and lanes will be restriped as they are today. SDOT will add "sharrows" in the curb lanes to indicate that these lanes should be shared with bicyclists. SDOT did consider striping transit lanes on 1st Avenue S; however, it was determined that the existing transit volumes are not high enough to warrant such lanes. SDOT would reconsider the need for transit lanes in the future if and when transit volumes increase, or as a temporary measure to accommodate detoured transit during Alaskan Way Viaduct reconstruction. If transit lanes are striped, operation of them must consider the loading needs for businesses that front 1st Avenue S. The DMMAC noted that two businesses – O.B. Williams and Millwork Supply – have their only viable access from 1st Avenue S.

3.3. King County Metro - Transit Enhancements

King County Metro is planning to relocate and consolidate transit stops on 1st Avenue S in conjunction with both the 1st Avenue S repaving project and Spokane Street Viaduct project. In addition, service changes are being planned to coordinate with the opening of Sound Transit's Link Light Rail Transit (LINK). These elements are described below.

Bus Stop Consolidation

There are seven bus stops in each direction along this approximately 1.43-mile section, from S Spokane Street to S Royal Brougham Way. The average bus stop spacing is 0.20 miles. This compares to Metro's minimum standard that all bus stops be located such that any walk distance to a bus stop is no more than 0.25 miles. Bus stops could be up to 0.50 miles apart to meet this standard. Closely spaced bus stops result in significant delay to bus travel times due to the dwell time at each stop.

Metro has evaluated the bus stops along 1st Avenue S and proposes the following changes:

- Close the southbound stop just north of S Spokane Street when the new on-ramp from 1st Avenue S to the Spokane Street Viaduct is complete. The new ramp will extend north to S Hinds Street and be accessed from the center lane on 1st Avenue S. This particular stop is too far south to serve buses destined to West Seattle.

- Add a pair of new stops at S Hanford Street. These will better serve buses destined to West Seattle.
- Remove southbound stop south of S Forest Street. This will be replaced with new stops located north and south.
- Add a southbound stop just south of S Lander Street creating a pair of stops.
- Remove the pair of stops at S Walker Street that have very low usage.

The DMMAC noted that it is important to locate transit stops at streets that provide the east-west connections across the BNSF Railways mainline tracks. In addition, pedestrian improvements on S Lander Street, including the future grade-separation, are very important to connect the 1st Avenue S corridor with the LINK station at S Lander Street.

Link Light Rail Transit (LINK) Service Integration and Rapid Ride

Sound Transit's LINK will have station at S Royal Brougham Way and at S Lander Street. Metro will restructure routes to serve the LINK stations and increase efficiency and ridership on existing routes. The community process for service changes will begin in September 2008 with two community outreach meetings in September and October and two meetings in the winter of 2009. Service changes will occur in September 2009 and February 2010.

Metro is considering opportunities to improve east-west service from the Rainier Valley to SODO and to West Seattle. With service changes Metro can improve connections to LINK and improve service to other areas of SODO, for example Airport Way S.

Planning for the West Seattle and Ballard *Rapid Ride* service is underway. *Rapid Ride* was approved by voters in 2006 as part of King County Metro's *Transit Now* program, and is proposed to provide higher capacity and more frequent service along three major corridors: Ballard, West Seattle, and Aurora. It is likely that the West Seattle route will use the West Seattle Bridge and SR 99/Alaskan Way Viaduct to access downtown Seattle. Therefore, it would bypass SODO.

3.4. Major Construction Projects

Discussion of 1st Avenue S inevitably leads to discussion of major construction projects on the horizon. At issue are the potential impacts that construction of these other projects could have along 1st Avenue S. At the same time, project construction mitigation may also provide opportunities for improvements. The DMMAC is most concerned about the three largest projects: SR 519 Phase II, Alaskan Way Viaduct, and the Spokane Street Viaduct. These are briefly described below.

SR 519 Phase II
This project, scheduled to begin construction in 2008, would add lanes to the 1st Avenue S/Edgar Martinez Drive/Atlantic Street intersection, add an eastbound off-ramp from I-90 to Edgar Martinez Drive, and build a new grade-separated roadway on Royal Brougham Way.

Alaskan Way Viaduct
Construction of the South End improvements to the Alaskan Way Viaduct began in 2008 with utility relocation. The project will remove the Viaduct sections south of about S King Street, construct a new railroad grade-separation at S Atlantic Street, and provide a truck bypass route of the railroad tracks.

Planning for the central section of the Viaduct continues. As of September 2008, there are eight alternatives with mix-and-match components being considered by the Tri-Agency project partners: WSDOT, SDOT, and King County Metro. A preferred alternative is scheduled to be selected by the end of this year.

The removal of the viaduct also equates to a loss of 1,400 parking spaces under the Alaskan Way Viaduct, either during construction or permanently. This loss of spaces would increase parking demand in the SODO area.

4. RECOMMENDED IMPROVEMENTS

The 1st Avenue S plan includes a comprehensive package of recommendations for improved mobility of through and local traffic. The recommendations consider the complex issues associated with a multi-modal system of cars, trucks, buses, bicycles and pedestrians. Additionally, all improvements are consistent with SDOT plans and policies based on street classifications along for the 1st Avenue S corridor. Improvements on 1st Avenue S include recommendations for bus stop relocations, sidewalks, bicycle facilities, transit service, parking, and freight mobility. However, in the long term, mobility would be maximized on 1st Avenue S with improvement of the cross streets and parallel streets of Utah Avenue S and Occidental Avenue S. The improvements to these streets are also addressed below. All projects are recommended in phases – short term (within the next 5 years), medium term (5 to 10 years), and long term (10+ years). Finally, the 1st Avenue S recommendations address mobility management during construction of major project that would affect the neighborhood.

4.1. 1st Avenue S Lane Configuration

Short term (Within next 5 years):

a. Restripe lanes the same as the existing configuration when SDOT completes the 1st Avenue S paving project. The cross section has a center two-way left-turn lane with turn pockets at the intersections, two through lanes in each direction, a bicycle "sharrow," and parking lanes.

Medium term (5 to 10 years):

b. As properties redevelop along 1st Avenue S, relocate driveways to side streets or on Occidental Avenue S and Utah Avenue S. Close driveways no longer in use along 1st Avenue S, which would allow removal of the center two-way left turn lane between intersections. Widen the travel lanes when center two-way left turn lane is removed.

c. Continue to review and improve signal coordination along 1st Avenue S, providing priority to 1st Avenue S traffic and movements to major cross streets such as S Lander Street.

Long term (10+ years):

d. Reconfigure the section of 1st Avenue S between S Lander Street and S Spokane Street to include Business Access and Transit (BAT) Lanes in both directions when S Lander Street grade-separation project is complete. This would likely require removal of the center, two-way left turn lane to provide a widened transit lane through this section. These BAT lanes would serve increased transit

e. Reconfigure 1st Avenue S between S Lander Street and S Atlantic Street to include a BAT lane in both directions if and when transit volumes on 1st Avenue S north of S Lander Street increase to a level that could justify a BAT lane (estimated to be a minimum of 15 to 20 buses per hour).

4.2. 1st Avenue S Bus Stop Relocation

Short term:

a. Metro desires to consolidate and organize the bus stops along 1st Avenue S. In addition, the proposed new ramps to and from the Spokane Street Viaduct will require removal of the southbound existing bus stop located between S Hinds Street and S Spokane Street. The existing and proposed bus stop locations are shown on Figure 6.

b. Metro plans to add shelters to bus stops between S Lander Street and S Spokane Street in conjunction with bus stop consolidation.

Long term:

c. Add a stop for southbound buses on the south side of S Lander Street when the S Lander Street Grade-Separation project is complete. It is assumed that Metro would add substantial bus traffic to S Lander Street when it is grade-separated from the railroad tracks as this provides a needed east-west connection between the Spokane Street Viaduct and the LINK station at S Lander Street. The stops located just south of S Lander Street could serve routes along both 1st Avenue S as well as those that turn to S Lander Street. Because the S Lander Street Grade Separation Project includes a dual westbound left turn lane at 1st Avenue S, adding the stop south of S Lander Street would require additional right-of-way on 1st Avenue S.

4.3. Utah Avenue S

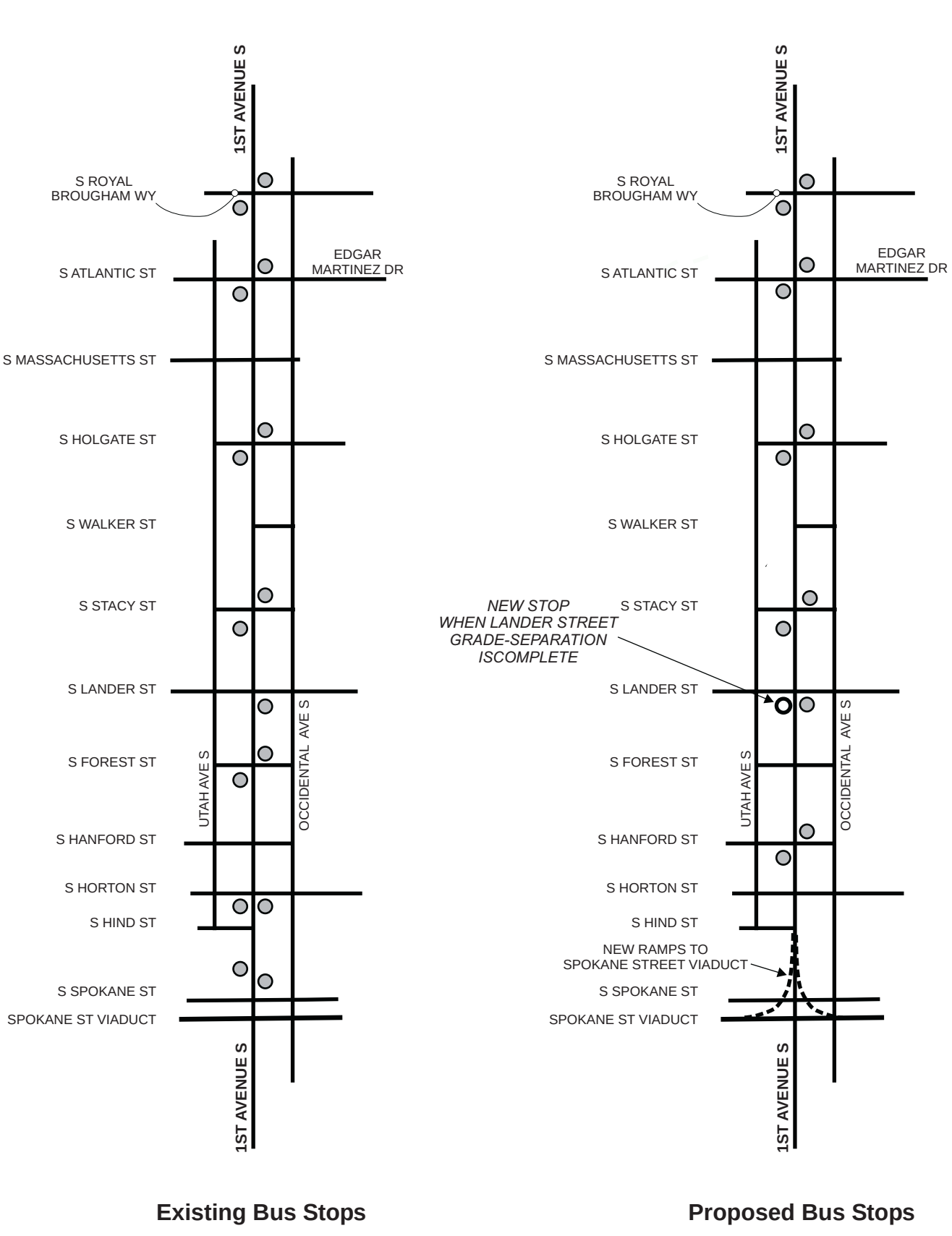
Short term:

a. Convert the section of Utah Avenue S between S Lander Street and S Forest Street from one-way (currently northbound only) to a two-way street. This one-way restriction is currently not obeyed and is unnecessary.

b. Remove abandoned rail tracks where possible. If removal is not possible, improve pavement at crossings to reduce potential "tripping" hazard for bicycles.

Medium term:

c. Prepare a street master plan for Utah Avenue S to guide improvements that could be made as properties redevelop. The master plan should establish the desired roadway cross-section, pedestrian walkway, and bicycle treatments.



1st AVENUE S Improvement Study

Figure 6
Existing and Proposed
Bus Stop Locations

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d. As part of the Street Master Plan, consider Utah Avenue S as an alternative bicycle and walking route to 1st Avenue S. Much of the length of Utah Avenue S is fenced on the west side (adjacent to the BNSF Railyard). A bicycle path could be developed along the length of this fence that has no conflicts with crossing traffic. Lighting and pavement would need to be improved and parking organized to accommodate bicycles and pedestrians.

e. Organize the haphazard parking and loading areas along the street. Prohibit parking in areas where it can block access to business loading docks.

Long term:

f. Improve the street pavement.

g. Implement the street master plan as new developments occurs.

4.4. Occidental Avenue S

Short term:

a. Organize the haphazard parking and loading areas along the street. Prohibit parking in areas where it can block access to business loading docks.

b. Prepare a street master plan for Occidental Avenue S to guide improvements that could be made as properties redevelop. The master plan should establish the desired roadway cross-section and pedestrian walkway treatments.

Medium term:

c. Implement the street master plan as new developments occurs. Establish public/private partnership to extend pavement improvements beyond the project frontage limits. Consider the special needs of pedestrian traffic at the north end of the corridor near the stadiums.

Long term:

d. Improve Occidental Avenue S between S Stacy Street and S Forest Street as part of the S Lander Street Grade-Separation project. Improvements will be needed to provide access to local businesses because the S Lander Street project would eliminate the connection to Occidental Avenue S.

4.5. Side Streets

Short term:

a. Test vehicle detection loops on side streets to ensure all are functioning. If broken, the signal phase for side-street traffic will actuate for every cycle, even when vehicles are not present. Replace malfunctioning loops or install video detection equipment where needed.

Medium term:

b. Ensure that side street parking areas are preserved. Prioritize pavement rehabilitation projects on side streets to improve and encourage local circulation on Occidental Avenue S and Utah Avenue S.

Long term:

c. Do not close S Holgate Street to vehicular traffic between 1st and 4th Avenues S.

d. Improve S Stacy Street and S Forest Street between Occidental Avenue S and 1st Avenue S as part of the S Lander Street Grade-Separation project. Improvements will be needed to provide access to local businesses because the S Lander Street project would eliminate the connection to Occidental Avenue S.

e. Improve side-street parking with implementation of future BAT lanes (see Item 1.c. and 1.d.) to mitigate loss of on-street parking. Reconstruct and/or repave side streets.

4.6. Pedestrian Facilities

Short term:

a. The sidewalks on 1st Avenue S will be rehabilitated and/or reconstructed as part of the 1st Avenue S paving project.

b. Improve the pedestrian walkway and pedestrian lighting along S Lander Street, which will be the primary route to the LINK station. The walkway on the north side of the street would be the highest priority because it is proximity to the largest employment centers (Starbucks Center and the Seattle School District Headquarters). This project is needed because of the delay in the S Lander Street Grade-Separation project.

c. Improve pedestrian safety at the S Lander Street/1st Avenue S intersection with the following measures:

- Install red-light-running cameras.
- Widen sidewalk on north side of S Lander Street by narrowing the extra-wide westbound right turn lane and removing one parking space near the intersection.
- Increase enforcement of motorists that do not yield to on pedestrians in crosswalk.
- Educate drivers, including shuttle drivers to nearby businesses, regarding the law about yielding to pedestrians in a crosswalk.
- Install the sign “State Law STOP for Pedestrians within Crosswalk” (MUTCD R1-6a) to the westbound-to-northbound and southbound-to-westbound right turns.
- Consider experimental signage to educate drivers on when they must yield to pedestrians in a crosswalk.
- Move the stop bar for the westbound left turn back (to the east) to improve pedestrian visibility for motorists in the westbound right-turn-only lane.

d. Eliminate the marked crosswalk at S Massachusetts Street that is at an unsignalized intersection. This will not be repainted after the repaving project is complete.

e. Improve lighting at the S Lander Street intersection. Consider pedestrian-scale light fixtures at the intersection corners and increase brightness and coverage of overhead lighting.

f. Install pedestrian count-down signal heads.

g. Enhance pedestrian safety signage at the 1st Avenue S/S Lander Street intersection.

h. Improve pedestrian wayfinding to the LINK Station.

i. Identify and prioritize pedestrian improvements for SDOT grant programs.

Medium term:

j. Install a traffic signal at the intersection of 1st Avenue S/S Massachusetts Street with development of the Home Plate Parking site (located on west side of 1st Avenue S between S Atlantic and S Massachusetts Streets). Install crosswalks and pedestrian signals on all four legs of the intersection.

k. Consider a signal at the intersection of S Walker Street for pedestrian and vehicle traffic as new development occurs.

Long term:

l. Provide a grade-separated pedestrian crossing between 1st Avenue S and 4th Avenue S to improve pedestrian access to Sound Transit's LINK Station at S Lander Street. This could be provided by the S Lander Street Grade-Separation project.

4.7. Bicycle Facilities

Short term:

a. Improve wayfinding for bicyclists.

b. Add "sharrows" to the curb lane on 1st Avenue S. These will be added as part of the 1st Avenue S paving project. The sharrows will be located at the edge of the parking lane.

Medium term:

c. Evaluate Utah Avenue S as a bicycle corridor that could be an alternative route to 1st Avenue S. (See Item 3.c. above).

d. Designate Royal Brougham Way west of 4th Avenue S as the Mountains-to-Greenway trail route. The proposed overpass on this street, to be constructed as part of the SR 519 Phase II project, includes an extra-wide walkway for post-event traffic pedestrian surges. This could be shared with bicyclists.

4.8. Transit Service

Short term:

a. Provide east-west transit connection in the SODO neighborhood that connects the Starbucks Center to the Royal Brougham Way Sound Transit LINK Station via Edgar Martinez Drive.

b. Improve lighting at bus shelters.

c. Support Duwamish Transportation Management Association (TMA) efforts to reduce commuter trips in the neighborhood.

Medium term:

d. Consider changing the signal phasing at the intersection of 1st Avenue S/S Horton Street to provide for a southbound transit queue jump. This bus priority phase would improve the bus driver's ability to weave from the curb lane to the center lane and new ramp to the Spokane Street Viaduct.

e. Consider routing the West Seattle Rapid Ride to 1st Avenue S with a stop in the vicinity of S Lander Street.

Long term:

f. Divert transit routes to 1st Avenue S and S Lander Street to increase transit service to SODO when the S Lander Street Grade-Separation project is constructed.

4.9. Parking

Short term:

a. Study parking needs in SODO and the Duwamish Industrial Area, and determine potential parking improvements that could balance the needs of the area's employees, who need long-term parking, with retail/wholesale businesses, that need short-term customer parking. Consider new management measures that would allow long-term parking for area employees but discourage use of the area to support commuters to downtown Seattle.

Medium term:

b. When warranted, implement parking management measures along streets fronting retail uses, such as on 1st Avenue S, to increase turnover for customer parking. Potential strategies could include time limited parking (two or one-hour time limits), or installing parking pay stations to improve compliance with existing time limits.

c. When warranted, implement parking management measures in areas that are used for long-term employee parking. Consider new management measures that would allow long-term parking for area employees but discourage use of the area to support commuters to downtown Seattle. One possibility is to meter parking with a mid-term time limit (e.g., four to five hours), such as five hours, that begins later in the morning (e.g., 10:00 A.M.). Employees of traditional industrial businesses, who tend to work earlier shifts, could park for their workday, but it would not provide enough time for a downtown commuter.

d. Protect the Postal Service garage for SODO area parking by employees. Strategize mechanisms to retain this garage for public parking, and implement parking management measures that prioritize use for area employees to avoid use by commuters to downtown.

4.10. Freight Mobility

Short term:

a. Retain on-street truck loading zones on 1st Avenue S adjacent to industrial uses that have no loading alternatives. Examples include Millwork Supply and OB Williams Company.

b. SDOT will soon begin an analysis of several scenarios for the long-term operation of S Holgate Street in response to an anticipated increase in railroad traffic. The new study should evaluate the rail operating conditions to determine the growth in Amtrak and BNSF Railway traffic that would functionally close S Holgate Street, and investigate alternative switching patterns that could reduce blockages of S Holgate Street during daytime periods.

Long term:

c. Do not close S Holgate Street to vehicular traffic between 1st and 4th Avenues S.

d. Grade separate S Lander Street from the BNSF Railway's mainline tracks and spur tracks to the Allied Waste facility.

4.11. Construction Management

Short term:

a. Retain the SODO Community Liaison within Seattle Department of Transportation (SDOT) to be a "one stop shop" for troubleshooting construction-related issues for community members and businesses.

b. Complete the area-wide construction scheduling tool being developed by SDOT to track the many construction projects in the area. Conduct outreach to businesses in the neighborhood to inform about the use of this tool.

c. Extend the Traffic Management Task Force that was established for the SR 519 project. The intent is to integrate neighborhood knowledge into the construction traffic management planning. This same format should be used for other major projects such as the Viaduct South End Interchange and Spokane Street Viaduct once contractors for those projects are selected.

d. Maintain the SDOT Construction web page to include the latest construction traffic information. www.seattle.gov/transportation/sodo_construction.htm

e. Support Duwamish Transportation Management Association (TMA) efforts to reduce commuter trips in the neighborhood.

f. Promote the construction notification e-mail alerts that SDOT uses to disseminate real-time information related to construction impacts and incidents. Expand the number of businesses and individuals in the neighborhood that receive those alerts. Consolidate construction traffic information.

g. Provide alerts related to major construction closures or lane changes at least one month in advance of the occurrence. This allows businesses to plan for deliveries in the event that additional drivers or equipment are needed.

APPENDIX A
DUWAMISH MULTI-MODAL ADVISORY COMMITTEE MEMBERS

1) ***Transportation Choices Coalition*** *(non-profit representing commute alternative)*

2) ***Cascade Bicycle Club*** *(advocates for bicyclers in metropolitan Seattle)*

3) ***Feet First*** *(a non-profit pedestrian advocacy organization)*

4) ***MacMillan-Piper*** *(private business – trucking - container freight*)

5) ***Port of Seattle*** *(public agency concerned with freight movement, all modes)*

6) ***King County Department of Transportation - Metro****(transit agency – operations side)*

7) ***Starbucks Coffee*** *(large employer with HQ located at 1st & Lander)*

8) ***Western Neon*** *(small business located at 1st & Lander)*

9) ***Mariner****s (stadium large event interests)*

10) ***SODO Business Association*** *(local business organization with business representation)*

11) ***Manufacturing Industrial Council*** *(local business organization with industrial business representation)*

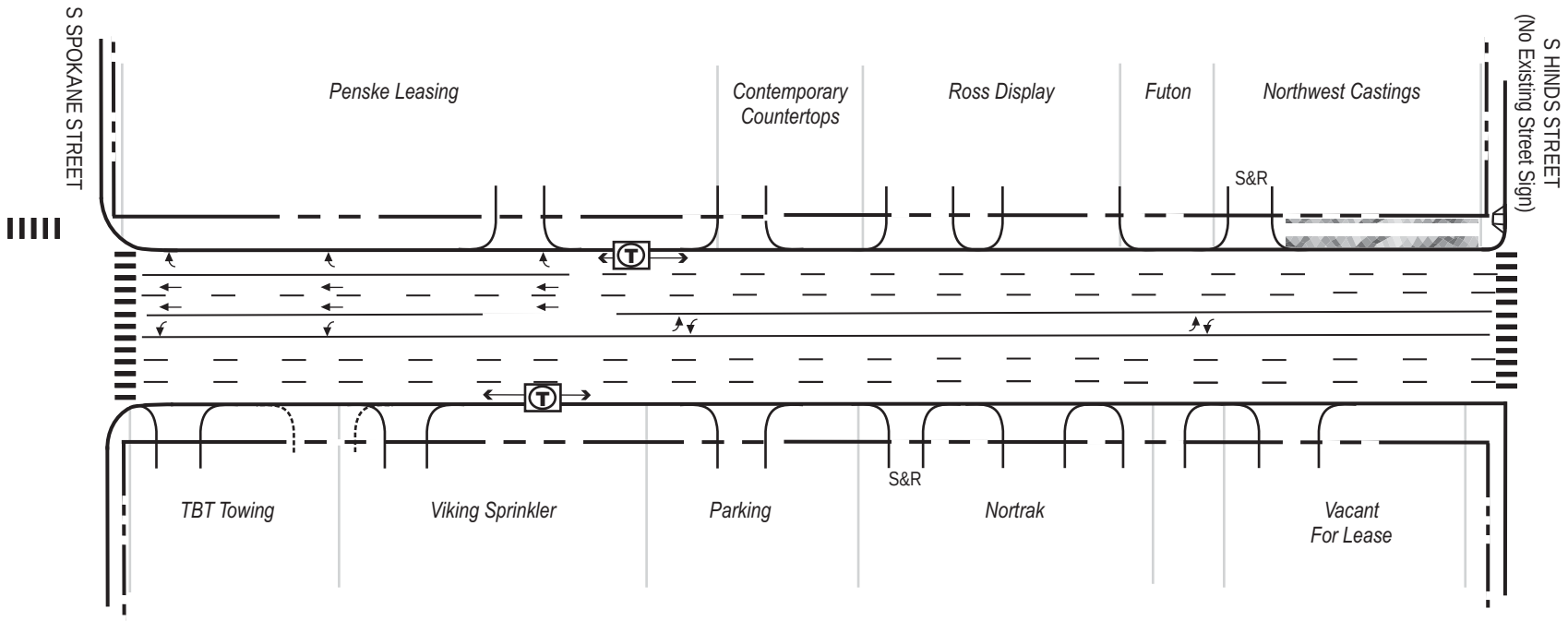
12) ***Seattle Dept of Transportation*** *– (Cristina VanValkenburgh, Policy and Plan Implementation Manager will attend)*

13) ***Qwest Field*** *(large events including trade shows w/ freight movement issues)*

14) ***SODO Retail Association*** *(retail trade and customer access to area)*

15) ***BNSF*** *(rail road operations)*

APPENDIX B
STREET INVENTORY MAPS



Notes:

- Curb to curb width is 68 feet throughout corridor.
- R-O-W width is 100 feet throughout corridor.

1. Sidewalks are in poor condition.
2. The driveway/curb definition is poor.

LEGEND

- Right-of-Way/Property Line
- Curb
- Commercial Property Line
- Landscape
- S&R — Shipping and Receiving
- Bike Rack
- Bus Stop
- Bus Stop w/Shelter
- Bus Zone
- Dwy Not-In-Use
- Dwy on Paint-Line But Does Not Exist
- P P P — Parking Unrestricted
- L/U L/U L/U — Load/Unload
- PHR PHR PHR — No Parking Between 3-7 pm
- 1P 1P 1P — 1 Hour Parking 7am To 6pm
- 2P 2P 2P — 2 Hour Parking 7am To 6pm
- 1PE 1PE 1PE or 2PE 2PE 2PE — 1 or 2 Hour Parking Except No Parking During Events

1st AVENUE S Improvement Study

Figure A

S Spokane Street to S Hinds Street

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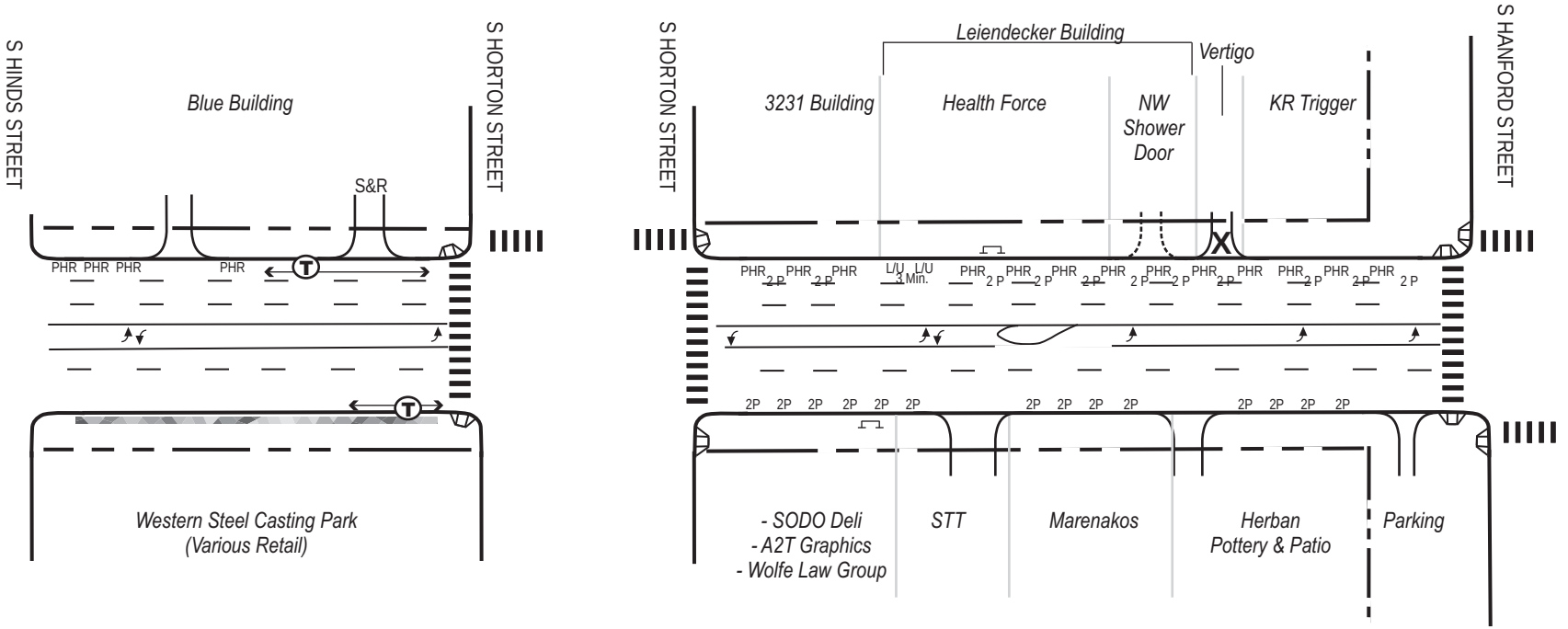

Notes:

1. PHR symbol combined with 2P symbol indicates restricted parking between 3-7 pm but 2 hour parking at all other times.

LEGEND

- Right-of-Way/Property Line
- Curb
- Commercial Property Line
- Landscape
- S&R — Shipping and Receiving
- Bike Rack
- Bus Stop
- Bus Stop w/Shelter
- Bus Zone
- Dwy Not-In-Use
- Dwy on Paint-Line But Does Not Exist
- P P P — Parking Unrestricted
- L/U L/U L/U — Load/Unload
- PHR PHR PHR — No Parking Between 3-7 pm
- 1P 1P 1P — 1 Hour Parking 7am To 6pm
- 2P 2P 2P — 2 Hour Parking 7am To 6pm
- 1PE 1PE 1PE or 2PE 2PE 2PE — 1 or 2 Hour Parking Except No Parking During Events

1st AVENUE S
Improvement Study

Figure B

S Hinds Street to S Horton Street and
S Horton Street to S to S Hanford Street

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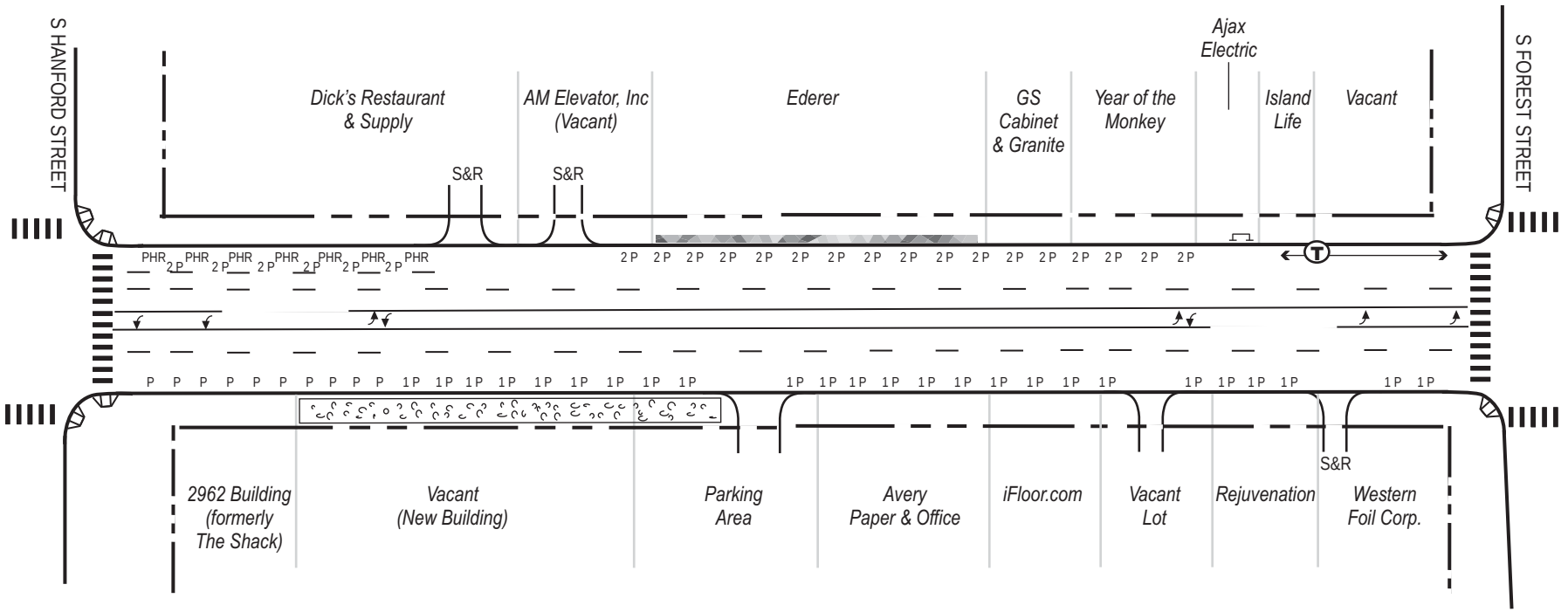

Notes:

1. New sidewalk along Vacant (New) Building frontage.
2. PHR symbol combined with 2P symbol indicates restricted parking between 3-7 pm but 2 hour parking at all other times.

LEGEND

Right-of-Way/Property Line	Bus Stop	P P P	Parking Unrestricted
Curb	Bus Stop w/Shelter	L/U L/U L/U	Load/Unload
Commercial Property Line	Bus Zone	PHR PHR PHR	No Parking Between 3-7 pm
Landscape	Dwy Not-In-Use	1P 1P 1P	1 Hour Parking 7am To 6pm
S&R Shipping and Receiving	Dwy on Paint-Line But Does Not Exist	2P 2P 2P	2 Hour Parking 7am To 6pm
Bike Rack		1PE 1PE 1PE or 2PE 2PE 2PE	1 or 2 Hour Parking Except No Parking During Events

1st AVENUE S Improvement Study

Figure C

S Hanford Street to S Forest Street

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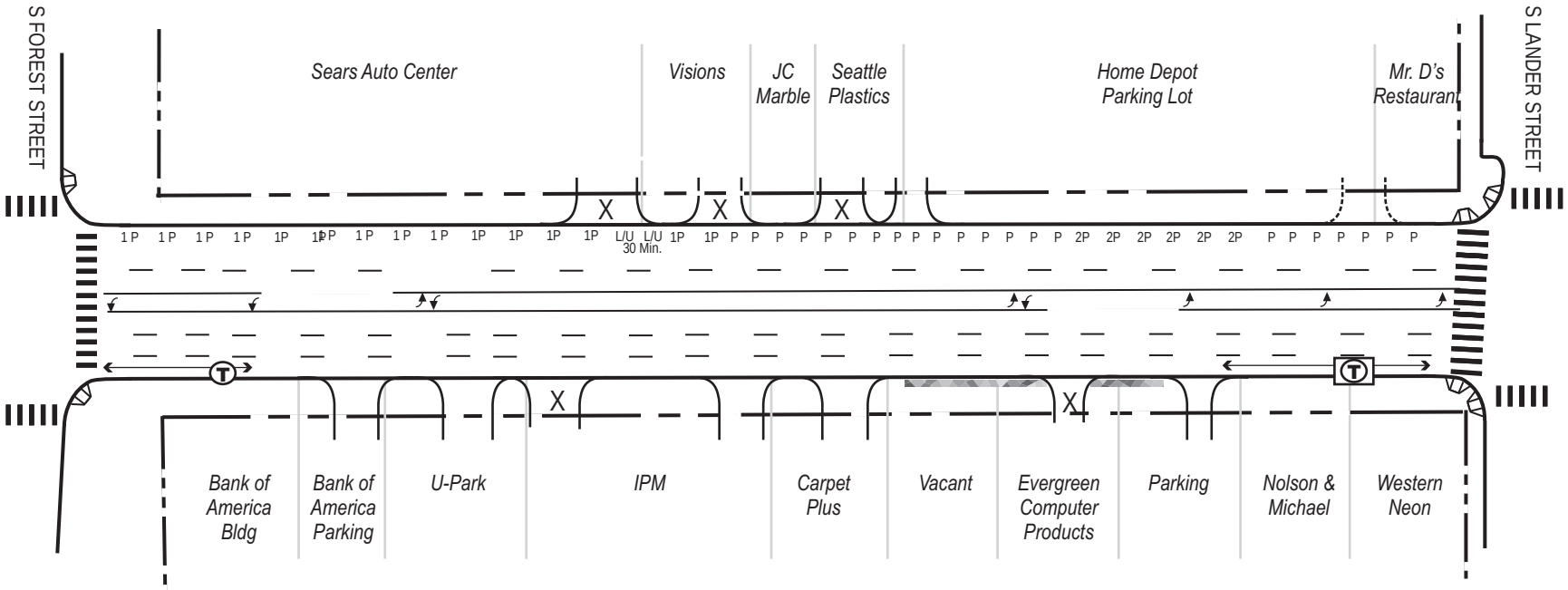

LEGEND

Right-of-Way/Property Line	Bus Stop	P P P	Parking Unrestricted
Curb	Bus Stop w/Shelter	L/U L/U L/U	Load/Unload
Commercial Property Line	Bus Zone	PHR PHR PHR	No Parking Between 3-7 pm
Landscape	Dwy Not-In-Use	1P 1P 1P	1 Hour Parking 7am To 6pm
S&R Shipping and Receiving	Dwy on Paint-Line But Does Not Exist	2P 2P 2P	2 Hour Parking 7am To 6pm
Bike Rack		1PE 1PE 1PE or 2PE 2PE 2PE	1 or 2 Hour Parking Except No Parking During Events

1st AVENUE S Improvement Study

Figure D

S Forest Street to S Lander Street

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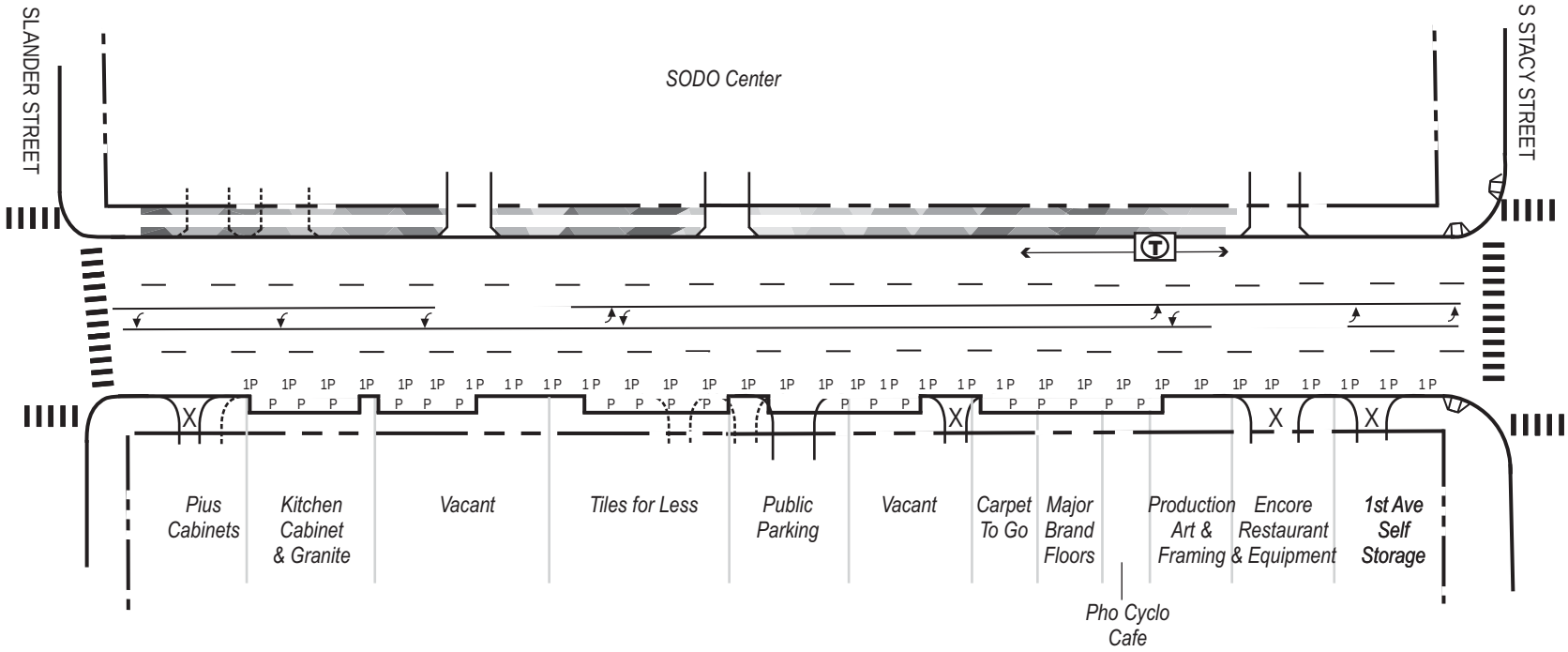

LEGEND

Right-of-Way/Property Line	Bus Stop	P P P	Parking Unrestricted
Curb	Bus Stop w/Shelter	L/U L/U L/U	Load/Unload
Commercial Property Line	Bus Zone	PHR PHR PHR	No Parking Between 3-7 pm
Landscape	Dwy Not-In-Use	1P 1P 1P	1 Hour Parking 7am To 6pm
S&R Shipping and Receiving	Dwy on Paint-Line But Does Not Exist	2P 2P 2P	2 Hour Parking 7am To 6pm
Bike Rack		1PE 1PE 1PE or 2PE 2PE 2PE	1 or 2 Hour Parking Except No Parking During Events

1st AVENUE S
Improvement Study

Figure E

S Lander Street to S Stacy Street

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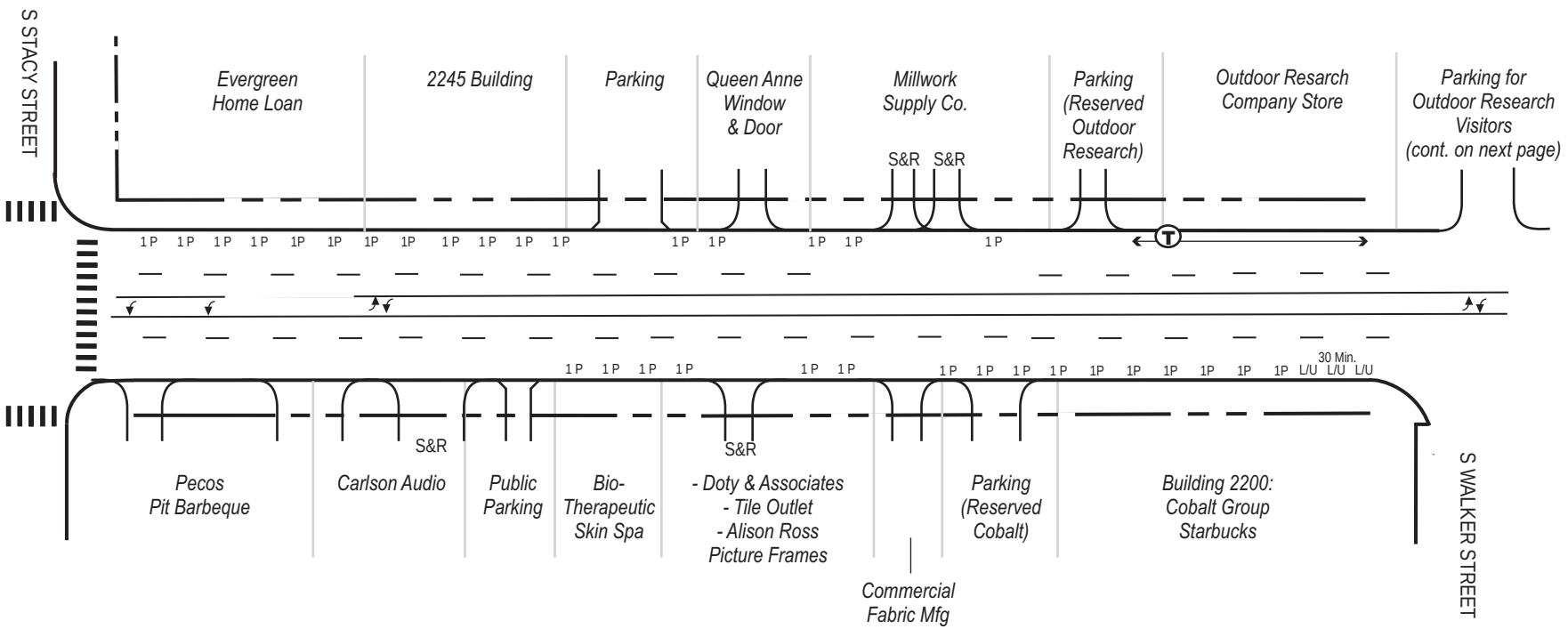
09.25.08



LEGEND

Right-of-Way/Property Line	Bus Stop	P P P	Parking Unrestricted
Curb	Bus Stop w/Shelter	L/U L/U L/U	Load/Unload
Commercial Property Line	Bus Zone	PHR PHR PHR	No Parking Between 3-7 pm
Landscape	Dwy Not-In-Use	1P 1P 1P	1 Hour Parking 7am To 6pm
S&R Shipping and Receiving	Dwy on Paint-Line But Does Not Exist	2P 2P 2P	2 Hour Parking 7am To 6pm
Bike Rack		1PE 1PE 1PE or 2PE 2PE 2PE	1 or 2 Hour Parking Except No Parking During Events

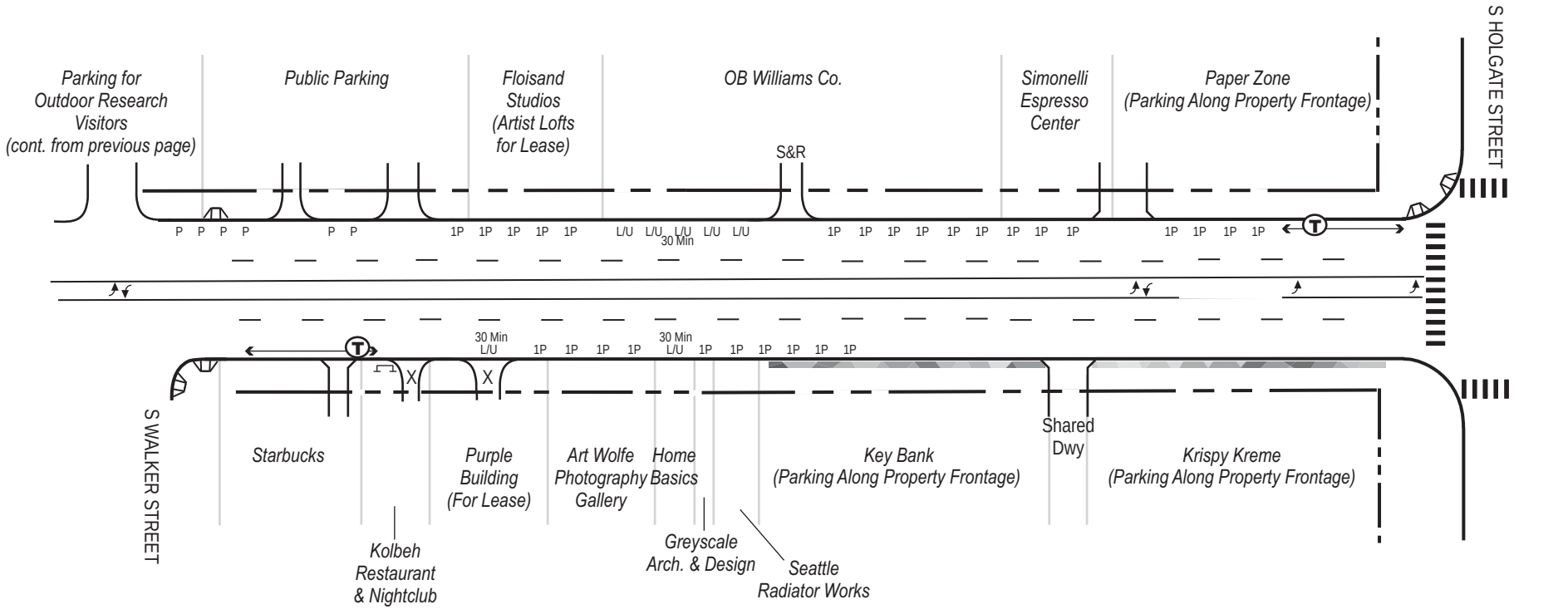
1st AVENUE S
Improvement Study

Figure F

S Stacy Street to S Walker Street

heffron transportation, inc.

09.25.08



LEGEND

Right-of-Way/Property Line	Bus Stop	P P P	Parking Unrestricted
Curb	Bus Stop w/Shelter	L/U L/U L/U	Load/Unload
Commercial Property Line	Bus Zone	PHR PHR PHR	No Parking Between 3-7 pm
Landscape	Dwy Not-In-Use	1P 1P 1P	1 Hour Parking 7am To 6pm
S&R Shipping and Receiving	Dwy on Paint-Line But Does Not Exist	2P 2P 2P	2 Hour Parking 7am To 6pm
Bike Rack		1PE 1PE 1PE or 2PE 2PE 2PE	1 or 2 Hour Parking Except No Parking During Events

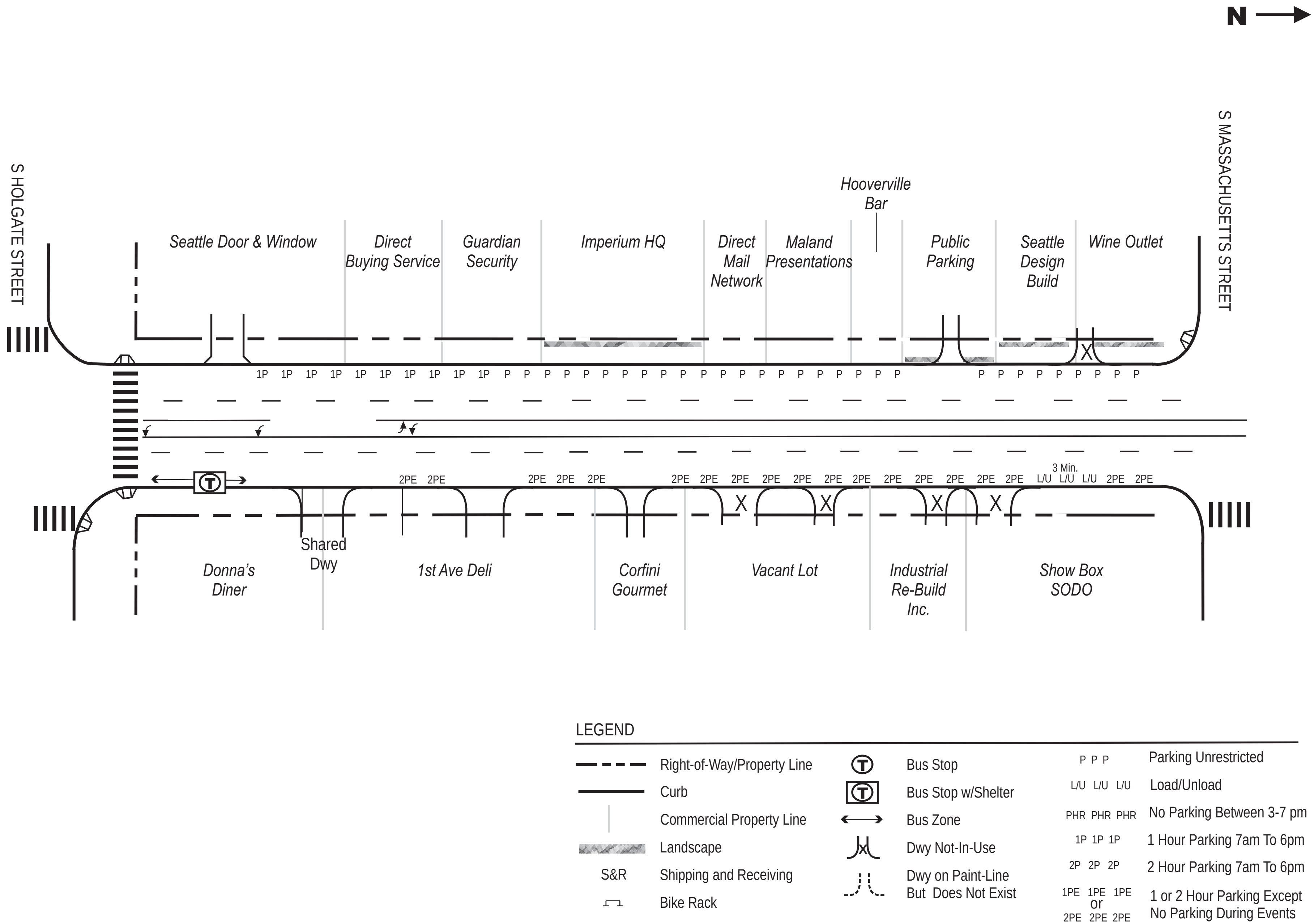
1st AVENUE S Improvement Study

Figure G

S Walker Street to S Holgate Street

heffron transportation, inc.

09.25.08



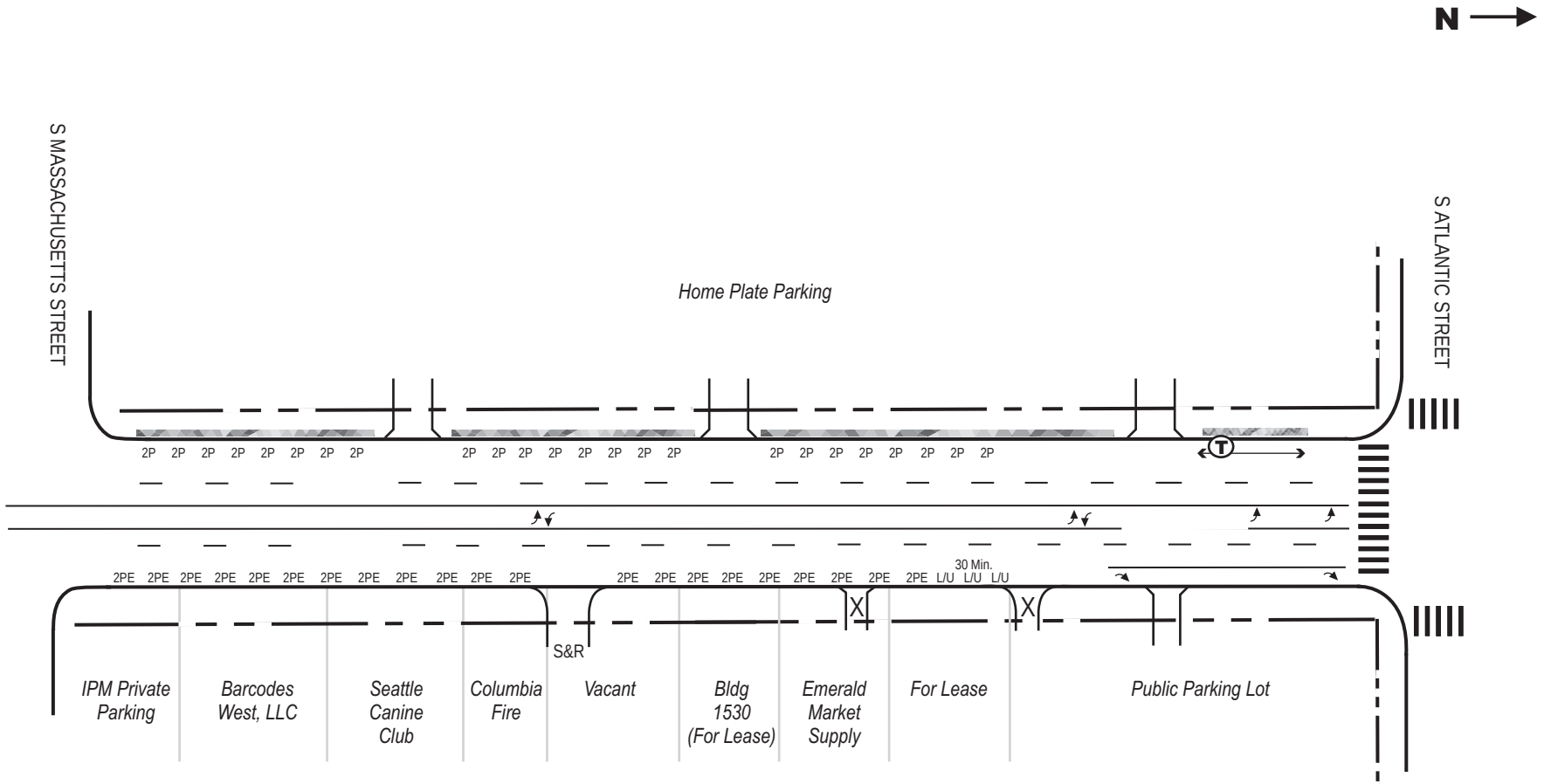
1st AVENUE S
Improvement Study

Figure H

S Holgate Street to S Massachusetts Street

heffron transportation, inc.

09.25.08



LEGEND

	Right-of-Way/Property Line	T	Bus Stop	P P P	Parking Unrestricted
	Curb	T	Bus Stop w/Shelter	L/U L/U L/U	Load/Unload
	Commercial Property Line	⟷	Bus Zone	PHR PHR PHR	No Parking Between 3-7 pm
	Landscape	X	Dwy Not-In-Use	1P 1P 1P	1 Hour Parking 7am To 6pm
S&R	Shipping and Receiving		Dwy on Paint-Line But Does Not Exist	2P 2P 2P	2 Hour Parking 7am To 6pm
	Bike Rack			1PE 1PE 1PE or 2PE 2PE 2PE	1 or 2 Hour Parking Except No Parking During Events

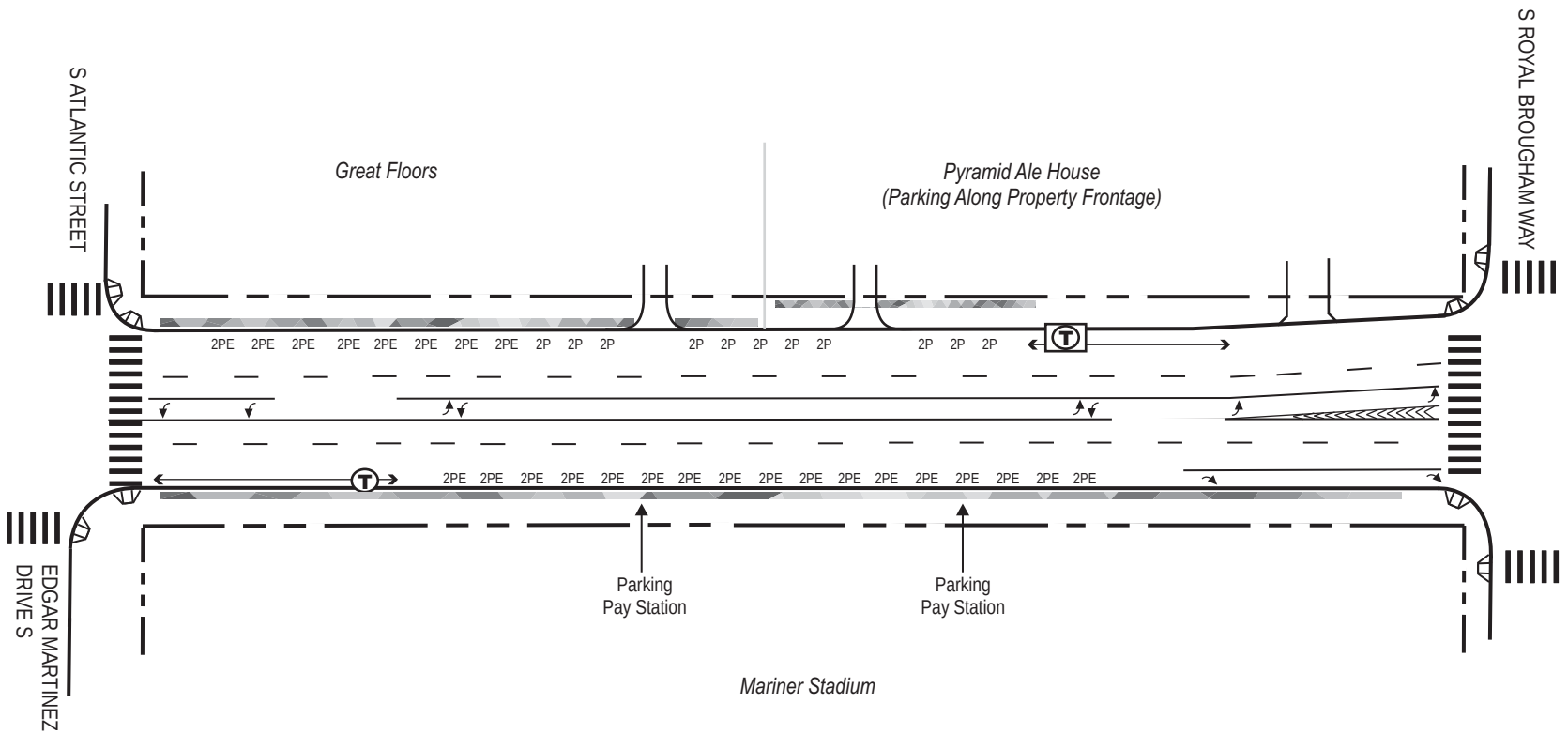
1st AVENUE S Improvement Study

Figure I

S Massachusetts Street to S Atlantic Street

heffron transportation, inc.

09.25.08



LEGEND

Right-of-Way/Property Line	Bus Stop	P P P	Parking Unrestricted
Curb	Bus Stop w/Shelter	L/U L/U L/U	Load/Unload
Commercial Property Line	Bus Zone	PHR PHR PHR	No Parking Between 3-7 pm
Landscape	Dwy Not-In-Use	1P 1P 1P	1 Hour Parking 7am To 6pm
S&R Shipping and Receiving	Dwy on Paint-Line But Does Not Exist	2P 2P 2P	2 Hour Parking 7am To 6pm
Bike Rack		1PE 1PE 1PE or 2PE 2PE 2PE	1 or 2 Hour Parking Except No Parking During Events

1st AVENUE S
Improvement Study

Figure J

S Atlantic Street to Royal Brougham Way S

heffron transportation, inc.

09.25.08

Appendix C

Public Involvement Materials - The Big Event

- Project Purpose Fact Sheet
- SODO Boundaries Fact Sheet
- Project Schedule and Process Fact Sheet
- Issue Exhibits Showing Public Input
- Summary of Public Comments

SODO Action Agenda

Project Purpose

- The SODO Action Agenda will provide a venue for the SODO business community to define priorities for general transportation, freight mobility, pedestrian safety, and public safety.
- These priorities will be developed into a list of recommendations and an Action Agenda document by Fall 2008.
- The Action Agenda will provide input into the City of Seattle work program for industrial lands (Council Resolution # 31026) and transportation and public safety initiatives.

SODO Action Agenda Goals

- Provide the community with an overview of improvements in four categories, that are ongoing or have been implmented. The categories are:
  - General transportation
  - Freight mobility
  - Pedestrian safety
  - Public safety
- Conduct broad outreach to businesses, employees, agencies, and advocates to determine community priorities for the four categories of improvements.
- Bring diverse groups together to define priority improvements that can be pursued for each of these topics.
- Provide input to City of Seattle and other agencies to implement Action Agenda priority projects and programs which have broad community support.

Who's Involved?

- City of Seattle
- SODO Business Association
- Manufacturing Industrial Council of Seattle (MIC)
- Duwamish Multi-Modal Advisory Coalition (DMMAC)
- Duwamish Transportation Management Association (TMA)
- SODO Action Agenda Advisory Committee
- Consultant Team, including AHBL (prime), Heffron Transportation, Communique Northwest

For more information see www.seattle.gov/economicdevelopment or contact Roque Deherrera at 206-684-4538 or roque.deherrera@seattle.gov

City of Seattle • Gregory J. Nickels, Mayor
Office of Economic Development • Susan Shannon, Director

AHBL
07/01/08

SODO Action Agenda

SODO Boundaries

The SODO area extends from Jackson Street on the north to Dawson Street on the south, and is bounded by Puget Sound and the Duwamish River on the west and I-5 on the east.

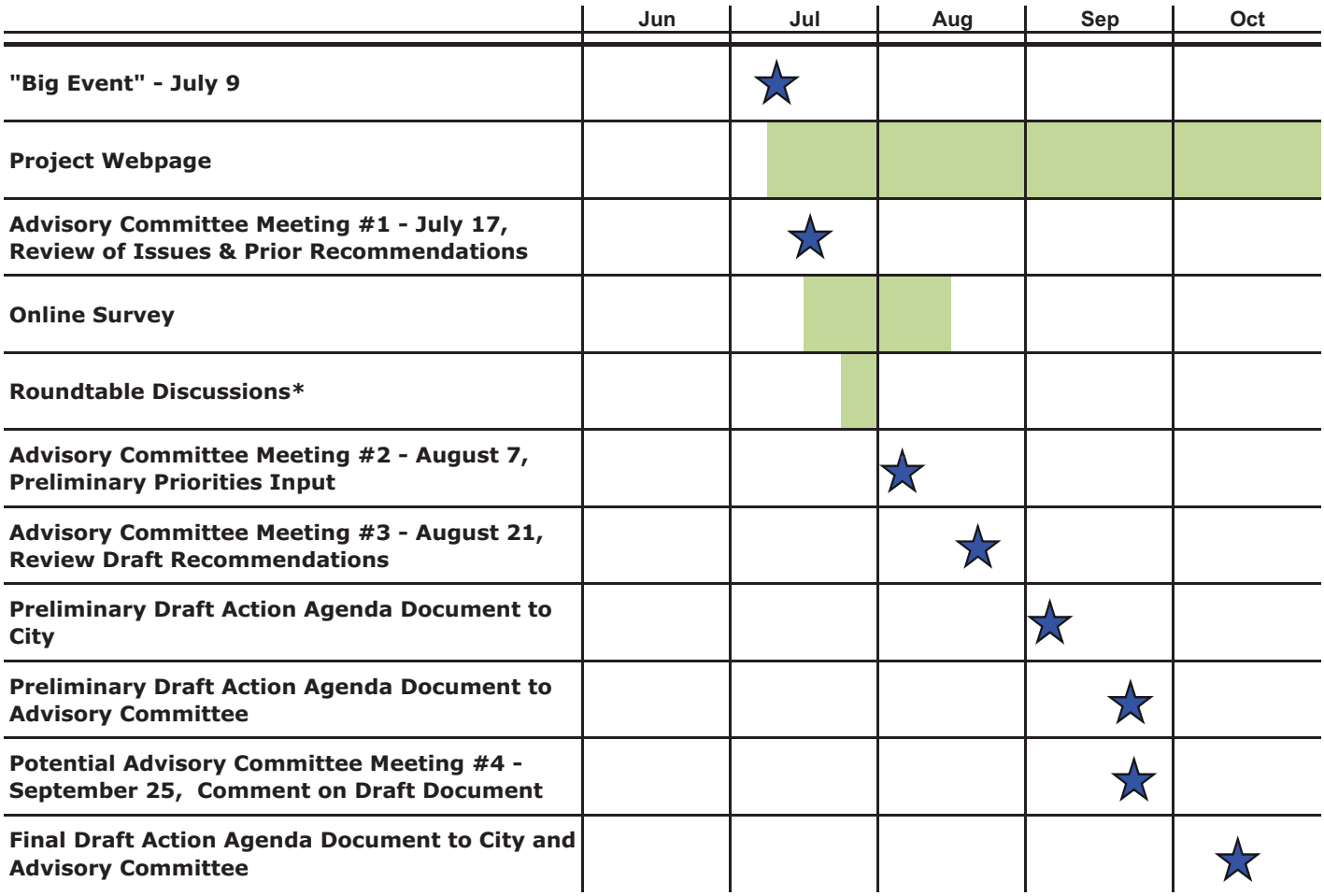
July 16, 2008

AHBL

City of Seattle • Gregory J. Nickels, Mayor
Office of Economic Development • Susan Shannon, Director

SODO Action Agenda

Project Schedule and Process



* There will be four roundtable discussions, each focused on one of the following topics:
  - Freight Mobility
  - General Transportation
  - Pedestrian
  - Public Safety

For more information go to www.seattle.gov/economicdevelopment or contact Roque Deherrera at 206-684-4538 or roque.deherrera@seattle.gov

SODO Action Agenda

FREIGHT MOBILITY

Which issues are most important to you?
Add your blue ● to the issue(s) you find most critical.

RAIL

- Rail Capacity
- Rail Access to Intermodal Container Facilities

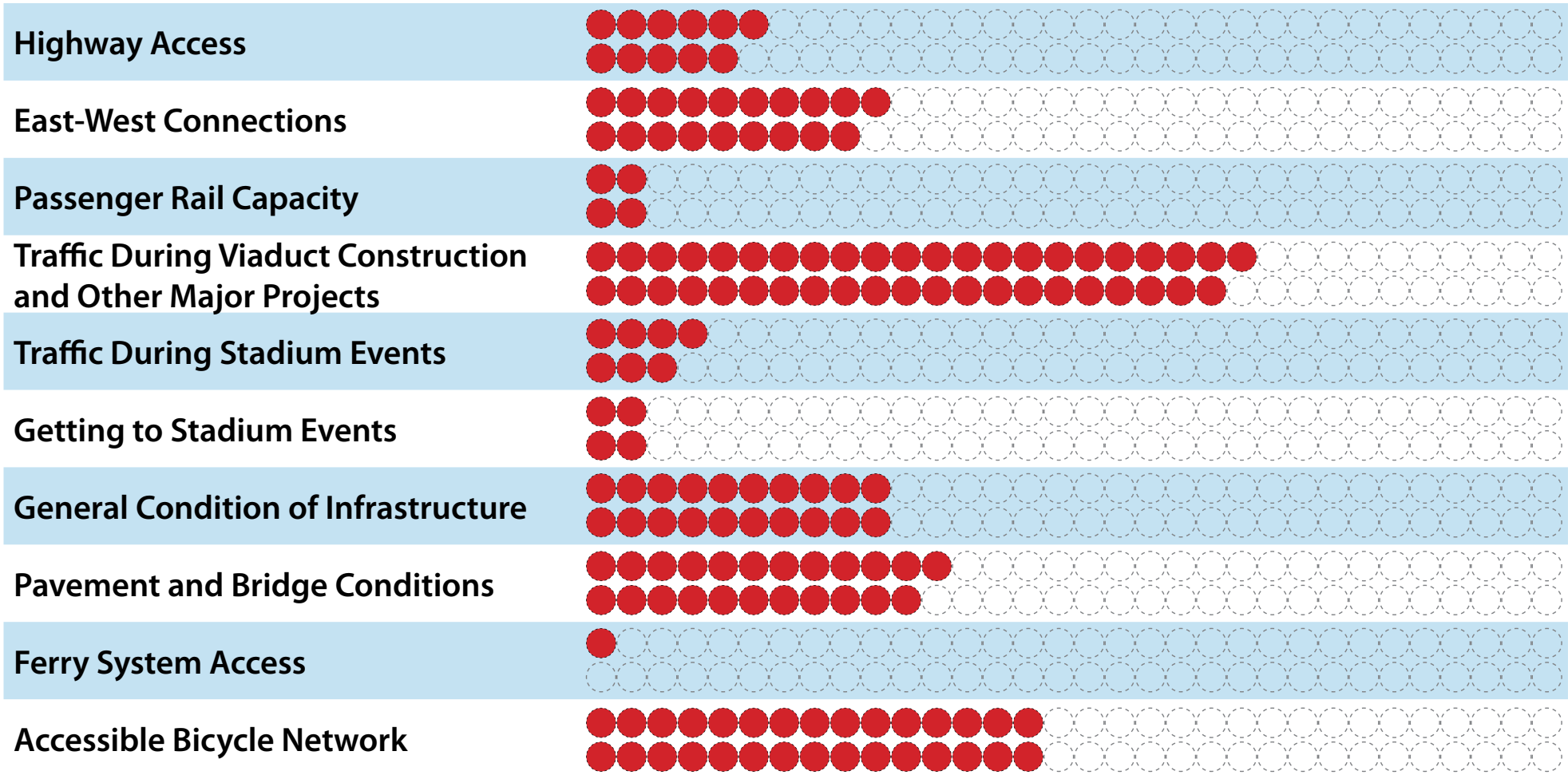
TRUCKS

- Truck Turning Radii
- East-West Connections
- Traffic During Viaduct Reconstruction and Other Major Projects
- Parking During Special Events
- Pavement and Bridge Conditions
- Traffic During Stadium Events

SODO Action Agenda

GENERAL TRANSPORTATION

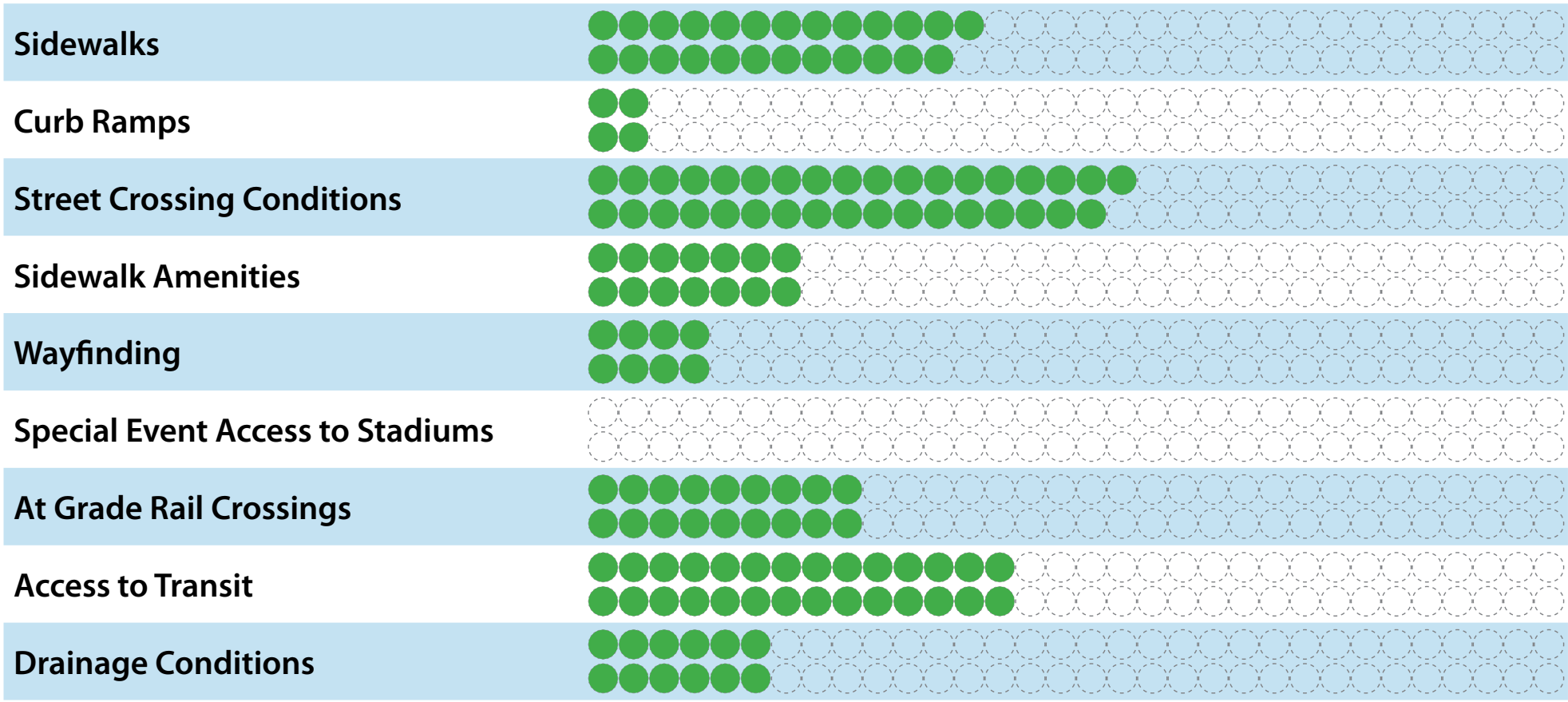
Which issues are most important to you?
Add your red ● to the issue(s) you find most critical.



SODO Action Agenda

PEDESTRIAN SAFETY

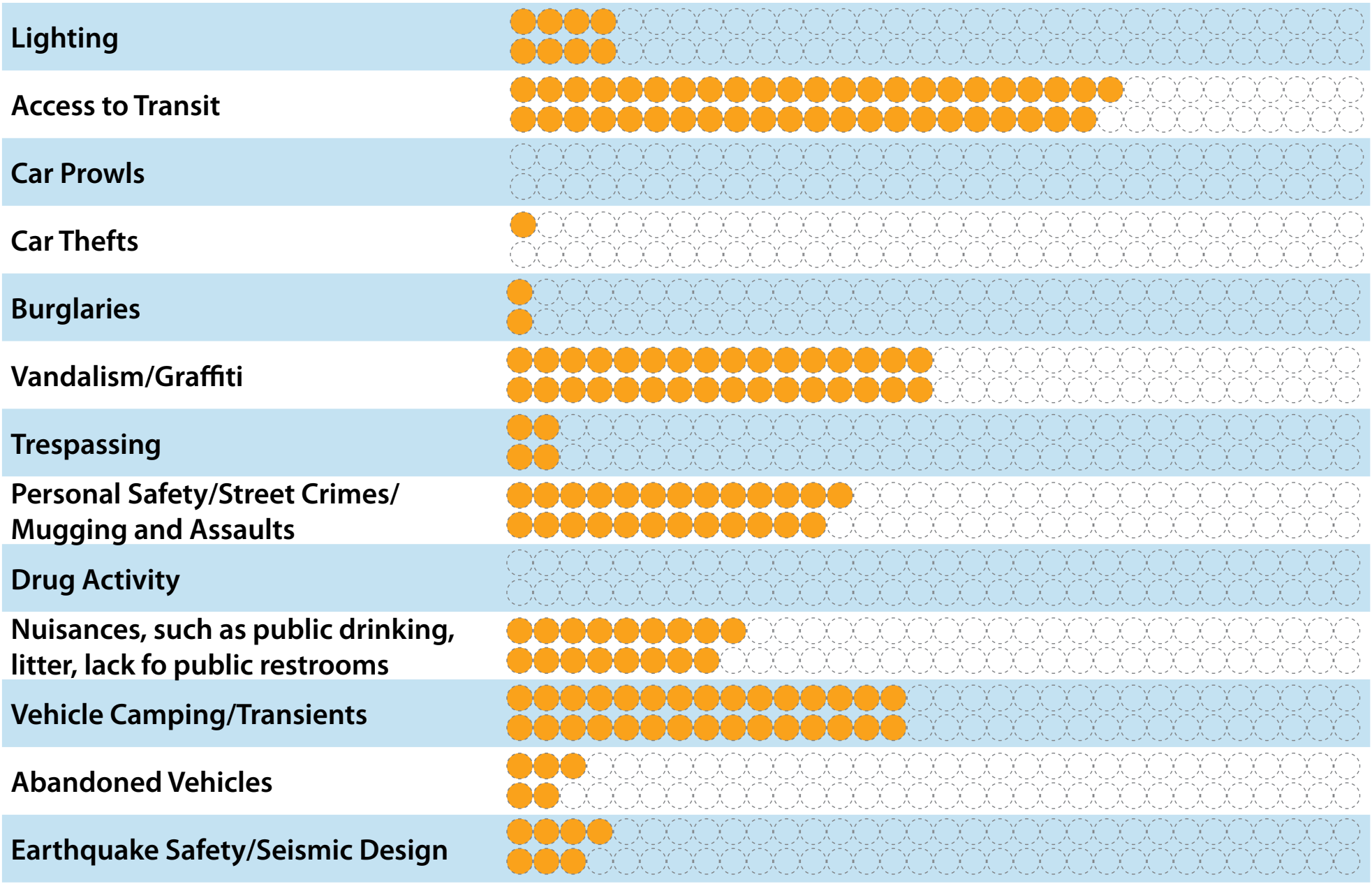
Which issues are most important to you?
Add your green ● to the issue(s) you find most critical.



SODO Action Agenda

PUBLIC SAFETY

Which issues are most important to you?
Add your orange ● to the issue(s) you find most critical.



Public Safety

Issue Identification Board (Orange Dots)	Number of Dots	Rank
Lighting	8	6
Access to Transit	45	1
Car Prowls	0	12 (tie)
Car Thefts	1	11
Burglaries	2	10
Vandalism/Graffiti	32	2
Trespassing	4	9
Personal Safety/Street Crimes/Mussing and Assaults	25	4
Drug Activity	0	12 (tie)
Nuisances, such as public drinking, litter, lack of public restrooms	17	5
Vehicle Camping/Transients	30	3
Abandoned Vehicles	5	8
Earthquake Safety/Seismic Design	7	7
Total Number of Dots	**176**	**1**

Written Comments on Flip Charts

None

Post-it Comments on Map	Location
Public urination/transients prevent access to transit/ businesses.	South Pioneer Square/North Stadium
Businesses clean up their property and storefronts for a more appealing neighborhood	Utah, north of Stacy
Tree planting needed for aesthetics and to reduce pollution	Utah, north of Stacy
Graffiti, Crime, Vandalism	Colorado/1st north of S. Horton
Consistent Vandalism, Graffiti, Trash around Horton and 1st	Horton and 1st
Public drinking/drug use	4th ave S and Spokane
Lack of enforcement on "no-turns" and pedestrian ROW	4th ave S and Spokane
Graffiti on retaining wall	I-5 and Edmunds St.
Better coordination between West and South precincts	
Vehicle camping and pavement issues	Occidental

Pedestrian Safety

Issue Identification Board (Green Dots)	Number of Dots	Rank
Sidewalks	25	3
Curb Ramps	4	8
Street Crossing Conditions	35	1
Sidewalk Amenities	14	5
Way finding	8	7
Special Event Access to Stadiums	0	9
At Grade Rail Crossings	18	4
Access to Transit	28	2
Drainage Conditions	12	6
Total Number of Dots	**144**	**4**

Written Comments on Flip Charts

Cross-coordination with Tukwila.
Why are people walking in the Industrial Area (just kidding).
Drainage from streets and floods during rainy times.
Green space/park area.
Bike lane (1st Ave?).
Bike way extension to Spokane and Beyond.
* See general transportation note regarding Utah Ave S.

Post-it Comments on Map	Location
Large puddle in S. Pioneer Square splash peds.	S. Pioneer Square
Dangerous intersections for Peds (1st and King), Traffic too Fast!	S. Pioneer Square/ N. SODO
Sidewalks dirty (public urination, trash), decreases likelihood of walking.	S. Pioneer Square/ N. SODO
Crossing at Triangle Tavern is very dangerous, cars often go around stopped cars.	S. Pioneer Sq/ N. SODO
Pedestrian improvements 1st and Stacy, Holgate, Lander, Home Depot, Walker, along 1st and 4th.	Central SODO
Lack of sidewalks 1st Ave	Central/South SODO
Lack of sidewalks on 4th, down Spokane.	Central/South SODO
Lack of enforcement on "no-turns" and pedestrian ROW.	4th and Spokane

General Transportation

Issue Identification Board (Red Dots)	Number of Dots	Rank
Highway Access	11	6
East-West Connections	19	5
Passenger Rail Capacity	4	8 (tie)
Traffic During Viaduct Construction and Other Major Projects	43	1
Traffic During Stadium Events	7	7
Getting to Stadium Events	4	8 (tie)
General Condition of Infrastructure	20	4
Pavement and Bridge Conditions	23	3
Ferry System Access	1	9
Accessible Bicycle Network	30	2
Total Number of Dots	**162**	**2**

Written Comments on Flip Charts

Time spent waiting on trains - can we put a few overpasses so traffic can move east-west over tracks?
Occidental as Bike Route from W. Seattle to downtown, then up 4th.
Improve infrastructure and ped environment walking to/from light rail SODO station.
Lander Street overpass funding.
Utah Ave S - no traffic controls for blocks - high speed vehicle travel is unchecked - peds can't cross street and other vehicles can't get into traffic flow. If Utah is used as a street it should be maintained - big SUPER potholes.

Post-it Comments on Map	Location
Ferry access impeded crossing at Triangle Tavern.	S. Pioneer Square
Better security, cleanliness of pedestrian bridge/connection to transit.	S. Weller St

Weller Street pedestrian bridge, very difficult to cross 4th Ave S - traffic signal too short and infrequent. Need pedestrian bridge across or under 4th Ave S.	S. Weller St
The distance between shops and around Qwest and Safeco fields is too long	Stadiums/S. Pioneer Square
Unclear vehicle connections between ID and Stadiums/SODO	ID/Stadiums
Traffic around SAFECO Field also congested	Stadiums
Safe bicycle access from SODO to I-90 Bicycle trails!!	SODO/ I-90
Bike Safety.	5th and 6th Ave north to Holgate
Safer Bike Access.	5th and 6th Ave and S. Forest
Dangerous and decommissioned train tracks at Utah and Walker.	Utah and Walker
Maintenance of new bike trail along Sound Trans from Royal Brougham to Forest? Started nice, but now a mess.	Central SODO
Please regrade/repave HORTON between 1st and 4th. Truck overuse is hurting businesses	Horton between 1st and 4th
Access to arterials for Emergency Response. Seattle City Light.	4th Ave S and Spokane, 4th Ave S and S.

Freight Mobility

Issue Identification Board (Blue Dots)	Number of Dots	Rank
Rail Capacity	0	8
Rail Access to Intermodal Container Facilities	9	6
Truck Turning Radii	11	5
East-West Connections	19	3
Traffic During Viaduct Reconstruction and Other Major Projects	45	2
Parking During Special Events	5	7
Pavement and Bridge Conditions	54	1
Traffic During Stadium Events	12	4
Total Number of Dots	**155**	**3**

Written Comments on Flip Charts

None

Post-it Comments on Map	Location
Commercial truck park here (Utah St) on public street, making parking next to impossible for employees to get spaces - park rig at night, park car during day to save a space.	2701 1st Ave
Remove or repave Utah St. by RR Tracks. Eliminate serious falls by cyclists	Utah street from Stacy to Walker
Dangerous decommissioned train tracks at Utah and Walker	Utah and Walker
Several improvements need to be made to S. Horton before its used as a detour: RR grade x-ings, slow light at 1st Ave. S, Poor pavement condition and striping, access to side streets critical for us (Utah Ave)	S. Horton and Utah
Horton is a disaster - too much truck transit for the size and quality of roadway - extremely disturbing to businesses	Horton
Trucks entering Spokane St viaduct while morning traffic is trying to exit to 1st Ave	S. Spokane Viaduct and 1st Ave
Port Drivers have no where to park trucks except on City Streets	S. Hudson, Colorado, 1st Ave, Utah

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