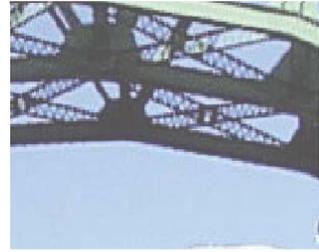




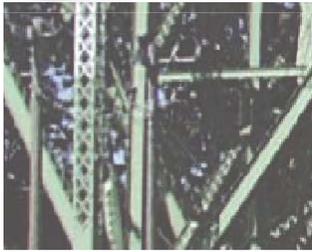
sidewalks



pay stations



pavement



trails

At a Glance

Status and Condition Report 2007



At a GLANCE

In 2007, Seattle Department of Transportation (SDOT) formally began implementation of an Asset Management Program. This program provides the structure and departmental standards for a business model based on International Infrastructure Management Manual principles for sustainable infrastructure asset management. In its first year, the program focused on the department's infrastructure assets and produced the 2007 Status and Condition Report. This report provides a description of the assets owned by SDOT, the value and condition of those assets, and the funding needed to maintain and preserve them. It also provides an important baseline of information to use in making decisions on future asset management efforts in the Department, for process improvements as well as management decisions on the operation, maintenance, and preservation or replacement of the infrastructure.

SDOT Asset Management Definition, Vision and Goals:



SDOT defines Asset Management as:

A strategic and systematic process that guides decisions about construction, maintenance and operation of SDOT infrastructure

Asset Management in SDOT will be developed and conducted to achieve this vision:

Transportation excellence through expert, credible and responsive asset management

Asset Management in SDOT will be guided by these goals as we move toward the vision:

**Sustainability
Equity
Agility**

**Accountability
Smart Decisions**

**Transparency
Stewardship**

SDOT's Asset Management Program at a Glance



SDOT has adopted asset management to meet the challenges of preserving Seattle's transportation infrastructure. SDOT has elected to implement the asset management business model through a multi-year program of continuous, compounded improvement in infrastructure asset management policies and practices.

SDOT is proceeding through the development of the fundamental building blocks in a basic asset management program:

- **Inventory and condition, and useful life on the infrastructure assets**
- **Level of service standards for the assets**
- **Relative criticality of the assets**
- **Full cost of ownership, or life cycle costs against the triple bottom Line**
- **Development of basic asset management plans follows the compilation and analysis of the information gathered in the four preceding foundation steps**

In 2008 the City is developing asset based levels of service for a selected group of assets. Future years' work will see levels of service developed for more assets and determination of a criticality methodology and rating.

The City and the Transportation Environment



The city of Seattle covers 142.5 square miles - 83.87 square miles consisting of land and 58.67 square miles of water. The Seattle Metropolitan Area covers 8,186 square miles. There are approximately 3,946 12-foot wide lane miles of streets within the city of Seattle. The street right-of-way (ROW) occupies 24.8 percent of the city surface area.

Seattle's urban transportation system consists of a street system with paved roads, a sidewalk system, a bicycle network, bridges and other roadway structures, a traffic control network, paths and trails, street signs, traffic safety structures and devices, and an urban forest. All of these infrastructure assets exist within the public ROW. The city operates a central control center for the signal system from a location in the Seattle Municipal Tower.

The Transportation Infrastructure Assets



The hundreds of infrastructure assets owned by SDOT have been organized into an asset hierarchy that contains 44 Level 1 assets, the level at which SDOT will manage its assets. The Level 1 assets have been grouped based on commonality of function into fourteen asset classes, a convenient grouping for reporting purposes.

SDOT owned assets primarily include traditional transportation infrastructure assets, which range from substantial and long-lived structures, such as bridges and pavement, to smaller, more frequently replaced assets, such as signs and marked crosswalks. SDOT also owns assets that are non-traditional for a transportation department and are often the heritage of the City's past organizational structure, such as the air raid siren tower which was constructed by SDOT's predecessor, the Seattle Engineering Department.

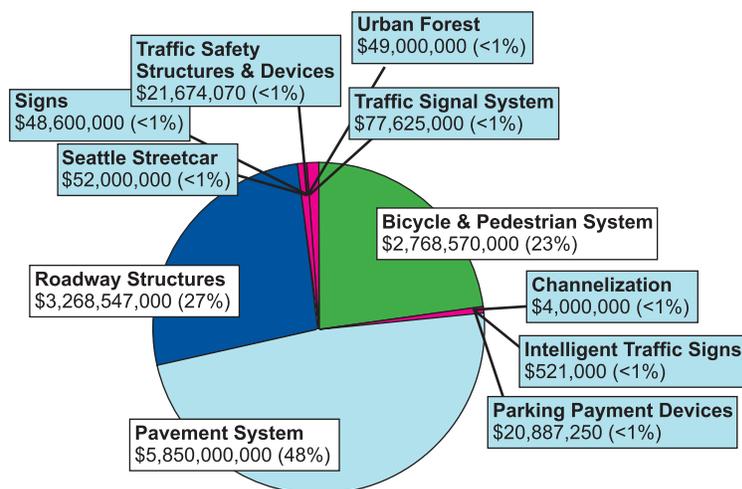
SDOT's newest asset is the 2.6-mile streetcar line linking the downtown with the South Lake Union neighborhood.

The department decided on a simple three-tier rating to describe condition and also established criteria for judging condition on most assets. Where this was known, asset condition was reported. The department has an ambitious work plan for 2008-2009 for inventory and condition rating work on the majority of its infrastructure.

The estimated replacement value of SDOT infrastructure assets is in excess of \$12.1 billion.

The replacement value is based on what it would cost to replace the infrastructure at today's prices. It does not represent the actual investment the city has made in the infrastructure over time.

Pavement and roadway structures assets represent 75% of this total. The third largest asset class is the Bicycle and Pedestrian System, which includes the sidewalk system, and represents 23% of the total. The assets in the other nine (9) asset classes make up the remaining 2%.



Asset Class/Asset	Inventory Status	Replacement Value	Condition			
			Good	Fair	Poor	TBD
Bike/Ped System						•
Bicycle Racks	3,000 (e)	\$1,995,000				•
Marked Crosswalks	6,000 (e)	\$3,000,000				•
Pedestrian Crossing Underpass/Tunnel	1	TBD				•
Pedestrian Viewing Platform	4	TBD				•
Sidewalks	33,778 block faces	\$2,650,000,000	48%*	30%*	22%*	
Stairways	482	\$34,775,000				•
Trails	39.4 lane miles	\$78,800,000				•
Transit Loading Platforms	TBD	TBD				
Channelization						
Pavement Markings	TBD	\$4,000,000				•
Roundabout	0	---				---
Intelligent Traffic Signs						
Dynamic Message Signs	5	\$500,000	100%*			•
Radar Speed Signs	3	\$21,000				
Parking Payment Devices						
Pay Stations	1,845	\$40,387,250	100%			
Parking Meters	1,000 (e)	\$500,000		100%*		
Pavement						
Arterial	1,531 lane miles	\$2,600,000,000	70%	15.7%	14.3%	
Non-arterial	2,412 lane miles	\$3,250,000,000				•
Real Property						
Parcels	106	TBD				---
Buildings	8	TBD				---
Regulated Assets						
Shoreline Street Ends	149 (e)	N/A				---
Roadway Structures						
Areaway Street Walls	205	\$144,620,000	3%	57%	19%	21%
Bridges	92	\$1,422,800,000	51%	10%	39%	
Bridge Hydrant Vaults	13	TBD				•
Retaining Walls	582	\$1,701,127,000	43%	37%	20%	
Seattle Streetcar						
Streetcar System	1	\$52,000,000	100%			
Signs						
Sign Assemblies	TBD	\$48,600,000				•
Structures other than Roadway						
Air Raid Siren Tower	1	TBD				N/A
Piers	1	TBD				•
Traffic Safety Devices & Structures						
Chicanes	19	\$285,000				•
Crash Cushions	34	\$595,000				•
Curb Bulbs	92	\$2,300,000				•
Guardrails	66,913 lnr feet	\$8,085,320				•
Median Islands	TBD	TBD				•
Speed Cushions	19	\$209,000				•
Speed Dots	1	TBD				•
Speed Humps	47	\$199,750				•
Traffic Circles	1,000 (e)	\$10,000,000				•
Traffic Signal System						
Beacons	380 (e)	\$2,280,000				•
CCTV Camera Assemblies	46	\$345,000				•
Detection Systems	TBD	TBD				•
Traffic Management Center	1	TBD				•
Traffic Signal Assemblies	1,001	\$75,000,000				•
Traffic Signal Communication System	TBD	TBD				•
Urban Forest						
Landscaped Areas	5,371,000 sf (e)	\$31,250,000	30%*	30%*	30%*	10%*
Trees	35,000 (e)	\$17,750,000	28%*	66%*	5%*	

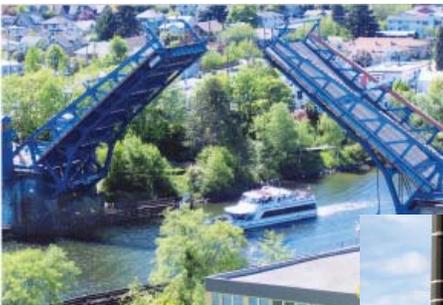
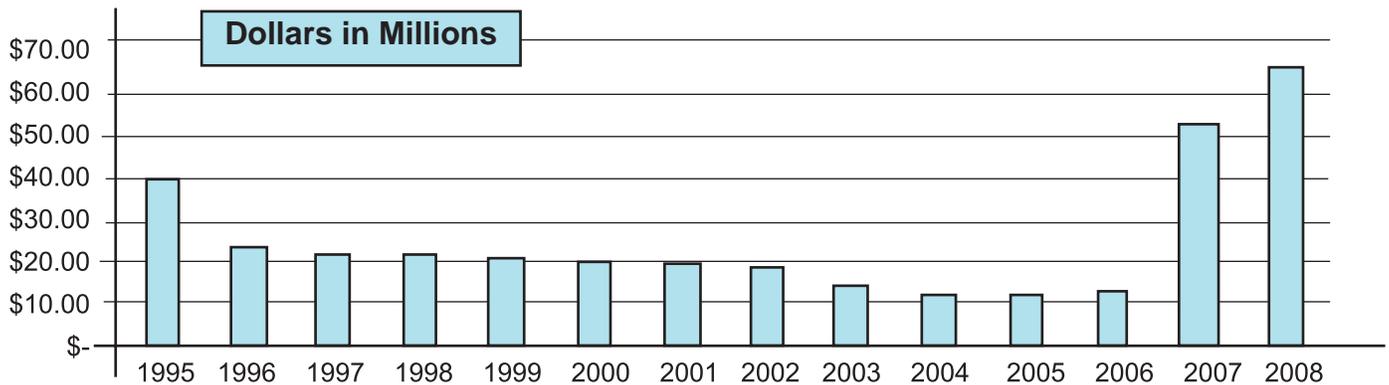
(e) = estimated costs * = estimated condition

Financial Facts



The year 2007 was the first year of the nine year Bridging the Gap program. Bridging the Gap (BTG) is a funding program consisting of a voter-approved levy; a tax on commercial parking and an employee-based tax on businesses within the city. It provides annually nearly \$50 million, most of which is going into preservation and maintenance of SDOT infrastructure. Prior to this, the department experienced a gradual loss of dedicated transportation funding that, when combined with inflation, had squeezed the department's budget and a deferred maintenance backlog had accumulated. BTG funding will enable the department to reduce that backlog substantially over the nine years of the program. Asset management will contribute to smart decisions on the expenditure of maintenance funds to ensure a good return on the investment.

The chart below depicts the recent trends in dedicated transportation revenues. One can easily see the impact of BTG funding in the two most recent years.



SDOT has allocated BTG funding to these assets: marked crosswalks, sidewalk system, stairways, trails, pavement markings, arterial pavement, bridges, sign assemblies, crash cushions, guardrails, beacons, traffic signal assemblies, landscaped areas, and trees.

Although the BTG funding has made a considerable difference, the effects of the tight budgets over the last several years remain. The Asset Management Program estimates additional maintenance is needed because:

- When new assets are installed, corresponding maintenance budgets are not always increased to allow SDOT to sustain the new assets in good condition.
- Funding has not traditionally been available to establish replacement programs for assets so that they can be replaced when they reach the end of their useful lives.
- Lack of programmatic maintenance contributes to higher costs in the long run when replacement comes due.

The top four asset classes for unmet funding need are:



- Roadway Structures for annual bridge maintenance, rehabilitation or replacement of bridges and retaining walls, including the Alaskan Way seawall, and fill or restoration of areaways;
 - Bicycle and Pedestrian System to perform permanent repairs on sidewalks, complete the sidewalk network, construct additional trails, and rehabilitate or replace stairways;
 - Pavement System for rehabilitation of non-arterial pavement; and
 - Urban Forest to preserve the condition of these assets and raise them to good condition.
-

“Sustainable infrastructure management to keep Seattle moving”

Looking Ahead

During 2008 and beyond, SDOT’s Asset Management Program will continue to make progress on a variety of asset inventory and condition assessment projects:



The Street Maintenance Division completed a sidewalk inventory in 2007 and will gather condition information in 2008.



The Traffic Management Division will conduct inventory and condition assessments on the major components of the Traffic Signal System, marked crosswalks, and other assets within the Traffic Safety Devices & Structures asset class.



The Roadway Structures Division will begin a 7-year cycle of inspection and condition assessment of its stairways.



Urban Forestry will complete inventories and condition assessments of its trees and landscaped areas.