Dependable Infrastructure

goal

Maintain levels of service commensurate with growing community requirements at optimum life-cycle costs.

City funds and staffs infrastructure maintenance

So that...

Infrastructure monitoring indicates good conditions

So that...

Kirkland has well maintained and sustainable infrastructure that meets the functional needs of the community

MEASURE	2007	2008	2009	2010	Target
Transportation Capital Projects Funding	*$5,772,700*	*$7,230,000*	*$6,666,200*	*$5,456,000*	*N/A*
Water/Sewer Capital Project Funding	*$3,603,600*	*$3,671,000*	*$4,547,900*	*$2,001,300*	*N/A*
Street Maintenance FTE	*12.3*	*12.3*	*12.3*	*12.3*	*N/A*
Water/Sewer Maintenance FTE	*15.5*	*15.5*	*16.2*	*16.2*	*N/A*
*Pavement Condition Index[1] for Major and Minor Arterial Streets**	*59*	*52*	*52*	*50.3*	*70*
*Pavement Condition Index for Collectors and Neighborhood Streets**	*73*	*68*	*68*	*68*	*65*
Citizens surveyed rate street maintenance as satisfactory or better	**	*93%*	**	*94%*	*90%*
Sewer inflow and infiltration rate	***	***	***	***	***
Water Main Breaks	*3*	*8*	*0*	*1*	*0*
Sewer Obstructions	*0*	*0*	*3*	*3*	*0*

*Pavement Condition Index (PCI) is a rating of the general condition of pavements based on a scale of 0 to 100. A PCI of 100 represents a newly constructed road with no distresses; a PCI below 10 corresponds to a failed road requiring complete reconstruction; a PCI of 41 or better equates to "fair or better". Data: 2009 PCI based on 2008 survey; 2010 Collector PCI based on 2010 Collector survey and 2008 Neighborhood Street survey

**Community survey occurs in even years

***Measure being developed for future reports

How is our performance?

The normal life-cycle of the City's infrastructure drives the needs for funding, construction of capital improvement projects and general maintenance to maintain its infrastructure in cost-effective ways. Public Works maintenance divisions establish their work plans based on the number of man hours available and the number of full time equivalent (FTE) employees, which ultimately determines the level of maintenance they are able to perform.

Citizen satisfaction with streets helps determine if the City is meeting the community's infrastructure needs.

The pavement condition index (PCI) and the number of water main breaks and sewer obstructions demonstrate if the City is successfully maintaining infrastructure at required levels of service. The amount of storm water infiltration into the sanitary sewer system provides a picture of the state of repair of the sewer system.

How are we doing?

- 20% of proposed transportation projects and 31% of proposed water/sewer utility projects were able to be funded in the revised 2009-2014 Capital Improvement Program with available revenue. Transportation and Utilities have high numbers of unfunded capital projects due to certain economic factors related to the construction industry, and staffing constraints. The funding available for capital projects has also decreased.
- The Pavement Condition Index (PCI) for major and minor arterial streets falls below the target level of service. The PCI for collectors and neighborhood streets is close to the target level of service.
- Surveyed citizens rate street maintenance as highly important. The 2010 Citizen Survey indicates that street maintenance does have a gap between performance and importance ratings, indicating there is room for improvement in the City's performance. In a 2008 citizen survey regarding street condition, patching potholes showed the biggest negative gap between importance and City performance rankings.

What is the City doing?

The Public Works Department maintains a comprehensive system of roads, sidewalks, sewer lines and water mains. All Public Works divisions respond to citizen requests for service as well as completing routine maintenance and repair projects. Larger capital projects are based on capacity needs and master plan targets.

The Streets Division ensures that roads are clean and clear, signs and pavement markings are maintained and that repairs to pedestrian and bicycle facilities are completed in a timely manner. Quick response to service requests, such as pothole repairs, extends the life of the streets and helps avoid costly reconstruction projects.

The Wastewater and Storm Water Division maintains, cleans and repairs the sewer and storm water conveyance system (lines and manholes) including ponds, tanks, ditches and swales and catch basins to assure waste water and storm water run off are safely conveyed to treatment facilities.

The Water Division is responsible for operating and maintaining the water infrastructure, including water mains, pumps, pressure reducing stations, meters and fire hydrants. Maintenance and repair of the water system reduces the number of costly water main breaks.

The Capital Improvement Program (CIP) identifies and prioritizes infrastructure repair and replacement projects and establishes a long-term funding plan. The CIP provides a plan for rehabilitation and repair to increase the lifespan of the infrastructure in the most cost-effective way. Projects are prioritized by the replacement and maintenance of existing infrastructure, providing enough capacity to meet services demands of the community.

To address the gap between the high importance of street maintenance and the lesser performance rankings, the City Council is exploring and implementing a variety of programs and funding sources to help the City keep pace with infrastructure needs including the possible formation of a Transportation Benefit District.

Street Preservation Program

The City's Street Preservation program rates road quality on a standard scale and provides prescriptions for road repair based on the Pavement Condition Index of the road. By surveying the roads, the City is able to enact repairs early to increase the lifespan of roads at lower costs.

Streets can be maintained at optimum health at little cost to taxpayers if road repairs are implemented early. Repairing minor cracks, for example, can cost taxpayers as little as 50 cents per square yard. Repairing potholes and failed roads can cost taxpayers as much as $50 per square yard. It's also why early detection and early maintenance are so essential to the health of the City's most basic infrastructure.

The City has increasingly turned to Slurry Seal to extend roads' life cycles at a low cost instead of overlaying them with a brand new surface.

Additionally, the City began leasing a milling machine that can prepare a street for maintenance more quickly than a traditional work crew. On top of creating time for crews to repair other streets, the milling machine has saved the City money in labor costs.