

LinkSpokane

Integrating City Infrastructure
For Better Outcomes



February 2016



Photo: James Richman



A Message from Mayor David Condon

The name Link Spokane started as our tagline for the process to combine the transportation and utilities portions of the City's Comprehensive Plan, our 20-year planning document that guides everything from land use to cost-effective delivery of services.

But for me, that name came to represent so much more. Seemingly every day, we were making "links" that were delivering results for our citizens. We grouped together needed public improvements. We bridged divides between our diverse City departments. And we connected to our citizens' ideas and opinions through new ways of engagement and a key street levy vote.

In this publication, you will see how these links—formally called integration—of projects and people have advanced environmental stewardship, provided for predictable and affordable utility rates, extended our street improvement dollar, and delivered more public benefits.

The approach is about delivering value for our citizens. Tear up the street one time, do all the work that's needed—above and below ground—once, and look for opportunities to create additional benefits. Improve parks, create safe routes to schools and community centers, establish an environment that encourages private investment and improved neighborhoods and alternative forms of transportation.

Doesn't it just make sense to build a completed street with bike and pedestrian connectivity when we open up the road to install a new water transmission main? And what about building a large combined sewer overflow (CSO) tank on a piece of property already owned by the City that can include a new public plaza with stunning Spokane River views? The examples go on.

We know looking at problems holistically is something our citizens do all the time in their personal lives. They don't replace the rain-damaged carpet without also fixing the roof that let the rain in. In government, though, we find it difficult sometimes to think horizontally and navigate an integrated-type solution. That's why Spokane is getting national attention for this work.

The Water Council of the U.S. Conference of Mayors and the National Association of Clean Water Agencies have lauded our plan to improve the health of the Spokane River because of its innovation. The Federal Highway Administration and Washington state Department of Transportation named a collaborative project to extend the Centennial Trail past Kendall Yards their project of the year. And bond rating agencies and investors responded to our approach as outlined in a sale of Green Bonds for water and wastewater projects with high ratings and very favorable interest rates.

Embracing this approach gives us a competitive advantage over other communities. As I am out in the community, our citizens tell me that we need to expand our priorities to include economic development and job growth. We need more family-wage jobs and opportunities to keep our youth in Spokane.

We are looking now at how to leverage public improvements to make Spokane more attractive to new and expanding businesses. Our ability to maintain affordable utility rates that grow predictably at only the rate of inflation also is a selling point. Our natural assets—like our abundant aquifer, gravity-fed wastewater system and incredible river—add to our marketability.

We will need to leverage all our strengths to get the results our citizens deserve from their City government. Spokane is definitely on its way to being the City of Choice.



David Condon
Mayor

Integration Brings Savings, Better Outcomes

These days, "integration" sits at the center of the City's approach to infrastructure projects. This is a holistic approach to public works projects that considers how the City can accomplish multiple objectives within a single project. The idea is to create value for our citizens.

But what does that really mean?

Consider a three-dimensional view of the street. Included in that view are those traditional surface transportation pieces like sidewalks, bike lanes, and vehicle travel lanes. But that view also includes below-ground connectivity for utilities—everything from water, sewer, and stormwater to natural gas, electricity, and telecommunications.

Under an integrated approach, the City now considers all the work that needs to be done along a street—above and below ground—and works that into a single project that is more affordable and best serves the surrounding land issues.

An integrated project on a 20-block section of South Crestline demonstrates the results. The project included a new water transmission main, full curb-to-curb rehabilitation of street, and the addition of sidewalks and stormwater facilities. Work also was coordinated with Spokane County and private utilities.

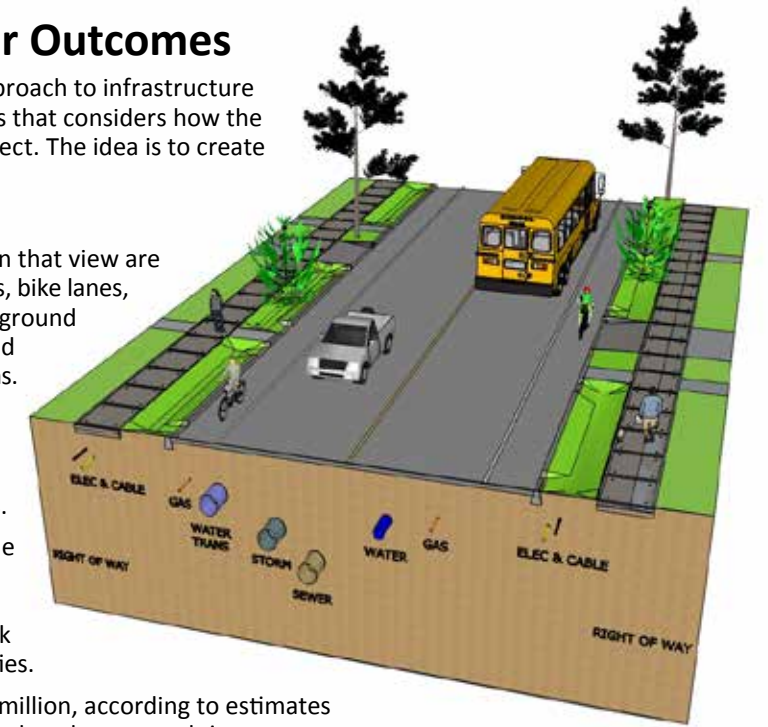
Combining the work into a single project saved about \$1.2 million, according to estimates by City engineers. It also inconvenienced the public once, rather than several times.

But integration of work doesn't stop with our streets. The City has used this approach to design wastewater and stormwater improvements that address several pollutants at once and also leave the area better than it was before the project.

In Underhill Park, the City built a 1.5 million-gallon underground storage tank to tackle overflows to the River from combined wastewater and stormwater sewers. When the project was complete, the area had a new parking lot and improved grassy fields for the neighborhood. Parts of Hartson Street near the area also were improved. The project helped to meet a regulatory requirement while also creating a neighborhood benefit.

To accommodate these approaches, the City organized its finances differently, too. Water and wastewater now comprise a single financial unit, and the City's utilities also contribute a match for street work to get these improved results.

Integration really is about working together to get better outcomes at a better price.



Case Study: East Sprague Avenue

The City's integrated approach to public infrastructure projects delivers customized results depending on location. East Sprague Avenue is part of a Targeted Investment Area, that's designed to help grow and diversify the business base in the area.

A planned 2016 project is designed to improve connectivity to the area, make the street more inviting for customers, and provide opportunities for improved economic and neighborhood health. The City worked with representatives of business and property owners along the corridor to incorporate their ideas and

deliver a project that provides multiple benefits for our citizens.

Project elements include pavement reconstruction, sidewalks bumpouts at intersections, pedestrian refuge islands, new landscaping and lighting, and stormwater management through pervious pavement in the parking lanes and the use of canister filters that treat the stormwater. The project runs from Helena to Stone streets with more concentrated streetscape improvements from Madelia to Crestline.





Fixing City Streets to Last into the Future

Maintaining the City's streets is always a top priority for citizens. In November 2014, City voters approved a new 20-year street levy designed to improve the arterial street system.

Nearly 78 percent of voters supported the new levy, which refocused dollars citizens already were paying for street bond debt into new street work. The new levy generates around \$5 million a year to fund new street work. Those funds are being matched with state, local, and federal transportation and utility dollars to support annual street improvements.

City engineers immediately went to work on the first projects planned under the levy. In 2015, the City used levy dollars to reconstruct portions of Indiana Avenue, Rowan Avenue, High Drive, and others.

The City is taking an integrated approach to this work so it provides the greatest value to our citizens. Projects include solutions to multiple needs, including pavement condition, bicycle and pedestrian improvements, transit, utility infrastructure, stormwater management, freight movement, and economic development opportunities.

A group of citizens is volunteering their time to serve on a new Transportation Subcommittee of the Plan Commission to determine how to prioritize major City street work over the next 20 years. They have developed a matrix that is used to score projects based on multiple measurable factors.

The scoring considers how well a proposed project provides connections for motorists, transit, freight, bicyclists and pedestrians. It considers the number of people who use a street, environmental benefits, integration with utility improvements, and how it might promote economic health. The subcommittee members use the scores to make decisions about when a project should move forward.

"Through the subcommittee's work, we now have a blueprint that will help guide our street investments for two decades," says Scott Simmons, the City's new Public Works Division Director. "We are using this work to help update the chapter in our long-term Comprehensive Plan that lays out our strategies and goals for street and utility work." (See page 10.)

Over the next 20 years, the City has committed to raising the overall condition of the arterial street system and maintaining those streets. Besides the major projects that go through the subcommittee's process, the City also is developing a comprehensive maintenance plan that will allow for crack sealing, chip sealing and grind and overlay work that will extend the life of reconstruction projects.

Proper maintenance essentially stretches citizens dollars once again. Street Department officials report that projects that are built to current standards with proper maintenance can last for 30 or 40 years.



Case Study: Indiana Avenue

One of the first projects that the City paid for using Street Levy dollars was a rebuild of Indiana Avenue. The project was one of a handful named before voters considered the levy. The goals for the project were to improve the street surface, maintain the flow of traffic, manage stormwater, accommodate bikes, and fit in with the neighborhood.

In the summer of 2015, the City completed the first phase of reconstruction on Indiana Avenue from Division east to Dakota. A second phase of work from Dakota to just past Perry is scheduled for 2016.

The project includes a full-depth reconstruction of the street, the creation of stormwater swales, and a shift in the lane configuration to accommodate vehicle travel, parking, and bicycles. An updated landscaping feature was added at Indiana's intersection with Ruby and work was modified to protect a number of large, mature trees.

The Indiana project will tie in with a "greenway" project planned for Cincinnati Street. The Greenway will provide a safe, beautified route for bicyclists and pedestrians that parallels the heavily used Hamilton corridor. The greenway will feature enhanced pedestrian crossings, the use of landscaping, and other amenities.



How It Works: Pervious Pavement

City engineers are trying out new approaches for managing stormwater when they design projects. One of those new approaches is the use of pervious pavements.

These porous surfaces can be made of concrete, asphalt, or pavers. They allow stormwater to flow through the street surface and soak into gravels and soils that are installed under the pavement. The soil and gravel layers provide some treatment for the stormwater, removing pollutants the water picks up from the street surface. To maintain them, the surfaces must be vacuumed periodically to keep them from clogging.

Engineers are testing these different uses for the pavements to determine how well they perform. The City has placed these surfaces on parking lots at Finch Arboretum and the Riverside Park Water Reclamation Facility. They will also be placed in bike lanes on Havana Street, in parking areas on East Sprague Avenue, and in a pilot project on Sharp Avenue near Gonzaga University.

If the tests prove successful, the City expects to use pervious pavement more frequently because the applications can replace large areas needed for stormwater swales or storm gardens.

City Investment in the Core

Over the next four years, the City of Spokane will invest about \$145 million in public infrastructure in and around the City core. That dollar figure includes design, construction, and other costs for a set of projects that will transform the look of our downtown.

The work includes everything from the renovation of Riverfront Park to the installation of two large underground tanks to manage overflows from combined wastewater and stormwater sewers to the replacement of the Post Street Bridge.

Streetscape improvements will be added on portions of Main Avenue and Wall Street. The University District will get an iconic bicycle-pedestrian bridge. And, one of the City's most heavily traveled corridors, Lincoln and Monroe, will be reconstructed.

The goal of the work is to gain as much public benefit as possible from the dollars spent.

1 Peaceful Valley Trail

2 Summit Boulevard CSO Tank

3 Post Street Bridge Replacement (concept rendering)

4 Riverfront Park Renovation

5 Spokane Falls Boulevard CSO Tank

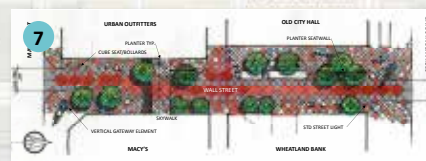
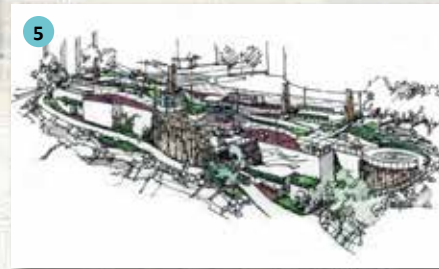
6 Lincoln-Monroe Corridor Rehabilitation

7 Wall Street Resurfacing

8 Division Street Gateway

9 Main Avenue Streetscape

10 U-District Gateway Bridge





Improving the Health of the Spokane River

The City and its citizens are making a significant investment to improve the health of the Spokane River. Spokane's Integrated Clean Water Plan includes plans for more than \$300 million in work to keep pollution out of the river.

The plan is designed to be both environmentally and financially responsible. With a new approach to the needed work, the plan delivers better pollution reduction at a cost that's about \$150 million less than previous plans.

At the same time, the City has committed to improving the areas where projects are constructed to provide additional benefits for Spokane neighborhoods. Projects to improve water quality that are largely underground also have included new pedestrian and bicycle trails, improved parks, and a public parking lot.

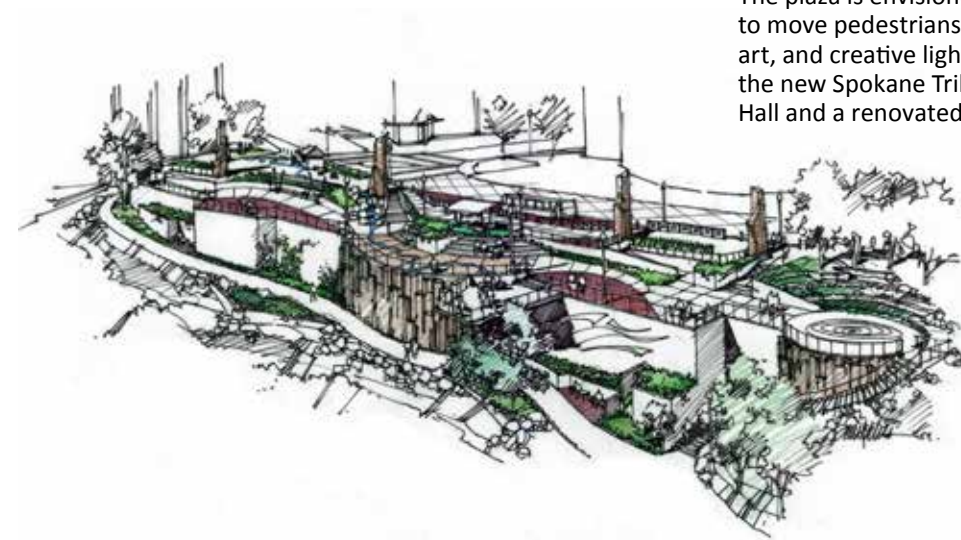
A major project planned in downtown is envisioned to include a new public plaza and river overlook, and City leaders also are considering the possibility of adding housing or commercial space above tanks in a couple of locations.

"This plan was the start of our new integrated approach to public improvements needed in our City," says Utilities Director Rick Romero. "We quickly realized that we could gain value for our citizens when we started thinking about our projects in a more holistic way."

The Integrated Clean Water Plan includes work:

- To manage overflows from combined sanitary and stormwater sewers (CSO). Through 2015, construction has been completed on four large CSO tanks, a fifth is under way, and seven more major projects are scheduled, including three that will begin in the first half of 2016.
- To address untreated stormwater going to the river. Design and planning work is proceeding on the Cochran Basin project that will manage about half of the stormwater that reaches the river untreated within the City. Additionally, the City is managing stormwater on site when it rebuilds streets throughout the City. Storm gardens, pervious pavement in bike and parking lanes, and more traditional swales all play a role.
- To add a third level of wastewater treatment at the City's Riverside Park Water Reclamation Facility. This \$126 million project will use membrane technology to further screen out pollutants, like heavy metals, PCBs, and phosphorus, and significantly improve the quality of the water that is released to the river. Work on this project is expected to begin in late 2016.

All of these investments are being done affordably for our citizens. The Mayor and City Council have committed to limiting annual utility rate increases to the average rate of inflation to keep bills more manageable for customers.



Case Study: Spokane Falls Blvd. CSO Tank

As the City builds below-ground infrastructure to manage wastewater, it has committed to including above-ground benefits for citizens. Plans for a 2.2 million-gallon concrete tank to manage overflows to the river from combined wastewater and stormwater sewers to the west of City Hall on Spokane Falls Boulevard provides a great opportunity to deliver on that commitment.

Construction is expected to begin in 2017 on the project, which will be the largest of the City's CSO tanks.

Design concepts for the site include a signature public plaza overlooking the Spokane River Gorge and Huntington Park. The plaza is envisioned to include viewing areas, a trailhead to move pedestrians and cyclists toward Glover Field, public art, and creative lighting and pavement. And it will tie into the new Spokane Tribal Gathering Place to the north of City Hall and a renovated Riverfront Park.

How It Works: Holding Back Flow

In December, the City experienced a record winter rain storm, with 1.73 inches of rain falling over 3 days. The storm served as a test of the City's new additions to the system that manages overflows from combined wastewater and stormwater sewers.

The City has these combined sewers on much of the South Hill, downtown, and in a couple of areas on the North Side, notably in the Shadle area.

During heavy rainstorms or periods of rapid snow melt, the runoff can overwhelm these sewer pipes and untreated overflow is directed to the Spokane River. To keep that from happening, the City has been building

large concrete tanks that can hold the excess water until the storm surge subsides and the wastewater can be sent to the City's Riverside Park Water Reclamation Facility for treatment.

The concrete tanks that already have been constructed kept 4.2 million gallons of combined wastewater and stormwater from reaching the river over the three-day storm in December. City engineers also estimated that if all of the planned CSO tanks were constructed and operational during this storm, they would have prevented all overflows from this significant storm.

That's good news for the river and the community.



Link Spokane – One Vision, One Plan

The Spokane Comprehensive Plan is the one unified document that coordinates and guides all the City's activities. As part of the larger planning process, Link Spokane is the integrated transportation and utility components of the Comprehensive Plan.

The updated Link Spokane Chapter will address the current and future needs of all transportation users, including vehicles, freight, transit, bicyclists, and pedestrians, while identifying opportunities to leverage coordinated infrastructure improvements and meeting the needs of the city's current and future land uses.

This process will establish a single unified vision to ensure every public dollar supports our broader community goals. It is designed to be fully integrated with other City investments in utilities and infrastructure.

Work happening under the Link Spokane effort includes:

- The recently adopted Pedestrian Master Plan. The plan supports a more walkable Spokane, encouraging a high-quality walking environment that supports increased levels of physical activity, important connections to transit, and more transportation options for all.
- On-going update of the Bicycle Master Plan. The plan creates a vision for enhancing bicycling opportunities for all residents of Spokane, with goals establishing actions intended to make Spokane a more bicycle-friendly city.
- Updated Street Design Standards to support the City's adopted Complete Streets Policy.

The Link Spokane work has been motivated by the following themes:

- Providing Transportation Choices
- Providing Access to Daily Needs and Regional Destinations
- Promoting Economic Opportunity
- Respecting Natural and Neighborhood Assets
- Enhancing Public Health and Safety
- Maximizing Public Benefits and Fiscal Responsibility with Integration

What does this all mean? Spokane has a great opportunity to be SMART about how we look at our future needs within a three-dimensional, integrated right-of-way. Spokane's investment strategy will include a balanced multimodal transportation system that will serve all users.

Opportunities to be involved will be coming up throughout the spring. More information can be found at my.spokanecity.org/projects/link-spokane/



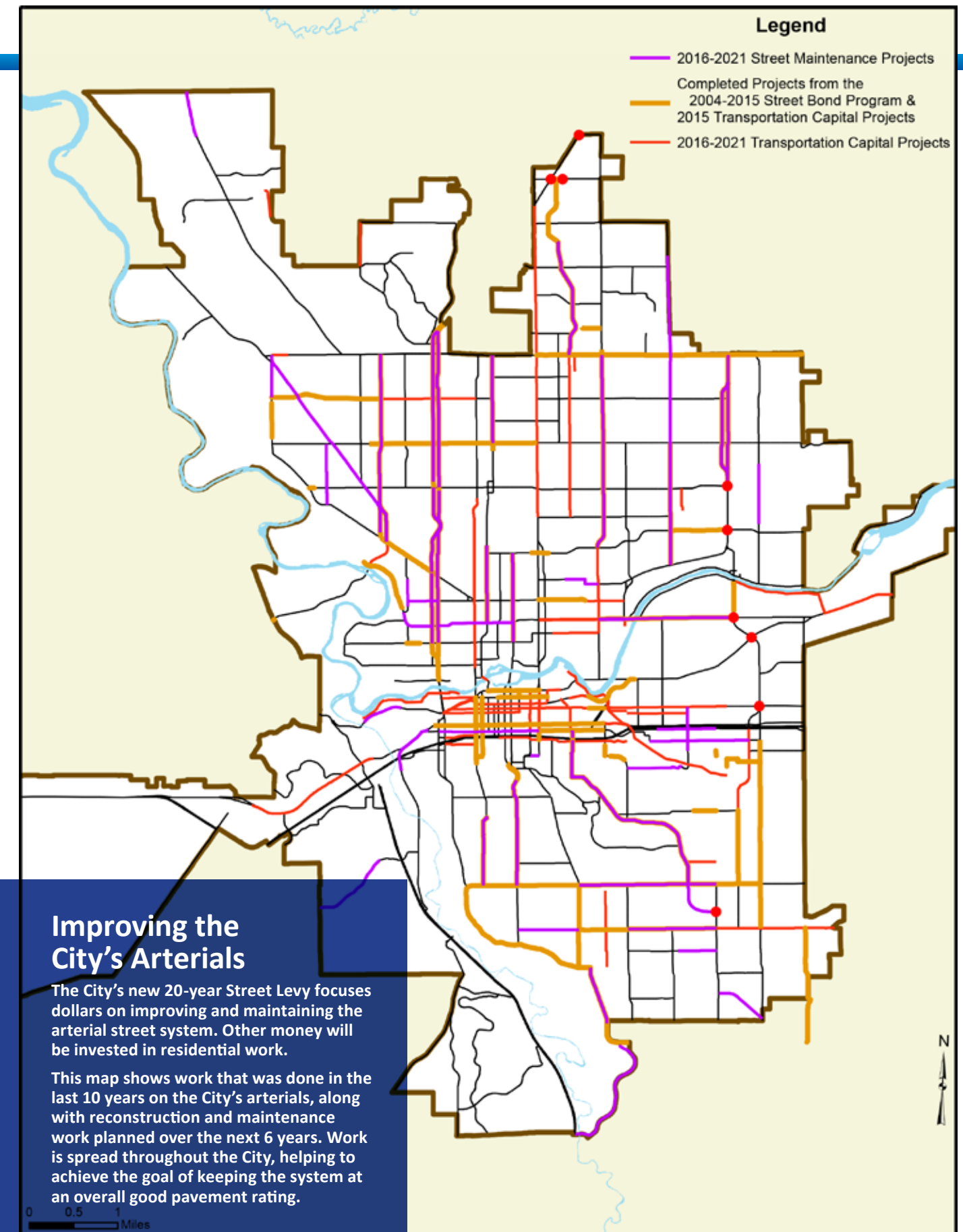
Planning for Pedestrians

Last fall, the City adopted its first Pedestrian Plan. Walking is the most fundamental transportation choice -- the starting place for all journeys, even as people walk to their cars, transit, or bicycle to move between the places they visit throughout a day.

Despite the fact that nearly all Spokane residents walk at some point every day, the details of the walking environment go largely unexamined. That's because for most people in Spokane the duration of a walking trip is so short that a facility of any quality that connects two places with the shortest path will do.

Spokane, like cities across the country, is choosing to redesign its streets. These redesigns can provide a high-quality, barrier-free walking environment that supports increased levels of physical activity, important connections to transit, and more transportation options for all.

The new plan includes maps of missing pedestrian facilities, including sidewalks, particularly on routes to schools and other important destinations. Information from the plan will help the City determine where to make new investments to help pedestrians get around.



Improving the City's Arterials

The City's new 20-year Street Levy focuses dollars on improving and maintaining the arterial street system. Other money will be invested in residential work.

This map shows work that was done in the last 10 years on the City's arterials, along with reconstruction and maintenance work planned over the next 6 years. Work is spread throughout the City, helping to achieve the goal of keeping the system at an overall good pavement rating.

Case Study: The “Barge” Cleanup

Since the City’s investment in improving the water quality of the Spokane River is largely underground, sometimes it makes sense to provide citizens with a tangible way to measure results.

As a complement to those water quality investments, the City and several partners put together what was dubbed a “barge cleanup” to remove larger pieces of garbage in the river between Division and Hamilton streets.

A boat with a winch, joined by divers and a platform compiled of floating docks to serve as a barge, was used to remove larger items that have been discarded in the river over the years. The boat and its crew worked for a week and removed seven tons of trash.


Shopping carts, bicycle parts, and tires littered the river bottom. Crews also pulled out a safe, a sink, a ski, a roller blade, cart parts, a park bench, and two wagon wheels, among other things. Around the bridges, in particular, the trash piled up.

“We accomplished something during our barge week, but we were a little sad to see how much our river has been used as a dumping site,” says Gavin Cooley, the City’s Chief Financial Officer who helped lead the charge on the garbage cleanup plans. “We are hopeful that our week-long project highlighted the role we can all play in protecting this great community asset.”

The City sends thanks to its partners on this project: Spokane Riverkeeper, Spokane River Forum, Avista Corp., The Lands Council, and the Friends of the Falls. Additional thanks go out to the barge team of Knight Construction, Associated Underwater Services (AUS), and Brown Construction.



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