



King County

Department of
Natural Resources and Parks
Wastewater Treatment Division

Lake Hills and NW Lake Sammamish Sewer Upgrade Project

OVERVIEW

King County Wastewater Treatment Division (WTD) has nearly 400 miles of underground pipes in the region that collect sewage from homes and businesses. The pipes take sewage to one of our treatment plants to be cleaned. This system of pipes and treatment plants help keep us healthy and keep Puget Sound, lakes, and rivers clean.

The Lake Hills and N.W. Lake Sammamish sewer pipe is an important part of this underground network of pipes. This sewer pipe has been serving Redmond and Bellevue for 50 years. The water you use travels down your drain to City sewer systems. The City's pipes send wastewater to King County's sewer system where it is carried to the Brightwater Treatment Facility in Woodinville for treatment.

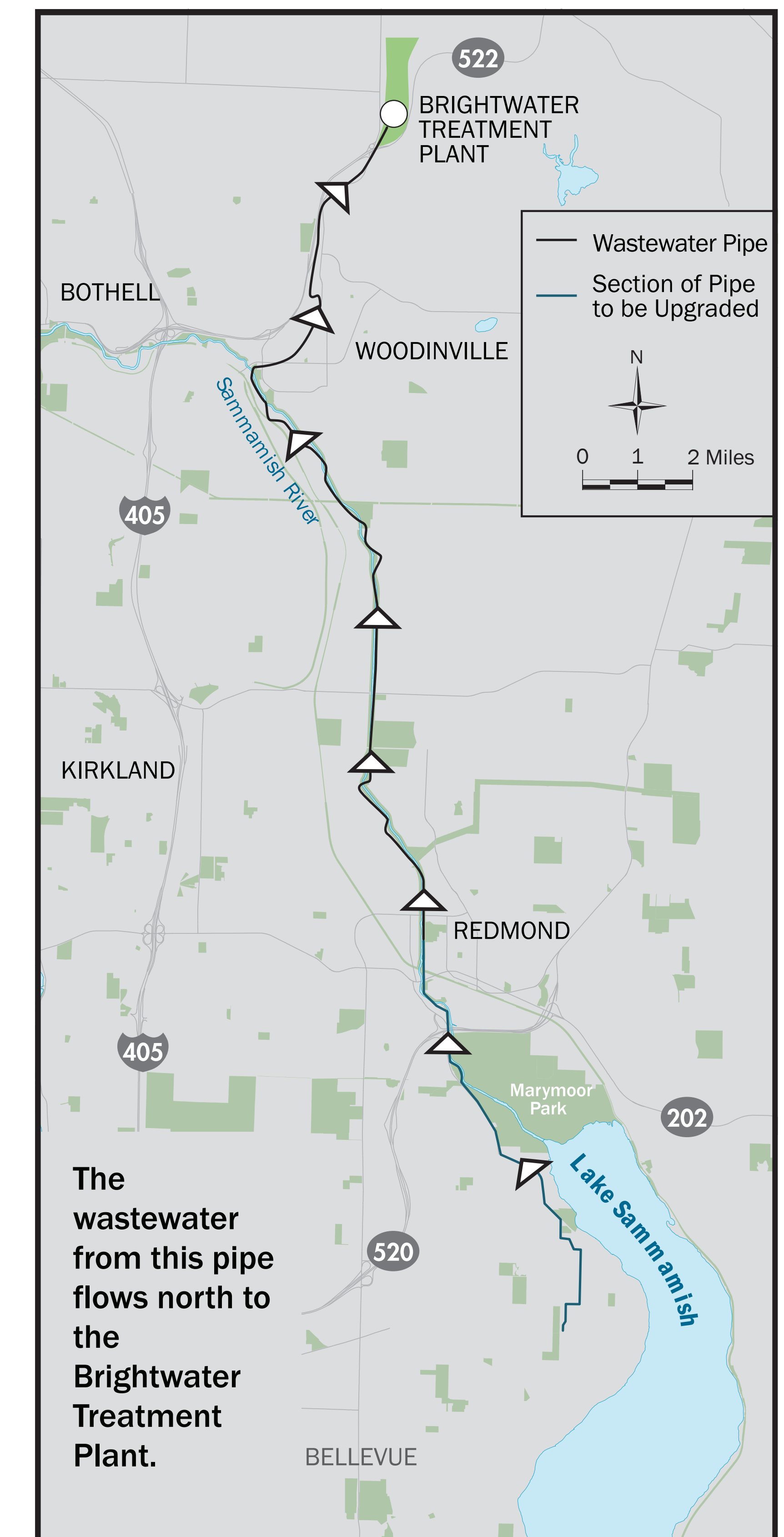
We are working on a project to upgrade 4.5 miles of this sewer pipe. King County will build the new pipe in trails, roads, parks, and private property in Redmond. The route of the new pipe will almost entirely follow the route of the existing pipe. Construction is expected to begin in 2021 and take three years to complete.

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TIMELINE



*This is an estimated project timeline and is likely to shift over the course of the project.



The wastewater from this pipe flows north to the Brightwater Treatment Plant.

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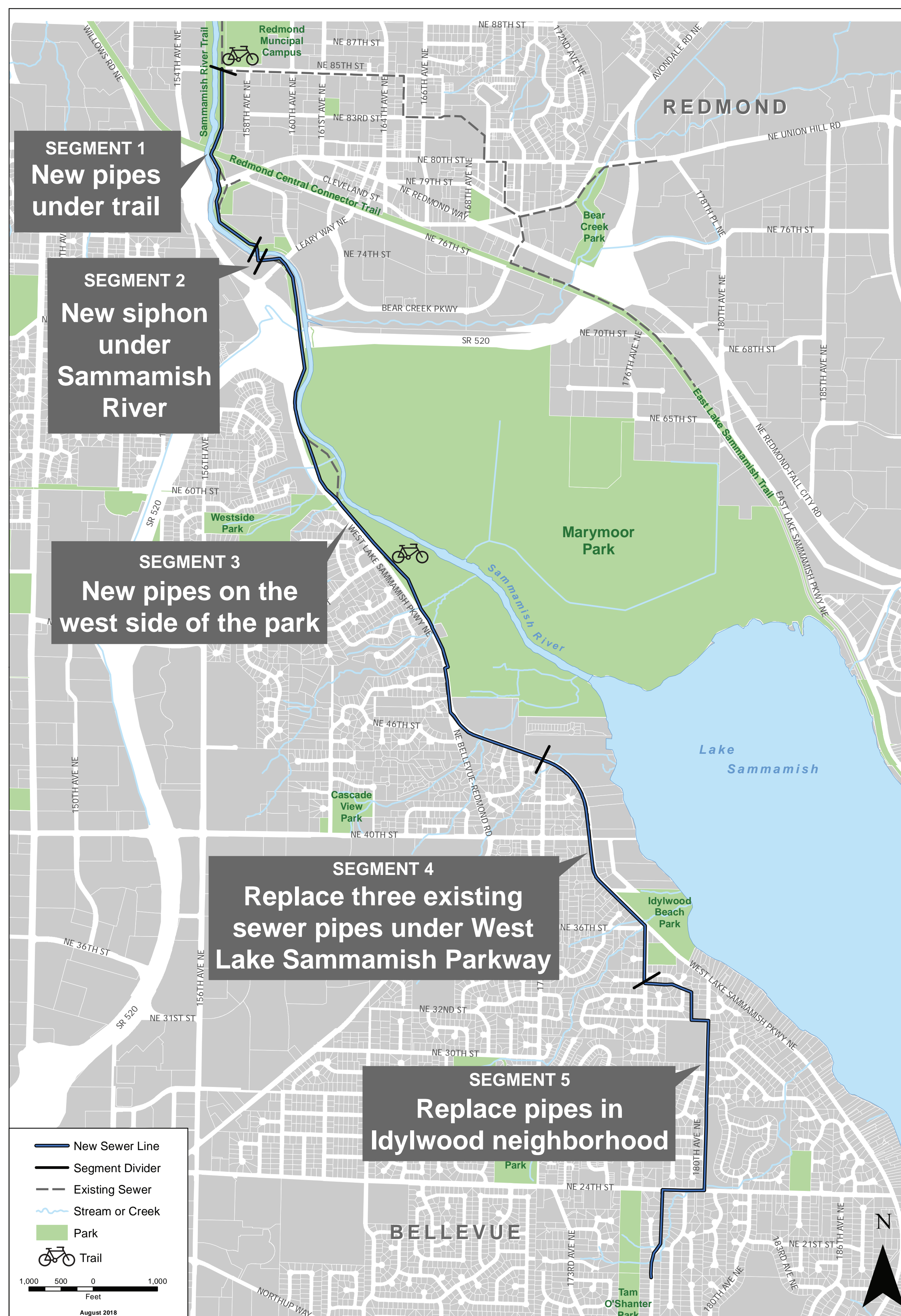
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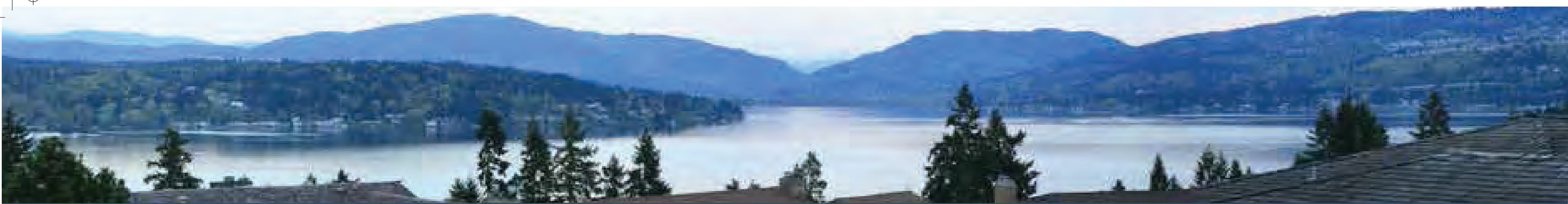
SEWER ROUTE

The 4.5-mile-long sewer pipe runs underground between 177th Avenue N.E. and N.E. 85th Street. The pipe begins in Redmond's Idylwood neighborhood and continues along West Lake Sammamish Parkway between Idylwood and Marymoor parks. From there, the pipe runs under the Sammamish River Trail to N.E. 85th Street near Redmond City Hall.

The project is divided into five segments based on unique conditions – soil type and groundwater levels, existing utilities, environmentally sensitive areas, and cultural resources. Construction methods and durations will vary by segment. **The segments are not representative of the order the pipe will be installed.**

We will have a more detailed construction schedule in 2021 after we hire a contractor.





Lake Hills and NW Lake Sammamish Sewer Upgrade Project

COMMUNITY PRIORITIES

Your feedback is important to us.

King County recognizes that construction can be disruptive to those who live, work, or play nearby. We’ve been working with you to identify ways we can reduce disruption to your community during construction. Here is what we’ve heard so far and how we’re working to incorporate your input where we can:



Marymoor and Idylwood Parks

YOUR FEEDBACK

- Maintain park access, especially during the busy summer months

OUR RESPONSE



We will drill under the Marymoor Park entrance at West Lake Sammamish Parkway rather than digging a trench across it. This will allow us to keep the park entrance open.



We will avoid road closures in front of Idylwood Park and the overflow parking lot during busy summer months.




West Lake Sammamish Parkway


YOUR FEEDBACK

- Limit disruptions
- Avoid work during peak commuting hours
- Always keep at least one lane open


OUR RESPONSE




Work will be completed in sections to limit disruptions.



We do anticipate vehicle lane, bike lane, and sidewalk closures during construction.



We’re working closely with the City of Redmond to identify working hours and safe detour routes for each section of the road.



We may not be able to maintain a thru-traffic lane in the narrowest sections of the road. Local and emergency access at these locations would always be maintained.



Sammamish River Trail

YOUR FEEDBACK

- Limit disruptions
- Find safe and efficient detour routes
- Ensure detour routes are well marked
- Use project restoration as an opportunity to improve the trail

OUR RESPONSE



Work will be completed in sections to limit disruptions.




We’ve developed preliminary detour routes based on direction we’ve received from the City of Redmond, King County Parks, and your community.



In addition to standard safety signage, we will have supplemental wayfinding along detour routes.



We’re partnering with King County Parks to widen part of the Trail during project restoration.

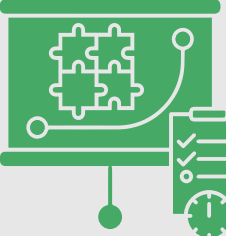


Healthy Habitats


YOUR FEEDBACK

- Identify and avoid sensitive plant and animal habitats
- Protect, restore, and enhance fish and wildlife habitat


OUR RESPONSE




We’ve tried to avoid sensitive environmental areas where possible. Where we couldn’t, we are developing protection and restoration plans as appropriate.



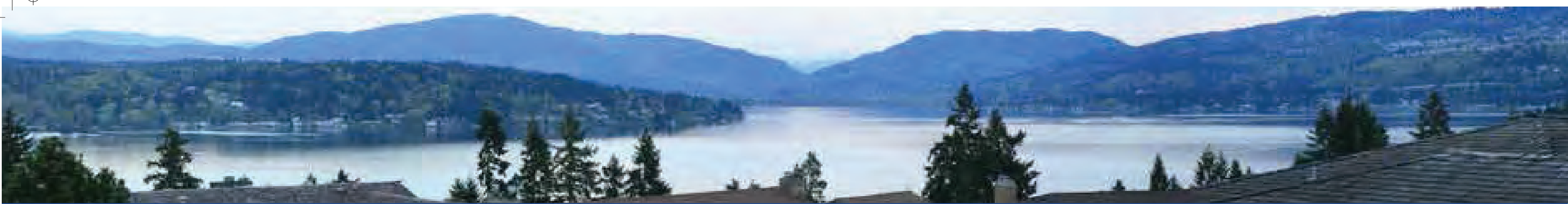
We will install habitat enhancing log structures and plants on the banks of the Sammamish River near Leary Way.



We’ll prioritize replanting with native and drought-tolerant trees.



We’re designing a culvert at Country Creek to allow fish to move further upstream.



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COMMUNITY PRIORITIES (continued)

**Private Property**

YOUR FEEDBACK

- Relocate the sewer off private property
- Maintain access to homes and businesses along the sewer route during construction

OUR RESPONSE



There were no alternative sewer routes that would allow us to avoid private property while keeping flows moving through the pipes using gravity.



King County is working closely with private property owners to acquire easements and share information about what to expect during construction.



While you may experience delays during construction, we will maintain access to homes and businesses along the sewer route during construction.

**Other Projects**

YOUR FEEDBACK

- Coordinate with other planned construction projects


OUR RESPONSE



We’re coordinating closely with the City of Redmond, Microsoft, and Sound Transit to understand schedules for their construction projects.




We’ll look for opportunities to collaborate with other projects to consolidate impacts from multiple projects happening at once.

**Schools**


YOUR FEEDBACK

- Limit construction near Audubon Elementary School during the school year
- Coordinate with schools to maintain safe bus and walking routes

OUR RESPONSE



Work in front of the entrance to the school will only be allowed when the school is not in session.



We’re coordinating closely with the Lake Washington School District and Bellevue School District so bus and walking routes can be safely rerouted ahead of construction.



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HOW WE WORK WITH THE PUBLIC

Your feedback is important to us.

King County is committed to working with you throughout the life of this project.

Design

During project design, King County provides the community with details about construction, such as techniques used and estimated duration, as well as plans for site restoration. As this information is shared, the project team will work with the public to identify reasonable solutions to reduce the effects that construction will have on the community.

Our outreach efforts to date include:

- 7 community meetings
- 48 project updates and fieldwork notices
- 9 community events
- 700 conversations with community members
- 19 community briefings

Construction

King County recognizes that construction can be disruptive to those who live, work or play nearby. During construction our goal is to let you know about upcoming construction activities so you can plan ahead. We'll also work with you to promptly address questions and concerns while work is underway.



Here are some of the ways we seek to get you the information you need:

- Community meetings with the contractor prior to construction
- Community briefings on project progress during construction
- Prompt responses to all community inquiries
- Regular email, text and social media updates
- Signage around your community
- Fliers at your door
- Construction hotlines
- Project web page

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WHAT TO EXPECT DURING CONSTRUCTION

Construction is expected to begin in 2021 and take approximately three years to complete. During construction, you can expect:

- Typical work hours
- 7 a.m. to 7 p.m. on weekdays
- 9 a.m. to 6 p.m. on Saturdays
- Noise, vibration, dust
- Traffic, pedestrian, cyclist delays and detours
- Increased activity and use of large construction equipment



This work will require large construction equipment.



Traffic flaggers will be used when necessary.



Safety is our top priority. Bicyclists may be asked to dismount and walk bikes through our work zones.



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OPEN-CUT CONSTRUCTION

Open-cut construction will be used to install the majority of the new pipe. This is the most common method for installing pipes, and is safer for shallower work zones. There will be traffic impacts during open-cut installation, including lane closures and detours. Access to residences and businesses will be maintained.

Examples of open-cut construction are shown here.



Crews excavate before open-cut installation



Traffic impacts are expected during installation



Example of open-cut installation of 60" pipe

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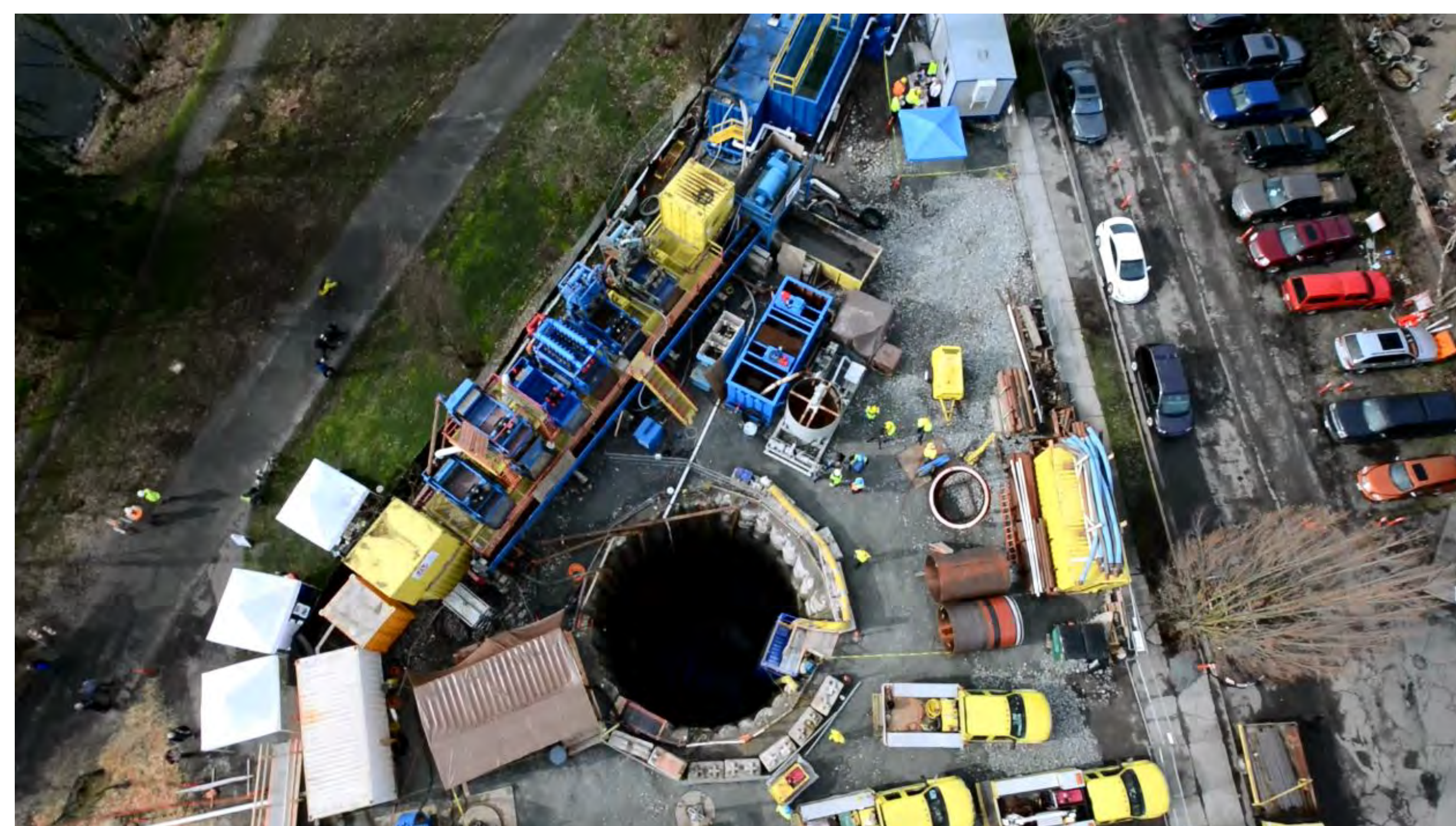
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TRENCHLESS CONSTRUCTION

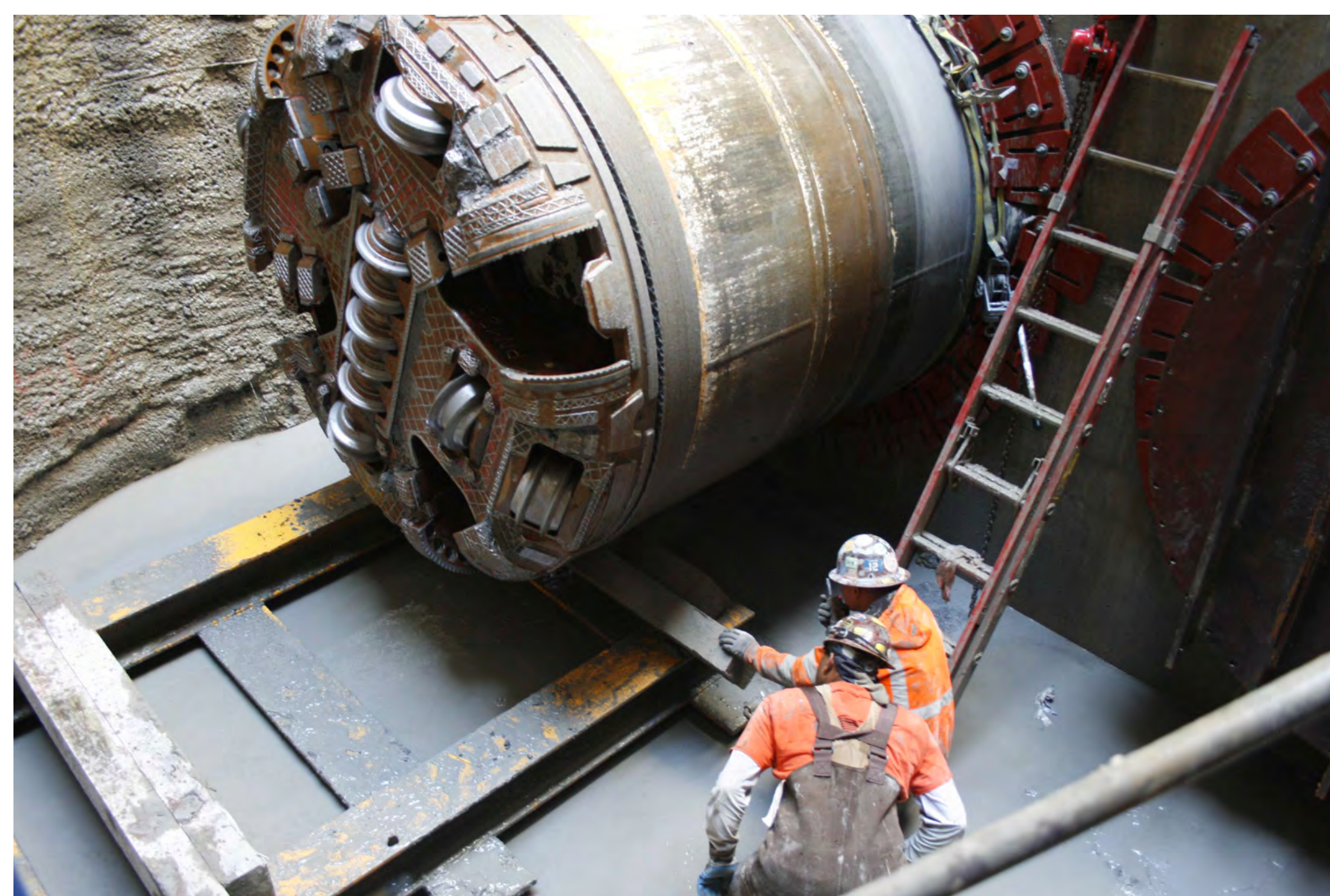
Trenchless construction does not require digging from the surface to the pipe depth. Instead, two shafts are built on either end of the pipe. Then the pipe is installed using a hammer, auger, drill, or microtunneling machine. This method is only feasible in certain types of soils and conditions.

We expect to use trenchless construction in two places along the sewer route:

- We'll drill under the Marymoor Park entrance off West Lake Sammamish Parkway. Going under the entrance will allow us to maintain park access.
- The Sammamish River and its banks provide important habitat for fish and wildlife, including migrating salmon. To protect this sensitive habitat, we will use a microtunnel to cross under the Sammamish River.



To cross under the Sammamish River, the shafts on either side of the pipe will need to be 50 feet deep. To cross under the Marymoor Park entrance, the shafts will need to be 20 feet deep.



We will use a microtunneling machine to go under the Sammamish River.



Crews will likely use a trenchless method called an auger bore to cross under the entrance to Marymoor Park.



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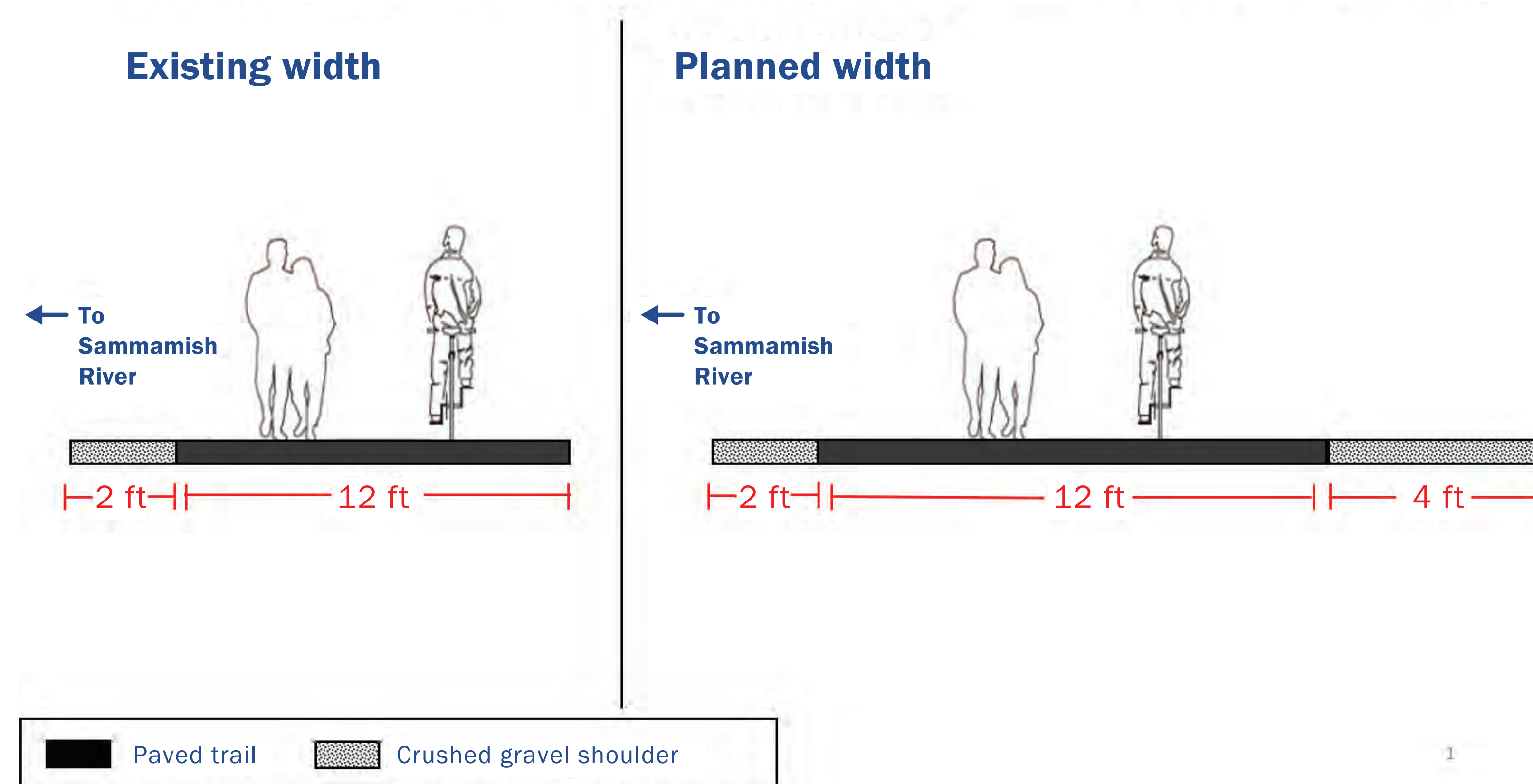
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SAMMAMISH RIVER TRAIL

We recognize that the trail is a popular route for recreation and commuting. Our goal is to put the trail back as good or better than we found it. When our work is complete, we plan to:

- Relocate as many maintenance holes off the trail as possible
- Plant new trees and shrubs to replace those removed
- Repave affected areas of the trail to at least the current footprint
- Partner with King County Parks to widen the trail between N.E. 85th Street and Leary Way

Sammamish Trail widening: NE 85th St. to Leary Way



Rendering of trail restoration looking north from Leary Way



Rendering of trail restoration looking north from The Stroll park toward NE 85th Street

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LANDSCAPE REMOVAL AND REPLACEMENT

Many plants and trees have grown up around the sewer pipe since it was installed fifty years ago. Our crews will need an area approximately 30 to 45 feet wide along the entire pipe route to safely install the new pipe. Plants and trees will be removed in these working limits. Over the length of the 4.5-mile-long sewer route we expect to remove several hundred trees.

When work is complete, King County will replant trees and shrubs. We will plant at least one tree for every mature tree that is removed. For trees that are removed and are 30-inches-wide or larger, three new trees will be planted. These guidelines are set by the City of Redmond.

Example of landscape removal and replanting in Bellevue



Before Construction



During Construction



After Construction

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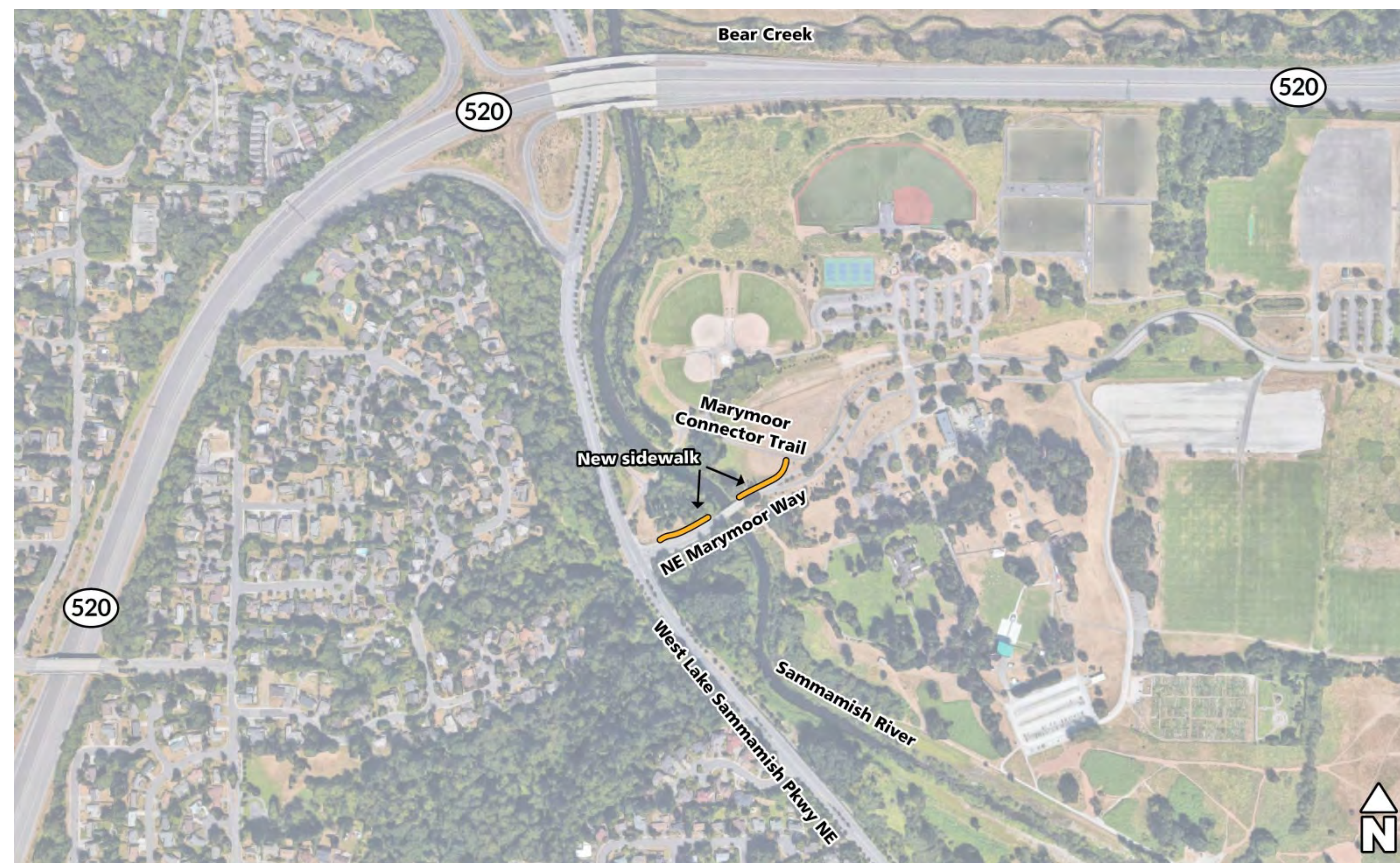
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ROADS AND SIDEWALKS

King County will repave sections of roads and sidewalks that we disrupt to install the new sewer pipe. Replacing sidewalks is an opportunity to improve accessibility. As part of the project's restoration, we'll install 24 new curb ramps at 11 locations along the sewer route.

We'll also install a new sidewalk at Marymoor Way that will serve as an accessible detour route during construction. The sidewalk will remain in place after construction.



Example of new curb ramp

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HABITAT ENHANCEMENT

We've tried to avoid sensitive environmental areas in our project design where possible. Where we couldn't, we are developing restoration plans. We're working closely with Tribes, local jurisdictions, and permitting agencies to develop plans that will maximize benefits for fish and wildlife. As part of the project restoration, we will:

- Install habitat-enhancing log structures and plants on the banks of the Sammamish River near Leary Way
- Prioritize native and drought-tolerant trees for replanting plans
- Maintain and monitor critical environmental areas for 5 to 10 years after planting
- Design and install a culvert at Country Creek that will allow fish to move further upstream



Example of log jam structure

Improving fish habitat at Country Creek

Part of the existing Lake Hills/NW Lake Sammamish sewer pipe runs under West Lake Sammamish Parkway, very close to the culvert at Country Creek. A culvert is a tunnel that allows water to flow under a roadway. King County must replace the culvert to install the new sewer pipe. We are partnering with the City of Redmond to improve the culvert so fish can swim through it.



The existing culvert at Country Creek allows water to flow under West Lake Sammamish Parkway, but it's too high above the creek surface to allow fish to swim through it.

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WHAT'S NEXT?

We'll spend the next year finalizing our project design by:

- Finalizing restoration plans
- Developing plans for managing traffic
- Acquiring permits from the Cities of Redmond and Bellevue and state and federal agencies

We expect to hire a contractor in early 2021. We will share detailed information about the construction schedule, detours, and what to expect during construction in 2021.

Our project team is available for meetings, briefings, and events. To request a meeting or to talk with the project team, contact:

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 kelly.foleykruse@kingcounty.gov

 Sign up for email updates:
www.kingcounty.gov/KCRedmondSewer

 Text alerts by texting:
KING REDMONDSEWER to 468-311



Community members attend a public meeting at Audubon Elementary in 2016

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