

CANYON ROAD REGIONAL CONNECTION PROJECT

Stormwater, Seasonal Flooding and Drainage Mitigation

Project overview

The Canyon Road Regional Connection Project will extend Canyon Road East from Pioneer Way to 70th Avenue with a grade separation of the BNSF railroad, and construct a new, more efficient bridge over the Puyallup River. Once complete, commuters, freight vehicles, bicyclists, and pedestrians will have a new and more efficient route to travel around Pierce County.

The County has invested millions of dollars to improve the capacity and safety of Canyon Road in several earlier phases of construction. Pierce County hopes to begin the next phase of construction for Canyon Road in 2025 with the Railroad Crossing portion of the Canyon Road Regional Connection Project. The Railroad Crossing portion of the project extend the road north, up and over the BNSF railroad tracks. This phase of the project will construct 9.5 acres of new impervious surface, which requires significant mitigation to avoid impacts to seasonal flooding.

For the Railroad Crossing portion of the project, Pierce County will manage seasonal flooding in the following ways:

- Building two detention ponds. Detention ponds control how fast the water that runs off the roadway is discharged to natural drainage courses.
- Increasing flood storage by creating, enhancing, or preserving of around 24 acres of wetland.
- Increasing environmental resilience in flood conditions by improving natural vegetation and conditions in wetland areas.

Pierce County is committed to working with local farmers, agricultural groups, and regional land advocates as the Canyon Road Regional Connection Project design advances. Protecting and preserving farmland in the project area is a priority.



Pierce County

Plans to mitigate stormwater, drainage, and seasonal flooding

Land use in the Railroad Crossing project area is currently agricultural, and will stay that way. Pierce County is committed to preserving the health and character of this sensitive agricultural area while building the Canyon Road Regional Connection Project.

TREATMENT AND STORAGE

The project will construct stormwater treatment and storage facilities, such as detention ponds, to manage and clean water that runs off the new roadway. Stormwater treatment and storage facilities allow for greater control of how much water is discharged to natural drainage courses or absorbed into the soil at a given time. The stormwater improvements will increase flood storage capacity and help prevent damage to farmland. Currently no such facilities exist in the project area south of the Puyallup River.

WETLAND MITIGATION

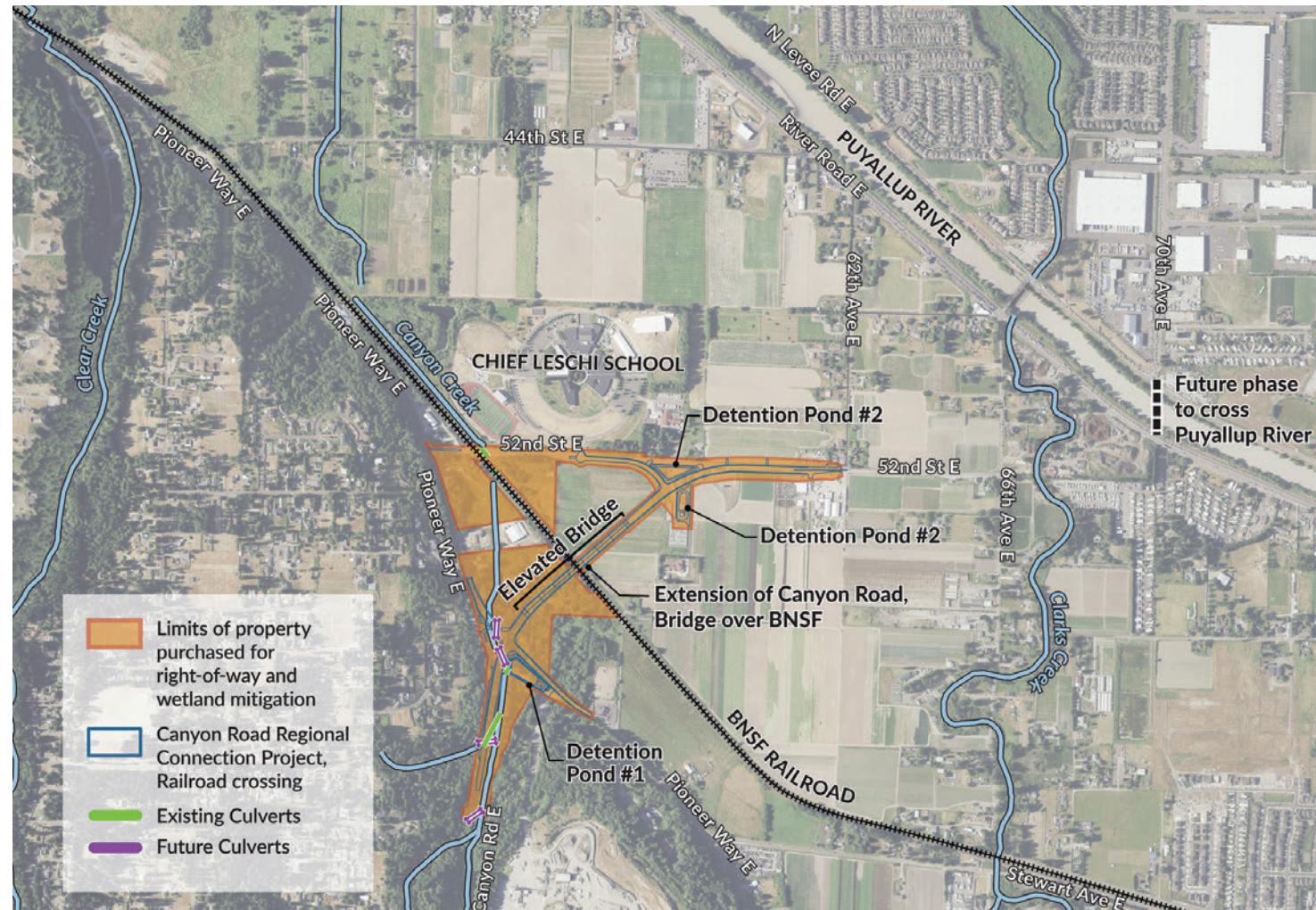
Plans include increasing flood storage by designating additional

areas along Canyon Creek as wetland mitigation, increasing culvert sizes and enhancing stream conveyance capacity. The project will re-establish about six acres of functional wetland, rehabilitate and enhance more than 10 acres of degraded wetland, and preserve more than six acres of intact wetland.

ENVIRONMENTAL RESTORATION

The project will add new vegetation, reduce the amount of invasive plant species, increase the amount of native plant species and vegetative diversity, enhance stream channel conditions, and establish off-channel habitats in wetland areas adjacent to the creek.

Figure 1: Canyon Road Regional Connection Project Stormwater Drainage Activities



Common questions about stormwater, drainage and seasonal flooding

The questions and answers below explain how Pierce County is preserving the health and character of the Railroad Crossing project, especially on the topic of drainage.

1. Are the road engineers aware of the flooding that already happens in the Puyallup Valley?

Yes. Even though the main stem of the Puyallup River has been contained by levees, there are tributaries such as Clear Creek, Canyon Creek, and Clarks Creek that overtop their banks in heavy storms. We are also aware of the challenges of high groundwater and the importance of fields drying enough to plant in the spring.

2. How much stormwater runoff will the new road create?

This project will construct 9.5 acres of new impervious surface, which will generate a high volume of runoff in a heavy storm. This runoff would become a problem if we didn't slow it down before releasing it. We plan to build two detention ponds to slow the release of the runoff.

3. Where will runoff from the road be released?

As shown on Figure 1, the ponds will collect and temporarily store the runoff from the Railroad Crossing portion of the project, and a structure linked to the ponds will control, restrict and limit the flow out of the ponds to mimic pre-developed conditions.

4. Won't this additional water overload Canyon Creek and the other creeks and ditches downstream?

No. Creeks flood when the rate of water flow exceeds their capacity, however this project includes mitigation to slow down the runoff, which will maintain Canyon Creek's flooding patterns without causing additional flooding. The Canyon Road Regional Connection project will build two large detention ponds to catch the extra water during a storm and let it run out very gradually.

The control of the flow out of the ponds will occur through 2-inch holes and weirs of varying dimensions, depending on the depth of the water in the pond.

5. Will the detention ponds work correctly if Canyon/Clear Creek are not able to drain?

Yes. Due to the high groundwater in the area, the roadway and detention ponds are being built above the existing grade. Since the ponds are higher than the surrounding land, the water level in Canyon Creek and Clear Creek will not impact the function of the ponds.

Common questions, continued:

6. Why can't the runoff be sent straight to the Puyallup River, or infiltrated into the soil?

Current regulations direct us to try “first infiltration” as Plan A. But in the Puyallup Valley the ground is already saturated most of the winter, so infiltration won’t work. The discharge point is established by state regulations, which say we must keep water flowing in its current direction.

7. Who is making these rules?

The Washington State Department of Ecology (DOE) sets the regulations on stormwater. The County used DOE rules to craft the 2015 Pierce County Stormwater Management and Site Development Manual. This manual, mandated by DOE, requires us to build large detention ponds and release water very slowly. The manual says that if we cannot infiltrate into the soil, we need

to slow the release rate to match the conditions present before Europeans settled the area. This means the allowable release rate will actually be less than today’s conditions.

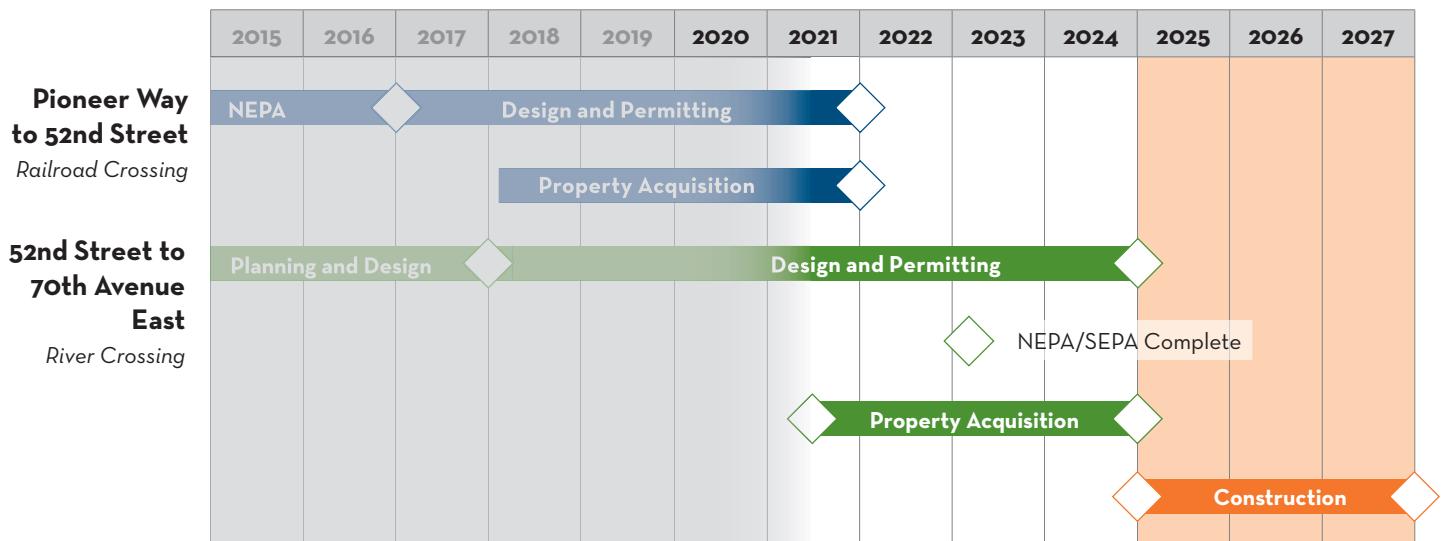
8. What can Pierce County do to increase the capacity of the creeks and ditches in the area?

Very little. While these open channels do function as drainage facilities, they also function as fish habitat. Environmental regulations are very particular about keeping fish habitat undisturbed.

9. What is the project doing with water that drains off adjacent agricultural lands?

The project proposes to put roadside ditches along the edge of the new right-of-way. Adjacent properties will be able to drain their runoff to the roadside ditches just like they do currently.

Project Timeline



Have more questions?

For more information visit the project website at:
www.canyonroadconnection.org or contact the Project Manager, Letticia Neal
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This material can be made available in an alternate format by emailing
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