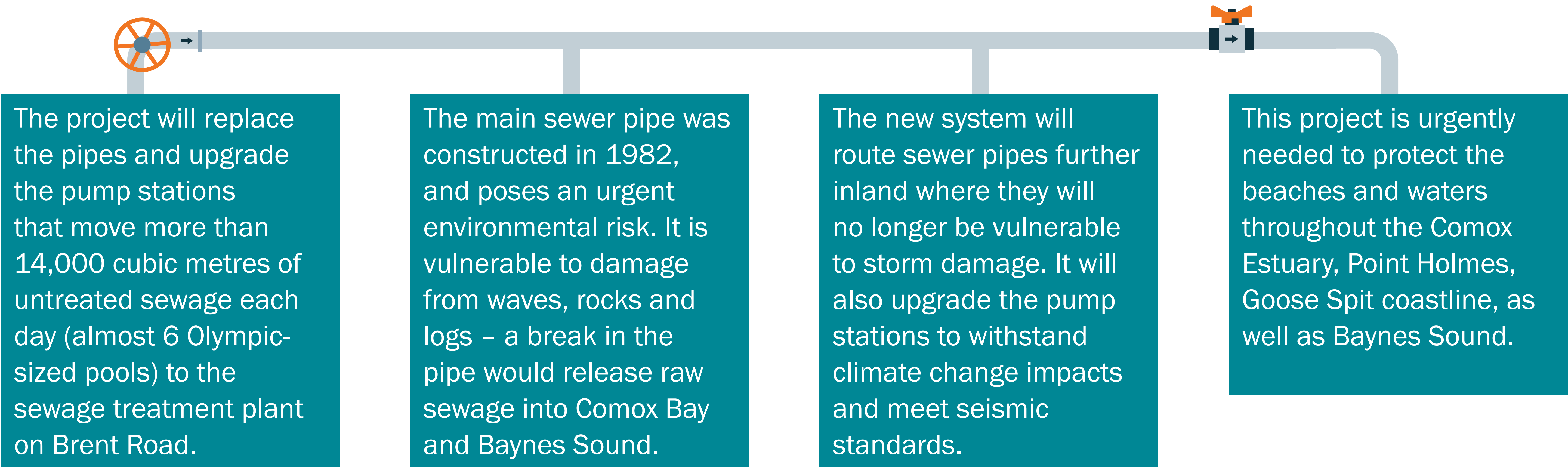


# ABOUT THE COMOX VALLEY SEWER CONVEYANCE PROJECT

The Sewer Conveyance Project involves an extensive upgrade to the sewer conveyance infrastructure that currently services the K’ómoks First Nation, Town of Comox and City of Courtenay. The Comox Valley Regional District (CVRD) is preparing for construction to begin in Summer 2023.





# CONVEYANCE PROJECT: UNDERSTANDING THE ROUTE

This multi-year, \$101 million conveyance project will be constructed and funded in one phase. Read below to find out what's happening along the route and the seven key zones that will be impacted during construction.

## PIPE INSTALLATION

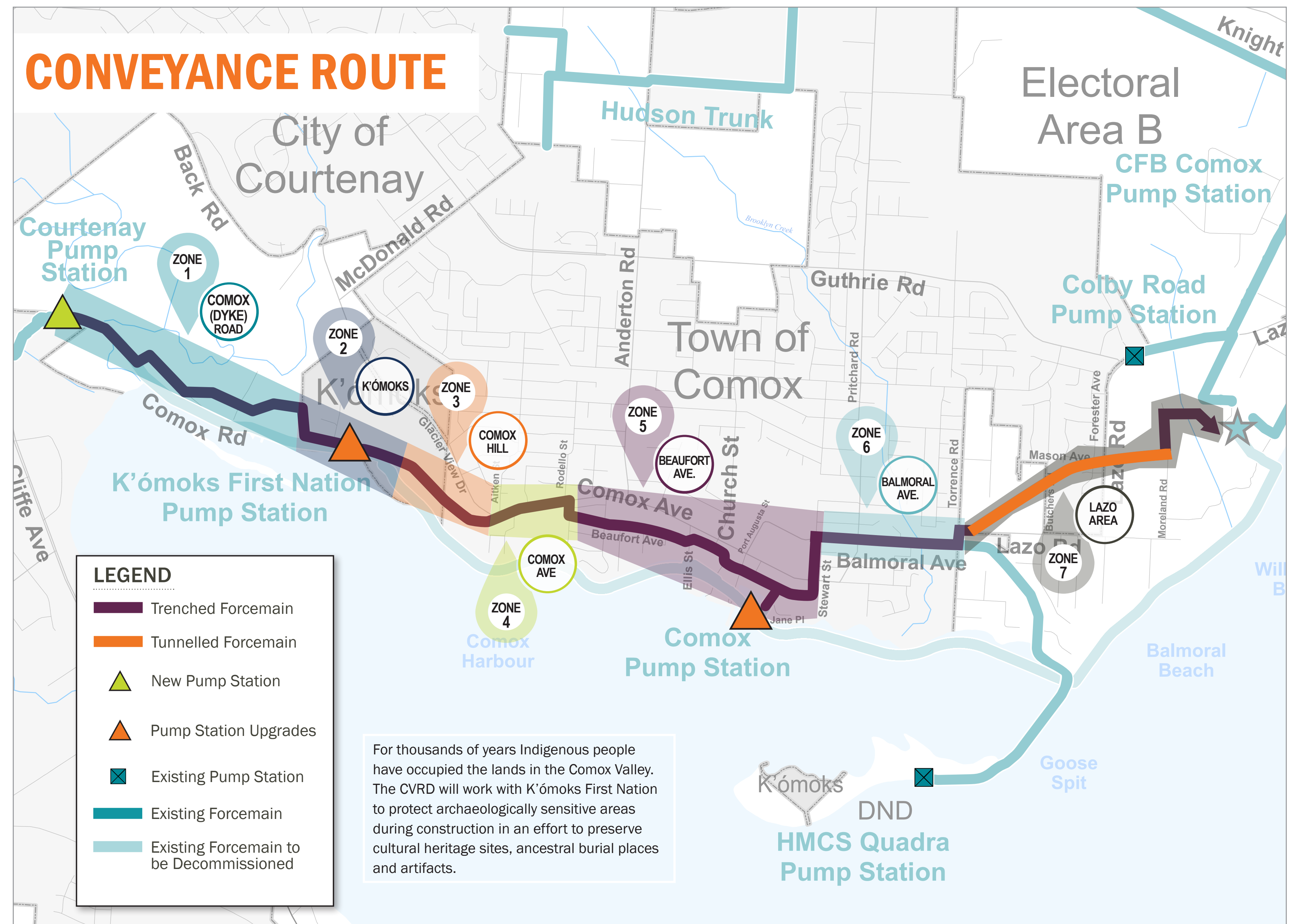
- **Traditional Trenching:** Construction will include traditional trenching pipe installation ('cut and cover') along the entire project route with the exception of Lazo Hill.
- **Tunneling:** The new pipe will be tunneled through Lazo Hill and then trenched through the Lazo marsh to the treatment plant.

## PUMP STATION IMPROVEMENTS

- **New Pump Station:** The Courtenay Pump Station will be re-built and relocated.
- **Pump Station Upgrades:** There will be upgrades to the K'ómoks Pump Station (in IR1) and Comox Pump Station at Jane Place.

## PROTECTING ARCHAEOLOGICALLY SENSITIVE AREAS

- **K'ómoks Cultural Heritage Policy:** There is a plan in place to preserve cultural heritage sites, ancestral burial places and artifacts during construction.
- **Construction Monitoring:** Monitors will be present throughout construction.




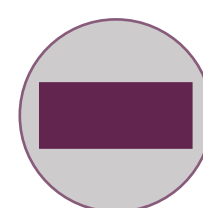


# CONSTRUCTION IMPACTS: COMOX RD & K'ÓMOKS FIRST NATION


The Sewer Conveyance Project will require construction along some of the Comox Valley's busiest routes. Read below to find out more about what to expect along the route in Zones 1 & 2.


## WHAT'S HAPPENING

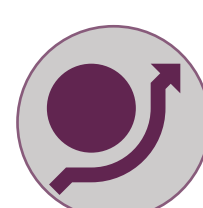
 **New Courtenay Pump Station:** A new pump station will be constructed to accommodate future predicted flood levels and meet current earthquake standards.

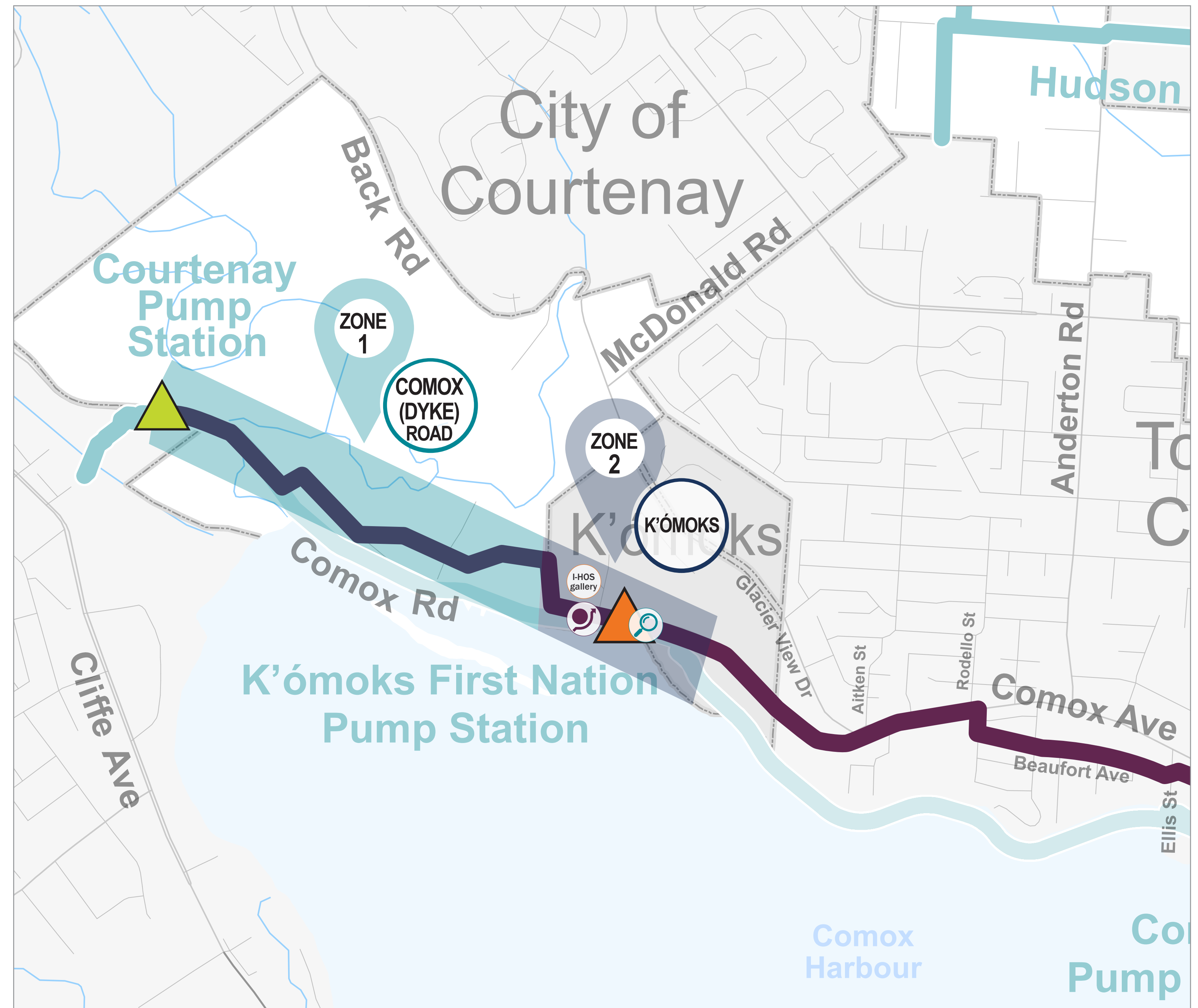
 **New Pipe:** A section of the new forcemain will be re-routed off Comox Rd to avoid archaeologically sensitive zones. A majority of the new pipe in IR1 will be installed in the existing trench to avoid undisturbed midden material.

After Bayside Rd, all work will occur in a new trench along Comox Rd to the top of Comox Hill.

 **Upgraded K'ómoks Pump Station:** This pump station will be upgraded to withstand climate change impacts and meet seismic standards.

 **Archaeological Investigation:** This will happen in advance of construction to better understand the extent of archaeological materials along the route. Some smaller sections of pipe near the K'ómoks band office will require pre-digging to check for archaeological materials before construction.

 **Temporary Bypass Line:** A bypass line will be installed along a section of Comox Rd in IR1 while the old forcemain is removed. The pipe will be visible for approx. 2-3 months.





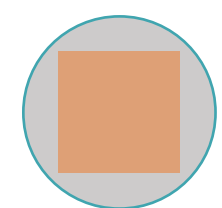
# TRAFFIC IMPACTS: COMOX RD & K'ÓMOKS FIRST NATION

The CVRD is committed to minimizing disruption during this work and is developing a Traffic Management Strategy to keep traffic moving as smoothly as possible. Read below to find out more about delays and traffic impacts along the route, from the Courtenay Pump Station through K'ómoks IR1.



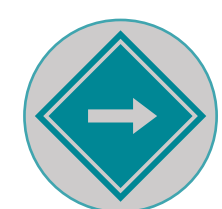
## Single-lane Traffic

- Expect delays through this area while the trenched pipeline is installed.



## Road Closures

- There will be rolling closures on parts of Farmview Rd and Scott Rd with access to local traffic only.



## Detour Routes

- Travellers will be encouraged to use Anderton, Guthrie, Lerwick and Ryan Rd to avoid delays.
- Back Rd will remain open but will not be a designated detour route.



## Bike, Pedestrian and Transit Access

- Priority will be given to these travellers. Transit users along the route can expect schedule changes but no detours.



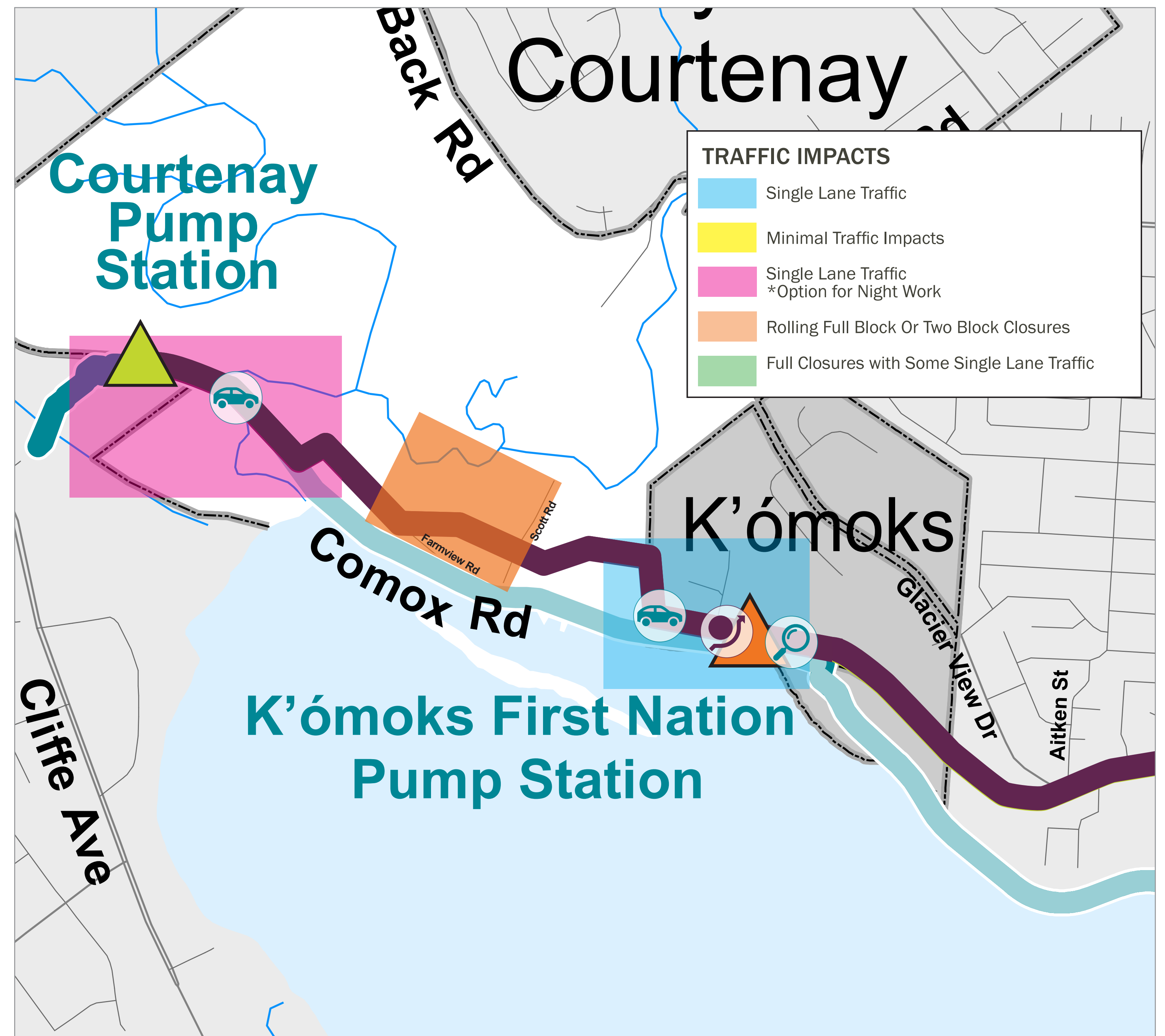
## Temporary Bypass Line

- The CVRD will work to minimize impacts to homeowners and pedestrian/bike traffic while this pipe is installed along the eastbound shoulder of Comox Rd.



## Archaeological Work

- Some pre-construction archaeological work in this area.

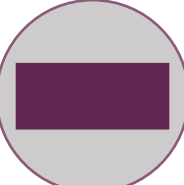

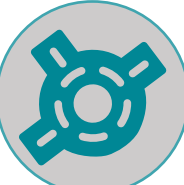



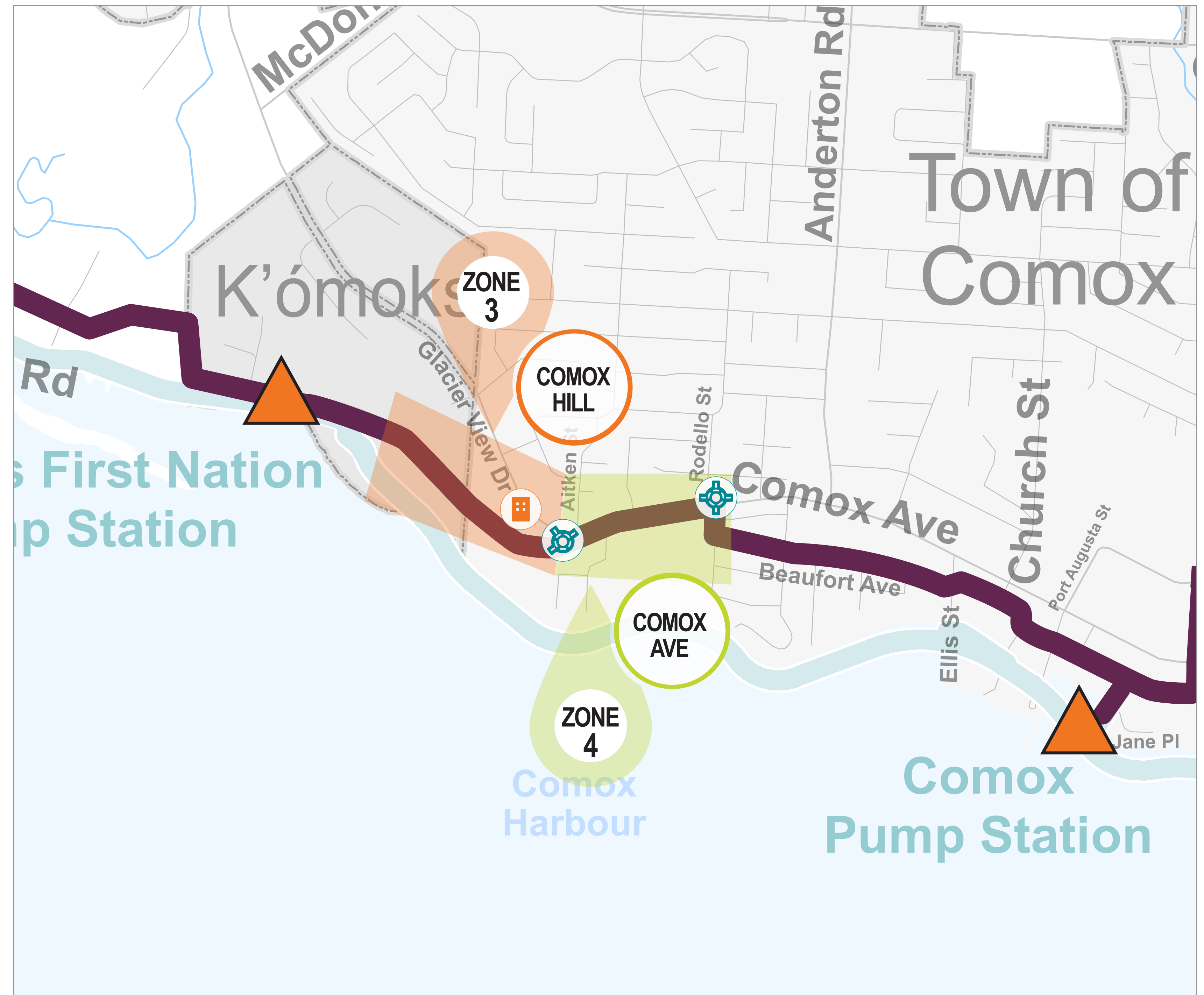


# CONSTRUCTION IMPACTS: COMOX HILL & COMOX AVE

The Sewer Conveyance Project will require construction along some of the Comox Valley's busiest routes. Read below to find out more about what to expect along the route in Zones 3 & 4.

## WHAT'S HAPPENING

-  **New Pipe:** The new forcemain will be installed up Comox Hill and along Comox Ave to Rodello St using traditional trenching ('cut and cover'). All work along this stretch will occur in a new trench.
-  **Odour Control Structure:** This will be installed at the top of Comox Hill between Glacier View Dr and Comox Ave.
-  **Glacier View Dr and Comox Ave Roundabout:** A single roundabout is planned for installation at Glacier View Dr, along with turning restrictions at Aitken St. This will make it easier to turn left from both Glacier View and Aitken onto Comox Ave.
-  **Rodello St and Comox Ave Roundabout:** A new roundabout will help cars move optimally in all directions and decrease wait times during rush hour.





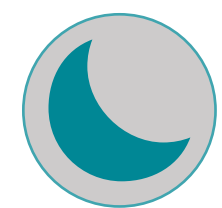
# TRAFFIC IMPACTS: COMOX HILL & COMOX AVE

The CVRD is committed to ensuring minimal disruption during this work and is developing a Traffic Management Strategy to keep traffic moving as smoothly as possible. Read below to find out more about delays and traffic impacts on Comox Hill and Comox Ave.



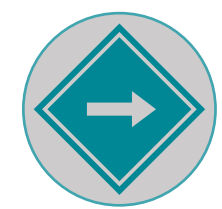
## Single-lane Traffic

- Expect single-lane traffic when travelling on Comox Hill and Comox Ave.



## Night Work

- Night work is likely to occur on Comox Hill to prevent daytime road closures and shorten the total length of construction.



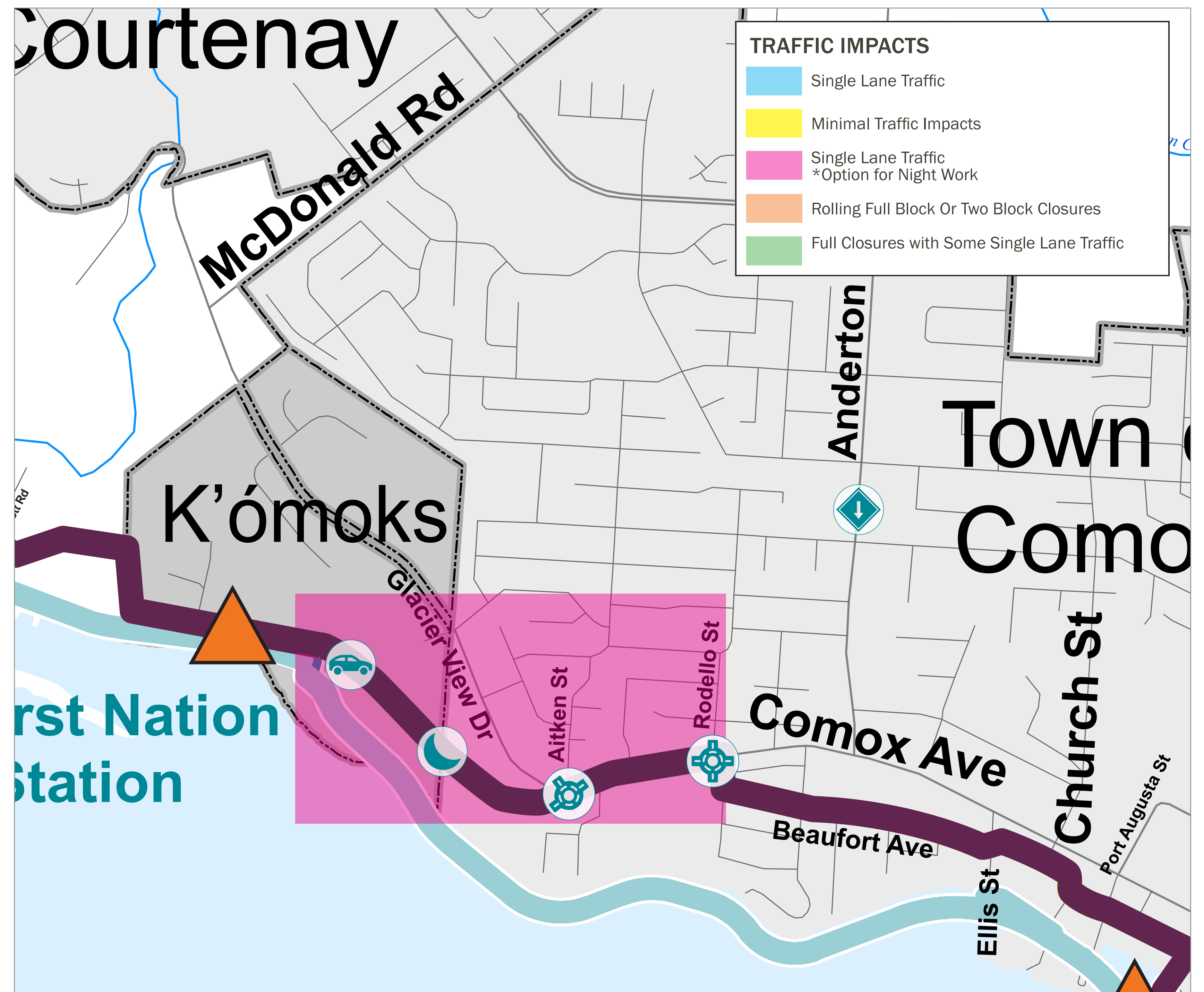
## Detour Routes

- Anderton/Guthrie/Lerwick are identified as detour routes.
- Please note that Glacier View Dr and Back Rd will remain open but are not detour routes for this area and their use will be discouraged.



## Bike, Pedestrian and Transit Access

- Priority will be given to these travellers.
- Transit users along the route can expect schedule changes but no detours.

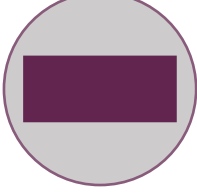

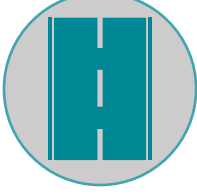





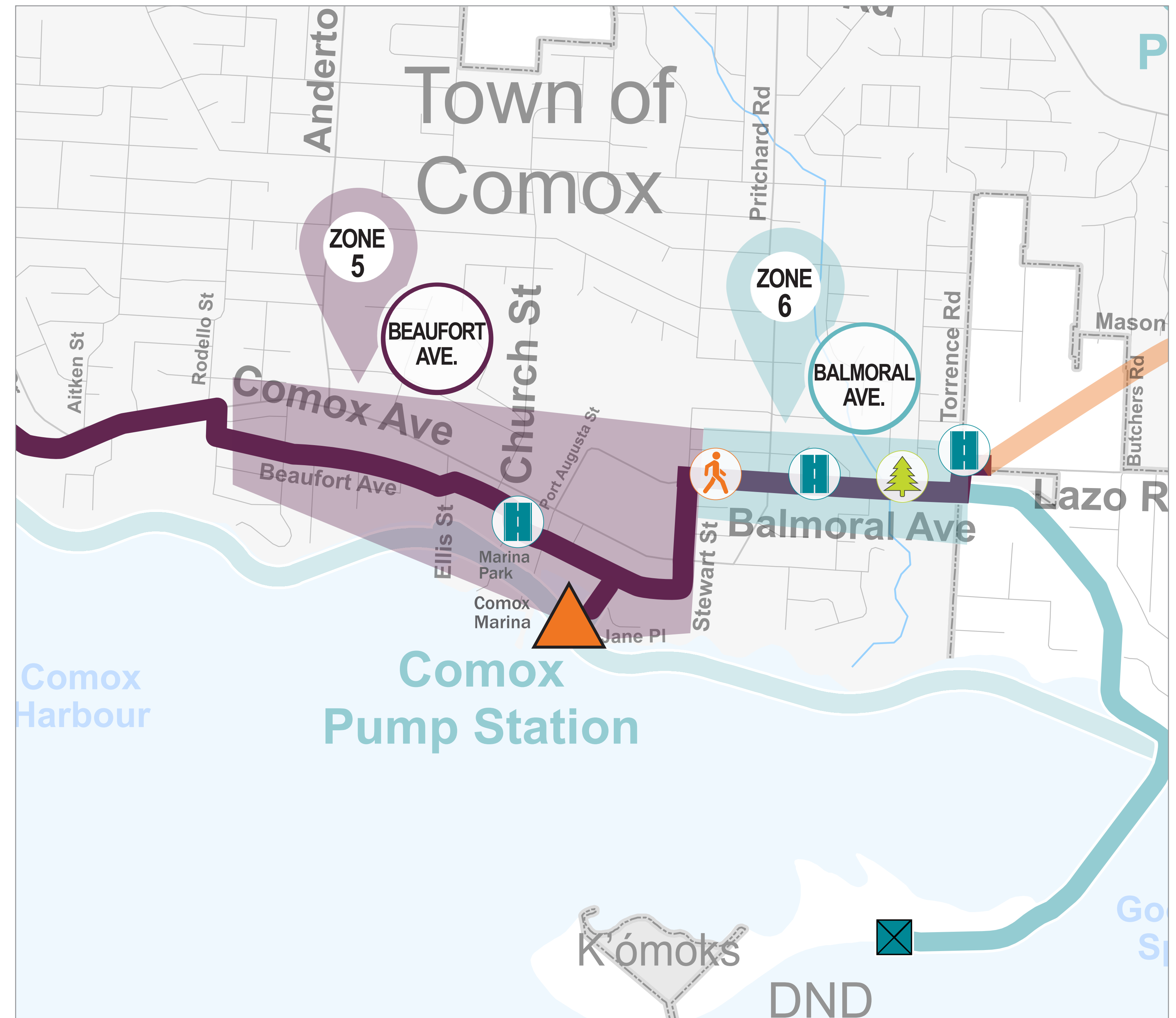


# CONSTRUCTION IMPACTS: BEAUFORT AVE & BALMORAL AVE

The Sewer Conveyance Project will require construction along some of the Comox Valley's busiest routes. Read more about the route through Zones 5 & 6 and the work that will happen there.

## WHAT'S HAPPENING

-  **New Pipe:** The new forcemain will be installed along Beaufort Ave, Stewart St, Balmoral Ave and Torrence Rd to Lazo Rd using traditional trenching ('cut and cover'). All work along this stretch will occur in a new trench. Trenching will also occur on Jane St to the Comox Pump Station.
-  **Upgraded Comox Pump Station at Jane Place:** This pump station will be upgraded to increase capacity and allow for connection to the new forcemain.
-  **Potential Beaufort Avenue Improvements:** Roadway upgrade between Church St and Nordin St to provide sidewalk on both sides of the road, formalized parking areas and a shared bike/vehicle lane.
-  **Potential New Sidewalk:** A new sidewalk on the south side of Balmoral Ave from Stewart St to Pritchard Rd, as well as shared use lanes (vehicles/cycling) and a dedicated parking lane on the north side of Balmoral Ave.
-  **Road Improvements:** Repaving of Balmoral Ave and potential repaving of Torrence Rd, as well as the southbound lane of Torrence Rd between Lazo Rd and Albatross Ave.
-  **Tree Protection Measures:** Steps will be taken to protect and preserve the trees along Balmoral Ave during construction.





# TRAFFIC IMPACTS: BEAUFORT AVE & BALMORAL AVE

The CVRD is committed to ensuring minimal disruption during this work and has developed a Traffic Management Strategy to keep traffic moving as smoothly as possible. Read below to find out more about delays and traffic impacts along this section of the route.



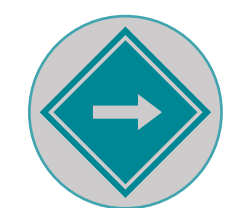
## Rolling Full Block or Two Block Closures

- Along Beaufort Ave and Stewart St, expect full closures throughout construction, with local traffic access only.



## Single-lane Traffic

- Along Balmoral Ave and sections on Torrence Rd, expect full closures with some single-lane traffic.



## Detour Routes

- Vehicles, bikes and pedestrians that would normally park or travel along closed section(s) of Beaufort Ave will be detoured to Comox Ave.



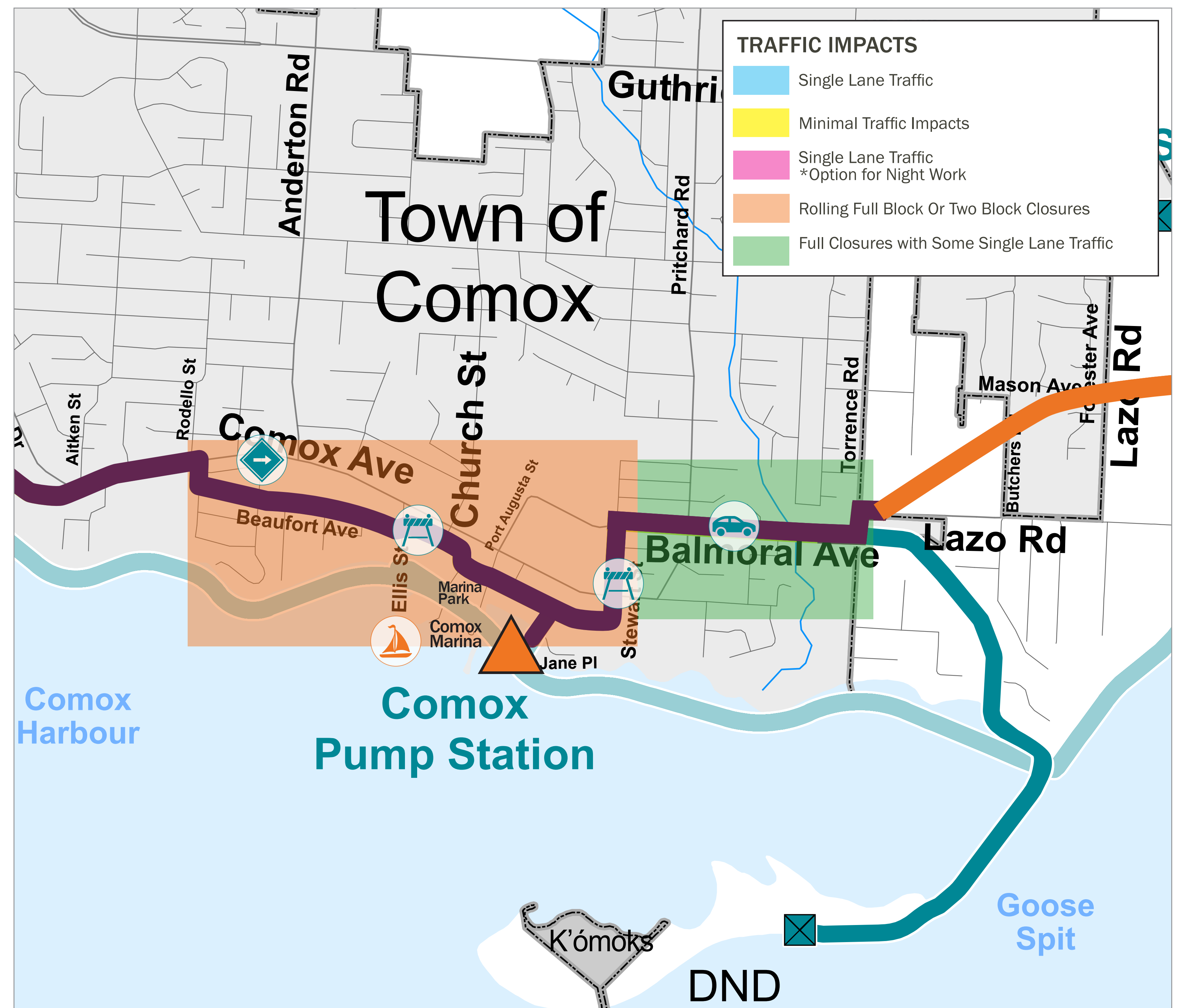
## Bike, Pedestrian and Transit Access

- The CVRD is working with BC Transit and the Town of Comox to minimize disruption to transit routes, cyclists and pedestrians.



## Marina Access

- There will be no impacts to marina access during the summer months.
- Construction will be paused during Nautical Days.

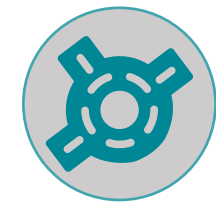




# TOWN OF COMOX IMPROVEMENTS

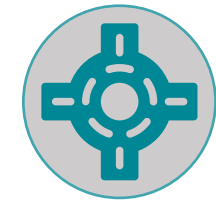
The CVRD and Town of Comox have come to an agreement to include key infrastructure projects for the Town of Comox as part of the Comox Valley Sewer Conveyance Project. This will minimize construction and traffic disruptions for all impacted residents.

Infrastructure projects under consideration by the Town of Comox include:



## Glacier View Drive and Comox Avenue Roundabout

- Current intersection of Comox Ave, Glacier View Dr and Aitken St makes it difficult to turn from Glacier View or Aitken onto Comox Ave.
- To solve this, a single roundabout is planned at Glacier View, along with turning restrictions at Aitken St.



## Rodello Street and Comox Avenue Roundabout

- Currently, cars moving north and south at this intersection are unable to smoothly turn onto Comox Ave in any direction.
- A new roundabout will help cars move optimally in all directions and decrease wait times during rush hour.



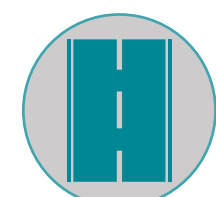
## Beaufort Avenue Improvements

- Upgrade to the roadway cross section on Beaufort Ave between Church St and Nordin St.
- The improvements include a sidewalk on both sides of the road, formalized parking areas and a shared bike/vehicle lane.



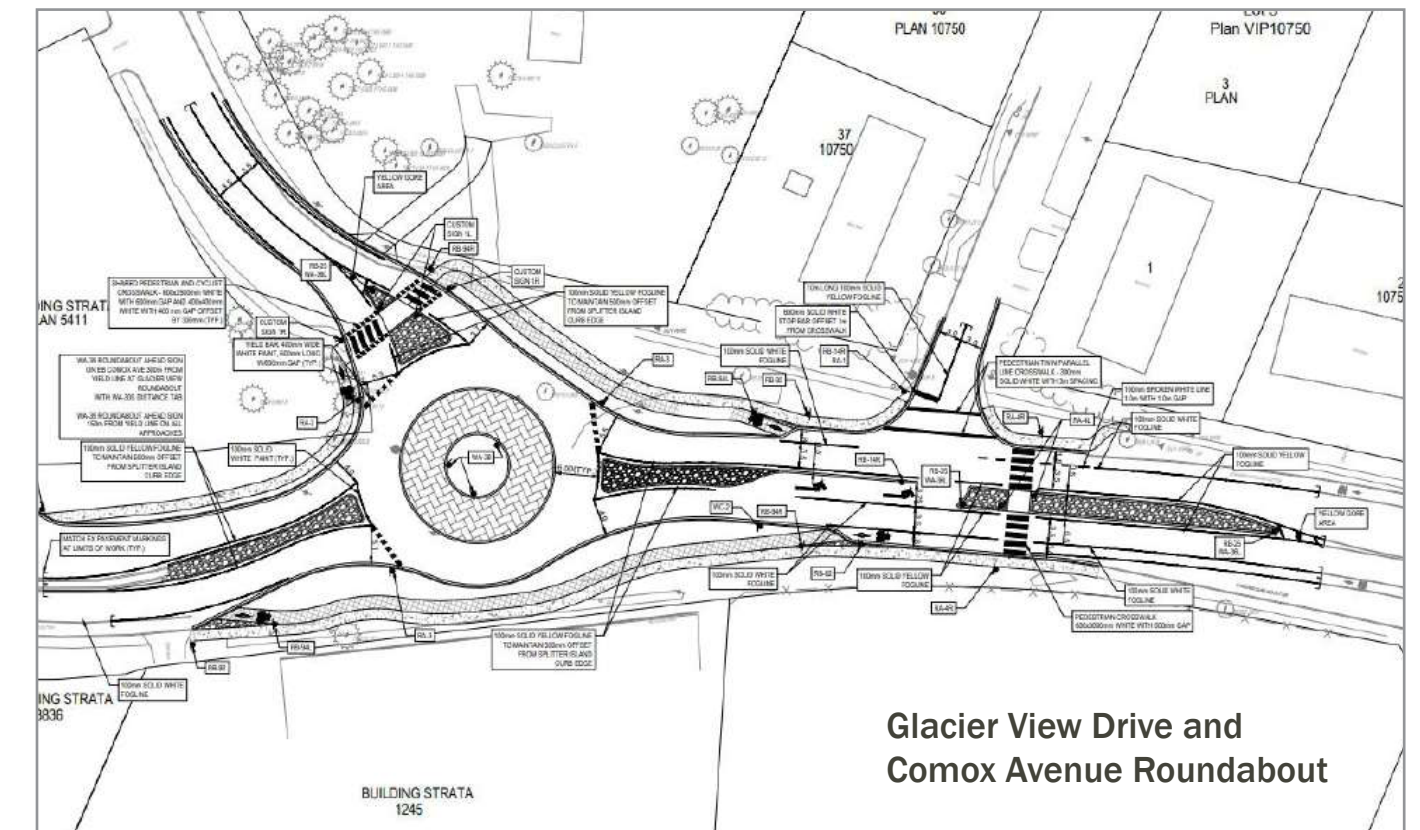
## Balmoral Avenue Improvements (from Stewart St to Pritchard Rd)

- This upgrade will improve travel for pedestrians with a new sidewalk on the south side of Balmoral Ave from Stewart St to Pritchard Rd.
- The upgrade will include a bus shelter at the existing bus stop on the south side of Balmoral, just west of Pritchard.



## Balmoral Avenue and Torrence Road Improvements (Donovan Dr to Albatross Ave)

- Repaving of Balmoral Ave from Donovan Dr to Torrence Rd, as well as the southbound lane of Torrence Rd between Lazo Rd and Albatross Ave.
- Consideration of some storm sewer infrastructure near the Brooklyn Creek crossing and installation of pedestrian activated beacons at the existing crosswalk at Brooklyn Creek.

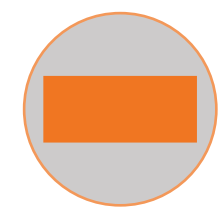
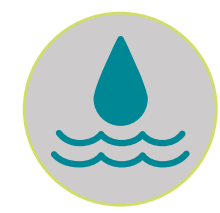

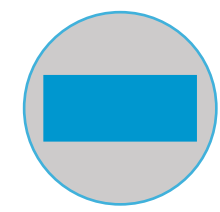


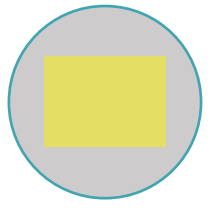


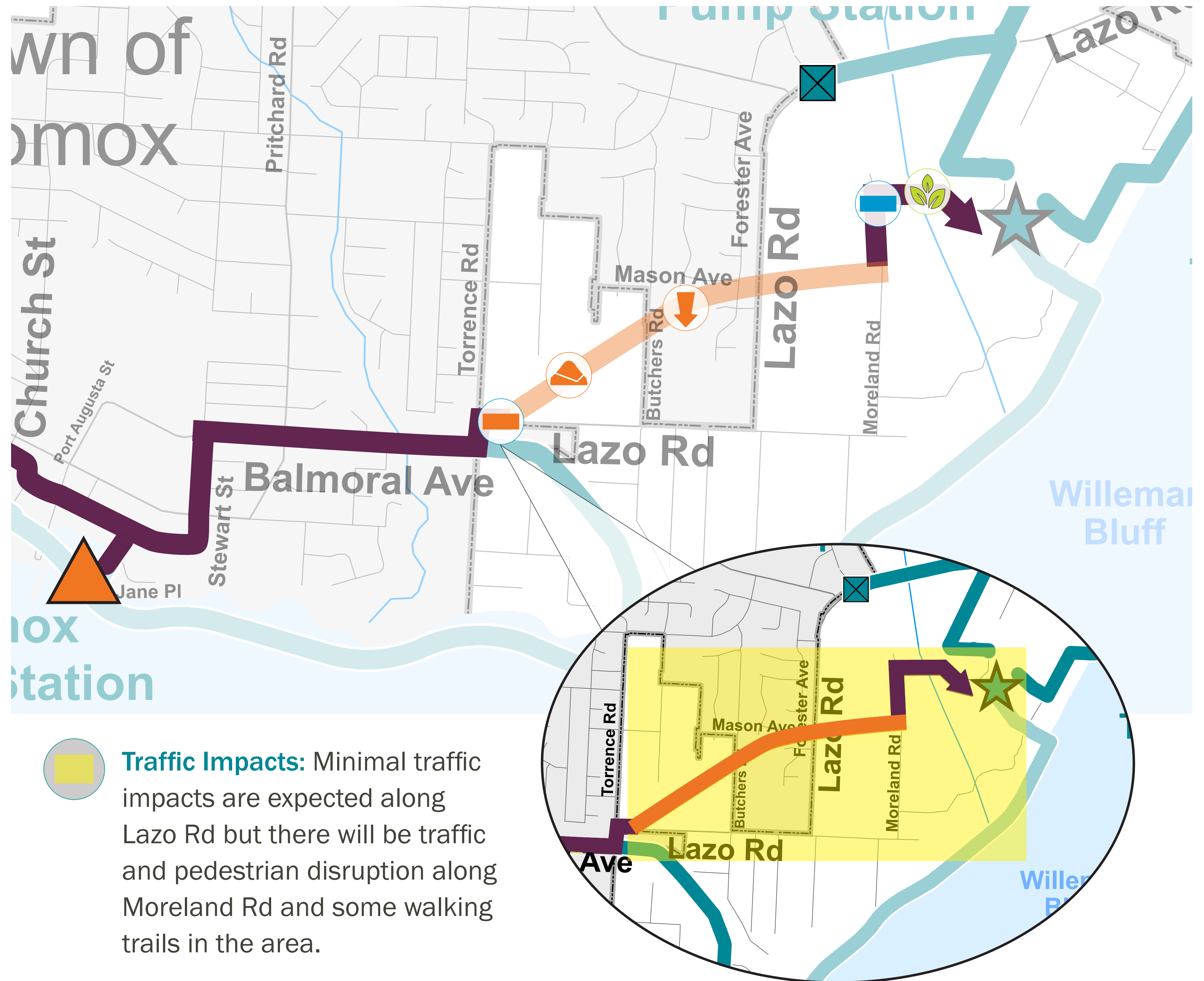


# CONSTRUCTION IMPACTS: LAZO AREA

The forcemain will be tunneled below Lazo Hill. This route through Zone 7 is the result of significant assessment, and consideration of community feedback.

## WHAT'S HAPPENING

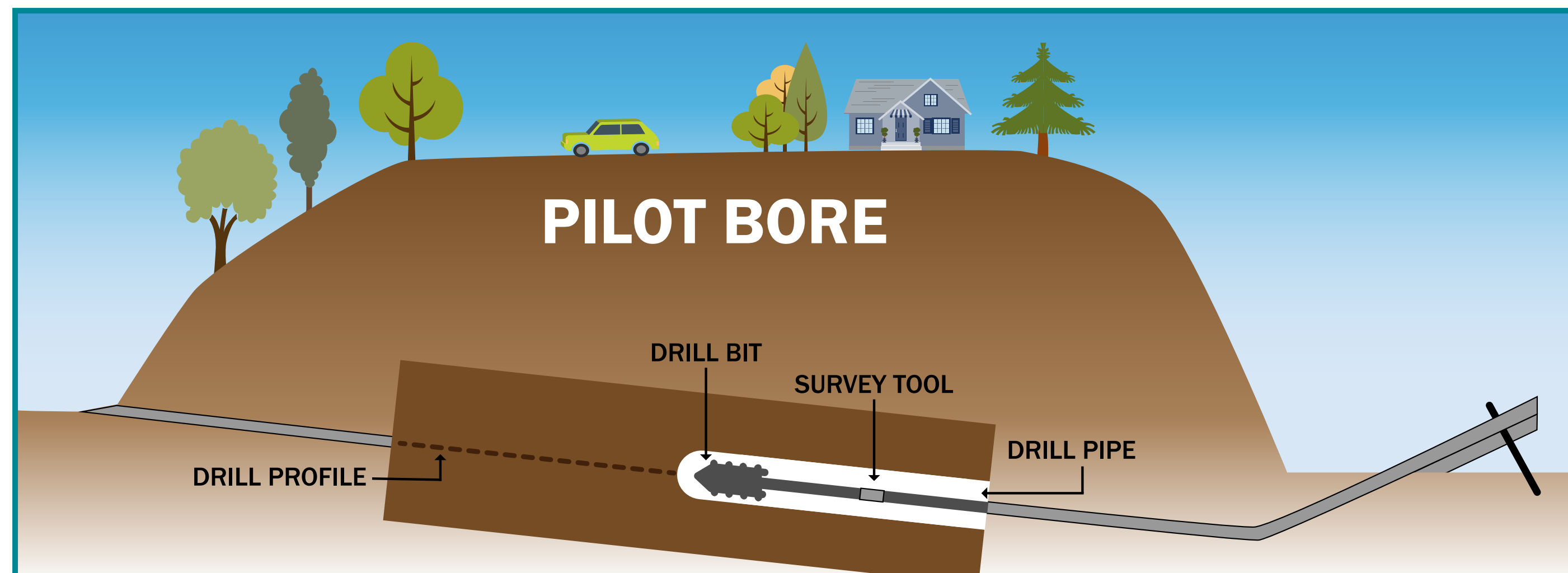
-  **Tunneling:** The pipe will be tunneled from Torrence/Lazo Rd to existing right-of-way at Morland Rd. It uses a route that reduces impacts on culturally sensitive areas.
-  **Protection of groundwater wells:** Minimum 20-metre offset from all deep water wells in the area (as per recommendation by groundwater consultant).
-  **Low Impact:** This chosen alignment impacts the fewest properties in the area.
-  **Laydown Area:** This will be along Morland/Brent Rd, and through the Sewage Treatment Plant, which reduces disruption to residents.
-  **Reducing Operational Risks:** Alignment allows for gravity flow in the pipe through Lazo Hill.
-  **Environmental Considerations:** Careful consideration around the environment has been undertaken, to protect the marsh during construction.
-  **Traffic Impacts:** Minimal traffic impacts are expected along Lazo Rd but there will be traffic and pedestrian disruption along Moreland Rd and some walking trails in the area.



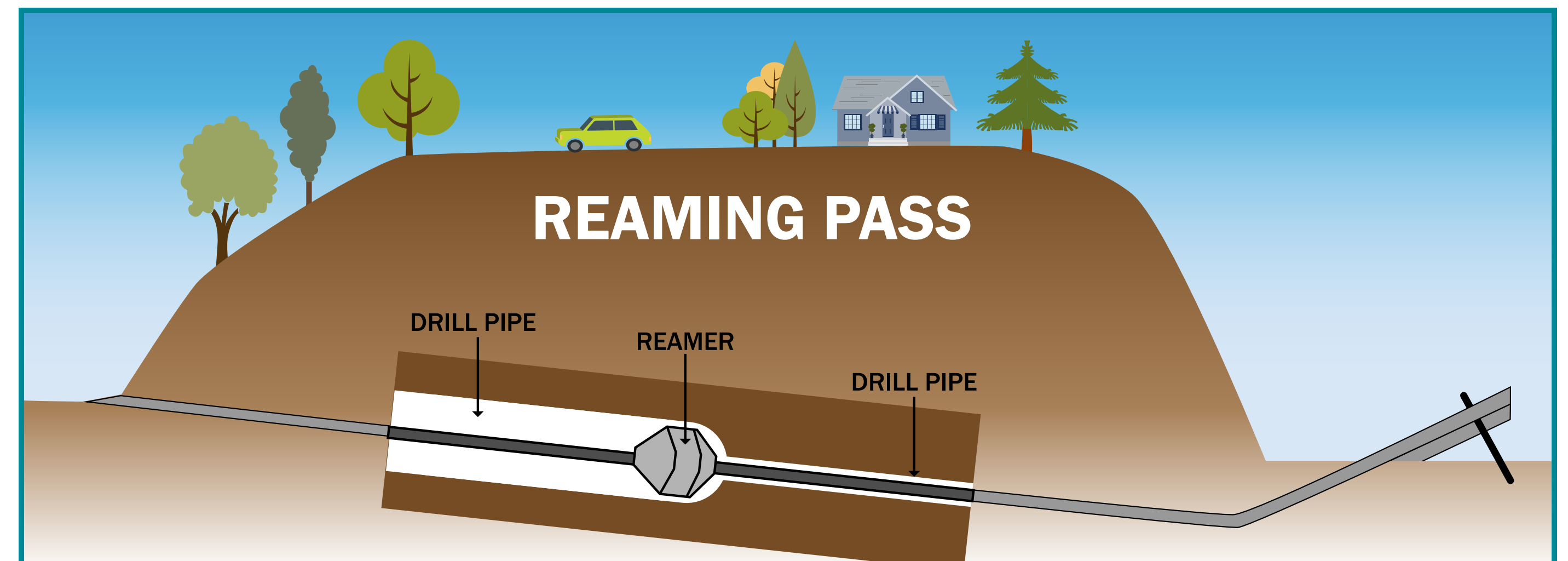


# ABOUT HORIZONTAL DIRECTIONAL DRILLING (TUNELLING)

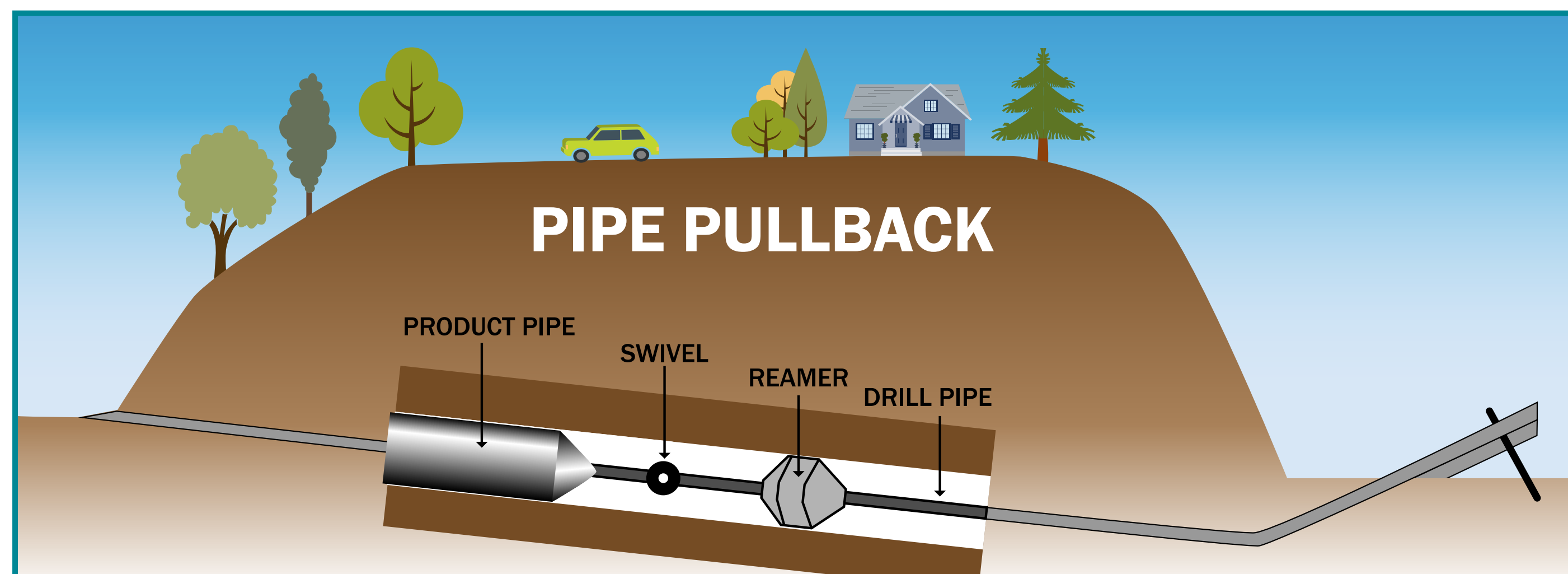
Horizontal Directional Drilling (HDD) will be used to avoid surface impacts through Lazo Hill and minimize the maximum pipe elevation to reduce lifecycle costs and risk. The contractor uses a drill rig to horizontally drill an underground pathway for the new pipe between an entry and an exit pit. This process happens in three stages.



**1.** Pilot Bore: A process called a pilot bore establishes the underground path for the new sewer pipe.



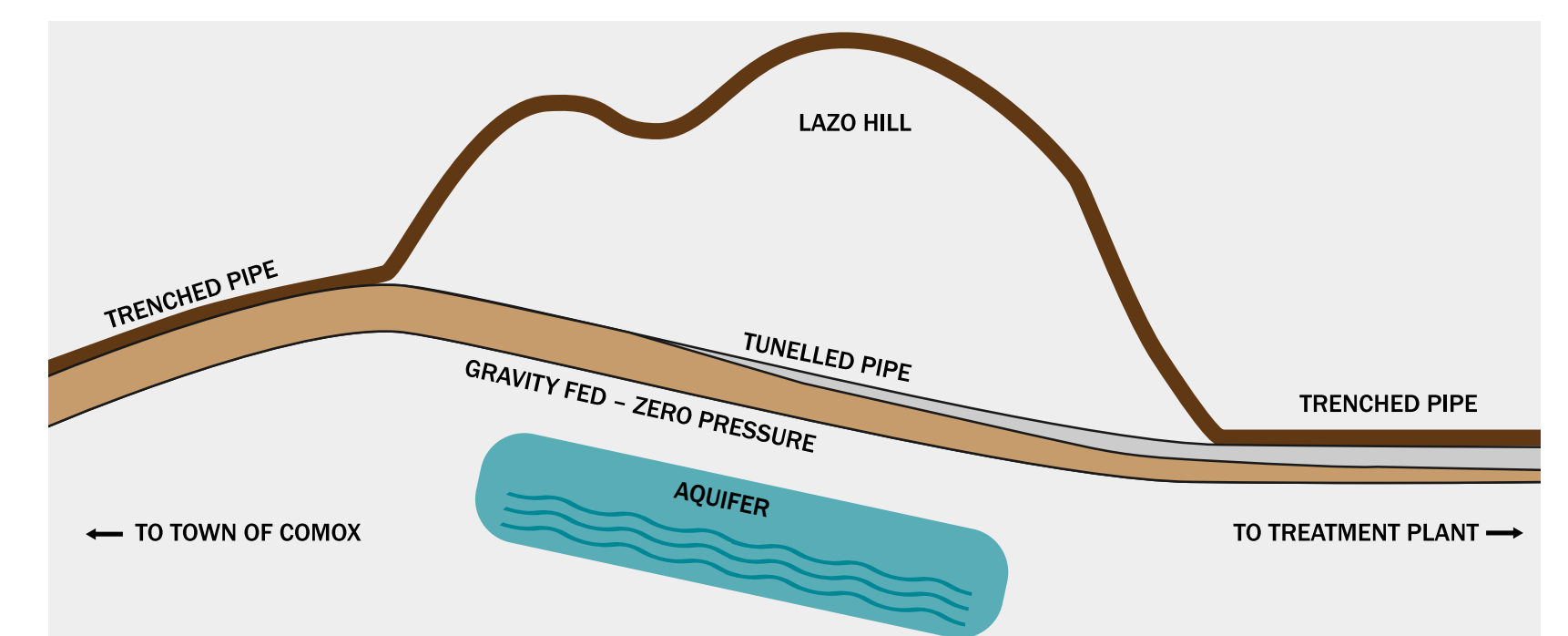
**2.** Reaming Passes: The contractor will enlarge the tunnel to the final pipe size using a reamer. A bentonite-based drilling fluid keeps the borehole stabilized – the drilling mud is collected and recycled.



**3.** Pipe Pullback: The pipeline is assembled at surface in a long single string and is then pulled through the tunnel into its final position.

## Gravity Fed Line: Reduces Risk

- Non-pressurized flow, virtually eliminating an already very-low risk of a leak
- Allows route to remain 10m above aquifer, eliminating penetration of aquifer
- Pipe wall designed to withstand installation stress, far exceeding the zero-pressure of operational flow





# SEWER CONVEYANCE PROJECT: COSTS

In February 2022, the project scope was approved for \$82 million. Since then, project costs have increased significantly, requiring a budget increase to \$101 million. Read the FAQs below to find out more about the costs for this project.

## What are the costs for this project and how will it be funded?

The project is anticipated to cost \$101 million with an estimated 80-year service life for the new pipe. This includes \$32.3 million in reserves and \$68.7 million in debt.

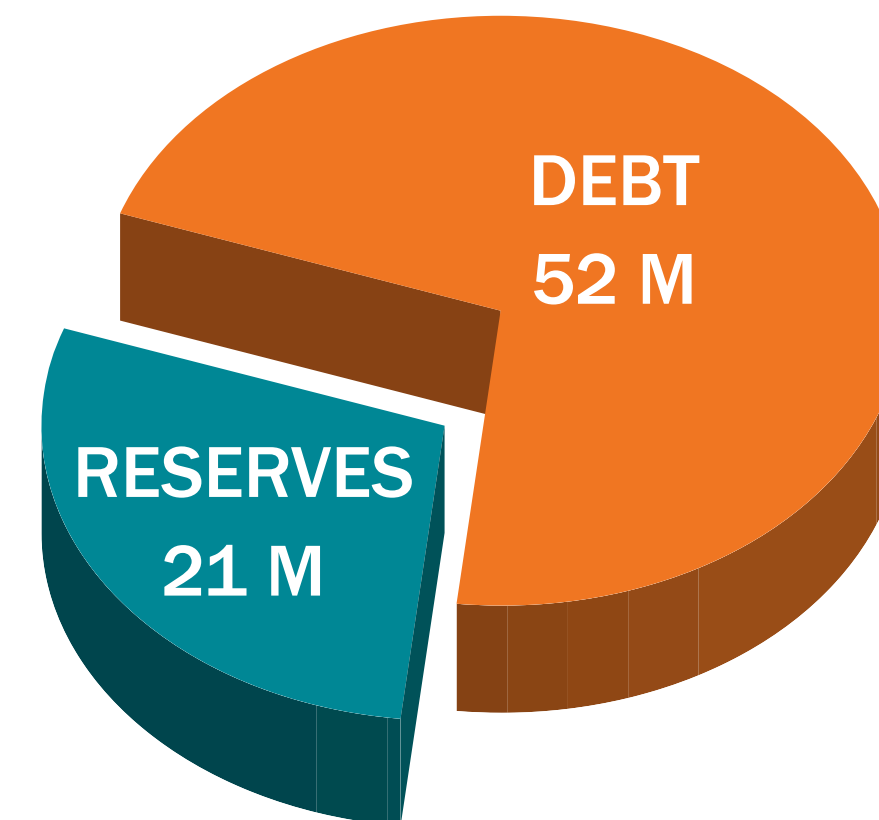
## Why has the project budget increased?

The construction industry has seen supply chain issues, unprecedented increases in fuel and material prices, and general inflation that is resulting in bid price increases. Construction cost escalation, combined with an increase in indirect costs and scope increases, made it necessary to increase the project budget.

## What are next steps to borrow for the cost increase?

An Alternate Approval Process (AAP) will be held in Spring 2023 to seek consent from electors to utilize long term borrowing in order to extend the length of debt and reduce annual payment amounts, improving the affordability of this project.

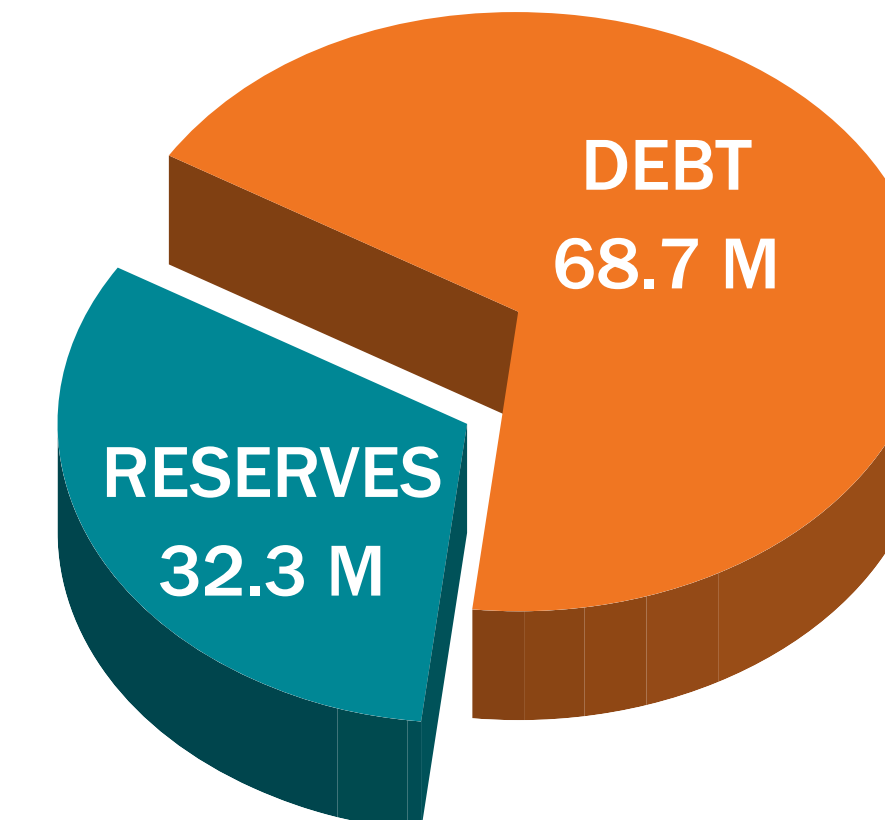
### JUNE 2021 AAP



**PREVIOUS  
ESTIMATE:  
\$73 MILLION**

**TOTAL DEBT COST:**  
\$150/household  
for 30 years

### ANTICIPATED SPRING 2023 AAP



**CURRENT  
ESTIMATE:  
\$101 MILLION**

**TOTAL DEBT COST:**  
\$240/household  
for 30 years

## INFLATION DRIVERS



Large  
surge in  
property  
prices



High  
wages/  
labour  
costs



Increase in  
world oil/  
gas prices



Inflation  
in global  
commodity  
prices

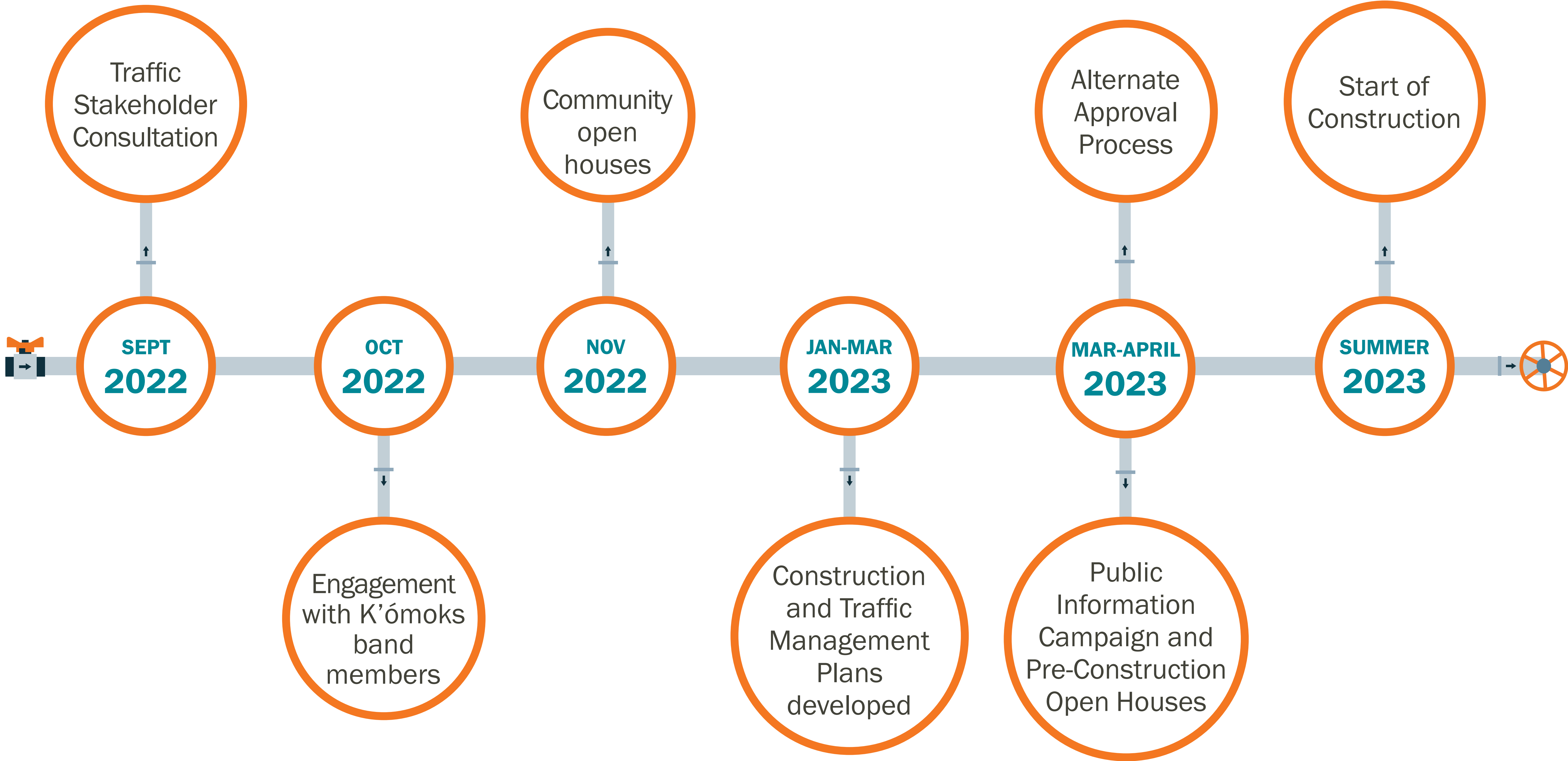


Higher  
inflation  
in other  
countries



# TIMELINE TO PROJECT LAUNCH

A lot of work has been completed to date, but there is still much to be done before this project is complete. Here is a look at key milestones to expect in the coming months, before construction officially begins.





# WE WANT TO HEAR FROM YOU

Please share with us any questions, concerns or comments that you would like the project team to consider as we enter next steps. Complete a feedback form or add your feedback here. Your input will be provided to contractors as they finalize construction and traffic management plans.



CVRD Call: 250-334-6000 Email: [communications@comoxvalleyrd.ca](mailto:communications@comoxvalleyrd.ca)

Town of Comox Call: 250-339-2202 Email: [town@comox.ca](mailto:town@comox.ca)