Welcome to the BC Hydro open house

We're strengthening the transmission network that delivers clean, reliable electricity to Westbank First Nation, West Kelowna, Peachland, and surrounding areas.

We'll upgrade Westbank Substation in West Kelowna and build a new transmission line that connects it to FortisBC's Recreation Substation in Kelowna.

Please review the storyboards to learn more about the West Kelowna Transmission Project.

We'd like to hear your input on the proposed route options. We'll select a leading route option by the end of 2026.

Project team members are here to discuss our plans with you and answer your questions.

BC Hydro
Power smart

Why it's important

We're planning to interconnect our grid in West Kelowna with FortisBC's network in Kelowna. The West Kelowna Transmission Project will create a secondary power supply for nearly 26,000 BC Hydro customers in Westbank First Nation, West Kelowna, Peachland, and surrounding communities.

We're identifying a route the transmission line can follow from Westbank Substation on Shannon Lake Road, across Okanagan Lake, and into Kelowna. We're currently seeking feedback from the community about route options through Westbank First Nation and West Kelowna.

HOW WE REACHED THIS POINT

Currently, power to our substation in West Kelowna is supplied by a single 138-kilovolt transmission line from Nicola Substation near Merritt. It runs through rugged, remote terrain that's susceptible to wildfires.

In September 2024, we decided that an interconnection to the FortisBC system in Kelowna is the leading alternative for the West Kelowna Transmission Project.

This alternative, known as 3e, includes a transmission line from Westbank Substation to FortisBC's Recreation Substation in downtown Kelowna.

In coming to this decision, we considered input received through ongoing collaboration with the sylix Okanagan Nation, consultation with stakeholders, and discussions with governments and FortisBC, along with engineering, safety, socio-environmental, and other factors.

BC Hydro
Power smart

CX-6890

Working with syilx Okanagan Nation

HONOURING THE LAND

BC Hydro acknowledges our presence on the traditional, ancestral, and unceded tm̓ xʷúlaʔxʷ (land) of the syilx Okanagan Nation.

WORKING TOGETHER

The West Kelowna Transmission Project is being developed in collaboration with the syilx Okanagan Nation as part of our shared commitment to strengthen our Enduring Relationship.

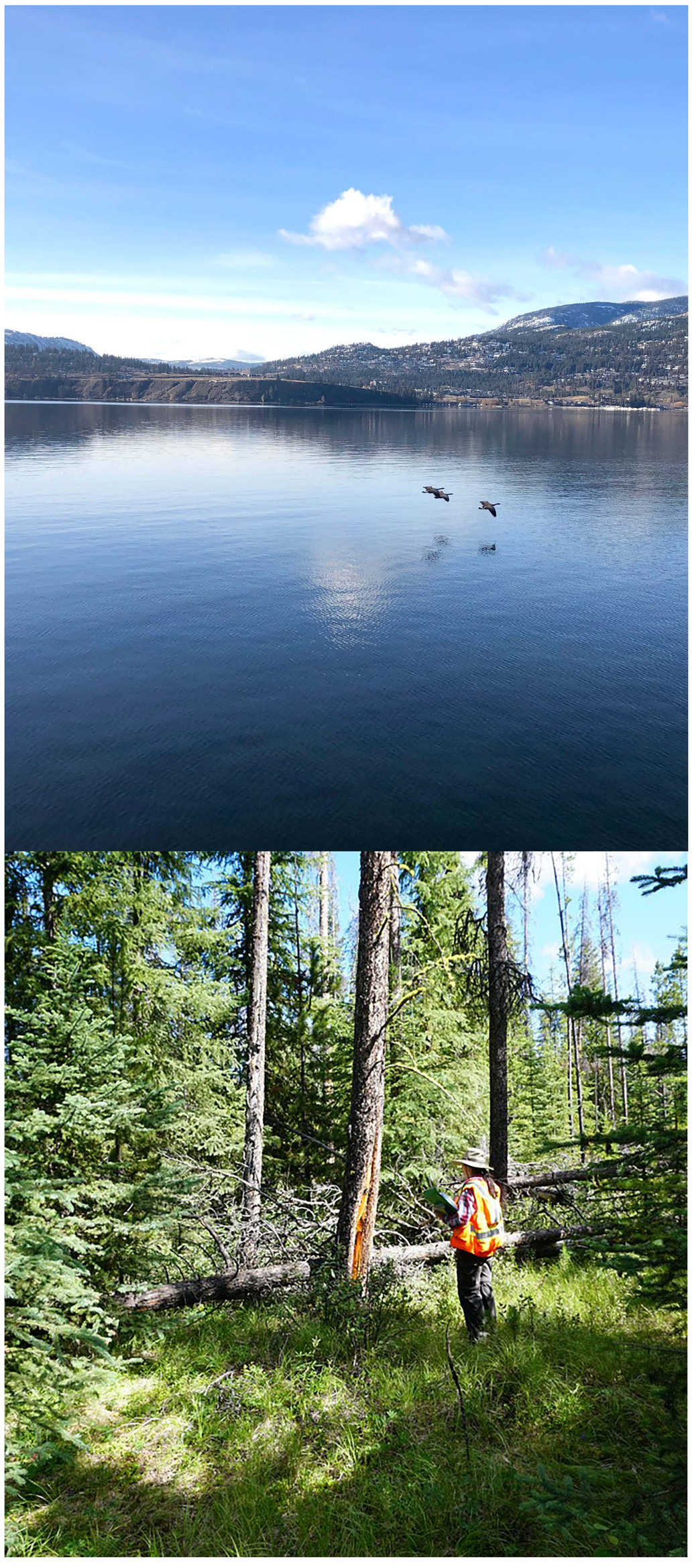
Through a new relationship model based on mutual respect and collaboration called the Enduring Relationship, BC Hydro is committed to working with the syilx Okanagan Nation on projects within Okanagan territory and to ensuring that impacts to Aboriginal rights and/or title are identified and addressed.

Specifically, BC Hydro is working with a Project Review Committee comprised of Okanagan communities and led by Westbank First Nation to better understand and address the environmental, cultural, and socioeconomic impacts of the West Kelowna Transmission Project and to make shared decisions about routing.

BC Hydro
Power smart

CX-6890

We’re working to minimize our cultural and environmental footprint



Environmental studies including field work are currently underway. These include fish and aquatic, wildlife, and archaeological assessments.

The studies are being completed in partnership with the syilx Okanagan Nation and will be used to plan our work to avoid or minimize impacts to environmentally sensitive areas.

We’re designing the project to avoid habitat fragmentation and habitat loss by using existing corridors, such as roads.

A crossing of Okanagan Lake will be required. We recognize that Okanagan Lake has important cultural and ecological significance and we’re taking steps to limit disturbance to shoreline and aquatic habitat.

WE’RE STUDYING POTENTIAL CULTURAL IMPACTS

syilx Okanagan Nation is leading traditional use and socio-economic studies of the project and its proposed routes.

We’ll seek to limit the footprint of new infrastructure on communities by following existing corridors, such as roads.

BC Hydro
Power smart

Power lingo

What is a substation?

A substation brings together power lines of different voltages. Substations contain equipment that can change the voltages of these lines and safely control the flow of power.

What is a transmission line?

Transmission lines move electricity from one point to another via numerous towers in an electric power system. Transmission lines vary in size with those carrying more electricity at a higher voltage requiring larger towers.

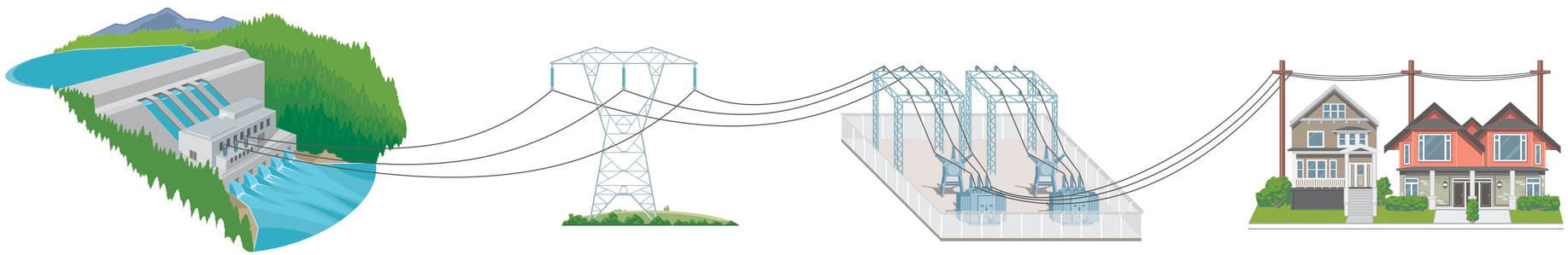
What is a duct bank?

Duct banks are underground housing used to protect electrical wires, made of plastic pipes encased in concrete.

BC Hydro
Power smart

CX-6890

Delivering electricity to our customers



Generation

Electricity is generated by BC Hydro and independent power producers.

Transmission

Electricity is moved from where it's produced to where it's used.

Substations

Voltage is reduced at substations to provide power suitable for use in your home or business.

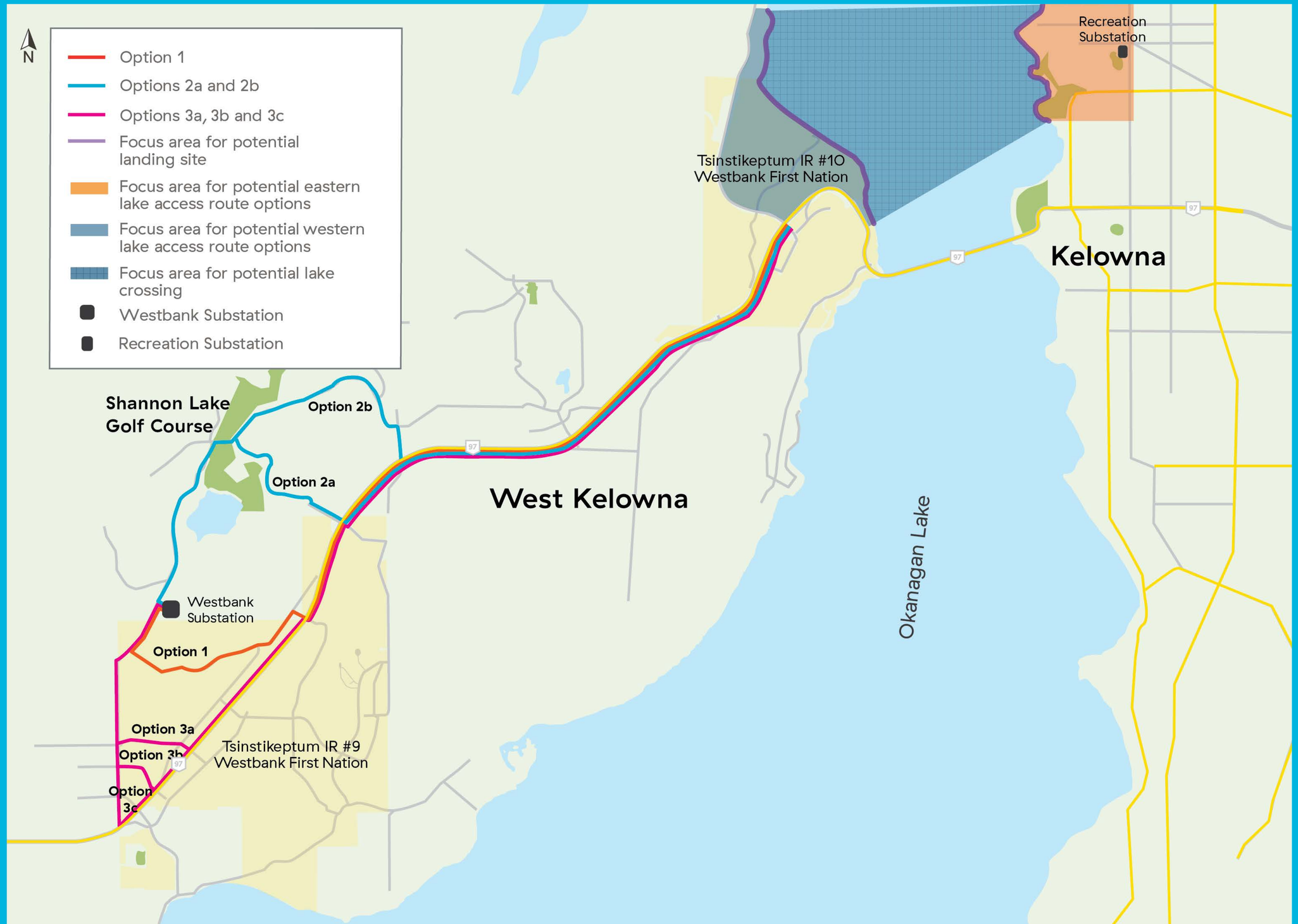
Distribution

Low voltage electricity is provided to neighbourhoods and businesses.

BC Hydro
Power smart

CK-6890

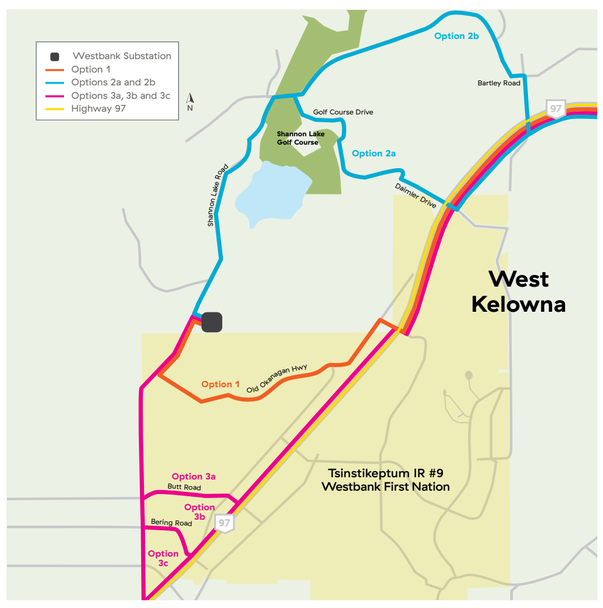
West Kelowna Transmission Project Overview

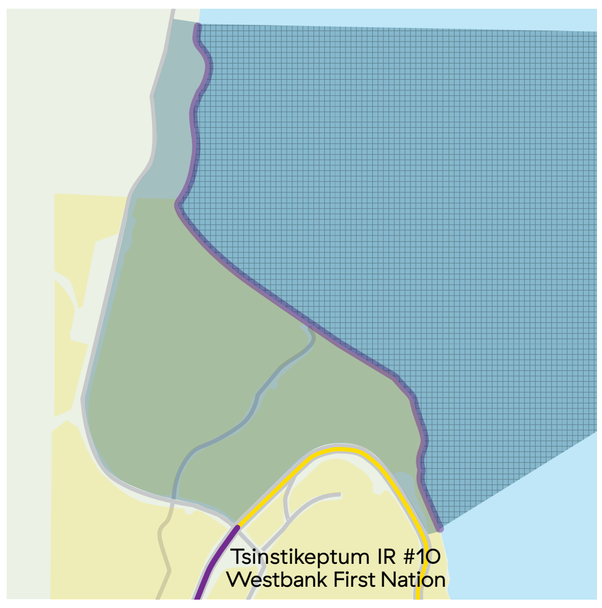


Designing the transmission line route

We're studying route options between our Westbank Substation in West Kelowna and FortisBC's Recreation Substation in Kelowna.

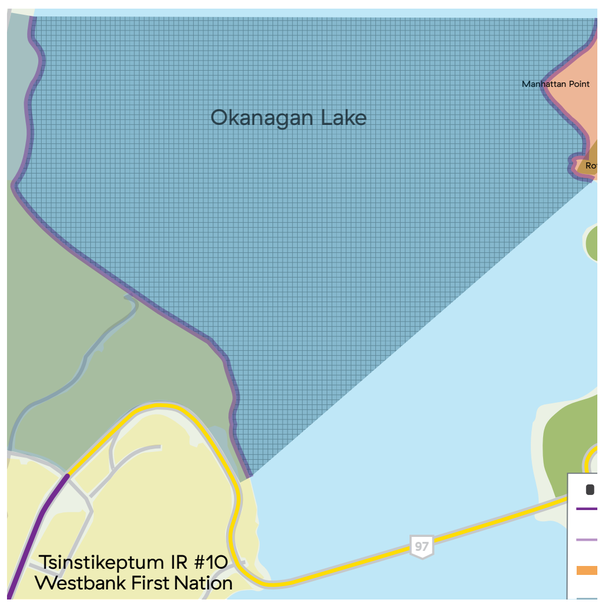
The first segment of the route goes from Westbank Substation on Shannon Lake Road to Highway 97.





The second segment goes from Highway 97 to the western lakeshore.

In designing the third segment, we'll determine a preferred location to cross Okanagan Lake.



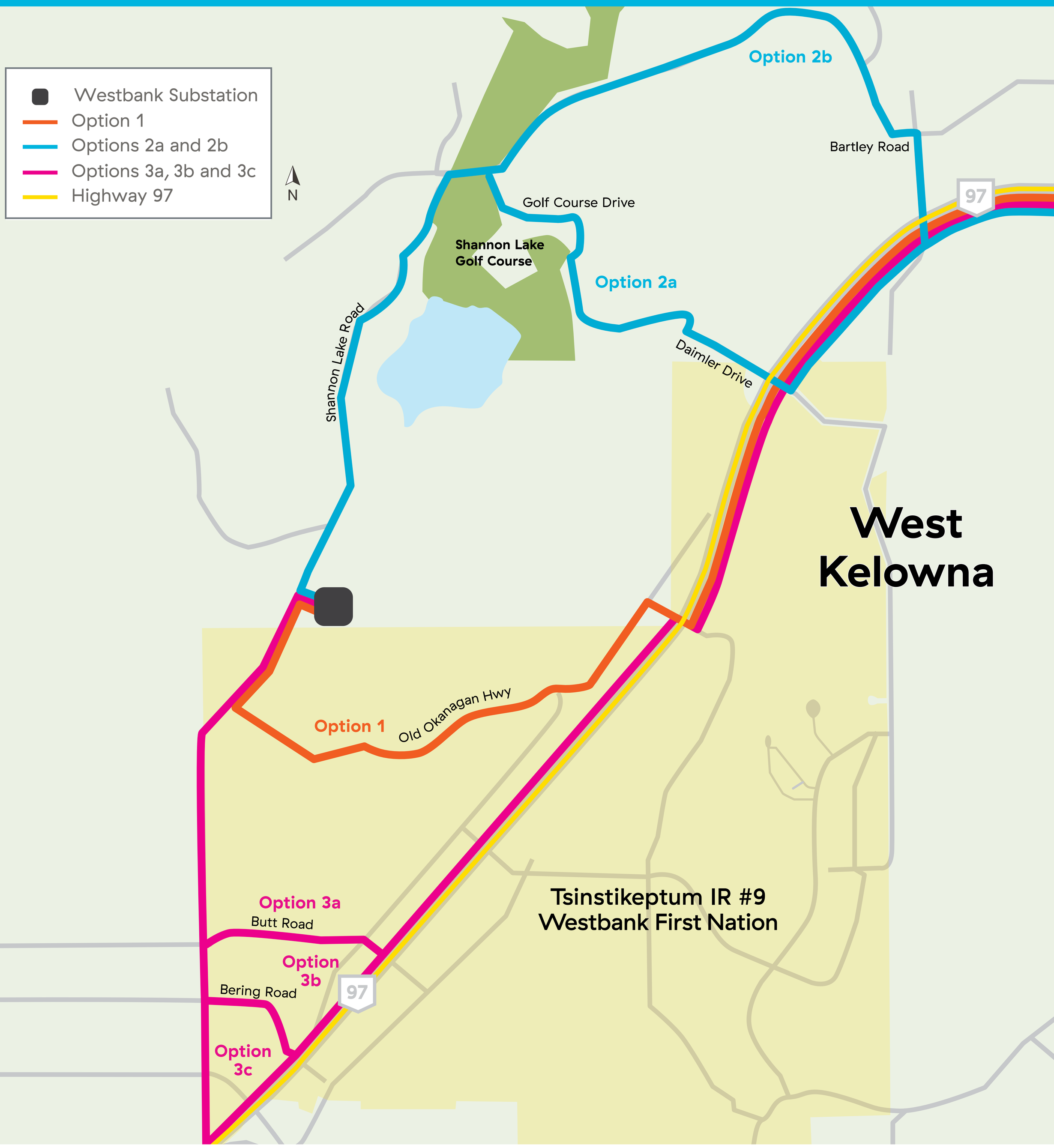
The fourth and final segment will be owned by FortisBC. We're supporting FortisBC as they plan a route between the eastern lakeshore and Recreation Substation.

We're working on all four segments concurrently and we'll select a preferred route option for the full length of the line by the end of 2026. For now, we're showing options in segment one. We'll share options for segments two, three, and four later in 2026.

BC Hydro
Power smart

CX-6890

Route options:
Westbank Substation to Hwy 97



BC Hydro
Power smart

CX-6890

Route options

BC Hydro
Power smart

We're seeking public input on six potential route options through West Kelowna and Tsinstikeptum IR #9.

Objective	West Kelowna Route Options					
	1	2a	2b	3a	3b	3c
Minimize impacts to First Nations						
Impacts to Westbank First Nation lands	We are working in collaboration with Westbank First Nation and syilx Okanagan Nation to understand project impacts.					
Impacts to syilx Okanagan Nation territory						
Minimize impacts to stakeholders						
Impacts to property owners	We need your input! Share your thoughts on these route options to help inform our decision.					
Feedback from Public						
Impacts to the City of West Kelowna	We're working with the City of West Kelowna council and staff to determine impacts to city infrastructure and development potential					
Minimize environmental impacts						
Route segment length	4.5 km	4.4 km	4.5 km	5.9 km	6.4 km	7 km
Potential impact to ground water	🟢	🟢	🟢	🟢	🟢	🟢
Stream crossings	🟢	🟢	🟢	🟡	🟡	🟡
Minimize total costs						
Estimated costs	We'll develop cost estimates as we advance early design decisions.					

🟢 Better 🟡 Moderate 🔴 Worse

All routing options provide the same system reliability and minimize safety risks.

Selecting a preferred route

We’re working with syilx Okanagan Nation, Westbank First Nation, the City of West Kelowna, FortisBC, and the City of Kelowna to define routing options

To decide on a line route option, we’ll compare the options considering:

- Input from Westbank First Nation
- Input from syilx Okanagan Nation
- Feedback from landowners, communities, other interested parties, the public, and specialists in various fields
- Impacts on the natural and human environments
- Reliability and safety risks
- Cost to build the line

We’ll work to identify an option that best balances these considerations.

We expect to select a preferred route option for all segments by the end of 2026.

BC Hydro
Power smart

CX-6890

Steps in building a transmission Line

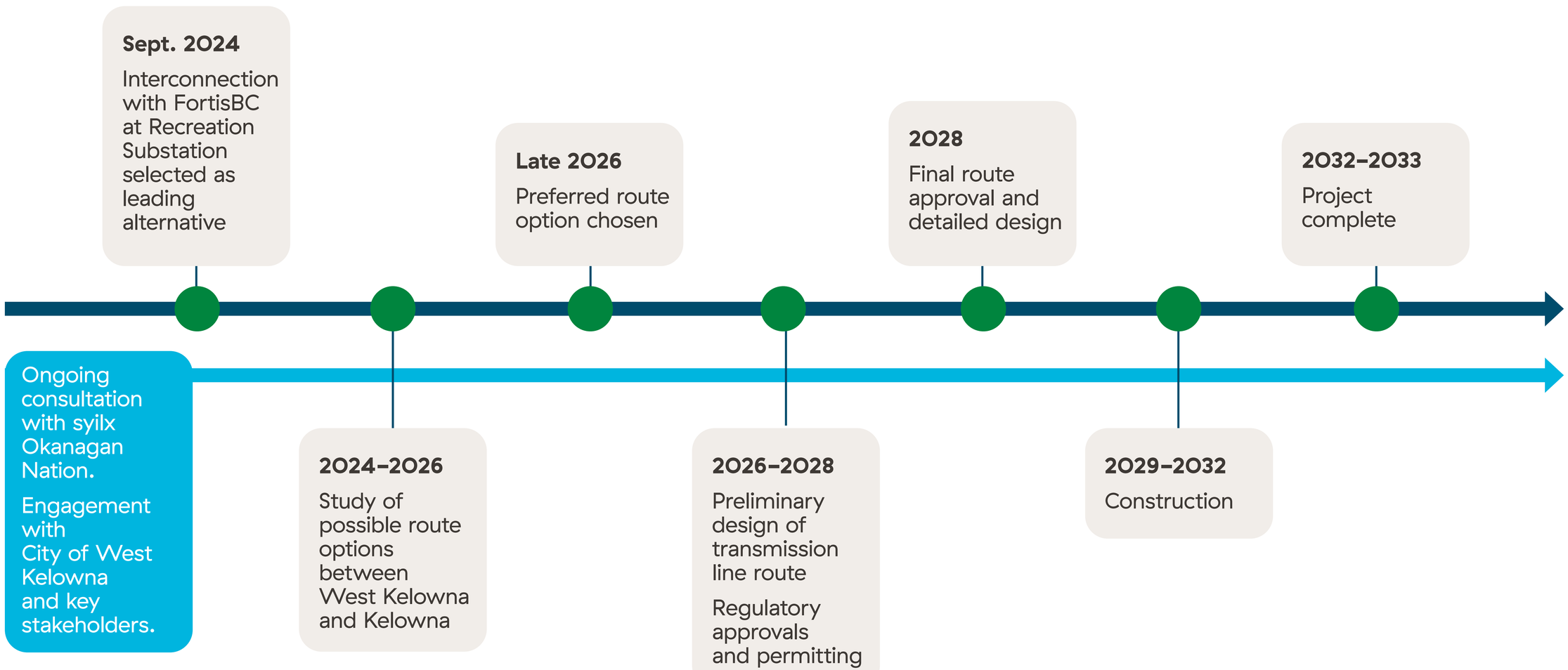
We are here

Planning	Transmission line design	Pre-construction	Construction
○ Identify route corridors ○ Identify route options ○ Identify right-of-way requirements ○ High-level environmental review ○ Initial engineering and environmental field studies to determine if lines can be built in an area ○ Route selection	○ Detailed engineering and environmental studies ○ Regulatory approvals and permitting ○ Confirm placement of structures ○ Confirm new right-of-way ○ Acquire property rights including access	○ Clearing ○ Access ○ Prepare ROW so that foundations and towers can be installed ○ Purchase construction materials	○ Foundations ○ Towers ○ Line stringing ○ Restoration

BC Hydro
Power smart

CX-6890

West Kelowna Transmission Project schedule



BC Hydro
Power smart

CK-6890

What will the transmission line look like?

We expect the line to be on overhead steel monopoles for its entire length, except where overhead is not feasible.

A graphic visualisation of steel monopoles overlaid on route option 2a

BC Hydro
Power smart

CX-6890

Westbank Substation Upgrade Project

We're advancing plans to upgrade Westbank Substation to help ensure we can continue to meet the electricity needs of growing communities in the region, including Westbank First Nation, West Kelowna, Peachland, and parts of Summerland.

Upgrading Westbank Substation will allow us to:

- Increase the substation's capacity
- Replace end-of-life equipment
- Connect the West Kelowna Transmission Line when it's complete

In 2025, we purchased land to the east of the substation for the expansion.

BC Hydro
Power smart

CX-6890

Expansion of Westbank Substation

CX-6890

Anticipated impacts and mitigations

WE'LL MANAGE THE CONSTRUCTION OF THIS SUBSTATION TO MINIMIZE IMPACTS TO NEIGHBOURS.

Public safety

The safety of the public and our workers is always our top priority.

We'll follow all relevant safe work procedures at our work site.

We'll make sure that signs and traffic management personnel keep people moving around and through our work zones safely.

Fire safety

We'll create a fire safety plan prior to construction, including fire-fighting equipment and tools, communication plan, and evacuation routes and muster locations.

During summer, we'll monitor fire danger ratings and plan our work accordingly.

Traffic

We'll prepare a traffic management plan prior to starting construction and ask for approval from Westbank First Nation and the City of West Kelowna.

There will be minimal impacts to traffic.

- When equipment and heavy machinery is arriving at the worksite, we may need to halt traffic on Shannon Lake Road for a few minutes.
- Our existing private access road, which borders Green Acres mobile home park will be closed throughout construction.

Noise

We'll complete our work in daytime hours as much as possible to avoid noise disruption.

Dust

To manage dust, we'll do regular sweeping, use gravel where appropriate, and wet the areas as needed during construction.

Other?

If you can identify other impacts or have examples of helpful mitigations, please let us know in-person or in our online survey.

BC Hydro
Power smart

CX-6890

Environment

Environmental Mitigation Measures

Silt fencing

We did an environmental review of wildlife, fish habitat, water quality, vegetation, air quality, noise, wildfire risk, and archaeological resources.

As part of our Construction Environmental Management Plan, we are developing specific mitigation measures to reduce the potential for adverse environmental effects during construction.

Mitigation measures are taken from BC Hydro standards and practices, provincial best management practices, guidelines, terms and conditions of project permits, and other applicable documents.

We will be monitoring environmental compliance throughout construction.

BC Hydro
Power smart

CX-6890

Westbank Substation Upgrade Project timeline

Planning and Community Engagement

September 2018
BC Hydro introduced the project to local governments and First Nations

November 2018
Project introduction letter sent to the surrounding community

2018–2025
Engagement with stakeholders to refine our plans

June 2024
Open house

2024–2025
Ongoing community updates

2025
BC Hydro purchases land east of the substation

Construction

October 2025
Vegetation management including tree clearing

March 2026
Site preparation including levelling the site

Summer 2026
Main construction start

2028
Targeted in-service date

~ 2032
New transmission line connected to the new substation

BC Hydro
Power smart

CX-6890

Westbank Ductbank Distribution Project

WE'RE UPGRADING OUR DISTRIBUTION SYSTEM IN WEST KELOWNA BETWEEN 2025 AND 2027.

To ensure we can continue to meet the electricity needs of growing communities, we're working to upgrade the power system that delivers electricity from Westbank Substation, located on Shannon Lake Road near Kinsmen Athletic Park, to homes and businesses in Westbank First Nation and West Kelowna. Specifically, we'll:

- install about 3 km of new underground power lines along Old Okanagan Highway between Shannon Lake Road and Daimler Drive
- upgrading about 5 km of existing overhead power lines along Daimler Drive; East Boundary, Ross, and Brentwood Roads; and on Hudson Road and a short section of Boucherie Road

BC Hydro
Power smart

CX-6890

What to expect

The work will be done in four phases over the next two years. We're working closely with Westbank First Nation during all phases of the project.

October 2025 to March 2026 (underway): Trenchless crossing construction near the intersection of Highway 97 and Daimler Drive

- We drilled a utility tunnel underneath Highway 97 from Old Okanagan Highway to Ross Road.

November 2025 to September 2026 (underway): Replacing overhead poles, installing new conductors, and installing new poles from Daimler Drive to Boucherie Road

- Where our crews are working, the roads may be single-lane only or single-lane alternating, with traffic control in place.

April to October 2026: Ductbank construction along Old Okanagan Highway from Daimler Drive to Shannon Lake Road

- We're installing a new underground line. The existing overhead line in this area will remain. Crews will be working in three locations along this route at once. Parts of Old Okanagan Highway will be single-lane only or single-lane alternating, with traffic control in place.

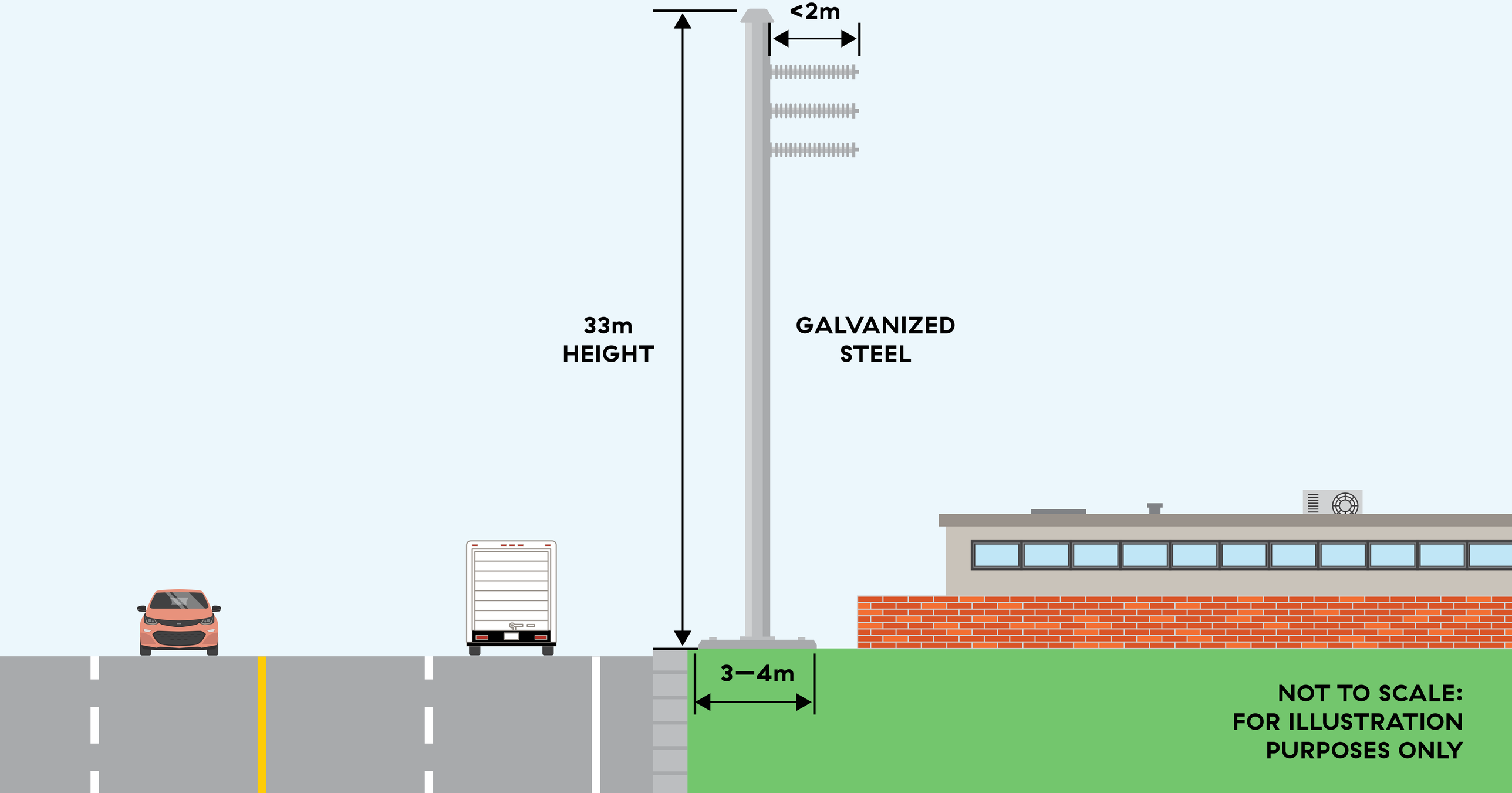
October 2026 to December 2027: Cable installation along Old Okanagan Highway from Daimler Drive to Shannon Lake Road

Our crews will use a construction laydown area beside Westbank Substation.

General construction hours will be from 7 a.m. to 7 p.m. unless night work is required. Construction will follow noise bylaws, although there may be times when this is not possible. We'll avoid or minimize impacts to sidewalks. We ask pedestrians to make safety a priority when walking near our work sites.

BC Hydro
Power smart

What will the transmission line look like?



Thank you

Sign up for project updates by emailing **projects@bchydro.com**

Visit our webpages:

bchydro.com/wktp

bchydro.com/westbanksub

SHARE YOUR COMMENTS IN A PRINTED FEEDBACK FORM OR THROUGH OUR ONLINE SURVEY.

BC Hydro
Power smart

CX-6890