West End Substation

Public consultation, May 19 – June 9, 2026

Welcome

The new West End Substation will provide clean, reliable power to approximately 50,000 customers in downtown Vancouver.

We're sharing an overview of our construction plans for the substation. Please take this opportunity to:

- Review this information to learn about how we'll construct the substation,
- Review the potential construction impacts and our planned mitigations,
- Reach out to the project team and ask any questions, and
- Share your feedback on what you read and hear.

We recognize and acknowledge that the West End Substation will be constructed on the unceded, traditional territory of xʷməθkʷəy̓ əm (Musqueam), Sḵwx̱ wú7mesh (Squamish), səlilwətaɬ (Tsleil-Waututh) Nations.

Once projects at this site are complete, the West End Substation will operate safely, out-of-sight, under a school playground

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An opportunity to share your feedback

We're sharing information about the West End Substation construction timeline and methods, and anticipated impacts and mitigations.

In addition to sharing this information online, we'll be in the West End to speak with the community and stakeholder groups through our consultation period.

Join us in person

Join us at an open house

To see and read detailed information about our plans and speak with the project team

Thursday May 21 Sheraton Wall Centre 1000 Burrard St 5 pm to 8 pm	**Saturday May 30** Lord Roberts Elementary Sch 1100 Bidwell St 10 am to 2 pm	**Wednesday June 3** Virtual – register by email 6 pm to 8 pm

Find us at community pop-ups

We'll be out in the community for you to drop by and ask questions

Saturday May 23 West End Farmers Mkt Comox St 9 am to 2 pm	**Thursday May 28** Nelson Park 7.30 am to 9.30 am	**Sunday May 31** Jim Deva Plaza 10 am to 2 pm	**Thursday June 4** Nelson Park 4 pm to 6 pm

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Powering downtown Vancouver

Substations are a critical link between the electricity system and your light switches and sockets. They reduce the high voltage used in transmission power lines to a lower voltage for use in your homes and businesses.

Since 1953, the West End has been served by the Dal Grauer Substation, on Burrard Street. This substation serves approximately 50,000 customers, but it's reaching the end of its life and can't be redeveloped in place. We need to construct a new substation that can accommodate future growth when needed and that is built to meet strict safety and seismic standards.

Since 2017, we've been working towards building a new substation to serve downtown Vancouver, the West End Substation. This substation will be located underground at 1136 Nelson Street, adjacent to Nelson Park, and will serve your community for more than 100 years.

Dal Grauer Substation, Burrard Street, 1953

Dal Grauer Substation, Burrard Street, 2017

Future West End Substation, Nelson Street, est 2033

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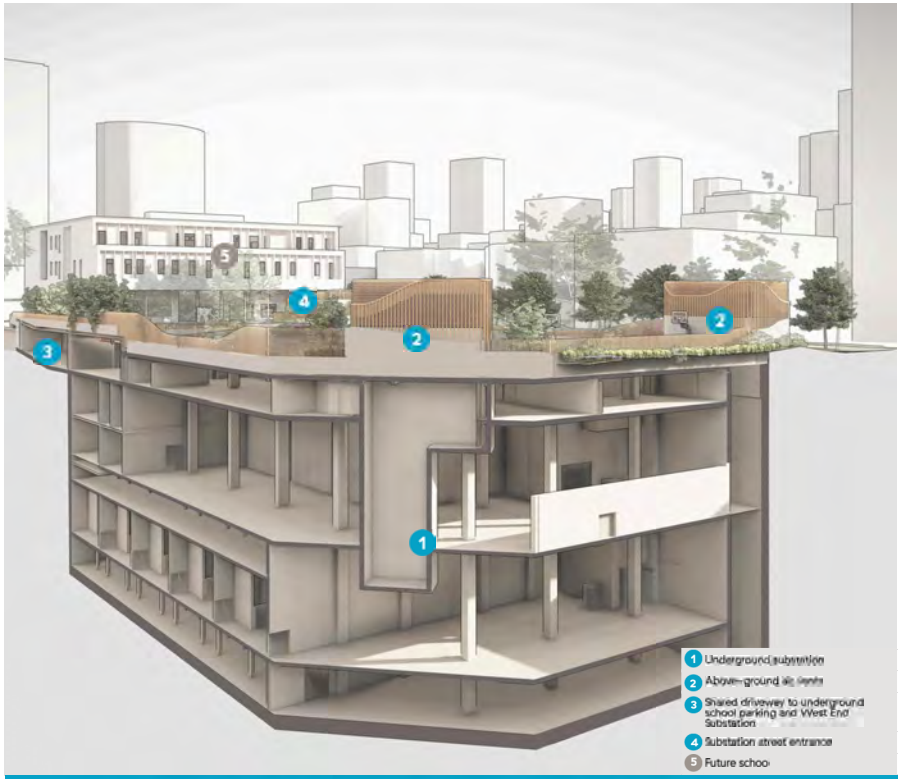
What we're building

The West End Substation will be a safe, modern substation located underground at 1136 Nelson Street, under property owned by the Vancouver School Board.

High–voltage electricity will be delivered into the substation via power lines located under city streets. Inside the substation, safe, modern transformers will reduce the voltage so that the electricity can be used in nearby homes and businesses. Electricity will be distributed from the substation via another network of underground power lines.

Above ground, you'll see two air vents – used to bring air into and out of the substation – and our secure street entrance. The substation is being designed to operate quietly, efficiently, and to the highest safety standards.

Once our project is complete, the Vancouver School Board has plans to construct a new school building on the west portion of its property and to use the space above the substation as a play space.



The West End Substation will operate safely underground

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Advancing the West End Substation project

We're working with experienced teams of engineers, architects, and builders to advance our design and construction plans for the West End Substation. Since we last shared our plans, we have:

Updated our above-ground design

We've updated the design of the above-ground elements of the substation – the air vents, street entrance and fencing.

Last spring, consultation participants shared a preference for simple, flowing shapes that could integrate with the adjacent park, and this feedback has been incorporated into the refined design. We're also continuing to work closely with the Vancouver School Board and Vancouver Park Board to ensure the visible parts of the substation fit into the surrounding environment.

Started our regulatory review

In November, we applied to B.C.'s independent utilities regulator for a Certificate of Public Convenience and Necessity. We're sharing information with the British Columbia Utilities Commission over three stages, and it will consider whether the project is needed and if it's in the public interest. A decision is expected in October 2026.

Information about the BCUC's process is available on its website: bcuc.com.

Updated our substation design to 'zero lot line'

As our design evolved, we identified a need for more space underground to support safe and efficient operations, and long-term maintenance. To make space, we've expanded the outside of the substation walls to the property boundary with no setback. This is known as 'zero-lot line'.

Once we've completed construction, this won't have an impact on the community. During construction, it means our construction fence will be located 5 metres away from the property boundary for safe work space.

Retained PCL to provide expert advice on construction plans

In April, we announced that PCL Constructors Westcoast Inc. has joined our team to help us advance construction plans.

PCL is a Canadian-founded construction company, with over 120 years of experience, and a significant presence in Vancouver. Their team of skilled construction leaders and tradespeople brings strong, local experience. They built our Mount Pleasant Substation in 2014 and they're currently constructing the new St. Paul's Hospital.

Our plans will continue to advance

Between now and the start of construction, we'll continue refining our construction plans and we'll continue our engagement with you.

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Preparing for construction

We expect to start construction of the West End Substation in late 2026. We'll only start work once we have regulatory approval and the cə́was Ch'elxwá7elch Skwuláẃtxw Seaside Elementary school community has relocated to its new building.

Between now and the start of construction, we'll be working on:

General contractor collaboration

In April, we announced that PCL has joined our team to help us advance our plans for construction.

We'll keep working with PCL to refine our construction plans to ensure that the substation is built safely and efficiently, taking into account what we've heard from the community.

Community Construction Liaison Committee launch

In April, we recruited a group of people who live, work and recreate in the West End to help us stay focused on community needs through construction. They'll receive regular updates about upcoming work and recommend the best ways to work in your community.

Underground assessments

We're continuing to complete underground assessments in the Nelson Park block and downtown streets to better understand conditions.

This information will help us plan for efficient construction and minimize impacts once construction begins.

Regulatory review completion

The BC Utilities Commission is reviewing the West End Substation project to consider whether it's in the public interest. The Commission's process is public, and you can find all its information on its website: **bcuc.com**.

We expect a decision from the British Columbia Utilities Commission in October 2026.

Community and stakeholder collaboration

We'll continue connecting with the people who live, work and play in the West End to share information about what to expect during construction, and to best understand and prepare to support their needs through construction.

EMF measurement collection

To help alleviate public concerns about EMF, we committed to commissioning an independent study of current electric and magnetic field levels at the existing Lord Roberts Annex property and Nelson Park, and reporting these publicly.

In May, we hired Exponent to undertake these measurements. Exponent is an engineering & scientific consulting firm with expertise in environmental and occupational health.

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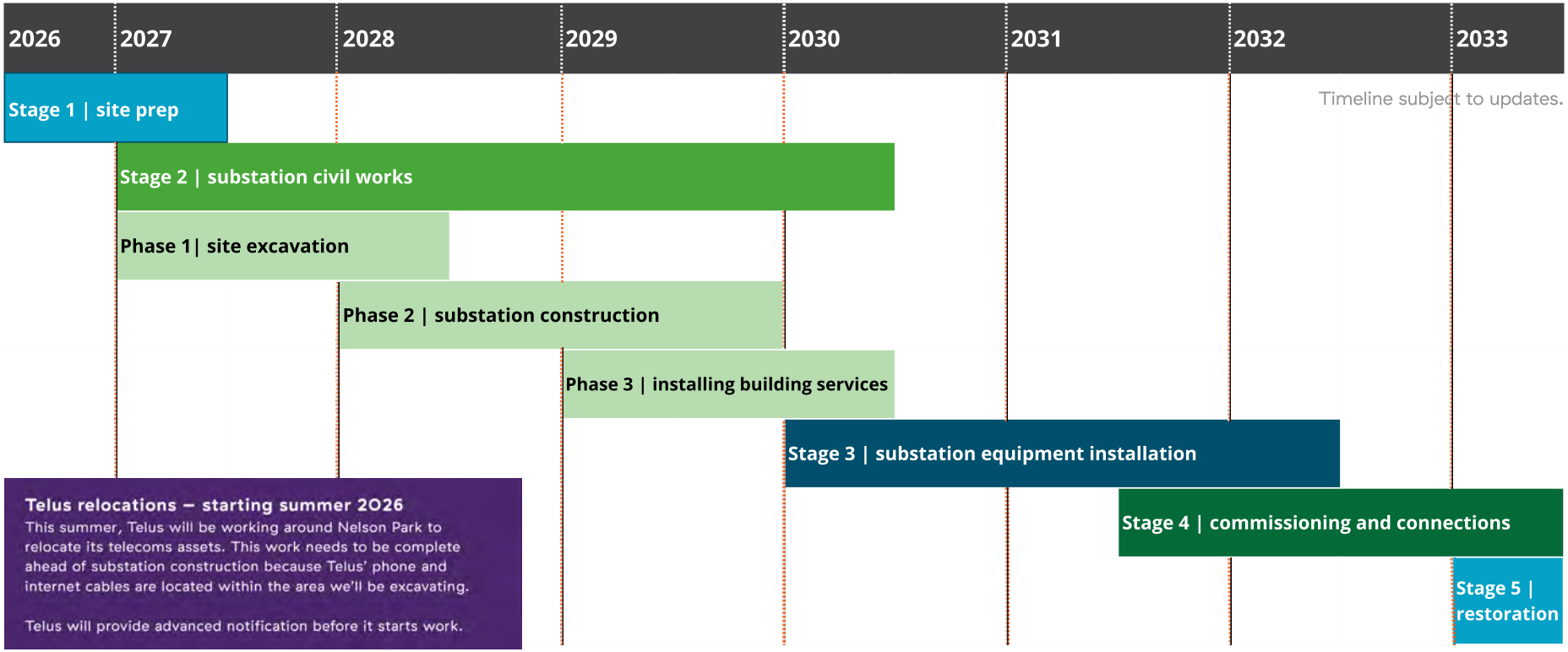
West End Substation timeline

Construction of the West End Substation will take place in five stages. We'll also install transmission and distribution power lines to connect the substation to the electrical grid. Throughout this project, we'll look for opportunities to accelerate the project schedule where it is safe to do so.



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Stage 1 | site preparation and early construction

We expect to start substation construction in late 2026, following a positive decision by the BC Utilities Commission. Over the first months on site, crews will:

1. Install construction fencing

One of the first tasks crews will undertake is installing construction fencing. This will extend the full perimeter of our work zone to provide space to complete work safely. At first, the fence will enclose the existing school fence. Following school demolition and tree removal, the construction fence will be expanded to its full footprint.

The larger construction fence will be double fence: the outer fence will be approximately 10–12 feet high and will consist of noise-muffling material covered with plywood. It will keep people and pets safely away from work areas and dampen noise from the site, and the inner chain-link fence, placed around the excavation, will enable workers to move around the excavation area safely.

2. Connect the site to existing utilities

Crews will establish temporary utility connections to support construction activities. This includes electricity to power construction offices, as well as temporary water and sanitary services for workers and on-site needs. Permanent utility routing and connections are along Nelson and Bute Street and will occur early on. Nelson Street work will require temporary lane closures and Bute Street will be enclosed within the project fenceline for the duration of the project.

The construction site during Stage 1 activities

Example noise-muffling fencing

Example tree protections

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Stage 1 | site preparation and early construction

3. Remove, prune and protect trees

Crews will remove a maximum of 83 trees from the substation site, power line rights-of-way and adjacent streets. They'll prune additional trees along the boulevards, and install fencing around some trees to prevent damage from construction vehicles and activities.

4. Relocate a storm drain

We need to relocate a storm drain that collects water from Nelson Park and directs it into the City's storm water system. This drain currently exists beneath the Lord Roberts Annex site and we'll move it into the pathway that runs through the middle of the park.

To do this, crews will close the central pathway, excavate a trench approximately 2 metres wide by 3 metres deep, install new piping and connect it to the existing system outside the park, then re-cover the pathway.

5. Demolish the school building

Crews will demolish the existing school building to make way for excavation. They'll start by removing materials that can be hazardous during demolition, such as asbestos, following all regulatory requirements for safe handling and disposal.

Demolition planning will be informed by detailed site assessments and will be carried out by qualified professionals.

Phase duration

- 6 months

Work hours

- Monday to Friday
- 7.30 am – 8 pm

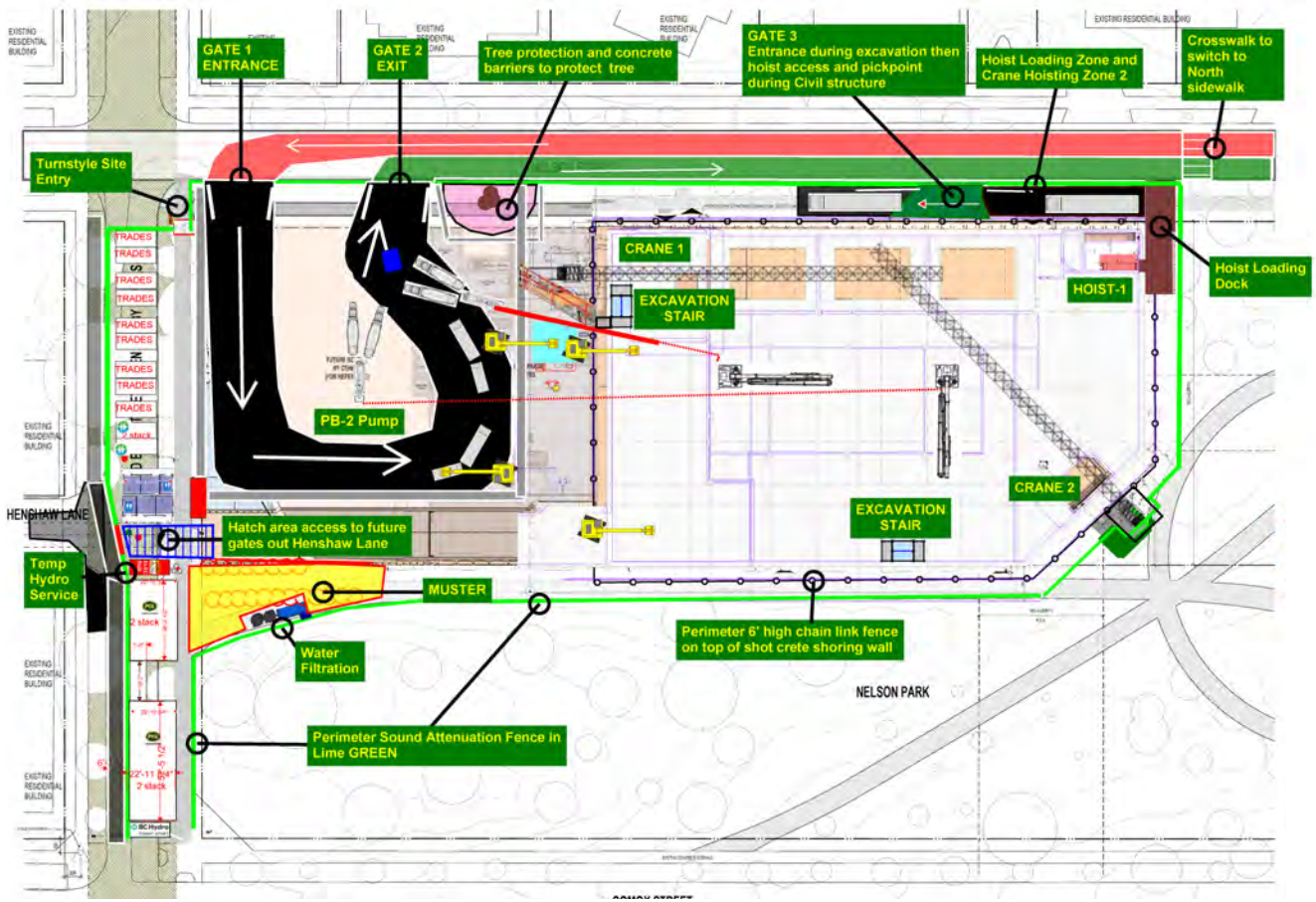
What you might see and hear

- Construction vehicles accessing the site, likely to include excavators and dump trucks
- Construction sounds including: vehicle engines, excavation, materials being moved, tree cutting/chipping, concrete/asphalt cutting, building demolition

Construction site layout

A construction site involves many activities, so before work begins, builders carefully plan how the space will be used. They decide where to place access gates, material laydowns, site offices and washrooms, and where to direct traffic, to ensure the site operates safely and efficiently.

To arrive at this recommendation, BC Hydro and PCL have considered: the safety of workers and the public, site access and traffic flow, the work schedule and sequencing, and environmental considerations.



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Traffic management

On a typical workday, about 30 vehicles are expected to access the site. During busier periods, this may increase to up to 50 vehicles.

Construction vehicles will access the West End via dedicated truck routes, then access the site via Nelson Street, entering and exiting mid-block, away from the intersection.

To ensure people can move past the construction site safely, we'll:

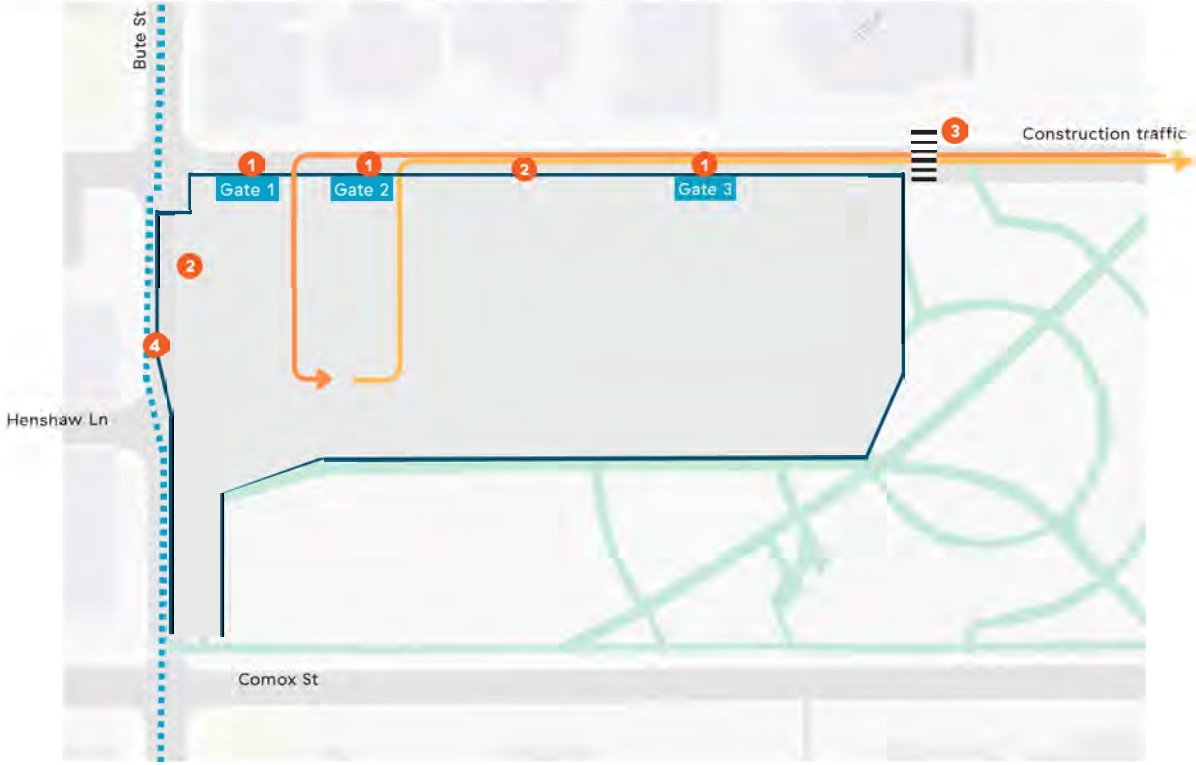
1. Employ flaggers to provide traffic direction near site access gates

   Close pedestrian access closest to the site i.e. close the:

2.
   - Eastern-sidewalk on Bute between Nelson and Comox, and
   - Southern-sidewalk on Nelson between Bute and Thurlow

3. Install a temporary, lit crosswalk mid-block on Nelson Street to provide a safe, alternative crossing point

4. Remove the boulevard on the western-side of Bute between Nelson and Henshaw Lane to provide a dedicated bike route



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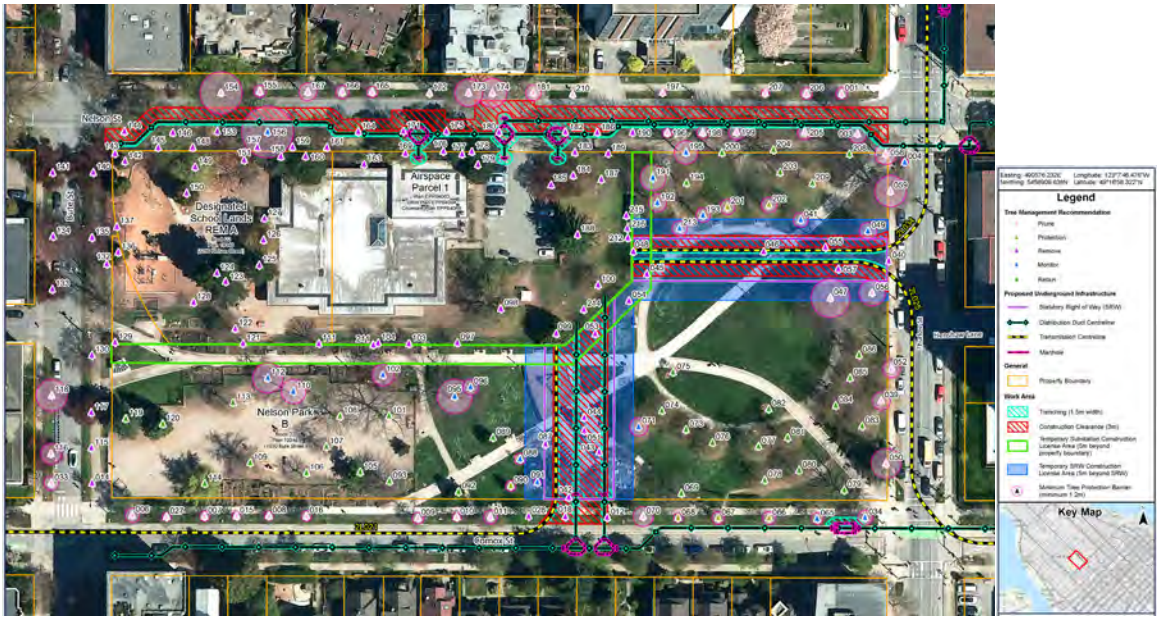
Tree removals, pruning and protection

While designing the substation and planning for construction, we've aimed to minimize tree impacts wherever practicable. We'll continue looking for opportunities to preserve trees.

We expect that a maximum of 83 trees will be removed from the Nelson Park block: 38 of these will be removed from the Lord Roberts Annex property to make way for excavation, 15 will be removed from the park because they are within power line rights of way, and 30 will be removed from the boulevard to provide space for safe and efficient construction.



Protecting the big leaf maple

The big leaf maple just east of the corner of Nelson and Bute Streets will be protected throughout construction.

Throughout planning, we've explored opportunities to limit impacts to trees, and we heard from the community that this large, mature tree is especially valued.

Although originally marked for removal, we've adjusted our construction plans to preserve the tree in place.

Qualified arborists will monitor the health of this tree throughout our construction.

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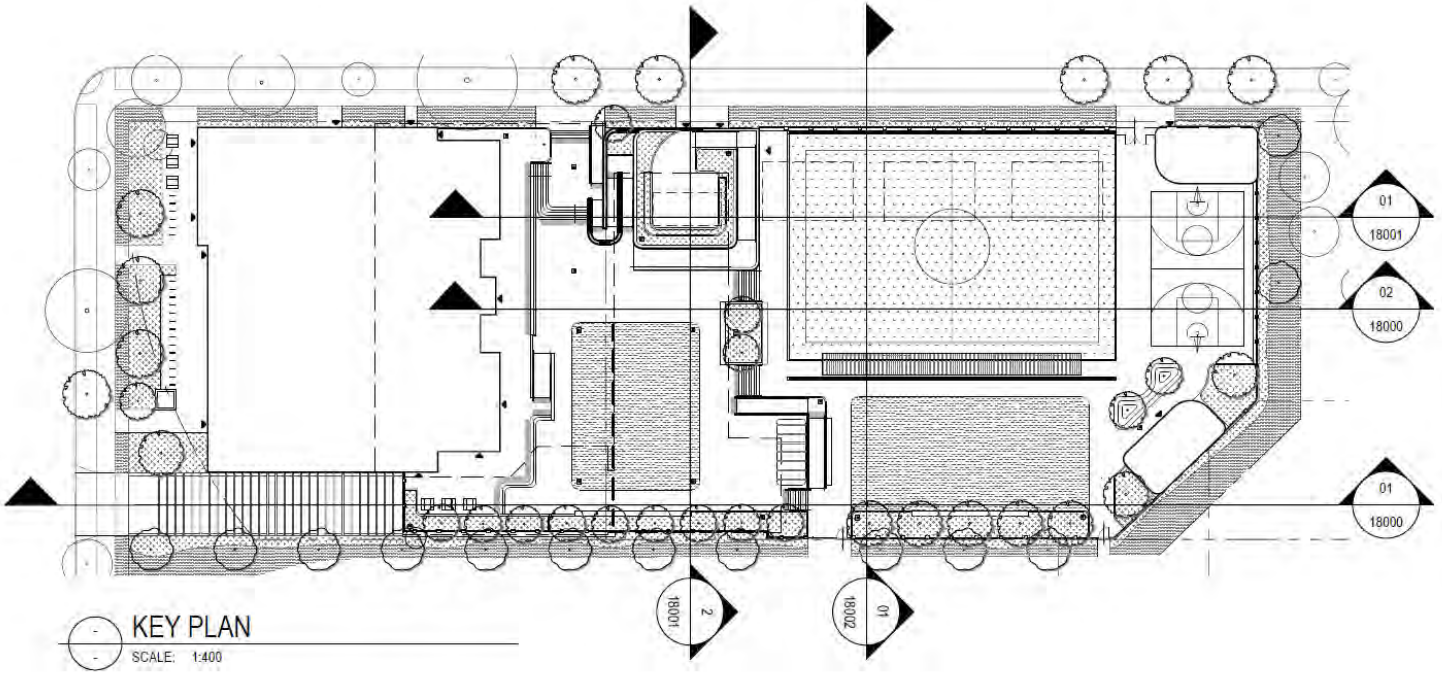
After construction – tree replanting and re-vegetation

Once our construction is complete, we'll plant and support the planting of replacement trees and vegetation within the Nelson Park block.

Within the Vancouver School Board property, our draft replanting plan includes the planting of 45 trees, including those shown below: (l) Field Maple, Turkish Hazelnut, Black Hawthorne, Katsura Tree, Pacific Dogwood, (r) Ginkgo Tree, Thornless Honey Locust, Black Gum, Kwanzan Cherry, Ponderosa Pine.

We'll also fund replacement of park trees and street trees at a 1:1 ratio, and we're working with the City of Vancouver and Vancouver Park Board to discuss where these trees can be planted.



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Stage 2, Phase 1 | site excavation

Construction crews will excavate the substation site to a depth of approximately 35 metres to create space for the underground substation.

They'll remove soils layer-by-layer and truck it off-site for disposal, following applicable environmental regulations. We expect to remove approximately 120,000 cubic metres of soil from the site – or 12,000 truckloads.

As the excavation gets deeper, crews will stabilize the excavation using soil anchors – long pins, drilled through the excavation into surrounding soils, and shotcrete – a liquid concrete that is sprayed onto the soil. We expect to complete this work in lifts of 1.5 -3 metres.

The construction site during Stage 2 Phase 1 excavation

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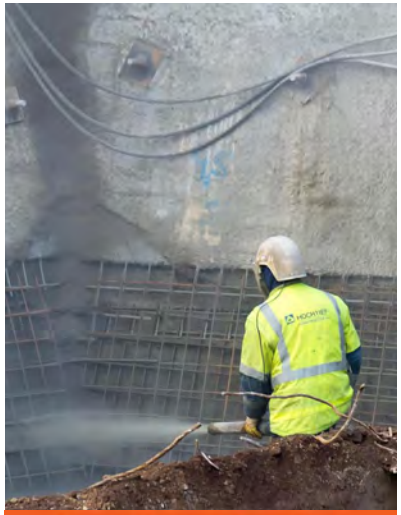
Stage 2, Phase 1 | site excavation

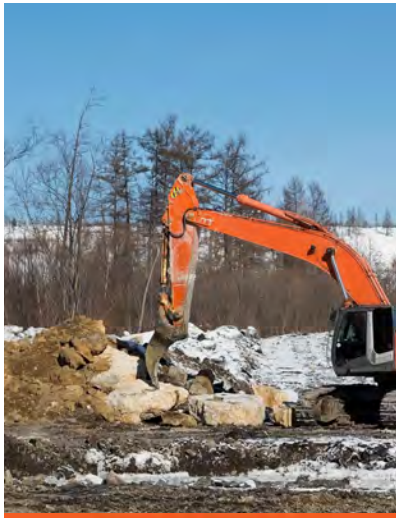
Earlier in our design process, we reduced the depth of excavation required, which reduced the volume of bedrock we will need to excavate. We expect to need to remove 7 metres of bedrock at the bottom of the excavation. During this process, or when we need to remove large rocks, we'll use excavators with ripping-tooth attachments or hydraulic breakers to break these into smaller pieces so that they can be removed from site.

Throughout the excavation, groundwater will be pumped out of the excavated area and tested for contaminants. Contaminated water will be treated and disposed of appropriately, and uncontaminated water will be disposed of through the City's storm sewer system.

Example excavation in downtown Vancouver



Example of shotcrete application to stabilize an excavation



Example excavator with ripping-tooth attachment

Phase duration

- 12 months

Work hours

- Monday to Friday
- 7.30 am – 8 pm
- Saturday work may occur to expedite the construction schedule

What you might see and hear

- Large vehicles accessing the site, likely to include excavators, cranes, tandem trucks, and dump trucks
- Typical construction sounds, including vehicle engines, ripping or rock breaking sounds
- During shotcrete application, sounds may come from drilling, air compressors and spraying equipment

Construction cranes

To support efficient construction, we'll require two cranes on site. These will arrive as early as late 2027, when they will be used to support excavation activities. Crews will continue to use them through the completion of excavation and throughout the building of the concrete substation until the roof is on.

When the eastern crane arrives at site, it will be offloaded from Nelson Street and erected using a mobile crane. We'll need to close Nelson Street for about three days while this work takes place.

In B.C., all use of construction cranes must follow strict safety rules to protect workers, nearby buildings, and the public. These rules require cranes to be installed and configured in accordance with manufacturer specifications and local regulations. The cranes will be regularly inspected and maintained, and only operated by trained and certified workers.

At this construction site, the cranes will follow a process called 'weathervaning'. This means that when the cranes aren't in use, their 'jibs' – or horizontal arms will rotate with the wind. Allowing free movement reduces stress on the crane structure, foundation, and tower during strong winds, and is a common practice on construction sites in the Lower Mainland.

Anticipated crane swings: loads will only be lifted within the worksite

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Stage 2, Phase 2 | substation construction

Following excavation, construction crews will begin to build the concrete substation structure. This has been designed to meet strict industry safety standards and to remain operational in event of a major earthquake.

This phase will begin with the construction of the 'base slab' or foundation. Crews will level the excavation and install waterproofing systems and drainage. Next, they'll place 'rebar' or reinforced steel in position to provide slab strength. Finally, they'll pour concrete in a controlled, continuous operation, using pumps attached to the site cranes to deliver large volumes of concrete evenly across the slab.

Once the base slab is in place, crews will follow a routine of installing waterproofing, building 'concrete forms' – or wooden moulds, installing rebar and pouring concrete to create the walls, columns and floors of the substation. The tallest forms will be supported by scaffolding.

We expect to require about 3,000 concrete trucks to provide the 25,000 cubic mets of concrete needed to build the substation.

While we'll provide as much notice as possible about concrete pours, concrete requires specific conditions to cure – or set – properly and we may have to postpone and reschedule this work with short notice.

The site during Stage 2 Phase 2 construction of the underground substation

Example of rebar placement to reinforce a concrete structure

Example of concrete pumping

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Stage 2, Phase 2 | substation construction

Concrete pours

Concrete must be poured in one, continuous flow to deliver strength and durability.

When concrete is being poured at the substation site, you'll see an increase in traffic, as large volumes of concrete arrive just-in-time to be poured, and more activity on site.

This work may extend beyond typical work hours at the site and may take place on weekends.

We'll provide as much notice as possible that this work is planned.

Concrete is usually delivered within about an hour of 'batching', which is when water is added at the concrete plant

Phase duration

- 24 months

Work hours

- Monday to Friday
- 7.30 am – 8 pm
- During concrete pours, workdays and hours are likely to be extended

What you might see and hear

- Large vehicles accessing the site, likely to include long flatbed trucks, concrete trucks and pump trucks
- Typical construction sounds, including engines, materials being moved, scaffolding installation, pumping
- During concrete pours, expect more traffic on Nelson Street and activity on site

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Stage 2, Phase 3 | installing building services

Once the structure is complete, crews will install building services, such as electrical systems, plumbing, ventilation, substation cranes and elevators, and fire protection system.

This involves crews running pipes, ducts, and cables through the building, testing systems, and connecting them to external networks.

While this phase is generally less disruptive than major structural work, you'll still see ongoing activity at site as materials and systems are delivered, installed, and commissioned.

The roof of the substation is in place and work is taking place out-of-sight

Phase duration

- 18 months

Work hours

- Monday to Friday
- 7.30 am – 8 pm

What you might see and hear

- Delivery vehicles accessing the site and cranes placing large equipment into the facility
- Fewer construction sounds, because most work will be taking place inside the underground building

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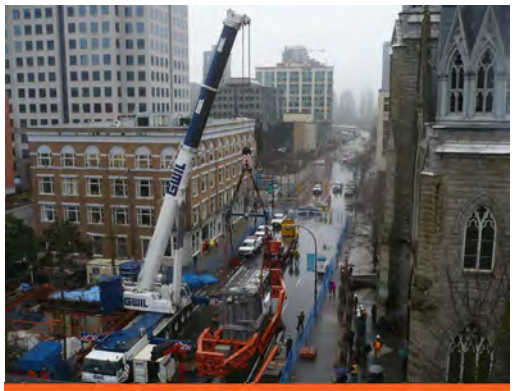
Stage 3 | substation equipment installation

During this stage of work, large, specialized equipment – including transformers, switchgear, control panels, and cables – will be delivered into the substation building, and positioned precisely using cranes, rigging, and lifting equipment. Specialist crews will connect and secure the equipment, install electrical and control systems, and carry out detailed testing to ensure everything operates safely and reliably.

Transformer delivery will require the closure of Nelson Street for short periods so that the transformers can be lifted by cranes.



In 2009, we replaced a transformer at Cathedral Square Substation

The transformer was lifted from the street into the underground substation

Transformer delivery

Substation transformers are large, heavy pieces of equipment. They must be transported on specialized trailers that can be 160' long and 18' wide – the equivalent of four city buses long and two city buses wide.

These vehicles can only move slowly, so transformers are delivered overnight, then lifted into place by heavy cranes during daylight hours in the following days.

Phase duration

- 30 months

Work hours

- Monday to Friday
- 7.30 am – 8 pm
- During transformer delivery, work hours will be extended

What you might see and hear

- Delivery vehicles accessing the site and crews on site
- Limited construction sounds, because the majority of work will occur inside the building
- During transformer delivery, Nelson Street will close and cranes will lift the transformers into the substation

Construction site safety

BC Hydro's highest priority is the safety of the public, construction crews and our employees.

Before construction begins, BC Hydro will work with the general contractor to create a site-specific safety plan that considers work on site, the public and traffic management to help keep everyone safe. Our plan will include:

Securing the site

- With a double fence, controlled access points and site signage so that only qualified workers have access
- Clear communications with residents, park users, and others in the community about work on and around site

Site traffic management

- Using approved routes to access the site and using trained flaggers to guide trucks and equipment safely at busy times
- Providing the community with clear directions via signage and flaggers about safe ways to walk or roll past the construction site

Worker safety

- Ensuring every worker has appropriate qualification and training
- Providing safety orientations, weekly updates and daily tailboards to share expectations, guidance and updates
- Requiring protective equipment for workers, such as helmets, high-visibility clothing, safety boots and glasses

Equipment inspections, safe use, and maintenance

- Pre-use inspections before each shift and regular additional safety inspections
- Strict adherence to WorkSafeBC and industry safety requirements
- Ensuring equipment is used following safe load handling practices

Supportive excavation

- Using carefully designed system of shotcrete and anchors to secure the excavation
- Monitoring the site to ensure supports are working as expected

Emergency response plans

- Created and shared with all workers on site
- First Aid provisions on site

Mitigating construction impacts

We're committed to addressing or mitigating construction impacts as much as practical during construction. Our mitigations efforts reflect the need to prioritize worker and public safety, regulatory requirements, industry best practices and what we've heard from the West End community through years of consultation.

Workdays and hours

- Monday to Friday, 7.30 am to 8 pm will be the general days and hours of work
- Crane delivery, concrete pours and transformer deliveries may occur outside these times
- Saturdays are being explored to advance the construction schedule

Traffic

- A traffic management plan will be developed for review by the City of Vancouver: this plan will consider all modes of transportation
- Crews will be required to park outside the West End
- Road-side deliveries will be minimized: most deliveries will be directly onto site
- The Bute Street cycling lane will be maintained, with a new lane in the boulevard near the intersection of Bute and Nelson Streets.
- We'll continue working with the City of Vancouver to identify opportunities to keep Nelson Street traffic moving efficiently

Dust

- Asphalt will be installed on the main truck route through site to minimize dust
- Wheel-washes will be installed to prevent dust from being carried into streets
- Mud and dust generated on the existing roads will be cleaned as soon as practical

Noise

- Noise is expected to stay below 85 dB – the limit for construction noise in Vancouver
- Noise monitors will be installed on site at the start of construction and monitored
- Sound-muffling panels will be installed on the fencing surrounding the site
- Vehicles and equipment will be maintained and inspected to ensure they're operating as quietly as possible
- Quieter equipment will be selected for use when available

Vibrations

- Vibration levels from construction activities are expected to be low, with predicted levels below 8 mm/s (~80 Hz), which is near the threshold at which vibrations may become perceptible
- Vibration monitors will be installed on site and monitored
- Buildings closest to the site will be inspected before construction starts and when construction is finished to confirm they are damage free
- Crews will use equipment and work methods with limited vibration output when practicable

Nelson Park during construction

We recognize that the substation construction will affect how people use the surrounding area, and we're continuing to look for opportunities to mitigate construction impacts.

Trees

Within Nelson Park, a maximum of 15 trees will be removed for power line construction.

We have:

- Updated the power line routes under Nelson Park to avoid priority trees, those that have unique value, at the Vancouver Park Board's request
- Planned construction activities to minimize impacts to trees wherever practicable
- Committed to funding tree replanting at 1:1 ratio

We're continuing to:

- Seek opportunities to preserve trees within the construction area
- Work with the City of Vancouver and Vancouver Park Board to consider locations near Nelson Park where for temporary planting during our construction
- Look for opportunities to use the timber, including offering it to local First Nations, artists and craftspeople, and the Vancouver Park Board
- Work with the Vancouver Park Board to discuss replanting plans

Nelson Park community gardens

The community gardens north of the park's central pathway will be removed because they are within the construction fence. The community gardens south of the park's central pathway will be impacted by utility relocation work and the construction fence.

We have:

- Met with the Community Gardeners and Vancouver Park Board to talk about the project impacts and opportunities for garden relocations
- Investigated opportunities to host community gardens elsewhere in the West End
- Met with the Community Gardeners to understand their interests and how we might support relocations

We're continuing to:

- Work with the Community Gardeners and Vancouver Park Board to understand how we can support garden relocations

Nelson Park dog park

The dog park will stay open throughout the construction period.

The construction fence has been designed to ensure that dogs stay safely away from the construction area throughout our work.

Other changes during construction

School building

Before we start construction, students of cəẃas Ch'elxwá7elch Skwuláẃtxw Seaside Elementary School will relocate to their new building in Coal Harbour.

We have:

- Committed funding to walking school buses to the new school to support safe commutes for the duration of substation construction

We're continuing to:

- Engage with school communities to understand if there are additional supports we can offer as they prepare to occupy the new school.

Playground equipment

The Vancouver School Board will relocate the Lord Roberts Annex playground before we start construction.

The Nelson Park playground will be removed one winter for a period of up to three months, when we install power lines. It will be reinstalled in the park afterwards.

Long-term, a playground for the replacement school will be installed above the substation.

We have:

- Committed to completing power line construction within Nelson Park over winter when the playground equipment is used less
- Supported the installation of improved playground equipment adjacent to cəẃas Ch'elxwá7elch Skwuláẃtxw Seaside Elementary School

We're continuing to:

- Work with the Vancouver Park Board to identify opportunities to support play space and equipment in downtown Vancouver

West End Farmers Market

The West End Farmers Market will continue to operate on Comox Street throughout the construction of the West End Substation project.

We have:

- Committed to completing work within Nelson Park and along Comox Street over winter, in part, to limit impacts to the market
- Worked with Vancouver Farmers Markets to understand the needs of farmers, market vendors, and shoppers through construction

We're continuing to:

- Sponsor the West End Farmers Market and to attend monthly to meet the community

Thank you

To review this information again and share your feedback:

- Complete an online feedback form at: **bchydro.com/westendsub**
  - Visit the webpage, or
  - Scan the QR code
- Email us: **westendsub@bchydro.com**

Our online feedback survey will be available on our webpage until **June 9, 2026.**

Looking south into the Vancouver School Board property from Nelson Street when the West End Substation project is complete

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