

Capilano Substation Upgrade Community Engagement Summary

MAY 2016—NOVEMBER 2018

BCH18-1278

 **BC Hydro**
Power smart

Contents

- 1.0 Introduction..... 1
- 2.0 Methodology 2
 - 2.1 Notification..... 2
 - 2.2 Event location 3
 - 2.3 Event format 3
 - 2.4 Participation and other respondents 3
- 3.0 Summary of findings..... 3
- 4.0 Next steps 4
- Appendix A: Public information session notification 5
- Appendix B: Storyboards and maps 6

1.0 Introduction

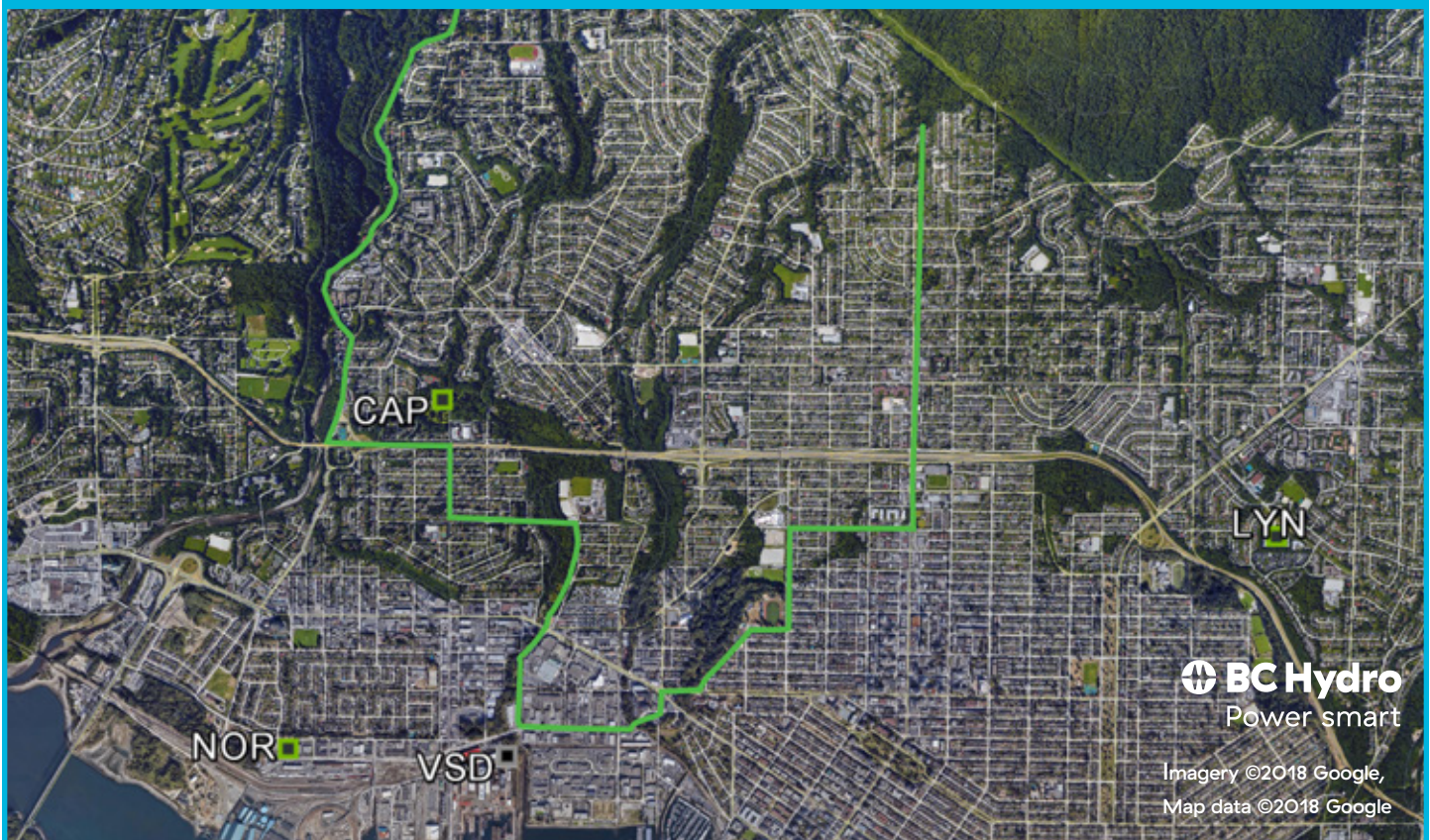
This Summary Report presents the public feedback received on the Capilano Substation Project Upgrade at a public information session held by BC Hydro on November 7, 2018; and, from in-person meetings, phone calls, e-mails received since project was introduced May 2016.

Project background

Substations are a key piece of the BC Hydro electricity transmission system, connecting communities to the transmission system and providing electricity to local homes and businesses.

To continue to provide reliable electricity to 12,000 homes and businesses, we're upgrading our Capilano Substation located on Woods Drive at Pemberton Avenue.

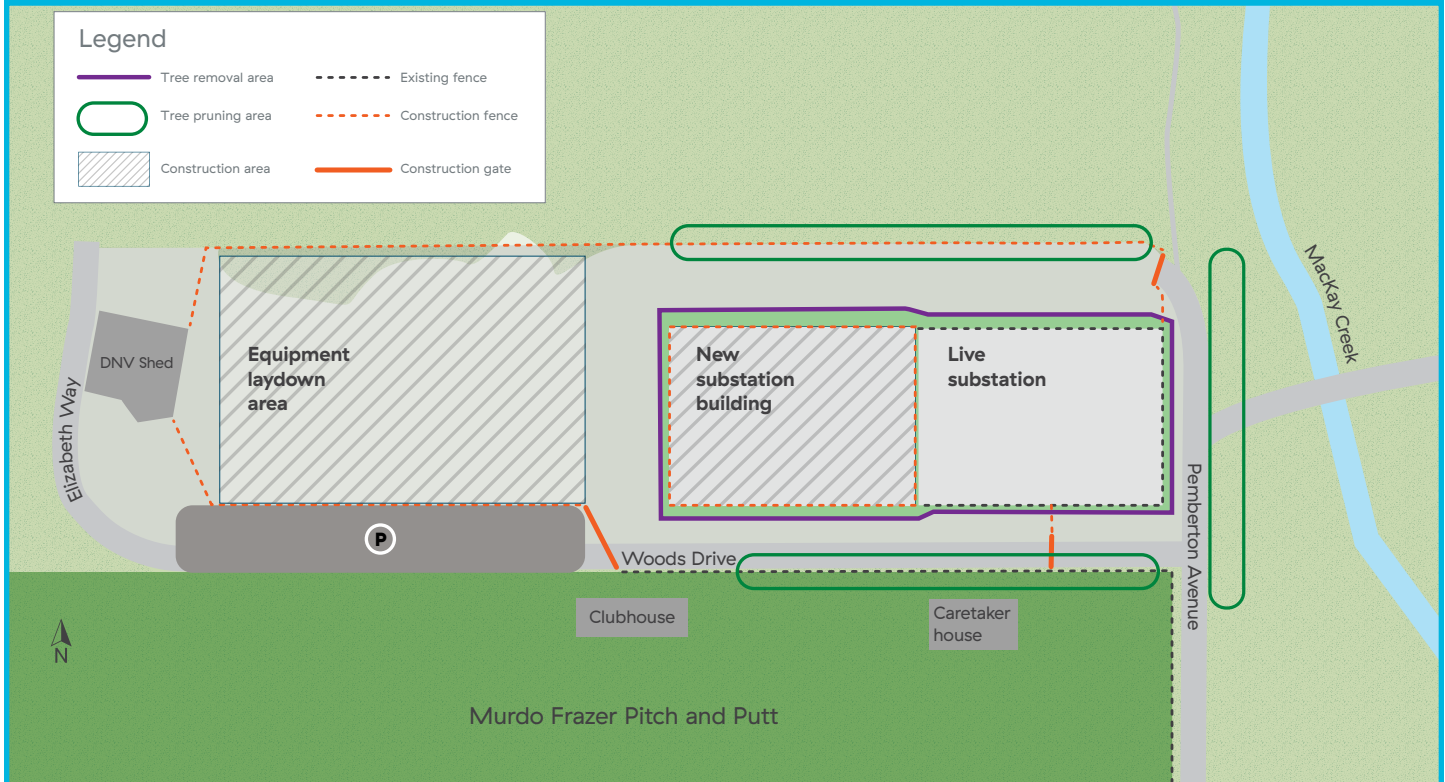
Capilano Substation Service Area 2018



On the west side of the substation, we'll remove and replace the existing substation building and outdoor equipment and construct a new building to house indoor electrical equipment including:

- Two outdoor transformers
- A control room, and
- Other associated electrical equipment.

Capilano Construction plan



The east side of the substation will remain operational during construction to continue to provide a reliable supply of electricity to nearby homes and businesses. After the west side is operational, we will decommission the east side and reserve it for future expansion.

2.0 Methodology

2.1 Notification

The public was informed of the community event by means of the following mechanisms:

- AdplacementintheNorthShoreNews
- Invitations sent by Canada Post mail-drop to residents living in the vicinity of the Capilano Substation to approximately one kilo-metre radius.
- Poster on the fence of the Capilano Substation
- Social media (Twitter) notifications
- Project website: bchydro.com/capsub

Notifications were also sent to staff of the District of North Vancouver; Members of the Legislative Assembly; and email subscribers. A copy of the ad and invitations are included in Appendix A.

2.2 Event location

Public information session was held in the centre of the Capilano Substation service area near Edgemont Villiage for ease of access for participants.

Wednesday, November 7, 2018

5:00 p.m. to 8:00 p.m.

Delbrook Community Recreation Centre, Fir Room,
851 W Queens Road, North Vancouver, B.C.

2.3 Event format

The public information session was conducted in an informal, drop-by format allowing visitors to learn about project at a pace reflecting his or her own level of interest and expertise, and to engage in dialogue with BC Hydro resource people on the issues important to them.

The focus of the information material was a set of textual and graphic display panels (see Appendix B). Copies of a large orthophoto map of the substation service area was displayed along with the storyboards at the information session. Both the display panels and the map were made available to the public on the project website.

A comment form was distributed to all participants to complete and either deposit in a drop box at the event or submit to BC Hydro at a later date.

The project manager and representatives from the project team including, stakeholder engagement, engineering, properties, environment and construction services were present to answer questions and hear comments.

2.4 Participation and other respondents

The public information session was attended by 14 people and three comment forms were submitted.

3.0 Summary of findings

The following summary reflects themes derived from:

- Questions and comments received from one-on-one conversations between public information session participants and the project team
- Comment forms
- E-mails
- Meetings with stakeholder groups

Summary

Participants were generally positive about the project and welcome the upgrade to help address reliability. The project team noted that outages caused by weather and overgrown trees could still occur with the upgraded substation. Conversations held were primarily focused on how to minimize disruption during construction and whether the restored park area meets the community's need.

Reliability

- Request for a faster in-service date for the project to increase reliability.
- Request to remove hazardous trees north and south of the substation to prevent falling branches from causing future outages during storm seasons.
- Noted that residents in the area depends on BC Hydro's electricity supply for sump pumps for basements due to high water table and some have invested in backup power supply using natural gas.

Traffic & transportation

- Concerns about construction access to and from Highway 1 onto Pemberton Avenue.
- Concerns about using Gladwin Road for construction transportation because the road is steep, narrow and crumbling.
- Concerns about truck transportation on Gladwin Road causing increased wear and tear on Gladwin Road.
- Noted that Gladwin Road may need to be restored once the project is complete.

Construction

- Appreciation that BC Hydro is putting considerable effort into water management plan including potentially timing excavation work to avoid wet periods.
- Support for plans to replant trees after project completion.
- Support for space to allow for future substation expansion on the east side as it is seen as a sign of good planning by BC Hydro.

Murdo Frazer Park access

- Support for access and parking for Murdo Frazer Pitch and Putt during construction.
- Request to keep Elizabeth Way open after construction.
- *Request to close Elizabeth Way after construction.
- *Request to only allow access on Elizabeth Way during Murdo Frazer Pitch and Putt operating hours.

Equipment laydown area restoration plan

- Noted the centre of the picnic area used for the equipment laydown is very wet and marshy.
- Noted that existing picnic tables and benches north in the trail north of the substation are seldom used and they should not be added to the restored laydown area.
- Request to keep the park as an open field to support current park use and opposition to including picnic tables and trails as part of park restoration.
- Request to retain the hazelnut tree towards the south of the equipment laydown area.

Other comments

Request BC Hydro to have a unified electronic mail notification system for outage, construction, and project updates.

4.0 Next steps

The input summarized above will be considered with input from First Nations consultation activities, discussions with municipalities and other interested parties, as well as the results of our environmental and engineering studies. All of this information is considered in our project plan in order for us to construct this upgrade in a responsible and responsive manner to the community.

Appendix A: Public information session notification

We're upgrading Capilano Substation in Murdo Frazer Park

Come learn more, including how we're keeping the park and golf course accessible during construction

November 7, 2018



BCH18-936

We're upgrading Capilano Substation in Murdo Frazer Park

To ensure reliable electricity to 12,000 homes and businesses, we're upgrading our Capilano Substation located on Woods Drive at Pemberton Avenue.

Come learn more, as well as how we're keeping the park and golf course accessible during construction.

Where: Delbrook Community Recreation Centre, Fir Room M17.
851 W Queens Road
North Vancouver, B.C.
(At Del Rio Drive in William Griffin Park)

When: Wednesday, November 7, 2018

Time: 5 p.m. to 8 p.m.

For more information, please contact us at projects@bchydro.com

Learn more at bchydro.com/capsub



5543

To continue to provide reliable electricity to 12,000 homes and businesses, we're upgrading our Capilano Substation located on Woods Drive at Pemberton Avenue.

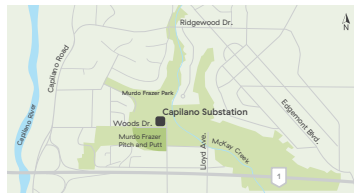
Substations are a key piece of the BC Hydro electricity transmission system, connecting communities and providing electricity to local homes and businesses.

Join us at our public information session to learn more.

Where: Delbrook Community Recreation Centre, Fir Room M17
851 W Queens Road
North Vancouver, B.C.
(at Del Rio Drive in William Griffin Park)

When: Wednesday, November 7, 2018

Time: 5 p.m. to 8 p.m.



Artist rendering of upgraded substation

Can't make it?

Contact us at 604 623 4472 or projects@bchydro.com, or visit bchydro.com/capsub.



Publication(s): North Shore News (GM)
Size: 3col 5.062" x 70 lines
Insertion Date(s): October 24, 26, 31 and Nov 2
Deadline: Tuesday, October 18 by 3pm

Welcome to the BC Hydro information session



Capilano Substation Upgrade

We're upgrading the Capilano Substation on Woods Drive at Pemberton Avenue. This upgrade will ensure long-term reliability and safety for the electricity supply to the area. We're here to share our project plans and gather your comments.

CAPILANO SUBSTATION UPGRADE PROJECT

 **BC Hydro**
Power smart

Why it's important

The Capilano Substation is an existing substation built in the early 1950s. Approximately 12,000 customers are served by this substation in the immediate area.

Most of the major equipment in this substation is near end-of-life and needs to be replaced for reliability and safety reasons.

This upgrade will include:

- Two outdoor transformers.
- A building for indoor electrical equipment and a control room.
- Steel structures to support the new and existing power lines.
- Other associated outdoor electrical equipment in the substation yard.

We'll construct the new substation on the west side of the existing substation site while using the east side to continue to provide power during construction.

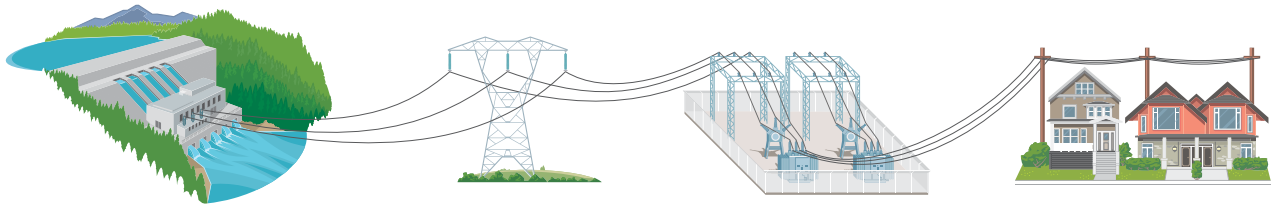


Existing substation inside the fence

What area is being supplied by this substation?

The service area currently supplied by Capilano Substation extends north to the base of Grouse Mountain, south to 1st Street, west to Capilano Road, and east to Lonsdale Avenue. The centre of the supply area is Edgemont Villiage.

Our electricity system



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.

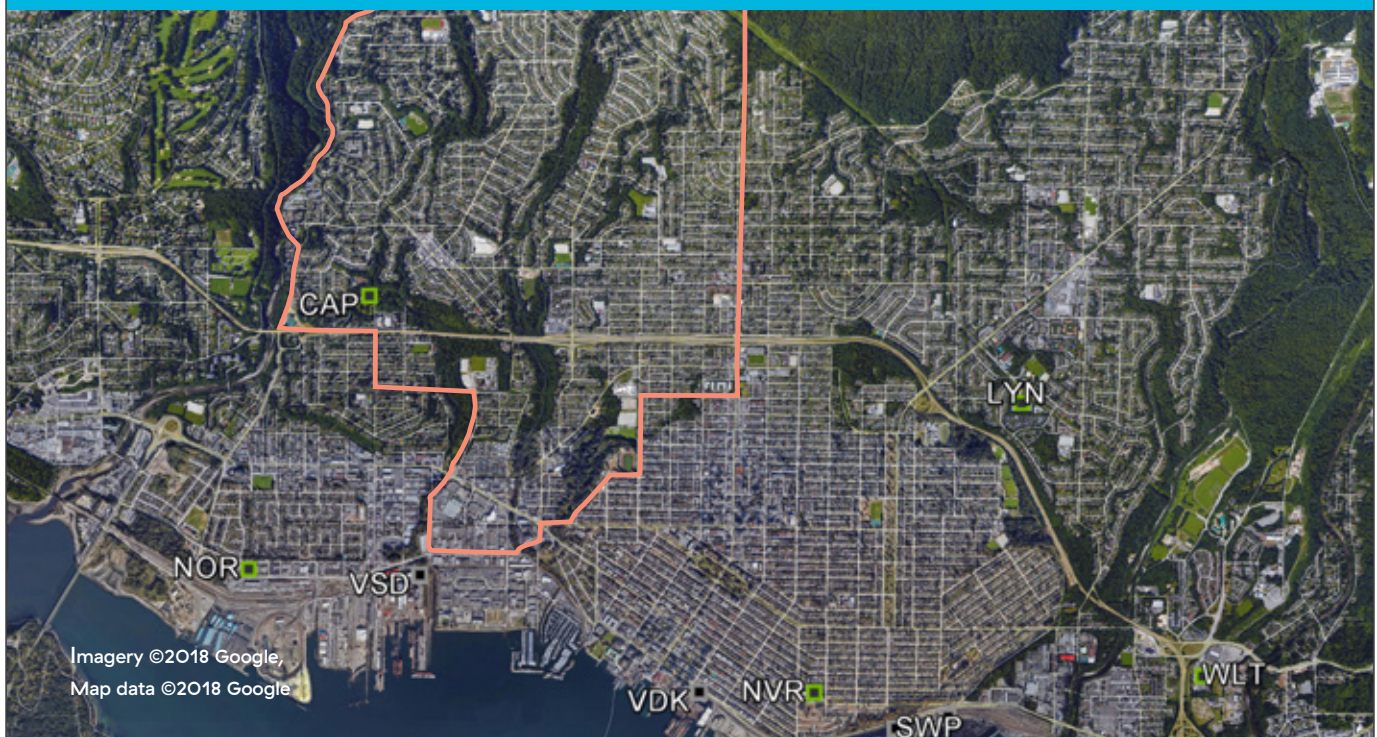
Distribution

Low voltage electricity is provided to neighbourhoods and businesses.

CAPILANO SUBSTATION UPGRADE PROJECT

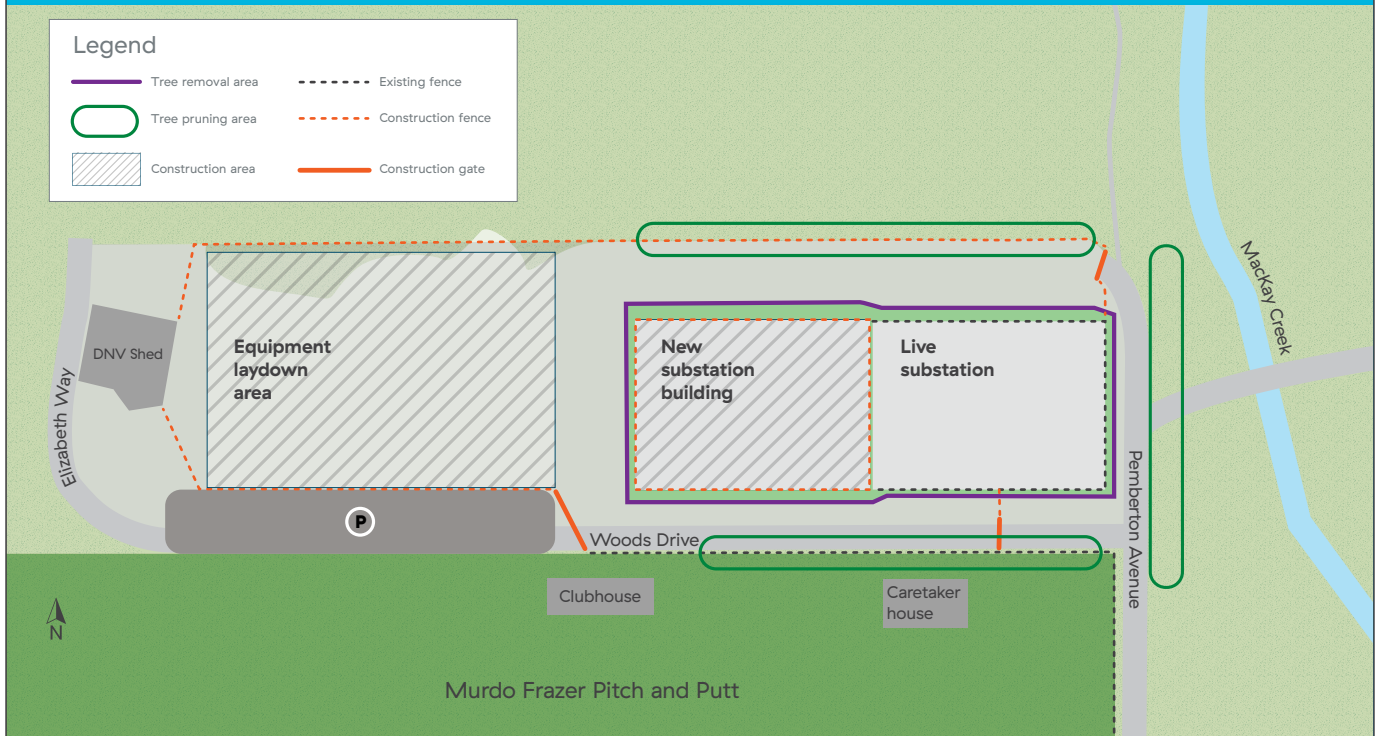


Capilano substation service area 2018



Imagery ©2018 Google,
Map data ©2018 Google

Construction plan



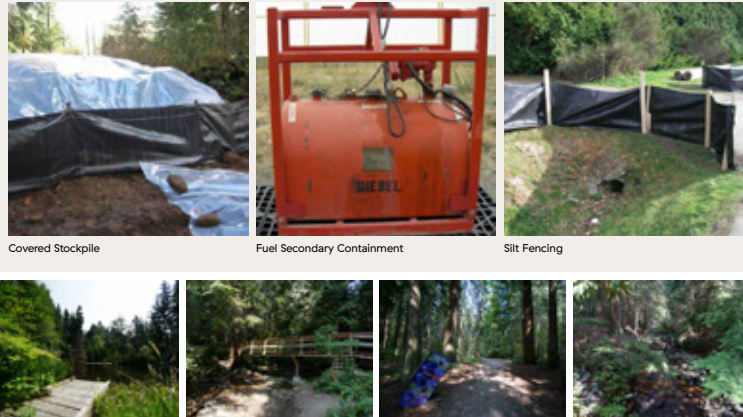
How are we constructing it?

We'll be managing the construction of this substation to minimize impact to park users.

Construction Impact	How we're dealing with it
Park Traffic and Parking	Murdo Frazer Park access will be maintained along Pemberton Avenue. Access to existing parking on Woods Drive will be redirected through Elizabeth Way near the tennis courts.
Pitch and Putt Operation and Access	Access to the clubhouse will be maintained from the west via Elizabeth Way. Additional parking has been made available.
Noise	Construction will take place during regular construction hours and will be consistent with District of North Vancouver's noise bylaw.
Dust	To manage the dust, we'll do regular sweeping, use gravel where appropriate and wet the areas as needed during construction.
Park User Communications	We'll add signs to ensure users are aware of trail changes, the access route to the Pitch and Putt and the expanded parking location. We'll also provide project updates in the Park, on the project website and by email. We'll advertise in local papers that Murdo Frazer Park remains accessible during construction and the Pitch and Putt continues to be operational.

- We did an environmental review of wildlife, fish habitat, water quality, vegetation, air quality, noise, wildfire risk, and archaeological resources.
- The substation is close to MacKay Creek so we have conducted studies of the soil and groundwater quality.
- 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.

Environmental Mitigation Measures

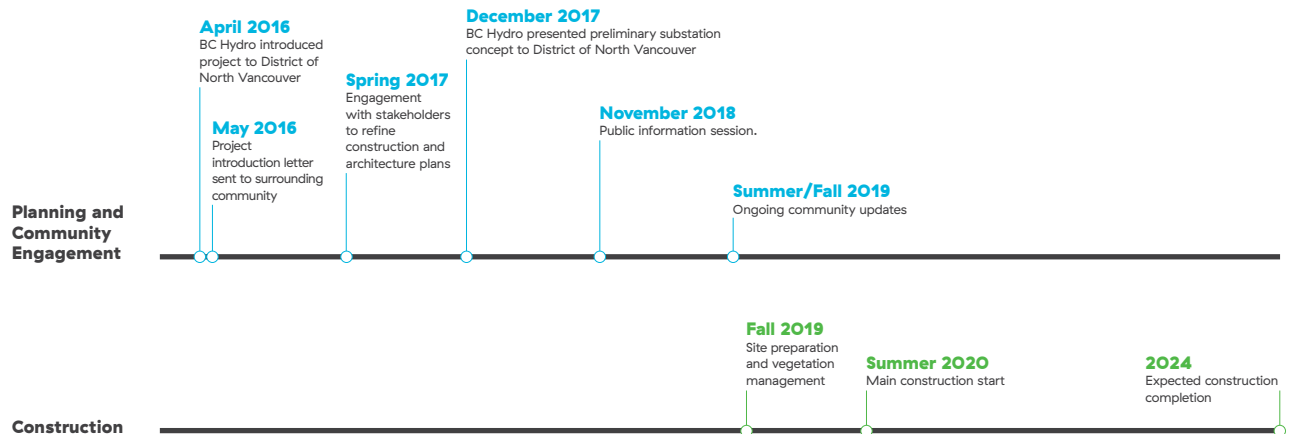


Covered Stockpile

Fuel Secondary Containment

Silt Fencing

Project timeline



Architectural design

We hired an architect to design the substation to ensure that the building exterior and fence have features that will fit with the surrounding area.

We worked closely with the District's architect and planning staff to refine the design.

The design incorporates some features found on other public buildings in the District such as:

- A weathered zinc façade;
- Decorative tile work on the eastern face;
- Metal panels on the south face as a screen;
- Additional design elements to make the scale feel more pedestrian.

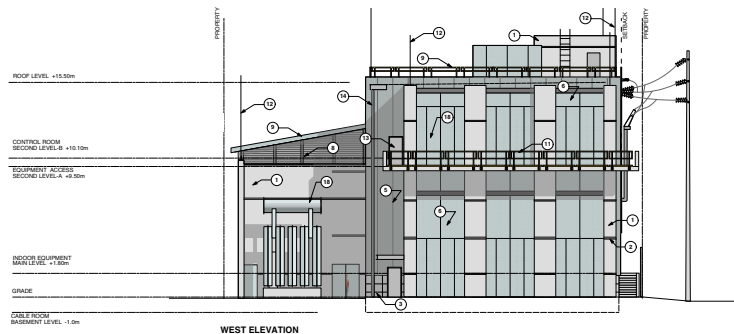
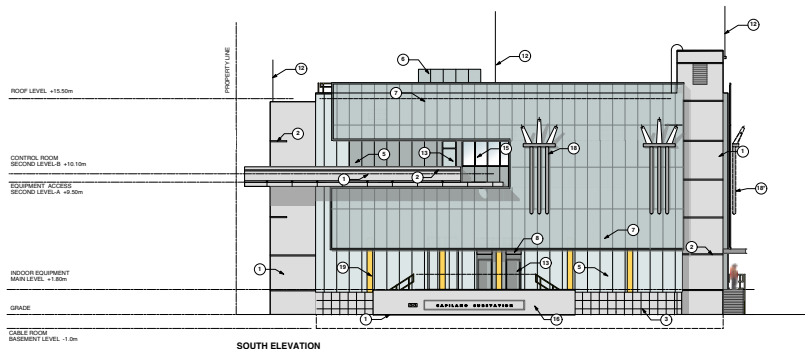
For the landscaping, we're adding sustainable and native plants and landscape materials around the outside of the fence.



CAPILANO SUBSTATION UPGRADE PROJECT

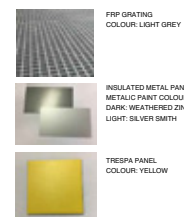
BC Hydro
Power smart

Architectural design



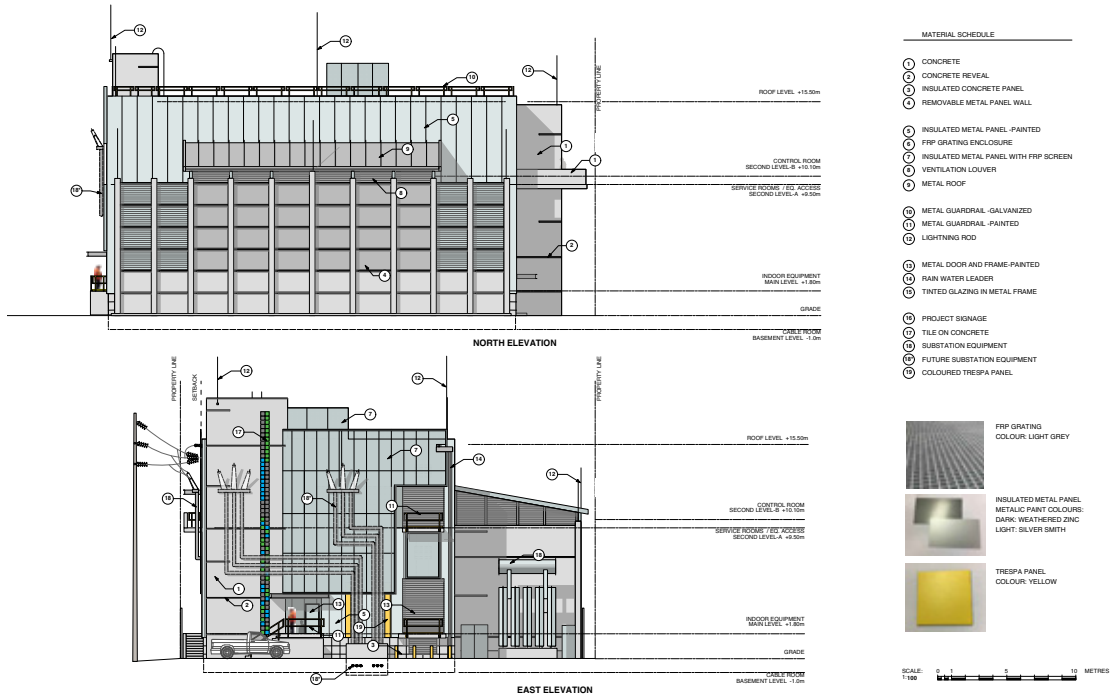
MATERIAL SCHEDULE

①	CONCRETE
②	CONCRETE REVEAL
③	INSULATED CONCRETE PANEL
④	REMOVABLE STEEL FRAME FIRE WALL
⑤	INSULATED METAL PANEL - PAINTED
⑥	FRP GRATING ENCLOSURE
⑦	INSULATED METAL PANEL WITH FRP SCREEN
⑧	VENTILATION LOUVER
⑨	METAL ROOF
⑩	METAL GUARDRAIL - GALVANIZED
⑪	METAL GUARDRAIL - PAINTED
⑫	LIGHTNING ROD
⑬	METAL DOOR AND FRAME - PAINTED
⑭	RAIN WATER LEADER
⑮	TINTED GLAZING IN METAL FRAME
⑯	PROJECT SIGNAGE
⑰	TILE ON CONCRETE
⑱	SUBSTATION EQUIPMENT
⑲	FUTURE SUBSTATION EQUIPMENT
⑳	COLOURED TRESPA PANEL



SCALE: 1:100 0 1 2 3 4 5 10 METRES

North and East Elevation



Long-term benefits

Beyond ensuring continued reliable electricity in the area, we'll also be doing our part to enhance Murdo Frazer park:

Community Benefits	What we're doing
Murdo Frazer Park Enhancements	Following construction the Murdo Frazer Park picnic area across from Pitch and Putt will be enhanced with new trails, shelters and benches.
Road and Parking Improvements	Woods Drive will be repaved and existing parking spaces will be repainted. Parking will also be created and painted on the north side of the substation. New parking spaces, created on Pemberton Avenue and 26th Street for construction use, will be retained permanently for park users.
Fire Protection	An additional fire hydrant will be added for fire protection in the area.
Service Connections	Water and sanitary connections will be constructed under Woods Drive and provided to the Pitch and Putt clubhouse for future facilities.
Contribution to DNV Parks	We're providing a contribution to the District of North Vancouver Parks for environmental restoration and upgrades in Murdo Frazer Park.

Restored picnic area



Conceptual sketch. Some trees may need to be removed during construction. BC Hydro will replant with appropriate tree species following construction.

AMEC Foster Wheeler

