

# Memo



**Date:** October 21, 2010

**To:** City Manager

**From:** Land Use Management, Community Sustainability

**Application:** A10-0005

**Owner:** FortisBC Inc.

**Address:** 1955 McCurdy Road East

**Applicant:** New Town Planning Services

**Subject:** Non-farm use within the Agricultural Land Reserve

**Existing OCP Designation:** Public Services/Utilities

**Existing Zone:** A1 - Agriculture 1

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## 1.0 Recommendation

THAT Agricultural Land Reserve Appeal No. A10-0005 for Lot 1 Section 31 Township 27 ODYD Plan KAP58736, located at 1955 McCurdy Road East, Kelowna, B.C. for a non-farm use within the Agricultural Land Reserve, pursuant to Section 20(3) of the Agricultural Land Commission Act, be supported by Municipal Council;

AND THAT Municipal Council forward the subject application to the Agricultural Land Commission.

## 2.0 Purpose

The applicant is requesting permission from the Agricultural Land Commission (ALC) for a non-farm use within the Agricultural Land Reserve (ALR) to allow an expansion of the existing electrical substation on the subject property.

## 3.0 Land Use Management

The subject property has a variety of land capabilities and soil classifications across the site with the potential for dramatic improvement with irrigation and reduced rockiness. No portion of the property is currently being used for agricultural purposes apart from periodic grazing, however this is not a reflection of the carrying capacity of the land but rather a reflection of the landowner, FortisBC, not engaging in farm activity.

The applicant notes that the substation on the subject property has been in operation since 1958 and that it predates the inception of the ALR. While the current substation is grandfathered as a legally non-conforming use, any expansion does trigger the need for a non-farm use application to the ALC. Should the non-farm use application be successful, a rezoning will be required to formalize the utility use.

While some substation upgrades are to occur within the existing footprint, FortisBC intends to enlarge the facility toward the southern property line. The result, as noted by the applicant, is an increase in the overall substation footprint of about 25%. The attached drawing illustrates

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potential (near) build-out at 2016, along with a schedule of anticipated dates for significant milestone upgrades.

Should the application for non-farm use be approved in principle by the ALC, subsequent rezoning and Development Permit applications to the City will have to address the following items which have not yet been supplied by the applicant:

- Proposed buffering and landscaping to minimize impact to adjacent agricultural land;
- Site grading and drainage plan for proposed changes; and,
- Assessment of visual impact.

Land Use Management staff note that the applicant is requesting a relatively small expansion to the existing substation and that there is little potential for adverse impact on agricultural land.

#### 4.0 Proposal

##### 4.1 Project Description

FortisBC proposes to expand the existing electrical substation on site as a result of long term planning studies that indicate a requirement for expanded infrastructure in order to ensure the continued reliable delivery of electricity into the future.

A direct result of this long term infrastructure planning has been the creation of three new substations: the Ellison substation near Quail Ridge, the Benvoulin substation on Casorso Road, and the Black Mountain substation on Joe Riche Road. FortisBC anticipates that no new greenfield substations are required in the next 20-30 year period and that any additional required capacity will be provided for with the expansion of existing facilities.

As the only two terminal stations in Kelowna, the proposed expansions of the substations on Steward Road East (DG Bell substation) and McCurdy Road East (Lee substation) serve to switch and transform electricity to lower voltages for delivery to the Kelowna distribution grid.

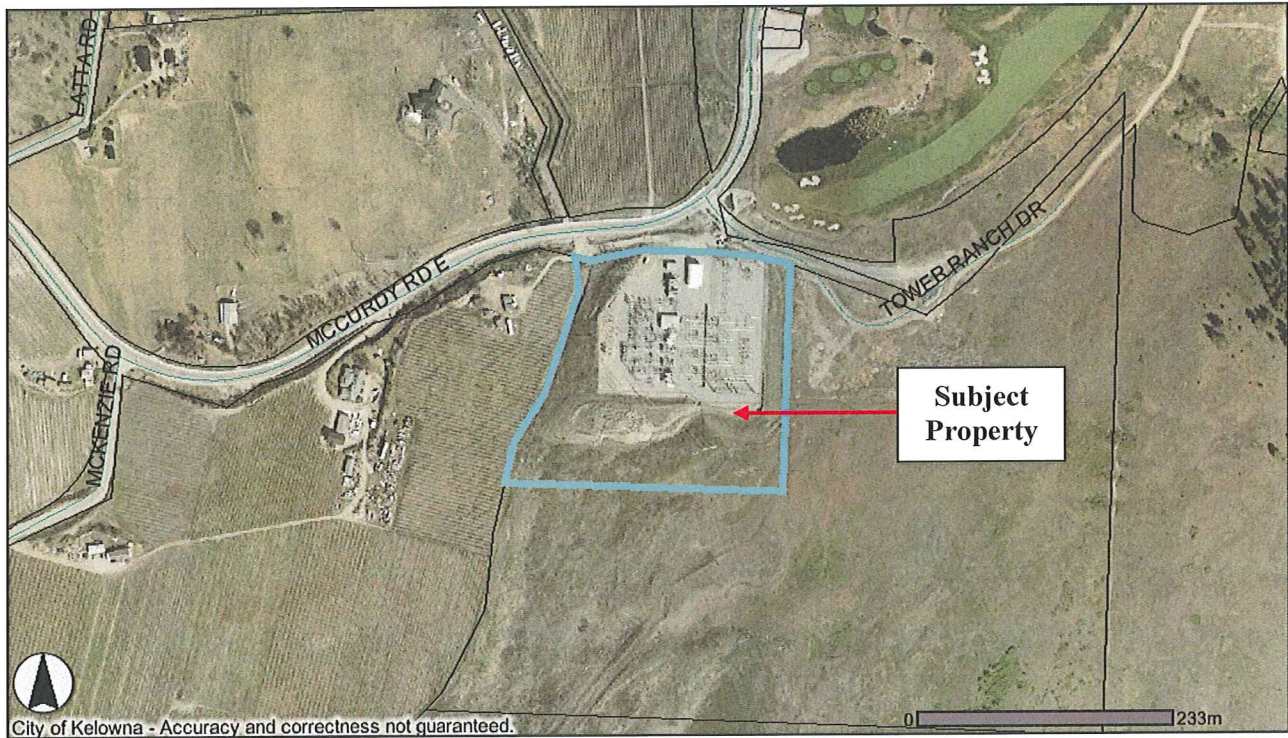
##### 4.2 Site Context

The subject property is located on the south side of McCurdy Road East, adjacent to Tower Ranch Golf Club, and is designated as a Wildland Fire Hazard Development Permit Area. The site area is 5.60 hectares (11.4 acres) and the site elevation varies between 554-583 metres above sea level, representing a change of 29 metres (95 feet) across the site.

In addition, portions of the subject property are identified in the City of Kelowna Sensitive Ecosystems Inventory as grassland. Soil erosion potential is identified as moderate and terrain stability is identified as stable.

The City's stream inventory identifies Bauer Brook flowing just to the north of the property, within the McCurdy Road East right-of-way. This stream has been identified as ephemeral (flows briefly in the spring and subsequently after rain events).

Zoning and Land Use of Adjacent Properties			
North	CD6 - Comprehensive Residential Golf Resort A1 - Agriculture 1	ALR	Tower Ranch Golf Club Orchard
South	A1 - Agriculture 1	ALR	Grazing land
East	A1 - Agriculture 1	ALR	Grazing land
West	A1 - Agriculture 1	ALR	Grazing land / Orchard



## 5.0 Current Development Policies

### 5.1 Kelowna Official Community Plan (OCP) <sup>1</sup>

#### Agriculture Policies:

Sustained Agriculture. Encourage the retention of diverse agricultural uses through limits on urban development and non-farm use on lands of sustainable production capability.

Buffers. Provide for distinct boundaries that separate urban and rural uses by utilizing, where appropriate, roads, topographic features, watercourses, ditching, fencing, or small lot rural transition areas, as buffers to preserve larger farm units and areas.

Buffering. Require that new developments adjacent to or abutting agricultural areas provide sufficient setbacks, on-site fencing and vegetative buffering to mitigate potential conflicts.

#### Services & Utilities Policies:

Residential Setback. Encourage new residential development setbacks of 30 metres from the edge of the transmission line wires for feeder lines.

Non-Residential Setback. Encourage new development setbacks of 6 metres from the edge of high voltage power lines or as required by the electrical utility owner.

## 6.0 Technical Comments

Development Engineering Branch. No comments at this time as this application does not trigger any offsite upgrades.

<sup>1</sup> City of Kelowna Official Community Plan, Chapters 11 and 13

Infrastructure Planning. No comments.

Black Mountain Irrigation District. No comments.

Policy & Planning Department. The subject property is designated Public Service/Utilities (PSU) in the current OCP. Currently, it is zoned Agriculture 1 (A1). This property is within the Wildland Fire Hazard Development Permit Area and will therefore be required to go through the DP process. If granted Non-Farm Use status from the ALC, the applicant would then pursue Utilities (P4) zoning.

Since the existing electrical station has been in operation for more than fifty years and since expansion to the facility is necessary to meet the anticipated demand over the next 20-30 years, it is recommended that the approval for Non-Farm use be supported. Also, the subject property is designated PSU in the OCP and electrical station falls within this intended use. However, since the subject property is within the Wildland Fire DPA, it is recommended that the applicant go through Development Permit process to identify any measures to be undertaken to minimize negative impacts, if necessary.

Subdivision Approving Officer. Provide landscape plan for proposed landscape buffer and consult with Tower Ranch/Intrawest to ensure the proposal complements their vision for Tower Ranch Golf Community.

## 7.0 Application Chronology

Date of Application Received: April 30, 2010

Agricultural Advisory Committee July 8, 2010

The above noted application was reviewed by the Agricultural Advisory Committee at the meeting on July 8, 2010 and the following recommendation was passed:

THAT the Agricultural Advisory Committee support Application No. A10-0005 for 1955 McCurdy Road, by Fortis BC Inc, to obtain approval from the Agricultural Land Commission under Section 20(3) of the Agricultural Land Commission Act for a non-farm use within the Agricultural Land Reserve to permit expansion of an existing electrical substation.

### Report prepared by:



Andrew Browne, Urban Land Use Planner

Reviewed by:



Todd Cashin Manager, Environment & Land Use Manager

Approved for Inclusion:



Shelley Gambacort, Director, Land Use Management

### Attachments:

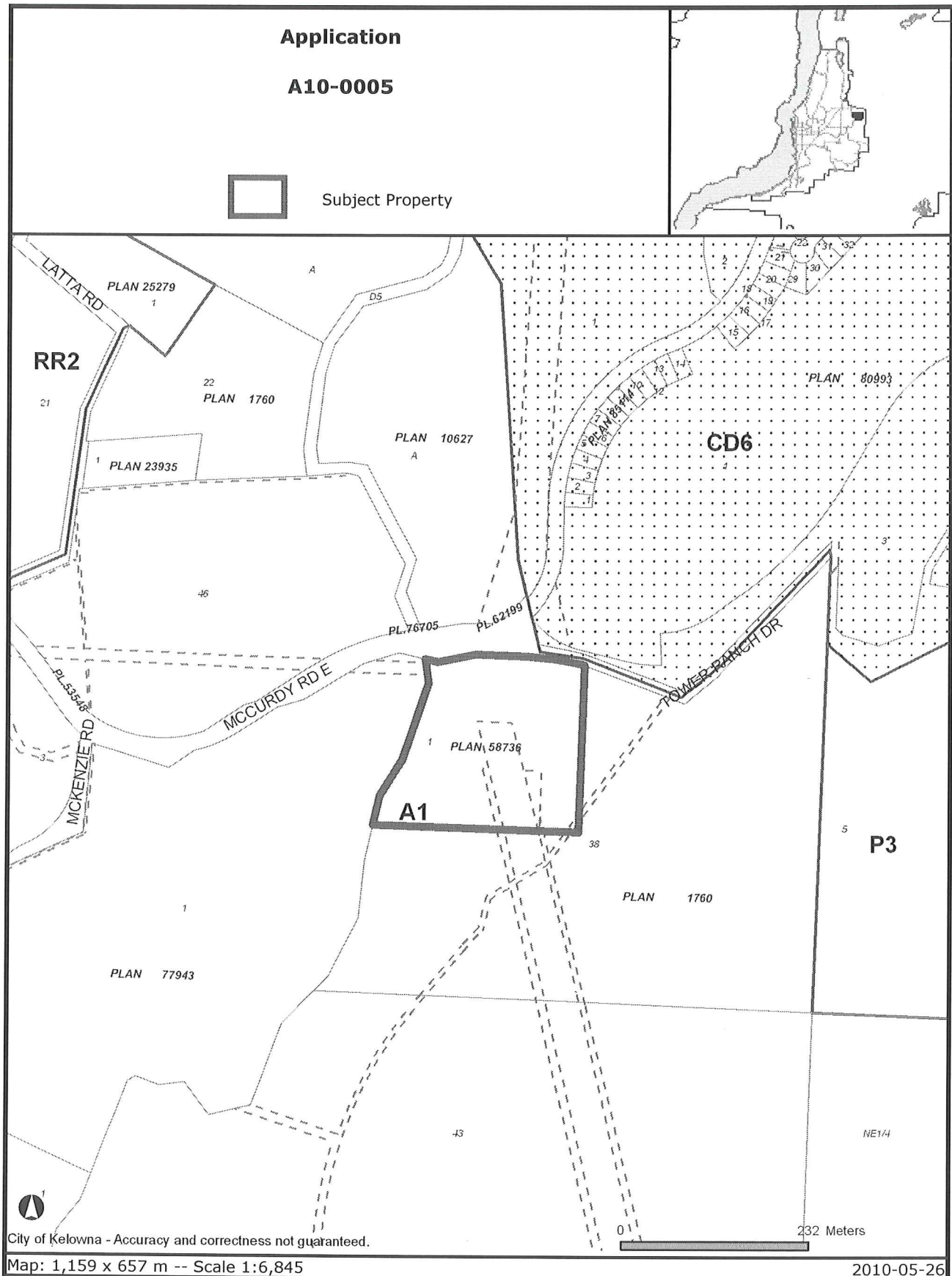
Location and zoning map of subject property

BCLI Land Capability and Soil Classification - Maps and descriptions (3 pages)

ALC Application by landowner (2 pages)

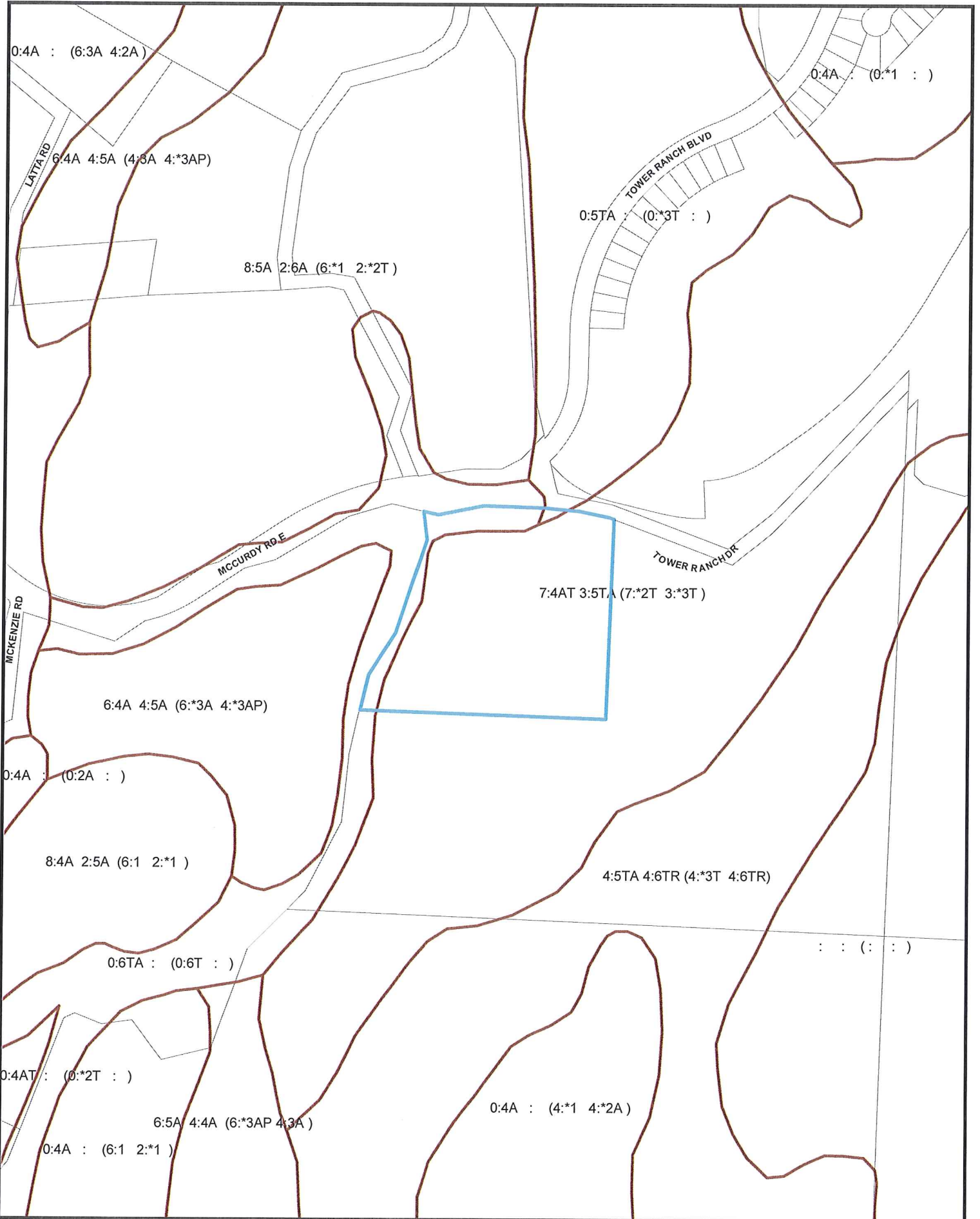
Letter of rationale (8 pages)

Drawing



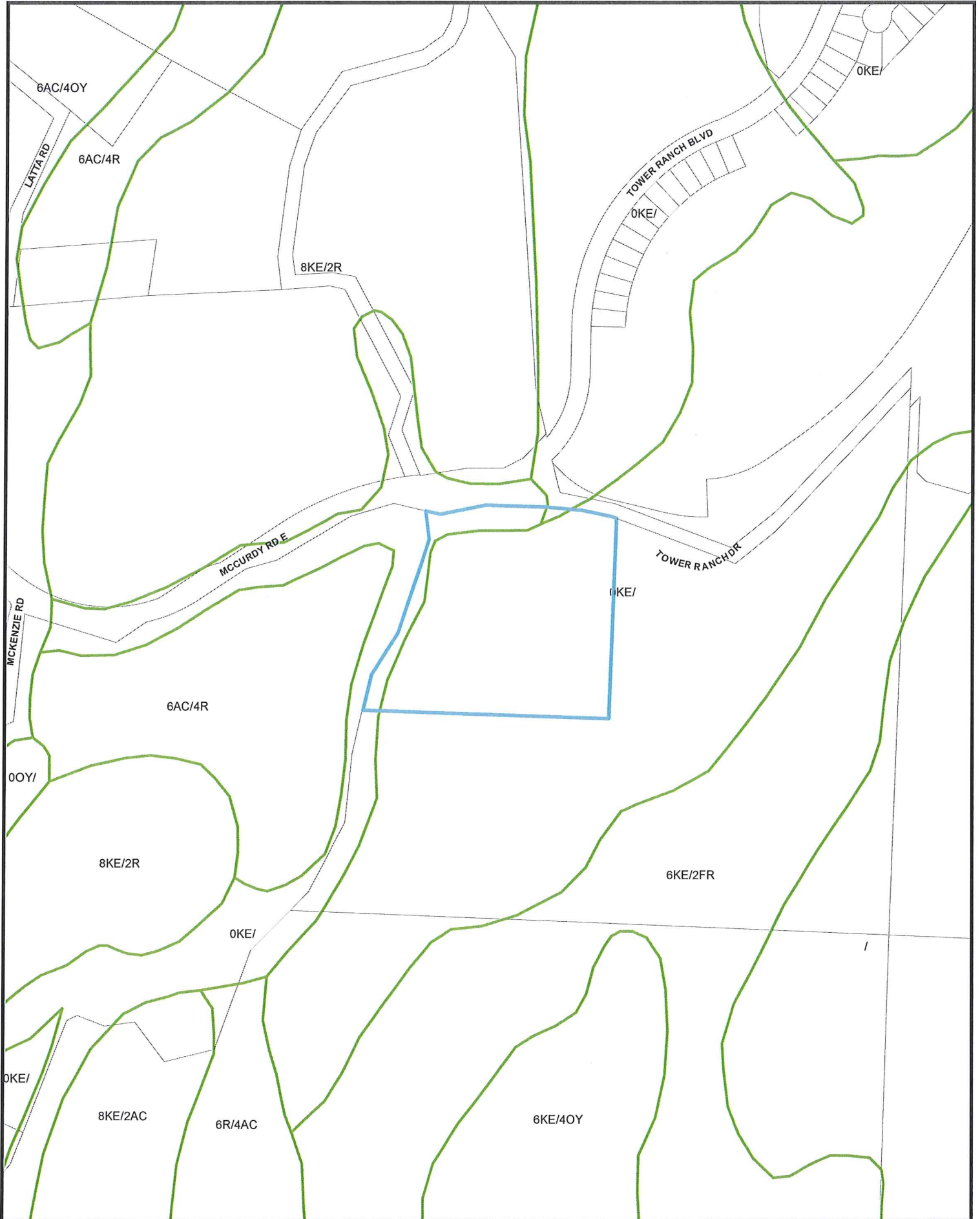
Certain layers such as lots, zoning and dp areas are updated bi-weekly. This map is for general information only.  
The City of Kelowna does not guarantee its accuracy. All information should be verified.

Land Capability = Brown/ Soil Class = Green



1:5,000

Land Capability = Brown/ Soil Class = Green



1:5,000

**BCLI Land Capability (Map 82E.094)**

Portion of Site	Land Capability Rating, Unimproved	Land Capability Rating, with Improvements
n/a	70% Class 4 with soil moisture deficiency and stoniness  30% Class 5 with soil moisture deficiency and stoniness	70% Class 2 with stoniness  30% Class 3 with stoniness

Class 2 - Soils in this class have moderate limitations that restrict the range of crops or require moderate conservation practices. The soils are deep and hold moisture well. The limitations are moderate and the soils can be managed and cropped with little difficulty. Under good management they are moderately high to high in productivity for a fairly wide range of crops.

Class 3 - Soils in this class have moderately severe limitations that restrict the range of crops or require special conservation practices. The limitations are more severe than for Class 2 soils. They affect one or more of the following practices: timing and ease of tillage; planting and harvesting; choice of crops; and methods of conservation. Under good management they are fair to moderately high in productivity for a fair range of crops.

Class 4 - Soils in this class have severe limitations that restrict the range of crops or require special conservation practices, or both. The limitations seriously affect one or more of the following practices: timing and ease of tillage; planting and harvesting; choice of crops; and methods of conservation. The soils are low to fair in productivity for a fair range of crops but may have high productivity for a specially adapted crop.

Class 5 - Soils in this class have very severe limitations that restrict their capability to producing perennial forage crops, and improvement practices are feasible. The limitations are so severe that the soils are not capable of use for sustained production of annual field crops. The soils are capable of producing native or tame species of perennial forage plants, and may be improved by use of farm machinery. The improvement practices may include clearing of bush, cultivation, seeding, fertilizing, or water control.

**BCLI Soil Classification (Map 82E.094)**

Portion of Site	%	Soil Type	Description
n/a	100%	KE - Kelowna	<u>Land</u> : Moderately and strongly sloping glacial till. <u>Texture</u> : 10 to 30 cm of loam or sandy loam veneer over gravelly sandy loam or gravelly loam. <u>Drainage</u> : Well.



Request for ALC Non-Farm Use  
To Allow for Expansion of Existing Electrical Station  
Lot 1, Section 31, Township 27, ODYD, Plan KAP58736  
Lee Station: 1955 McCurdy Road East, Kelowna

Applicant: FortisBC

## Introduction

A Non-Farm Use is requested from the Agricultural Land Commission to allow FortisBC to apply to the City of Kelowna for rezoning from Rural Agricultural (A1) to Utility (P4) in order to accommodate a future expansion to the existing electrical station, Lee Station. The subject area is projected in the Official Community Plan as future utility use and is located in the Rutland area of Kelowna.

**Figure 1: Location**



## Long Term Planning

Due to both growth of the City, and the increasing electrical needs of individual homes and businesses, the electrical distribution system requires upgrading to meet current and future demand. Over the last few years, FortisBC has invested significant resources in electrical upgrades and improvements to increase system reliability, services and safety. The load is currently forecasted to meet capacity by approximately 2015. The system must have the capacity for a certain amount of

energy to provide seamless and reliable service in high demand periods, which occur during peak load conditions such as very cold and very hot weather.

As one of only two terminal stations in Kelowna, Lee Station provides high voltage transmission switching and transformation to lower voltages for delivery to the Kelowna grid. The second station, Bell Station, located in the Southeast/Mission area of Kelowna is also slated for expansion in the 20-30 year period. A separate application has been submitted to the ALC to accommodate those expansion plans.

Bell and Lee are critical cogs in the Kelowna area electrical distribution system. They also serve important roles in the local neighbourhoods as the stations also include a substation to provide energy to the local area.

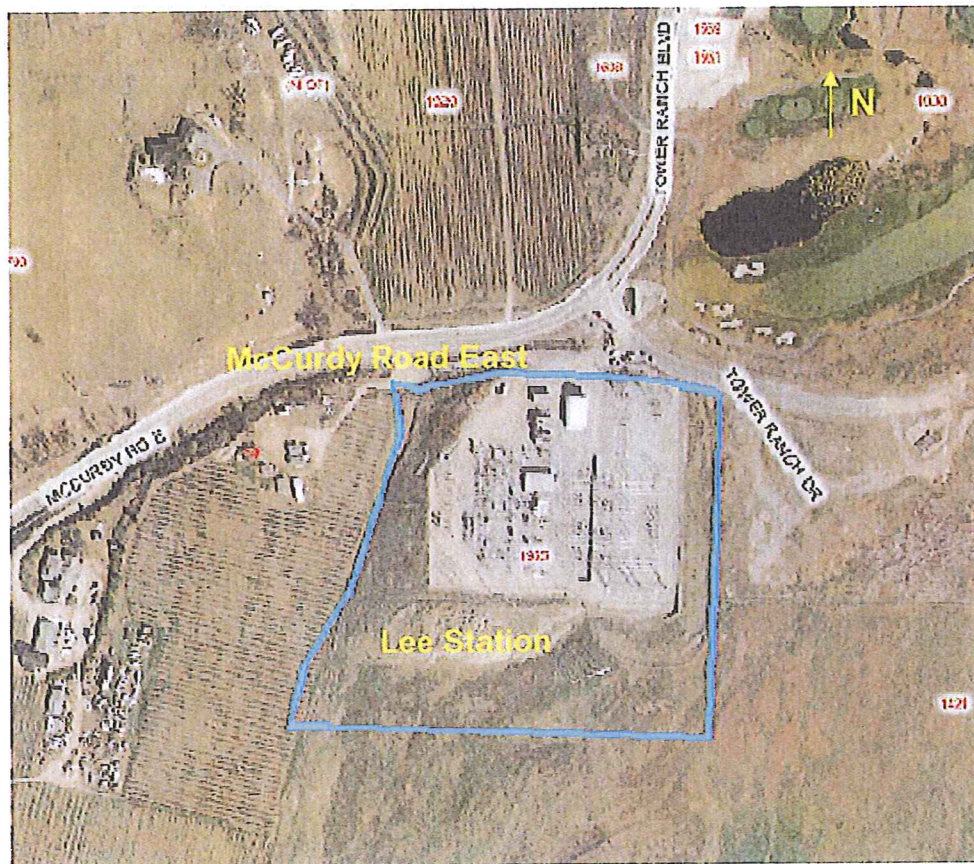
Upon the recent approval of new Kelowna area substations (Benvoulin, Black Mountain, Ellison, Big White), the remaining projects planned for the 20-30 year time range include upgrades and expansion to existing facilities, with no new Greenfield station projects planned. Expansion to the distribution stations, Bell and Lee, are priority projects to ensure consistent and quality service to the community.

Lee Station has been in operation for approximately fifty years and pre-dates the ALCR; as such, FortisBC did not initially realize that the station was part of ALR land and believed that they were already on appropriately zoned sites. The applications for non-farm use for both Bell and Lee stations will allow FortisBC to apply for appropriate re-zoning and OCP Amendments prior to applying to the British Columbia Utilities Commission (BCUC) for the expansion to the existing stations. At this point, FortisBC anticipates that the expansion of Bell and Lee Station, in addition to recent substation approvals will be sufficient to meet electrical demands in the Kelowna area for a 20 to 30 year period.

## **Background**

The Lee station has been operating in the current location since 1958. Although the station is on an ALR site, the current use pre-dates the inception of the ALR, and is proposed in the City of Kelowna's OCP as a future Public Utility (P4) site. The station provides N-1 source of 138Kv Transmission power to the Kelowna area in addition to 13.8Kv distribution power to the Rutland area. As part of Fortis BC's long term planning, expansion to the existing Lee Station is required to meet future electrical demands for the City of Kelowna. In the next few years, Fortis BC needs to expand the station by adding a T4 Transformer addition. A Non-Farm Use application is required from the ALC in order for FortisBC will pursue P4 Zoning from the City of Kelowna before applying for approvals from the BCUC.

**Figure 2: Context**

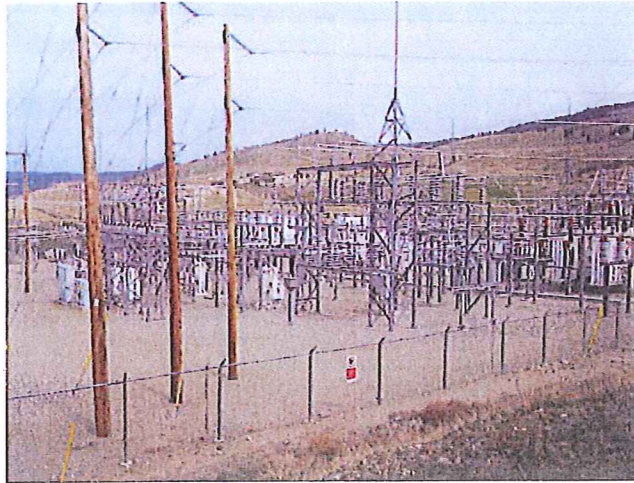


**Subject Site**

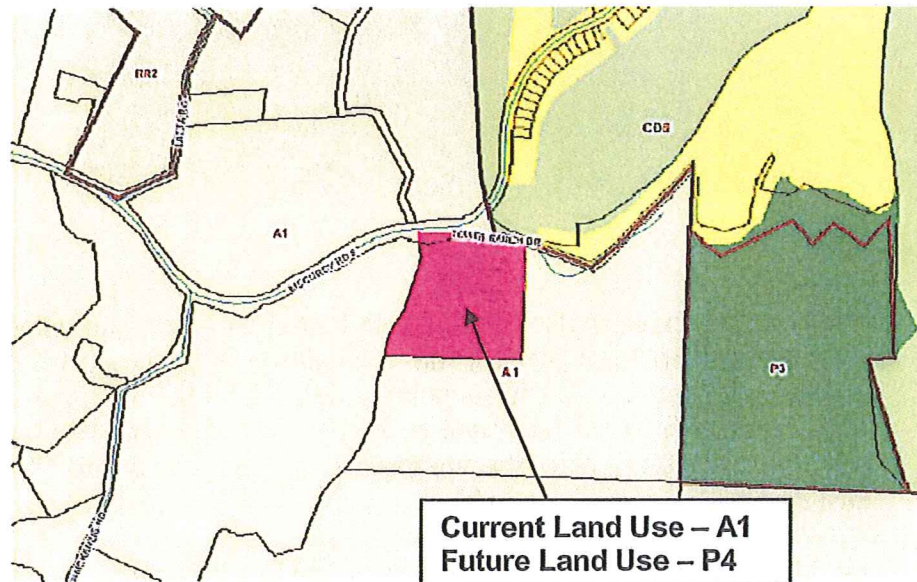
The property under application is a 4.45 ha (11.11 acres) site which is occupied by the existing distribution station, with the balance of the property free of development or use. The surrounding properties are void of development with the exception of a small orchard west of the property. It is possible that cattle have at one point used portions of the site for grazing. The site is partially fenced on the east and south property boundaries.

The station is located at the base of a steep hill and as such, the topography is rolling and steep in sections. Due to the lack of disturbed land, the southern edge of the property is designated as remnant grass in the sensitive ecosystem inventory. Moderate risk for soil erosion also exists and may require landscaping and soil erosion control in areas.

**Figure 3: Photo of Existing Station**



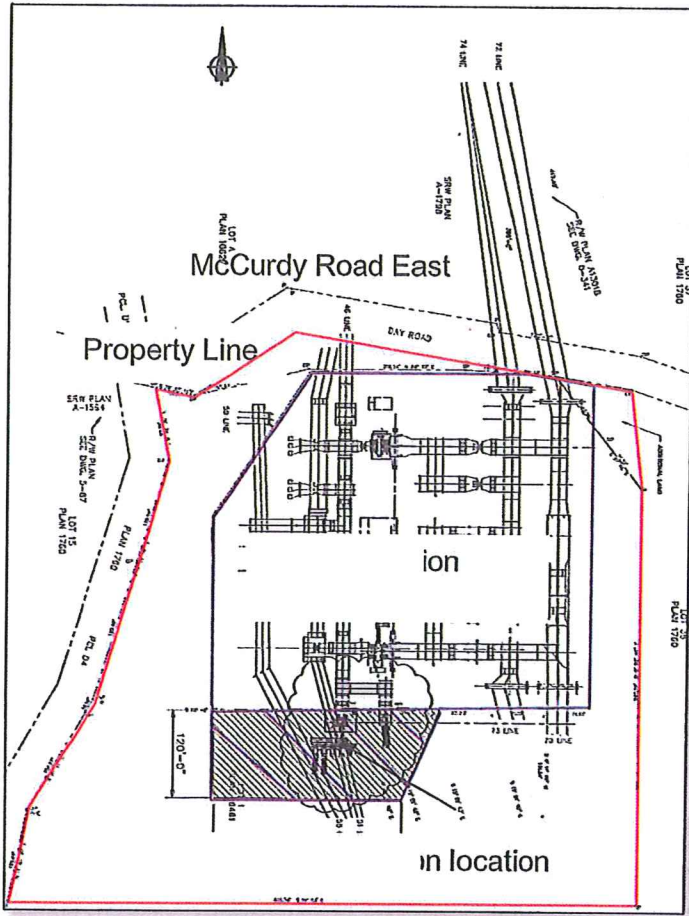
**Figure 4: Current and Future Zoning**



### **Siting Rationale**

As one of two Kelowna stations supplying 138Kv to the entire city on the N-1 transmission circuit, the need to expand the station is imminent. The proposed expansion to the existing station would occur on the south side of the station, contiguous to the existing station. The existing footprint would be approximately 25% larger. The station expansion will not require the entire site, and the balance of the site could be used for agricultural purposes. Please refer to the FortisBC Okanagan Planning Lee Terminal Plan, attached as an appendix for more detail.

### d Expansion Diagram



Expansion Location



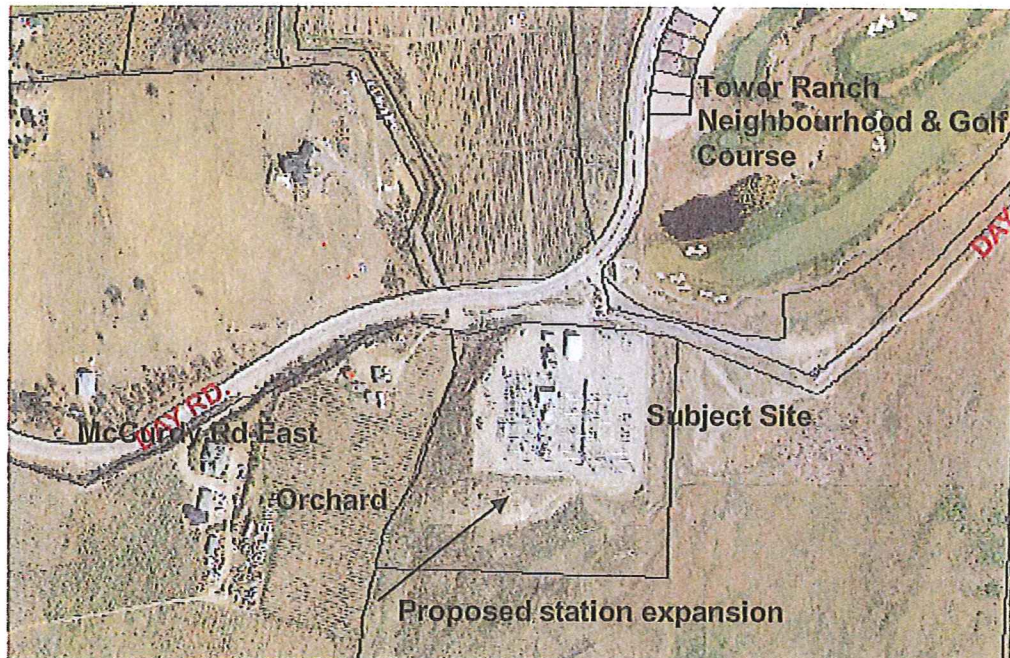
## Agricultural Impacts

The subject site is bordered by existing Agricultural Land to the South, East, West and by McCurdy Road to the North. Across McCurdy Road, a new golf course and residential community, Tower Ranch, is in the process of development. A small creek, Industry Creek, runs past the northern boundary of the site. Mitigation, including landscaping and berming, to prevent soil erosion to the orchard will be included in plans. As required by the City of Kelowna bylaws, a landscape buffer will be built at the time of construction on the subject property between the abutting ALR land and station. The fencing and landscaping requirements will take into consideration the potential for agricultural use and minimize the impact on the adjacent orchard.

## Neighbourhood Impacts

To the Northeast of the station, a new golf course community, Tower Ranch, is in the development process. A number of homes have been constructed with an additional 600 single family homes planned for the future. Given that the proposal is to expand the existing station, the neighbourhood impact is less severe than planning a new station on a new site in a fully developed community.

**Figure 7: Neighbourhood Context**



## *Visual Impact*

The planned station expansion will be situated on the south side of the station and further away from the Tower Ranch neighbourhood and golf course, which will minimize the visual impact as the addition will blend into the existing station. Additionally, the size of the planned station expansion is much smaller than the

current footprint and will therefore not make a significant visual impact when added onto the back of the existing station.

Landscaping, berming and fencing at the time of construction will also enhance the visual appeal of the station and help to minimize the visual impact. Proper zoning of the site to Public Utility will benefit the community through the inclusion of necessary berms and landscaping.

### *Public Input*

The ALR Non-Farm Use application is the first step in procuring the necessary approvals to expand the station. Following a successful resolution by the ALC, FortisBC will make a re-zoning application with the City of Kelowna. The public will have the opportunity to provide feedback and comments through the re-zoning process, in particular at the Public Hearing. Additionally, a thorough consultation process is required as part of the BCUC application process and the existing community will have the opportunity to comment and provide feedback. FortisBC will seriously consider the feedback and take reasonable measures to minimize the impact to the community of expanding the station.

### *Noise and Pollution Levels*

Once built, FortisBC does not anticipate any noise, congestion or dust related to the operation of the station.

Noise from a station can be characterized as a low hum as a result of the transformer operation. No sounds are likely to be detected from the residence closest to the site.

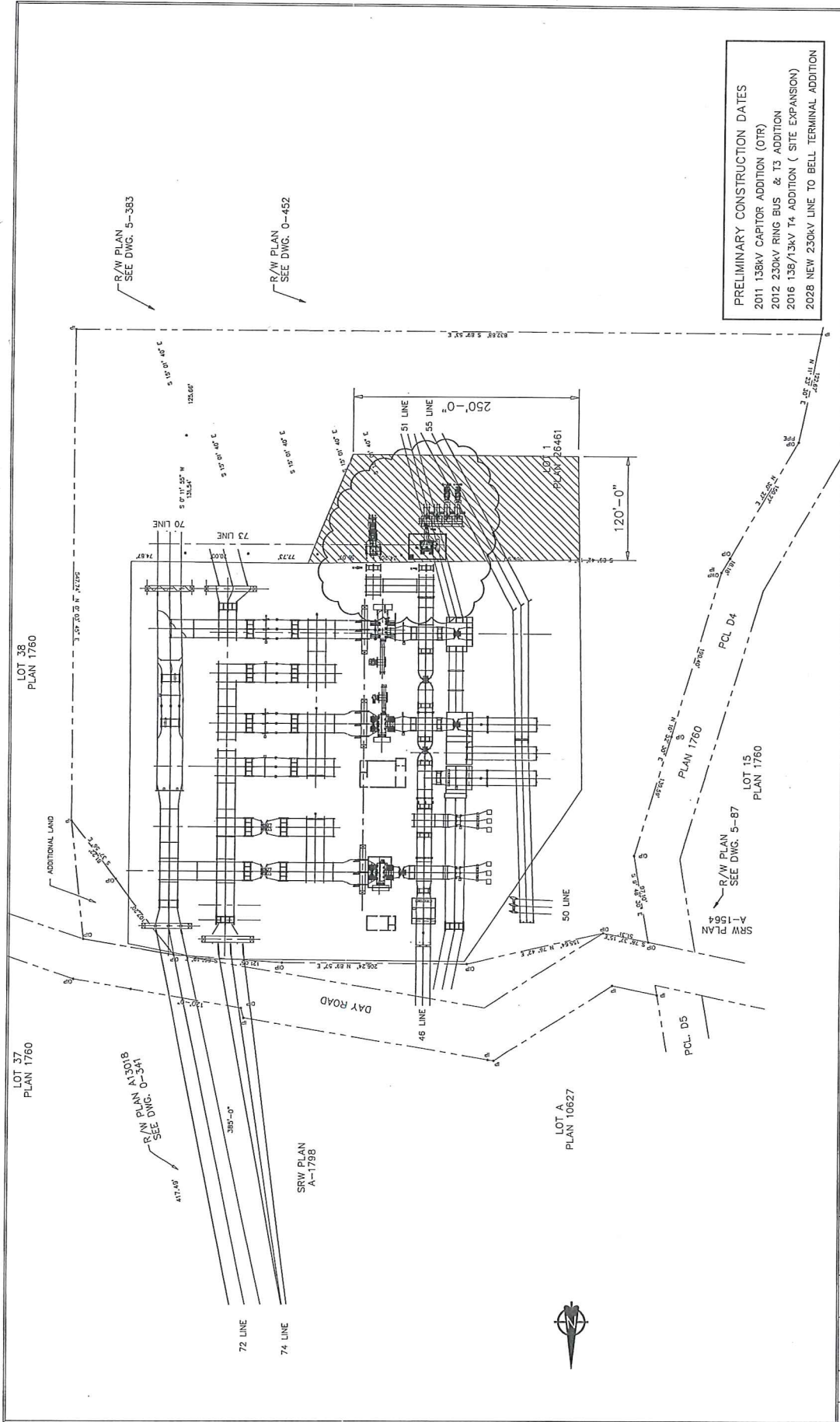
Access to the station will be from the existing access point off McCurdy Road East. Once the station is in operation, FortisBC expects minimal traffic to and from the site. Maintenance visits are expected to occur approximately once a month.

## **Summary**

In anticipation of increased demand over the 20-30 year period, expansion to the Lee Station will allow FortisBC to continue providing service to the Kelowna and Rutland area. A Non-Farm Use approval is the first step in procuring the necessary zoning and BCUC approvals to add a transformer addition to the existing Lee Station to continue to service the Kelowna area.

The current station has been in operation for over fifty years and pre-dates the inception of the ALR, while also being forecasted as future Utility use in the Official Community Plan.

FortisBC plans to minimize the impact on the agriculture and surrounding neighbourhood through mitigation measures. Also, an agreement allowing agricultural use on the unused remaining portion of the land is possible and will serve to minimize the impact on agriculture.



PRELIMINARY CONSTRUCTION DATES  
 2011 138KV CAPITOR ADDITION (OTR)  
 2012 230KV RING BUS & T3 ADDITION  
 2016 138/13KV T4 ADDITION ( SITE EXPANSION)  
 2028 NEW 230KV LINE TO BELL TERMINAL ADDITION

REVISIONS		REV	DATE	BY	CHECKED	DESCRIPTION	REV.	APPR.	DATE
4									
3									
2									
1									

DRAWN BY	DESIGNED BY	CHECKED BY	APPROVED BY

REV	DATE	DESCRIPTION
0		



OKANAGAN PLANNING  
 LEE TERMINAL - 2016  
 ULTIMATE SITE PLAN C/W EXTENSION  
 DRAWING NUMBER  
 PLN11-1001-GA2