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September 24, 2008

Via Email
Original via mail

Ms. Erica M. Hamilton
Commission Secretary
BC Utilities Commission
Sixth Floor, 900 Howe Street, Box 250
Vancouver, BC V6Z 2N3

Dear Ms. Hamilton:

Re: An Application for a Certificate of Public Convenience and Necessity for the Benvoulin Substation Project

Please find enclosed for filing 20 copies of FortisBC Inc.'s Application for a Certificate of Public Convenience and Necessity for the Benvoulin Substation Project pursuant to Sections 45 and 46 of the Utilities Commission Act.

Sincerely,

Dennis Swanson
Director, Regulatory Affairs

AN APPLICATION FOR A

CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY

BENVOULIN SUBSTATION PROJECT

September 24, 2008

FORTISBC INC.

TABLE OF CONTENTS

EXECUTIVE SUMMARY

The central/south Kelowna area bounded by Highway 97/Harvey Avenue to the north, Highway 33 to the east, KLO Road/McCulloch Road to the south and Lakeshore Road to the west is served primarily by two substations. These are the Hollywood Substation, which is located in the east near the intersection of Hollywood Road and Springfield Road, and the OK Mission Substation which is located at the intersection of Lakeshore Road and Richter Street. The DG Bell Terminal station in upper Mission currently serves south Kelowna, however, in cases of emergency it receives some backup from the OK Mission feeders.

FortisBC's 2005 System Development Plan (2005 SDP) identified a need to add capacity in the central Kelowna area. To meet this need, an additional transformer was planned in the existing Hollywood Substation for the year 2008, the existing OK Mission Substation was to receive a third transformer in year 2011, and a new substation was planned in south Kelowna in 2010/11. Distribution load in the Hollywood Substation area is increasing rapidly due to commercial developments and high density housing projects primarily along the Highway 97 and Highway 33 corridors.

In the Braeloch area, in the southern region of the City of Kelowna, distribution load is also growing very rapidly. There are five developments in this area planned for the next 10-15 years. As of 2007, 1,300 of a potential 7,500 units had been completed in this area which will add approximately 1.8 MVA of load to the DG Bell Terminal station per year for the next 10 to 15 years. The subject of this Application, the Benvoulin Substation, will provide distribution support for the area and will provide back-up support to adjacent substations.

The load in the central and south Kelowna area is expected to increase by 2-3 MVA in each of the 10 years.

The proposed Benvoulin Substation will support the south/central Kelowna area growth and alleviate the need for the individual substation capacity upgrades mentioned above. The new station will initially include a single 32 MVA transformer with 4 feeder

terminations to connect the station to the central and south Kelowna areas. One feeder will support the Hollywood Substation, one feeder will support both the OK Mission and Hollywood substations, one will support the OK Mission Substation and one will support the DG Bell Terminal station.

The Benvoulin Substation Project is required to:

1. Increase the capacity of the Lower Mission region of Kelowna's distribution system due to a rise in demand attributed to growth in both residential and commercial development;

2. Provide capacity relief for Hollywood Substation which is approaching its limit;

3. Address similar capacity relief for the OK Mission Substation which is approaching its capacity; and

4. Provide backup for customers in the southern region of Kelowna primarily served by DG Bell Terminal station.

In order to meet the load growth, capacity requirements and backup supply planning criteria for this region, two alternatives were considered. These were: a rebuild of the existing Hollywood Substation and OK Mission Substation (Alternative 1); and a new substation in the lower Mission area of Kelowna (Alternative 2).

FortisBC is proposing Alternative 2 as the preferred solution, as it is the lowest cost, provides both capacity and reliability backup through the planning horizon, is the only solution that satisfies all of the four primary needs identified above and is best able to balance the needs of stakeholders. Alternative 2 has an estimated capital cost of approximately $17.7 million and includes the construction of a new substation and the transmission and distribution egress necessary to connect the substation into the existing network. This is described in detail in Section 4 - Project Description.

While Alternative 1 can meet the capacity requirement, it cannot meet the backup requirements for the loads served by DG Bell Terminal station. Alternative 1 is also

more expensive than Alternative 2 as it would require additional distribution lines and substantial reworking within the substations. In contrast, Alternative 2 requires a less extensive rebuild of the existing distribution system and includes 1.6 kilometres of underground distribution infrastructure. A detailed description of the alternatives considered for this Project and their comparative analysis can be found in Section 8 of this Application.

For Alternative 2, there were seventeen sites considered for the substation location. Two sites were ultimately considered and further engineering analysis was completed on these two locations. A location designated as Site 2 was identified near the intersection of Benvoulin and Casorso Roads as a possible location for the substation. As a result of community feedback following two public information sessions, subsequent discussions were held with community members that resulted in FortisBC's review of locations along Casorso Road, southeast of the intersection with Swamp Road. The proposed site for the Benvoulin Substation is identified in this Application as the former Gravel Pit Site – Site 7. Site 2, while still viable, ranks below the preferred Site 7. Both Site 7 and Site 2 are within the Agricultural Land Reserve ("ALR"). The preferred site is private property and meets the criteria of proximity to both the existing transmission and distribution systems and placement in relation to the other area substations. Several key advantages should be noted that make Site 7 the most cost effective long term solution:

- Less in-service schedule risk and associated cost risk;
- Greater public support;
- Higher likelihood of land zoning changes with both the City of Kelowna and the Agricultural Land Commission ("ALC"); and
- Technical superiority.

Site selection is discussed in detail in Section 5 of the Application. The location of the substation will allow for load to be transferred from both the Hollywood and OK Mission

substations, allow for back up capacity at DG Bell Terminal station, and provide the necessary distribution capacity for both the present and projected future load growth in all areas.

1. THE APPLICATION

FortisBC hereby applies to the British Columbia Utilities Commission, (the "Commission") pursuant to Sections 45 and 46 of the Utilities Commission Act, for a Certificate of Public Convenience and Necessity (the "Application") for the Benvoulin Substation Project (the "Project") at a cost of approximately $17.7 million.

This Project is required to accommodate load growth and meet back-up criteria in the central/south Kelowna area.

The Project consists of a new 138/13 kV, 32 MVA distribution source substation in Kelowna on Casorso Road, southeast of the intersection of Swamp Road and Casorso Road. The substation will be the called the Benvoulin Substation.

2. THE APPLICANT

2.1 Name, Address, and Nature of Business

FortisBC Inc.

1975 Springfield Road, Suite 100

Kelowna, BC V1Y 7V7

FortisBC is an investor-owned, integrated utility engaged in the business of generation, transmission, distribution and sale of electricity in the southern interior of British Columbia. The Company serves more than 155,000 customers directly and indirectly, and employs approximately 570 full time and part time people. FortisBC was incorporated in 1897 and is regulated under the Utilities Commission Act of British Columbia.

2.2 Financial and Technical Capacity

FortisBC owns assets of approximately $850 million, including four hydroelectric generating plants with a combined capacity of 223 megawatts and approximately 6,850 circuit kilometres of transmission and distribution power lines for the

delivery of electricity to major load centers and customers in its service area. FortisBC has been engaged in the construction and operation of facilities of the type described in this Application since its inception in 1897.

2.3 Proposed Regulatory Process

FortisBC proposes a Written Public Hearing for the review of the Benvoulin Substation Project. The public consultation process, which is described in detail in section 5.5 of this Application, has included three public Open House sessions in the area of the proposed substation and as stated on page 44, the Company has not been made aware of any opposition to its proposed site. All aspects of this Application, in FortisBC's view, can effectively be reviewed through a written process.

The following Regulatory Timetable is proposed.

BCUC Information Request No. 1	October 8
Response to BCUC Information Request No. 1	October 29
BCUC IR2 and Intervenor IR1	November 5
Response to BCUC IR2 and Intervenor IR1	November 26
FortisBC Final Submission	December 5
Intervenor Final Submission	December 12
FortisBC Reply Submission	December 19

A draft Order approving the Project is attached as Appendix A.

2.4 Contact Person

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3. PROJECT NEED

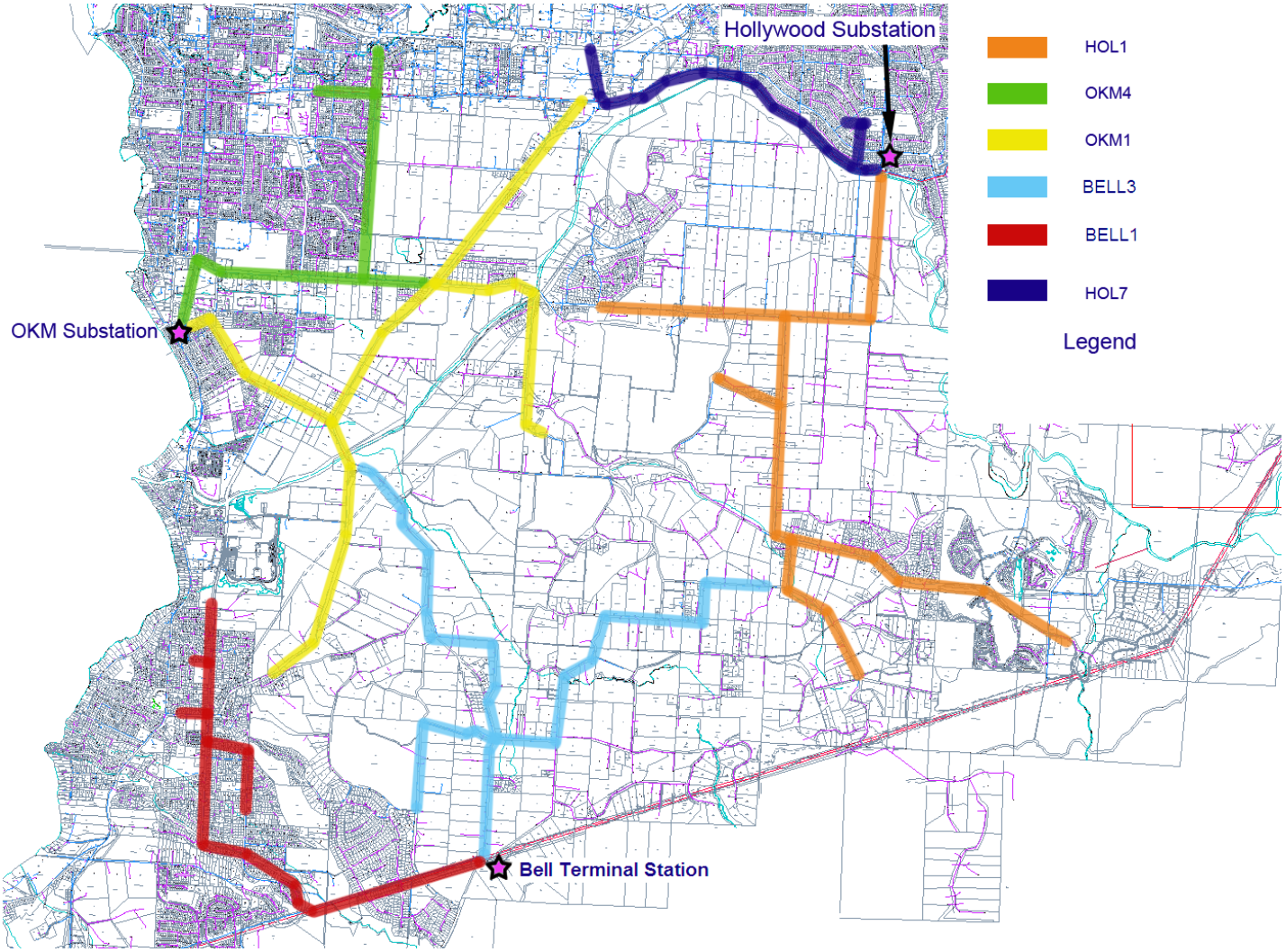
The need for a new substation in the south/central area of Kelowna is driven by increasing demand, which in this area, peaks in the summer. The growing load in the Kelowna area would have overloaded the transformers (summer load rating of 28 MVA) at Hollywood Substation in the summer of 2008; however, through the transfer of approximately 2.7 MVA of distribution load to the Glenmore Substation over the next two years, this overload condition will now materialize in 2010. The OK Mission Substation will also become overloaded in 2010. The ability to backup DG Bell Terminal station is currently 55 percent, below the FortisBC minimum requirement of 80 percent. As load growth continues in this region, the ability to provide backup capacity will decrease. Both of these topics are covered in greater detail in this section.

3.1 Description of the Existing System

The south/central Kelowna area bounded by Highway 97/Harvey Avenue to the north, Highway 33 to the east, KLO Road/McCulloch Road to the south and Lakeshore Road to the west is served primarily by two substations. These are the Hollywood Substation, which is located in the east near the intersection of Hollywood Road and Springfield Road, and the OK Mission Substation which is located at the intersection of Lakeshore Road and Richter Street. The DG Bell Terminal station in upper Mission currently serves south Kelowna; however, in cases of emergency it receives some backup from the OK Mission feeders.

Diagram 3.1 below shows the existing distribution system with the associated feeders from DG Bell Terminal station, Hollywood Substation and OK Mission Substation.

Diagram 3.1 - Existing Distribution Feeders



3.1.1 Hollywood Substation

The Hollywood Substation consists of Transformer 1 and Transformer 3 with individual winter peak capacities of 31.8 MVA and 32 MVA respectively, and a summer peak capacity of 28 MVA for both. Parallel operation of the transformers is not possible as this substation is not equipped with fault limiting reactors. It is not possible to install reactors at this site due to physical constraints. Without parallel operation, loads cannot be allocated proportionately to each unit, limiting the real capacity of the substation to a maximum summer load of 28 MVA for each transformer. The 2007 summer peaks on the transformers were 20.8 MVA and 27.3 MVA respectively, with the difference in loading due to the configuration of the substation which prevents the two transformers from operating in parallel. Based on the current forecast for the distribution feeders serving this area, the peak load will reach the summer capacity of Transformer 3 in the summer of 2008 (see Table 3.1.1 below). This summer peak will be reduced for 2 years by moving a total of 2.7 MVA load from Hollywood Feeder 7 onto Glenmore Feeder 2.

Table 3.1.1 - Central/South Kelowna Transformer Loadings (Current Configuration)

Name	Transformer	MVA	Winter/ Summer	2006/07 MVA	2007/08 MVA	2008/09 MVA	2009/10 MVA	2010/11 MVA	2011/12 MVA	2012/13 MVA	2013/14 MVA	2014/15 MVA	2015/16 MVA	2016/17 MVA	2017/18 MVA	2018/19 MVA	2019/20 MVA
Hollywood	T1	28	Summer	20.05	20.75	22.09	23.02	23.74	24.47	25.19	26.86	27.26	27.67	28.08	28.50	28.93	29.37
Hollywood	T1	31.8	Winter	24.67	27.90	27.14	28.90	29.77	30.63	31.49	33.33	33.83	34.33	34.85	35.37	35.90	36.44
Hollywood	T3	28	Summer	25.97	27.34	28.18	29.97	30.76	30.52	31.28	32.13	32.62	33.11	33.60	34.11	34.62	35.14
Hollywood	T3	32	Winter	23.48	26.47	28.77	30.35	31.05	31.75	32.46	33.34	33.84	34.35	34.86	35.39	35.92	36.46
OK Mission	T1	28	Summer	23.36	22.41	23.23	27.60	28.33	30.66	31.42	32.53	33.15	33.78	34.42	35.08	35.74	36.42
OK Mission	T1	31.5	Winter	25.93	25.41	26.30	30.37	31.19	33.79	34.65	35.87	36.56	37.25	37.96	38.68	39.41	40.16
OK Mission	T2	28	Summer	13.57	13.11	17.08	17.53	17.97	18.42	18.87	19.50	19.84	20.19	20.54	20.90	21.26	21.64
OK Mission	T2	32	Winter	13.75	11.87	19.33	19.89	20.45	21.01	21.57	22.28	22.67	23.07	23.47	23.89	24.30	24.73
DG Bell	T1	28	Summer	17.42	19.77	15.77	18.87	20.65	22.43	24.21	26.00	27.07	28.18	29.33	30.53	31.79	33.09
DG Bell	T1	32	Winter	19.77	19.64	18.56	21.67	23.42	25.16	26.91	28.89	30.08	31.31	32.59	33.93	35.32	36.77
Total Summer				**100.38**	**103.38**	**106.34**	**117.00**	**121.45**	**126.50**	**130.97**	**137.02**	**139.93**	**142.92**	**145.98**	**149.12**	**152.34**	**155.65**
Total Winter				**107.60**	**111.29**	**120.11**	**131.19**	**135.88**	**142.34**	**147.07**	**153.72**	**156.97**	**160.31**	**163.74**	**167.25**	**170.86**	**174.56**

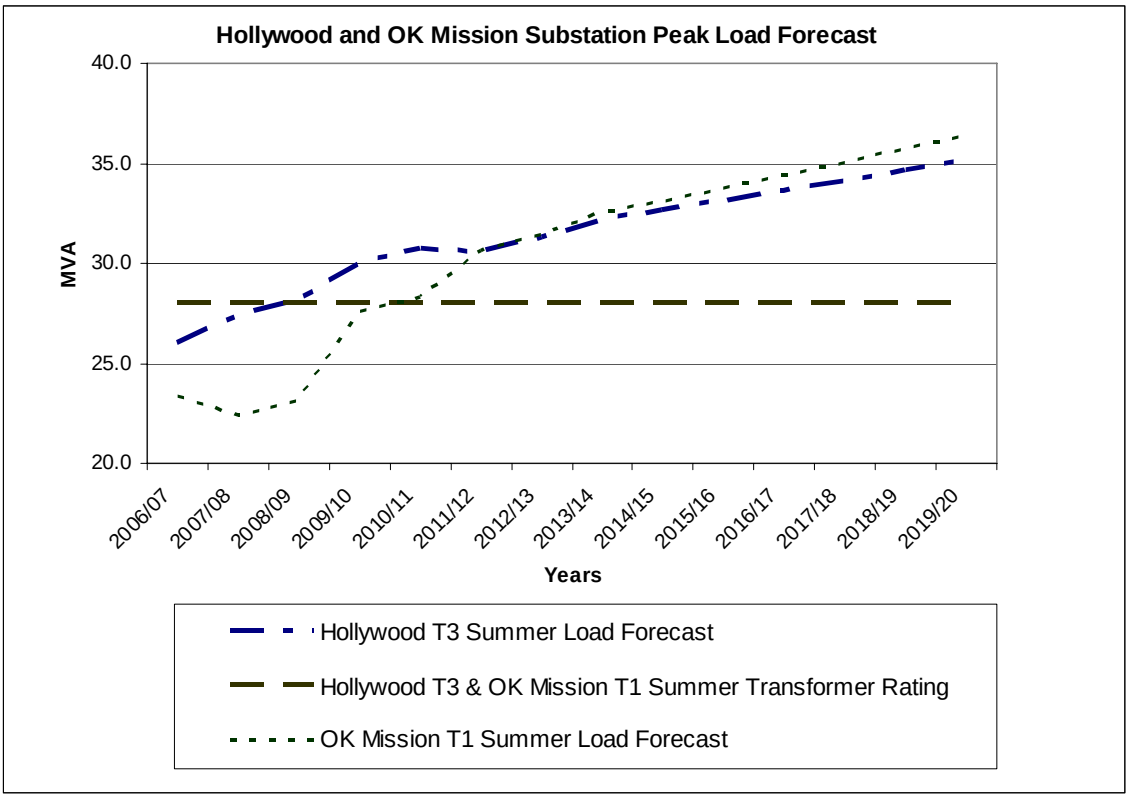
3.1.2 OK Mission Substation

The OK Mission Substation consists of Transformer 1 and Transformer 2 with individual winter peak capacities of 31.5 MVA and 32 MVA respectively and summer peak capacity of 28 MVA for each. The 2007 summer peaks on the transformers were 22.4 MVA and 13.1 MVA respectively, with the difference in loading due to the configuration of the substation which prevents the two transformers from operating in parallel. Based on the current forecast for the distribution feeders serving this area, the peak load will reach the summer capacity of Transformer 2 in the summer of 2010 (see Table 3.1.1 above).

As with the Hollywood Substation, the installation of fault limiting reactors is physically not possible preventing the transformers at this substation from being operated in parallel.

As can be seen in Table 3.1.1 above, the peak load for the area served by the OK Mission Substation is forecast to exceed the summer capacity of Transformer 1 in 2010 and the winter capacity in 2011/12. The most critical transformer anticipated loadings are highlighted in Figure 3.1.2 below. It shows that the summer peak on Hollywood Transformer 3 will exceed nameplate capacity in 2008/09 and the summer peak capacity of OK Mission will be exceeded in 2010/11.

Figure 3.1.2 - OK Mission and Hollywood Capacity versus Load



Note: As discussed in section 3.1.1 above, 2.7 MVA of the Hollywood Transformer 3 load can be shifted onto the Glenmore Substation until an alternate solution is implemented.

Several distribution projects have been completed during the past few years which accommodated some load transfer from the Hollywood Substation to the OK Mission Substation, however due to the location of the load growth and the distances from the substation, further projects of this nature are not practical.

3.2 Area Development

As with most areas in the City of Kelowna, the central/south area is experiencing customer growth, resulting in increased load at the substations supplying the area. Distribution load in these areas is increasing primarily due to commercial development and high density housing. Table 3.2a below provides a listing of developments either under construction or currently proposed that FortisBC is aware of through discussions with City of Kelowna planners and developers. Figure 3.2a shows the geographic location of developments in relation to the Hollywood Substation and Figure 3.2b shows the location of developments in relation to OK Mission Substation and DG Bell Terminal station.

Table 3.2a - Expected Additional Load 2008-2020

PROJECT BASIS NEW LOAD INFORMATION AS ON JULY 2008	YEARLY LOAD GROWTH FOR NEW PROJECTS (KVA)														NEW LOAD TO BE SERVED BY (PRESENT CONFIGURATION)		
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	>2020	HOLLYWOOD	OK MISSION	DG BELL
Mission Sports/Pool	1000		500													Feeder 3	
Cedar Creek Water Pumps	700					1400								400			Feeder 2
Kettle Valley Water Treatment	600					600								200			Feeder 3
Stellar Booster Pumps	400					1100					500			400			Feeder 2
Marshall Feedlot - Commercial	1500	1500	1500	1500											Feeder 4*		
4-5 MFU's / Pandosy Area	1000	1000	1000	1000												Various	
1 MFU / Rutland Commercial Area	700														Feeder 3		
Playa Del Sol	1000	1500														Feeder 3	
Rutland Commercial			500	500	500	500	500	500							Feeder 3		
Pandosy Commercial		250	250	250	250	250										Feeder 5	
Mission Creek Towers		250	250												Feeder 2		
Icon Tower (Tapestry)		750	750												Feeder 7		
New Wastewater Treatment Facility														6000		Feeder 4	
South Mission - Residential	1612	1612	1612	1612	1612	1612	1612	1612	1612	1612	1612	1612	1612	17650			Feeder 2/3
Lower Mission - Residential	227	227	227	227	227	227	227	227	227	227	227	227	227				Feeder 1
SE Mission - Residential	167.9	167.9	167.9	167.9	167.9	167.9	167.9	167.9	167.9	167.9	167.9	167.9	167.9				Feeder 1/2
Pandosy Area - Residential	149	149	149	149	149	149	149	149	149	149	149	149	149	8047		Feeder 5	
Central Kelowna - Residential	524	524	524	524	524	524	524	524	524	524	524	524	524			Various	
Rutland Area - Residential	558	558	558	558	558	558	558	558	558	558	558	558	558	5103	Various		
Total (kVA)	10138	8488	7988	6488	3988	7088	3738	3738	3238	3238	3738	3238	3238	37800			

*Note: Marshall Feedlot would typically be served from the Sexsmith Substation however Hollywood Feeder 4 is required for backup purposes only

Figure 3.2a Rutland/Central Kelowna Development Locations

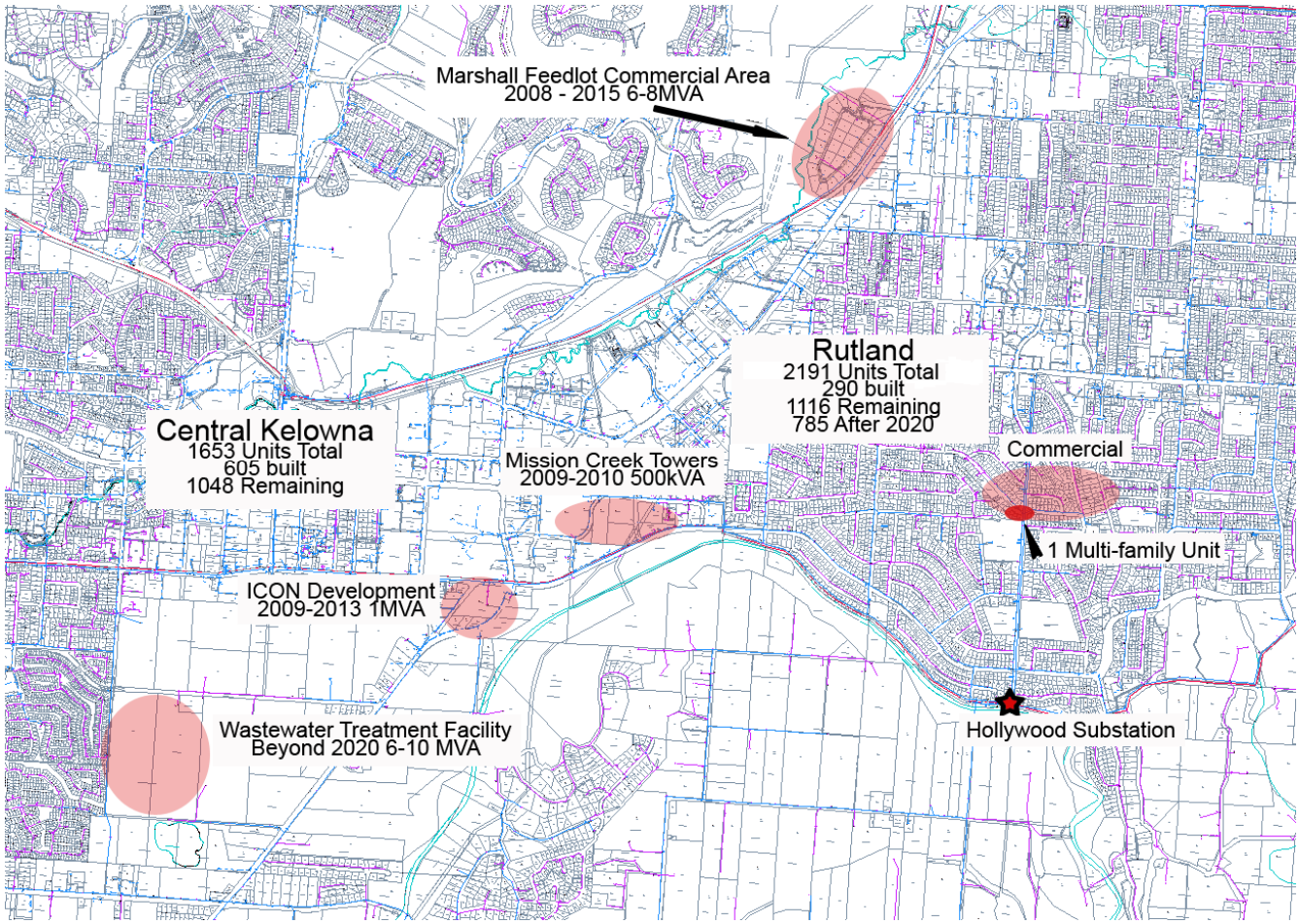


Figure 3.2b - South Kelowna Development Locations

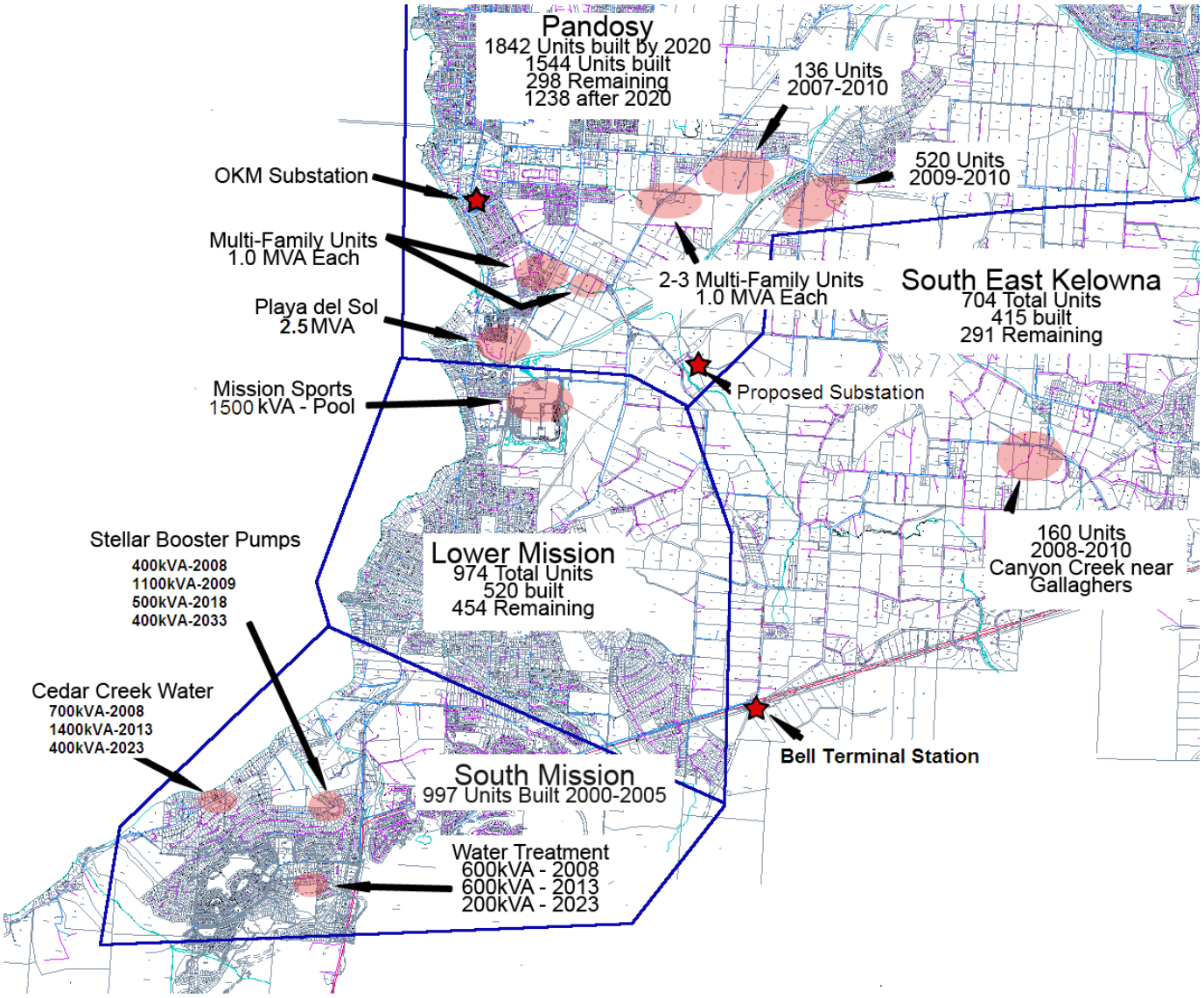
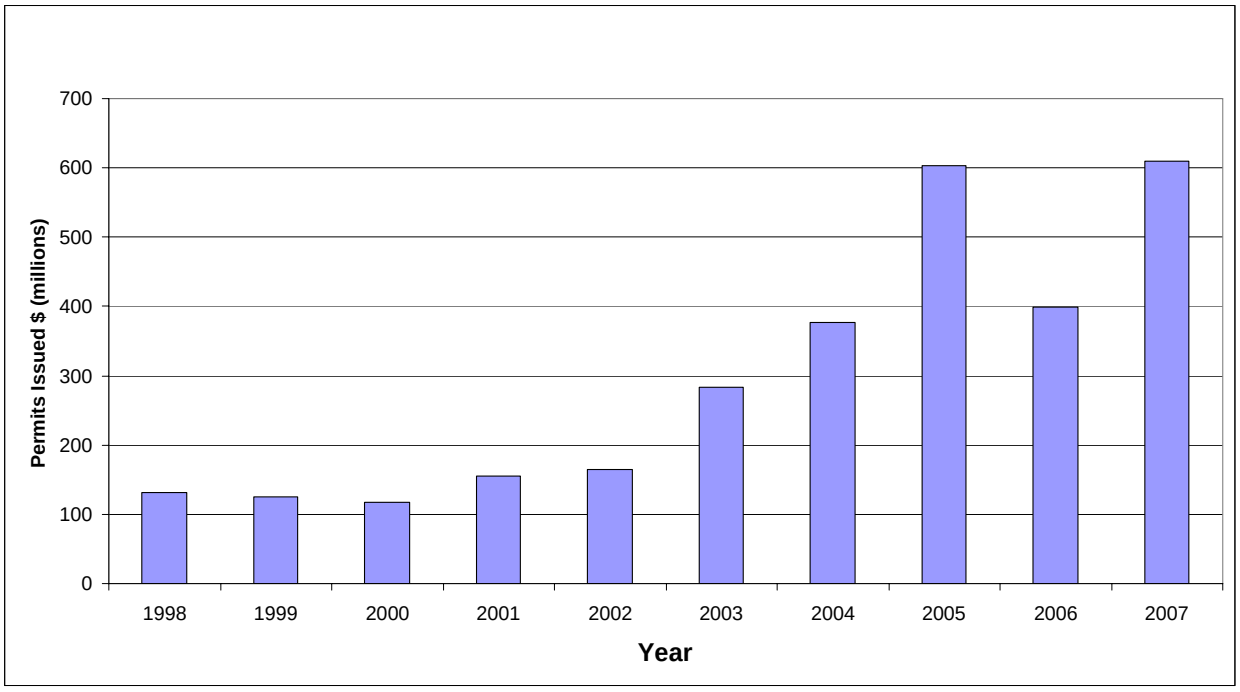


Table 3.2b below shows the historical value of building permits issued in the region served by the substations involved in this project. The trend of steadily increasing activity can be seen clearly in the graphical representation of this data, as shown in Figure 3.2c below.

Table 3.2b - Building Permits Issued ($millions)

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Kelowna	132	125	117	156	165	283	377	604	400	609

Figure 3.2c - Kelowna Total Value of Building Permits Issued 1998-2008



* Source – BC Stats and the City of Kelowna

3.3 Back-Up Planning Criteria

Due to the size and configuration of the existing transformers and the distribution system in the central/south Kelowna area, the Company's backup planning criterion for a single transformer failure is not met. The maximum available backup capacity at either substation is less than 65 percent during peak periods, falling well below the FortisBC Backup Planning Guideline of 100 percent of peak load for a two transformer substation. Please see Appendix C.

A transformer outage in 2005 at the Hollywood Substation revealed that there was a lack of backup when loading was only approximately 80 percent of peak. The continuing growth only exacerbates the potential for unacceptably long outages for over 40 percent of the customers currently fed by the Hollywood Substation.

The DG Bell Terminal station in upper Mission currently serves south Kelowna; however, in cases of emergency it receives some backup from the OK Mission feeders.

The combined capability of the OK Mission and Hollywood substations to provide back up for the DG Bell Terminal station in 2007/08 was only 55 percent.

The system planning criteria of FortisBC was published as part of the 2005 SDP.

3.4 Customers Served

Table 3.4 - Customers by Class

CUSTOMER CLASS	TOTAL
Residential	5,382
General Service and Others	390
Industrial	0
Irrigation	21
TOTAL	**5,793**

4. PROJECT DESCRIPTION

The proposed Benvoulin Substation will support the south/central Kelowna area growth and alleviate the need for multiple individual substation capacity upgrades. The new substation will initially include a single 32 MVA transformer with four feeder terminations. Feeder ties to the station will be constructed in 2010 to connect the substation to the central and south Kelowna areas. One feeder will support the Hollywood Substation, one will support both the Hollywood and OK Mission substations, one will support the OK Mission Substation, and one will support the DG Bell Terminal station.

This project involves the construction of a distribution source substation in the south/central Kelowna area together with a transmission line connected to the existing 138 kV 51 Line and the necessary distribution facilities to tie the substation into the existing distribution network. The project is required to increase distribution capacity in the south/central Kelowna area. This project is planned for 2009/10 and consists of the following project components:

- Acquisition of approximately 5 acres of land;
- New Benvoulin Substation with one 32 MVA distribution transformer, two 138 kV breakers, four 13 kV breakers, attachment structures, mobile transformer connection structures, control building, ground grid/gravel and fencing. Space for the installation of two additional 32 MVA distribution transformers and eight 13 kV feeder breakers for future expansion;
- A short 138 kV transmission line to and from the new substation;
- Four 13 kV distribution egress cables out of the substation and a new 13 kV overhead and underground distribution line to connect to the existing distribution network; and
- Install additional underground ducts for future feeders.

A total estimated expenditure of $17.7 million is required to complete the project.

Table 4.0 below shows the projected loadings of the transformers serving the south/central area of Kelowna after the completion of the Benvoulin Substation Project.

Table 4.0 - Central/South Kelowna Transformer Loadings (Post Project)

Name	Transformer	MVA	Winter/ Summer	2006/07 MVA	2007/08 MVA	2008/09 MVA	2009/10 MVA	2010/11 MVA	2011/12 MVA	2012/13 MVA	2013/14 MVA	2014/15 MVA	2015/16 MVA	2016/17 MVA	2017/18 MVA	2018/19 MVA	2019/20 MVA
Hollywood	T1	28	Summer	20.05	20.75	22.09	23.02	23.74	24.47	25.19	25.86	26.24	26.64	27.04	27.44	27.86	28.27
Hollywood	T1	31.8	Winter	24.67	27.90	27.14	28.90	29.77	30.63	31.49	32.33	32.81	33.30	33.80	34.31	34.82	35.35
Hollywood	T3	28	Summer	25.97	27.34	28.18	29.97	22.39	22.42	23.18	23.81	24.17	24.53	24.90	25.27	25.65	26.04
Hollywood	T3	32	Winter	23.48	26.47	28.77	30.35	24.54	25.25	25.95	26.65	27.05	27.46	27.87	28.29	28.71	29.14
OK Mission	T1	28	Summer	23.36	22.41	23.23	27.60	20.78	21.54	22.30	23.09	23.53	23.98	24.43	24.90	25.37	25.85
OK Mission	T1	31.5	Winter	25.93	25.41	26.30	30.37	23.42	24.29	25.15	26.04	26.53	27.04	27.55	28.07	28.61	29.15
OK Mission	T2	28	Summer	13.57	13.11	17.08	17.53	14.30	14.75	15.19	15.70	15.97	16.25	16.54	16.83	17.12	17.42
OK Mission	T2	32	Winter	13.75	11.87	19.33	19.89	16.70	17.26	17.82	18.41	18.73	19.06	19.39	19.73	20.08	20.43
DG Bell	T1	28	Summer	17.42	19.77	15.77	18.87	14.78	16.38	17.99	19.31	20.10	20.93	21.79	22.68	23.61	24.58
DG Bell	T1	32	Winter	19.77	19.64	18.56	21.67	17.02	18.59	20.16	21.65	22.54	23.46	24.43	25.43	26.47	27.56
Benvoulin	T1	32	Summer	0.00	0.00	0.00	0.00	25.46	26.95	27.12	29.25	29.91	30.59	31.28	32.00	32.73	33.49
Benvoulin	T1	40	Winter	0.00	0.00	0.00	0.00	24.42	26.33	26.50	28.63	29.30	29.99	30.69	31.42	32.16	32.93
Total Summer				**100.38**	**103.38**	**106.34**	**117.00**	**121.45**	**126.50**	**130.97**	**137.02**	**139.93**	**142.92**	**145.98**	**149.12**	**152.34**	**155.65**
Total Winter				**107.60**	**111.29**	**120.11**	**131.19**	**135.88**	**142.34**	**147.07**	**153.72**	**156.97**	**160.31**	**163.74**	**167.25**	**170.86**	**174.56**

Diagram 4.0 below shows the location of the preferred site relative to surrounding geographic features. The topography and vegetation limit the visibility of the site from surrounding properties while still providing FortisBC with access from Casorso Road. The height difference between Casorso Road and the substation base is approximately 23 metres.

Diagram 4.0 - Proposed Substation Site

Diagram 4.0.1 below shows the proposed substation location on a 1 metre contour map. Note the steep slopes on the east and west side of the station location which together with the tree line effectively creates a visual buffer which shields the site from nearby residents and approaching traffic. The topographical depression by itself is in excess of 20 metres below the road with the tallest structure being approximately 10 metres in height.

Diagram 4.0.1 - Proposed Substation Location Contour Map

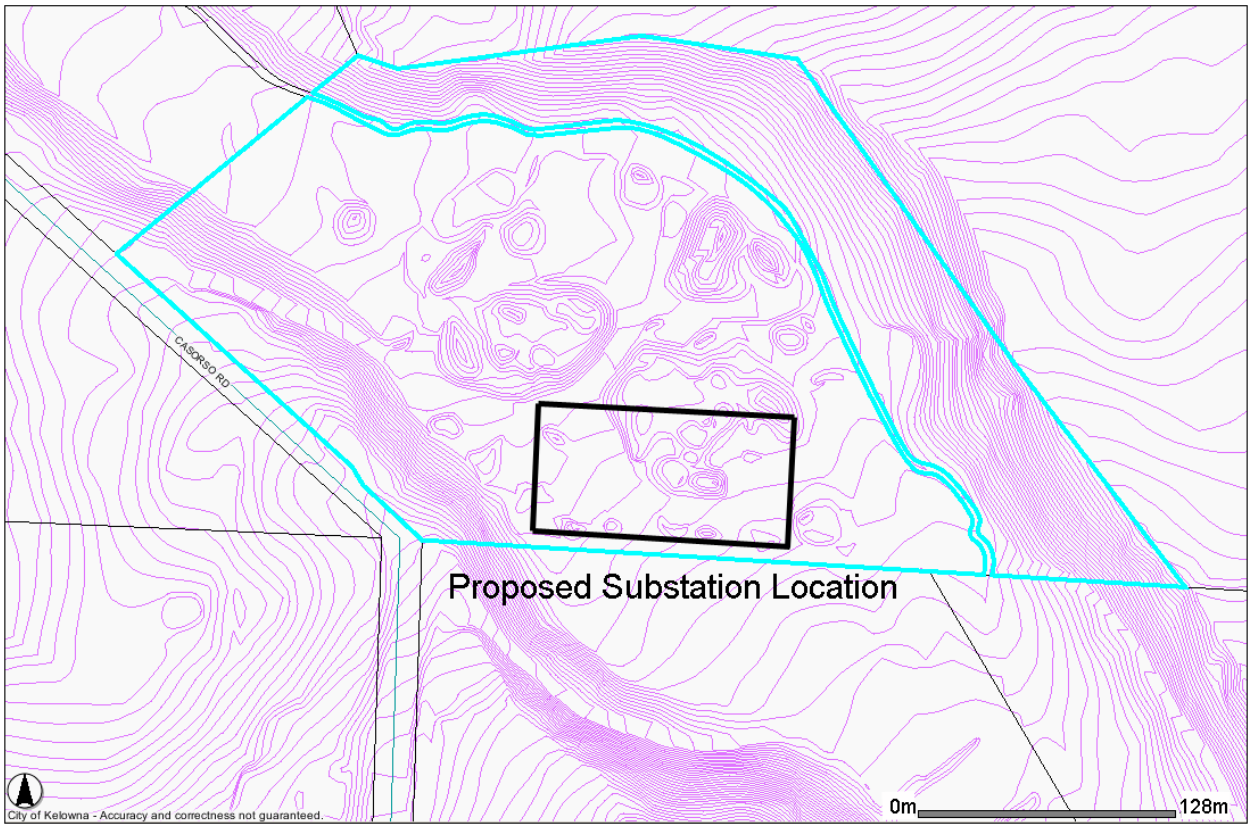
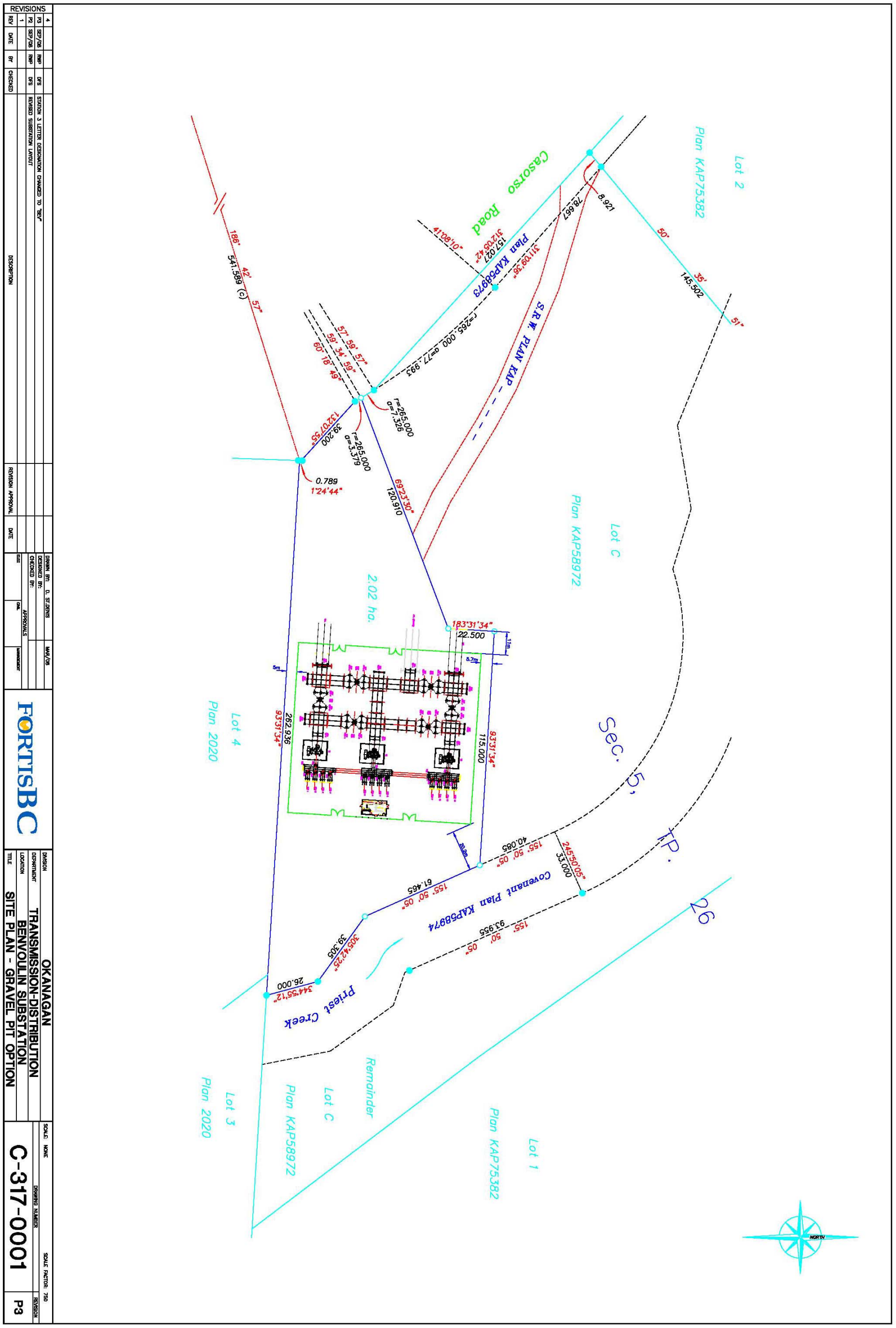


Diagram 4.0.2 below shows the ultimate substation layout within the boundary of the lot shown in Diagram 4.0.

Diagram 4.0.2 - Ultimate Substation Layout



REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION
1	SEP/08	RMP	DFS	REVISED SUBSTATION LAYOUT
P2	SEP/08	RMP	DFS	STATION 3 LETTER DESIGNATION CHANGED TO "BEV"
P3	SEP/08	RMP	DFS	
4				

REVISION APPROVAL	DATE

APPROVALS	
ENG.	
MANAGEMENT	

DRAWN BY: D. ST.DENIS — MAR/08
DESIGNED BY:
CHECKED BY:

FORTISBC

DIVISION: OKANAGAN
DEPARTMENT: TRANSMISSION-DISTRIBUTION
LOCATION: BENVOULIN SUBSTATION
TITLE: SITE PLAN - GRAVEL PIT OPTION

SCALE: NONE — SCALE FACTOR: 750
DRAWING NUMBER: C-317-0001
REVISION: P3

4.1 Engineering Design and Capacity

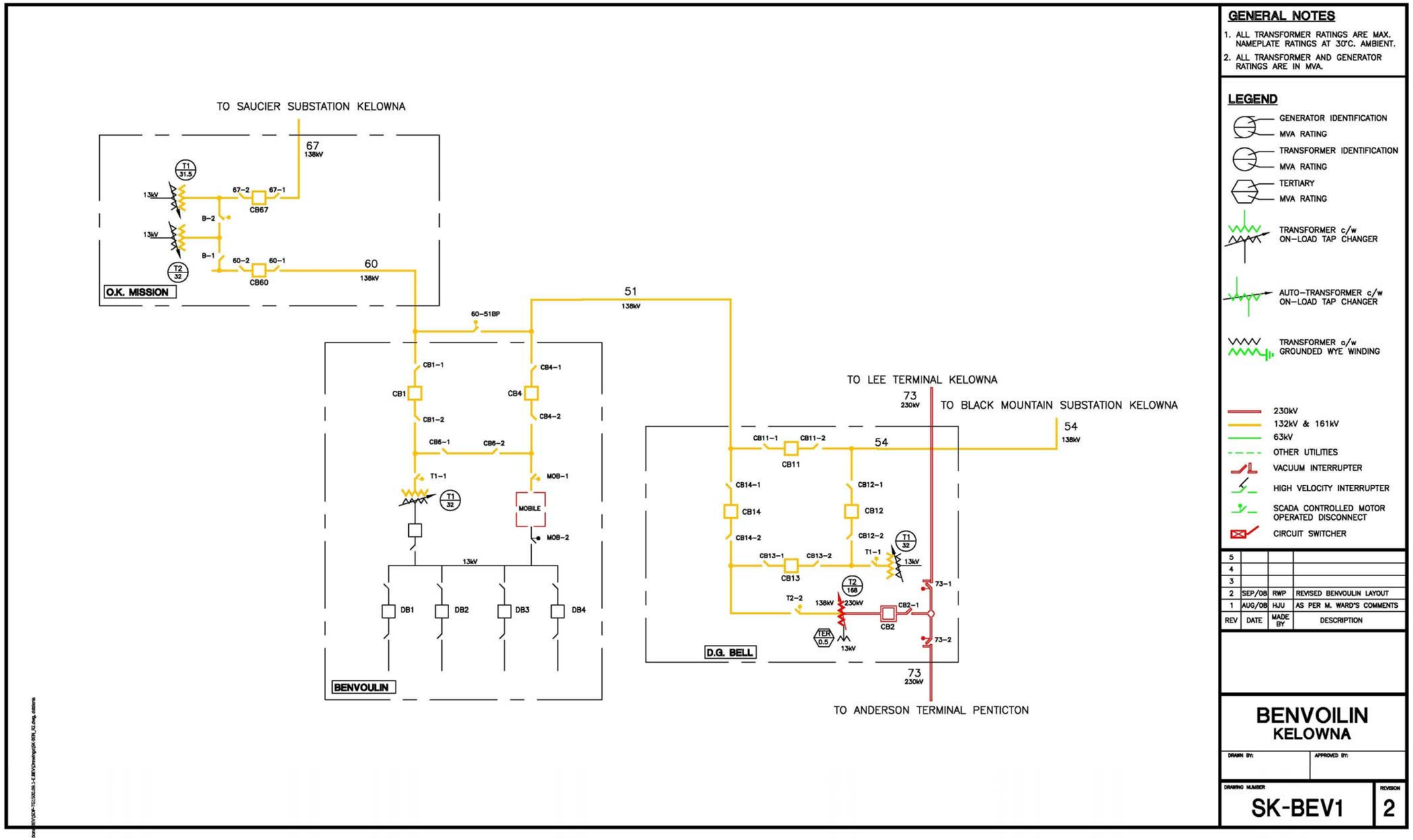
Single line and general arrangement drawings can be found in Appendix B.

Substation

- Installation of a single 138/13 kV, 32 MVA transformer complete with oil On Load Tap Changer (OLTC) with ±10 percent regulation and surge arrestors;
- Installation of two 138 kV, SF6 Dead Tank, 1200A breaker with associated line protection and control;
- Outdoor rated circuit breakers - One main breaker, 15 kV, 2000A, SF6/Vacuum, four feeder breakers, 15 kV, 600A, SF6/Vacuum;
- Mobile transformer access bay with isolation switches.

Figure 4.1 below shows a schematic of the project as proposed including transmission connections to adjacent substations.

Figure 4.1 – Project Schematic



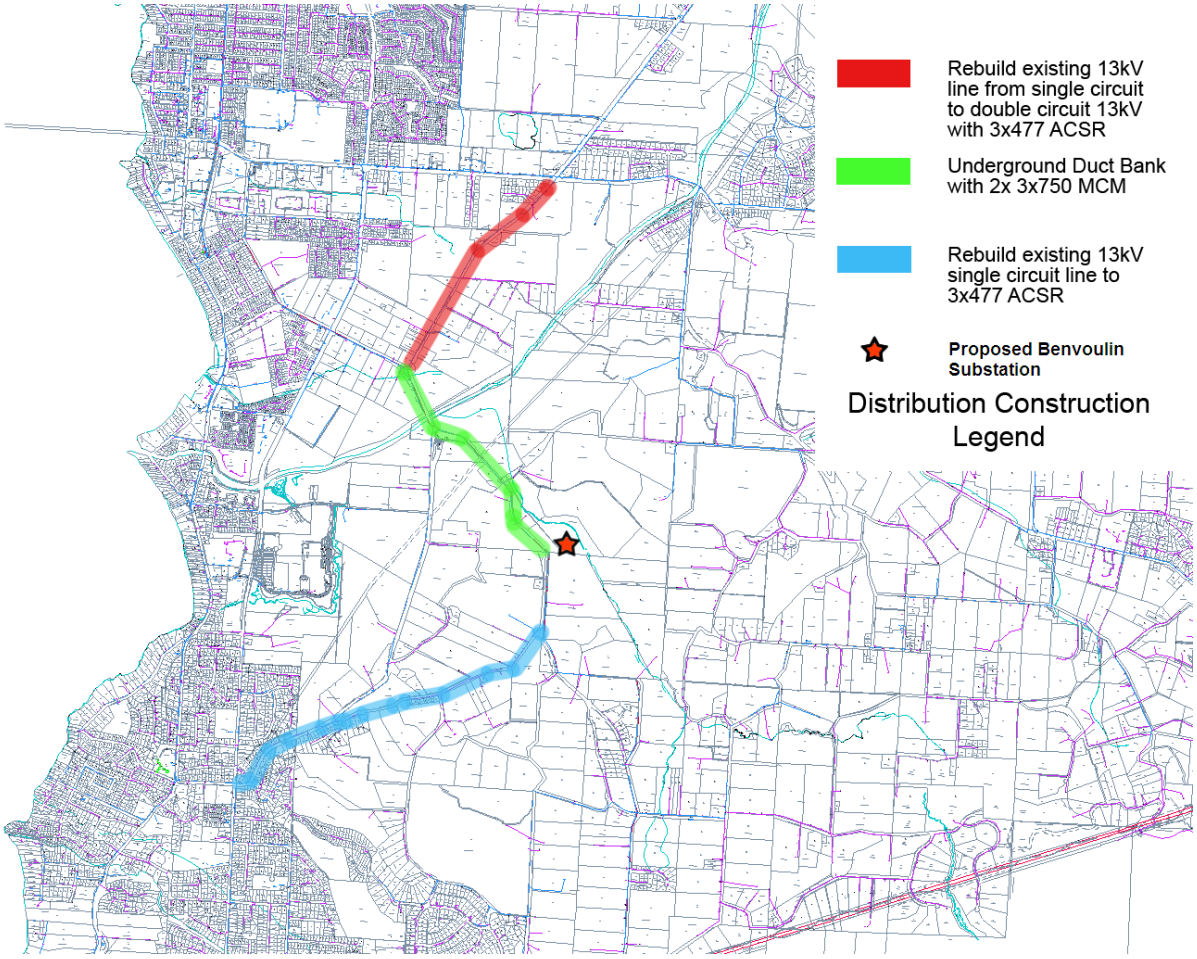
Distribution

The proposed substation will tie into the existing distribution network, with the following additions:

- Installation of six new overhead 13 kV gang operated load break switches (normally open points and tie points between feeders);
- Construction of an underground duct bank approximately 1.6 kilometres in length to accommodate feeders egressing the station and running along Casorso Road which can not accommodate any additional overhead lines;
- Rebuilding of the existing distribution circuit along Benvoulin Road (between Casorso Road and KLO Road) to accommodate a new 13 kV double circuit overhead line (approximately 1.6 kilometres); and
- Rebuilding the existing distribution circuit along DeHart Road between Casorso and Gordon Roads (approximately 2.4 kilometres).

Changes to the existing distribution system are shown in Diagram 4.1.1 below.

Diagram 4.1.1 - Proposed Changes to Existing 13 kV Distribution System

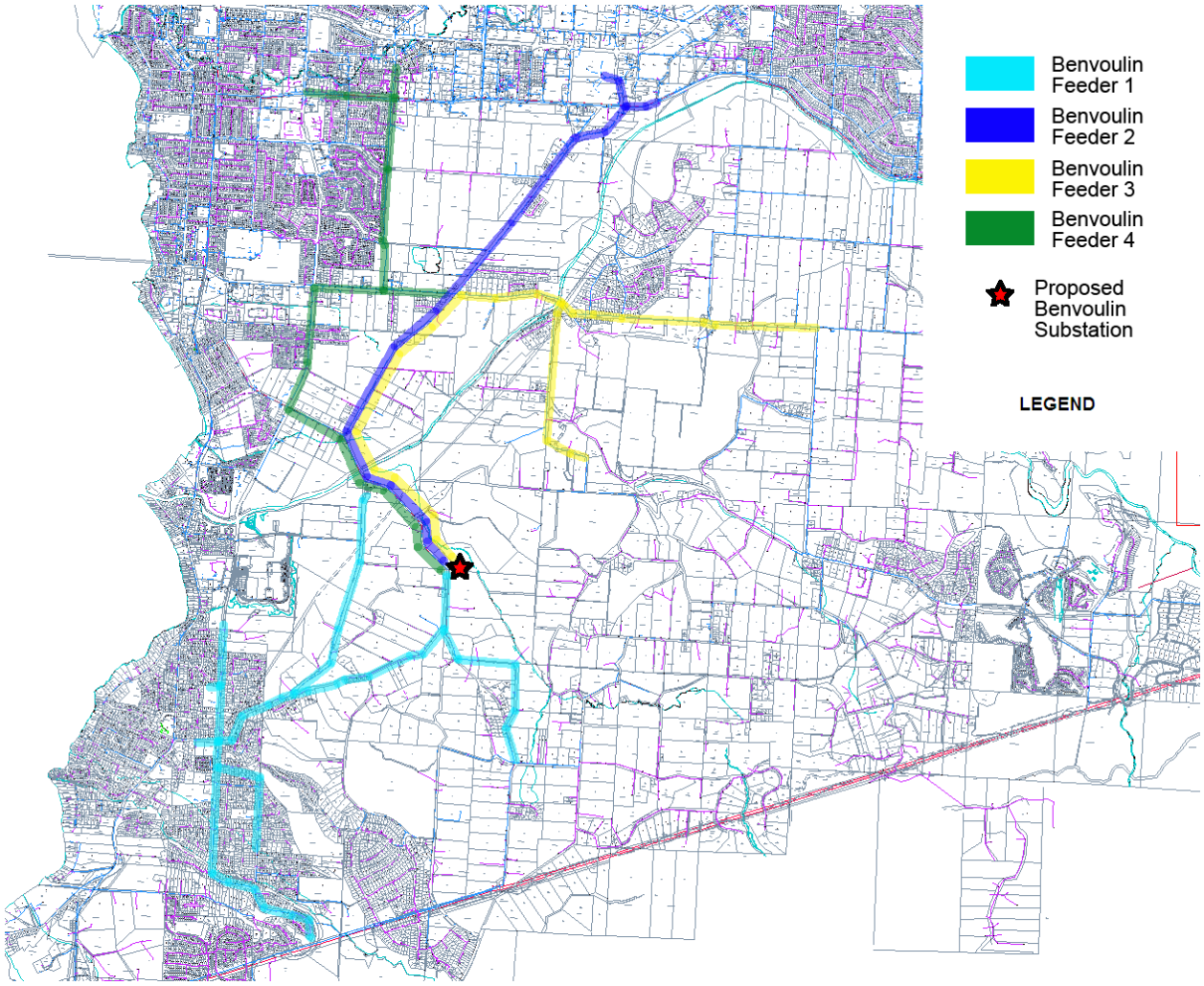


The proposed feeder alignment would be as follows:

- Feeder 1: South on Casorso Road heading west on DeHart Road and north and south on Gordon Road;
- Feeder 2: North on Casorso and Benvoulin Roads terminating at Springfield Road;
- Feeder 3: North on Casorso and Benvoulin Roads and then heading east on KLO Road; and
- Feeder 4: North on Casorso Road, heading up Gordon then east onto KLO Road and then north on Burtch Road with a small section heading west on Springfield Road.

These feeder alignments are shown in the following Diagram 4.1.2.

Diagram 4.1.2 - Proposed 13 kV Distribution Schematic



4.2 Public Works/ Infrastructure

The Project does not impact any known public works or existing infrastructure, other than those owned and operated by FortisBC.

5. ENVIRONMENTAL AND SOCIAL IMPACT

5.1 Environmental Management Plan

The substation site selection included a review to identify environmental sensitivities, landowner impacts and potential stakeholder issues. Detailed construction, traffic and fire safety plans will be prepared to manage and monitor risks.

Site selection priorities include environmental impacts, residential impacts, suitability for construction and cost. It is also guided by efforts to minimize impacts to wildlife, watersheds and public use areas. Guided by a general archaeological and environmental overview, the initial impact assessment found there to be a low risk of encountering items or sites of archaeological significance or any environmental issues.

The final detailed construction and environmental management plan for the purpose of tendering the civil portion of the Project will include specific prescriptions, procedures and requirements to mitigate potential construction impacts.

FortisBC has completed a high level environmental assessment for the preferred site. Previous industrial activities on the property have impacted the land and no evidence remains of the original vegetation and supporting soil composition. The assessment identified no additional environmental effects from the proposed Project.

There is no legislated requirement for further environmental study.

Visual and Landscape Resources: The proposed site has been used for gravel extraction operations for several years and as such the visual and landscape values are considered to be low.

Slopes and Soil Protection: Slope stability prescriptions will be included as part of the detailed construction plan. As the integrity of native soils has been seriously compromised as a result of gravel extraction activities, no soil protection measures are required.

Vegetation Management Values: There are no areas of intact riparian vegetation on the subject property that would require consideration beyond the detailed environmental management plan.

5.2 Archaeological Impact Assessment and First Nations Consultation

FortisBC representatives have met with the Westbank First Nation and discussed the proposed project including the distribution line routing. No concern has been expressed with either the environmental or land impact of the project.

5.3 Electric and Magnetic Fields ("EMF")

FortisBC's position with respect to Electric and Magnetic Fields is consistent with that of Health Canada as set out in the document "Electric and Magnetic Fields at Extremely Low Frequencies" (which can be found on their website: http://www.hc-sc.gc.ca/hl-vs/alt_formats/pacrb-dgapcr/pdf/iyh-vsv/environ/electmagnet-eng.pdf). Health Canada states that "Typical exposures present no known health risks.... the scientific evidence is not strong enough to conclude that typical exposures cause health problems". Although Health Canada does not consider exposures to EMF from electrical devices and power lines to present any known health risks, FortisBC is aware of the concerns of some of its customers. All facilities associated with this Project meet the World Health Organization (WHO) and International Council on Non-Ionizing Radiation Protection (ICNIRP) reference levels.

5.4 Health and Safety

The health and safety interests of the public, employees and contractors include community and environmental values, and are well integrated into the planning, tendering and audit protocols for the Benvoulin Substation Project. FortisBC construction safety and risk mitigation standards will be followed and the requirements will be detailed in final construction and environmental management plans.

5.5 Public Consultation

The siting of a substation and/or distribution facilities within an urban setting presents challenges that FortisBC has recognized in order to ensure that it continues to meet its obligation to provide safe, reliable power to its customers, while attempting to incorporate the results of its public consultation efforts.

Typically, community members understand the need to add infrastructure to accommodate the obvious growth in their region; however, that understanding is at times in conflict with the vision that local residents have for the neighbourhoods in which they live.

It is a key role of the public consultation process to aid in finding the best balance between a solution that meets the technical requirements of the project while adhering to the principle of cost effectiveness and the interests of the community and other stakeholders.

As with other recent projects, FortisBC adopted a two-tier, multi-step approach to public consultation with the Benvoulin Substation Project in an effort to capture as much input as practical to help with decision making and to keep the stakeholder groups as informed as possible as the Project progresses.

During the first tier, FortisBC met with local government and key stakeholders to discuss the Project and provide preliminary information for public officials for both personal understanding, and so that FortisBC may respond to inquiries. In addition, these meetings provided an opportunity for external organizations to provide feedback on the Project plan, particularly the substation location.

Meetings were held with:

- City of Kelowna Administration;
- City of Kelowna Planning Department;
- The Regional District of Central Okanagan;
- Astral Media - Owner of local radio transmission equipment;

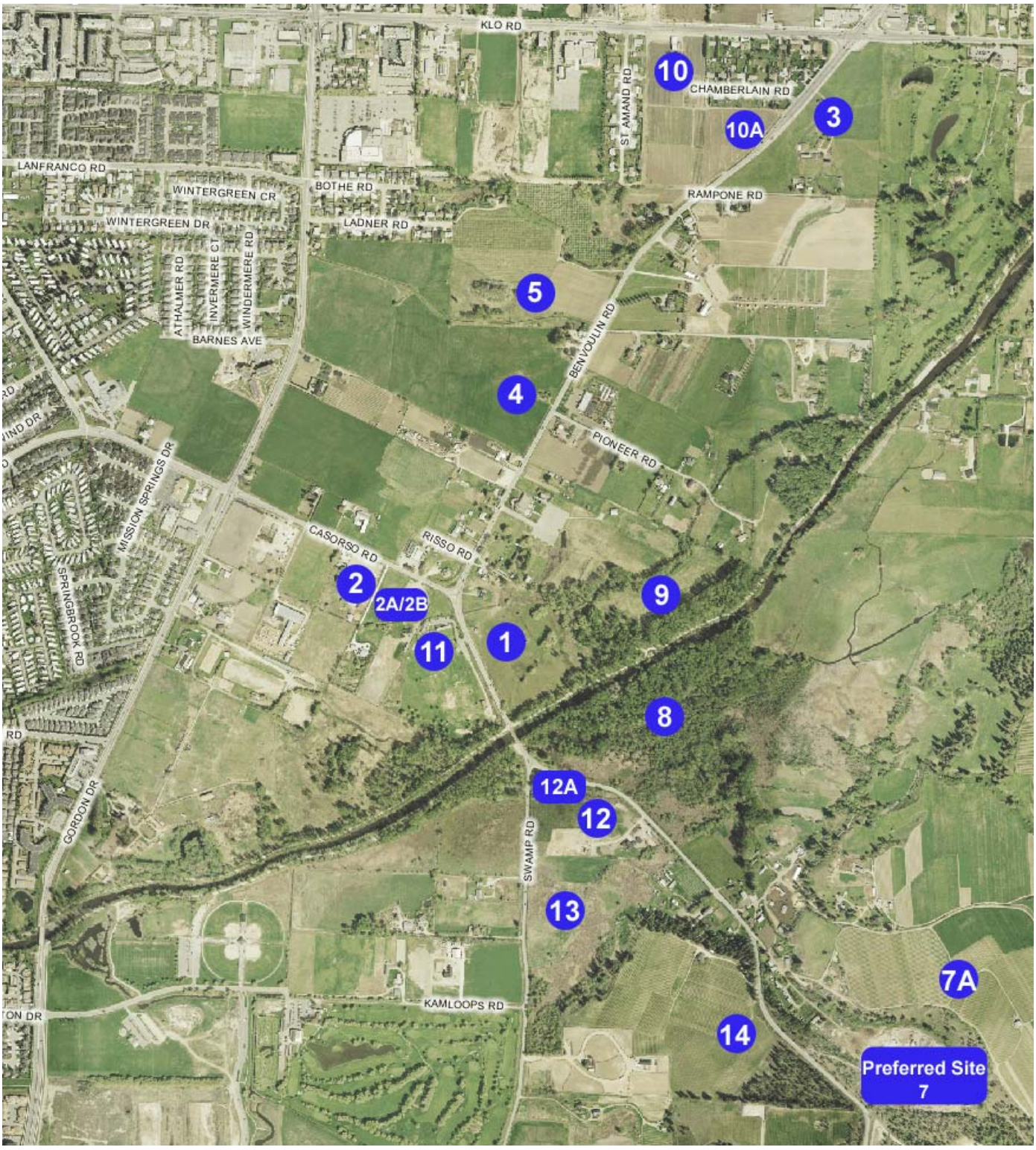
- Eagle Quest Golf Range – Area Business;
- Society for the Prevention of Cruelty to Animals “SPCA” - Area Business;
- Westbank First Nation; and
- Friends of Mission Creek.

Specifically, during this stage of consultation, stakeholders were provided with information on the:

- Project need;
- Project options as described in this CPCN Application;
- The potential substation sites considered in Alternative 2; and
- Public consultation process.

During this initial consultation while no objections were received to the Project need in principle, alternate sites were suggested and subsequently investigated as discussed below. Please see Figure 5.5 for the sites considered in this project.

Figure 5.5 – Investigated Sites



The second step in the public consultation process involved communication with the general public.

In recent applications, FortisBC has developed an approach to gathering public input that serves to involve the area residents in meaningful discussions prior to final site selection. This approach has been generally well received by community members.

As part of this process, FortisBC conducted three open houses. The purpose of the first open house was to communicate FortisBC's plans for the Benvoulin Substation Project to the general public and obtain feedback on the Project plan and provide a feedback mechanism for residents with concerns or suggestions. At this initial presentation, a number of technically suitable potential sites were identified within the area identified by FortisBC.

Figure 5.6 is a reproduction of the public notice advertising the open house and includes the map of potential substation areas presented at the first open house held on November 27, 2007.

Figure 5.6 - November 27, 2007 Open House Notice

FORTISBC

Benvoulin Substation Project

This project is one of many taking place throughout FortisBC's service area aimed at improving reliability and meeting growing customer electrical load requirements.

Open House

FortisBC is in the process of developing an application to the BC Utilities Commission to increase electricity capacity in central Kelowna. To meet growing electricity requirements and increase reliability, FortisBC is proposing to construct a new substation in South Central Kelowna on Benvoulin Road.

Learn more about the Benvoulin Substation Project at our open house.

Date:	Tuesday, November 27, 2007
Time:	4 pm to 8 pm
Location:	Kelowna Christian School 2870 Benvoulin Road

FortisBC is committed to open dialogue with customers, stakeholders and First Nations groups. Open houses give local area residents the opportunity to learn more about the project, discuss why it is needed and also to help the project team identify potential issues, concerns and opportunities to improve the project plan.

For more information:

Phone:	1-866-4FORTIS (1-866-436-7847)
E-mail:	projects@fortisbc.com
Web:	www.fortisbc.com/benvoulinproject.html

*FortisBC Inc. is a Canadian owned electric utility operating in the southern interior of British Columbia.

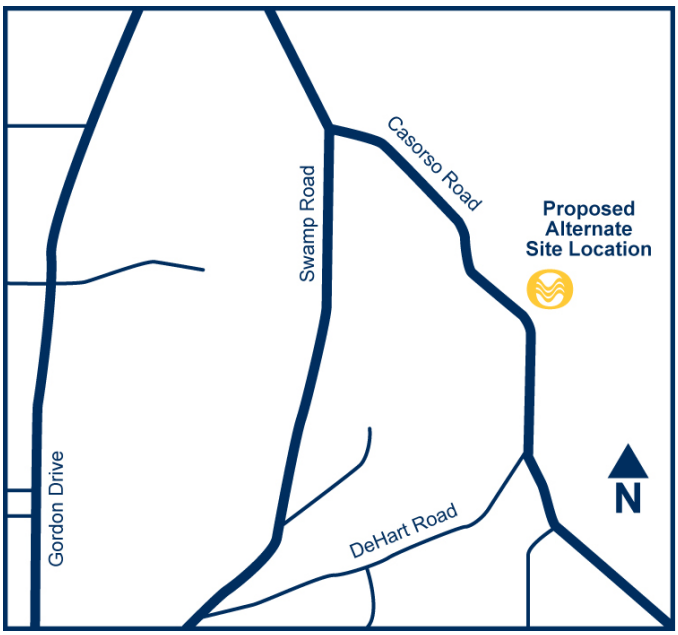
www.fortisbc.com

A second open house was held on January 14, 2008, after the selection of the preferred site, to communicate the choice to area residents. At this open house, the preferred site near the intersection of Benvoulin and Casorso Roads was identified as indicated by the open house materials reproduced in Figure 5.6 below.

Figure 5.6 - Open House No. 2 Preferred Site

Also at the open house, the “Gravel Pit Site” was presented as a viable, though more costly and technically complicated alternative as shown on Figure 5.7.

Figure 5.7 Open House No. 2 Alternate Gravel Pit Site



Discussion

During the first open house in November 2007 local residents and interested parties were clear in their preference that the substation be located as far south as possible. This would locate the infrastructure away from the local school and residential areas. Of the sites presented, the Site 2A and 2B combination (to the east of Site 2) was strongly preferred. Once again, project need was well understood and uncontested. The topics most often discussed were aesthetics, property values, noise, and health issues.

However, from discussions with the stakeholder groups contacted during the first tier of consultation, FortisBC was aware that there were concerns with Site 2A/2B that also focused on the residential nature of the neighbourhood, aesthetics and land use planning. In particular, the fact that the subject properties were within the Agricultural Land Reserve was discussed at length. FortisBC also had several discussions with

Astral Media which has a large AM broadcasting tower situated on the east corner of Benvoulin and Casorso roads.

Based on feedback received, FortisBC subsequently investigated two additional sites, Site 7 (Gravel Pit), and Site 11 (Driving Range). As a result of detailed analysis of the investigated sites, including input from the public process to date, Site 2A/2B was chosen as the preferred site for presentation at the second open house.

The second open house was held on January 14, 2008. The discussion at this open house was focussed on the selection of the preferred site. In addition, there was significant discussion around the alternate site, Site 7 – the Gravel Pit. It was acknowledged that while at the time, it was not the preferred site to be put forward in the Application, Site 7 was technically viable and further investigation was being undertaken to ensure that all factors related to both sites were considered. At the time of the January 2008 open house, the gravel pit site had a lower ranking in both the non-financial and cost comparisons.

In the period between the second open house and filing of this Application, the Project Team became aware of another lot (Site 2) adjacent to the preferred site that would provide all of the project benefits of Site 2A/2B at a lower cost to ratepayers.

During the public consultation process, it was apparent that while general concerns around the area in which the substation would ultimately be located were present, the specific lot selected was not identified as a concern. The issues most often raised, as previously discussed, would apply in equal measure were the Company to choose Site 2A/2B or the newly identified adjacent lot - Site 2. In effect, the two sites are equivalent with the exception of land cost, with Site 2 being lower.

For this reason, FortisBC is of the opinion that the emergence of Site 2 as an option effectively removed Site 2A/2B from consideration.

There was strong opposition to both Site 2A/2B, and Site 2 due to their inclusion in the ALR and the potential to return either site to active agricultural use. The visible nature of Site 2A/B or Site 2 was also of concern and a visual barrier was strongly

recommended. The gravel pit, also in the ALR, has very little potential to ever be useful for farming due to its current condition. As can be expected, support for a given site has a positive correlation to its distance from populated areas. A move to the Gravel Pit site, which is further away from any concentration of residences and high traffic corridors, was generally seen as positive.

A concern was raised about the potential visual impact on traffic approaching the site. FortisBC has had further discussions with this resident and has been successful in ameliorating the concern.

In addition, FortisBC worked through the detailed design stages of both Site 2 and Site 7. The design effort recognized that there were a number of design issues with Site 2 that were not identified in the initial screening for the sites. Soil stability, visual barriers, and radio tower noise mitigation became more prevalent as the design process progressed. Once all of the cost analysis was completed, two site option costs were within 10 percent of each other.

Ultimately, given the reduction in delay risk, convergence of public opinion and support, FortisBC concluded that the Gravel Pit, Site 7, should be presented in the CPCN Application as the preferred site for the project. FortisBC has contacted the immediate neighbours to the sites, and has communicated to all stakeholders who are on record as a result of the consultations to date its decision to recommend Site 7.

In order to ensure that public consultation is as complete as possible, and that all interested parties have been informed of the selection of Site 7, a third open house was held on April 9, 2008. Letters of comment are attached as Appendix D. To date, no feedback has been received expressing any opposition to the Gravel Pit - Site 7.

The locations of the sites considered for the Benvoulin Substation are shown on Figure 5.5a. The non-financial comparison of the potential sites for the Benvoulin Substation based on the criteria suggested by the Commission in earlier projects is contained in Table 5.5. A description of the criteria is also included.

Table 5.5 - Non-Financial Comparison of Investigated Sites

	Criterion	Weighting Factor	Site 1		Site 2		Site 2A/2B		Site 3		Site 4		Site 5		Site 7		Site 7A		Site 8		Site 9		Site 10		Site 10A		Site 11		Site 12		Site 12A		Site 13		Site 14	
			Rank	WR	Rank	WR	Rank	WR	Rank	WR	Rank	WR	Rank	WR	Rank	WR	Rank	WR	Rank	WR	Rank	WR	Rank	WR	Rank	WR	Rank	WR	Rank	WR	Rank	WR	Rank	WR	Rank	WR
1	Reliability	**15**	**5**	75	**5**	75	**5**	75	**3**	45	**3**	45	**3**	45	**4**	**60**	**3**	45	**4**	60	**4**	60	**3**	45	**3**	45	**5**	75	**4**	60	**4**	60	**4**	60	**4**	60
2	Operations & Safety	**15**	**3**	45	**4**	60	**4**	60	**4**	60	**4**	60	**4**	60	**5**	**75**	**2**	30	**3**	45	**3**	45	**4**	60	**4**	60	**4**	60	**4**	60	**4**	60	**4**	60	**4**	60
3	Public Health	**15**	**5**	75	**5**	75	**5**	75	**5**	75	**5**	75	**5**	75	**5**	**75**	**5**	75	**5**	75	**5**	75	**5**	75	**5**	75	**5**	75	**5**	75	**5**	75	**5**	75	**5**	75
4	Risk of Delay	**10**	**3**	30	**3**	30	**3**	30	**3**	30	**3**	30	**3**	30	**5**	**50**	**3**	30	**3**	30	**3**	30	**3**	30	**3**	30	**3**	30	**3**	30	**3**	30	**3**	30	**3**	30
5	First Nations	**5**	**5**	25	**5**	25	**5**	25	**5**	25	**5**	25	**5**	25	**5**	**25**	**5**	25	**5**	25	**5**	25	**5**	25	**5**	25	**5**	25	**5**	25	**5**	25	**5**	25	**5**	25
6	Natural Habitat	**5**	**4**	20	**4**	20	**4**	20	**5**	25	**5**	25	**5**	25	**5**	**25**	**5**	25	**3**	15	**4**	20	**5**	25	**5**	25	**4**	20	**5**	25	**5**	25	**5**	25	**5**	25
7	Parks and Recreation	**5**	**4**	20	**5**	25	**4**	20	**5**	25	**5**	25	**5**	25	**5**	**25**	**5**	25	**5**	25	**4**	20	**5**	25	**5**	25	**4**	20	**5**	25	**5**	25	**5**	25	**5**	25
8	Aesthetics	**5**	**3**	15	**3**	15	**3**	15	**3**	15	**3**	15	**3**	15	**5**	**25**	**5**	25	**4**	20	**5**	25	**4**	20	**3**	15	**3**	15	**4**	20	**4**	20	**5**	25	**5**	25
9	Property Values	**5**	**5**	25	**5**	25	**5**	25	**5**	25	**5**	25	**5**	25	**5**	**25**	**5**	25	**5**	25	**5**	25	**5**	25	**5**	25	**5**	25	**5**	25	**5**	25	**5**	25	**5**	25
10	EMF	**5**	**5**	25	**5**	25	**5**	25	**5**	25	**5**	25	**5**	25	**5**	**25**	**5**	25	**5**	25	**5**	25	**5**	25	**5**	25	**5**	25	**5**	25	**5**	25	**5**	25	**5**	25
11	Effects During Construction	**5**	**4**	20	**5**	25	**5**	25	**4**	20	**4**	20	**4**	20	**3**	**15**	**3**	15	**4**	20	**4**	20	**4**	20	**4**	20	**5**	25	**3**	15	**3**	15	**3**	15	**3**	15
12	Flexibility for Future Growth	**10**	**5**	50	**5**	50	**5**	50	**5**	50	**5**	50	**5**	50	**4**	**40**	**3**	30	**4**	40	**5**	50	**5**	50	**5**	50	**5**	50	**4**	40	**4**	40	**4**	40	**3**	30
	TOTALS	**100**		425		450		445		420		420		420		**465**		375		405		420		425		420		445		425		425		430		420

WR - Weighted Rank

Definitions of Site Selection Criterion

1. **Reliability**- a measure of availability of electrical supply on the new transmission, distribution and substation facilities. Also considers potential for exposure to damage and resulting service outages due to external hazards.

2. Operations and Safety

   a. **Operations** - criterion considers accessibility and operability of the facilities by FortisBC employees and contractors working on system repairs or performing routine maintenance. An example is the degree of difficulty of access to a substation with heavy equipment.

   b. **Safety** - criterion considers exposure to injury for persons working on or near line or station facilities including the general public, FortisBC employees, and contractors. Considerations include limits of approach to energized equipment, lines and buswork and safe clearance for vehicles and service equipment.

3. **Public Health** -This criterion applies to health and environmental hazards posed by the transmission, distribution and substation facilities. Hazards include but may not be limited to accidental release of controlled materials, oil spills, and any other such events. FortisBC designs, constructs and operates these facilities to ensure that probabilities of such events are mitigated.

4. **Risk of Delay** - criterion considers risk of significant delay to the final in service date of the proposed facilities. Delays can stem from regulatory process, permitting, zoning applications and procurement schedules.

5. **First Nations** - This criterion considers the effect of the Project on the cultural values, economic well being and quality of life of First Nations citizens.

6. **Natural Habitat** - This criterion considers potential negative effects on the natural habitats of both aquatic and land dwelling plants and animals especially including rare and endangered species.

7. **Parks and Recreation** - this criterion considers the potential impact of the Project on the capability of the parks and recreation areas to continue to provide

a quality experience for existing and future users.

8. **Aesthetics** - This criterion considers visual effects of the proposed facilities that may be observed by residents and visitors in the Project area.

9. **Property Values** - This criterion considers the potential effects of the proposed Project on the market value of real estate in the Project area.

10. **EMF** - This criterion considers Project compliance with the WHO/ICNIRP reference levels for public exposure. FortisBC has ranked the potential for EMF exposure based on the proximity and frequency of passage expected on or immediately adjacent to the line rights of way and substation facilities which are generators of electromagnetic fields.

11. **Effects during construction** - considers the temporary disruption to residents, property owners and services near the Project area. Disruptions may include service interruptions, land use, traffic detours and delays, noise and dust.

12. **Flexibility for future growth** - considers the scalability of the Project for future growth and distribution network flexibility.

Rationale for Non-Financial Comparison of Investigated Sites Rankings

1. Reliability

Table rankings generally reflect distance from existing infrastructure and the length of any required distribution or transmission additions. Thus sites 2, 2a/2b, 11 and 1 ranked highest, 12, 12A, 8 ranked slightly lower. All others ranked lower due to large transmission or distribution additions

2. Operations and Safety

Rankings reflect ease of access to the site as well as the ability to maintain facilities without traffic disruption and the ability to work directly beneath transmission lines. All sites would rank the same when working beneath the transmission line (due to road exposure for the main part). Site 7 would result in the least traffic disruption as there is room to manoeuvre heavy equipment off the main road.

3. Public Health

None of the sites investigated is seen as presenting any public health issues and rank the same.

4. Risk of Delay

Generally reflects the availability of the site and the potential delays stemming from any acquisition or zoning process. All sites lie within the ALR and hence represent a risk in removing the land from the ALR. All sites are zoned A1 (agricultural) within the city and would require rezoning - Site 2A/2B, Site 2 and Site 7 are not commercially farmed and have willing sellers - site 7 ranks highest as it is currently used for industrial purposes and would require extensive remediation to make it farmable. Extensive civil remedial work for site 2A/2B required hence ranked lower.

5. First Nations

None of the sites investigated is seen as presenting any First Nations concerns and rank the same

6. Natural Habitat

Sites 9, 1, 11, 2A/2B and 2 lie along Wilson Creek and Site 8 lies within a wetland

habitat. The rest of the sites do not have a negative impact on natural habitat. Site 7 does have Priest Creek adjacent to the property, however, the closest point of the fence line is 30 metres from the creek and no impact to the natural habitat is foreseen.

7. Parks and Recreation

Site 11 is currently used as a recreational driving range and borders the Mission Creek Greenway and hence ranks lower. Site 9 is located adjacent to a historical site.

8. Aesthetics

Most sites apart from Sites 7, 7A, 9, 13 and 14 would be visible from a major road. Sites 1, 2, 2A/2B, 3, 4, 5, 10, 10A and 11 would be adjacent to busy roads.

9. Property Values

The Company does not believe that electrical facilities of this nature materially affect property value and ranks all sites the same.

10. EMF

EMF is within WHO/ICNIRP reference levels at all of the sites.

11. Effects during construction

Ranking in this category generally reflects the duration and impact on local residents as a result of construction activities. Sites 12, 12A, 13, 14, 7 and 7A would require a lot of road building activity (underground duct bank) resulting in traffic delays. Sites 2, 2A/2B and 11 could be managed with minimal disruption to the public.

12. Flexibility for future growth

Distance from load centre negatively affects sites 7, 7A and 14.

Other Considerations

Final site selection for the Benvoulin Substation, given all of the factors described above, in conjunction with public input received to date, indicated that a choice be made between Sites 7 and 2. In directly comparing the appropriateness of each site for a substation location, the following factors were also considered:

1. Ground Stability– A ground stability study has indicated that additional risk to project time and cost exists with Site 2 due to the proximity of the creek. The site may require more fill depending on water. Note that this is the case for all of the locations at the same elevation as the creek.

2. Existing Structures – Selection of Site 2 would require the relocation of the existing residence. While the cost for this has been included in the estimate, this would result in a three month delay for any construction. This issue may be mitigated considering the timelines for permit approvals.

3. Creek Proximity – There is a creek that is within 15 metres of Site 2 which may require environmental mitigation. For Site 7, there is also a creek, however the station would be at a distance of 30 metres that meets environmental regulatory requirements.

4. Easements – an easement is required into Site 2 for the transmission line on the west side of the property. Site 7 has no additional easement requirements

5. Agricultural Land Reserve – While both properties are within the ALR, and FortisBC has been successful in previous sites where a non-farm use status has been required, Site 2 presents additional delay risk over Site 7. Site 7 has been the site of gravel operations and the site is heavily disturbed. While Site 2 is not currently actively farmed, the opportunity for agricultural use still exists. Public consultation activities have indicated that significant opposition could be encountered should Site 2 be selected. This would introduce additional uncertainty and delay risk into the project.

6. Site 7, along with Site 2 is zoned by the City of Kelowna as agricultural; however, since Site 7 is an old gravel pit, FortisBC anticipates approval from the city during the rezoning process.

7. Since Site 2 is close to the radio broadcasting tower, FortisBC has the potential of introducing interference in the towers broadcasting pattern which would require additional hardware to mitigate the substations interference on the broadcast pattern. This would require additional cost and has the potential to introduce project delays at this site.

6. PROJECT COST

6.1 Summary of Cost

Detailed cost estimates for the preferred option are summarized in Table 6.1 below.

Revenue Requirement analyses for Site 7 and 2 are provided in Appendix E.

Table 6.1 Summary of Cost – Site 7

	Scope Item	2007	2008	2009	2010	TOTAL
		($000s)				
1	Design and construct distribution substation with one 138/13 kV 32 MVA transformer and egress for four feeders	-	197.1	871.3	7,948.8	**9,017.2**
2	Design and construct connections transmission lines	-	-	-	515.2	**515.2**
3	Design and construct connections to local 13 kV distribution feeders	-	-	1,320.2	4,120.9	**5,441.1**
4	Planning / Pre Engineering / Regulatory Costs	83.5	450.4	378.0	105.9	**1,017.7**
5	Land Acquisition and Assessments	**-**	96.4	871.7	20.6	**988.7**
SUBTOTAL		**83.5**	**743.8**	**3,441.2**	**12,711.5**	**16,979.9**
6	**AFUDC**		3.4	109.9	589.1	**702.5**
TOTAL CAPITAL COST		**83.5**	**747.2**	**3,551.1**	**13,300.6**	**17,682.4**
7	**Net Present Value**	**1,312.4**				
8	**One Time Equivalent Rate Impact**	**0.05%**				

For comparison purposes, presented below, is cost information for Site 2.

Table 6.2 Summary of Cost – Site 2

	Scope Item	2007	2008	2009	2010	TOTAL
		($000s)				
1	Design and construct distribution substation with one 138/13 kV 32 MVA transformer and egress for four feeders	-	194.4	1,006.6	9,218.8	**10,419.9**
2	Design and construct connections transmission lines	-	-	-	284.7	**284.7**
3	Design and construct connections to local 13 kV distribution feeders	-	-	626.0	1,954.1	**2,580.1**
4	Planning / Pre Engineering / Regulatory Costs	83.5	450.1	448.9	295.5	**1,277.9**
5	Land Acquisition and Assessments	-	162.1	1,466.3	34.7	**1,663.0**
SUBTOTAL		83.5	**806.6**	**3,547.8**	**11,787.9**	**16,225.7**
6	**AFUDC**		3.7	129.8	583.4	**717.0**
TOTAL CAPITAL COST		83.5	810.3	3,677.6	12,371.3	**16,942.7**
7	**Net Present Value**	**1,264.9**				
8	**One Time Equivalent Rate Impact**	**0.04%**				

It is the opinion of FortisBC that the incremental increase in project cost that results from choosing Site 7 is warranted given the considerations discussed in Section 5, and in particular the delay risk associated with City rezoning and the ALR non-farm use process, as well as the strong public sentiment in favour of the Gravel Pit - Site 7. FortisBC further believes that previous Commission commentary on the distinction between “low cost” and “cost effective” is amply demonstrated in this conclusion. FortisBC’s objective is to put forward a project solution that best balances safety, the environment, social and economic impacts, constructability, long term operations and customer rates. This approach is consistent with the Commission’s recent decisions ensuring projects are the most cost effective but not necessarily the least cost.

The principal distinction between a least-cost and a most cost-effective assessment is the scope of considerations that are relevant. Least-cost only considers the price of a project. Most cost-effective includes broader consideration of a project's characteristics in addition to price, and may include: safety, reliability, schedule, financing arrangements, the cost to ratepayers, the impact on the financial capability of the utility, and other impacts. (VIGP Decision, page 77; VITR Decision, page 15)

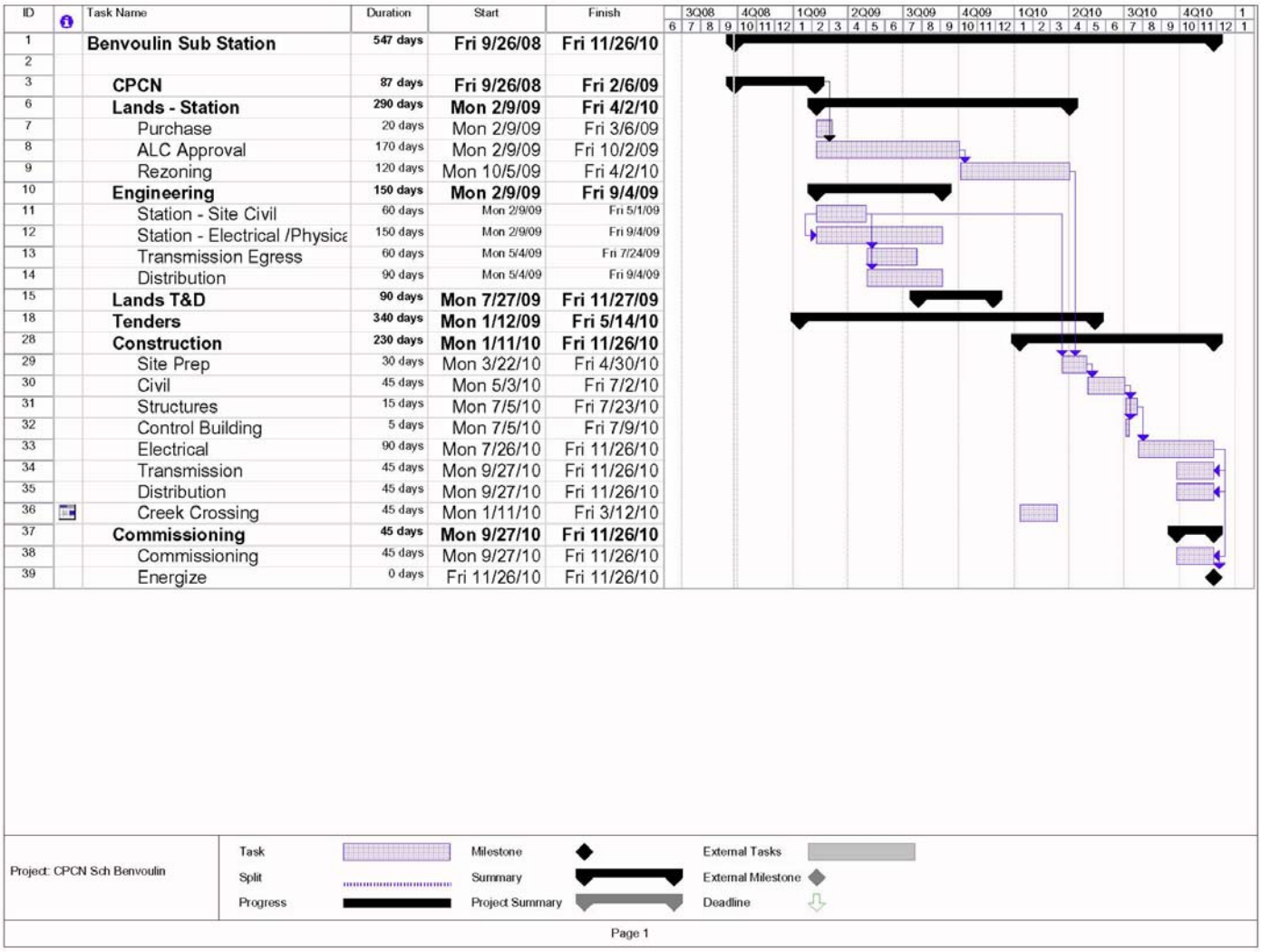
7. PROJECT SCHEDULE

7.1 Project Schedule

Conceptual design for the station is complete with detailed design and major procurement to follow. On receipt of Commission and other agency approval, the Project will enter the construction phase. The Project is slated for completion in the fourth quarter of 2010. The major milestones are:

- Order Transformer — Second quarter 2009
- Commence Detailed Engineering — First quarter 2009
- Formal Land Acquisition — First quarter 2009
- Complete ALC and Rezoning Processes — First quarter 2010
- Station Construction Begins — Second quarter 2010
- Transformer Delivery — Third quarter 2010
- Station Construction Complete — Fourth quarter 2010
- Station Energization — Fourth quarter 2010

Figure 7.1 Project Schedule



ID	Task Name	Duration	Start	Finish
1	**Benvoulin Sub Station**	**547 days**	**Fri 9/26/08**	**Fri 11/26/10**
2				
3	**CPCN**	**87 days**	**Fri 9/26/08**	**Fri 2/6/09**
6	**Lands - Station**	**290 days**	**Mon 2/9/09**	**Fri 4/2/10**
7	Purchase	20 days	Mon 2/9/09	Fri 3/6/09
8	ALC Approval	170 days	Mon 2/9/09	Fri 10/2/09
9	Rezoning	120 days	Mon 10/5/09	Fri 4/2/10
10	**Engineering**	**150 days**	**Mon 2/9/09**	**Fri 9/4/09**
11	Station - Site Civil	60 days	Mon 2/9/09	Fri 5/1/09
12	Station - Electrical /Physica	150 days	Mon 2/9/09	Fri 9/4/09
13	Transmission Egress	60 days	Mon 5/4/09	Fri 7/24/09
14	Distribution	90 days	Mon 5/4/09	Fri 9/4/09
15	**Lands T&D**	**90 days**	**Mon 7/27/09**	**Fri 11/27/09**
18	**Tenders**	**340 days**	**Mon 1/12/09**	**Fri 5/14/10**
28	**Construction**	**230 days**	**Mon 1/11/10**	**Fri 11/26/10**
29	Site Prep	30 days	Mon 3/22/10	Fri 4/30/10
30	Civil	45 days	Mon 5/3/10	Fri 7/2/10
31	Structures	15 days	Mon 7/5/10	Fri 7/23/10
32	Control Building	5 days	Mon 7/5/10	Fri 7/9/10
33	Electrical	90 days	Mon 7/26/10	Fri 11/26/10
34	Transmission	45 days	Mon 9/27/10	Fri 11/26/10
35	Distribution	45 days	Mon 9/27/10	Fri 11/26/10
36	Creek Crossing	45 days	Mon 1/11/10	Fri 3/12/10
37	**Commissioning**	**45 days**	**Mon 9/27/10**	**Fri 11/26/10**
38	Commissioning	45 days	Mon 9/27/10	Fri 11/26/10
39	Energize	0 days	Fri 11/26/10	Fri 11/26/10

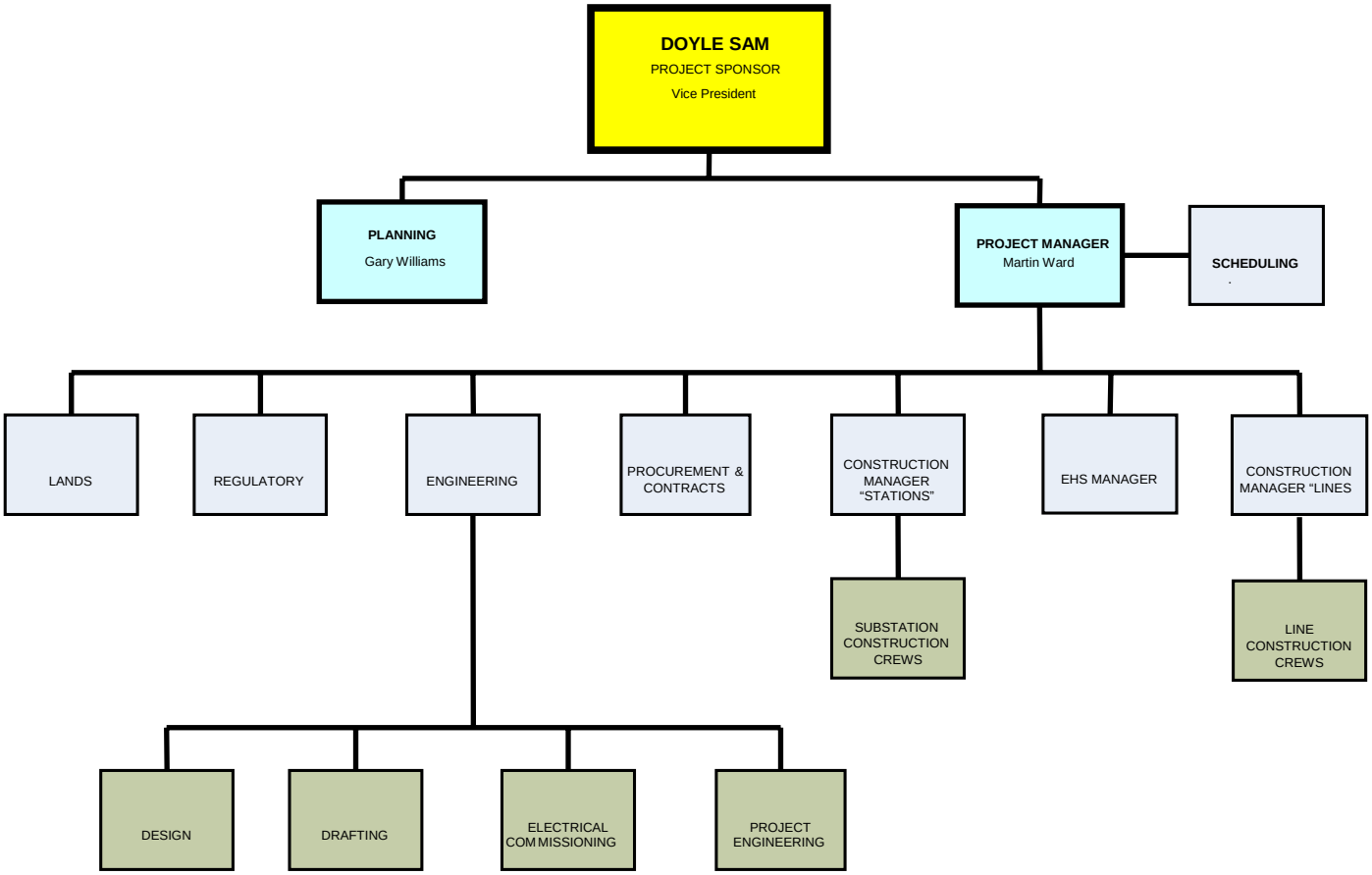
7.2 Project Management

The following principles will underpin the management of the Project:

- Quality, scope and cost control of the Project will be the responsibility of a FortisBC Project Manager;
- Work which impacts utility operations will be done, where possible, by FortisBC internal staff. This includes engineering management and review, construction management, and final commissioning;
- A combination of consultant, contractor and internal resources will be used for all major assessment, design and construction components of the Project;
- Accountability for each Project component (environment, engineering, construction, commissioning, etc.) will reside with FortisBC and will be actively managed by a FortisBC employee or representative;
- There will be a full time Construction Manager assigned during the construction phases of the Project, with accountability for site health and safety, environmental procedural adherence, quality assurance, employee orientation, and crew scheduling.

The Project organizational structure can be found below in Diagram 7.2.

Diagram 7.2 - Project Organizational Chart



7.3 Other Applications and Approvals

Permits and Approvals Required for the Benvoulin Project

Agency	Department or Branch	Legislative Mandate of Agency	Purpose of Contact or Required Approval	Responsibility
I. FEDERAL AGENCIES				
Environment Canada	Environmental Protection Service	Canadian Environmental Protection Act	Notification re: handling, transportation and remediation of toxic substances, including contaminated soils.	FortisBC
II. PROVINCIAL AGENCIES				
Ministry of Labour and Citizens' Services	Workers' Compensation	Work Safe BC	Notice of Project	FortisBC
Ministry of Aboriginal Relations and Reconciliation		Specific to First Nations	Consultations with the Okanagan Nation Alliance	FortisBC
Ministry of Agriculture and Lands	Food Safety & Quality Branch	Weed Control Act	Occupier of land has duty to control noxious weeds growing or located on land and premises	FortisBC
Ministry of Agriculture and Lands	ALC		ALR designation	FortisBC

Agency	Department or Branch	Legislative Mandate of Agency	Purpose of Contact or Required Approval	Responsibility
Ministry of Environment	Environmental Protection Service	Environmental Management Act Contaminated Sites Regulation	Notification in the event that a polluting substance escapes or is spilled Contaminated Sites remediation	Contractor
Ministry of Environment	Environment Protection Division	Integrated Pest Management Act	Pesticide Use Permit (switchyard sites only)	FortisBC
Ministry of Environment		Environmental Management Act	Burning Permits	Contractor
Ministry of Environment	Environmental Stewardship Division – Ecosystems Branch	Guidelines and BMP: Develop with care: Environmental Guidelines for Urban and Rural Land Development in British Columbia	Best Management Practices	FortisBC / Contractor
Ministry of Tourism, Sport and the Arts	Heritage Branch	Heritage Conservation Act	Heritage Inspection Permit – for inventory & impact assessment	FortisBC
Ministry of Tourism, Sport and the Arts		Heritage Conservation Act	Heritage Investigation Permit – for systematic data recovery	FortisBC
Ministry of Tourism, Sport and the Arts	Archaeology Branch	Heritage Conservation Act	Site Alteration Permit – to monitor and disturb sites subsequent to data recovery or to date Culturally Modified Trees during construction	FortisBC
Ministry of Transportation and Infrastructure	Okanagan	Transportation Act	Permit for Access to a Controlled Access Highway	FortisBC

Agency	Department or Branch	Legislative Mandate of Agency	Purpose of Contact or Required Approval	Responsibility
Ministry of Energy, Mines and Petroleum Resources	Mining and Minerals Division, South Central Region	Mines Act Permit G-4-150	Site reclamation bond requiring removal for old gravel pit	FortisBC
III. MUNICIPAL GOVERNMENTS				
City of Kelowna			Building Permit for unmanned control building	FortisBC
IV. CROWN CORPORATIONS & PRIVATE COMPANIES				
Terasen Gas			Pipeline Crossing Permit – If applicable	FortisBC
Telus			Utility Crossing Permit – If applicable	FortisBC
Private Landowner			Access and Construction Rights – As required	FortisBC

7.4 Risks to Project Completion

Circumstances that could delay the Project or increase cost include:

- Unforeseen environmental or archaeological discoveries during the construction phase. The risk of such an occurrence is considered to be low, based on the results of environmental and archaeological assessments;
- An unexpected increase in the delivery times of transformers, and other major equipment; and
- Availability of labour and/or materials.
- ALC and City of Kelowna re-zoning delays

7.5 Contingency Plan for Project Delays

The Project is scheduled to be commissioned in the fourth quarter of 2010. In order to meet the summer peak of 2010, a mobile transformer may be used to meet any shortfall in capacity.

8. Alternatives Analysis

In order to resolve the capacity and back-up issues in the south/central area of Kelowna to be addressed through this Project, two options were initially seen as viable. During the development of the 2005 SDP, it was anticipated that these load increases would be accommodated through transformer additions at the Hollywood Substation in 2009/10 and OK Mission Substation in 2012/13 along with a new distribution source (the proposed Braeloch Substation) in the southwest Kelowna area in approximately 2015. Subsequent analysis and updated load forecasts show that the transformers at both Hollywood and OK Mission substations will reach capacity in the summer of 2010.

The other potential solution is a new distribution source in the south/central Kelowna area along with the required distribution infrastructure to connect it with the existing network.

Alternative 1: Capacity Increase at OK Mission and Hollywood Substations

Analysis regarding the transformer additions at Hollywood and OK Mission stations indicated that this is not an acceptable solution from a technical, environmental or economic perspective as described below.

- Due to the locations of the Hollywood and OK Mission substations, it would be more expensive to add a transformer and four additional feeders to the existing substation than it is to build a new substation.

- Because all the existing feeders are overhead, it would require all additional feeders to egress underground for a minimum of 1 kilometre each (typically four feeders).

- The addition of a third transformer creates technical difficulties from a fault level and protection perspective. Although the existing substations have sufficient physical space for a third transformer, there is insufficient land at either location to accommodate the necessary auxiliary substation equipment.

- Outdoor reactors for distribution feeder circuits, which limit the fault level, would be required.

- All transformers would be on a single 138 kV bus system which would have a significant impact on customer and system reliability.

- The space around the existing station is not available for station expansion.

- The Hollywood Substation is located adjacent to Mission Creek. From an environmental risk management perspective, locating additional oil filled equipment at Hollywood Substation would not be recommended as FortisBC must limit this risk where possible.

Further to the reasons mentioned above, the installation of the new distribution source would have the potential ability to postpone the proposed Braeloch Substation. In effect, this single transformer distribution source option replaces the 2005 SDP proposal for two transformers and potentially postpones the third transformer distribution source for one to three years depending upon load growth in the south Kelowna area.

Alternative 2: New Distribution Substation

The second option, a new distribution source, is the option ultimately chosen and is described in detail in Section 4, Project Description, of this Application. FortisBC examined a number of potential sites for the new station, as discussed in Section 5, but all were essentially variations on the same solution, differentiated only by the locations and associated line work involved. For this reason, only the version incorporating the proposed location is detailed. This option provides for one transformer and station in 2010 with the potential ability to postpone the proposed Braeloch Substation. In effect, this single transformer option replaces the original 2005 SDP proposal for two transformers and potentially postpones a third transformer.

Total Project cost: $17.7 million

8.1 Revenue Requirement, Rate Impact and Final Choice of Option

Alternative 2 is chosen as the “Preferred Solution” since, as per the above analysis, it stands out as technically superior to Alternative 1, and comparatively has the least environmental and aesthetic impact.

APPENDICES

APPENDIX A: **DRAFT ORDER - electronic & hard copy**

APPENDIX B: **ENGINEERING DRAWINGS**

APPENDIX C: **LOAD BACKUP PLANNING CRITERIA**

APPENDIX D: **LETTERS OF COMMENT**

APPENDIX E: **REVENUE REQUIREMENTS ANALYSIS - electronic & hard copy**

BRITISH COLUMBIA UTILITIES COMMISSION

ORDER NUMBER C-XX-08

SIXTH FLOOR, 900 HOWE STREET, BOX 250
VANCOUVER, B.C. V6Z 2N3 CANADA
web site: http://www.bcuc.com

TELEPHONE: (604) 660-4700
BC TOLL FREE: 1-800-663-1385
FACSIMILE: (604) 660-1102

IN THE MATTER OF
the Utilities Commission Act, R.S.B.C. 1996, Chapter 473

and

An Application by FortisBC Inc.
for a Certificate of Public Convenience and Necessity
for the Benvoulin Substation Project

BEFORE: XXXX, Commissioner XXXX, 2008

O R D E R

WHEREAS:

A. On September DD, 2008 FortisBC Inc. ("FortisBC") applied (the "Application") to the British Columbia Utilities Commission (the "Commission") for a Certificate of Public Convenience and Necessity ("CPCN") for the Benvoulin Substation Project (the "Project"); and

B. FortisBC is proposing the Project as the preferred solution to meet load growth and relieve capacity constraints in the south/central Kelowna area; and

C. The Project has an estimated capital cost of approximately $17.7 million and includes the construction of a new substation and the transmission and distribution egress necessary to connect the substation into the existing network; and

D. The Project is scheduled to commence in the first quarter of 2009 and to be completed by the end of 2010; and

E. By Order No. G-xx-08, the Commission established a Written Public Hearing for the regulatory review of the Application; and

F. The XXXX filed final submissions on the Project; and

BRITISH COLUMBIA UTILITIES COMMISSION

ORDER NUMBER C-XX-08

G. The FortisBC Reply Submission dated MONTH XX, 2008 completed the written review process; and

H. The Commission Panel has considered the Application and has determined that the Project is in the public interest and that a CPCN should be issued to FortisBC for the Benvoulin Substation Project.

NOW THEREFORE pursuant to Sections 45 and 46 of the Utilities Commission Act, the Commission orders as follows:

1. A Certificate of Public Convenience and Necessity is granted to FortisBC for the Benvoulin Substation Project as set out in the Application and described in the Decision that is issued concurrently with this Order.

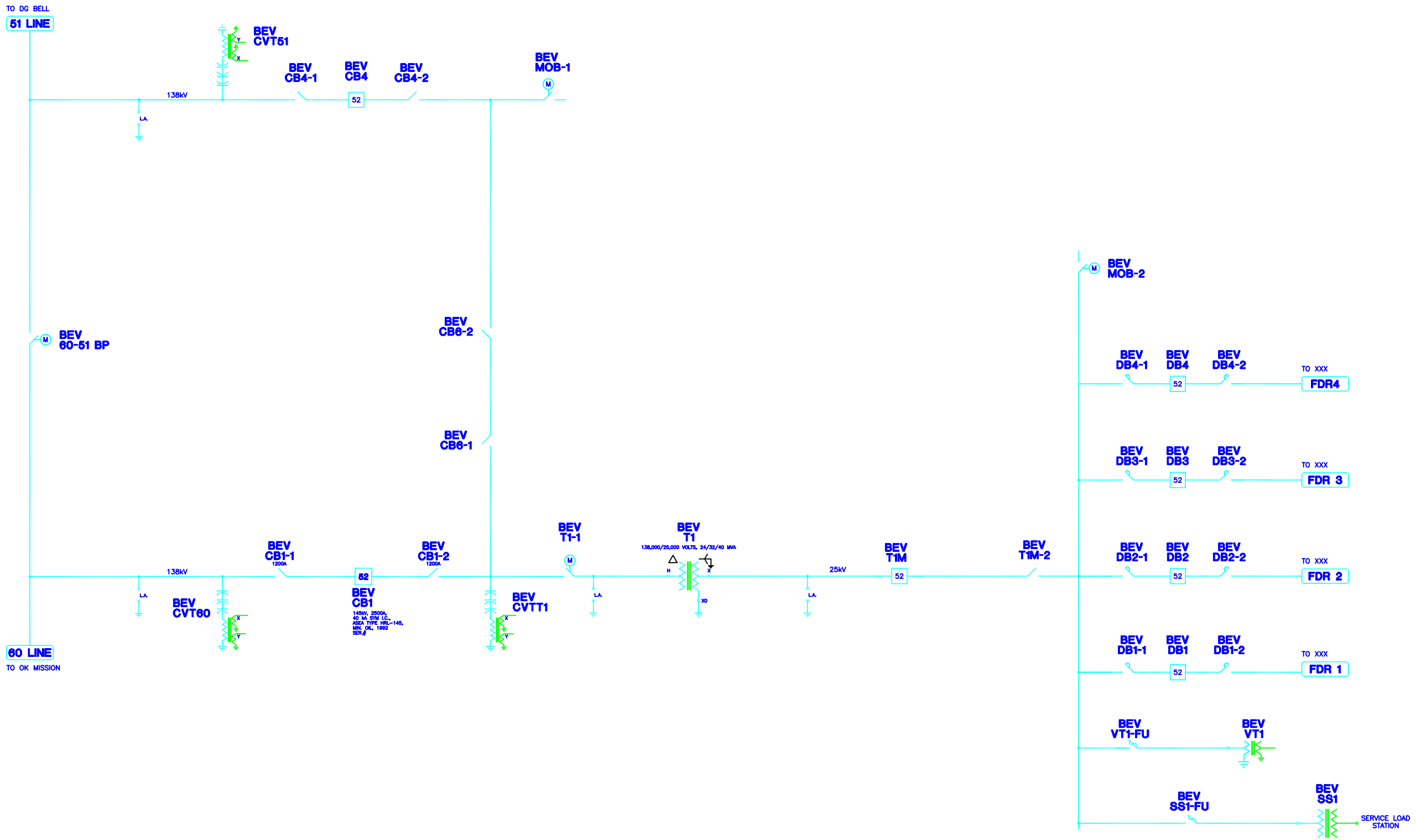
2. FortisBC will file with the Commission quarterly progress reports on the Benvoulin Substation Project schedule and costs, followed by a final report on completion of the Project.

DATED at the City of Vancouver, in the Province of British Columbia, this XX day of Month 2008.

BY ORDER

Original signed by:

XXXXXXX
Commissioner



REVISIONS	REV	DATE	BY	CHECKED	DESCRIPTION	REVISION APPROVAL	DATE
	4						
	3						
	2						
	P1	SEP/08	RWP	DFS	STATION 3 LETTER DESIGNATION CHANGED TO "BEV"		

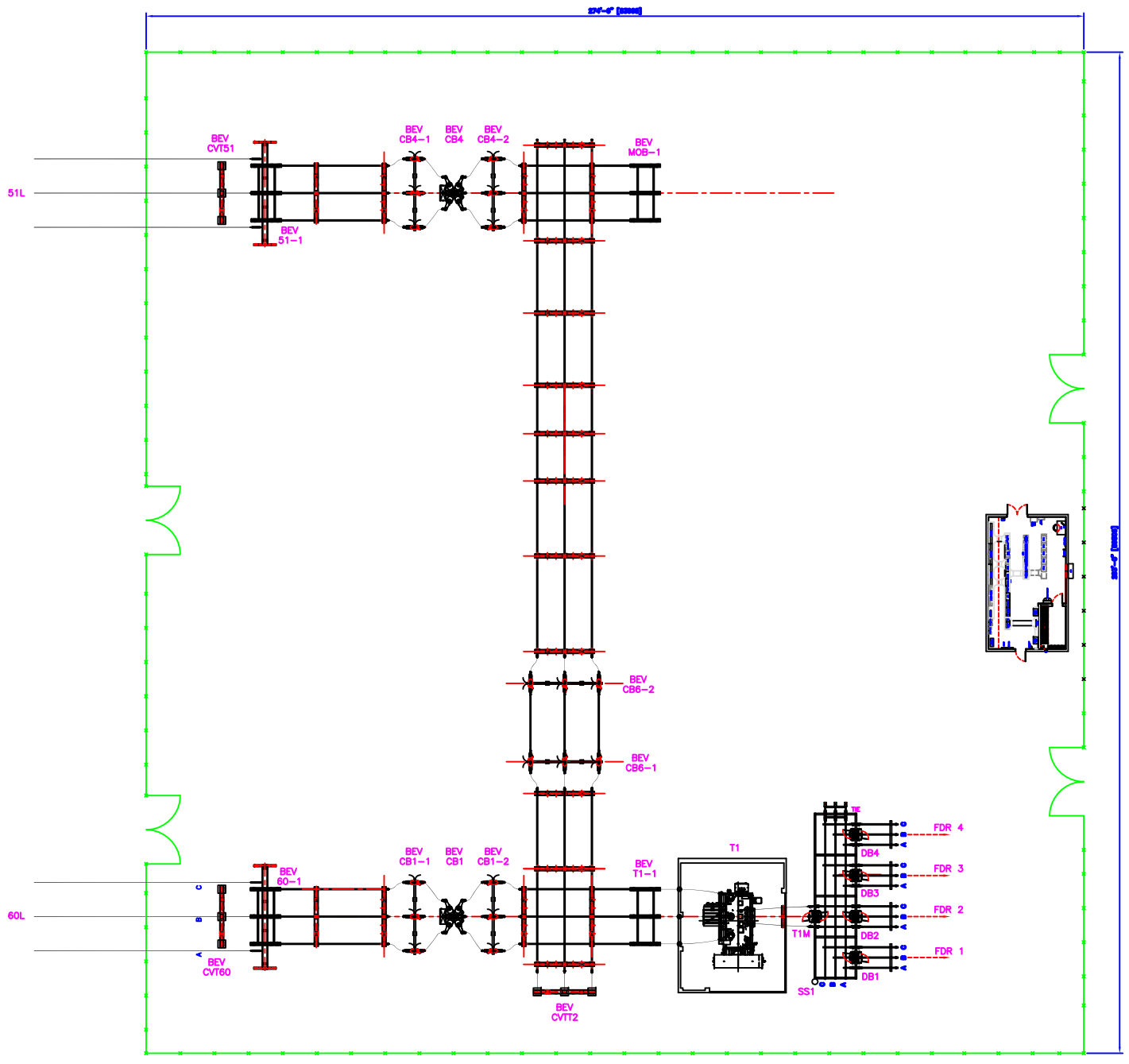
DRAWN BY: RWP — SEP/08
DESIGNED BY: DFS
CHECKED BY:
APPROVALS: ELEC | CIVIL | MANAGEMENT

FORTISBC

DIVISION	OKANAGAN
DEPARTMENT	PROTECTION-CONTROL
LOCATION	BENVOULIN SUBSTATION
TITLE	SINGLE LINE DIAGRAM

SCALE: NONE — SCALE FACTOR: 1.25

DRAWING NUMBER	REVISION
3-317-SLD	P1



REVISIONS								
4								
3								
2								
P1	SEP/08	RWP	DFS	STATION 3 LETTER DESIGNATION CHANGED TO "BEV"				
REV	DATE	BY	CHECKED	DESCRIPTION	REVISION APPROVAL	DATE		

DRAWN BY: RWP	SEP/08		
DESIGNED BY: DFS			
CHECKED BY:			
APPROVALS			
ELEC	CIVIL	MANAGEMENT	

FORTISBC

DIVISION	OKANAGAN
DEPARTMENT	TRANSMISSION-DISTRIBUTION
LOCATION	BENVOULIN SUBSTATION
TITLE	GENERAL ARRANGEMENT

SCALE: 1" = 20' SCALE FACTOR: 240

DRAWING NUMBER	REVISION
317-GA	P1

APPENDIX H: LOAD BACKUP PLANNING CRITERIA

The system planning criteria of FortisBC was published in November 2004 in the Company's Transmission and Distribution System Development Plan, Appendix E, Section 3.2.2. It is presented below for the purpose of clarity.

80% Load Back Up Criterion for Single Transformer Substations:

For loss of the transformer in a single transformer substation, 80% of the peak load normally supplied by that transformer must be able to be supplied from the remaining distribution feeders and substations in the area. This is also referred to as the 80% back-up criterion.

100% Load Back Up Criterion for Multi Transformer Substations:

For loss of a single transformer in a multi transformer substation, 100% of the peak load must be able to be supplied from the remaining substation transformer or a combination of the remaining station transformer and other supplies in the area under consideration.

From: Gibney, Bob
Sent: Wednesday, July 09, 2008 9:00 AM
To: Leyland, Michael
Subject: FW: Letter of Support for Benvoulin Substation

From: John Vos [mailto:jvos@kelowna.ca]
Sent: Wednesday, July 09, 2008 8:46 AM
To: Gibney, Bob
Subject: Letter of Support for Benvoulin Substation

BOB,
My apologies for not responding to your letter requesting support for the new substation.

While personally I understand and support your reasons for the Gravel Pit site, I am not in a position on behalf of the City to support this location recognizing it will have to go thru rezoning process etc before formal City approval. Since that is a public process that goes thru City Council I can't write the letter you are looking for.

Sorry.....

John

Learn. Practice. Play.

May 29, 2008

Tee to Green
3810 Casorso Road
Kelowna
British Columbia
V1Y 8R3
Telephone:
(250) 860-3850
Facsimile:
(250) 860-3860
www.eaglequestgolf.com

Mr. Bob Gibney,

This letter is to show our support to locate the Fortis Substation at the old gravel pit on Casorso Rd. rather than the location next to the Eaglequest Driving Range.

Sincerely,

Cindy Lewthwaite
Manager
Eaglequest Kelowna
3810 Casorso Rd.
860-3850

From: Rampone Farms [mailto:ramponefarms@shaw.ca]
Sent: Saturday, April 19, 2008 7:41 PM
To: Sinclair, Corey
Subject: benvoulin substation

Mr. Corey Sinclair
Fortis BC

Dear Mr. Sinclair,

I am a resident of the proposed Benvoulin substation. I am writing you to say Fortis BC has my full support to locate the substation in the Casorso gravel pit.

To make the gravel pit the preferred location was an excellent choice for the future of Kelowna. It does not use up valuable farm land and is not highly visible. All at a very little price difference. Thank you to the entire Fortis BC staff for being so open to the public.

Signed,

Michael Rampone
1-3609 Gordon Dr.
Kelowna B.C.
ramponefarms@shaw.ca

April, 10, 2008

Mr.Corey Sinclair
Manager, Stakeholder Relations
Regulatory Affairs
Fortis BC Inc.
1290 Esplanade PO Box 130
Trail BC
V1R 4L4

Re: Proposed Benvoulin Substation

Dear Mr. Sinclair,

As a resident and farmer in the area of the proposed Benvoulin Substation, I would like to state my support of the site that is located in the existing gravel pit. I believe that this a site that you can not see from the road, has room for expansion and is the best suitable for long term growth of the area.

This site does not use land that is suitable for primary food which makes this gravel pit site the best choice.

I would like to commend Fortis BC for making the gravel pit the preferred site. I think this shows very impressive corporate responsibility to the agriculture industry and to the long term growth of the City of Kelowna.

Yours truly,

Domenic Rampone
#2-3609 Gordon Dr
Kelowna BC
V1W 4M8

Ph.cell - 215-3992

April, 10, 2008

Mr.Bob Gibney
Fortis BC
Suite 100
1975 Springfield Rd
Kelowna BC
V1y 7V7

Re: Proposed Benvoulin Substation

Dear Mr. Gibney,

Our families are farmers in the area of the proposed Benvoulin Substation. I think that the location of this substation should be in the existing gravel pit on Casorso Rd. is the best spot for it as it is hidden from the road and does not use land that is good for primary food production .

This site I believe this is the best spot for the long term growth of the City of Kelowna.

Ida Russo
3616 Benvoulin Rd
Kelowna BC

Ida Russo

April, 10, 2008

Mr.Bob Gibney
Fortis BC
Suite 100
1975 Springfield Rd
Kelowna BC
V1y 7V7

Re: Proposed Benvoulin Substation

Dear Mr. Gibney,

As a resident in the area of the proposed Benvoulin Substation, I would like to state my support of the site that is located in the existing gravel pit.This is the best spot for it as it is hidden from sight of the general public and does not use up good farm land .

This site also has room for expansion and the land is not good to grow crops on..

Yours truly,

Lorni Russo
3616 Benvoulin Rd
Kelowna BC

Lorni Russo

-----Original Message-----
From: Dave Henshaw [mailto:dave.henshaw@ok.bc.ca]
Sent: Thursday, April 10, 2008 4:03 PM
To: Ward, Martin; MacLeod, Nancy
Subject: Fish, game club, substation

Hello;

Here is the letter from the club in support of the Site 7 location for Benvoulin substation. Also, the Jan. 31 letter is attached.

April 10. 2008

Martin:

It was nice seeing you again and meeting Nancy MacLeod, Al Clarke and Curtis Goriuk.

The Kelowna and District Fish and Game Club board of directors strongly supports location of the Benvoulin Substation at Site 7, adjacent to our lower shooting ranges.

Separately, I will deliver several open house questionnaires that board members filled out that also back Site 7.

Because the substation would be located next to a rifle range, the club suggests as a safety consideration that new fencing should be installed by Fortis along the common property line.

We also are keen to be able to access our property via the existing road that leads to the gravel pit. Traditionally, A.G. Appel Enterprises has used the road to get heavy equipment onto our lower ranges when we required the building of berms and the raising of gravel and earth backdrops to ensure range safety.

As I mentioned during our discussions Wednesday, the club is planning to erect a small home/classroom building on the lower range. To that end, we would like to find a way to gain power from one of your lines in the lower area. We are looking at a standard, 200-amp panel for the house/classroom.

Bringing in power from above would involve us needing primary cable for the longest run from near the clubhouse to a berm a good 500 feet away. From there, we could drop down to secondary wire to get to the house.

Last year, we paid $7,500 to get power to a storage building near the hall.
We are a non-profit society and are choking on our guesstimate of $20,000 to get to the panel in the new lower-range building by going overland from beside our hall..

I was pleased to tell the board that Mr. Clarke said we could expect some help with some used poles, suitable for carrying secondary wire.

When last we spoke, on Jan. 30, we discussed the fact you might have to remove some material (large rocks, etc.) to create a flat building site.
Because we plan to re-arrange some of our shooting ranges, we would welcome material that could be placed as bases for our berms. Because Fortis would not have to pay for considerable trucking and disposal fees, we suggest the utility pay for the equipment to place the material.

As to the Fortis pole that is on our property, would it be possible to respond in writing what Fortis has in mind regarding that situation? We are not keen to sell land, even the small parcel at that corner, that was bought 60 years ago.

Thanks for discussing our concerns Wednesday. We look forward to your response.

Dave Henshaw,
president,
Kelowna and District Fish and Game Club
470-0754 (w); 763-0106 (h)

Attached: letter of Jan. 31

Hello, Martin;

It was nice speaking with you at the open house Wednesday.
I think I have a fairly clear understanding of what likely will transpire.

As I mentioned, the fish and game club is keen to have new fencing along the common property if the Benvoulin substation is built at the Casoro site north of our property.
I can't at this time speak for our board, but it is likely we would welcome some of the material you might wish to remove to create a flat building site. We have preliminary plans to re-arrange some of our shooting ranges.

It would be nice if Fortis could provide equipment to place the material on our proposed berms, since Fortis would save considerable money by not having to truck it away and dispose of it elsewhere.

We also are keen on the common road access that you indicated. We occasionally have to get heavy equipment onto our ranges and have traditionally used the Casorso pit roads as a means of access.

It is my understanding the application would go to the BCUC at the end of March and word could be back about mid-May.

Thanks for your time Wednesday evening.

Dave Henshaw,
president,
Kelowna and District Fish and Game Club
470-0754 (w); 763-0106 (h)

BC SPCA
ADMINISTRATION CENTRE
1245 East 7th Avenue
Vancouver BC
V5T 1R1

T 604.681.7271
F 604.681.7022
1.800.665.1868

www.spca.bc.ca

BCSPCA

December 18, 2007

Ms. Ameera Shivji
Corporate Communications
FORTISBC
Suite 100
1975 Springfield Road
Kelowna, BC
V1Y 7V7

Dear Ms. Shivji:

Reference our telephone conversation, this letter advises that we do not have any concerns with having the installation of a power sub-station at the Tomato King property directly across the street from our shelter. We are therefore in agreement with the information provided by you, as follows:

- the power lines will be installed both underground and above ground,
- the above ground lines will be running along the existing corridors,
- the height of the towers will be both 15 and 30 feet.

If you want to discuss this further, please feel free to call me any time at 861-7722.

Yours truly,

Bernice Demchuk

Bernice Demchuk,
Manager, BC SPCA Kelowna Branch

Benvoulin Substation Project : Preferred Solution

Line No.		Dec-08	0 Dec-09	1 Dec-10	2 Dec-11	3 Dec-12	4 Dec-13	5 Dec-14	6 Dec-15	7 Dec-16	8 Dec-17	13 Dec-22	18 Dec-27	23 Dec-32	28 Dec-37	33 Dec-42
	Summary															
	Revenue Requirements															
1	Annual Operating Expense	0	0	20	141	144	147	150	153	157	160	178	198	220	245	272
2	Depreciation Expense	0	0	0	504	504	504	504	504	504	504	504	504	504	504	504
3	Carrying Costs	0	0	655	1,292	1,255	1,217	1,180	1,143	1,106	1,068	882	696	509	323	137
4	Income Tax	0	(66)	(380)	(17)	11	35	56	76	93	108	162	186	192	185	169
5	Yearly Revenue Requirement for Project	0	(66)	295	1,920	1,913	1,903	1,891	1,876	1,859	1,841	1,726	1,584	1,425	1,256	1,082
6	Net Present Value of Revenue Requirements @ 10% Discount Rate		**1,312**													
7	**Rate Impact**															
8	Load Growth	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
9	Cummulative Load Growth	2.00%	4.04%	6.12%	8.24%	10.41%	12.62%	14.87%	17.17%	19.51%	21.90%	34.59%	48.59%	64.06%	81.14%	99.99%
10	Forecast Revenue Requirements ($2008)	220,950	229,876	234,408	239,458	245,866	250,739	255,705	260,769	265,932	271,196	299,121	329,934	363,950	401,511	442,993
11	Incremental Revenue Requirements	0	(66)	361	1,625	(6)	(10)	(13)	(15)	(17)	(18)	(26)	(30)	(33)	(34)	(35)
12	Rate Impact	0.0%	0.0%	0.2%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
13	Cummulative Rate Impact	0.00%	-0.03%	0.13%	0.80%	0.80%	0.80%	0.79%	0.79%	0.78%	0.77%	0.73%	0.69%	0.64%	0.60%	0.56%
14	Discounted Yearly Revenue Requirement for Project		(66)	328	1,343	(5)	(7)	(8)	(8)	(9)	(9)	(7)	(5)	(4)	(2)	(2)
15	NPV of Project / Total Revenue Requirements		**0.05%**													
16	**Regulatory Assumptions**															
17	Equity Component	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%
18	Debt Component	60.00%	60.00%	60.00%	60.00%	60.00%	60.00%	60.00%	60.00%	60.00%	60.00%	60.00%	60.00%	60.00%	60.00%	60.00%
19	Equity Return	9.02%	8.91%	8.91%	8.91%	8.91%	8.91%	8.91%	8.91%	8.91%	8.91%	8.91%	8.91%	8.91%	8.91%	8.91%
20	Debt Return	6.34%	6.38%	6.38%	6.38%	6.38%	6.38%	6.38%	6.38%	6.38%	6.38%	6.38%	6.38%	6.38%	6.38%	6.38%
21	**Capital Cost**															
22	Unloaded Capital Cost	732	2,922	10,893												
23	Capitalized Overhead	94	154	637												
24	Direct Overhead	0	365	1,181												
25	AFUDC	3	110	589												
26	Total Construction Cost in Year (Less Land Cost)	830	2,670	13,301	0	0	0	0	0	0	0	0	0	0	0	0
27	Cumulative Construction Cost	830	3,500	16,801	16,801	16,801	16,801	16,801	16,801	16,801	16,801	16,801	16,801	16,801	16,801	16,801
28	Land	0	881	0												
29	Total Capital Cost in Year	830	3,551	13,301	0	0	0	0	0	0	0	0	0	0	0	0
30	Cumulative Capital Cost	830	4,381	17,682	17,682	17,682	17,682	17,682	17,682	17,682	17,682	17,682	17,682	17,682	17,682	17,682
31	Net Cost of Removal	0	0	46												
32	Total Construction Cost in Year	830	3,551	13,346	0	0	0	0	0	0	0	0	0	0	0	0
33	Additions to Plant in Service	0	0	17,682	0	0	0									
34	Cummulative Additions to Plant	0	0	17,682	17,682	17,682	17,682	17,682	17,682	17,682	17,682	17,682	17,682	17,682	17,682	17,682
35	CWIP	830	4,381	0	0	0	0	0	0	0	0	0	0	0	0	0
36	**Annual Operating Costs / (Savings)**															
37	Incremental Operating Costs (Savings)				20	20	21	21	22	22	23	25	27	30	33	37
38	Incremental Property Tax			20	121	123	126	129	132	134	137	153	170	190	211	235
39	Total Incremental Operating Costs (Savings)	0	0	20	141	144	147	150	153	157	160	178	198	220	245	272
40	**Depreciation Expense**															
41	Opening Cash Outlay	0	0	0	16,801	16,801	16,801	16,801	16,801	16,801	16,801	16,801	16,801	16,801	16,801	16,801
42	Additions in Year (Without Land-Since no Depreciation for Land)	0	0	16,801	0	0	0	0	0	0	0	0	0	0	0	0
43	Cumulative Total	0	0	16,801	16,801	16,801	16,801	16,801	16,801	16,801	16,801	16,801	16,801	16,801	16,801	16,801
44	Depreciation Rate - composite average	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
45	Depreciation Expense (Without Land)	0	0	0	504	504	504	504	504	504	504	504	504	504	504	504
46	**Net Book Value**															
47	Gross Property **(With land)**	0	0	17,682	17,682	17,682	17,682	17,682	17,682	17,682	17,682	17,682	17,682	17,682	17,682	17,682
48	Accumulated Depreciation	0	0	46	(458)	(962)	(1,466)	(1,970)	(2,474)	(2,978)	(3,482)	(6,003)	(8,523)	(11,043)	(13,563)	(16,083)
49	Net Book Value	0	0	17,728	17,224	16,720	16,216	15,712	15,208	14,704	14,200	11,679	9,159	6,639	4,119	1,599
50	**Carrying Costs on Average NBV**															
51	Return on Equity	0	0	316	623	605	587	569	551	533	515	425	335	246	156	66
52	Interest Expense	0	0	339	669	650	630	611	592	573	553	457	360	264	167	71
53	**Total Carrying Costs**	0	0	655	1,292	1,255	1,217	1,180	1,143	1,106	1,068	882	696	509	323	137
54	**Income Tax Expense**															
55	Combined Income Tax Rate	31.00%	30.00%	29.00%	27.50%	26.00%	26.00%	26.00%	26.00%	26.00%	26.00%	26.00%	26.00%	26.00%	26.00%	26.00%
56	**Income Tax on Equity Return**															
57	Return on Equity	0	0	316	623	605	587	569	551	533	515	425	335	246	156	66
58	Gross up for revenue (Return / (1- tax rate)	0	0	445	859	817	793	769	745	720	696	575	453	332	211	89
59	Income tax on Equity Return	0	0	129	236	213	206	200	194	187	181	149	118	86	55	23
60	**Income Tax on Timing Differences**															
61	Depreciation Expense	0	0	0	504	504	504	504	504	504	504	504	504	504	504	504
62	Capitalized OH - 100% deduction	94	154	637	0											
63	Less: Capital Cost Allowance	0	0	610	1,172	1,078	992	913	840	772	711	468	309	203	134	88
64	Total Timing Differences	(94)	(154)	(1,247)	(668)	(574)	(488)	(409)	(336)	(268)	(207)	36	195	301	370	416
65	Gross up for tax (Total Timing Differences/(1-tax rate))	(137)	(220)	(1,757)	(921)	(776)	(659)	(552)	(453)	(363)	(279)	48	264	406	500	562
66	Income tax on Timing Differences	(42)	(66)	(509)	(253)	(202)	(171)	(144)	(118)	(94)	(73)	13	69	106	130	146
67	**Total Income Tax**	(42)	(66)	(380)	(17)	11	35	56	76	93	108	162	186	192	185	169
68	**Capital Cost Allowance**															
69	Opening Balance - UCC (Undepreciated Capital Cost)	0	0	0	14,648	13,477	12,398	11,407	10,494	9,655	8,882	5,854	3,858	2,543	1,676	1,105
70	Total Cash Outlay (includes salvage, excludes capitalized OH and AFUDC)	0	0	15,259	0	0	0	0	0	0	0	0	0	0	0	0
71	Subtotal UCC	0	0	15,259	14,648	13,477	12,398	11,407	10,494	9,655	8,882	5,854	3,858	2,543	1,676	1,105
72	Capital Cost Allowance Rate	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%
73	CCA on Opening Balance	0	0	0	1,172	1,078	992	913	840	772	711	468	309	203	134	88
74	CCA on Capital Expenditures (1/2 yr rule)	0	0	610	0	0	0	0	0	0	0	0	0	0	0	0
75	Total CCA	0	0	610	1,172	1,078	992	913	840	772	711	468	309	203	134	88
76	Ending Balance UCC	0	0	14,648	13,477	12,398	11,407	10,494	9,655	8,882	8,172	5,386	3,550	2,340	1,542	1,016

Benvoulin Substation Project : Alternative 1

Line No.		Dec-08	0 Dec-09	1 Dec-10	2 Dec-11	3 Dec-12	4 Dec-13	5 Dec-14	6 Dec-15	7 Dec-16	8 Dec-17	13 Dec-22	18 Dec-27	23 Dec-32	28 Dec-37	33 Dec-42
	Summary															
	Revenue Requirements															
1	Annual Operating Expense	0	0	20	141	144	147	150	153	157	160	178	198	220	245	272
2	Depreciation Expense	0	0	0	466	466	466	466	466	466	466	466	466	466	466	466
3	Carrying Costs	0	0	628	1,239	1,204	1,170	1,135	1,101	1,066	1,032	860	688	515	343	171
4	Income Tax	0	(68)	(346)	(5)	20	42	62	79	95	109	158	181	185	179	164
5	Yearly Revenue Requirement for Project	0	(68)	301	1,840	1,834	1,824	1,813	1,799	1,784	1,767	1,662	1,532	1,387	1,232	1,073
6	Net Present Value of Revenue Requirements @ 10% Discount Rate		**1,265**													
7	**Rate Impact**															
8	Load Growth	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
9	Cummulative Load Growth	2.00%	4.04%	6.12%	8.24%	10.41%	12.62%	14.87%	17.17%	19.51%	21.90%	34.59%	48.59%	64.06%	81.14%	99.99%
10	Forecast Revenue Requirements ($2008)	**220,950**	229,876	234,406	239,465	245,787	250,659	255,627	260,691	265,855	271,121	299,055	329,879	363,908	401,484	442,981
11	Incremental Revenue Requirements	0	(68)	369	1,539	(7)	(9)	(12)	(14)	(15)	(17)	(23)	(27)	(30)	(31)	(32)
12	**Rate Impact**	0.0%	0.0%	0.2%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
13	Cummulative Rate Impact	0.00%	-0.03%	0.13%	0.77%	0.77%	0.76%	0.76%	0.76%	0.75%	0.74%	0.71%	0.67%	0.62%	0.58%	0.55%
14	Discounted Yearly Revenue Requirement for Project		(68)	336	1,272	(5)	(6)	(7)	(8)	(8)	(8)	(7)	(5)	(3)	(2)	(1)
15	**NPV of Project / Total Revenue Requirements**		**0.04%**													
16	**Regulatory Assumptions**															
17	Equity Component	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%
18	Debt Component	60.00%	60.00%	60.00%	60.00%	60.00%	60.00%	60.00%	60.00%	60.00%	60.00%	60.00%	60.00%	60.00%	60.00%	60.00%
19	Equity Return	9.02%	8.91%	8.91%	8.91%	8.91%	8.91%	8.91%	8.91%	8.91%	8.91%	8.91%	8.91%	8.91%	8.91%	8.91%
20	Debt Return	6.34%	6.38%	6.38%	6.38%	6.38%	6.38%	6.38%	6.38%	6.38%	6.38%	6.38%	6.38%	6.38%	6.38%	6.38%
21	**Capital Cost**															
22	Unloaded Capital Cost	787	3,013	10,102												
23	Capitalized Overhead	103	159	591												
24	Direct Overhead	0	376	1,095												
25	AFUDC	4	130	583												
26	Total Construction Cost in Year (Less Land Cost)	894	2,263	12,371	0	0	0	0	0	0	0	0	0	0	0	0
27	Cumulative Construction Cost	894	3,156	15,528	15,528	15,528	15,528	15,528	15,528	15,528	15,528	15,528	15,528	15,528	15,528	15,528
28	Land	0	1,415	0												
29	Total Capital Cost in Year	894	3,678	12,371	0	0	0	0	0	0	0	0	0	0	0	0
30	Cumulative Capital Cost	894	4,571	16,943	16,943	16,943	16,943	16,943	16,943	16,943	16,943	16,943	16,943	16,943	16,943	16,943
31	Net Cost of Removal	0	0	46												
32	Total Construction Cost in Year	894	3,678	12,417	0	0	0	0	0	0	0	0	0	0	0	0
33	Additions to Plant in Service	0	0	16,943	0	0	0									
34	Cummulative Additions to Plant	0	0	16,943	16,943	16,943	16,943	16,943	16,943	16,943	16,943	16,943	16,943	16,943	16,943	16,943
35	CWIP	894	4,571	0	0	0	0	0	0	0	0	0	0	0	0	0
36	**Annual Operating Costs / (Savings)**															
37	Incremental Operating Costs (Savings)				20	20	21	21	22	22	23	25	27	30	33	37
38	Incremental Property Tax			20	121	123	126	129	132	134	137	153	170	190	211	235
39	Total Incremental Operating Costs (Savings)	0	0	20	141	144	147	150	153	157	160	178	198	220	245	272
40	**Depreciation Expense**															
41	Opening Cash Outlay	0	0	0	15,528	15,528	15,528	15,528	15,528	15,528	15,528	15,528	15,528	15,528	15,528	15,528
42	Additions in Year (Without Land-Since no Depreciation for Land)	0	0	15,528	0	0	0	0	0	0	0	0	0	0	0	0
43	Cumulative Total	0	0	15,528	15,528	15,528	15,528	15,528	15,528	15,528	15,528	15,528	15,528	15,528	15,528	15,528
44	Depreciation Rate - composite average	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
45	Depreciation Expense (Without Land)	0	0	0	466	466	466	466	466	466	466	466	466	466	466	466
46	**Net Book Value**															
47	Gross Property **(With land)**	0	0	16,943	16,943	16,943	16,943	16,943	16,943	16,943	16,943	16,943	16,943	16,943	16,943	16,943
48	Accumulated Depreciation	0	0	46	(420)	(886)	(1,352)	(1,818)	(2,283)	(2,749)	(3,215)	(5,544)	(7,873)	(10,202)	(12,532)	(14,861)
49	Net Book Value	0	0	16,988	16,523	16,057	15,591	15,125	14,659	14,193	13,728	11,398	9,069	6,740	4,411	2,082
50	**Carrying Costs on Average NBV**															
51	Return on Equity	0	0	303	597	581	564	547	531	514	498	415	332	249	166	82
52	Interest Expense	0	0	325	641	624	606	588	570	552	534	445	356	267	178	89
53	**Total Carrying Costs**	0	0	628	1,239	1,204	1,170	1,135	1,101	1,066	1,032	860	688	515	343	171
54	**Income Tax Expense**															
55	Combined Income Tax Rate	31.00%	30.00%	29.00%	27.50%	26.00%	26.00%	26.00%	26.00%	26.00%	26.00%	26.00%	26.00%	26.00%	26.00%	26.00%
56	**Income Tax on Equity Return**															
57	Return on Equity	0	0	303	597	581	564	547	531	514	498	415	332	249	166	82
58	Gross up for revenue (Return / (1- tax rate)	0	0	426	824	785	762	740	717	695	672	560	448	336	224	111
59	Income tax on Equity Return	0	0	124	227	204	198	192	186	181	175	146	116	87	58	29
60	**Income Tax on Timing Differences**															
61	Depreciation Expense	0	0	0	466	466	466	466	466	466	466	466	466	466	466	466
62	Capitalized OH - 100% deduction	103	159	591	0											
63	Less: Capital Cost Allowance	0	0	560	1,076	990	910	838	771	709	652	430	283	187	123	81
64	Total Timing Differences	(103)	(159)	(1,151)	(610)	(524)	(445)	(372)	(305)	(243)	(186)	36	183	279	343	385
65	Gross up for tax (Total Timing Differences/(1-tax rate))	(149)	(226)	(1,621)	(841)	(708)	(601)	(502)	(412)	(328)	(252)	49	247	377	463	520
66	Income tax on Timing Differences	(46)	(68)	(470)	(231)	(184)	(156)	(131)	(107)	(85)	(65)	13	64	98	120	135
67	**Total Income Tax**	(46)	(68)	(346)	(5)	20	42	62	79	95	109	158	181	185	179	164
68	**Capital Cost Allowance**															
69	Opening Balance - UCC (Undepreciated Capital Cost)	0	0	0	13,444	12,369	11,379	10,469	9,632	8,861	8,152	5,373	3,541	2,334	1,538	1,014
70	Total Cash Outlay (includes salvage, excludes capitalized OH and AFUDC)	0	0	14,005	0	0	0	0	0	0	0	0	0	0	0	0
71	Subtotal UCC	0	0	14,005	13,444	12,369	11,379	10,469	9,632	8,861	8,152	5,373	3,541	2,334	1,538	1,014
72	Capital Cost Allowance Rate	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%
73	CCA on Opening Balance	0	0	0	1,076	990	910	838	771	709	652	430	283	187	123	81
74	CCA on Capital Expenditures (1/2 yr rule)	0	0	560	0	0	0	0	0	0	0	0	0	0	0	0
75	Total CCA	0	0	560	1,076	990	910	838	771	709	652	430	283	187	123	81
76	Ending Balance UCC	0	0	13,444	12,369	11,379	10,469	9,632	8,861	8,152	7,500	4,943	3,258	2,147	1,415	933