

Greg Dureault

From: Greg Dureault <greg@dureault.com>
Sent: Tuesday, October 18, 2016 12:10 PM
To: blair.choquette@fraserhealth.ca
Subject: FW: Anmore Green Estates
Attachments: October 6th 2016 Letter to Anmore - Re Anmore Green Estates.pdf; 9-15-16 Letter to Port Moody re Anmore Agreeen Estates.pdf; 13-10-23 Letter from School Dist 43 with Keystone Engineering Report.pdf; 2008-01-04 Metro Van GVSDD re Anmore joining GVSDD.pdf; 16-0616 Anmore Sanitary Sewer Design.pdf; ANMORE GREEN SANITARY SEWER - COST ESTIMATE.pdf; Google Earth - 400 ft view of Site.pdf; Feb 24 16 Pitcures of Septic Field Site Apparent Breakout.pdf; October 12 2016 Letter to Anmore and Port Moody re AGE Septic Field Failure etc.pdf; Metro Van GVRD and D minutes on Eagle Mnt School approval - Conditional on Anmore joining.pdf

October 18, 2016

Fraser Health Authority

Abbotsford, B.C.

Attention: Mr. Blair Choquette

Dear Blair,

Further to our telephone conversation today please see the attachments in support of my advice to you.

I would be pleased to have the opportunity to further discuss this matter with yourself and Mr. Hamelin at your convenience.

I look forward to hearing back from you.

Best Regards,

Greg Dureault
Barrister & Solicitor
8652 Commerce Court
Burnaby, B.C.
V5A 4N6

Tel. (604) 338-8820
Fax (604) 336-5460
Email greg@dureault.com

From: Greg Dureault [mailto:greg@dureault.com]
Sent: Thursday, October 6, 2016 11:45 AM
To: luke.guerin@anmore.com

Cc: rpuche@portmoody.ca
Subject: Anmore Green Estates

October 6, 2016

VILLAGE OF ANMORE
2697 Sunnyside Road,
Anmore, B.C.
V3H 5G9

Attention: Mr. Luke Guerin
Operations Superintendent

Dear Sirs & Mesdames:

Re: Anmore Green Estates ("AGE"); Drainage relating to lands subdivided by Strata Plan LMS3080 (the "Strata Lands") affecting the Eagle Mountain Middle School (the "School") Development Site (Lot 2 Plan BCP5107 and Lots 4 and 5 Plan 1MP40733, all of Section L6 Township 39 New Westminster District) (the "School Site") owned by The Board of Education of School District No. 43 (Coquitlam)

Please see attached.

Regards,

Greg Dureault
Barrister & Solicitor
8652 Commerce Court
Burnaby, B.C.
V5A 4N6

Tel. (604) 338-8820
Fax (604) 336-5460
Email greg@dureault.com

Greg Dureault

Barrister & Solicitor

8652 Commerce Court

Burnaby, B.C. V5A 4N6

Tel. (604) 338-8820

*denotes personal law corporation

Email greg@dureault.com

10/6/2016

By Email, and Hand Delivery

VILLAGE OF ANMORE

2697 Sunnyside Road,

Anmore, B.C.

V3H 5G9

**Attention: Mr. Luke Guerin
Operations Superintendent**

Dear Sirs & Mesdames:

Re: Anmore Green Estates ("AGE"); Drainage relating to lands subdivided by Strata Plan LMS3080 (the "Strata Lands") affecting the Eagle Mountain Middle School (the "School") Development Site (Lot 2 Plan BCP5107 and Lots 4 and 5 Plan 1MP40733, all of Section L6 Township 39 New Westminster District) (the "School Site") owned by The Board of Education of School District No. 43 (Coquitlam)

Luke I am writing to you further to our letter of September 15, 2016 to Robinson Puche at the City of Port Moody with reference to the above subject matter. A copy of that letter along with the various attachments is enclosed for you.

We understand that Robinson has been in email communication with you or someone on your staff last week, and in our conversation yesterday it became apparent that we should bring this matter to your direct attention. Please be advised that we are willing to pay for any reasonable cost of Anmore's engineering staff time on this matter given the importance of resolving the apparent serious health hazard to the School Site emanating from the septic field failure of the Strata Lands. We ask that you advise the undersigned if that is a requirement for Anmore to consider this matter by email or telephone call at your convenience. We believe that Port Moody cannot proceed without concurrence of Anmore to resolve this matter. The purpose of this letter is to

respectfully request your assistance, and to work together with Port Moody to bring this matter to a close.

As you will note from my letter to Robinson, R.F. Binnie & Associates Ltd. were hired to provide a Sanitary Sewer Design for connecting the AGE residents to the City sewer system. The design and a cost estimate are attached.

The proposed project is to abandon and remove the existing septic system and be replaced with a new sanitary sewer system. The proposed sanitary sewer is to be connected to an existing downstream sanitary sewer system located on David Avenue in the City of Port Moody. The City's North Slope Sewer design appears to have anticipated an expansion of sewer service to the Anmore area. The 400mm sewer along Heritage Mountain Boulevard is apparently oversized and connects to the GVSD&D Port Moody Interceptor.

The existing sanitary sewer located within David Avenue allowance is under the jurisdiction of the City of Port Moody. Therefore, the design and construction of the proposed sanitary sewer system must be reviewed and approved by the City of Port Moody Engineering Department. This in turn requires a green light from Anmore. The scope of services performed for the sanitary sewer design included the following:

1. Completion of a topographic survey for the project site and preparation of a plan in CAD format.
2. Site visits to check for existing services.
3. Completion of sanitary sewer flow calculations.
4. Preparation of a civil base drawing showing the topographic survey and all existing underground services within the project site. The base plan also reflects the existing topographic survey.
5. Preparation of a detailed sanitary sewer plan and profile drawing.

The AGE septic drain field appears to be compromised. To date they have spent more on STP rehabilitations than it would appear to cost to connect to the City's sewer system.

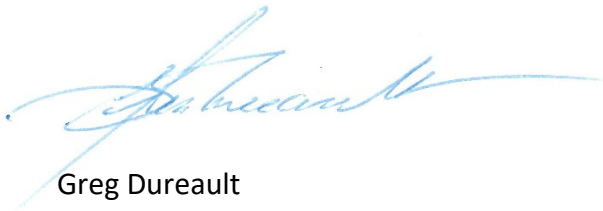
It is recognized that a definitive agreement is required between the City of Port Moody and Anmore based upon certain 2008 recommendations of the GVSD&D. As there has been little progress since 2008, we are seeking your assistance to request Port Moody engineering staff to confirm the apparent feasibility of R.F. Binnie & Associates' design

proposal. Under existing zoning, the subject area is perhaps capable of potential development of a further 14 bare land strata homes. The proposed limited sewerage area would on that basis serve approximately 65 residences in addition to existing services to the Eagle Mountain Middle School from School District 43.

As we asked Robinson, we are hoping you can help resolve this long outstanding matter, or point us in the right direction if you cannot do so.

We look forward to hearing from you, and thank you in advance for your consideration of this matter.

Best Regards,



Greg Dureault

GD/*

Cc Mr. Trevor Hamelin, ASCT
Environmental Protection Officer
Authorizations - South
(Office) 604-582-5275
(Fax) 604-584-9751
Hamelin, Trevor M ENV:EX [<mailto:Trevor.Hamelin@gov.bc.ca>]
(Without Previous Attachments)

List of Attachments Enclosed:

1. Letter dated September 15, 2016 to Robinson Puche
2. Letter dated October 23, 2013 from School District 43;
3. Report prepared by Keystone Environmental Ltd. dated August 13, 2013 (attached to Item#2);
4. Letter dated January 4, 2008 from Metro Vancouver to Anmore;
5. R.F. Binnie & Associates Ltd. Sanitary Sewer Design and Cost Estimate;
6. Google Earth 400 Ft Overview of Site, and adjacent Developments
7. February 24, 2016 Pictures of the relevant septic field site breakout and drainage to Eagle Mountain Middle School

Greg Dureault

Barrister & Solicitor

8652 Commerce Court

Burnaby, B.C. V5A 4N6

Tel. (604) 338-8820

*denotes personal law corporation

Email greg@dureault.com

9/15/2016

By Hand Delivery

PORT MOODY

100 Newport Drive

Port Moody, BC

V3H SC3

Attention: Mr. Robinson Puche

Infrastructure Engineering Development Services

Dear Sirs & Mesdames:

Re: Anmore Green Estates; Drainage relating to lands subdivided by Strata Plan LMS3080 (the "Strata Lands") affecting the Eagle Mountain Middle School (the "School") Development Site (Lot 2 Plan BCP5107 and Lots 4 and 5 Plan 1MP40733, all of Section L6 Township 39 New Westminster District) (the "School Site") owned by The Board of Education of School District No. 43 (Coquitlam)

Robinson I am writing to you further to our meeting on July 20, 2016 with reference to the above subject matter. You may recall that we discussed "Anmore Green Estates", which I advise is formally known as Strata LMS 3080 ("AGE"). It is an urban development located adjacent the Village of Anmore's southern boundary with the City.

For approximately 18 years 51 residential homes have been serviced by an aging sewage septic system under permit PE-04606 issued in or about 1997 by the Ministry of Environment, Lands and Parks.

In 2008 the firm of Arden Consulting Engineers Ltd. (“ACE”) was engaged to review the existing Sewage Treatment Plant (“STP”) and septic field for AGE. ACE was hired to make recommendations for retrofitting or replacement of the STP, and to assess the design parameters of the septic field concerning an apparent breakout occurring at a berm down gradient of the west septic field area.¹

ACE described the system was designed to service 39 two bedroom homes and 12 three bedroom homes for a maximum discharge rate of 61m³/day. Test data indicted an average flow rate of approximately 35 m³/day.²

ACE reported that the subsurface conditions of the septic field generally consisted of the following: 0-910mm Silty SAND, some gravel, brown, dense to very dense. Based on the maximum design flow of 61m³/day and the provided length of 616 lineal meters per field, ACE extrapolated that the design percolation rate should have been 10 minutes per inch for treatment plant effluent.

The average of the six percolation tests³ conducted was 50 minutes per inch, which falls above the 30 minutes per inch maximum allowable percolation rate under the ***Municipal Sewage Regulation*** for ground disposal. ACE observed field seepage occurring at 1m, and ponded water⁴ containing Fecal coliform concentrations of 990 CFU per 100mL occurring at a distance of approximately 3.5m from the south edge of the west septic field.

The field was established prior to construction of City’s “North Shore Community Park” sports complex, Heritage Woods Secondary School, and more recently the Eagle Mountain Middle School (collectively the “Development”). AGE’s septic drain field is situated immediately adjacent the Development. It is at high elevation, as much as 10 meters above the Development. Steep slopes from the septic field are now present and ground water from the field is likely draining directly toward the park and two schools.

¹ I am enclosing pictures of this area taken on February 24, 2016

² Effluent quality and flow data collected by Corix Utilities encompassing the operating period from March 2006 to September 2007 as well flow and effluent quality data from Orion Water Services from January to June of 2008

³ Three tests conducted in the west field and three tests conducted in the east field

⁴ Ponding was still evident during a dry time a year with no rainfall occurring during testing between July 3rd and 15th

I showed you the Contract of Purchase and Sale dated November 2, 2001 between the City and School District 43 (“Purchase Agreement”). At page 9, section 3.2(e) it provided: “(e) The Purchaser and the Vendor also acknowledge and agree that there may be some septic effluent leachate from adjacent lands within the Village of Anmore onto the Property and the parties shall act reasonably and cooperate with each other to minimize and control any such problems.” The reference to adjacent lands can only be interpreted as AGE’s septic drain field.⁵

The residents of AGE remain defensive that they have done their utmost to contain and treat sewage effluent since the establishment of their homes in 1998. Following the ACE report AGE’s STP was rehabilitated in approximately 2008 at a cost of approximately \$300,000. However, by letter dated October 23, 2013 the School District 43 has complained to AGE that:

- “In the course of preparing the School Site for construction, we have discovered a concrete catchment basin and three underground pipes on the School Site that appear to be draining water from the Strata Lands. That drainage is interfering with the construction of the School.”
- “Also, we enclose for your reference a copy of a report prepared by Keystone Environmental Ltd. dated August 13, 2013. The report indicates that water flowing onto the School Site is contaminated by e-coli and fecal coliforms, in excess of BC Water Quality Guidelines. It appears that there may be some discharge onto the School Site from the septic field on the Strata Lands.”

The Keystone Environmental Report concludes:

“It is recommended, based on bacteria values and future on-Site land use, that the Village of Anmore and Anmore Estates be made aware of the human health concerns, and implement measures to prevent the septic field discharge migrating on-Site prior to the Site school being operational and/or Site grounds accessible to the public. If this request does not receive

⁵ Under the Purchase Agreement the School District conditionally reserved the right (at page 10, section 4.1 (2)) to receive a “site profile referred to in paragraph 3.2 herein and a report dealing with the septic effluent leachate referred to in Section 3.2(d)”. That condition was to be performed by December 18, 2001, prior to construction of the Eagle Mountain Middle School.

an immediate response, it is recommended that the BC Ministry of Health be contacted to alert them of the potential public health threat.”⁶

Ongoing efforts have been pursued for connection to the GVSD&D sewer system and decommissioning of the existing STP and septic field as early as 2003. Apparently an agreement in principle to consider connection to the regional sewer system for a specified limited sewerage area was reached by the Village of Anmore in March 2007 and by the City of Port Moody in June, 2007. To my knowledge this has not changed. Anmore has requested that the GVSD&D accept connection of AGE residents to the regional sewerage system. This requires that Anmore become a member of the GVSD&D in order to extend the Fraser Sewage Area. As there are no regional sewer pipes in that area, the GVSD&D has previously concluded that Anmore is best served by reaching an agreement with Port Moody to allow a connection from AGE to the existing Port Moody neighborhood sewer system.

To the extent that there is an unresolved issue causing past delay as discussed with you, it is that while Anmore is a member of the GVRD it has yet to become a member of the GVSD&D despite a series of positive resolutions and affirmations by Anmore Council to so become a member.

As I expressed to you at our meeting, the AGE sewage connection is needed because of apparent STP’s failing or poor performance and lack of sustainable viable alternatives. R.F. Binnie & Associates Ltd. were hired. I am now able to provide their Sanitary Sewer Design for connecting the AGE residents to the City sewer system. The design and a cost estimate are attached.

The proposed project is to abandon and remove the existing septic system and be replaced with a new sanitary sewer system. The proposed sanitary sewer is to be connected to an existing downstream sanitary sewer system located on David Avenue in the City of Port Moody. The City’s North Slope Sewer design appears to have anticipated an expansion of sewer service to the Anmore area. The 400mm sewer along Heritage Mountain Boulevard is apparently oversized and connects to the GVSD&D Port Moody Interceptor.

⁶ Emphasis added, a copy of this report is attached

The existing sanitary sewer located within David Avenue allowance is under the jurisdiction of the City of Port Moody. Therefore, the design and construction of the proposed sanitary sewer system must be reviewed and approved by the City of Port Moody Engineering Department. The scope of services performed for the sanitary sewer design included the following:

1. Completion of a topographic survey for the project site and preparation of a plan in CAD format.
2. Site visits to check for existing services.
3. Completion of sanitary sewer flow calculations.
4. Preparation of a civil base drawing showing the topographic survey and all existing underground services within the project site. The base plan also reflects the existing topographic survey.
5. Preparation of a detailed sanitary sewer plan and profile drawing.

The AGE septic drain field appears to be compromised. To date they have spent more on STP rehabilitations than it would appear to cost to connect to the City's sewer system.

It is recognized that a definitive agreement is required between the City and Anmore based upon certain 2008 recommendations of the GVSD&D. As there has been little progress since 2008, I am seeking your assistance to determine the apparent feasibility of R.F. Binnie & Associates' design proposal. Under existing zoning, the subject area is perhaps capable of potential development of a further 14 bare land strata homes. The proposed limited sewerage area would on that basis serve approximately 65 residences in addition to existing services to the Eagle Mountain Middle School from School District 43.

I am hoping you can help resolve this long outstanding matter, or point me in the right direction if you cannot do so as we last discussed. At the least I hope that you will be able to review the Sanitary Sewer Design for feasibility purposes.

I look forward to hearing from you, and thank you in advance for your consideration of this matter.

Best Regards,



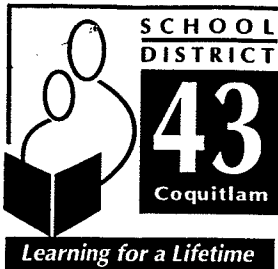
Greg Dureault

GD/*

Cc Mr. Trevor Hamelin, ASCT
Environmental Protection Officer
Authorizations - South
(Office) 604-582-5275
(Fax) 604-584-9751
Hamelin, Trevor M ENV:EX [<mailto:Trevor.Hamelin@gov.bc.ca>]

List of Attachments Enclosed:

1. Letter dated October 23, 2013 from School District 43;
2. Report prepared by Keystone Environmental Ltd. dated August 13, 2013;
3. Letter dated January 4, 2008 from Metro Vancouver to Anmore;
4. R.F. Binnie & Associates Ltd. Sanitary Sewer Design and Cost Estimate;
5. Google Earth 400 Ft Overview of Site, and adjacent Developments
6. February 24, 2016 Pictures of the relevant septic field site above Eagle Mountain Middle School



550 Poirier Street, Coquitlam, BC, Canada V3J 6A7 • Phone: 604-939-9201 • Fax: 604-939-7828

October 23, 2013

SENT VIA EMAIL TO info@quaypacific.com
ORIGINAL TO BE SENT BY MAIL

The Owners, Strata Plan LMS3080
c/o Quay Pacific Property Management Ltd.
535 Front Street
New Westminster, B.C.
V3L 1A4



Dear Sirs,

Re: Drainage relating to lands subdivided by Strata Plan LMS3080 (the "**Strata Lands**") affecting the Eagle Mountain Middle School (the "**School**") Development Site (Lot 2 Plan BCP5107 and Lots 4 and 5 Plan LMP40733, all of Section 16 Township 39 New Westminster District) (the "**School Site**") owned by The Board of Education of School District No. 43 (Coquitlam)

In the course of preparing the School Site for construction, we have discovered a concrete catchment basin and three underground pipes on the School Site that appear to be draining water from the Strata Lands. That drainage is interfering with the construction of the School.

The Village of Anmore has advised that the subject works are not part of the Village infrastructure and were not installed or inspected by the Village. Please provide us with copies of any drawings or specifications you have that show underground pipes on the Strata Lands, including any that continue on to the School Site.

Also, we enclose for your reference a copy of a report prepared by Keystone Environmental Ltd. dated August 13, 2013. The report indicates that water flowing onto the School Site is contaminated by e-coli and fecal coliforms, in excess of BC Water Quality Guidelines. It appears that there may be some discharge onto the School Site from the septic field on the Strata Lands. Please provide us with any drawings or specifications you have regarding the septic field, so that we can more fully investigate the source of the contamination.

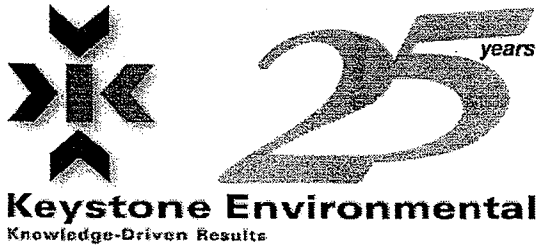
As you can appreciate, we want to resolve this issue as soon as possible. We look forward to your prompt response and to working with you to address these important issues. Mr. John West, Manager of Projects, will be your school district contact at Ph: 604-937-6786 Fax: 604-939-6400.

Yours sincerely,

SCHOOL DISTRICT NO. 43 (COQUITLAM)

Thomas Grant
Superintendent

- c. Board of Education
Mark Ferrari, Secretary Treasurer
Carey Chute, Assistant Superintendent
Frank Giampa, Assistant Secretary Treasurer – Facilities & Planning Services
Chris Nicolls, Assistant Secretary Treasurer – Corporate & Financial Services
John West, Project Manager



August 13, 2013

Mr. John West
Project Manager
Coquitlam School District No. 43
550 Poirier Street
Coquitlam, BC V3J 6A7

Dear Mr. West:

Re: Surface Water Runoff/Seepage Sampling Results
Heritage Middle School
Anmore, BC
File No. 10988

Keystone Environmental Ltd. (Keystone Environmental) was requested by Coquitlam School District No. 43 to conduct sampling of surface water runoff and groundwater seeps present at the Heritage Middle School development in the Village of Anmore, BC (the Site). The sampling was conducted in response to suspected septic field discharge being directed onto the Site from an adjacent property (Anmore Estates) located immediately to the east.

Keystone Environmental collected surface water samples from a ditch, catch basin and groundwater seeps that were present along the eastern edge of the Site, and in proximity to the adjacent septic field. The sampling events were conducted on March 26, April 29, May 15, and June 25, 2013 at different locations on the east side of the Site near the septic field, based on varied conditions during Site development and presence of surface water flow and/or seeps. The following table illustrates weather conditions on the stated sample dates.

Date	Weather	Precipitation (mm)
March 26, 2013	Sunny	0.0
April 29, 2013	Sunny	0.0
May 15, 2013	Overcast	0.2
June 25, 2013	Rainy	8.4

Samples were submitted for laboratory analysis of Extractable Petroleum Hydrocarbons, Total Extractable Hydrocarbons, Polycyclic Aromatic Hydrocarbons, Light and Heavy Extractable Petroleum Hydrocarbons, Dissolved Metals, Total Metals, Total Suspended Solids, pH, Total and Fecal Coliforms and *Escherichia coli* (*E. coli*).

Suite 320
4400 Dominion Street
Burnaby, British Columbia
Canada V5G 4G3

Telephone: 604 430 0671
Facsimile: 604 430 0672
info@KeystoneEnviro.com
KeystoneEnviro.com

Environmental Consulting
Engineering Solutions
Assessment & Protection

The following provides a description of sample locations and dates for each sample collected, as shown on the attached figure:

- SW13-A: surface water and seep collected from the base of a slope at the southern edge of the Site (March 26, 2013)
- CB IN 2: a storm drain pipe directed into the catch basin on the eastern edge of the Site from the southeast (April 29, 2013)
- CB IN: a storm drain pipe directed into the catch basin on the eastern edge of the Site from the northeast (April 29, 2013)
- CB OUT: water from the catch basin on the eastern edge of the Site (April 29, 2013)
- SW13-B: surface water collected south of the Site access road approximately 20 m northwest and up-gradient of the catch basin on the eastern edge of the Site (May 15, 2013)
- SEEP-A: groundwater seep collected from the excavation wall near the centre of the Site (May 15, 2013)
- SW13-C: surface water collected south of the Site access road approximately 10 m northwest and up-gradient of the catch basin on the eastern edge of the Site (May 15, 2013)
- CB: a second sample from the catch basin on the eastern edge of the Site. The water level was above both pipe inlet sample points (CB IN and CB IN 2) on this date (June 25, 2013).

Analytical results were compared against the BC Water Quality Guidelines for Primary- and Secondary-Contact Recreation. The criteria for primary-contact recreation (PCR) is applicable to waters where there is substantial risk of ingestion or intimate contact with eyes, ears, nose, mouth or groin. The secondary-contact recreation (SCR) criterion is applicable to waters where an individual would have limited direct contact, as well as water used to irrigate areas open to the public. Given future on-Site land use, analytical results were compared to the more conservative primary-contact recreation criteria, as primary school children are considered to have an increased likelihood for ingesting (hand to mouth) while playing in the schoolyard adjacent to the septic field. Furthermore, the primary-contact recreation criterion for bacteria is used as the safety limit to trigger beach and public area closures in Metro Vancouver.

E. coli and fecal coliforms were identified in samples collected on all occasions and at each location except for the groundwater seep (SEEP-A) sampled on May 25, 2013. Although elevated levels of fecal coliforms exceeded the PCR for surface water being directed from underground pipes directed into an on-Site catch basin from septic field to the east (CB IN 2 and CB IN), surface water samples collected from a ditch up-gradient of the catch basin on the eastern edge of the Site (SW13-B and SW13-C) contained bacteria levels that exceeded PCR criteria. The identified ditch surface water samples were collected at a similar grade to the septic field, and therefore, groundwater influence from the septic field on the ditch surface water flow is likely.

Based on the proximity to a popular recreational trail along the northern edge of the Site and directly up-gradient of samples collected from Site ditch, there is the potential that fecal matter from pets and wildlife utilizing the trail may also contribute to the microbiological exceedances. Measures to manage this overland flow from the recreational trail can be incorporated into natural drainage features in the final Site landscape and stormwater design plan to prevent

contact with the public/students. The management of surface and groundwater originating from the septic field area to the east of the Site is considered more complex and not considered to be the responsibility of the Client.

It is recommended, based on bacteria values and future on-Site land use, that the Village of Anmore and Anmore Estates be made aware of the human health concerns, and implement measures to prevent the septic field discharge migrating on-Site prior to the Site school being operational and/or Site grounds accessible to the public. If this request does not receive an immediate response, it is recommended that the BC Ministry of Health be contacted to alert them of the potential public health threat.

This report has been prepared solely for the internal use of Coquitlam School District No. 43 pursuant to the agreement between Keystone Environmental Ltd. and Coquitlam School District No. 43. By using this report, Coquitlam School District No. 43 agrees that they will review and use the report in its entirety. Any use which other parties make of this report, or any reliance on or decisions made based on it, are the responsibility of such parties. Keystone Environmental Ltd. accepts no responsibility for damages, if any, suffered by other parties as a result of decisions made or actions based on this report. I certify that the work described herein fulfills standards acceptable of a Professional Biologist.

If you should have any questions, please do not hesitate to contact us.

Sincerely,

Keystone Environmental Ltd.

ORIGINAL SIGNED BY

Jim Armstrong, M.Sc., R.P.Bio.
Chief Biologist

I:\10900-10999\10988-Heritage School\Investigations Analytical\10988 130813 Surface Water Sampling Letter.docx

ATTACHMENTS:

- Surface Water Analytical Results
- Figure 1 – Sample Location Plan

SURFACE WATER ANALYTICAL RESULTS

Table 1 (1 of 1)
 Surface Water Analytical Results
 Microbiology and Total Suspended Solids
 Heritage Mountain Middle School

Project No. 10988

Sample ID Lab Sample ID	RDL	SW-13-A FZ8681	CB IN 2 GG3219	CB IN GG3218	CB OUT GG3220	SW13-B GJ8360	SEEP-A GJ8339	CB GT1100	SW13-C GT1101
Date Sampled		26-Mar-13	29-Apr-13	29-Apr-13	29-Apr-13	15-May-13	15-May-13	25-Jun-13	25-Jun-13
E. coli	1	10	50	13	18	5100	<	290	2200
Fecal Coliforms	1	10	100	200	220	5100	<	300	2200
Total Coliforms	1	<	1100	1100	1400	43000	2	12000	12000
Total Suspended Solids (mg/L)	4	94.5	12.0	4.0	12.0	19.0	112	16	190

BCWQG PCR	BCWQG SCR
77*	385*
200*	n/g
n/g	n/g
n/g	n/g

NOTES:

All concentrations are in colony forming units per litre (CFU/L)

BCWQG British Columbia Water Quality Guidelines

PCR Primary-Contact Recreation

SCR Secondary-Contact Recreation

n/g No guideline for this constituent

< Less than reported detection limit

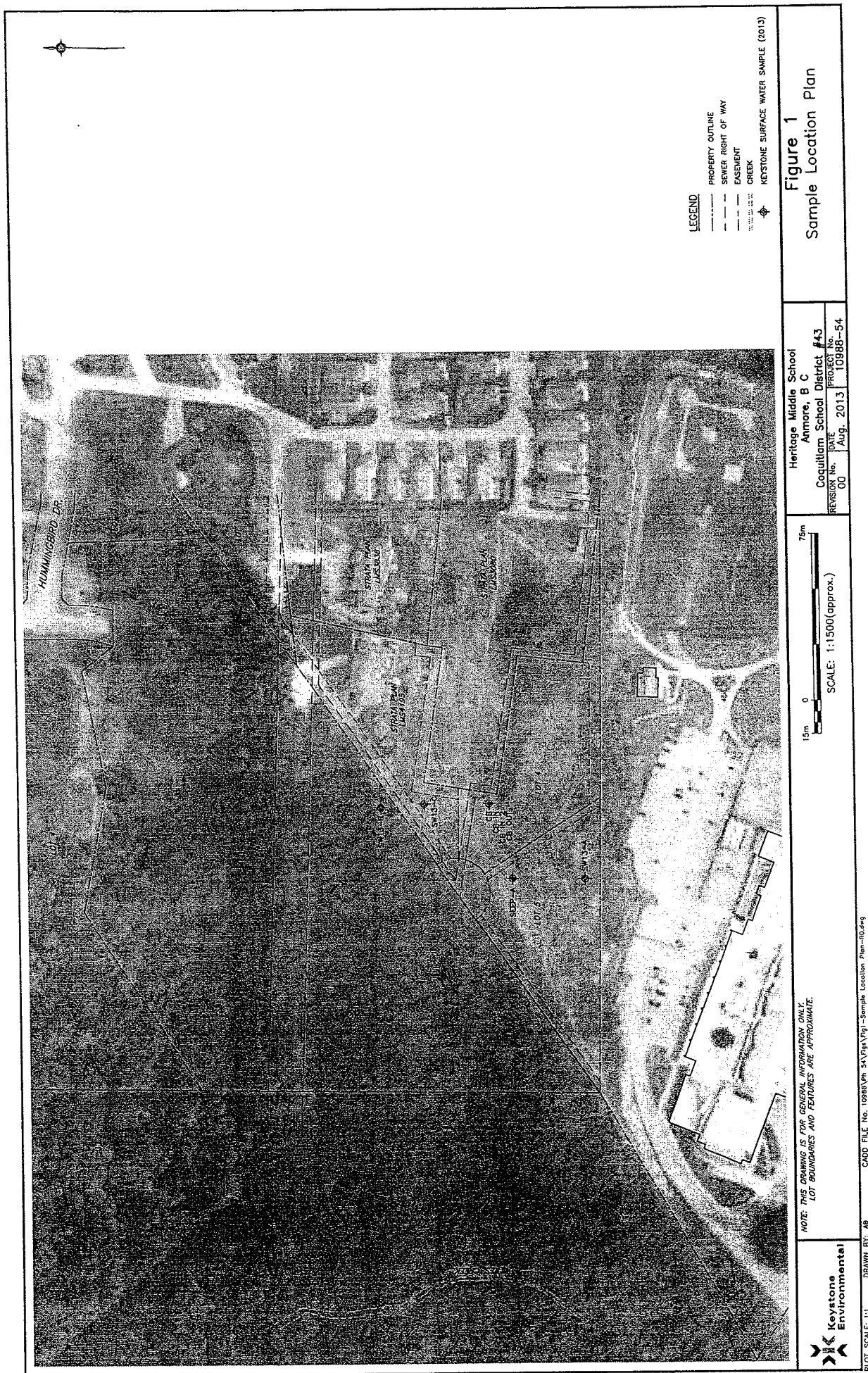
Bold Exceeds BCWQG (PCR) standard for this sample

Underlined Exceeds BCWQG (SCR) standard for this sample

* Standard should be compared with the geometric mean from at least 5 samples over a 30-day period

RDL Reported detection limit

FIGURE 1 – SAMPLE LOCATION PLAN





Policy & Planning Dept.
Tel. 604-432-6375 Fax. 604-436-6811

January 4, 2008

File No.: CP-16-01-ANM

Mayor Hal Weinberg
Village of Anmore
2697 Sunnyside Road
Anmore, BC V3H 5G9

Dear Mayor Weinberg:

Re: Process for the Village of Anmore to join the Greater Vancouver Sewerage and Drainage District (GVS&DD).

Thank you for your letter of November 5, 2007 requesting that Anmore Green Estates be permitted to connect to the regional sewer system. In order for Metro Vancouver to accommodate your council resolution, the GVS&DD Board must approve expansion of the Fraser Sewerage Area to include the subject properties. As the Fraser Sewerage Area can only be expanded into member municipalities, we recommend the following steps to complete the membership process.

- 1) As the GVS&DD does not own or operate a regional sewer main in the area, the Village of Anmore is best served by entering into an agreement with the City of Port Moody to accept sewage flows.
- 2) Once there is an agreement between Anmore and Port Moody, the GVS&DD Board can consider Anmore's membership and expand the Fraser Sewerage Area boundary.
- 3) The Village of Anmore will also need to complete an entry agreement with the GVS&DD.

A report will be prepared for the February 2008 Waste Management Committee recommending that the GVS&DD expand the Fraser Sewage Area to include the Village of Anmore once the three steps listed above are complete.

Your letter also referenced other potential Anmore properties for inclusion in the Fraser Sewerage Area. We will arrange a meeting with Anmore staff and the developers of the Imperial Oil Properties to determine the next steps in potential future utility servicing of that site.

Should you have any questions, please contact Ed von Euw at 604 436 6900.

Yours truly

Toivo Allas
Manager, Policy and Planning
TA/EvE/ms

February 24, 2016, a relatively sunny day pictures taken at the south edge of the west septic field:

















April 18 2015

400 Ft View

Legend

- 1300 David Ave
- Feature 1

AGE Homes

AGE Septic
(Approx.)

Site
Pictures

Eagle Mtn.
School

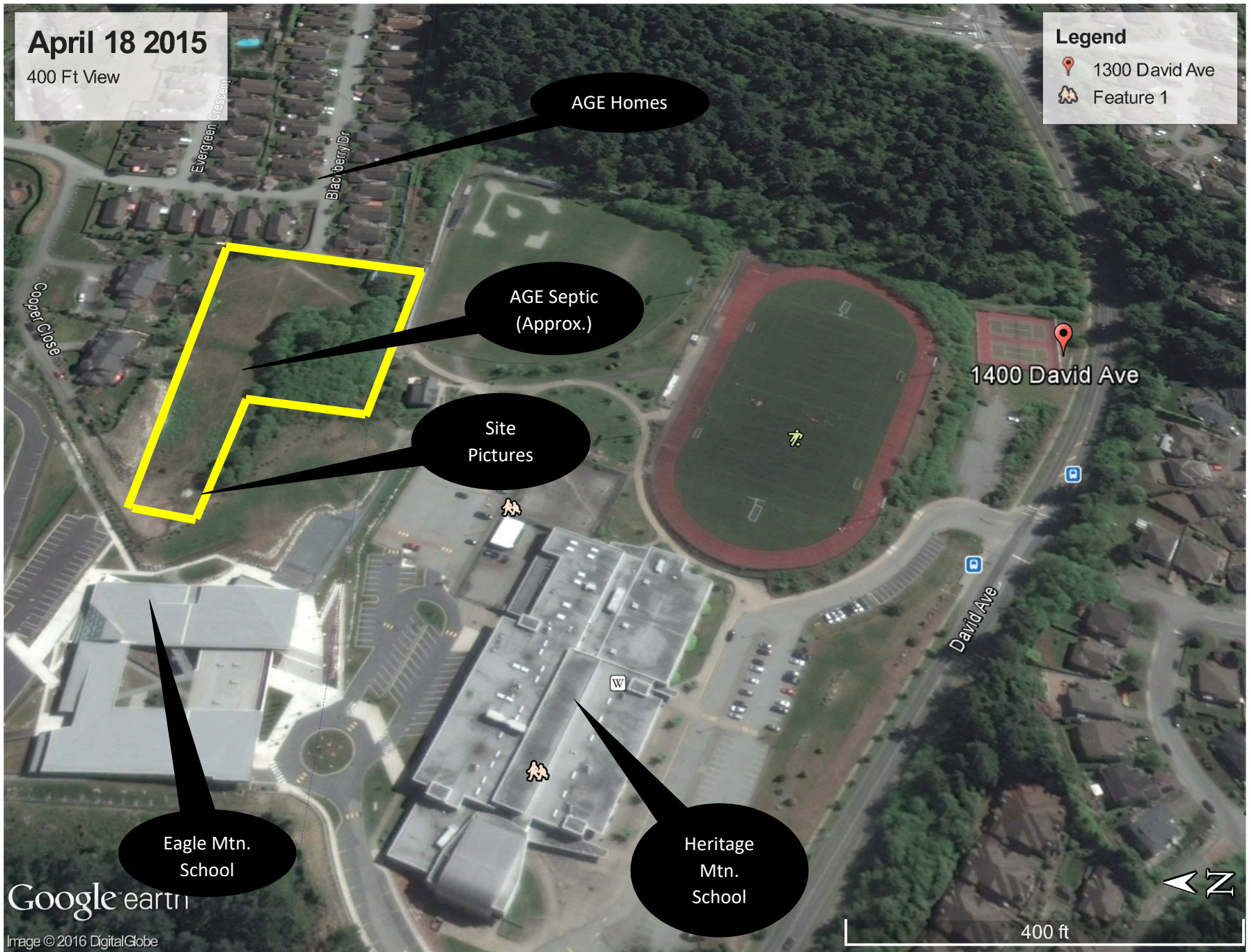
Heritage
Mtn.
School

1400 David Ave

Google earth

Image © 2016 DigitalGlobe

400 ft





To: Utilities Committee

From: Fred Nenninger, Manager Policy Planning Analysis & WWTP Upgrade

Date: May 2, 2014 Meeting Date: May 13, 2014

Subject: **Village of Anmore's Request for Sewer Service for Eagle Mountain Middle School**

RECOMMENDATION

That:

- a) Notwithstanding the GVS&DD Board's November 10, 2010 resolution that required the Village of Anmore to become a member of the GVS&DD in order to receive regional sewerage services for the Eagle Mountain Middle School, in recognition of the unique present circumstances, the GVS&DD Board approves regional sewerage services for the Eagle Mountain Middle School even though the Village of Anmore is not a member of the GVSⅅ
 - b) The GVS&DD Board approves an amendment to the Fraser Sewerage Area boundary so that the building footprint only of the Eagle Mountain Middle School is located within the Fraser Sewerage Area; and
 - c) The GVS&DD Board directs staff to negotiate and enter into a 25 year Service Agreement with the Village of Anmore and the City of Port Moody under which GVS&DD will provide regional sewerage services to Eagle Mountain Middle School by way of Port Moody's municipal sewer system, on terms that will include a 20% surcharge for service to a non-member municipality.
-

PURPOSE

This report considers the request by the Village of Anmore (Anmore) to obtain regional sewerage services for the new Eagle Mountain Middle School pursuant to a Service Agreement rather than by way of membership within the GVS&DD.

BACKGROUND

Eagle Mountain Middle School (the Middle School) is located at 110 Dogwood Drive, Anmore. It is immediately adjacent to Heritage Woods Secondary School (the Secondary School), which is located within Port Moody and is serviced by the Port Moody sewer system (Attachment 1).

In October 2009, Anmore council passed a resolution stating: *"That the Village of Anmore is seeking inclusion within the GVS&DD in order to connect a proposed middle school to the regional sewer system"*.

To date, Metro Vancouver has only provided regional sewerage services to GVS&DD member municipalities and only with respect to those properties that are located within one of the GVS&DD

sewerage areas. Accordingly, on November 10, 2010 the GVS&DD Board passed the following resolution (Attachment 2):

That the Board support the Village of Anmore's request to expand the Fraser Sewerage Area to accept sewage from the proposed School District 43 middle school site for the building footprint only subject to:

- i. *The Village of Anmore becoming a member of the GVSⅅ*
- ii. *The Village of Anmore, the City of Port Moody and the GVS&DD negotiating and concluding an agreement to address the construction and connection of the Village of Anmore's school service sewer to the GVS&DD system via the City of Port Moody's sewers; and*
- iii. *The Village of Anmore demonstrating that, in accordance with the Integrated Liquid Waste and Resource Management Plan, the regional sewer system should be extended to accommodate the school due to environmental or public health reasons that warrants extension beyond the urban containment boundary.*

The overall process was delayed while School District 43 considered other locations for the Middle School. In September 2011, Anmore confirmed that the School District had decided to proceed with the Anmore location and the process resumed.

The Middle School intends to connect to the Secondary School's sewer system and then to the Port Moody municipal sewer system. A screening assessment determined that an on-site system was not feasible at the Middle School due to poor soil conditions, steep slopes, and insufficient available space for an effluent dispersion field. Technically, the only other option would be to truck the sewage to Annacis Island Waste Water Treatment Plant at a cost estimated to be in the order of \$500,000 per year. For these reasons, School District 43 asked Anmore to apply to Metro Vancouver for regional sewer service for the Middle School (refer to Attachment 2).

At a meeting held on April 8, 2014 between the Chair of the GVS&DD Board, the Chair of the Metro Vancouver Utilities Committee, the Mayor of Anmore, the Mayor of Port Moody and their respective staff, Anmore requested that the GVS&DD reconsider its condition that regional sewerage service would only be provided for the Middle School if Anmore became a member of the GVS&DD. During the meeting Anmore confirmed that it is only seeking regional sewerage service for the Middle School and has no plans to connect any other properties within the municipality to the regional system.

Construction of the Middle School is underway and School District 43 is aiming for occupancy in June 2014 and to be open to students in September 2014.

DISCUSSION

Anmore is a small rural village with a current population of about 2,400 and an estimated build-out population of 4,000 by 2041. Anmore's draft 2014 OCP states that: "Anmore is identified in the RGS as a rural community and is not expected to absorb a large proportion of regional population growth (0.2%), or be connected to regional services, as it is outside the urban containment boundary." Anmore has a bylaw requiring on-site sewer systems for properties within its

jurisdiction. Anmore does not own any municipal sewer infrastructure and has advised that it has no plans to own or operate any sewer infrastructure in the future.

GVS&DD Cost Apportionment Bylaw

If Anmore was to become a member of the GVS&DD, it would be subject to cost apportionment pursuant to the *GVS&DD Cost Apportionment Bylaw*. Even though the Middle School site would be the only area within Anmore inside the Fraser Sewerage Area and therefore the only area within Anmore that would receive regional sewerage services, the *Cost Apportionment Bylaw* operates such that Anmore's entire population growth relative to other GVS&DD members would be used to calculate Anmore's growth apportionment. Metro Vancouver's staff projections are that Anmore's growth apportionment would be approximately \$7,000 in 2014 and escalate to approximately \$80,000 per year by 2023. The additional flow based apportionment would be more constant at approximately \$10,000 per year plus inflation.

The legislative process to add a member to the GVS&DD is set out in section 66 of the *GVS&DD Act*, which provides:

- (1) The Lieutenant-Governor in Council shall have absolute power and authority, upon the request of a municipality which is not a member of the Corporation, to order or refuse to order such municipality to be a member of the Corporation.*
- (2) Any Order of the Lieutenant-Governor in Council made under this section shall fix the terms and conditions (if any), and shall name the day on which the municipality shall become and be a member of the Corporation.*

Staff from Metro Vancouver, Anmore and Port Moody have been in frequent contact with Ministry staff through regular conference calls. Anmore has been exploring its options and has not made a formal request to the Ministry for membership in GVS&DD.

Boundary Adjustment

Metro Vancouver staff discussed with staff from Anmore and Port Moody the possibility of a municipal boundary adjustment whereby the Middle School would be located within Port Moody. Given Port Moody is a member of GVS&DD, a boundary adjustment would mean there would be no impediment to the Middle School receiving regional sewerage service. Neither Anmore nor Port Moody has expressed an interest in adjusting their shared boundary.

Anmore's request

Given that Anmore is seeking regional sewer service only for the Middle School and given the fact that apportionment of expenses under the GVS&DD's *Cost Apportionment Bylaw* would be based in part on Anmore's entire population growth, resulting in high projected cost apportionment, Anmore's preference is not to become a member of the GVS&DD. Rather, Anmore has requested that the Middle School receive regional sewer service by way of a Service Agreement. Anmore has agreed in principle to pay a surcharge over regional rates in recognition of the fact that Anmore is not a member of the GVS&DD, has not contributed to the capital cost of existing infrastructure, and is not exposed to the costs and potential liabilities that are inherent in GVS&DD membership.

Service Agreement

Section 7C(3) of the GVS&DD Act permits the GVS&DD to enter into service agreements:

The Corporation may enter into agreements respecting the discharge into or the treatment of liquid waste by a sewerage facility including, without limiting this authority, agreements that provide exceptions to a by-law [regarding disposal fees and levies].

Despite this legislative provision, GVS&DD has not previously provided service to a non-member or provided sewerage services pursuant to an agreement (other than with respect to trucked liquid waste).

There is however precedent within the Water District. In a few unique circumstances the GVWD has provided relatively small volumes of water to non-members, namely: the University Endowment Lands, Riverview Provincial Institution, the Capilano Salmon Hatchery, and Point Roberts Water District. In June 2013, the GVWD reconsidered and reconfirmed its policy of charging non-members a 20% surcharge over the regional rate. A copy of the GVWD's policy is attached (Attachment 3).

In the present circumstances regional sewerage service for the Middle School can be accommodated by the adjacent municipality, Port Moody, which is a member of the GVS&DD and is supportive of Anmore's request. In addition, regional servicing for the Middle School aligns with regional interests by enabling the development of a public institution.

Key terms of a Service Agreement for regional sewerage service for the Middle School may include:

- The parties would be GVS&DD, Anmore, Port Moody.
- Port Moody would provide municipal sewer and storm water services to the Middle School, as if the Middle School were located within Port Moody's boundaries.
- Port Moody would charge Anmore in accordance with Port Moody's rates bylaws, plus an administration fee of 10%.
- Sewerage from the Middle School would be conveyed to the Annacis Waste Water Treatment Plant for treatment.
- GVS&DD would calculate apportionments under the *Cost Apportionment Bylaw* and would impose its levy on Port Moody as if the Middle School were located within Port Moody.
- Given that there are no dedicated sewerage flow meters for the Middle School, the school's sewerage flow would be deemed equal to the inflow of drinking water to the Middle School.
- GVS&DD would calculate a unit based charge for the sewerage leaving the Middle School and would charge Anmore a 20% surcharge over the calculated 'base rate' multiplied by the deemed volume of sewerage leaving the Middle School.
- Anmore would make a one-time payment to GVS&DD equal to Development Cost Charges that would have been payable had Anmore been a member of the GVS&DD at the time the building permit for the Middle School was issued (approximately \$50,000).
- Anmore would cause School District 43 to grant any necessary SRWs and restrictive covenants.
- No sewer connections from Anmore, other than the Middle School connection, would be permitted to Port Moody's municipal sewer network.

- Anmore would be required to comply with Port Moody's applicable bylaws and GVS&DD's applicable bylaws (such as the *GVS&DD Sewer Use Bylaw*), however remedies would be contractual and typical bylaw enforcement mechanisms would not be available.
- The term of the agreement would be 25 years, with termination of the agreement permitted only in the case of default that is not remedied within a specified period of time.

Technical Review

The Metro Vancouver technical staff review confirms that:

- The subject property is within the Urban Containment Boundary, but is currently outside of the Fraser Sewerage Area.
- The development of the Middle School is consistent with the provisions of the Regional Growth Strategy.
- There are no financial impacts to the GVS&DD for the service connection, as the cost will be borne by Anmore. It is understood that Anmore will pass costs onto School District 43.
- The Middle School will discharge primarily domestic liquid waste, thus no industrial discharge permit is needed.
- The analysis of flow projections shows negligible regional service level impacts.
- The proposed Fraser Sewerage Area boundary adjustment is shown in Attachment 4.

Consistency with Metro Vancouver 2040

The third condition of the November 10, 2010 Board resolution was satisfied when the GVRD Board amended the *Metro Vancouver 2040 Regional Growth Strategy* so that the designation of the Middle School site was changed from Rural to General Urban and the Urban Containment Boundary was amended to encompass the Middle School (Attachment 5).

ALTERNATIVES

1. That:

- a) Notwithstanding the GVS&DD Board's November 10, 2010 resolution that required the Village of Anmore to become a member of the GVS&DD in order to receive regional sewerage services for the Eagle Mountain Middle School, in recognition of the unique present circumstances, the GVS&DD Board approves regional sewerage services for the Eagle Mountain Middle School even though the Village of Anmore is not a member of the GVSⅅ
- b) The GVS&DD Board approves an amendment to the Fraser Sewerage Area boundary so that the building footprint only of the Eagle Mountain Middle School is located within the Fraser Sewerage Area; and
- c) The GVS&DD Board directs staff to negotiate and enter into a 25 year Service Agreement with the Village of Anmore and the City of Port Moody under which GVS&DD will provide regional sewerage services to Eagle Mountain Middle School by way of Port Moody's municipal sewer system, on terms that will include a 20% surcharge for service to a non-member municipality.

2. That the GVS&DD Board:

- a) Denies Anmore's request and reconfirms its position that in order for the GVS&DD to provide regional sewerage service for the new Eagle Mountain Middle School, the Village of Anmore must become a member of the GVSⅅ and
- b) In the event that the Village of Anmore wishes to become a member of GVS&DD, directs Metro Vancouver staff to work with Anmore in relation to Anmore's request to the Province for membership in GVS&DD pursuant to section 66 of the *GVS&DD Act*, and directs Metro Vancouver staff to negotiate and enter into an agreement with the Village of Anmore and the City of Port Moody setting out the terms and conditions of the Middle School's connection to Port Moody's municipal sewer system.

FINANCIAL IMPLICATIONS

Alternative 1 would mean Anmore is not a GVS&DD member and would not be apportioned costs under the *GVS&DD Cost Apportionment Bylaw*. Instead, Anmore would be billed, in accordance with the Service Agreement, for the sewage flowing from the Middle School. It is estimated the flow based charge would be approximately \$10,000 per year. Pursuant to the Service Agreement, Port Moody would recover this amount from Anmore by billing Anmore. In addition, Port Moody would charge Anmore a 10% administration fee and GVS&DD would charge Anmore a 20% surcharge over its calculated 'base rate'. Anmore would be required to pay an amount equal to Development Cost Charges that would have been payable if it had been a GVS&DD member when it issued the building permit to School District 43 (approximately \$50,000). Metro Vancouver staff understands that Anmore would pass most of the charges on to the School District.

Alternative 2 would mean that Anmore is required to become a member of the GVS&DD in order for the Middle School to receive regional service. Anmore would be subject to cost apportionment pursuant to the *GVS&DD Cost Apportionment Bylaw*. Metro Vancouver's staff projections are that Anmore's growth apportionment would be approximately \$7,000 in 2014 and escalate to approximately \$80,000 per year by 2023. The additional flow based apportionment would be more constant at approximately \$10,000 per year plus inflation.

OTHER IMPLICATIONS

GVS&DD has not previously entered into a Service Agreement for sewer services nor has it provided sewer service to a non-member. There is historical precedent for the Greater Vancouver Water District providing water to non-members by way of Service Agreement and charging a 20% surcharge over regional rates in recognition that non-members have not paid for the costs of developing infrastructure, and are not subject to the obligations and potential liabilities of members (Attachment 3).

SUMMARY / CONCLUSION

Anmore has requested that the Middle School located at 110 Dogwood Drive, Village of Anmore receive regional sewer service. The GVS&DD Board in late 2010 supported Anmore's request subject (i) to Anmore becoming a member of the GVS&DD, (ii) execution of an agreement between GVS&DD, Anmore and Port Moody, and (iii) compliance with the related provisions in the Integrated Liquid Waste and Resource Management Plan and subsequent Regional Growth Strategy.

In recognition of the fact that only the Middle School would receive regional sewer service and therefore Anmore's cost apportionment under the *GVS&DD Cost Apportionment Bylaw* would be disproportionately high, the fact that the connection would have negligible consequences for the regional sewerage system, and the fact that Anmore is a member of both the GVRD and the GVWD, staff recommends that the Middle School receive regional sewerage service without the Village of Anmore becoming a member of GVS&DD. Staff believes that the unique circumstances in this instance mean there is little risk of setting a precedent for GVS&DD providing regional sewerage services to non-members.

Staff has been in the process of negotiating an agreement with Anmore and Port Moody as contemplated by the November 2010 GVS&DD Board resolution. That draft agreement can be revised as required.

The GVRD amended the Regional Growth Strategy so that the Middle School is designated General Urban and is within the Urban Containment Boundary and therefore the Regional Growth Strategy does not preclude GVS&DD from providing regional sewerage service to the Middle School.

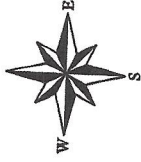
Staff recommends Alternative 1.

Attachments:

1. Site Map – Village of Anmore New Middle School Development
2. 2010 GVS&DD Board Report, November 10, 2010 – Anmore's Request to Connect to the Regional Sewer System
3. 2013 GVWD Board Report, June 6, 2013 - GVWD Water Rates for Members and Non-Members
4. Drawing No. SA-2376, Sheet 77
5. 2012 GVRD Board Report, July 27, 2012 – Regional Growth Strategy Amendment Bylaw No. 1168, 2012

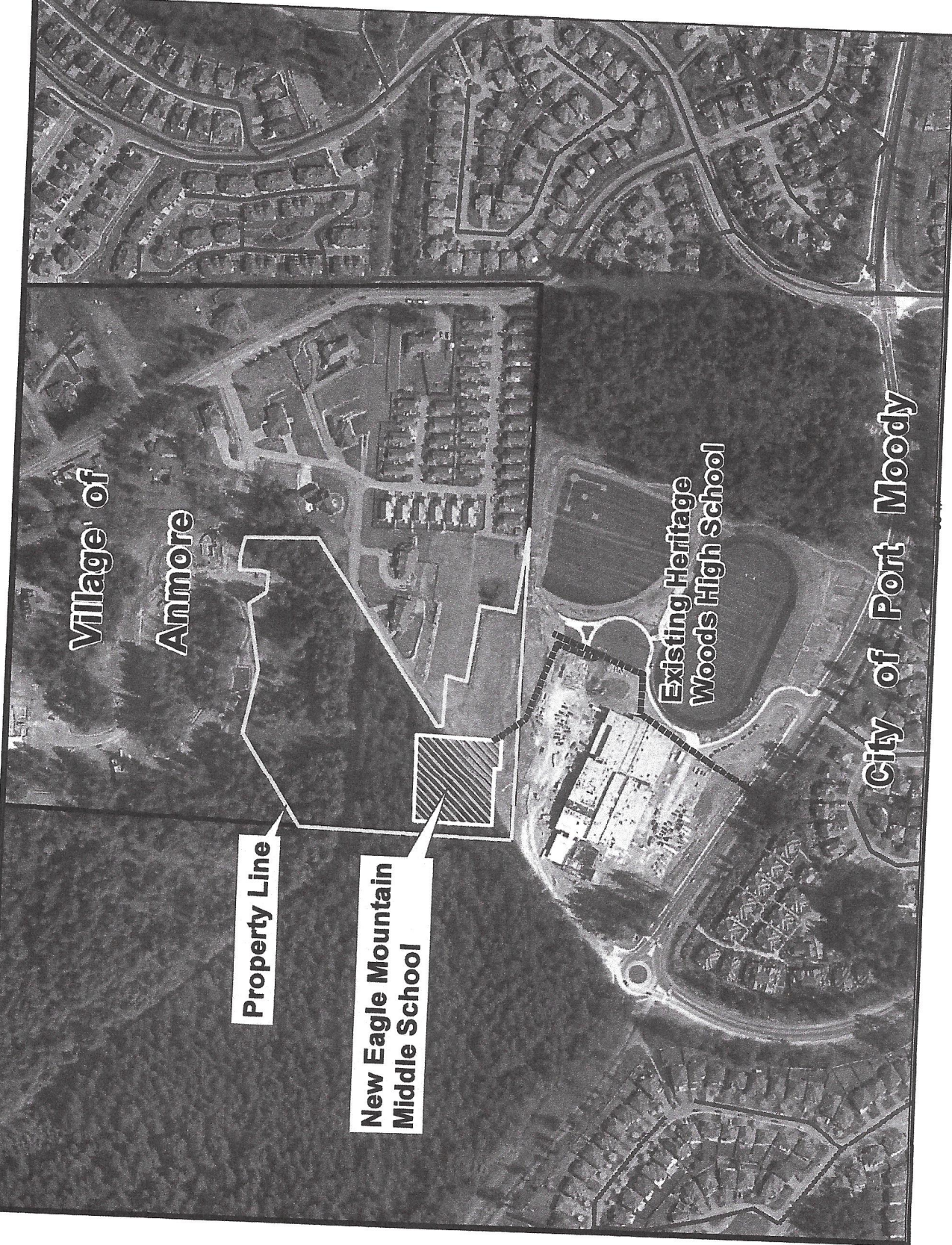
9276063

ATTACHMENT 1



VILLAGE of ANMORE
NEW MIDDLE
SCHOOL DEVELOPMENT

- Municipal
- Sanitary Sewer
- New Lateral
- Existing Lateral





metrovancover

Greater Vancouver Regional District • Greater Vancouver Water District

Greater Vancouver Sewerage and Drainage District • Greater Vancouver Housing Corporation

4330 Kingsway, Burnaby, BC, Canada V5H 4G8 604-432-6200 www.metrovancover.org

Waste Management Committee Meeting Date: November 10, 2010

To: Waste Management Committee
From: Fred Nenninger, Division Manager, Policy and Planning Department
Date: October 28, 2010
Subject: **Anmore's Request to Connect to the Regional Sewer System**

Recommendation:

That the Board support the Village of Anmore's request to expand the Fraser Sewage Area to accept sewage from the proposed School District 43 middle school site for the building footprint only subject to:

- i. The Village of Anmore becoming a member of the GVS&DD pursuant to section 66 of the *Greater Vancouver Sewerage and Drainage District Act*;
 - ii. The Village of Anmore, the City of Port Moody and the GVS&DD negotiating and concluding an agreement to address the construction and connection of the Village of Anmore's school service sewer to the GVS&DD system via the City of Port Moody's sewers; and
 - iii. The Village of Anmore demonstrating that, in accordance with the Integrated Liquid Waste and Resource Management Plan, the regional sewer system should be extended to accommodate the school due to environmental or public health reasons that warrants sewer extension beyond the urban containment boundary.
-

1. PURPOSE

To respond to a request from the Village of Anmore to connect the proposed School District 43 middle school to the regional sewer system via the City of Port Moody's sewer system.

2. CONTEXT

School District 43 has proposed constructing a new middle school in Anmore to service students from Anmore, Port Moody and Coquitlam. In October of 2009, Anmore council passed a resolution stating: *"That the Village of Anmore is seeking inclusion within the Greater Vancouver Sewerage and Drainage District in order to connect a proposed middle school to the regional sewer system.* Due to property issues, Anmore subsequently requested that the process be delayed until the property issues were resolved. On October 18, 2010, Anmore renewed its request to connect the proposed middle school to the regional sewer system (Attachment 1).

The Village of Anmore currently requires developments to provide on-site sewage treatment systems. Given difficult site conditions, Anmore has requested that Greater Vancouver Sewerage and Drainage District (GVS&DD) allow the proposed middle school to connect to the regional sewer system via the City of Port Moody's sewer system rather than require on-site sewage treatment.

In order for the proposed middle school to connect to the regional sewer system, the property needs to be included in the Fraser Sewage Area (FSA), which requires the FSA boundary to be extended. As a matter of longstanding policy, GVS&DD has accepted requests to amend sewerage area boundaries only from member municipalities and, therefore, in order to amend the FSA boundary, the Village of Anmore would need to become a member of the GVS&DD. If Anmore were to become a member of the GVS&DD then the *Greater Vancouver Sewerage and Drainage District Act* (GVS&DD Act) and GVS&DD bylaws will apply to Anmore. In accordance with the GVS&DD Act, upon the request of a municipality, the Lieutenant-Governor in Council has the power and authority to order such municipality to be a member of the GVS&DD. Under the Act the GVS&DD has the discretion to establish and change the boundaries of the sewerage areas required to carry out its objects.

The Board-approved Integrated Liquid Waste Management Plan (ILWMP) states that "the regional sewer system will not be extended beyond the urban containment boundary except for overarching environmental or public health reasons." Action 1.1.1 of the draft Regional Growth Strategy (draft dated September 2010) states that "Metro Vancouver's role is to: Direct the Greater Vancouver Sewerage and Drainage District to not extend regional sewage services into the Rural, Agricultural or Conservation and Recreation areas, except for building footprints in cases where infrastructure is needed to address a public health issue, protect the region's natural assets, or to service agriculture or agri-industry." The proposed middle school site is outside of the urban containment boundary, thus before approving a bylaw to expand the FSA, the GVS&DD should require Anmore to demonstrate that the regional sewer system should be extended to accommodate the school due to environmental or public health reasons.

The GVS&DD does not own or operate a regional sewer in the Anmore area. The nearest regional system is located several kilometers away in Port Moody (Attachment 2). The City of Port Moody owns and operates a neighbourhood sewer system adjacent to the proposed school site. Port Moody council has passed a resolution requesting that Anmore seek membership in the GVS&DD and fund a study to assess the feasibility of connecting to the Port Moody system. Once that study is complete, Port Moody will consider Anmore's request to connect to the Port Moody system.

3. ALTERNATIVES

That the Board may:

- 1) Support the Village of Anmore's request to expand the Fraser Sewage Area to accept sewage from the proposed School District 43 middle school site for the building footprint only subject to:
 - i. The Village of Anmore becoming a member of the GVS&DD pursuant to section 66 of the *Greater Vancouver Sewerage and Drainage District Act*;
 - ii. The Village of Anmore, the City of Port Moody and the GVS&DD negotiating and concluding an agreement to address the construction and connection of the Village of Anmore's school service sewer to the GVS&DD system via the City of Port Moody's sewers; and
 - iii. The Village of Anmore demonstrating that, in accordance with the Integrated Liquid Waste and Resource Management Plan, the regional sewer system should be extended to accommodate the school due to environmental or public health reasons that warrants sewer extension beyond the urban containment boundary.

- 2) Not support the Village of Anmore's request to allow connection of the proposed middle school to the regional system.

4. CONCLUSION

Anmore has requested that the GVS&DD accept connection of a proposed middle school to the regional sewerage system via the City of Port Moody's sewer system. Consistent with longstanding GVS&DD policy, Anmore should first become a member of the GVS&DD and then GVS&DD may extend the Fraser Sewage Area. As there are no regional sewer pipes in that area, Anmore is best served by reaching an agreement with Port Moody and GVS&DD to allow a connection from the proposed middle school to the existing nearby Port Moody's sewers and the GVS&DD's sewers.

Staff recommends Alternative 1.

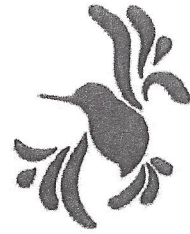
ATTACHMENTS:

- 1) Letter from Village of Anmore dated October 18, 2010, titled Inclusion of School District 43 Properties Within GVS&DD Sewer Area Boundary (Doc #4517914)
- 2) Location of Proposed Middle School and Regional Wastewater Facilities (Doc #4502232)



VILLAGE OF ANMORE

2697 Sunnyside Road
Anmore, B.C.
V3H 5G9



October 18, 2010

Metro Vancouver
4330 Kingsway
Burnaby, BC
V5H 4G8

Attention: Mr. Ed von Euw
Senior Engineer,
Policy & Planning Department

Dear Mr. von Euw:

**SUBJECT: INCLUSION OF SCHOOL DISTRICT 43 PROPERTIES
WITHIN GVS&DD SEWER AREA BOUNDARY**

Further to your recent conversations with our Planning Consultant, Mr. Michael Rosen, this letter is intended to officially inform Metro Vancouver that School District 43 has decided to resurrect the development of a new Middle School within the Village of Anmore.

Consequently, further to the Village's letter to Metro Vancouver dated 27 October 2009, the Village respectfully requests that Metro Vancouver resume the process of including the School District's properties within the GVS&DD sewer boundary. We understand that the next step in the process would be a staff report going to the Metro Vancouver Board in November requesting inclusion of the Village in the GVS&DD for the school property.

The Village understands that entering into agreements with the City of Port Moody will be required as a condition of securing an expansion of the GVS&DD sewer boundary.

Our staff will continue to liaise with Metro Vancouver and City of Port Moody staff regarding this matter.

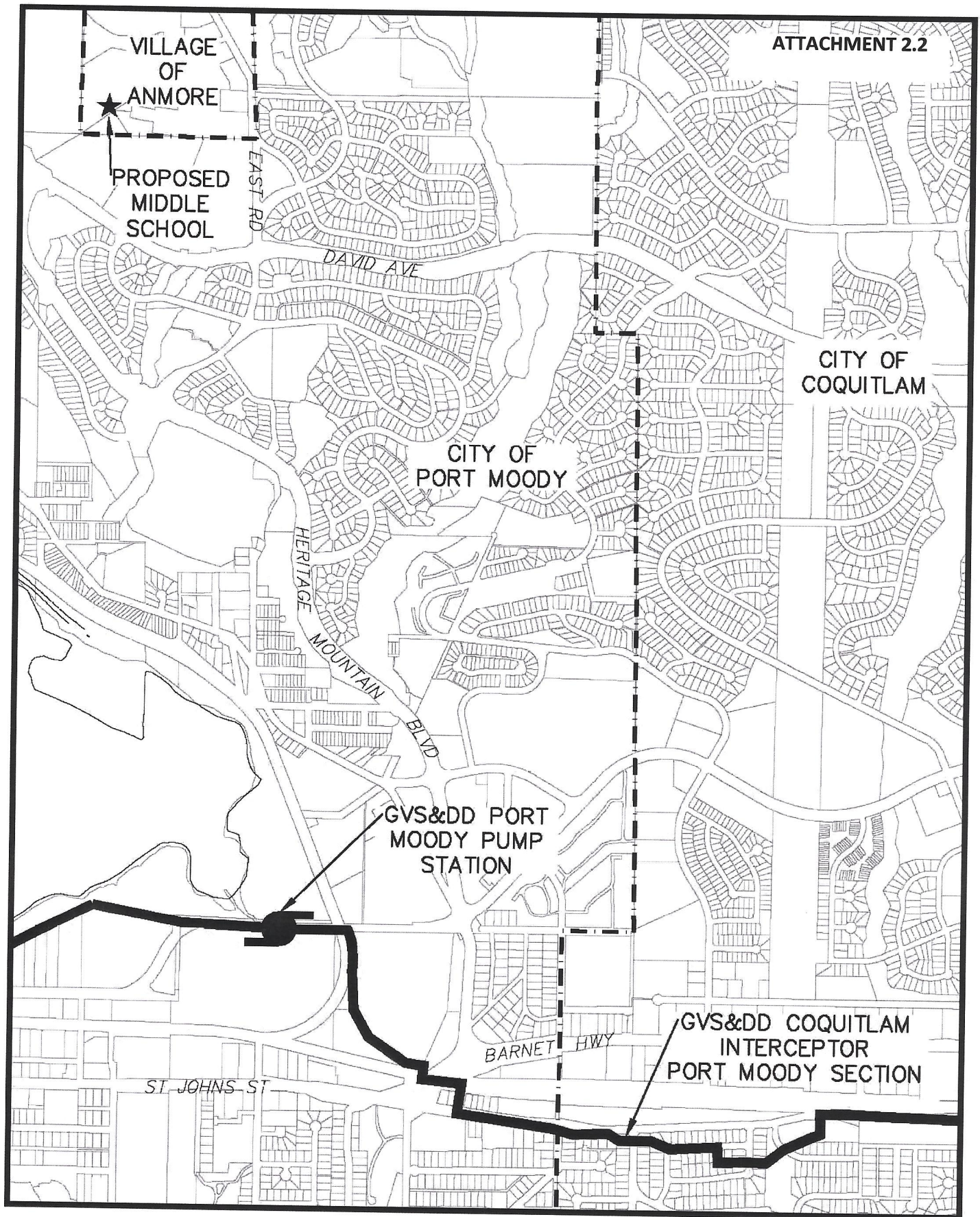
Yours truly,

Karen Ann Cobb

Manager of Corporate Services

cc: Tom Grant, Superintendent, School District 43
Gaetan Royer, Chief Administrative Officer, City of Port Moody

Phone: 604-469-9877 • Fax: 604-469-0537 • Email: village.hall@anmore.com
Web: <http://www.anmore.com>



ATTACHMENT 2.2

GREATER VANCOUVER SEWERAGE & DRAINAGE DISTRICT

LOCATION OF
**PROPOSED MIDDLE SCHOOL AND
 REGIONAL WASTEWATER FACILITIES**

SCALE: N.T.S.

JM/OCT/10
 SH. 40/SA-2376



Policy Title: **GVWD Water Rates for Members and Non-Members**

Policy Number: **UT 001**

Effective Date: **June 14, 2013**

Date Approved by the GVWD Board: **June 14, 2013**

PURPOSE

To establish the rate structure under which water is provided by the Greater Vancouver Water District (GVWD) to members and non-members.

POLICY

1. GVWD Act

In December 1924 the Greater Vancouver Water District (GVWD) was established as a corporate body under the *Greater Vancouver Water District Act* to provide water on a wholesale basis to GVWD members. The *Act* provides the GVWD with all the rights and is subject to all the liabilities of a corporation including the right to exercise and carry out all the powers, rights and duties conferred and imposed by the *Act*.

Under its general powers, the GVWD has the power to sue or be sued, and shall have the power to acquire, hold or dispose of real property for use of the GVWD and may become a party to any contracts or agreements necessary or incidental to the management of the GVWD.

The GVWD membership has increased over time to 19 members in 2013 (18 member municipalities and 1 Treaty First Nation).

2. GVWD Water Rates for Members

All GVWD members shall pay the same wholesale water rate (dollars per cubic metre) for the volume of water they consume. The wholesale water rate is established annually by the GVWD Board and is set to provide for a balanced budget as required by legislation.

To join the GVWD, new members must pay the incremental infrastructure costs associated with the GVWD expanding capacity to meet the demand of the new member. After joining the GVWD, paying the upfront servicing costs and assuming all the obligations of membership, new members will also pay the wholesale GVWD water rate for the volume of water they consume.

3. GVWD Water Rates for Non-Members

Except as set out by this policy, all GVWD non-members shall pay a retail water rate based on the wholesale water rate as set annually by the GVWD Board, plus an additional charge of 20%. This additional charge is included to reflect the following costs and obligations which are not incurred or assumed by a non-member of the GVWD:

- *Legal liabilities of members* - GVWD members are legally liable for all obligations of the GVWD including debt, risks to infrastructure, legal suits or actions, or spills to the environment. GVWD members are, therefore, subject to additional charges should circumstances arise while non-members are not;
- *Obligations of members* - GVWD members are obliged to comply with the *GVWD Act* and the plans, policies, authorities, regulations, and bylaws of the GVWD such as the Drinking Water Management Plan, the Regional Water Shortage Response Plan, and the GVWD lawn sprinkling regulations;
- *Upfront costs of membership* - To join the GVWD, new members pay the incremental cost associated with the GVWD expanding capacity to meet the demand of the new member. These costs include the initial connections and the expansion of infrastructure required to meet the incremental demand as determined as part of the entry or membership agreement;
- *Member commitments* - Non-members do not have the same commitments, interests, obligations and investments in the success of the GVWD as members. In addition, non-members do not contribute to the stature of the GVWD (ability to influence matters of regional significance) in discussions with other groups and senior governments to the same extent as a member.

The favourable cost of borrowing for the GVWD is the result of the commitment, financial position and stability of its collective membership. Non-members do not contribute to this position despite benefiting from the lower debt service costs included within the wholesale water rate.

The 20% surcharge calculation generally reflects the following breakdown:

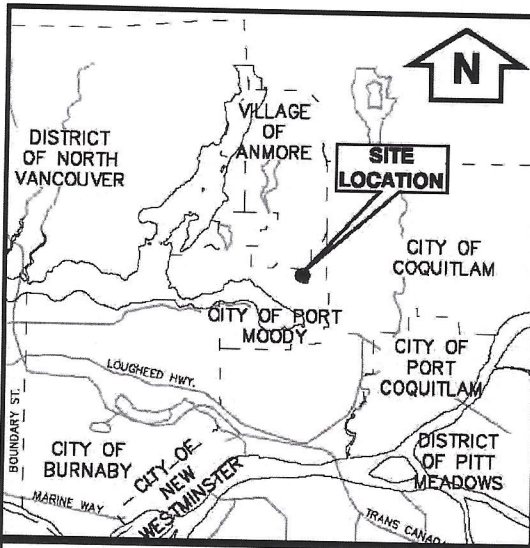
5% - Administration: Represents an administrative and operational charge for services including invoicing, general accounting, reading and maintaining non-member water meters and general staff time dealing with non-member water issues.

5% - Legal and Operational Risk: Represents a charge for the legal and operational risk avoided by not being a full GVWD member. This provides some financial security for members should the non-member significantly change their demand for water from the GVWD thus resulting in infrastructure with either excess or insufficient capacity. This is also intended to provide some security should there be a catastrophic system failure requiring a special levy to members or any potential impact of legal liability.

10% - Infrastructure: Represents a charge for the specific infrastructure enhancements required to provide water to the non-member. This infrastructure includes supply mains, pump station capacity, reservoir capacity, water meters, valving and related infrastructure. These infrastructure enhancements are subsidized by all members through the wholesale water rate, where under the scenario of membership, these costs would be borne by the new member and not included in the rate.

This charge will also contribute to offset the debt service costs on the original infrastructure and overtime lend to funding any capital enhancements or required replacement. In addition, the non-member is benefiting from a favourable borrowing rate on GVWD debt that would not be available if they were to borrow independently. This lower borrowing rate is the result of risk sharing amongst the membership.

ATTACHMENT 4



LOCATION PLAN
N.T.S.

EXISTING FRASER
SEWERAGE AREA
BOUNDARY

PROPOSED
EXPANSION OF THE
FRASER SEWERAGE
AREA TO INCLUDE
THE BUILDING
FOOTPRINT FOR THE
EAGLE MOUNTAIN
MIDDLE SCHOOL

CITY OF PORT MOODY

DAVID AVE

HERITAGE MOUNTAIN BLVD

FOREST PARK WAY

FOREST PARK WAY

GREATER VANCOUVER SEWERAGE AND DRAINAGE DISTRICT

FRASER SEWERAGE AREA AMENDMENT

EAGLE MOUNTAIN MIDDLE SCHOOL
VILLAGE OF ANMORE

SCALE:
N.T.S.

DISTRICT FILE
SA-2376

SHEET 77

DRAWING NUMBER

A	APR 14	MW	JM		
Iss.	Date	Desr	Dr'n	Chk'd	App'd

ISSUED FOR REVIEW

Description

0 20

Bar Is 20mm On Original Drawing. If Not On
This Sheet, Adjust Scales Accordingly

Design: MW
Drawn: JM
Checked:
Approved
Manager

SUPERSEDES PRINTS OF THIS DRAWING NUMBER WITH LETTERS PREVIOUS TO A

xref files:

Greg Dureault

Barrister & Solicitor

8652 Commerce Court

Burnaby, B.C. V5A 4N6

Tel. (604) 338-8820

*denotes personal law corporation

Email greg@dureault.com

10/12/2016

By Email: cboit@islengineering.com

VILLAGE OF ANMORE
2697 Sunnyside Road,
Anmore, B.C.
V3H 5G9

Attention: Mr. Chris Boit, P. Eng.
Senior Project Engineer¹

By Email: rpuche@portymoody.ca

PORT MOODY
100 Newport Drive
Port Moody, BC
V3H SC3

Attention: Mr. Robinson Puche
Infrastructure Engineering Development
Services²

Dear Sirs & Mesdames:

Re: Anmore Green Estates ("AGE"); Drainage relating to lands subdivided by Strata Plan LMS3080 (the "Strata Lands") affecting the Eagle Mountain Middle School (the "School") Development Site (Lot 2 Plan BCP5107 and Lots 4 and 5 Plan 1MP40733, all of Section L6 Township 39 New Westminster District) (the "School Site") owned by The Board of Education of School District No. 43 (Coquitlam)

Chris I want to thank you for your attention yesterday to this matter. I am copying Mr. Robinson Puche with the City of Port Moody on this letter by email to keep him up to date.

I confirm our discussion on protocol and next steps needed to resolve the documented health risks³ to children and others at the School Site from the apparent failed septic field/STP of AGE, which is draining into the School Site and perhaps adjacent North

¹ ISL Engineering and Land Services, #503 4190 Lougheed Hwy, Burnaby, B.C. V5C 6A8 Tel (778)990-7342

² Tel (604) 469-4523

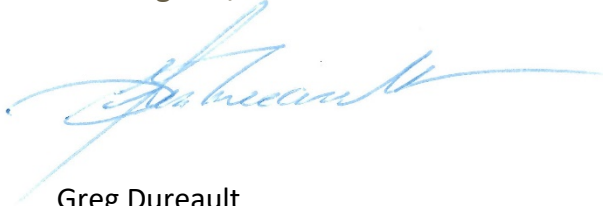
³ Letter dated October 23, 2013 from School District No.43 to AGE, with report prepared by **Keystone Environmental Ltd.** dated August 13, 2013: "**water flowing onto the School Site is contaminated by e-coli and fecal coliforms, in excess of BC Water Quality Guidelines**"

Shore Community Park. Despite the November 5, 2007 letter from Council for Anmore⁴ requesting AGE be permitted to connect to the regional sewerage system, Port Moody cannot proceed to review our proposed Sanitary Sewer Design⁵ for connecting the AGE residents to the City sewer system without a request to do so from Anmore.

This is to further confirm funds are available to pay for any reasonable cost of engineering staff time spent on this matter. Please let us know if that is a requirement for Anmore or Port Moody to consider this matter by email or telephone call to the undersigned at your earliest convenience. The purpose of this letter is to respectfully request your assistance by working together on the proposed Sanitary Sewer Design given to you both. Your determination of Design feasibility will help give us the practical certainty we believe is needed to help address the apparent outstanding unresolved administrative hurdles set in place in 2008. Will you be able to provide assistance? Is there any other person or persons in your knowledge that I should be contacting at this time to resolve this matter? Please advise me so.

I look forward to hearing from and thank you both throughout this task.

Best Regards,



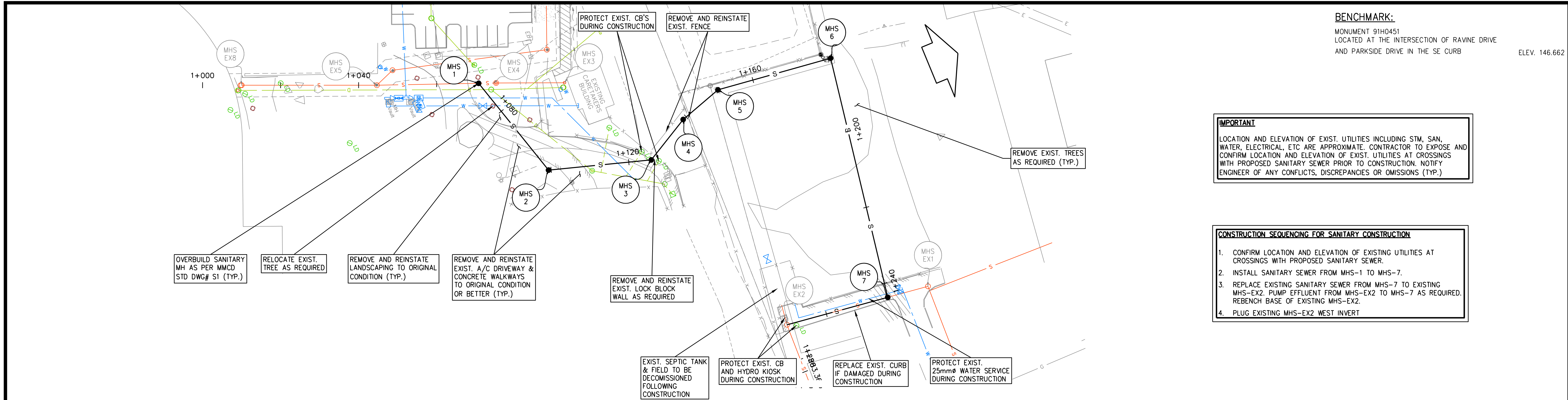
Greg Dureault

GD/*

Cc Mr. Trevor Hamelin, ASCT
Environmental Protection Officer
Authorizations - South
(Office) 604-582-5275
(Fax) 604-584-9751
Hamelin, Trevor M ENV:EX [<mailto:Trevor.Hamelin@gov.bc.ca>]

⁴ This letter was acknowledged in a January 8, 2008 Letter from Metro Vancouver, previously provided to you and Mr. Puche, setting out the administrative requirements to achieving a connection for AGE to the regional sewerage system

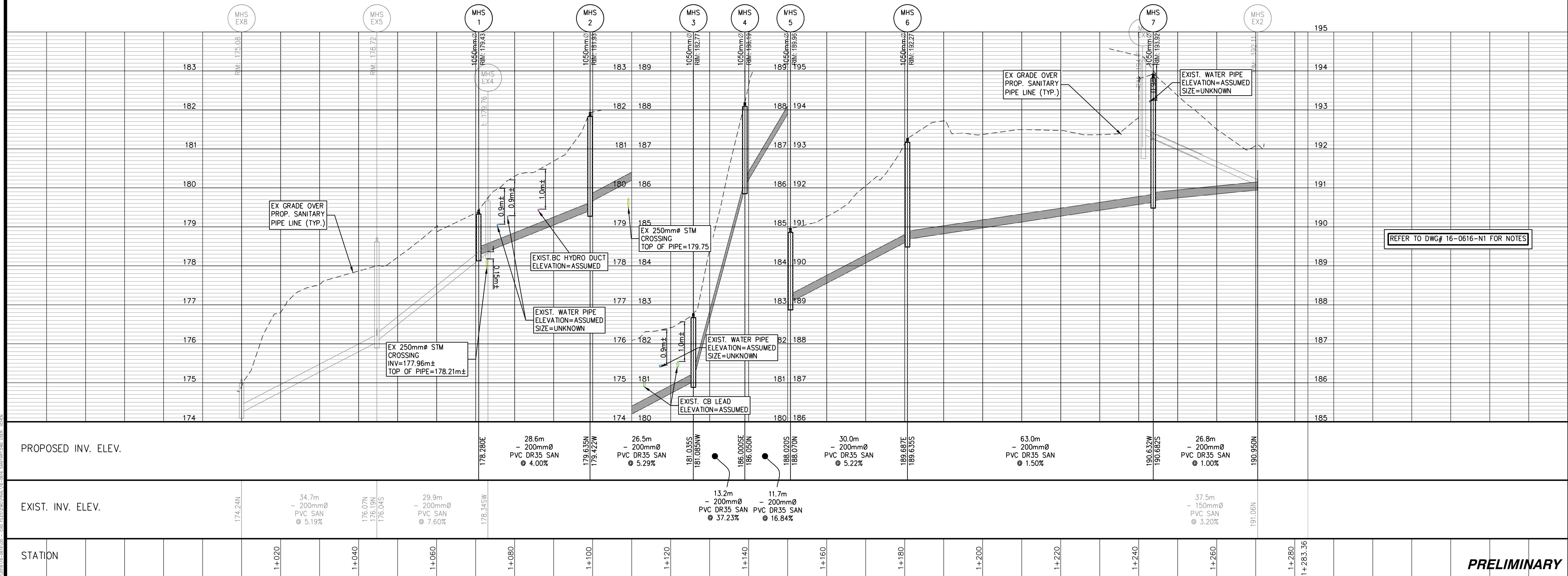
⁵ Prepared by **R.F. Binnie & Associates Ltd.**



BENCHMARK:
MONUMENT 91H0451
LOCATED AT THE INTERSECTION OF RAVINE DRIVE
AND PARKSIDE DRIVE IN THE SE CURB
ELEV. 146.662

IMPORTANT
LOCATION AND ELEVATION OF EXIST. UTILITIES INCLUDING STM, SAN, WATER, ELECTRICAL, ETC ARE APPROXIMATE. CONTRACTOR TO EXPOSE AND CONFIRM LOCATION AND ELEVATION OF EXIST. UTILITIES AT CROSSINGS WITH PROPOSED SANITARY SEWER PRIOR TO CONSTRUCTION. NOTIFY ENGINEER OF ANY CONFLICTS, DISCREPANCIES OR OMISSIONS (TYP.)

- CONSTRUCTION SEQUENCING FOR SANITARY CONSTRUCTION**
1. CONFIRM LOCATION AND ELEVATION OF EXISTING UTILITIES AT CROSSINGS WITH PROPOSED SANITARY SEWER.
 2. INSTALL SANITARY SEWER FROM MHS-1 TO MHS-7.
 3. REPLACE EXISTING SANITARY SEWER FROM MHS-7 TO EXISTING MHS-EX2. PUMP EFFLUENT FROM MHS-EX2 TO MHS-7 AS REQUIRED. REBENCH BASE OF EXISTING MHS-EX2.
 4. PLUG EXISTING MHS-EX2 WEST INVERT



REFER TO DWG# 16-0616-N1 FOR NOTES

PROPOSED INV. ELEV.				EXIST. INV. ELEV.				STATION				PRELIMINARY			
174.24N				176.07N 176.19N 176.04S				178.34SW				174.24N			
34.7m - 200mmØ PVC SAN @ 5.19%				29.9m - 200mmØ PVC SAN @ 7.60%				178.34SW				174.24N			
1+020				1+040				1+060				1+080			
1+100				1+120				1+140				1+160			
1+180				1+200				1+220				1+240			
1+260				1+280				1+283.36				1+283.36			
1				2016/09/02				ISSUED FOR REVIEW				VC			
No.				DATE				REVISION				BY			

BINNIE
Your Challenges. Our Solutions. Build with Binnie.

R.F. BINNIE & ASSOCIATES LTD.
205 - 4946 Canada Way,
Burnaby, BC V5G 4H7
TEL 604 420 1721
BINNIE.com

CLIENT
AZURA MANAGEMENT CORPORATION
15561 Marine Dr, White Rock, BC V4B 1C9

DRAWING DESCRIPTION
ANMORE, B.C.
SANITARY SEWER

SURVEYED BY
DRAWN BY VC
DESIGNED BY GR
CHECKED BY GR

SCALES
0 H 1:500 20m
0 V 1:50 2m

DATE August 12, 2016
DRAWING No.
16-0616-SS1
SHEET 1 **OF** 2 **REV.**
DESTROY ALL PRINTS BEARING PREVIOUS No.

3 – THE CONTRACTOR IS TO NOTIFY THE ENGINEER 48 HRS. PRIOR TO CONSTRUCTION TO VERIFY THAT THEY HAVE THE LATEST DRAWINGS ISSUED FOR CONSTRUCTION.

2 – THE CONTRACTOR IS TO NOTIFY THE ENGINEER AT THE FOLLOWING STAGES OF THE CONSTRUCTION SCHEDULE:

1. DELIVERY OF STORM SEWER MATERIALS TO SITE.
2. DELIVERY OF SANITARY SEWER MATERIALS TO SITE.
3. DELIVERY OF WATERWORKS MATERIALS TO SITE.
4. INITIAL INSTALLATION OF STORM, SANITARY AND WATER CONSTRUCTION PRIOR TO BACKFILLING.
5. GRADING OF ROAD SURFACES PRIOR TO PAVING.

3 – THE CONTRACTOR IS TO MAINTAIN A COMPLETE SET OF CIVIL DRAWINGS MARKED UP IN RED TO RECORD THE CONSTRUCTION OF ALL SITE SERVICES ON THIS PROJECT. THIS REDLINED SET IS TO BE AVAILABLE ONSITE FOR THE CIVIL ENGINEER TO REVIEW AT ALL TIMES. AT THE COMPLETION OF THE CIVIL WORKS, THIS MARKED UP SET IS TO BE SUBMITTED TO R. F. BINNIE & ASSOCIATES LTD. FOR THEIR RECORDS.

4 – THE CONTRACTOR IS TO NOTIFY THE CITY OF PORT MOODY 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION WITHIN ROAD ALLOWANCES AND RIGHTS-OF-WAY.

5 – ALL ON-SITE SERVICES ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE THE B.C. BUILDING CODE AND THE B.C. PLUMBING CODE. ANY PIPE WORKS CONSTRUCTED WITHIN THE PROPOSED AND EXISTING MUNICIPAL RIGHTS-OF-WAY ARE TO CONFORM TO MUCD STANDARDS AND SPECIFICATIONS.

6 – ALL SITE WORK, TRENCHING, EXCAVATION, BACKFILL, ROAD WORKS AND CONCRETE WORKS ARE TO BE SUPPLIED AND CONSTRUCTED IN ACCORDANCE WITH THE MASTER MUNICIPAL CONSTRUCTION DOCUMENTS (ALSO REFERRED TO M.M.C.D.).

7 – THE CONTRACTOR SHALL ENSURE THAT ALL APPROVALS REQUIRED FOR THE PROPOSED WORK HAVE BEEN OBTAINED PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION. THE CONTRACTOR IS TO CHECK WITH TERASEN GAS, B.C. HYDRO AND TELUS PRIOR TO COMMENCING WORK TO VERIFY THE LOCATIONS AND INVERTS OF THESE SERVICES.

8 – ALL MATERIALS TESTING MUST BE DONE IN ACCORDANCE WITH THE B.C. PLUMBING CODE AND THE M.M.C.D. AND CITY OF PORT MOODY. TESTING IS TO BE CARRIED OUT BY A QUALIFIED MATERIALS TESTING FIRM AND PAID FOR BY THE CONTRACTOR. THE ENGINEER SHALL RECEIVE COPIES OF ALL TEST RESULTS FROM THE CONTRACTOR.

9 – TRAFFIC CONTROL (SIGNS, BARRICADES, FLAGPERSONS) IS TO BE MAINTAINED AT ALL TIMES WHILE WORKING ON MUNICIPAL RIGHT-OF-WAYS. A TRAFFIC OBSTRUCTION PERMIT MUST BE OBTAINED FROM CITY OF PORT MOODY PRIOR TO PARTIAL OR FULL ROAD CLOSURES.

10 – ANY MATERIAL SUBSTITUTION MUST BE APPROVED BY THE ENGINEER.

11 – WORKSAFE BC IS TO BE NOTIFIED PRIOR TO THE START OF CONSTRUCTION.

12 – THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR REPAIR OF ANY DAMAGE CAUSED TO EXISTING STREET OR SERVICES BY CONSTRUCTION EQUIPMENT AND/OR TRUCKS HAULING MATERIAL TO THE SITE. THIS MAY INCLUDE DAILY CLEANING OR SWEEPING EXISTING ROADS OF DIRT AND DEBRIS CAUSED BY THE CONSTRUCTION ACTIVITY.

13 – ALL LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND SERVICES HAVE BEEN DETERMINED FROM AS-CONSTRUCTED DRAWINGS, AND THE ENGINEER CANNOT BE HELD RESPONSIBLE FOR THEIR ACCURACY. THE CONTRACTOR IS TO VERIFY THE LOCATIONS OF ALL EXISTING SERVICES AND TIE-IN POINTS PRIOR TO CONSTRUCTION AND TO NOTIFY THE ENGINEER OF ANY DISCREPANCIES, CONFLICTS OR OMISSIONS.

14 – OPEN TRENCH OPERATIONS IN EXISTING PAVEMENT SHALL BE VERTICAL AND REPLACED WITH HOT MIX ASPHALT AFTER BACKFILL AND COMPACTION WITHIN 48 HOURS OF TRENCH WORK. NO TRENCHES IN EXISTING ROADWAYS SHALL BE LEFT UNCOVERED OVERNIGHT. THEY SHALL BE TEMPORARILY BACKFILLED AND SURFACED WITH COLD MIX ASPHALT, OR STEEL PLATES SHALL BE USED TO COVER THE TRENCHES. ALL PAVEMENT, BOULEVARDS, ETC. ARE TO BE RESTORED TO ORIGINAL CONDITIONS WHERE NO IMPROVEMENT IS PROPOSED UNDER THIS CONTRACT.

15 – THE CONTRACTOR SHALL USE EXTREME CARE WHEN WORKING NEAR EXISTING SERVICES AND ANY SERVICES DISTURBED ARE TO BE REPLACED TO THE SATISFACTION OF THE CITY OF PORT MOODY OR OTHER APPROVING AGENCIES.

16 – ALL SURVEY MONUMENTS MUST BE PROTECTED AND ANY DAMAGE IS TO BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

17 – ALL EXISTING IMPROVEMENTS ARE TO BE RESTORED TO THE SATISFACTION OF THE CITY OF PORT MOODY. IN SPECIAL CASES, THE CITY OF PORT MOODY INSPECTOR MAY REQUIRE WRITTEN ACCEPTANCE FROM THE AFFECTED PROPERTY OWNERS FOR RESTORATION WORKS PERFORMED BY THE CONTRACTOR.

18 – THE CONTRACTOR SHALL NOT COMMENCE WITH CONSTRUCTION PRIOR TO THE ISSUANCE OF A PERMISSION TO CONSTRUCT NOTIFICATION BY CITY OF PORT MOODY. THE CONTRACTOR IS TO PROVIDE 48 HOURS NOTICE TO THE CITY OF PORT MOODY INSPECTOR PRIOR TO INITIAL CONSTRUCTION COMMENCEMENT. THE CITY INSPECTOR IS TO BE NOTIFIED OF ANY START OF CONSTRUCTION IF THE WORK HAS BEEN STOPPED.

19 – FIGURED DIMENSIONS SHALL GOVERN OVER SCALED DIMENSION.

20 – FOR RECOMMENDATIONS REGARDING SUBSURFACE CONDITIONS, SITE PREPARATIONS AND THE ROAD STRUCTURE: REFER TO THE GEOTECHNICAL

1-ALL ON-SITE CONSTRUCTION TO BE IN ACCORDANCE WITH THE B.C. PLUMBING CODE UNLESS SPECIFIED ELSEWHERE.

2-THE CONTRACTOR IS TO ESTABLISH LOCATIONS, ELEVATIONS AND ALIGNMENTS OF ALL EXISTING STORM AND SANITARY SEWER SERVICES PRIOR TO CONSTRUCTION TO FACILITATE TIE-INS. ANY DISCREPANCIES WITH THE INFORMATION SHOWN THAT MAY ALTER THE DESIGN SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.

3-A MINIMUM OF 1.5m COVER IS REQUIRED OVER SANITARY PIPING.

4-ALL MANHOLES ARE TO BE CONSTRUCTED AND SIZED AS PER MMCD STANDARD DRAWING No. 51

5-THE CONTRACTOR MUST CONTACT THE CITY OF PORT MOODY 48 HOURS PRIOR TO COMMENCEMENT OF TIE-IN PROCEDURES.

6-ALL SANITARY SEWER MAIN DEFLECTIONS ARE TO CONFORM TO THE MANUFACTURER'S SPECIFICATIONS.

7-SANITARY SEWERS ARE TO BE PVC SDR 28 FOR PIPES UP TO 150mm (6") DIAMETER AND PVC SDR 35 FOR PIPES GREATER THAN 150mm (6") DIAMETER UNLESS OTHERWISE NOTED.

8-ALL WYES ARE TO BE MANUFACTURED.

9-THE CONTRACTOR MUST PRESSURE TEST AND FLUSH ALL NEW SANITARY LINES PRIOR TO TIE-IN PROCEDURES. TESTS ARE TO BE PERFORMED AS PER CITY OF PORT MOODY REQUIREMENTS. THE CONTRACTOR IS TO PROVIDE THE ENGINEER WITH THE TEST RESULTS.

10-THE CONTRACTOR MUST PROVIDE A VIDEO INSPECTION REPORT FOR ALL MAINLINE SANITARY SEWERS. THE VIDEO INSPECTION MUST BE PERFORMED BY A WRC CERTIFIED OPERATOR AND APPROVED BY THE CONSULTANT. THE SANITARY SEWER WILL BE CONSIDERED INCOMPLETE UNTIL SATISFACTORY TEST RESULTS HAVE BEEN SUBMITTED FOR REVIEW. TESTING MUST BE COMPLETED AT LEAST ONE WEEK ADVANCE OF FINAL PAVING.

11-THE CONTRACTOR IS TO CHECK WITH THE GEOTECHNICAL ENGINEER AND DETERMINE IF DEWATERING MEASURES ARE NECESSARY DURING TRENCHING OPERATIONS. THE CONTRACTOR IS TO PROVIDE A COST FOR NECESSARY DEWATERING MEASURES IN THE CONTRACT BID.

12-SANITARY SEWERS ARE TO BE CONSTRUCTED WITH SEALED JOINTS UNLESS NOTED OTHERWISE.

13-ALL SERVICE CONNECTIONS SHALL BE MADE TO THE MAIN WHEREVER POSSIBLE. SHOULD THE CONNECTION HAVE TO BE MADE TO A MANHOLE, IT SHALL BE AT A HIGHER ELEVATION THAN THE CROWN OF THE HIGHEST SEWER MAIN ENTERING THE MANHOLE UNLESS OTHERWISE NOTED.

14-TIE-INS AND CONNECTIONS TO EXISTING SANITARY SEWERS SHALL BE PERFORMED BY THE CONTRACTOR UNDER INSPECTION BY CITY OF PORT MOODY. THE CONTRACTOR MUST CONTACT THE ENGINEERING DEPARTMENT 48 HOURS PRIOR TO COMMENCEMENT OF TIE-IN PROCEDURES.

15-ALL SANITARY SEWER CONNECTIONS SHALL BE 150mm (6") MINIMUM DIAMETER UNLESS NOTED OTHERWISE, COMPLETE WITH MANUFACTURED WYES.

16-THE CONTRACTOR SHALL BE RESPONSIBLE FOR MATCHING THE FINISHED RIM ELEVATION OF THE SANITARY MANHOLES TO THE FINISHED ASPHALT AND/OR LANDSCAPED ELEVATIONS.

17-LAWN BASINS ARE TO BE 600mm (24") DIAMETER INSTALLED WITH 150mm (6") DIAMETER LEAD AT 1.0% MINIMUM, UNLESS OTHERWISE NOTED.

This drawing is not to be used for construction unless it is stamped "ISSUED FOR CONSTRUCTION" and signed by R.F. Binnie & Associates Ltd. It is the contractor's responsibility to ensure that he is in possession of the latest revision of this drawing.

1	2016/09/02	ISSUED FOR REVIEW	VC
No.	DATE	REVISION	BY



Your Challenges. Our Solutions. Build with Binnie.

205 - 4946 Canada Way,
Burnaby, BC V5G 4H7
TEL 604 420 1721
BINNIE.com

ANMORE, B.C.

NOTES

NOT TO SCALE

16-0616-N1

SHEET 2 OF 2	REV. 1
--------------	--------



Anmore Sanitary Sewer
Preliminary Sanitary Sewer Construction Cost Estimate

September 2016
R.F. Binnie & Associates Ltd
RFB Job #16-0616-06

ITEM	DESCRIPTION	UNIT	UNIT PRICE \$	Quantity	Amount \$
Section 1 - Sanitary Sewers					
1.01	Supply & Install Mains, <3.0m to invert				
	i) 200 mm main	lin.m	\$350.00	200.0	70,000.00
1.02	Manholes				
	a) Barrels				
	i) 1050 mm diameter	vert.m	\$650.00	14.0	9,100.00
	b) Base, Lid, Frame & Cover				
	i) 1050 mm diameter	each	\$2,200.00	7.0	15,400.00
1.03	Video Inspections	L.S.	\$3,000.00	1.0	3,000.00
Total Section 1					\$97,500.00
Section 2 - Miscellaneous					
2.01	Topsoil & Sod Boulevard (150mm Thick)	sq.m	\$35.00	90.0	3,150.00
2.02	Remove & Reinstall existing chainlink fence	lin.m	\$100.00	56.0	5,600.00
2.03	Remove & Reinstall existing wall	l.s.	\$5,000.00	1.0	5,000.00
2.04	Re-benching of existing manhole base	each	\$1,000.00	1.0	1,000.00
2.05	Remove & Reinstall existing asphalt D/W and Concrete walkway	l.s.	\$2,000.00	1.0	2,000.00
2.06	Remove and relocate existing trees	l.s.	\$2,000.00	1.0	2,000.00
5.07	As built	each	\$3,000.00	1.0	3,000.00
Total Section 2					\$21,750.00
SUBTOTAL SECTIONS					\$119,250.00
ENGINEERING (15%)					\$17,887.50
CONTINGENCY (25%)					\$23,850.00
TOTAL ESTIMATED COST					\$160,987.50
GST (5%)					\$8,049.38
PRELIMINARY CONSTRUCTION COST (TOTAL)					\$170,000.00

Section 3 – Contingency for Project Fulfillment

ITEM	DESCRIPTION	UNIT	UNIT PRICE \$	Quantity	Amount
3.00	<ul style="list-style-type: none"> Costs for relocation of existing utilities that maybe in conflict w/ proposed sanitary sewer 	TBD	TBD	TBD	EST.
3.01	<ul style="list-style-type: none"> Costs for decommissioning existing septic system/building and hydro kiosk 	TBD	TBD	TBD	
3.02	<ul style="list-style-type: none"> Costs for pumping effluent during construction if required 	TBD	TBD	TBD	
3.03	<ul style="list-style-type: none"> Costs for dewatering if required 	TBD	TBD	TBD	
3.04	<ul style="list-style-type: none"> Costs for supporting existing utilities during construction 	TBD	TBD	TBD	
Total Additional Reserve – S.3 Costs					\$28,571.⁴³
G.S.T.					\$1,428.⁵⁷
PRELIMINARY COST CONTINGENCY ESTIMATE FOR EXTRAS					\$30,000.⁰⁰
TOTAL ESTIMATE: \$200,000.⁰⁰					