Appendix A - Subject Site Property Assessment Profile (BCAA, 2023)





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1600 SUNNYSIDE RD ANMORE

Area-Jurisdiction-Roll: 10-501-01121.300

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Favourite	Compare	Prir

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Google Report a problem (/Property/ImageInformation)

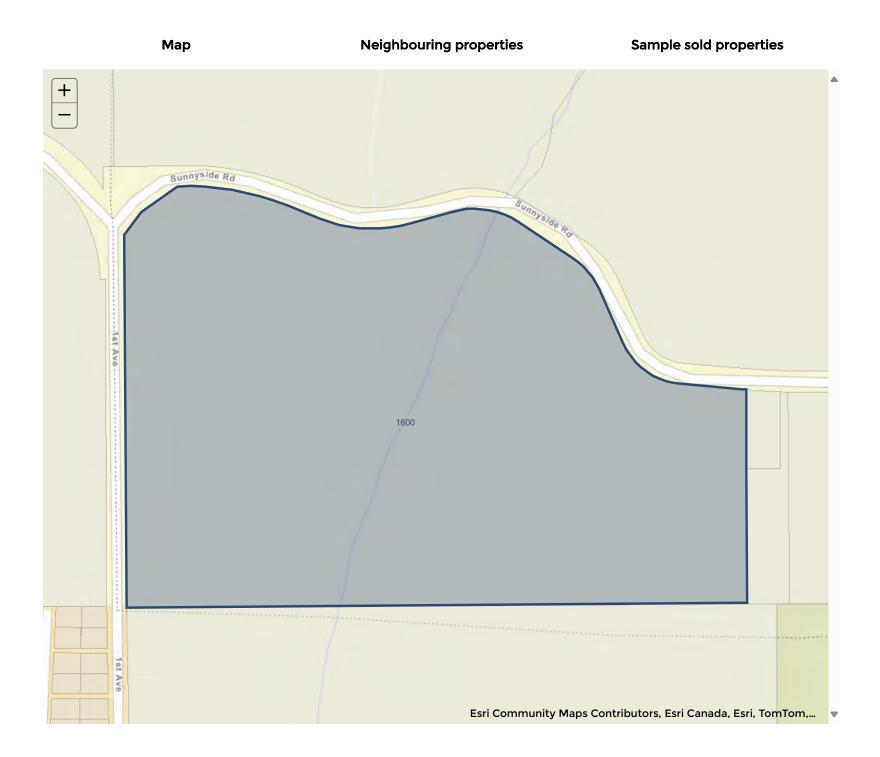
Total value	
2024 assessment as of July 1, 2023	
Land	
Buildings	
Previous year value	
Land	
Buildings	

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Property information		Legal description and parcel ID
Are the property details co	rrect?	LOT 3, PLAN EPP99431, DISTRICT LOT 269, GROUP 1, NEW
Year built		WESTMINSTER LAND DISTRICT
Description	2 Acres Or More (Vacant)	PID: 031-060-463
Bedrooms		
Baths		
Carports		
Garages		Sales history (last 3 full calendar years)
Land size	49.17 Acres	No sales history for the last 3 full calendar years
First floor area		
Second floor area		
Basement finish area		
Strata area		
Building storeys		Manufactured home
Gross leasable area		Width
Net leasable area		Length
No.of apartment units		Total area







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1605 SUNNYSIDE RD ANMORE

Area-Jurisdiction-Roll: 10-501-01121.100

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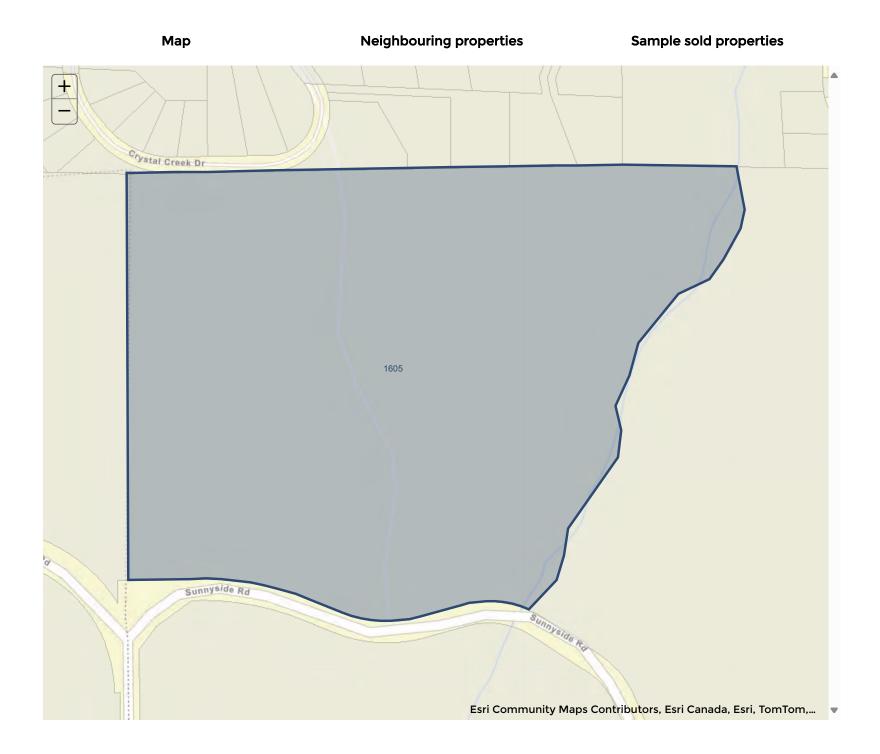
Total value	
2024 assessment as of July 1, 2023	
Land	
Buildings	
Previous year value	
Land	
Buildings	

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Find out more about BC Assessment's Data Services (https://info.bcassessment.ca/services-and-products/Pages/Buy-and-Exchange-Data.aspx)

Property information		Legal description and parcel ID
Are the property details co	rrect?	LOT 1, PLAN EPP99431, DISTRICT LOT 269, GROUP 1, NEW
Year built		WESTMINSTER LAND DISTRICT PID: 031-060-447
Description	2 Acres Or More (Vacant)	PID: 031-060-447
Bedrooms		
Baths		
Carports		
Garages		Sales history (last 3 full calendar years)
Land size	49.67 Acres	No sales history for the last 3 full calendar years
First floor area		
Second floor area		
Basement finish area		
Strata area		
Building storeys		Manufactured home
Gross leasable area		Width
Net leasable area		Length Total area
No.of apartment units		- IOCal area







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1755 SUNNYSIDE RD ANMORE

Area-Jurisdiction-Roll: 10-501-01121.200

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Favourite	Compare	Print



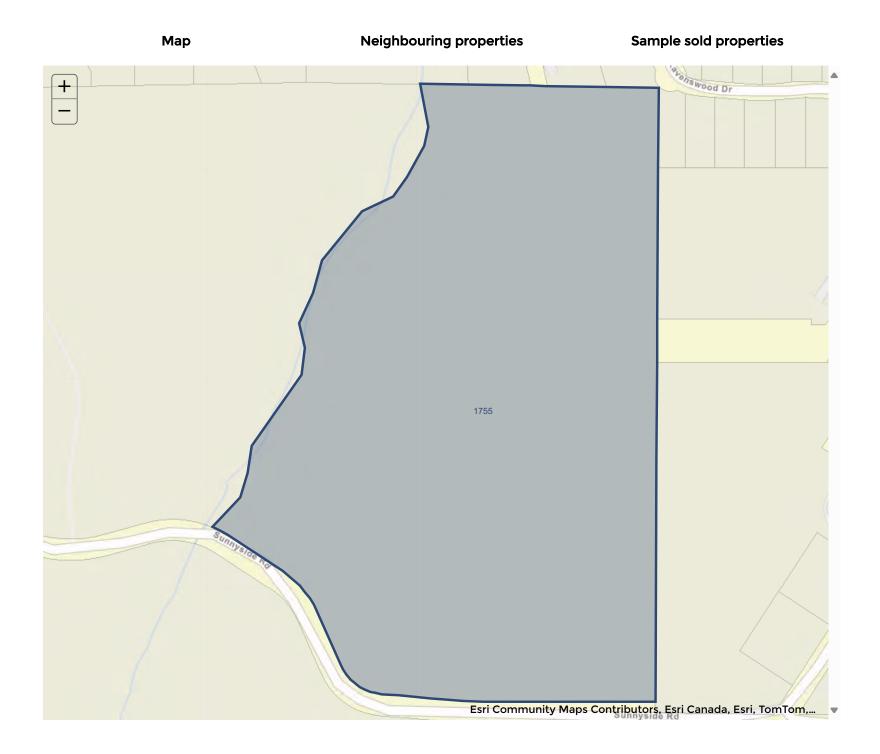
Total value	
2024 assessment as of July 1, 2023	
Land	
Buildings	
Previous year value	
Land	
Buildings	

Questions about this property assessment? Visit our Property assessment FAQ (https://info.bcassessment.ca/faq) or Contact us (/property/contact) if you have questions.

Visit our BC Assessment interactive market trends maps (http://bcagis.maps.arcgis.com/apps/MapSeries/index.html? appid=ba3d56fb4c144727896b25989bdf00d2) for assessed value changes in your area, and our Property tax page (https://info.bcassessment.ca/propertytax) to learn what your assessment value change means for your property taxes.

Find out more about BC Assessment's Data Services (https://info.bcassessment.ca/services-and-products/Pages/Buy-and-Exchange-Data.aspx)

Property information		Legal description and parcel ID
Are the property details co	rrect?	LOT 2, PLAN EPP99431, DISTRICT LOT 269, GROUP 1, NEW
Year built		WESTMINSTER LAND DISTRICT
Description	2 Acres Or More (Vacant)	PID: 031-060-455
Bedrooms		
Baths		
Carports		
Garages		Sales history (last 3 full calendar years)
Land size	46.46 Acres	No sales history for the last 3 full calendar years
First floor area		
Second floor area		
Basement finish area		
Strata area		
Building storeys		Manufactured home
Gross leasable area		Width
Net leasable area		Length Total area
No.of apartment units		Total area



Appendix B - Anmore South Preferred Plan Illustrative Concept



ILLUSTRATIVE CONCEPT PLAN Preferred







Appendix C - Offsite Servicing Concepts (Aplin Martin, 2023)



Sunnyside Anmore Development Past Engineering Work Review



Aplin Martin Project No. 23-291

Icona Properties

Date: March 2023

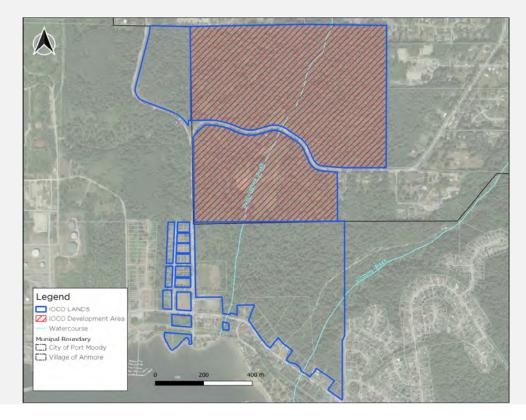
Prepared for: Icona Properties

1



INTRODUCTION

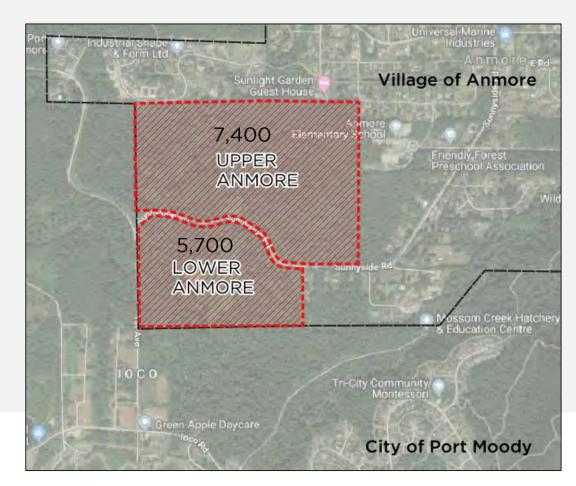
- The purpose of this PowerPoint presentation is to provide Icona Properties an overview of the past engineering related works that have been completed for the IOCO lands development project.
- ► The subject lands reviewed previously consists of approximately 59 ha of lands that sits within the Village of Anmore (Anmore).
- Previous engineering related works include:
 - Survey
 - Preliminary road alignment
 - High-level water and sanitary servicing concepts and cost estimates
 - Stormwater management requirements
 - Transportation, environmental and geotechnical reviews





PRELIMINARY POPULATION PROJECTIONS

- Based on the preliminary land use plan, projected population in Anmore is approximately 13,100
 - ► 5,700 in Lower Anmore (Stage 1)
 - > 7,400 in Upper Anmore (Stage 2)





SITE PLAN



PARCEL PLAN FROM THE CLIENT (2023-03-28)





WATER SERVICING OPTIONS REVIEW



Existing Anmore Water System

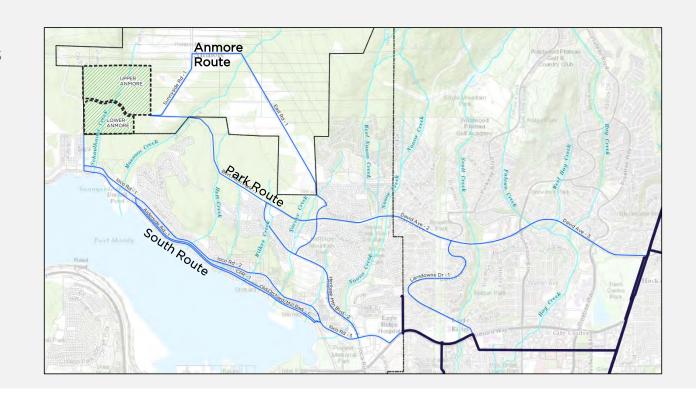
- No existing water services in the study area.
- Anmore's current water supply is provided by Port Moody - Deficiencies in providing adequate fire flows and emergency storage.
- Port Moody's existing Hickory Reservoir provides some storage for Anmore. Proposed Pinnacle Ridge Reservoir may satisfy Anmore's future storage requirements. ← Assumes only 506 people in IOCO lands.

Sunset Ridge Pump Station (Privat Lower Crystal Creek PRV Lower Pinnacle Ridge PRV Proposed Upper and Pinnacle Ridge Reservoir Lower IOCO Lands in Sunnyside PF Hickory Drive Anmore Reservoir Legend Pump Stations 158 Zone (158 m 186 Zone (186 m) -- Sunset Ridge (private)



Proposed Water Servicing Concepts

- Three major servicing options with 9 sub routes have been reviewed
- Connections to Metro Vancouver system are considered.
- Route options have been reviewed for construction challenges, reservoir and booster pump station requirements and construction costs.

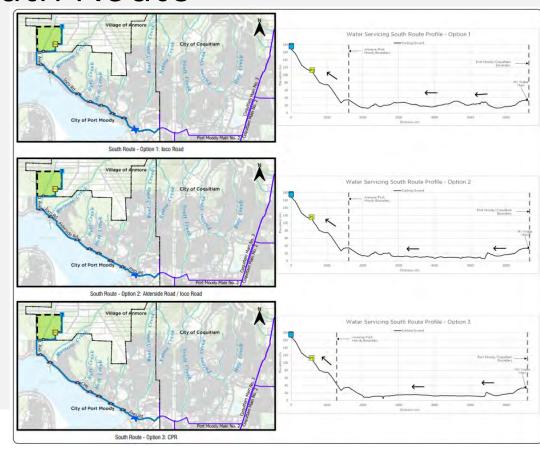




Water Servicing South Route

- ▶ The South Route options:
 - A-1, via loco Rd
 - > A-2, via Alderside Rd
 - > A-3, via the CP Rail ROW
- Only one proposed boost station and reservoir and they are both on the project site.

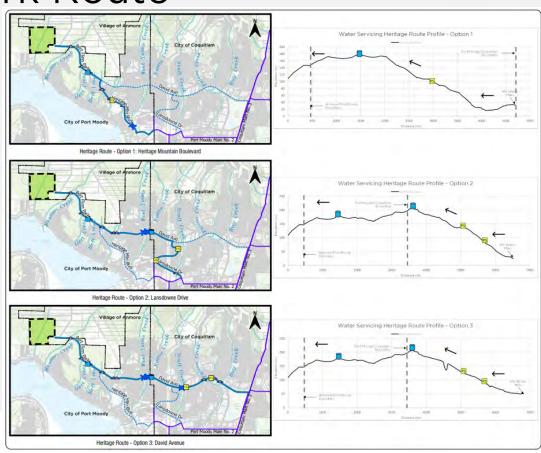
This option is currently proposed to provide services to the proposed development.





Water Servicing Park Route

- ► The Park Route options :
 - > B-1, via Heritage Mountain Blvd
 - ▶ B-2, via Lansdowne Dr
 - B-3, via David Ave
- ► The Bert Flinn Park ROW is clear of existing utility, making it an ideal corridor for new utilities. However, obtaining approval to run utility through Bert Flinn Park may be challenging.
- For this route, proposed boost station(s) and reservoir(s) are also not on the Project Site, making it difficult to control the implementation.





Water Servicing Anmore Route

- ▶ The Anmore Route options:
 - > C-1, via Heritage Mountain Blvd
 - C-2, via Lansdowne Dr
 - C-3, via David Ave
- Anmore can benefit from this route option as the overall water system within Anmore can be strengthened. There are potential opportunities to upgrade the Village of Anmore's existing infrastructure to address existing system deficiencies. Coordination with the Village of Anmore required as the proposed route through the Village runs parallel to existing utilities.
- However, minimum of 2 boost stations are required and the proposed boost stations and reservoir(s) are not on the project site, making it difficult to control the implementation.

North Route - Option 1: Heritage Mountain Boulevard Water Servicing North Route Profile - Option 2 Water Servicing North Route Profile - Option 3



WATER SERVICING STRATEGY COST COMPARISON

Major Water Servicing Route		Route Option		
		1	2	3
	Total Length (km)	6.65	6.65	6.61
Ontion A South Bouto	Number of Reservoirs	1	1	1
Option A - South Route	Number of Pump Stations	1	1	1
	Total Cost (\$M)	\$18	\$16	\$21
Option B - Park Route	Total Length (km)	4.71	6.52	6.82
	Number of Reservoirs	1	2	2
	Number of Pump Stations	1	2	2
	Total Cost (\$M)	\$12	\$21	\$22
Option C - Anmore Route	Total Length (km)	6.37	7.77	8.07
	Number of Reservoirs	1	2	2
	Number of Pump Stations	2	3	3
	Total Cost (\$M)	\$19	\$27	\$28

Park route option 1 (B-1) via Heritage Mountain Blvd has the shortest water main pipe requirement and construction cost.

Further review with the municipalities and Metro Vancouver is required to determine political feasibility and preferred options.



SANITARY SERVICING OPTIONS REVIEW



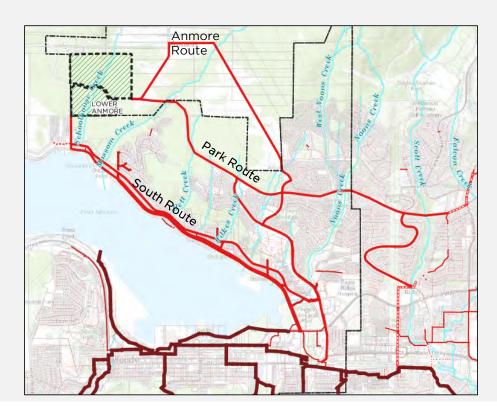
Existing Anmore Sanitary System

- No existing collection system
- Existing lots serviced by on-site sewage disposal
- Strata developments in the Village use common treatment system



Proposed Sanitary Servicing Concepts

- Three major servicing options with 9 sub routes have been reviewed
- Connections to Metro Vancouver system or municipal system.
- Route options have been reviewed for construction challenges, reservoir and booster pump station requirements and construction costs.





Sanitary Servicing South Route

Route Option A-3

- All three options for South route have sewer discharge into the Port Moody interceptor No.2. Route options for the South routes include
 - A-1, via loco Rd
 - > A-2, via Alderside Rd
 - > A-3, via the CP Rail ROW

This option is currently proposed to provide services to the proposed development.

Route Option A-1

Route Option A-2

Route Option A-2



Sanitary Servicing Park Route

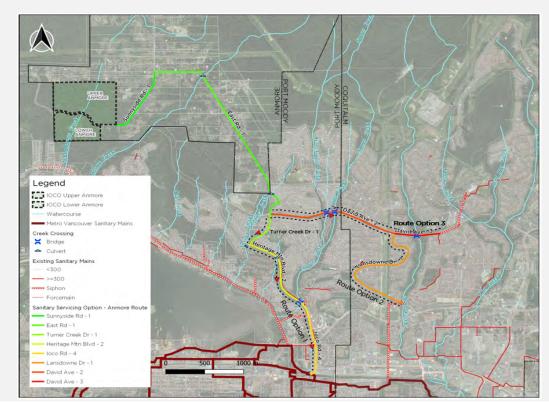
- The Park Route options explore the possible routes to connect through the Bert Flinn Trail. Route options for the Park routes include
 - B-1, via Heritage Mountain Blvd, discharges into Port Moody interceptor No.2
 - B-2, via Lansdowne Dr, discharges into City of Coquitlam siphon at Scott Creek Middle School
 - B-3, via David Ave, discharges into City of Coquitlam System at David Ave and Erskine St
- The Bert Flinn Park ROW is clear of existing utility, making it an ideal corridor for new utilities. However, obtaining approval to run utility through Bert Flinn Park may be challenging.

Bert Flinn Park Legend IOCO Upper Anmore IOCO Lower Anmore Watercourse X Bridge Existing Sanitary Main - Forcemain Sanitary Servicing Option - Park Route Bert Flinn Park - 1 Heritage Mtn Blvd - 1 David Ave - 2



Sanitary Servicing Anmore Route

- The Anmore Route options explore the possible routes to connect through the Village of Anmore. Route options for the Anmore Route includes
 - C-1, via Heritage Mountain Blvd, discharges into Port Moody interceptor No.2
 - C-2, via Lansdowne Dr, discharges into City of Coquitlam siphon at Scott Creek Middle School
 - C-3, via David Ave, discharges into City of Coquitlam System at David Ave and Erskine St
- Due to no existing sanitary collection system in Anmore, Anmore can benefit from this option as it provides options for sanitary servicing for the existing and future developments. Coordination with the Village of Anmore required as the proposed route through the Village runs parallel to existing utilities.





SANITARY SERVICING STRATEGY COST COMPARISON

Major Sanitary Servicing Route		Route Option			
		1	2	3	
	Total Length (km)	5.26	5.26	4.46	
Option A - South Route	Number of Lift Stations	1	1	1	
	Total Cost (\$M)	\$13	\$11	\$16	
Option B - Park Route	Total Length (km)	4.97	6.30	4.90	
	Number of Lift Stations	1	2	2	
	Total Cost (\$M)	\$10	\$15	\$13	
Option C - Anmore Route	Total Length (km)	6.62	7.53	6.13	
	Number of Lift Stations	2	3	3	
	Total Cost (\$M)	\$16	\$21	\$19	

Park route option 1 (B-1) via Heritage Mountain Blvd has the shortest sanitary main pipe requirement and construction cost.

Further review with the municipalities and Metro Vancouver is required to determine political feasibility and preferred options.

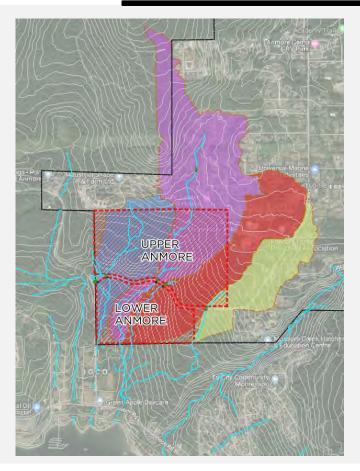


POTENTIAL STORMWATER MANAGEMENT REQUIREMENTS REVIEW



Existing Drainage Condition

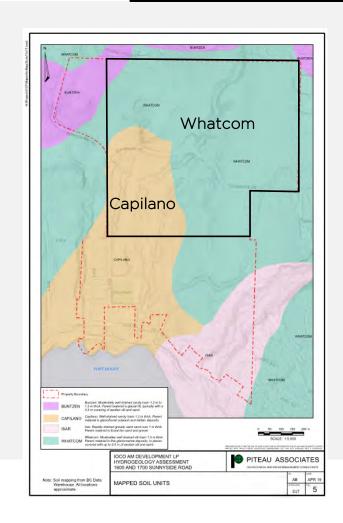
- Undeveloped natural forest setting
- ▶ Drainage The study area drains into Doctor's Creek and Schoolhouse Creek North through several tributaries. Both creeks ultimately drain south to the Burrard Inlet. Flows through the creeks consists of stormwater runoff and groundwater seepage.
- Topography The study area elevation ranges from 25m to 160m and generally slopes from northeast to southwest, with average slopes of about 10%. None of the watercourses within the study area were situated within ravines or area of high potential for erosion, with the exception of Schoolhouse Creek North near Sunnyside Road. -AquaTerra, 2019





Existing Drainage Condition

- Soils Primarily consists of moderately well drained silt loam (Whatcom) and well drained sandy loam (Capilano) soils. Opportunities for infiltration exists on these soils where a sufficiently thickness of unsaturated, loose, granular material is present. -Piteau, 2019
- ► Groundwater Connected to Aquifer 924. Water levels are believed to be near the ground surface of the site, limiting infiltration capacities in some areas. -Piteau, 2019





Stormwater Management Objectives and Design Considerations

- Maintain existing hydrological regime Post-development catchment areas to the local stream roughly match their predevelopment catchment configuration with no large-scale diversions and disruption of flows.
- Protect fish and fish habitat by maintaining baseflow and water quality
 Apply onsite infiltration and retention (for 6-month 24-hour event) and water quality source control BMPs for both the development areas and roads.
- Minimize potential stream erosion Apply onsite and offsite detention to control peak post-development flows to pre-development forested land use condition to up to 1:5-year return period.
- Safe conveyance of flows to minimize damage to life and property under extreme flood conditions Ensure major onsite and offsite conveyance systems including major road crossings, overland flow paths, and stream channels are capable of safely conveying up to the 1:100-year return period post-development flows.



WORKS BY SUBCONSULTANTS

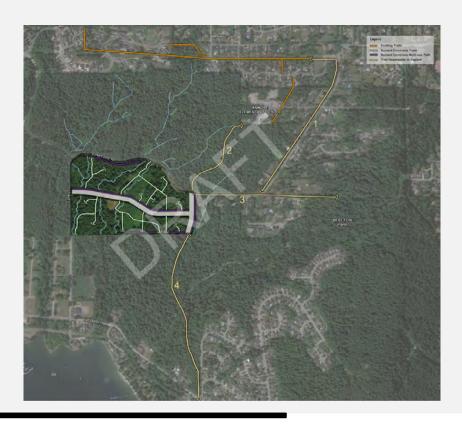


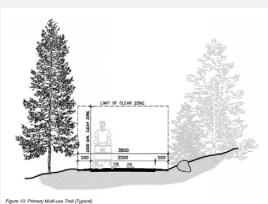
Subconsultants

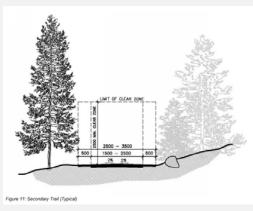
- Bunt & Associates Transportation
- AquaTerra Environmental
- ▶ GeoFoundation Geotechnical Consultant Inc. Geotechnical

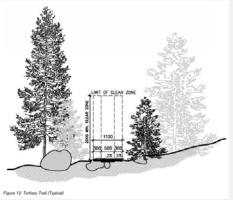


Trail Network and Cross Sections









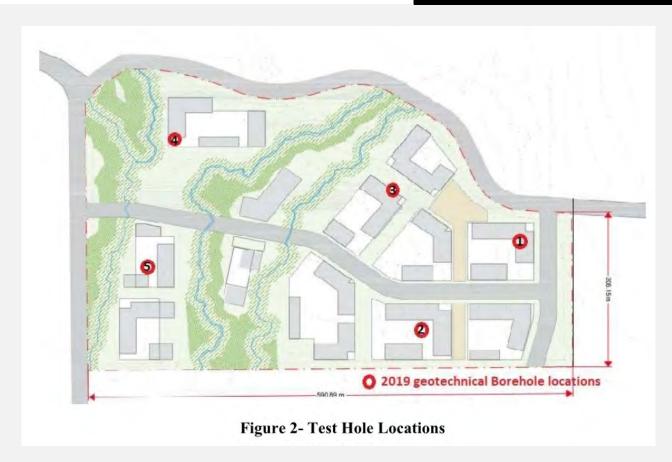


Environmental

- Development Feasibility Assessment
- Phase 1 Watercourse Assessment
- ▶ 1600 & 1700 Sunnyside Road Fish, Fish Habitat and SAR Assessment



Geotechnical





CONCLUSIONS AND NEXT STEPS



CONCLUSIONS

- Site background information in respect to environmental, geotechnical and hydrogeological conditions have been reviewed. Topographic survey has been conducted.
- Potential concepts for roads have been reviewed with preliminary road and trial plans being developed.
- Various water and sanitary services concepts and associated high-level cost estimates were reviewed.
- Stormwater management targets were developed based on the existing drainage and watershed health conditions.
- Further investigation in coordination with the municipalities and Metro Vancouver is required to determine political feasibility and preferred water and sanitary servicing options.
- ▶ Other potential water supply and sanitary servicing options may be explored, such as using Buntzen Lake as the water supply source and onsite wastewater treatment and disposal.



Phase Approach for Servicing Strategy Development

- Phase I Preliminary concept investigation of potential infrastructure servicing strategies. (Completed)
- Phase II Engagement with applicable municipalities, Metro Vancouver, Canadian Pacific Railway, and other regulatory authorities.
- Phase III Detailed infrastructure servicing strategies and capital cost estimates for comparison.
- Phase IV Final proposed infrastructure servicing strategy to support land use planning and the development approval process.



NEXT STEPS

- Update the proposed servicing concepts and cost estimates based on the revised land use plan information.
- Engagement with applicable authorities
 - Consult with Anmore to review water and sanitary servicing options and Anmore's preferences
 - Consult with Metro Vancouver to determine feasibility of connecting to the Metro system
 - Consult with other entities, e.g. Port Moody, Coquitlam, and/or CPR, to determine
 - feasibility of using their ROW to construct the required infrastructure;
 - feasibility to connect to their systems (for sanitary system only); and
 - optimal locations for reservoirs and pump/lift stations



THANK YOU!

Wendy Yao, P.Eng, M.A.Sc Senior Water Resources Engineer Email: wyao@aplinmartin.com

Jonathan Hung, P.Eng. Infrastructure Planning Engineer Email: jhung@aplinmartin.com



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