SUNSHINE COAST REGIONAL DISTRICT

ELPHINSTONE (AREA E)
ADVISORY PLANNING COMMISSION MEETING AGENDA
Tuesday, April 29, 2025 at 5:45 p.m.

IN THE CEDARROOM OF THE SUNSHINE COAST REGIONAL DISTRICT OFFICES AT
1975 FIELD ROAD, SECHELT, BC

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1. ELECTION OF CHAIR AND VICE CHAIR

2. CALL TO ORDER

3. AGENDA

3.1 Adoption of the Agenda

4. MINUTES

4.1	Elphinstone (Area E) APC Minutes of November 26, 2024	Pages 1 - 3
4.2	Egmont/Pender Harbour (Area A) *APC* Minutes of November 27, 2024	pp 4 - 7
4.3	Halfmoon Bay (Area B) APC November & December Meetings Cancelled	
4.4	Roberts Creek (Area D) APC Minutes of December 16, 2024	pp 8 - 10
4.5	West Howe Sound (Area F) APC Minutes of November 26, 2024	pp 11 - 13

5. BUSINESS ARISING FROM MINUTES AND UNFINISHED BUSINESS

6. PRESENTATIONS AND DELEGATIONS

7. REPORTS

7.1	Rezoning Application for Lot D Chaster Road (BYL00052)	pp 14 – 126
7.2	Housing Needs Report; Official Community Plan (OCP) Renewal Project Scope and Timeline Update	pp 127 - 261

8. DIRECTORS REPORT

9. NEXT MEETING

10. ADJOURNMENT

SUNSHINE COAST REGIONAL DISTRICT

AREA E – ELPHINSTONE
ADVISORY PLANNING COMMISSION

November 26, 2024

RECOMMENDATIONS FROM THE AREA E ADVISORY PLANNING COMMISSION MEETING HELD AT FRANK WEST HALL, 1224 CHASTER ROAD, ELPHINSTONE, BC

PRESENT:	Chair	Mary Degan
	Members	Laura Macdonald
		Devin Arndt
ALSO PRESENT:	Electoral Area E Director	Donna McMahon (Non-voting Board Liaison)
	Recording Secretary	Vicki Dobbyn
REGRETS:		Clinton McDougall
		Nara Benchley
		Arne Hermann
		Michael Sanderson

CALL TO ORDER 7:08 p.m.

AGENDA The agenda was adopted as circulated with agreement to reorder items.

MINUTES

Elphinstone (Area E) APC Minutes of October 22, 2024 were approved as circulated.

The following minutes were received for information:

- Egmont/Pender Harbour (Area A) APC Minutes of October 30, 2024
- Halfmoon Bay (Area B) APC Minutes of October 22 and October 26, 2024
- Roberts Creek (Area D) APC Minutes of October 21, 2024
- West Howe Sound (Area F) APC Minutes of October 22, 2024

NEW BUSINESS

There is a new Alternate Director for Area E, Fiona Beaty.

DIRECTOR'S REPORT

The Director's Report was received.

REPORTS

Official Community Plan Update – Project Status Report
Official Community Plan Background Report

Key Points of Discussion:

- 2024 Housing Needs Assessment was circulated prior to meeting. It is intended to be a reference for the OCP review. Inaccuracy of data in this report was noted.
- VCH regulations on septic systems limit housing options in rural areas
- It is very challenging to review OCPs without the participation of MOTI in the process
- Will new OCP wording be strong enough to influence MOTI decisions?
- Have there been any changes in the engagement plans?
- What are the budget implications of the engagement plans?

- Suggestions for Locations for Public Engagement:
  Booth at Fall Fair at Quality Garden Supply
  Whispering Firs would be a good location especially for Wood Creek Park residents
  Summer at Bonniebrook Beach for a coffee popup.
  Gibsons and Area Community Centre, Gibsons Legion, Churches, Thrift Stores
  Banditry and Sunday Cider
  Grounded Acres Farms
  Green Waste site on Henry Road
  Henry Reed Farm
  Elphie cycle
  Santa Claus in the mall
  GBS - at counter or popup in the parking lot
  Find places where people are waiting
  Should target mobile homes and RV parks
  Signs in parks

- Other Suggestions for Public Engagement:
  Use events to have a table to engage people
  Mailout to individual mailboxes with postpaid return and QR code
  Important to have paper options
  Newsletters from Elphinstone businesses
  ECA newsletter or updates and Facebook
  Elphinstone column in Coast Reporter
  Cedar Grove PAC newsletter
  Social Media
  Laminated poster with QR code in all the halls and notice boards
  Add a graphically interesting map that shows clearly what Area you are in.
  Other local Facebook pages

- What expectations are we setting up with OCP reviews?
- It was suggested to run draft survey by APC for input before sending out.

- Are they using one survey for all areas? There should be some common questions but also ones focussed on the specifics of the area.
- Have a meeting with all APCs and Area Directors to review what the top issues are. For Area E it is storm water and MOTI.
- TracC, VCH, and the Resource Centre jointly convened a Transportation meeting in May. A report will be distributed to APC members.
- APC would welcome more questions from SCRD to guide their discussions.

NEXT MEETING January 28, 2025

ADJOURNMENT 8:34 p.m.

SUNSHINE COAST REGIONAL DISTRICT
EGMONT/PENDER HARBOUR (AREA A) ADVISORY PLANNING COMMISSION
November 27, 2024

RECOMMENDATIONS FROM THE EGMONT/PENDER HARBOUR (AREA A) ADVISORY PLANNING COMMISSION MEETING HELD AT PENDER HARBOUR SECONDARY SCHOOL, 13639 SUNSHINE COAST HIGHWAY, MADIERA PARK, BC

PRESENT:	Chair	Dennis Burnham
	Members	Bob Fielding
		Jane McOuat
		Tom Silvey
		Catherine McEachern (Zoom)
ALSO PRESENT:	Electoral Area A Director	Leonard Lee (Non-Voting Board Liaison)
	Electoral Area A Alternate Director	Christine Alexander (Non-Voting Board Liaison)
	Administrative Assistant/Recorder	A. O'Brien
REGRETS:	Members	Yovhan Burega
		Sean McAllister
		Gordon Littlejohn
		Alan Skelley

CALL TO ORDER 7:10 p.m.

AGENDA The agenda was adopted as presented.

ELECTION OF CHAIR Dennis Burnham was elected Chair for the purpose of this meeting.

MINUTES

Area A Minutes

The Egmont/Pender Harbour (Area A) APC Minutes of October 30, 2024 were approved as circulated.

The following minutes were received for information:

- Halfmoon Bay (Area B) APC Minutes of October 22 & 26, 2024
- Roberts Creek (Area D) APC Minutes of October 21, 2024.
- Elphinstone (Area E) APC Minutes of October 22, 2024.
- West Howe Sound (Area F) APC Minutes of October 22, 2024.

REPORTS

Official Community Plan Update – Project Status Update

Discussion points included the following points:

- Reiterate the suggestion for the previous Area A OCP committee to participate in the OCP renewal process.
- APC discussed the tight project timeline given the scope of the review.
- Need clarity regarding "harmonization" of bylaws 337 and 722; each electoral area to be recognized for uniqueness.
- Bylaw harmonization should be separate from the OCP renewal process.
- This does not feel like a community plan given the limited scope of items to be reviewed.
- Suggestion to present a draft harmonized bylaw and review this before moving on to bylaw changes.
- The current Area A bylaw has not been brought in alignment with the current Area A OCP.
- Past members of the OCP Committee would be interested to participate again.
- Discussion around the level of involvement of the APC members – this is an enormous workload.
- APC was used as a referral agency for the last OCP update.
- Scope of work: Consider where more specifically the growth should occur and the utilities and infrastructure location to allow for residential and business growth.
- Example of Veranda Ridge – utilities in place to allow for the development.
- Questions around the OCP as a high-level document? The Area A OCP was a very specific document.
- APC discussion around the Housing Needs Report and the number of new units of housing needed in Area A. Seems very difficult to be able to achieve.
- Would like to see less verbiage and generalities, condense the content for what is being asked of the APC to review.
- Suggestion to limit the scope in order to meet the timeline or expand the timeline.
- Time could be saved by re-initiating the previous Area A OCP Committee.
- This scope process is similar to what happened in the last OCP kick off. The scope got more narrow as the process was initiated.
- Will zoning on the water be looked at in the OCP? This is an outstanding issue for First Nations rights and titles.
- Questions around the inclusion of water stewardship and solid waste considerations in the OCP.
- Will the Terms of Reference be driven by staff or by community input?
- Modify the Area A OCP rather than re-writing.

Recommendation No. 1 *Official Community Plan Project Update (Area A)*

The Area A APC recommends that a committee be constituted for the Area A OCP review with support from an SCRD Planner. The committee can look at the current OCP with the

view of revising the areas that are required by the provincial government and can also look at the *Local Government Act* optional content as they see fit.

The Area A APC discussed the questions posed in the staff report memo and provided the following feedback:

Local groups and associations to consider for public engagement process:

- Emergency Responders – Egmont and Pender Harbour fire, police and ambulance
- Egmont Community Club
- Pender Harbour Community Club
- Local Schools – Madeira Park Elementary and Pender Harbour Secondary School
- Parents Advisory Council (PAC) and school volunteers
- Pender Harbour and Area Residents Association (PHARA)
- Waterfront Protection Coalition
- Swiya Lakes Stewardship Alliance
- Ruby Lake Landholders Association
- Blind Bay neighbourhood area
- Nelson Island residents
- Panorama Drive Residents Club
- Pender Harbour Women's Connection
- Madeira Park Legion email list
- Pender Harbour Community Church email list
- Pender Harbour Rotary
- Sunshine Coast Chamber of Commerce
- Living Heritage Society
- Whitakers and Farrington Strata
- Fran Pen Residents Association
- Sakinaw Lake Community Association
- Sakinaw Woods Strata

Suggestions for engagement methods, digital and print media:

- Bulletin boards, outside Maderia Park IGA, Liquor Store, post office, library
- Facebook groups – Pender Harbour Uncut, Egmonsters, Earls Cove Neighbourhood
- Harbour Speil magazine
- Invitations in the mail, mail out flyers.
- Community Associations email lists.
- Schedule the meetings so that non-residents can also be in attendance.

Suggestions for community engagement in Area A:

- Involve youth and families by going into the local schools and notices at the pool.
- Consider youth engagement in the OCP process through interactive activities at the schools (workshops, group vote, gather feedback on what is important).
- The recent survey done by the Town of Gibsons had good questions and they were

worded in a positive way. Suggestion to try this for the OCP engagement.
- Intergenerational dialogue: model the format for the All-Candidates meeting held at the Madeira Park Legion. Panel discussion with questions. Include an elder from the community, different ages and viewpoints. Could host at a school gym.

The APC discussed the required aspects of the OCP that are of most community interest:

- Address housing needs and affordability vs. leveraging home as an asset to earn an income with short term rentals, building second dwelling, secondary suite.

- In no specific order, the top areas of interest and importance are:

    - location, amount and type of density of residential development to meet housing needs
    - location and phasing of any major road sewer and water systems
    - location and type of public facilities
    - location, amount, type of commercial industrial, recreation and public use lands

- In no specific order, the lower priority areas of interest and importance are:

    - restrictions of use of land subject to hazardous conditions or that is environmentally sensitive
    - location and area of sand and gravel deposits
    - greenhouse gas reduction targets

DIRECTOR'S REPORT

The Director's report was received.

NEXT MEETING To be confirmed.

ADJOURNMENT 9:15 p.m.

SUNSHINE COAST REGIONAL DISTRICT

ROBERTS CREEK (AREA D)
ADVISORY PLANNING COMMISSION

December 16, 2024

THE MINUTES OF THE ROBERTS CREEK (AREA D) ADVISORY PLANNING COMMISSION MEETING HELD AT THE ROBERTS CREEK LIBRARY READING ROOM LOCATED AT 1044 ROBERTS CREEK ROAD, ROBERTS CREEK, BC

PRESENT:	Chair	Mike Allegretti
	Members	Meaghan Hennessey Caroline Tarneaud
ALSO PRESENT:	Kelly Backs	Electoral Area D Director (Non-Voting Board Liaison)
	Vicki Dobbyn	Recording Secretary
	Public	2
REGRETS:	Members	Chris Glew Lesley-Anne Staats Gerald Rainville Chris Richmond Francesca Hollander Robert Hogg Jim Budd

CALL TO ORDER 7:05 p.m.

AGENDA The agenda was adopted as presented.

MINUTES

The Roberts Creek (Area D) APC Minutes of October 21 were approved as circulated.

The following minutes were received for information:

- Egmont/Pender Harbour (Area A) APC Minutes of October 30, 2024
- Halfmoon Bay (Area B) APC Minutes of October 22 and 26, 2024
- Elphinstone (Area E) APC Minutes of October 22, 2024
- West Howe Sound (Area F) APC Minutes of October 22, 2024

REPORTS

Official Community Plan Update – Project Status Update
Official Community Plan Background Report

Key Points of Discussion:

- SCRD is looking at Bylaw 722 that replaced 310 about two years ago.
- The housing crisis and the cost of building are background drivers of OCP renewal.

- The OCP is supposed to be a living document. It is meant to look to 10-20 years in the future and be updated every five years.
- Zoning bylaws are the implementation tools of the OCPs but they don't always align with the OCP.
- The APC is of the opinion that if the OCP is a vision and bylaws are aligned there shouldn't be as much need for variances. To create the co-housing development it was necessary to create a new zone in the Zoning Bylaw and then change the OCP to allow for the development.
- One way to revise OCP is to break areas down into different neighbourhoods.
- What is SCRD expecting the APC to do at this meeting? APC members don't understand the scope of what the SCRD wants to change.
- There is confusion around the process.
- There is a lot of anxiety about the hybridization of OCPs.
- Is there really a need for one OCP? What are the specific challenges for staff with the existing number of OCPs? If there are parts that are the same, can they just copy and paste?
- It will be a lot of work for the SCRD but they have earmarked over 4,000 hours for this project.
- How clear is the harmonization process and role of public input?
- Parts of the 7 OCPs all say the same thing but with different language. SCRD would like the wording to be the same when the meaning is the same.
- A goal is to get rid of the overlap, and could result in separate standalone regional chapters.
- There could even be several chapters for Roberts Creek if we want different visons for different areas.
- There is still a concern about harmonization.
- There is a trend of merging (this happened in North Van with little public input).
- It might work well to harmonize language within separate OCPs.
- Our OCP doesn't allow commercial development on the highway – would other areas agree to this?
- Roberts Creek is the only area with country residential zoning.
- Process should be as transparent as possible.
- APC members would very much like to get together with the other APCs. This session would be combined with orientation and should be at least 3 hours long, with pizza. The OCP would not be included.

Members reviewed the following questions in the report and provided feedback:

1. *What existing community events and locations in your electoral area would be effective for engaging diverse community members (people with different lived experiences) in person? Please provide specific examples, including both indoor and outdoor venues.*

- OCP Committee
- Legion
- Firefighters
- Yoga by the Sea
- Gumboot Cafe
- Earth Day
- Creek Daze
- Event at the hall using café model using a facilitator and making the process as transparent as possible. It would be good for the APC, OCPC, and SCRD staff to work together to come up with an appropriate and robust event. The SCRD has staff with the skills to facilitate this, but it might be better to look for a consultant so it is a completely neutral.
- In the Gibsons Mall they had a process for public input – can we find out how it worked for them?

2. *The project team is developing engagement tools for each phase of the OCP Update process. What digital and print methods do you believe will best reach community members in your area? Please be as specific as possible and consider breaking down the tools by target audience.*

- Coast reporter in print and online
- Mail out
- Posters
- Facebook - Roberts Creek Speaks
- Schools – weekly email from principal
- RC PAC and PACs of Elphinstone and Chatelech
- X/RCCA
- Instagram
- Boottales Community Newsletter
- Newsletters of local groups

3. *What actions can staff and the community take to ensure that our public engagement events feel safe and welcoming for all participants, particularly if we wish to create meaningful opportunities for: I) Fostering intergenerational dialogue about the future of the community/region? ii) Encouraging conversations among individuals with diverse life experiences regarding the future of the community/region?*

- The document is not in plain English, it is in planning language. It would be helpful if the language was simplified.
- Volunteers need more than a week to read long documents.
- Advertise through every method.
- Use the words “family friendly”.
- Ask people what is the common thread that everyone in Roberts Creek would agree to that unites them so we have a touchstone of commonality.
- It should be considered where the Roberts Creek OCPC can be involved in the OCP update, in accordance with the intent developed in the existing OCP.
- APC requests an up-to-date timeline of the OCP renewal process and public engagement schedule to help map out the expectations for the APCs, acknowledging that it is provisional and can change. The schedule in the report is out of date. It was ambitious, and has been put on hold. The schedule will be re-evaluated.

DIRECTORS REPORT The Director’s Report was received.

ADJOURNMENT 9:00 p.m.

NEXT MEETING To be determined.

SUNSHINE COAST REGIONAL DISTRICT

AREA F – WEST HOWE SOUND
ADVISORY PLANNING COMMISSION

November 26, 2024

RECOMMENDATIONS FROM THE WEST HOWE SOUND (AREA F) ADVISORY PLANNING COMMISSION MEETING HELD ELECTRONICALLY VIA MS TEAMS.

PRESENT:	Chair	Susan Fitchell
	Members	Marlin Hanson
		Miyuki Shinkai
		Jonathan McMorran
		Ryan Matthews
ALSO PRESENT:	Director, Electoral Area F (Non-Voting Board Liaison)	Kate-Louise Stamford
	Alt. Director Electoral Area F (Non-Voting Board Liaison)	Ian Winn
	Recorder	Diane Corbett
REGRETS:	Member	Katie Thomas
ABSENT:	Member	Tom Fitzgerald

CALL TO ORDER 7:00 p.m.

AGENDA The agenda was adopted as presented.

MINUTES

West Howe Sound (Area F) Minutes

The West Howe Sound (Area F) APC minutes of October 22, 2024 were approved as circulated.

Minutes

The following minutes were received for information:

- Egmont/Pender Harbour (Area A) APC Minutes of October 30, 2024
- Halfmoon Bay (Area B) APC Minutes of October 22 & October 26, 2024
- Roberts Creek (Area D) APC Minutes of October 21, 2024
- Elphinstone (Area E) APC Minutes of October 22, 2024

REPORTS

Official Community Plan Update – Project Status Update
Official Community Plan Background Report

The Area F APC continued discussion of the Official Community Plan reports received at the October APC meeting.

Points included:

- Could distribute a survey to contacts, friends. What would be the best way for them to respond?
- Could provide a list of contacts to provide feedback.
- Send a chain letter; send to friends in the community.
- "What do you love?" The opportunity to respond with a heartfelt idea is important. It would be helpful to give a specific example of how important something is, or what it is about the thing you love that is valued.
- Would be good to have an understanding of the impact on the two industrial area OCPs of West Howe Sound as we go forward. The two industrial area OCPs (Hillside and Twin Creeks) are not going to be renewed.
- Like idea of the APCs harmonizing to make the process more efficient and economize on the use of staff time. Can see localization of some of the topics (e.g., pulp mill in our area). Strongly support streamlining. We have to be realistic about our timeframe and what we can achieve.
- Do this through Facebook, Survey Monkey, and mail-out questionnaire.
- Hold online Zoom meetings to update people.
- Use a template with specific questions, not tricky or vague. Important to have universal or similar questions for feedback.
- The timeframe gives lots of opportunity in different seasons. Hopefully SCRD will maximize the opportunity when there are gatherings. People are coming or going off coast in summertime; gives opportunity for farmers markets, art shows, for outreach and engagement.
- Art Crawl: could ask same questions no matter where you are on the coast.
- Would be great if SCRD had the opportunity to let people know what is in the existing OCP.
- Encourage SCRD to reach out to get the OCP document out, even a link to the OCP. Have some copies available in addition to the survey.
- The YMCA camp has offered space as a venue for community meetings.

There was discussion about meeting in person, and in becoming more familiar with the existing West Howe Sound Official Community Plan. It was proposed that an in-person meeting, formal or informal, could be held at a local venue, like Persephone. Members could review the paper copy OCP, discuss what they would like to see and clarify where where they want to go; looking at the OCP would give a context to consider changing factors, and for looking forward.

DIRECTOR'S REPORT

The Director's report was received.

NEXT MEETING Tuesday, January 28, 2025

ADJOURNMENT 8:05 p.m.

Staff Report
Request for Comment

TO: Elphinstone Advisory Planning Commission – April 29, 2025

AUTHOR: Sven Koberwitz, Senior Planner

SUBJECT: **Rezoning Application for Lot D Chaster Road (BYL00052)**

OVERVIEW

Purpose of Report

The purpose of this report is to provide the Elphinstone Advisory Planning Commission (APC) with an opportunity to provide comments and recommendations concerning a residential development proposal for Lot D on Chaster Road.

Comments and recommendations from the APC will be provided to the Electoral Area Services Committee along with other referral comments for consideration.

BACKGROUND

The Sunshine Coast Regional District (SCRD) has received a zoning bylaw amendment application to rezone Lot D District Lot 909 on Chaster Road to facilitate a 16-lot residential subdivision.

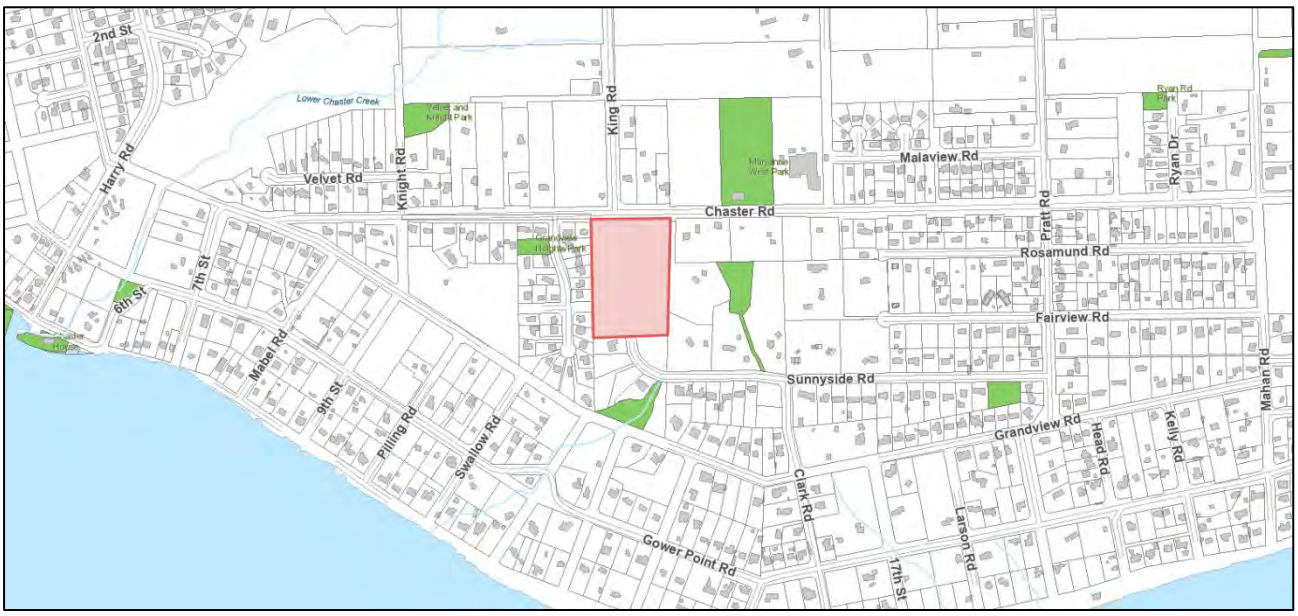
Table 1 Application Summary

Applicant/Owner:	Landev Consulting Inc. for AB Coast Projects Ltd.
Civic Address:	Chaster Road
Legal Description:	Lot D District Lot 909, PID: 015-955-371
Electoral Area:	E- Elphinstone
Parcel Area:	3.214 hectares (7.94 acres)
OCP Land Use:	Rural Residential and Comprehensive Development Cluster Housing Area 4
Subdivision District:	Existing: District F – 8,000 m2 min. (10,000 m2 avg.) Proposed: New District – 700 m2 min.
Zoning Land Use:	Existing: Rural Residential One (RU-1) Proposed: To Be Determined
Application Intent:	To permit a proposed 16-lot residential subdivision with a minimum lot size of 700 m2 (0.17 ac) within the Comprehensive Development Cluster Housing Area 4.

The property is an undeveloped lot located on the south-side of Chaster Road, approximately 200 m west of Cedar Grove Elementary School and Maryanne West Park (Figure 1).

The property is vegetated with ferns, salal, and second-growth coniferous and deciduous trees. Topography is relatively flat to gently sloping with developed residential parcels to the east, west and south, with Chaster Road to the north.

Figure 1 Location Map



Proposal Summary

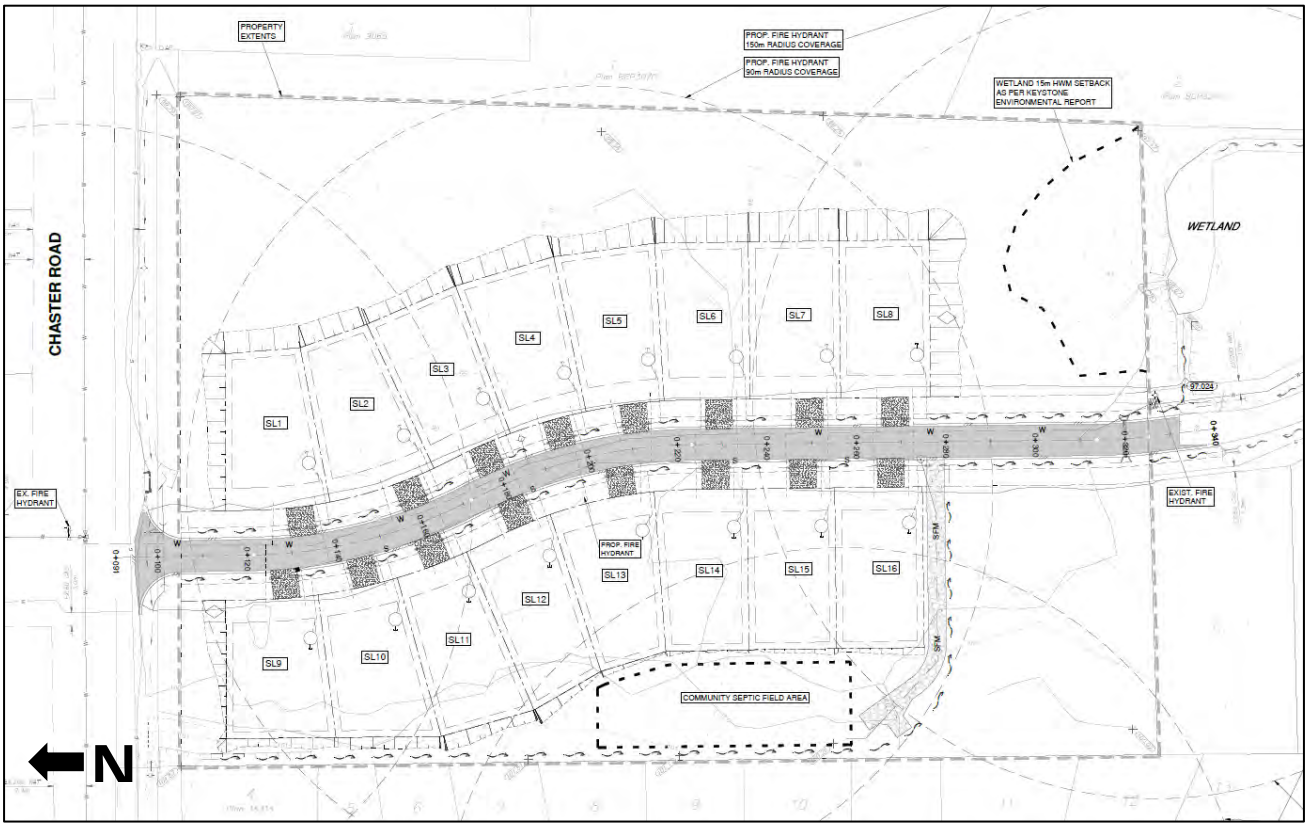
The applicant is proposing a 16-lot subdivision oriented towards an extension of Sunnyside Road from the south property line to the north at Chaster Road. The 16 lots would meet a proposed 700 m2 (0.17 acres or 7,535 ft2) minimum lot size and front the Sunnyside Road extension.

A Community Sewer System is proposed along the western portion of the property and would need to be approved by Vancouver Coastal Health and in alignment with SCRD Bylaw No. 320 – Subdivision Servicing Bylaw. The shared sewerage field is proposed to be owned and operated by the strata and can be expected to be an open grass field, as is typical of sewerage fields.

The balance of the property would be dedicated as publicly accessible open space. At this time, it has not been determined if public access would be secured through right of ways or dedication.

The proposed plan is generally consistent with the Elphinstone Official Community Plan; however, a Zoning Amendment is required to allow for the subdivision to proceed. Further analysis is provided below.

Figure 2 Proposed Subdivision



DISCUSSION

Official Community Plan

The property is designated as Rural Residential in the Elphinstone Official Community Plan (OCP) and located within Comprehensive Development Cluster Housing Area No. 4. The Cluster Housing Area supports increased density via reduced minimum lot sizes primarily in exchange for public open space.

Areas to the north and east are designated as Rural Residential with areas to the south and west designated as Residential C. The bulk of the surrounding Rural Residential Area is included in the Cluster Housing designation (Attachment A).

Policy B-3.1: Rural Residential and Comprehensive Development Cluster Housing Area No. 4

Specific policy relating to Comprehensive Development Cluster Housing Area No. 4 supports minimum lot sizes of 700 m2 subject to the provision of 50% publicly accessible open space, local community sewer system, stormwater retention for irrigation, and stormwater detention.

The applicant has shown that 50% of the site will be open public space, provided a stormwater management plan, and proposed a local community sewer system. Refinements to this proposal may occur as staff review progresses and referral comments are received.

An excerpt of the policy is provided:

Policy B-3.1: Rural Residential

3. *Subdivisions may be permitted where:*

   d) *Lands are within Comprehensive Development Cluster Housing Area No. 4 on Map 3, in which site rezonings may be considered to allow a density bonus in subdivisions creating smaller parcels averaging 1000 sq. m. (0.25 acres) (with a minimum size of 700 sq. m. (0.18 acres)) if land comprising 50% of the subdivision's gross area is dedicated as park or is protected as publicly accessible open space with a covenant and statutory right of way provided this area has a minimum depth of 60 metres (198 feet) adjacent to the ALR and covers any wetland areas under the rezoning application; and a local community sewer system is constructed that will serve the entire area under rezoning application.*

   e) *Site rezonings may be considered to allow a density bonus in subdivisions creating smaller parcels with a flat minimum size of 700 sq. m. (0.18 acres) within Comprehensive Development Cluster Housing Area No. 4 if there is also installation of systems for on-site clean stormwater retention for irrigation, and stormwater detention to improve on-site and down-slope drainage conditions in addition to the requirements in subsection (d) above.*

Policy B-10.1: Densification Strategies to Support Affordable Housing

The OCP also contains policies supporting densification in order allow for the provision of affordable housing, subject to being able to ensure adequate water supply, solid waste collection, storm water management, sewage treatment, traffic circulation and provision of or access to community amenities. The provision of smaller more compact housing forms does work towards reducing the cost of housing, making it more attainable; however, it is unlikely that market detached housing would meet Canada Mortgage and Housing Corporation (CMHC) or BC Housing affordability targets.

Contributions to affordable housing have not been proposed at this time. In lieu of providing affordable market or non-market housing units contributions to the SCRD Affordable Housing Fund could be considered.

Policy B-10.1: Densification Strategies to Support Affordable Housing

2. *Subdivision creating lots smaller than 1000 m2, cluster residential development such as townhouse and multi-unit building and mixed-use development that combines residential use with commercial, retail, service and office uses are encouraged to be located in the Comprehensive Development Cluster Housing Areas or similar settlement cluster areas.*

Developments exceeding density limits of the Official Community Plan and or the zoning bylaw are encouraged in these areas, subject to amendments to the Official Community Plan and or the zoning bylaw and all of the following criteria:

a) Water supply, solid waste collection, storm water management, sewage treatment facility, traffic circulation and provision of or access to community amenities can all be appropriately provided and the development design is compatible with the surrounding neighbourhoods; and

b) With the exception of any other applicable density increase policies of this Plan, a contribution to affordable or special needs housing must be made in the form of housing unit, land, money or other types of provision and registered with a housing agreement in accordance with the Local Government Act and approved by the Regional District Board.

B-11: Park Land Use Designation & Acquisition Policies

The OCP also contains policy directing the creation of a level 0.26 ha. (0.64 acre) neighbourhood park. The proposed subdivision includes a significantly larger portion of public open area than required under this policy. However, there appears to be a suitable contiguous, level area of 0.28 ha in the southwest corner of the property. This would also be adjacent to the proposed pathway connecting Grandview Heights Road and Sunnyside Road, via Fairview Road.

A more comprehensive review of the proposed public space will be undertaken to ensure it meets long-term community needs as part of the referral process in consultation SCRD Parks and Recreation Services. This work will also engage other referral partners, such as Ministry of Transportation & Transit (MOTT) to comprehensively look at the form, size and function of the proposed connection between Fairview/ Grandview Heights Road and the new Sunnyside Road extension to ensure community mobility is evaluated with a lens of meeting long-term needs.

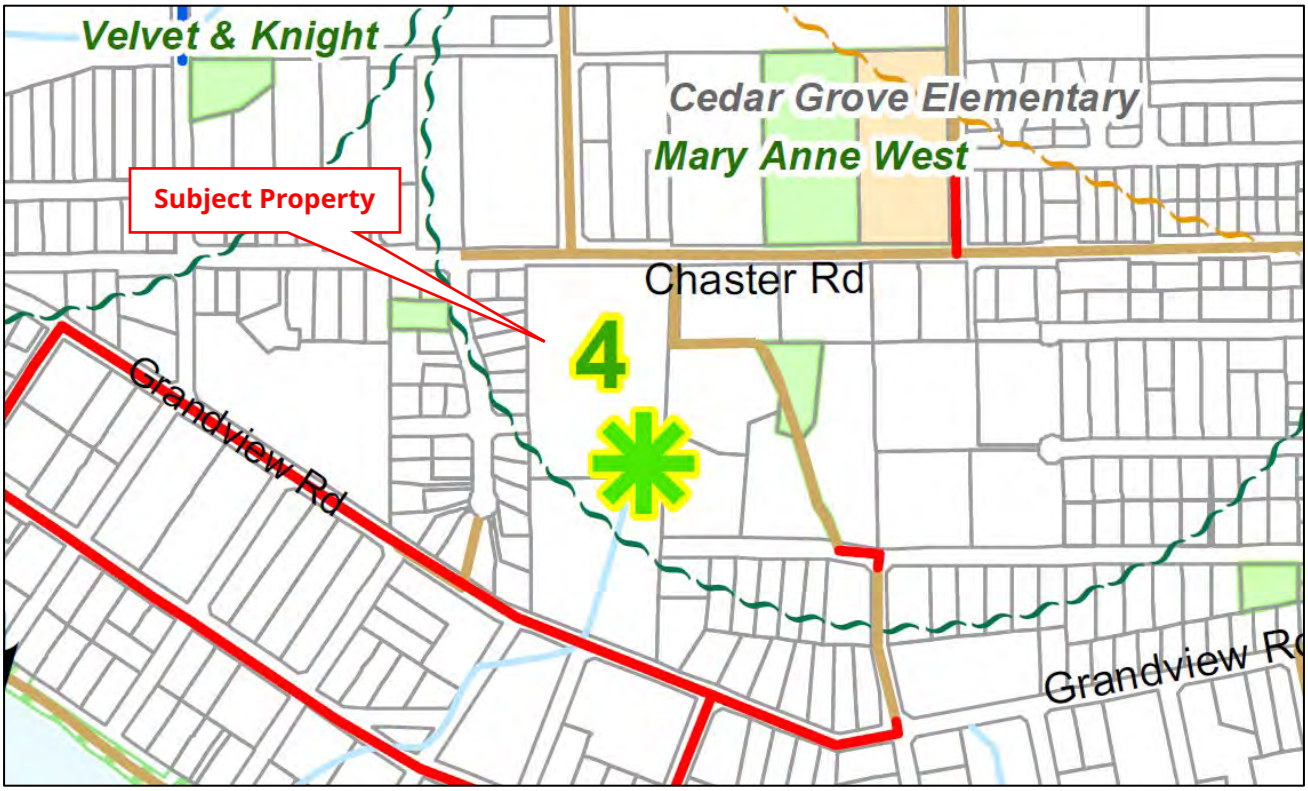
<u>B-11.2 Neighbourhood and Mini Park Policies</u>

(d) Future Neighbourhood or Mini Park No. 4

Grandview Heights Park

A level park site is to be dedicated at the time of the subdivision of two parcels of land located between Grandview Heights Road and Sunnyside Drive that will encompass approximately 0.26 ha. (0.64 acre) shown on Map 4. The dedication shall be achieved at time of subdivision or a rezoning of the two parcels following the cluster housing area policies in Part B-8. A pathway connection between Sunnyside Drive and Grandview Heights Road should be included.

Figure 1 Excerpt from Elphinstone OCP Map 4: Park and Recreation



Development Permit Areas

The property is affected by Development Permit Area 4: Stream Riparian Assessment Areas to all watercourses, including wetlands, that either provide fish habitat or flow to a waterbody that provides fish habitat (Attachment H).

A preliminary environmental assessment has been provided that specifies a 15 m setback from the wetland area on the southeast corner of the property. Further a 2 m setback will be required for ditches along Sunnyside Road.

Prior to final subdivision approval a development permit will be required including an approved Riparian Assessment.

Zoning Bylaw 722

The subject parcel is currently zoned Rural Residential One (RU-1) which allows for a maximum density of two detached dwellings on lots over 8000 m2.

The property is in Subdivision District F where an average lot size of 1.0 ha is required. This would currently allow for a maximum of two to three lots with two dwellings each.

Amendments to Zoning Bylaw 722 are required to facilitate the development. At this time there is no zone or subdivision district that would facilitate a relatively dense urban detached

residential development. Of the existing subdivision districts in Zoning Bylaw 722, Subdivision District A allows for the smallest lots, with a minimum of 1,000 m2

A variety of appropriate regulations will need to be evaluated including appropriate setbacks, lot coverage, building height, floor area limits, off-street parking, and potential density bonuses.

Development of appropriate site-specific small-lot development standards is important for successful infill development as the Elphinstone OCP does not provide design guidelines for intensive residential development.

The proposed 700 m2 minimum lot size is not unprecedented in rural areas with such parcels being in West Howe Sound in the Hopkins Landing, Central Avenue, and Elphinstone Avenue areas.

Many lots under 800 m2 are found in the Town of Gibsons in the Creekside, Heritage Hill, North Fletcher, and Gibsons Landing neighbourhoods.

In addition to local examples and best-practices, staff will consider guidance provided under the Small-Scale, Multi-Unit Housing (SSMUH) Program, specifically the Provincial Policy Manual & Site Standards: https://www2.gov.bc.ca/gov/content/housing-tenancy/local-governments-and-housing/housing-initiatives/smale-scale-multi-unit-housing

Servicing and Infrastructure

Water

Initial water-modelling indicate that the area has adequate fire-flow capacity to accommodate the development without impact to the surrounding area. Further engineering work will be undertaken in response to any comments from the SCRD Utility Services.

Sewer

The proposal includes a shared strata-septic field to service the development. This infrastructure will be owned and operated by the strata consisting of the proposed 16 lots.

Drainage

In accordance with OCP Policy the applicant is required to provide a comprehensive drainage plan to achieve a high level of on-site stormwater management. Initial stormwater plans have been provided (Attachment C).

Transportation and Transit

Sunshine Coast Transit Route 1 (Sechelt-Gibsons/Langdale Ferry) stops are located on Chaster Road and King Road within 100 m of the property.

A draft Vehicle Trip Generation report has been provided (Attachment D) showing 17 to 24 vehicle trips per weekday peak hour. The Ministry of Transportation and Transit (MOTT)

threshold for undertaking traffic impact assessments is site generation more than 100 vehicle trips in any hour.

The proposed Sunnyside Road connection to Chaster Road is consistent with the transportation network planning in the Elphinstone OCP (Map 5 – Transportation). Further local road network expansion, including potential future road connections west and east along the Fairview Road corridor will be explored in consultation with the MOTT.

The proposed development consists of lot sizes that are more common in urban areas with higher levels of infrastructure and not typically found in rural areas. On-street parking, boulevards, and sidewalks are generally found in urban areas; however, this level of service is not available nor prescribed by the SCRD Subdivision Servicing Bylaw 320.

Staff will work with the applicant, MOTT, and the community to determine an appropriate level of service within the existing rural transportation framework.

FINANCIAL IMPLICATIONS

Development Cost Charges

SCRD Development Cost Charges (DCC) Bylaw 693 requires that DCC's be paid for each new single-family dwelling within a Water Service Area. DCC's are collected to assist the SCRD in paying for capital costs directly, or indirectly, related to new development.

For a 16-lot development DCC's collected prior to final subdivision approval would be $58,112 or $3,632 per dwelling unit/lot.

Community Amenity Contributions

The SCRD does not have a target-based Community Amenity Contribution (CAC) policy and would therefore negotiate any CACs as appropriate. CACs are generally based on value created through the rezoning process due to the "lift" in land value.

Staff will negotiate appropriate voluntary CACs consistent with community expectations in order to implement OCP policy for affordable housing contributions.

LEGISLATIVE IMPLICATIONS

Section 464(3) of the *Local Government Act* prohibits a local government from holding a public hearing for residential developments that are consistent with the Official Community Plan. When a public hearing is not held notice must be given prior to first reading in accordance with Section 467.

This application will result in amendments to Zoning Bylaw 722. Staff are considering various options for amendments including a new zone or site-specific amendments to an existing zone.

TIMELINE

Comments received from the referral process, APC consideration, and Public Information Meeting will be evaluated and presented to the Electoral Area Services Committee at a future date.

Figure 3 Rezoning Application Timeline

COMMUNICATIONS

A development sign will be installed at the property at least 10 days before a required public information meeting. A public information meeting will be hosted by the applicant in an appropriate public venue. Notification will be provided in the local newspaper along with mail-outs to all properties within 100 m of the development.

Internal

The application has been referred to relevant internal departments at the SCRD including Building, Parks and Recreation, Utilities, Transit, and the Gibsons Fire Department.

External

The application has been referred to relevant external agencies including the Ministry of Transportation and Transit, Vancouver Coastal Health, BC Hydro, and the Sḵwx̱wú7mesh Nation.

SUMMARY AND CONCLUSION

The SCRD has received a zoning bylaw amendment application that is generally in compliance with OCP policies. The application is currently under review with referrals being undertaken to obtain comments and recommendations from the APC and other internal and external parties.

The APC may wish to consider the following specific questions and provide appropriate recommendations and local context to assist the SCRD Board and planning staff in consideration of this application.

- Is the layout and configuration of the proposed development compatible with the surrounding area?
- Considering OCP direction on a future neighbourhood park what level of service should such a park provide?
- Are there any additional local issues staff and the Board should consider that would affect this proposed development?

Included below are sample recommendations that may assist the APC during its deliberations.

ATTACHMENT(S):

A - OCP Land Use, Zoning, Subdivision District, DPAs, and Aerial Map
B - Rezoning Application Submission Report
C - Civil Drawings
D - DRAFT Vehicle Trip Generation Memo
E - Geotechnical Assessment
F - Hydrological Assessment
G - Tree Inventory
H - Wetland and Stream Assessment
I - Topographic Survey

Reviewed by:			
Manager	J. Jackson		
Assistant Manager	K. Jones		

SAMPLE RECOMMENDATIONS FOR ADVISORY PLANNING COMMISSION

Support

(1) THAT the Advisory Planning Commission supports the application as presented.

Conditional Support

(2) THAT the Advisory Planning Commission supports the application in-principle subject to the following condition(s):

    (a) Recommended changes to the proposal.

Non-Support

(3) THAT the Advisory Planning Commission does not support the application as presented due to the following reason(s):

    (a) Reason for not supporting the proposal.

2025-03-12

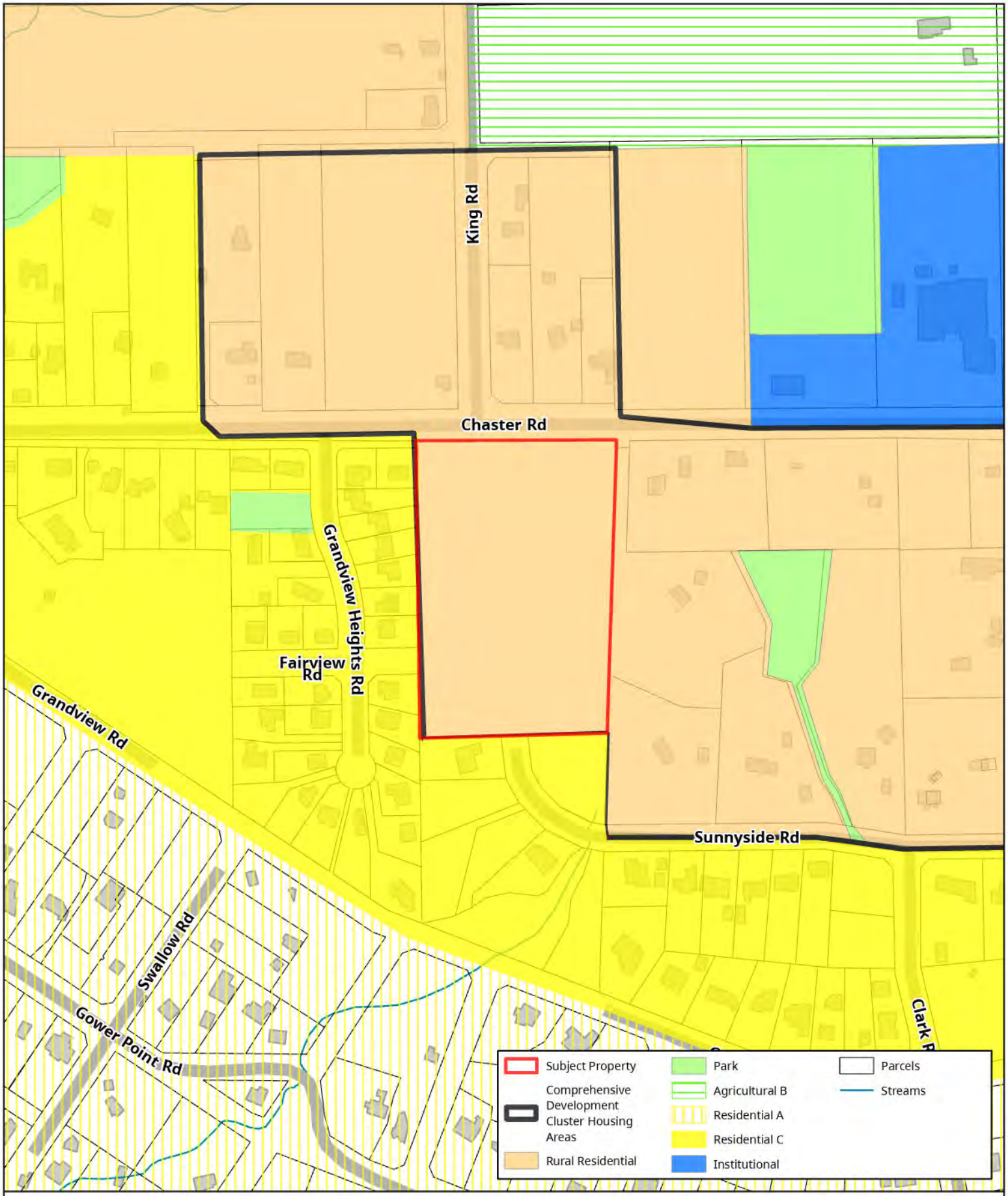
Aerial Context Map

Lot D Chaster Road (BYL00052)

This information has been compiled by the Sunshine Coast Regional District (SCRD) using data derived from a number of sources with varying levels of accuracy. The SCRD disclaims all responsibility for the accuracy or completeness of this information.

0 55 110
Meters

N



2025-03-12

OCP Land Use

Lot D Chaster Road (BYL00052)

This information has been compiled by the Sunshine Coast Regional District (SCRD) using data derived from a number of sources with varying levels of accuracy. The SCRD disclaims all responsibility for the accuracy or completeness of this information.

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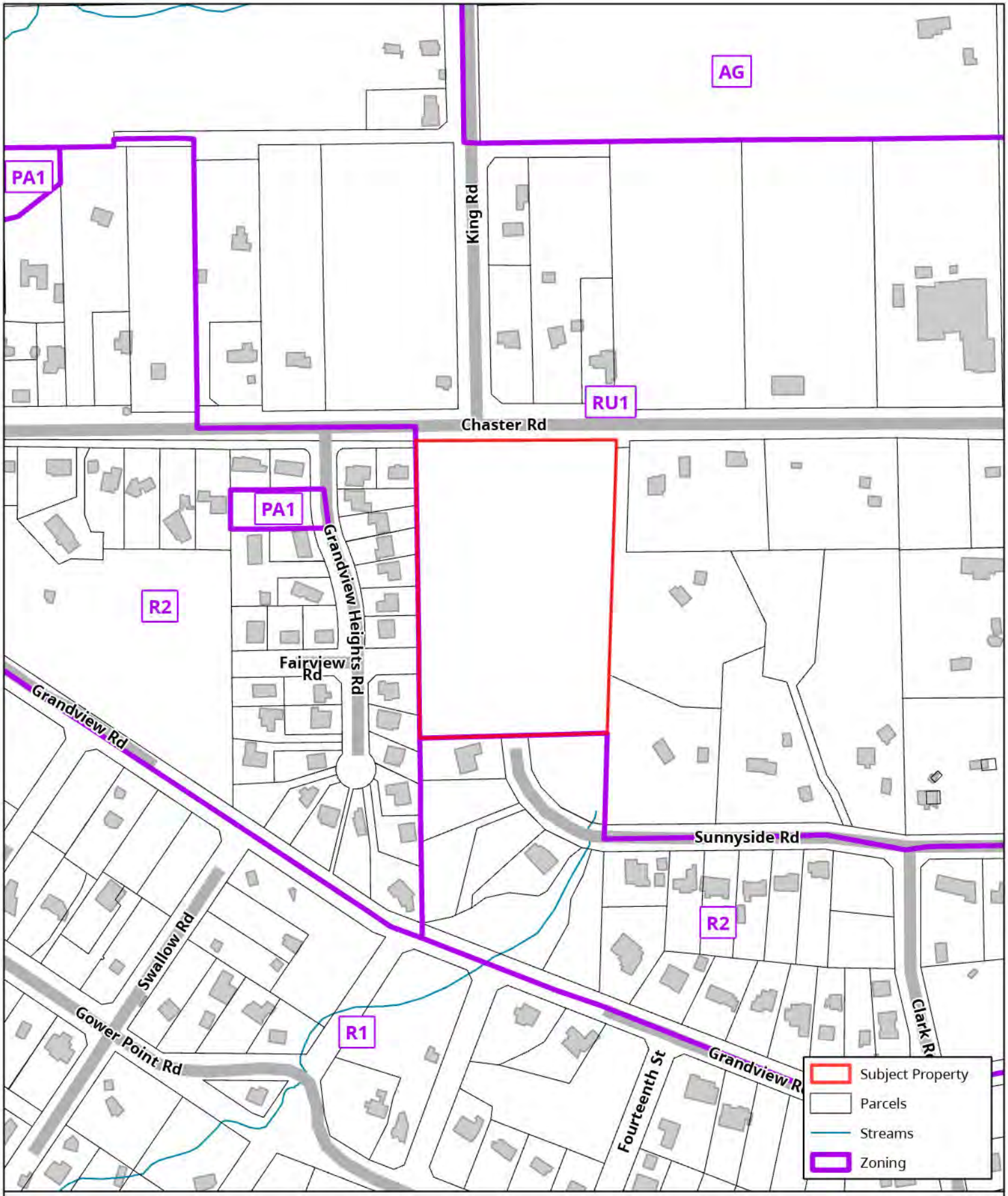

2025-03-12

Zoning

Lot D Chaster Road (BYL00052)

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Meters

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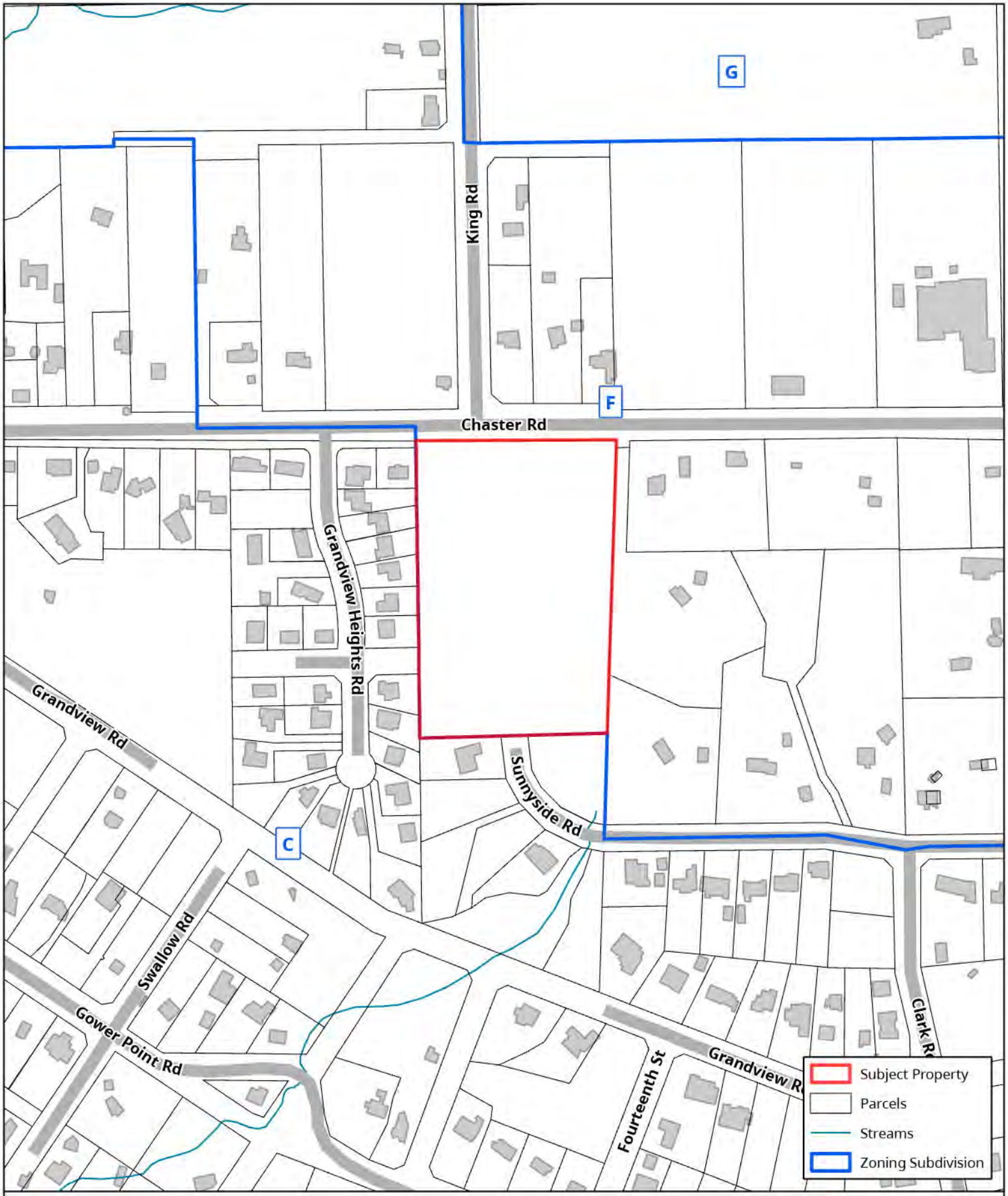

2025-03-12

Subdivision Districts

Lot D Chaster Road (BYL00052)

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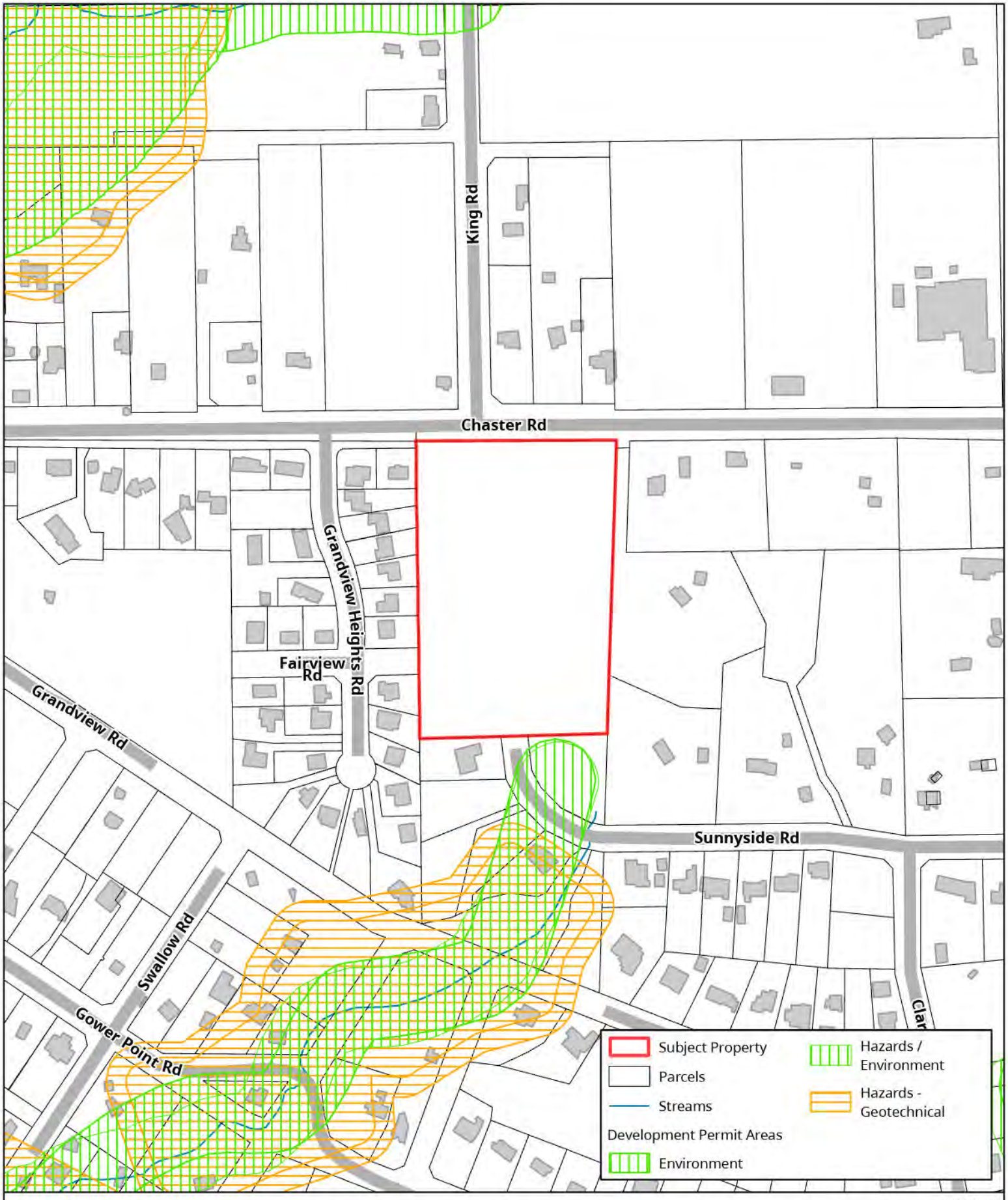


2025-03-12

Development Permit Areas

Lot D Chaster Road (BYL00052)

This information has been compiled by the Sunshine Coast Regional District (SCRD) using data derived from a number of sources with varying levels of accuracy. The SCRD disclaims all responsibility for the accuracy or completeness of this information.

0 55 110
Meters

N

Attachment B

Rezoning Application Report

Proposed Rezoning Application – Lot D Chaster Road, Gibsons, BC

Date: June 20, 2024

Project Number: 2232

LANDEV Consulting Inc.
Engineering & Development Services

info@landevconsulting.ca
www.landevconsulting.ca

Table of Contents

1. Project Overview

The subject property is 3.214 Hectares and is located at Lot D Chaster Road in Gibsons, BC. The Legal Description is Lot D, District Lot 909, Group 1 New Westminster District Plan, Reference Plan 1288. PID: 015-955-371. A recent title search is included in Appendix A.

The property is located in the Sunshine Coast Regional District (SCRD) in the RU-1 (Rural Residential One) Land Use Zoning and the "F" subdivision district for Subdivision Zoning under SCRD Zoning Bylaw No. 722, 2022. Appendix B contains the relevant sections for the RU-1 and subdivision 'F' zoning information from the referenced bylaw.

The SCRD OCP Bylaw 600, 2007 designates the subject lot as Rural Residential in the Comprehensive Development Cluster Housing Area 4 (CDCHA 4). CDCHA 4 supports site rezonings to allow a density bonus in subdivisions creating smaller parcels with a minimum size of 700 m2 which implement stormwater retention systems for irrigation and designate 50% of the subdivisions gross area as dedicated park or is protected as publicly accessible open space. Appendix D contains the OCP Land Use Designation Map 3 and section B-3 Rural Residential from the OCP with further details.

A rezoning Application is being submitted with a proposal to subdivide the subject property into 16 strata lots meeting a minimum 700 square meter area requirement.

The subject site would be accessible via a proposed extension of Sunnyside Road at the south of the lot heading north to connect with Chaster Road. Each proposed lot would be serviced by an extension of SCRD water supply. A community septic system area is being proposed approximately mid-way along the western property line and to be approved by Vancouver Coastal Health (VCH). Further details discussed in sections below. A title search is contained in Appendix A – and shows no encumbrances.

The general layout of the existing property is shown Figure 1: Subject Property. A property report generated from the SCRD Mapping program is included in Appendix C.

Figure 1 – Subject Property

2. Land Use

2.1. Existing

The property is located in the Sunshine Coast Regional District (SCRD) in the RU-1 (Rural Residential One) Land Use Zoning and the “F” subdivision district for Subdivision Zoning under SCRD Zoning Bylaw No. 722, 2022. Appendix B contains the relevant sections for the RU-1 and ‘F’ zoning information from the referenced bylaw.

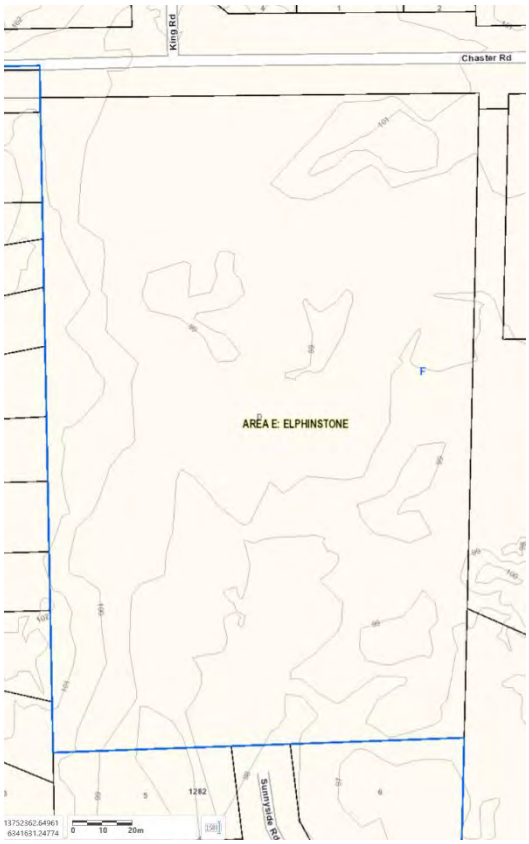


Figure 2 - SCRD Zoning

2.2. OCP and Proposed Land Use

The SCRD OCP Bylaw 600, 2007 designates the subject lot as Rural Residential in the Comprehensive Development Cluster Housing Area 4 (CDCHA 4). CDCHA 4 supports site rezonings to allow a density bonus in subdivisions creating smaller parcels with a minimum size of 700 m2 which implement stormwater retention systems for irrigation and designate 50% of the subdivisions gross area as dedicated park or is protected as publicly accessible open space. Appendix D contains the OCP Land Use Designation Map 3 and section B-3 Rural Residential from the OCP with further details.

The existing Rural Residential One (RU1) zone is not appropriate for the proposed land use. Further discussions will be required to determine the appropriate amendments to Zoning Bylaw No. 722 to enable development of lots with a minimum lot size of 700 m2. Consideration will need to be given to appropriate lot coverage, building height, floor areas, and setbacks to ensure the development integrates with the existing development pattern. The existing Subdivision District F will need to be redesignated to allow for a minimum lot size of 700 m2. This will be determined during the formal rezoning application review process.

The proposed development consists of 16 lots for residential use. Each lot is proposed to have a minimum 700 square meters. The remainder of the subject site will be Road Right of Way and 50 % of the subdivision gross area will be dedicated Parklands / Open Space.

2.2.1. Comprehensive Development Cluster Housing Area No. 4

(d) Lands are within Comprehensive Development Cluster Housing Area No. 4 on Map 3, in which site rezonings may be considered to allow a density bonus in subdivisions creating smaller parcels averaging 1000 sq. m. (0.25 acres) (with a minimum size of 700 sq. m. (0.18 acres)) if land comprising 50% of the subdivision's gross area is dedicated as park or is protected as publicly accessible open space with a covenant and statutory right of way provided this area has a minimum depth of 60 metres (198 feet) adjacent to the ALR and covers any wetland areas under the rezoning application; and a local community sewer system is constructed that will serve the entire area under rezoning application.

(e) Site rezonings may be considered to allow a density bonus in subdivisions creating smaller parcels with a flat minimum size of 700 sq. m. (0.18 acres) within Comprehensive Development Cluster Housing Area No. 4 if there is also installation of systems for on-site clean stormwater retention for irrigation, and stormwater detention to improve on-site and down-slope drainage conditions in addition to the requirements in subsection (d) above.

2.3. Development Permit Zones

2.3.1. Development Permit Areas

As per the SCRD Official Community Plan Bylaw No. 600, MAP 2 there does not appear to be Development Permit Areas (DPA) that fall within the subject site, refer appendix E.

2.4. Proposed Lot Layout

It is being proposed that the subject property be subdivided into 16 strata lots. The current RU-1 zoning will not be appropriate for the proposed land use. As per section 2.2 above, subject to the formal

rezoning approval process a minimum allowable lot size of 700 square meters has been proposed. The proposed lot layout is shown in Figure 3 and the Landev Consulting preliminary drawing set is included Appendix F.

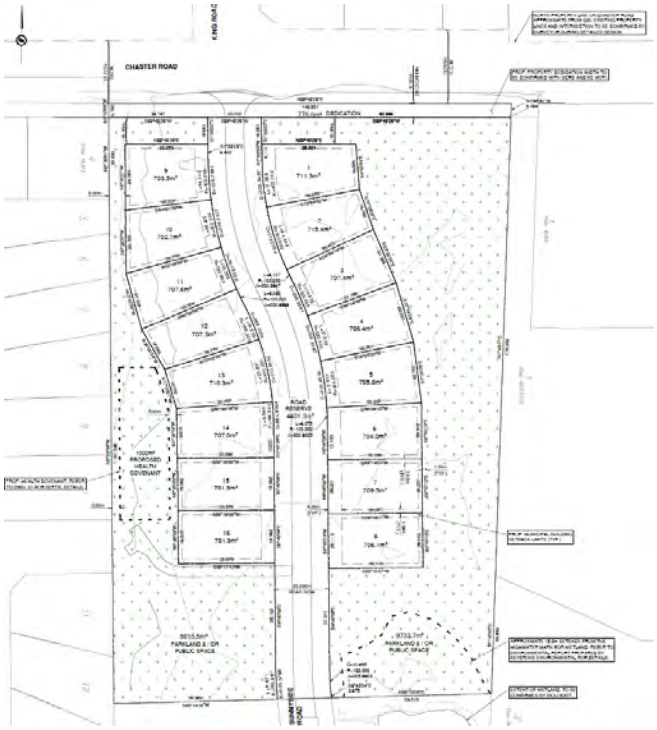


Figure 3 – Proposed Lot Layout

3. Access

Access to the proposed subdivision will be possible from the north of the lot coming off Chaster Road or Sunnyside Road to the south. It is being proposed that the existing Sunnyside Road at the south of the lot be extended approximately 230 meters heading north where it ties into existing Chaster Road. The proposed road is to be designed as per the Ministry of Transportation and Infrastructure standards, the B.C. Supplement to TAC Geometric Design Guide for Canadian Roads. The proposed road extension is a 2-lane local road having a paved width of 7.0 meters with 0.5 meters gravel shoulder on both sides as per Table 1420.c – Two-Lane Open Shoulder Asphalt Subdivision Road from the BC Supplement to TAC. Landev Consulting preliminary drawing set is included in Appendix F.

4. Water

Water supply is being proposed to tie-into the existing 200mm Ductile Iron SCRD watermain on Chaster Road and extend a 200mm Ductile Iron watermain to the south approximately 230 meters and tie-into existing 200mm Ductile Iron watermain within Sunnyside Road. As per preliminary conversations with the SCRD engineering department in May 2024 the fire flows and pressures appear to be sufficient to meet bylaw requirements. The looping of the water system should provide a benefit to the community water system to the South. Following drawing approval, a water supply system construction permit

would be applied for with VCH. Landev Consulting preliminary drawing set is included in Appendix F. A copy of the SCRD water infrastructure as-built is included in Appendix G.

Figure 4 – Existing Water Infrastructure

5. Septic

As there is no SCRD sanitary sewer in the vicinity of the proposed development, it is being proposed that a Vancouver Coastal Health approved Community Sewerage System be installed. It is being proposed that a 150mm diameter sanitary main with a service connection to each lot be installed and discharge into a communal septic treatment and absorption field. The community primary and reserve absorption field area is to have a minimum 1000 square meter area and be located approximately mid-way along the western property line. A restrictive covenant would be registered over this area. The approval process for the Heath Covenant would follow the Vancouver Coastal Health Subdivision Guideline, May 2010.

Preliminary site investigations have taken place to confirm suitability on March 15th 2023. 12 test pits were dug across the site to determine ground depth, soil type and the soil permeability. The material brought to surface from the test pits was consistent across all pits and was a light brownish red loamy sand with cobbles and small roots. Samples were taken, and jar tests were performed to confirm site analysis. Permeameter tests were completed which results in field saturated hydraulic conductivity of an average 1971 mm/day which is consistent with a loamy sand and sandy loam material, refer Appendix I for reference plan. Darren Moulder of VCH visited the site March 2023 and witnessed the open test pits.

Further to the site investigation completed March 2023, MDM Groundwater Consulting Ltd was engaged to complete a hydrogeological assessment. The intent was to examine and characterise hydrogeological attributes to the site for the purpose of identifying and assessing potential interactions of proposed residential site development including a onsite communal septic system with the local ground water regime. This results of the findings will be used in the detail design process. Refer to Appendix K for Hydrogeological assessment.

A detailed design of the communal septic system would be completed following the issuance of the site rezoning during the subdivision process.

6. Stormwater

It is being proposed that road-side ditches be installed at both sides of the newly constructed road extension, this is consistent with recently developed land within the area. The proposed ditches will direct stormwater to the existing wetlands located at the south-east of the subject lot.

Each proposed lot would have a new storm service connection and outlet to the proposed road side ditches. The onsite stormwater will be managed via the collection of roof area runoff as well as hardscaped areas and be directed to a stormwater management device. This could be in the form of a rain garden, detention tank or infiltration system (rock pit) or a combination. A flow control manhole would be installed to control post-development peak discharge rate to the pre-development rates for 5 year return period storms, as per the BC Supplement to TAC Geometric Design Guide 1010.03. Landev Consulting preliminary drawing set is included in Appendix F.

7. Geotechnical

A preliminary report has been prepared by Arya Engineering Inc and in Appendix J.

8. Environmental

Keystone Environmental conducted a survey of the Site to identify regulated watercourses (i.e., wetlands and/ or streams) for future development using the Riparian Areas Protection Regulation (RAPR) detailed riparian areas regulation (dRAR) assessment classification methods adopted for assessing 'streams' by the Sunshine Coast Regional District (SCRD).

A wetland was located in the southeast corner of site and on the adjacent parcel Lot 6 along Sunnyside Road. The wetland originates from overland precipitation runoff of the forest forming an ephemeral pool that contains hydrophytic plants. The stagnant water that accumulates in the ephemeral pool drains once it reaches a certain capacity decanting via a swale to a permanent wetland located on Lot D. The wetland then drains south through Lot 6 along the east side through a culvert under Sunnyside Road to a channel, eventually terminating in the ocean. The wetland is regulated under the Fisheries Act, the WSA and the RAPR. Under the RAPR, from its origin, it will require a 15 m setback along the north, west and east perpendicular to the high-water mark. Refer appendix M for Environmental report.

9. Park Land

As mentioned in section 2.2.1 Park land dedication is required. 50% of the subdivision's gross area is proposed to be dedicated as park or is to be protected as publicly accessible open space with a covenant and statutory right of way provided. The parkland dedication would be 1.57ha. Refer Lot Layout plan LL included in Appendix F.

10. Fortis

There is an existing 60DP Fortis gas line north of the property along Chaster Road. There is also and existing 60DP Fortis gas line south of the property at Sunnyside Road and terminates 5m from the south property line. It would be proposed that this be extended into the proposed subdivision within the proposed road extension corridor. Landev would coordinate the utilities.

11. BC Hydro

There are existing BC Hydro power poles north, south, and west of the subject site. The existing hydro pole to the north and in Chaster Road may need to be relocated as it currently conflicts with the proposed road but will be determined at detailed design stage. It is expected that new power poles be constructed on the subject site. Landev would coordinate the utilities.

12. Telus

A BC one call was completed and there was no records of existing Telus infrastructure near the site. This information seems incorrect due to experience working in the area. Further details will be determine during the detail design stage. Landev would coordinate utilities.

13. Traffic Study

Refer Appendix L for draft report.

Conclusion

A rezoning Application is being submitted with a proposal to subdivide the subject property into 16 strata lots meeting a minimum 700 square meter area requirement. The existing zoning on the subject lands is not appropriate for the proposed land use. Further discussions will be required to determine the appropriate amendments to Zoning Bylaw No. 722 to meet the OCP vision including the redesignation of Subdivision District F. This will be determined during the formal rezoning application review process. Landev has reviewed the requirements for septic disposal, water supply and stormwater and the proposed design and reports generally meet the requirements. The access requirements are met to MOTI standards based on the original concept for the lands.

Prepared By:

Dustin Christmas, P.Eng.
Civil Engineer
Landev Consulting Inc.

Reviewed By:

Sean Blake, P.Eng.
Civil Engineer
Landev Consulting Inc

Attachment C

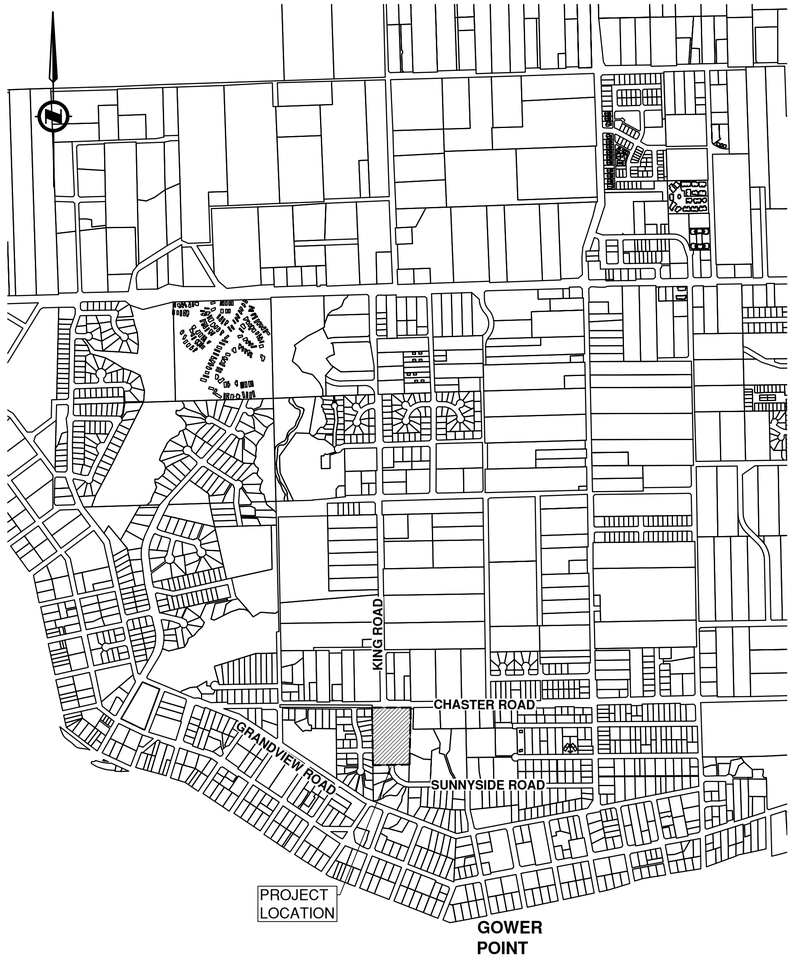
CLIENT:

AB COAST PROJECTS LTD.

PROJECT:

2232 - LOT D CHASTER - 16 LOT SUBDIVISION

ISSUED FOR REZONING



PROJECT LOCALITY MAP

DRAWING LIST				
DRAWING TYPE	DRAWING TITLE	DRAWING NUMBER	SHEET NUMBER	REVISION NUMBER
KEY PLAN	KEY PLAN	KP	1	1
LOT LAYOUT PLAN	LOT LAYOUT	LL	2	3
SITE GRADING	SITE GRADING	G-1	3	1
STORMWATER DRAINAGE	CATCHMENT PLAN, CALCS & DETAILS	SWCP	4	1
ROADWORKS	PLAN & PROFILES	RD-1	5	1
ROADWORKS	CROSS SECTIONS	XS-1	6	1
SANITARY SEWER	COMMUNAL SEPTIC PLAN	S-1	7	1
SERVICING	SERVICING PLAN	SRV-1	8	1
STANDARD DETAILS	STANDARD DETAILS	DET-1	9	1
GENERAL NOTES	CONSTRUCTION NOTES	N-1	10	1

EXISTING FEATURES

- MANHOLE
- COMBINED SEWER
- COMBINED SEWER SERVICE LINE
- STORM SEWER
- CATCH BASIN
- SANITARY SEWER
- SEWER CLEANOUT
- WATER MAIN
- WATER VALVE
- FIRE HYDRANT
- WATER METER
- WATER SERVICE
- GAS MAIN
- GAS VALVE
- TELUS CONDUIT
- ELECTRICAL CONDUIT
- STREET LIGHTING CONDUIT
- JUNCTION BOX
- DAVID STREET LIGHT
- TRAFFIC SIGNAL POLE
- UTILITY POLE
- CURB AND GUTTER
- CONIFEROUS TREE
- DECIDUOUS TREE
- ORNAMENTAL TREE
- COMMERCIAL SIGN
- FENCE

PROPOSED

- STORM SEWER
- SANITARY SEWER
- MANHOLE
- CATCH BASIN
- WATER MAIN
- WATER VALVE
- FIRE HYDRANT
- CROSS
- TEE
- BEND
- CAP
- REDUCER
- IRRIGATION CONTROL BOX
- IRRIGATION VALVE

LANDEV Consulting Inc.
Engineering & Development Services

NOT FOR CONSTRUCTION

METRES

PROPERTY EXTENTS

PROP. FIRE HYDRANT 150m RADIUS COVERAGE

PROP. FIRE HYDRANT 90m RADIUS COVERAGE

EXIST. FIRE HYDRANT 90m RADIUS COVERAGE

WETLAND 15m HWM SETBACK AS PER KEYSTONE ENVIRONMENTAL REPORT

Plan 9065

Plan BCP3070

Plan BCP3070

Plan 16315

CHASTER ROAD

KING ROAD

SUNNYSIDE ROAD

GRANDVIEW HEIGHTS ROAD

WETLAND

EX.60 GAS 22.5m

EX.200 WAT 11.6m

EX.150 WAT 4.9m

EX. FIRE HYDRANT

EX.60 GAS 3.0m

EX.200 WAT 7.3m

EX.200 WAT 3.0m

EX.60 GAS 1.2m

EXIST. FIRE HYDRANT

SL1

SL2

SL3

SL4

SL5

SL6

SL7

SL8

SL9

SL10

SL11

SL12

SL13

SL14

SL15

SL16

PROP. FIRE HYDRANT

SFM

SFM

COMMUNITY SEPTIC FIELD AREA

EXIST. FIRE HYDRANT

EXIST. FIRE HYDRANT 90m RADIUS COVERAGE

EXIST. FIRE HYDRANT 150m RADIUS COVERAGE

THIS DRAWING IS INTENDED FOR REZONING APPLICATION REVIEW ONLY AND IS NOT TO BE USED FOR CONSTRUCTION

FOR TYPICAL SECTIONS & DETAILS REFER TO DWG DET1 & DET 2. FOR GENERAL NOTES REFER DWG N1 (TYP)

CONFIRM LOCATION AND ELEVATION OF EXIST. UTILITIES AT PROP. CROSSINGS & TIE-INS PRIOR TO CONSTRUCTION. NOTIFY THE ENGINEER OF ANY DISCREPANCIES.

NOT FOR CONSTRUCTION

No.	DATE	REVISION	BY
1	2024-06-21	ISSUED FOR REZONING	DC

LANDEV Consulting Inc.
Engineering & Development Services
WWW.LANDEVCONSULTING.CA
EMAIL: INFO@LANDEVCONSULTING.CA PH: 604-989-7300

DRAWING DESCRIPTION
LOT D, CHASTER ROAD, GIBSONS, BC
PROPOSED 16 LOT SUBDIVISION
KEY PLAN

CLIENT
AB COAST PROJECTS LTD.

PROJECT No.	2232	DATE	2024-06-21
SCALE	1:500	DESIGN BY	DC
		CHECKED BY	SB
		SURVEYED BY	P.M.G.

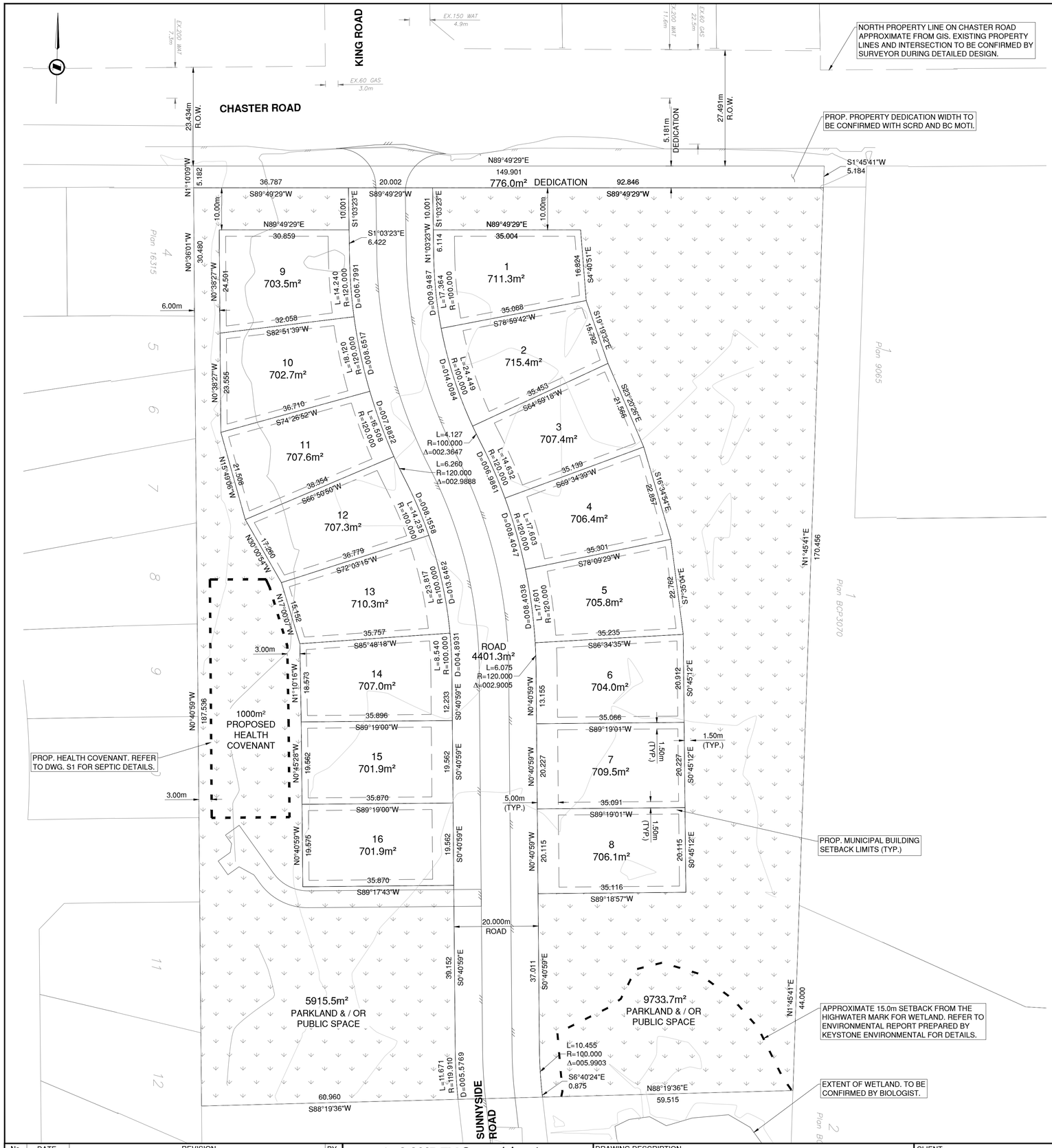
1:500 0 10 30m

DWG. NO. KP
SHEET. NO. 1 OF 10
REV. 1

PLOT DATE: June 21, 2024 - C:\Users\DC\Landev Consulting Dropbox\LANDEV PROJECTS\2260\2232 - Lot D Chaster\CAD\Final\KEY.dwg

EGBC PERMIT # 1003416

ISSUED FOR REZONING



LEGAL DESCRIPTION:

TOPOGRAPHIC PLAN OF LOT D REFERENCE PLAN 1288, DL 909

LOT AREA CALCULATIONS:

EXISTING PROPERTY AREA	= 3.214Ha
CHASTER ROAD DEDICATION AREA	= 0.078Ha (TO BE CONFIRMED)
PROPOSED PROPERTY AREA	= 3.136Ha
TOTAL PROPOSED LOT AREAS	= 1.567Ha
50% PARKLAND	= 1.56Ha
PROPOSED ROAD RESERVE	= 0.44 Ha

Parcel Area Table

Parcel #	Area (m²)
1	711.25
2	715.37
3	707.38
4	706.43
5	705.78
6	703.96
7	709.54
8	706.11
9	703.53
10	702.71
11	707.64
12	707.27
13	710.28
14	706.99
15	701.93
16	701.92
PARK	9733.65
PARK	5915.53
DEDICATION	776.01
241	4401.28

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NOT FOR CONSTRUCTION

No.	DATE	REVISION	BY
1	23-08-28	REVISED PER SCRD COMMENTS	SB
2	24-02-27	REVISED PER SCRD COMMENTS	DC
3	2024-06-21	ISSUED FOR REZONING	DC

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Engineering & Development Services
WWW.LANDEVCONSULTING.CA
EMAIL: INFO@LANDEVCONSULTING.CA **PH:** 604-989-7300

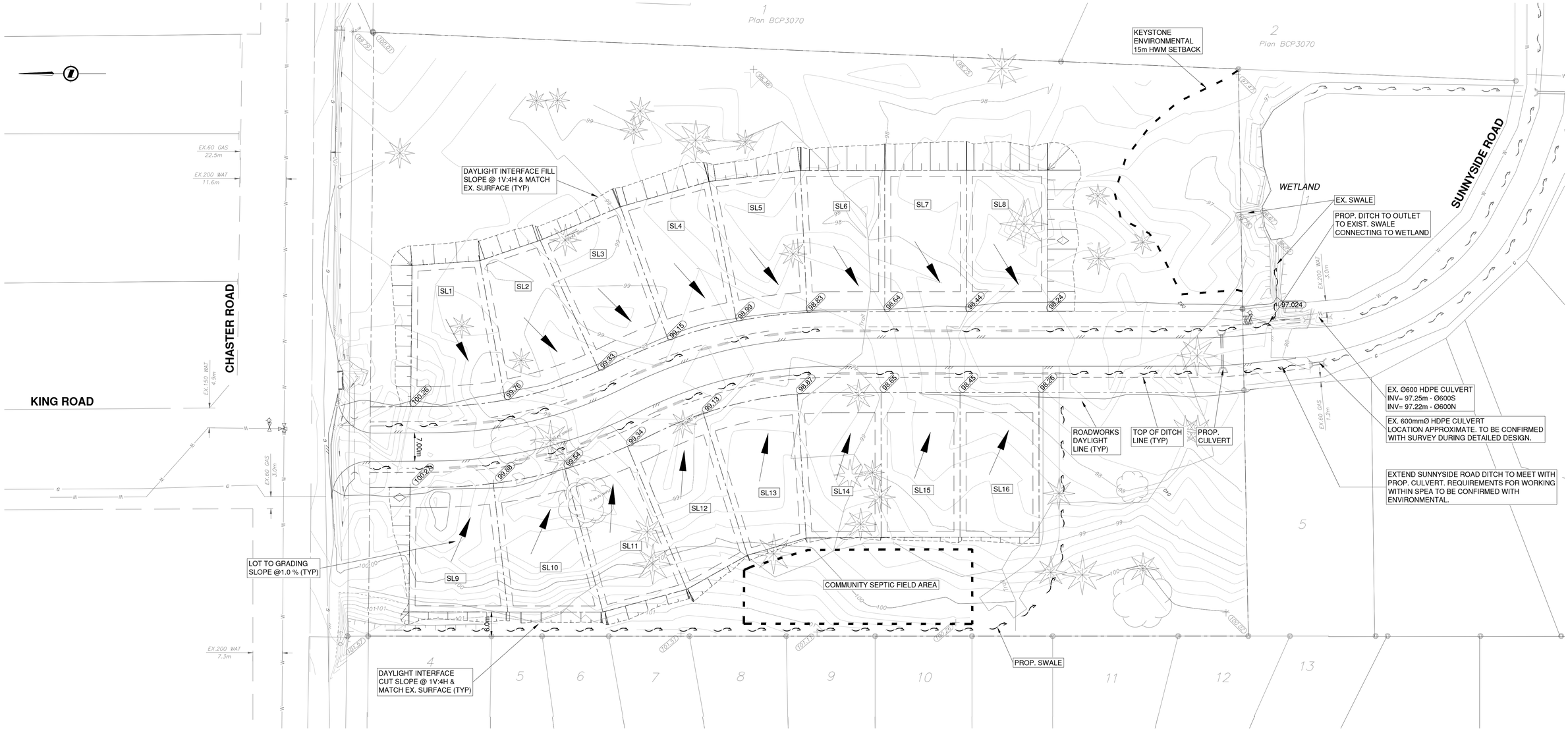
DRAWING DESCRIPTION
LOT D, CHASTER ROAD, GIBSONS, BC
PROPOSED 16 LOT SUBDIVISION
LOT LAYOUT PLAN

CLIENT
AB COAST PROJECTS LTD.

PROJECT No.	2232	DATE	2024-06-21
SCALE	1:500	DESIGN BY	SB
1:500 0 10 30m		CHECKED BY	DC
		SURVEYED BY	P.M.G.

DWG. NO. LL
SHEET. NO. 2 OF 10
REV. 3

PLOT DATE: June 21, 2024 - C:\Users\DC\Landev Consulting Dropbox\LANDEV\PROJECTS\2200\2232 - Lot D Chaster\CAD\Final\LL.dwg



MINIMUM BASEMENT ELEVATION (MBE) TO BE ESTABLISHED DURING DETAILED DESIGN.

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FOR TYPICAL SECTIONS & DETAILS REFER TO DWG DET1 - DET3. FOR GENERAL NOTES REFER DWG N1 (TYP)

CONFIRM LOCATION & ELEVATION OF EXIST. UTILITIES AT PROP. CROSSINGS & TIE-INS PRIOR TO CONSTRUCTION. NOTIFY THE ENGINEER OF ANY DISCREPANCIES.

NOT FOR CONSTRUCTION

No.	DATE	REVISION	BY
1	2024-06-21	ISSUED FOR REZONING	DC

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Engineering & Development Services
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EMAIL: INFO@LANDEVCONSULTING.CA **PH:** 604-989-7300

DRAWING DESCRIPTION
LOT D, CHASTER ROAD, GIBSONS, BC
PROPOSED 16 LOT SUBDIVISION
SITE GRADING PLAN

CLIENT
AB COAST PROJECTS LTD.

PROJECT No.	2232
SCALE	1:500 (1:500; 0, 10, 30m)
DATE	2024-06-21
DESIGN BY	DC
CHECKED BY	DC
SURVEYED BY	P.M.G.
DWG. NO.	G-1
SHEET. NO.	3 OF 10
REV.	1

PLOT DATE: June 21, 2024 - C:\Users\DC\Landev Consulting Dropbox\LANDEV\PROJECTS\2200\2232 - Lot D Chaster\CAD\Final\G1-1.dwg

EGBC PERMIT # 1003416

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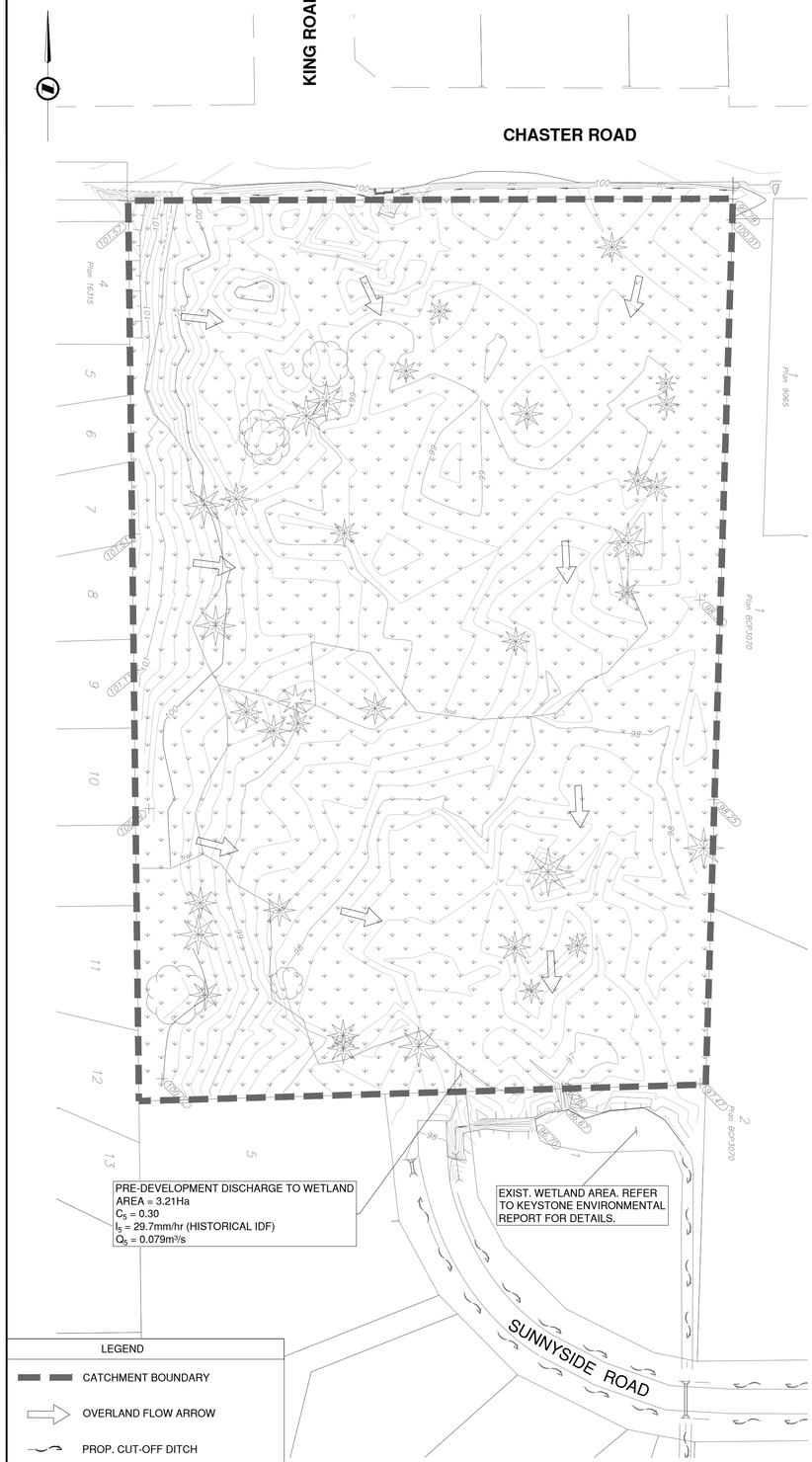
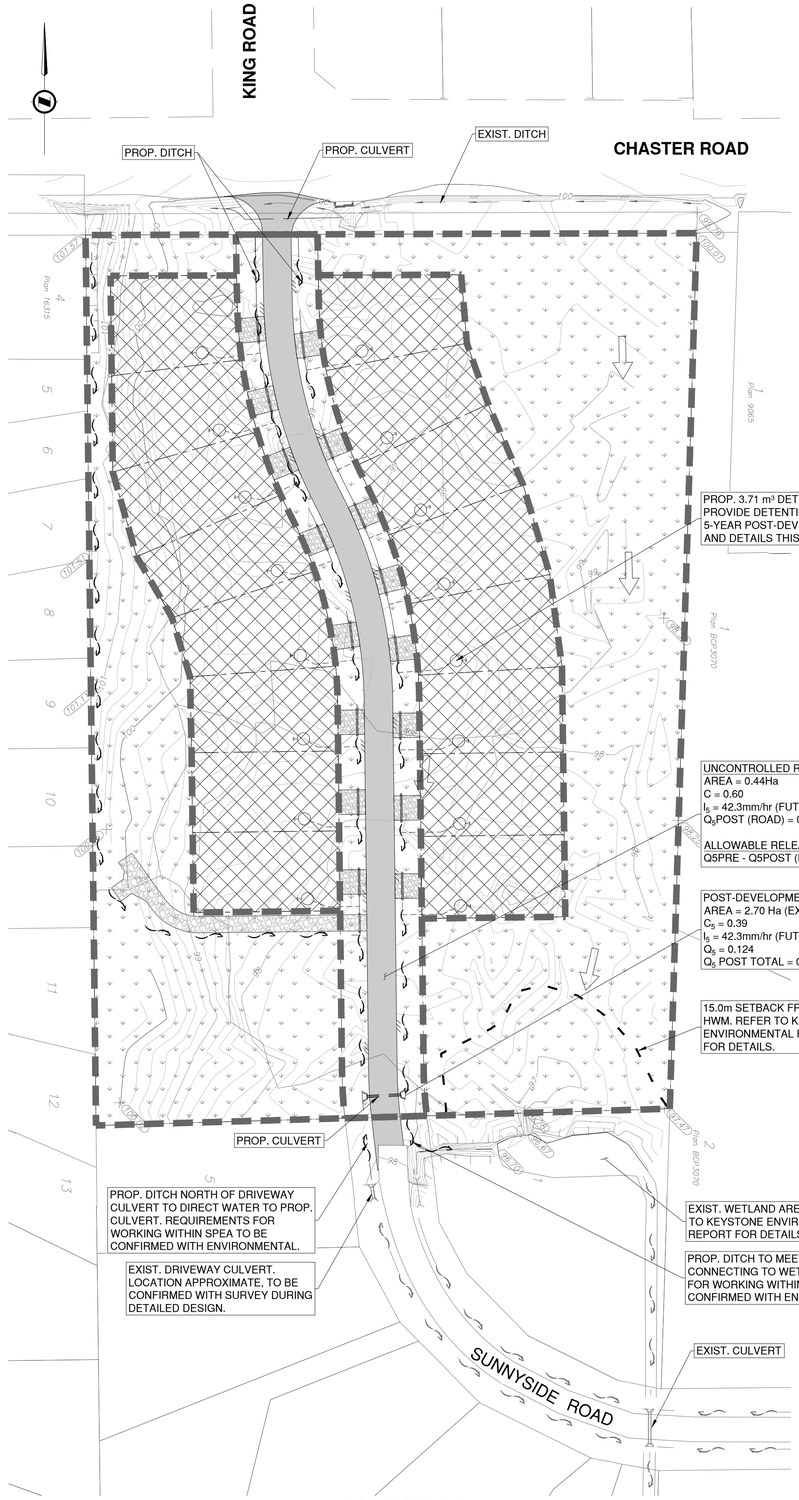




PROP. 3.71 m³ DETENTION TANKS ON EACH LOT TO PROVIDE DETENTION FOR 5-YEAR PRE-DEVELOPMENT TO 5-YEAR POST-DEVELOPMENT. REFER TO CALCULATIONS AND DETAILS THIS SHEET.

UNCONTROLLED RUNOFF FROM ROAD R.O.W.
AREA = 0.44Ha
C = 0.60
I_5 = 42.3mm/hr (FUTURE IDF)
Q_5POST (ROAD) = 0.031m³/s

ALLOWABLE RELEASE RATE
Q5PRE - Q5POST (ROAD) = 0.079m³/s - 0.031m³/s = 0.049m³/s

POST-DEVELOPMENT DISCHARGE TO WETLAND
AREA = 2.70 Ha (EXCLUDING ROAD R.O.W.)
C_5 = 0.39
I_5 = 42.3mm/hr (FUTURE IDF)
Q_5 = 0.124
Q_5 POST TOTAL = 0.124m³/s + 0.031m³/s + 0.154m³/s

15.0m SETBACK FROM HWM. REFER TO KEYSTONE ENVIRONMENTAL REPORT FOR DETAILS.

LEGEND

- CATCHMENT BOUNDARY
- OVERLAND FLOW ARROW
- PROP. CUT-OFF DITCH
- LOW DENSITY RESIDENTIAL (C_{10} = 0.50)
- PROPOSED ASPHALT AREA (C_{10} = 0.90)
- GRAVEL DRIVEWAY AREA (C_{10} = 0.90)
- LANDSCAPE / PARKLAND (C_{10} = 0.30)

RUNOFF COEFFICIENT CALCULATIONS

Post-Development: Area 1 (Road ROW)

Area Type	Area, A (Hectares)	Runoff Coefficient, R_{10}
Asphalt	0.15	0.90
Grass Boulevard	0.22	0.30
Driveways	0.06	0.90
TOTAL	0.44	
Average Runoff Coefficient =		0.60

Post-Development: Area 2 (Development Site Excluding Road ROW)

Area Type	Area, A (Hectares)	Runoff Coefficient, R_{10}
Low Density Residential	1.13	0.50
Park	1.54	0.30
Septic Access	0.03	0.90
TOTAL	2.70	
Average Runoff Coefficient =		0.39

Detention Volume Calculations

Project Name: LOT D CHASTER — **Rev.** 1
Project No.: 2232 — **By:** DE
Date: 15-May-24 — **Checked:** SB

PRE-DEVELOPMENT - 5YR RETURN

Runoff Coefficient	C_{AVG} =	0.3			
Catchment Area	A=	3.21	Ha		
Time of Concentration	Tc =	15	min		
Rainfall Intensity	I =	29.7	mm/hr		*(historical IDF)*
(Pre-Dev) Site Peak Flow Rate	Q5 =	0.079	m^3/s	= 79.43	l/s
(Post-Dev) Road ROW Peak Flow Rate	Q5 =	0.031	m^3/s	= 30.8	l/s
Allowable Release Rate (Q5Pre - Q5Post (Road)	=	0.049	m^3/s	= 48.6	l/s

POST-DEVELOPMENT - 5YR RETURN

Runoff Coefficient	C_{AVG} =	0.39			
Catchment Area (Excluding Road ROW)	A=	2.70	Ha		
Time of Concentration	Tc =	10	min		
Rainfall Intensity	I =	42.3	mm/hr		*(Future IDF)*
Peak Flow	Q5 =	0.124	m^3/s	= 123.5	l/s
Infiltration Rate	Qinfil =	0.0000	m^3/s		

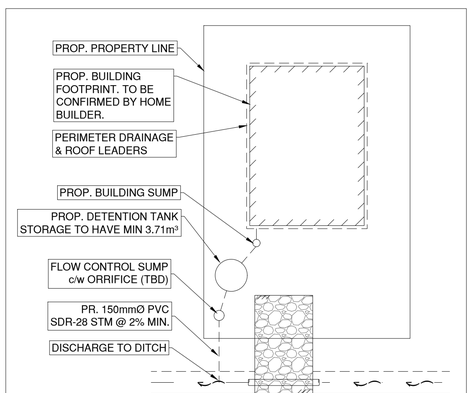
Duration, Tr (min)	Rainfall Intensity (mm/hr)	Peak Flow, Qp (m^3/s)	Inflow Runoff Volume (m^3)	Max Release Rate, Qrel (m^3/s)	Required Storage Volume (m^3)
10	42.3	0.124	74.1	0.049	45.0
15	34.8	0.102	91.4	0.049	52.6
20	30.3	0.088	106.0	0.049	56.9
30	24.9	0.073	130.8	0.049	59.4
40	21.7	0.063	151.7	0.049	57.0
50	19.4	0.057	170.3	0.049	51.6
60	17.8	0.052	187.1	0.049	43.8
120	12.7	0.037	267.8	0.049	-28.7
240	9.1	0.027	383.2	0.049	-232.8
360	7.5	0.022	472.5	0.049	-470.2
480	6.5	0.019	548.3	0.049	-724.9
600	5.9	0.017	615.4	0.049	-990.7
720	5.4	0.016	676.2	0.049	-1264.4

Peak Storage Requirement = **59.4 m^3**

***To meet Pre-Development Site Q5 Storage Objectives: Individual On-Site Detention tanks are to be oversized and have Min. Storage of =** **3.71** m^3

59.4 m^3/ 16 lots) = **3.71** m^3

***Each lot to have Flow Control Sump, size to be determined at Detailed Design.**
***Future IDF calculated using IDF_CC Tool for Scenario RCP 8.5**



TYPICAL DRAINAGE DETAIL c/w DISCHARGE TO DITCH (ALL LOTS)
SCALE: N.T.S.

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No.	DATE	REVISION	BY
1	2024-06-21	ISSUED FOR REZONING	DC

LANDEV Consulting Inc.
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EMAIL: INFO@LANDEVCONSULTING.CA **PH:** 604-989-7300

DRAWING DESCRIPTION
LOT D, CHASTER ROAD, GIBSONS, BC
STORMWATER DRAINAGE / MANAGEMENT
CATCHMENT PLAN, CALCS & DETAILS

CLIENT
AB COAST PROJECTS LTD.

PROJECT No.	2232	DATE	2024-06-21
SCALE	1:750	DESIGN BY	DC
		CHECKED BY	DC
		SURVEYED BY	P.M.G.

DWG. NO. SWCP
SHEET. NO. 4 OF 10
REV. 1

1:750 0 15 45m

EGBC PERMIT # 1003416

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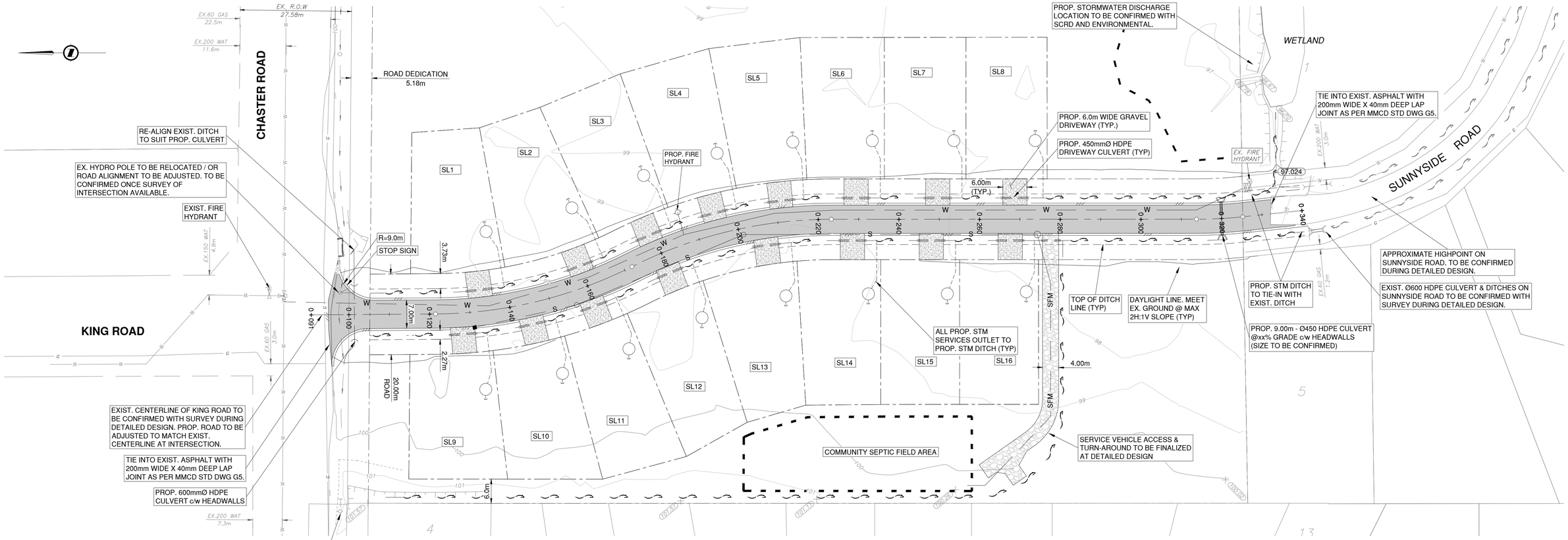
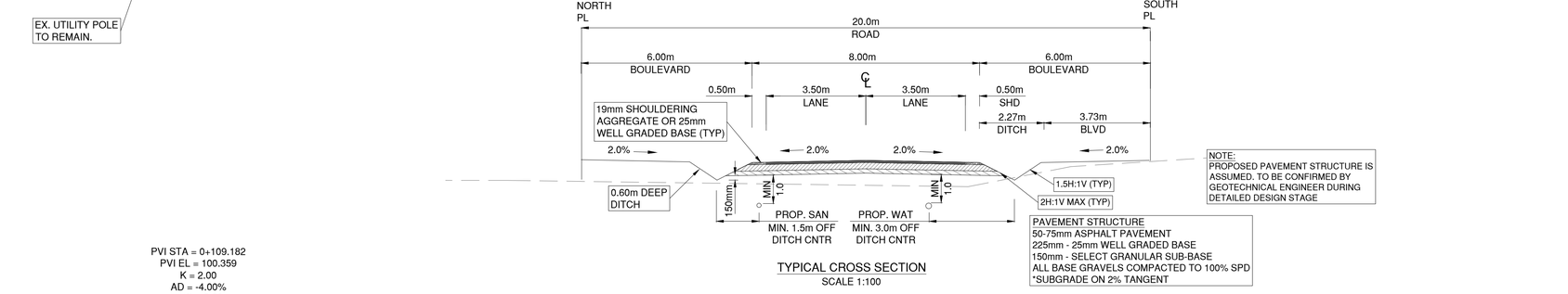
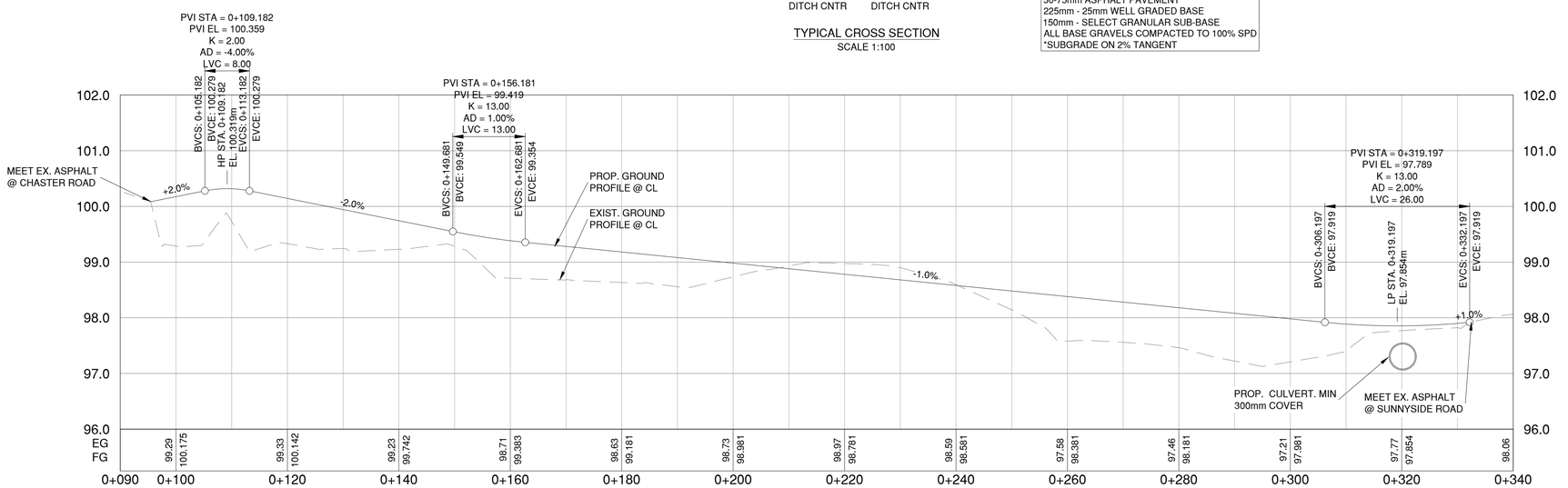
PLOT DATE: June 21, 2024 - C:\Users\DC\Landev Consulting Dropbox\LANDEV\PROJECTS\2200\2232 - Lot D Chaster\CAD\Final\SMP-1.dwg





TYPICAL CROSS SECTION
SCALE 1:100



PROP. CULVERT AND DITCH SIZES ARE ASSUMED AND TO BE CONFIRMED DURING DETAILED DESIGN

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1	2024-06-21	ISSUED FOR REZONING	DC

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Engineering & Development Services
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EMAIL: INFO@LANDEVCONSULTING.CA PH: 604-989-7300

DRAWING DESCRIPTION
LOT D, CHASTER ROAD, GIBSONS, BC
PROPOSED 16 LOT SUBDIVISION
ROADWORKS PLAN & PROFILES

CLIENT
AB COAST PROJECTS LTD.

PROJECT No.	2232
SCALE	1:500 (1:500, 1:50)
DATE	2024-06-21
DESIGN BY	DC
CHECKED BY	DC
SURVEYED BY	P.M.G.
DWG. NO.	R1-1
SHEET. NO.	5 OF 10
REV.	1

PLOT DATE: June 21, 2024 - C:\Users\DC\Landev Consulting Dropbox\LANDEV\PROJECTS\2200\2232 - Lot D Chaster\CAD\Final\R1-1.dwg

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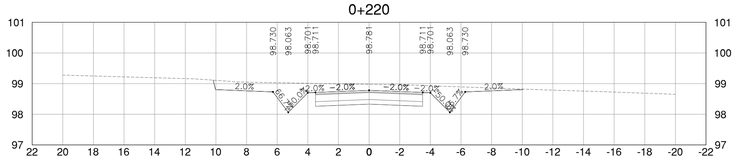

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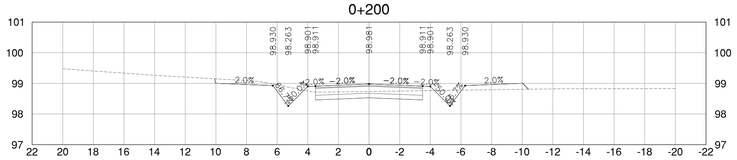

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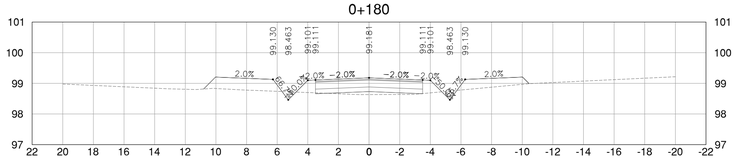

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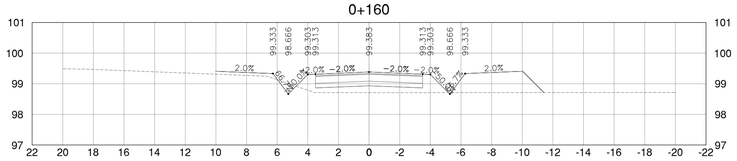

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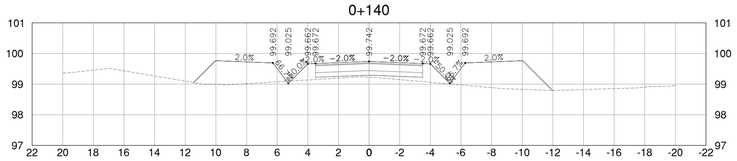

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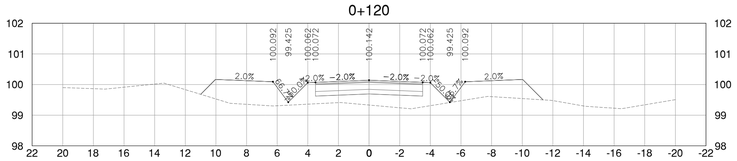

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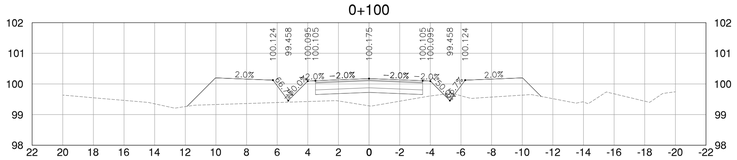

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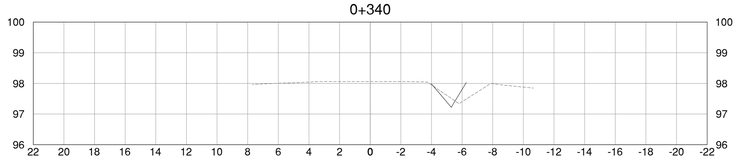

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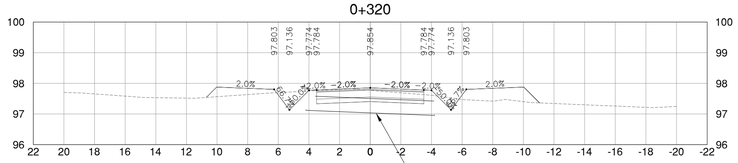

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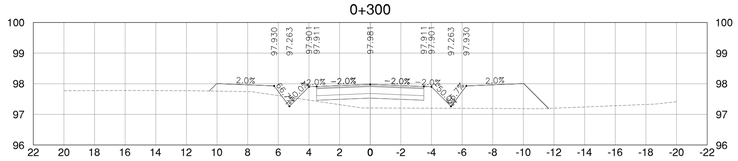

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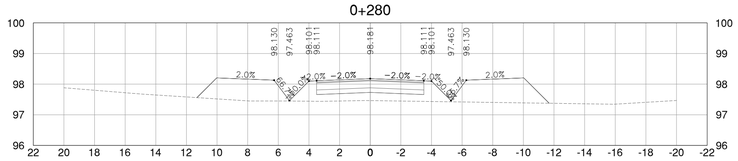

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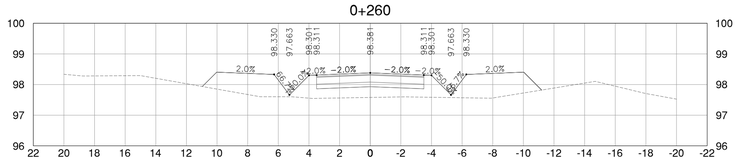

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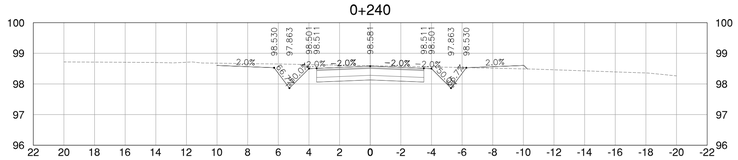

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1	2024-06-21	ISSUED FOR REZONING	DC

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EMAIL: INFO@LANDEVCONSULTING.CA **PH:** 604-989-7300

DRAWING DESCRIPTION
LOT D, CHASTER ROAD, GIBSONS, BC
PROPOSED 16 LOT SUBDIVISION
ROADWORKS - CROSS SECTIONS

CLIENT
AB COAST PROJECTS LTD.

PROJECT No. 2232	DATE	2024-06-21	DWG. NO. XS1-1
SCALE 1:200(H) 1:100(V) 1:100 0 2 6m 1:200 0 2 12m	DESIGN BY	SB	
	CHECKED BY	DC	SHEET. NO. 6 OF 10
	SURVEYED BY	P.M.G.	REV. 1

PLOT DATE: June 21, 2024 - C:\Users\Dc\Landev Consulting Dropbox\LANDEV PROJECTS\2200\2232 - Lot D Chaster\CAD\Final\XS1-1.dwg

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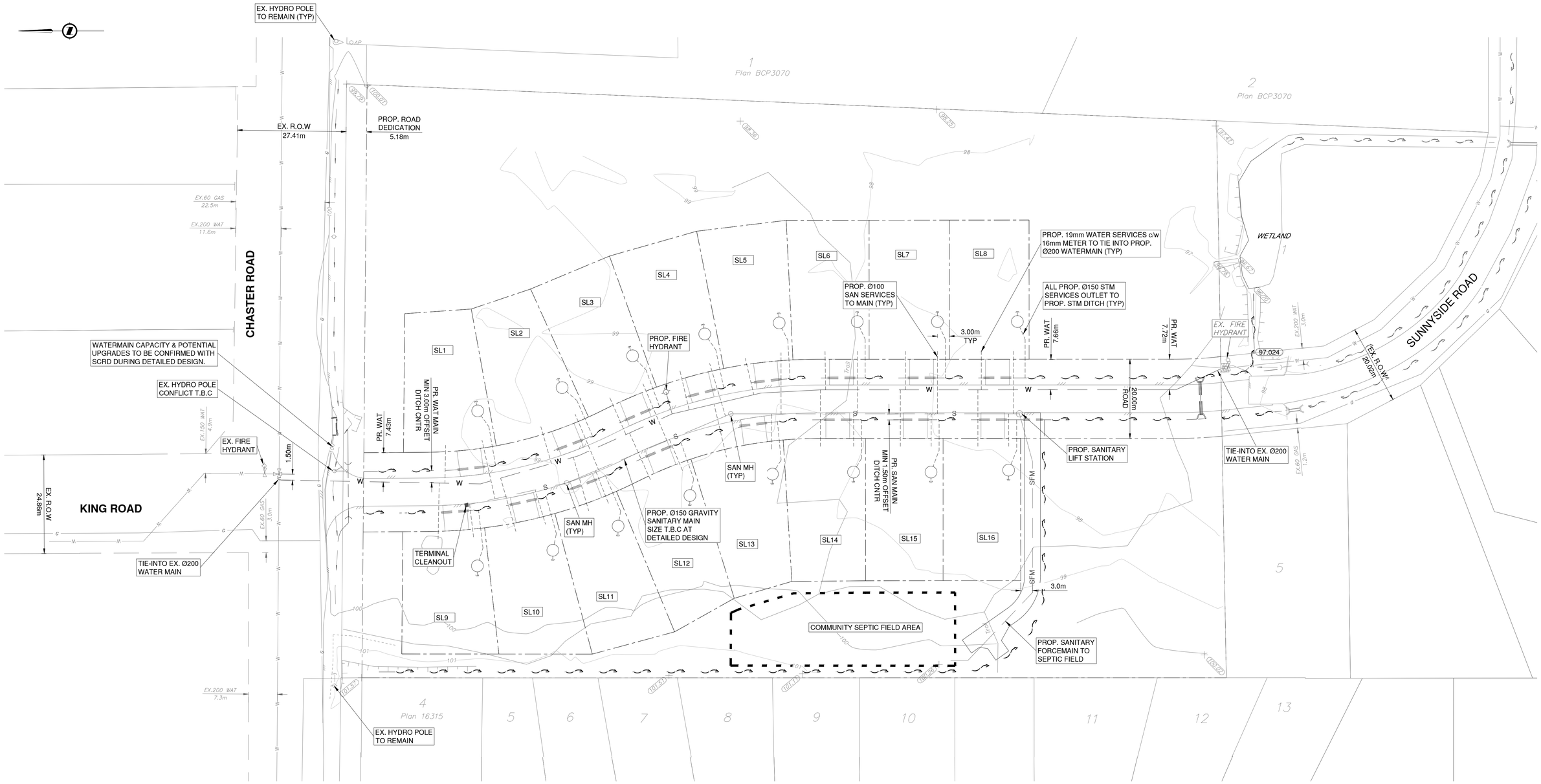

PROP. PIPE SIZES ARE ASSUMED AND TO BE CONFIRMED DURING DETAILED DESIGN

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CONFIRM LOCATION & ELEVATION OF EXIST. UTILITIES AT PROP. CROSSINGS & TIE-INS PRIOR TO CONSTRUCTION. NOTIFY THE ENGINEER OF ANY DISCREPANCIES.

PROPOSED PIPE AND DITCH SIZES ARE ASSUMED AND TO BE CONFIRMED DURING DETAILED DESIGN. WATERMAIN SIZING TO BE CONFIRMED WITH SCRD DURING DETAILED DESIGN.

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No.	DATE	REVISION	BY
1	2024-06-21	ISSUED FOR REZONING	DC

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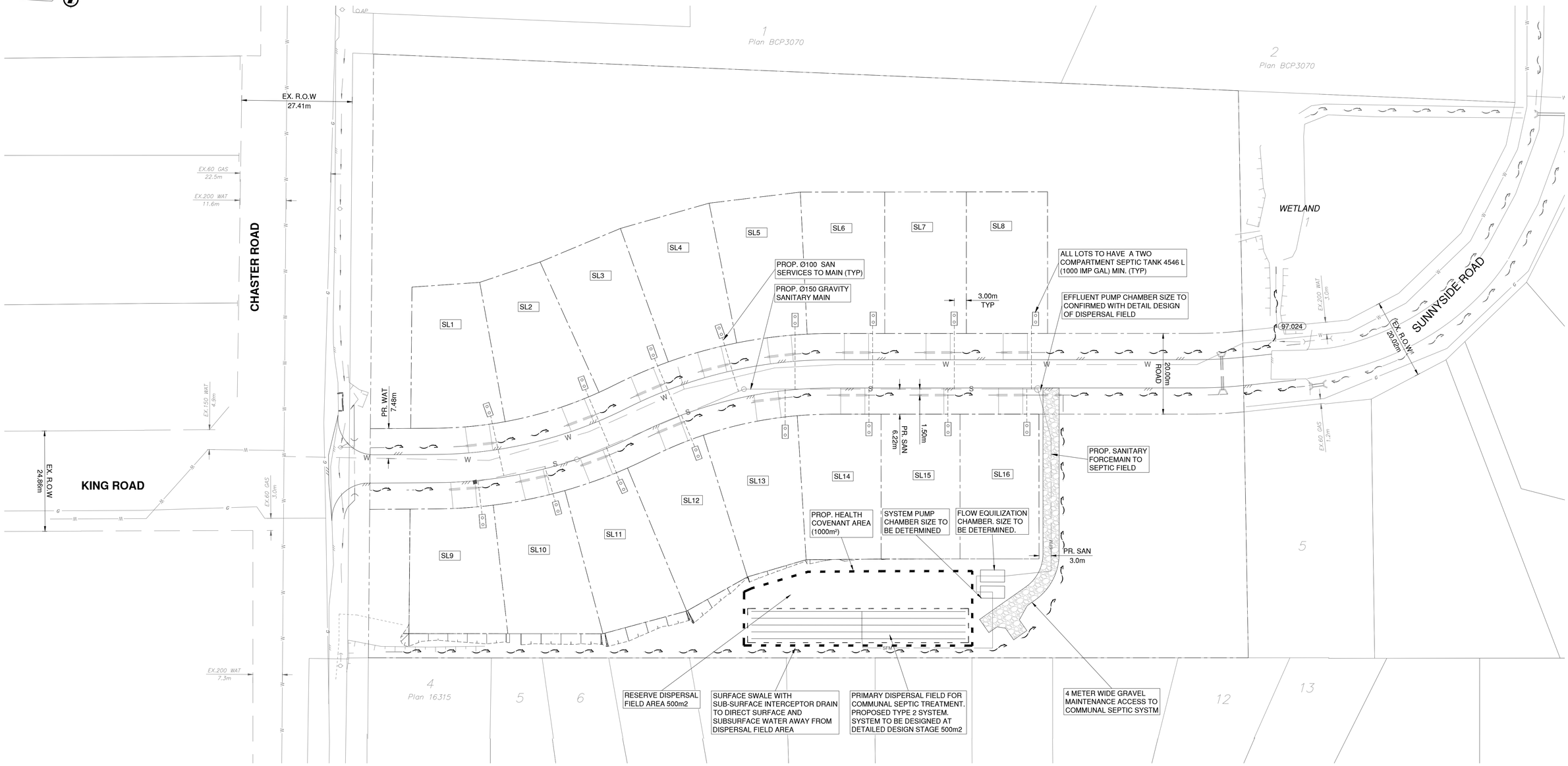
EMAIL: INFO@LANDEVCONSULTING.CA **PH:** 604-989-7300

DRAWING DESCRIPTION
LOT D, CHASTER ROAD, GIBSONS, BC
PROPOSED 16 LOT SUBDIVISION
SERVICING PLAN

CLIENT
AB COAST PROJECTS LTD.

PROJECT No.	2232
SCALE	1:500 (1:500 — 0, 10, 30m)
DATE	2024-06-21
DESIGN BY	SB
CHECKED BY	DC
SURVEYED BY	P.M.G.
DWG. NO.	SRV-1
SHEET. NO.	7 OF 10
REV.	1

PLOT DATE: June 21, 2024 - C:\Users\DC\Landev Consulting Dropbox\LANDEV\PROJECTS\2200\2232 - Lot D Chaster\CAD\Final\SERV-1.dwg



PROP. PIPE SIZES ARE ASSUMED AND TO BE CONFIRMED DURING DETAILED DESIGN

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Engineering & Development Services
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EMAIL: INFO@LANDEVCONSULTING.CA **PH:** 604-989-7300

DRAWING DESCRIPTION
LOT D, CHASTER ROAD, GIBSONS, BC
PROPOSED 16 LOT SUBDIVISION
COMMUNAL SEPTIC PLAN

CLIENT
AB COAST PROJECTS LTD.

PROJECT No.	2232	DATE	2024-06-21
SCALE	1:500 (0, 10, 30m)	DESIGN BY	DC
		CHECKED BY	DC
		SURVEYED BY	P.M.G.

DWG. NO. S-1
SHEET. NO. 8 OF 10
REV. 1

PLOT DATE: June 21, 2024 - C:\Users\DC\Landev Consulting Dropbox\LANDEV PROJECTS\2209\2232 - Lot D Chaster\CAD\Final\S-1.dwg

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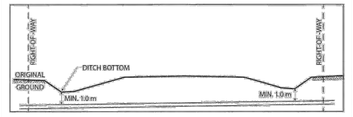

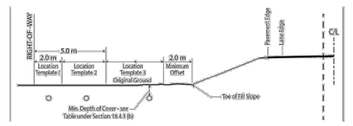

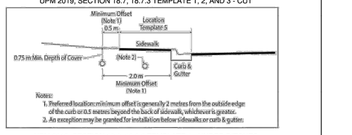

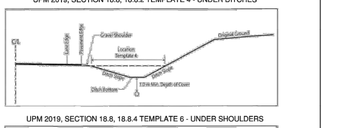

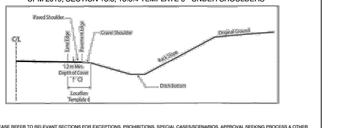

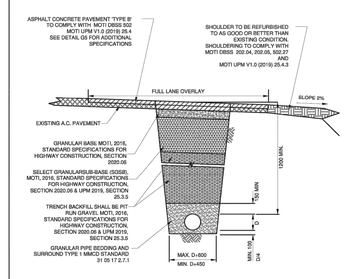

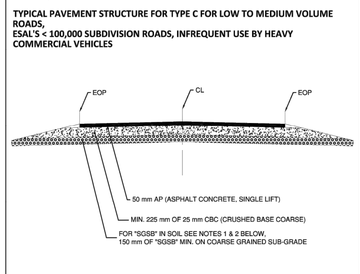

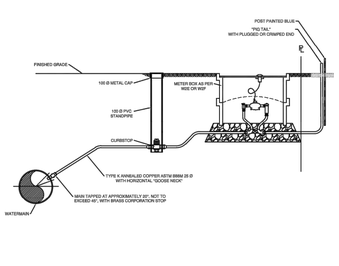

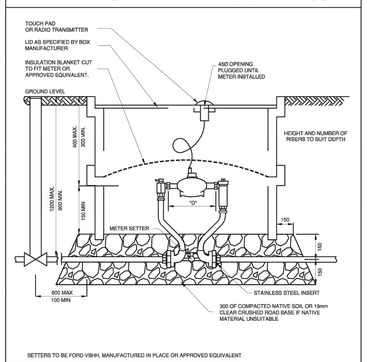

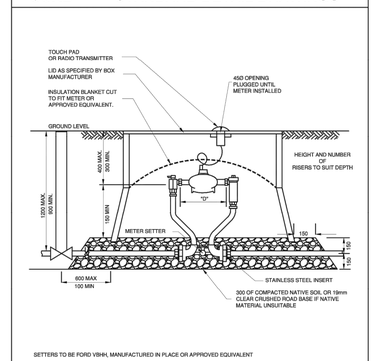

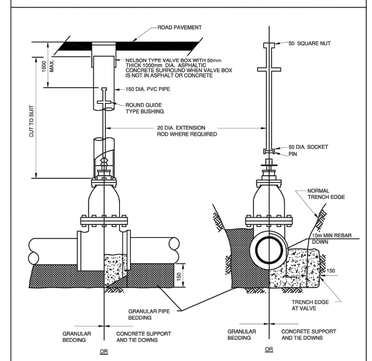

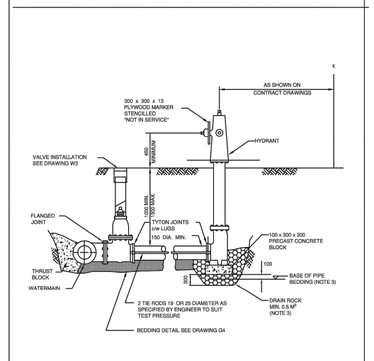

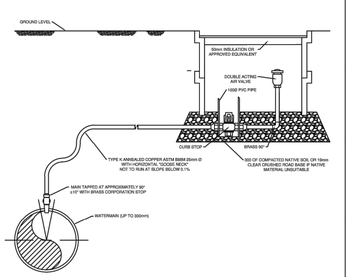

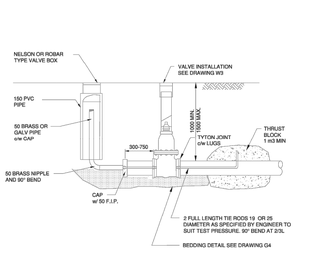

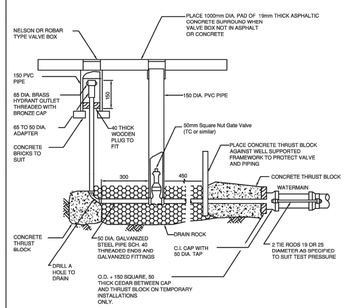

SCRD STANDARD DETAIL DRAWINGS

1. ALL WORK SHALL CONFORM TO THE MOST RECENT EDITION OF THE SUNSHINE COAST REGIONAL DISTRICT (SCRD) DESIGN AND CONSTRUCTION SPECIFICATIONS AND STANDARD DRAWINGS, AS WELL AS THE MASTER MUNICIPAL CONSTRUCTION DOCUMENTS. SCRD SPECIFICATIONS TAKE PRECEDENCE.

2. ALL NEW HIGH DENSITY POLYETHYLENE WATERMAINS SHALL BE DR 11.
ALL NEW DUCTILE IRON WATERMAINS SHALL BE PRESSURE CLASS 350.

3. WATERMAIN SHALL BE INSTALLED WITH 1.2m MINIMUM COVER UNDER ROADWAYS AND 1.0m ELSEWHERE. WATERMAIN SHALL BE INSTALLED TO SUIT EXISTING GROUND CONDITIONS. HDPE AND PVC WATERMAINS ARE TO BE LINED WITH TRACER WIRE.

4. EXISTING WATER SERVICE LOCATIONS AND SIZES TO BE DETERMINED PRIOR TO CONSTRUCTION. INSTALL THE NEW WATER SERVICES, COMPLETE WITH NEW CURB STOP AND METER BOX AS REQUIRED, AT THE SAME ELEVATION AS THE EXISTING CONNECTION.

5. ALL EXISTING UNDERGROUND UTILITIES (INCLUDING STORM, SANITARY, WATERMAINS, GAS MAINS, ELECTRICAL, TELEPHONE, STREETLIGHTING, ETC.) CROSSING ALONG THE COMPLETE PROPOSED WATERMAIN ALIGNMENT, INCLUDING TIE-IN LOCATIONS, SHALL BE LOCATED AND EXPOSED AND DEPTHS OF ALL UTILITIES RECORDED. THIS WORK TO PRECEDE WATERMAIN INSTALLATION BY THE DISTANCE REQUIRED TO ENSURE THAT THE LINE AND GRADE OF THE PROPOSED WATERMAIN CAN BE ADJUSTED TO SUIT FIELD CONDITIONS AS REQUIRED AND TO ENSURE THAT THE TEMPORARY ENDS OF THE WATERMAIN ARE SET TO ACCEPTABLE TIE IN ELEVATIONS. END PROPOSED WATERMAIN 3.0m FROM TIE IN LOCATIONS. ALL TIE-INS TO EXISTING WATERMAINS WILL BE COMPLETED AFTER TESTING AND FLUSHING.

6. PROTECTION OF THE WATERMAIN:
PARALLEL LINES: WATERMAINS SHALL BE LAID AT LEAST 3m HORIZONTALLY FROM ANY SANITARY OR STORM SEWER. WHERE THIS HORIZONTAL SEPARATION IS NOT POSSIBLE, THE BOTTOM OF THE WATERMAIN SHALL BE AT LEAST 0.5m ABOVE THE TOP OF THE SEWER AND SUFFICIENTLY TO ONE SIDE OF THE SEWER TO ALLOW FOR SEWER REPAIRS WITHOUT DISTURBING THE WATERMAIN. IF THIS VERTICAL SEPARATION IS NOT POSSIBLE, THE SEWER SHALL BE OF THE SAME SERVICE CAPABILITY AS THE WATERMAIN, WITH PRESSURE CLASS JOINTS DESIGNED TO REMAIN WATER TIGHT IF THE GROUNDWATER TABLE PERIODICALLY RISES ABOVE THE SEWER, AND ARE PRESSURE TESTED BEFORE BACKFILLING. ALL JOINTS WITHIN 3m OF THE SANITARY OR STORM SEWER SHALL BE EITHER WRAPPED WITH HEAT SHRINK PLASTIC OR PACKED WITH INERT PETROLATUM COMPOUND AND WRAPPED IN TAPE IN ACCORDANCE WITH ANS/AWWA STANDARDS C209 AND C217-90 OR INCASED IN ACCORDANCE WITH MMCD STANDARDS G6 and G7.

CROSSINGS: WHERE A WATERMAIN CROSSES A SANITARY OR STORM SEWER, THE LINES SHALL BE LAID WITH THE WATERMAIN CROSSING OVER THE SEWER AND WITH THE MIDDLE OF PIPE LENGTHS LOCATED AT THE CROSSING POINT, TO MAXIMIZE THE SEPARATION BETWEEN JOINTS. WHERE A MINIMUM 3m JOINT SEPARATION AND/OR MINIMUM 0.5m CLEAR VERTICAL SEPARATION IS NOT POSSIBLE AT THE CROSSING, PRECAUTIONS TO IMPROVE WATER TIGHTNESS OF THE SEWER JOINTS AND STRUCTURAL IMPROVEMENTS SUCH AS HIGHER STRENGTH WATERMAIN AND/OR SEWER AT THE CROSSING AREA ARE REQUIRED. ALL JOINTS WITHIN 3m OF THE CROSSING SHALL BE EITHER WRAPPED WITH HEAT SHRINK PLASTIC OR PACKED WITH INERT PETROLATUM COMPOUND AND WRAPPED IN TAPE IN ACCORDANCE WITH ANS/AWWA STANDARDS C209 AND C217-90 OR INCASED IN ACCORDANCE WITH SCRD STANDARD G6.

7. ALL WATER SERVICE CONNECTIONS TO BE 25mm DIAMETER TYPE K COPPER SERVICING PIPE FROM PROPERTY LINE TO THE NEW WATERMAIN UNLESS NOTED OTHERWISE.

8. THRUST BLOCKS TO BE PROVIDED AT ALL FITTINGS AND CHANGES IN DIRECTION UNLESS NOTED OTHERWISE. WHERE CONDITIONS DO NOT PERMIT THE USE OF THRUST BLOCKS, JOINT RESTRAINTS ARE TO BE USED.

9. THE SUNSHINE COAST REGIONAL DISTRICT WILL REMOVE AND RETURN TO THE SUNSHINE COAST REGIONAL DISTRICT WORKS YARD ALL EXISTING FIRE HYDRANTS ASSEMBLIES, GATE VALVES, ETC. CO-INCIDENT WITH TIE-IN OF WATERMAIN.

10. ALL PRESSURE TESTING CHLORINATION AND FLUSHING TO BE PERFORMED TO THE MINISTRY OF HEALTH AND AWWA STANDARDS. SEE SCRD DRAWING STANDARD N2.

11. RECORD DRAWINGS SHALL BE MAINTAINED BY THE CONTRACTOR THAT ACCURATELY DOCUMENT LOCATION AND DEPTH OF INSTALLED WORKS FOR SUBMISSION TO THE SCRD.

WATER WORKS NOTES — DRAWING NUMBER: **N1**

SCRD STANDARD DETAIL DRAWINGS

THE FOLLOWING IS COMPLEMENTARY TO THE SCRD BYLAWS AND DOES NOT NULLIFY THEM IN PART OR WHOLE.

1) THE SUNSHINE COAST REGIONAL DISTRICT ENGINEER, OR DULY AUTHORIZED REPRESENTATIVES, HENCEFORTH REFERRED TO AS "SCRD ENGINEER", MAY BE SCHEDULED TO INSPECT WATERWORKS PROJECTS, GIVEN FORTY-EIGHT HOURS' NOTICE, BETWEEN 9:30 AND 15:30, MONDAY TO FRIDAY, SUBJECT TO AVAILABILITY.

2) IN ACCORDANCE WITH BYLAW 320, SECTION II, PAGE 2, ARTICLE 8, THE OWNER'S REPRESENTATIVE SHALL ARRANGE TO MEET WITH THE SCRD ENGINEER PRIOR TO THE START OF CONSTRUCTION. AT THIS TIME THE SCRD ENGINEER WILL INFORM THE OWNER'S REPRESENTATIVE OF THE REQUIRED STAGES OF INSPECTION.

3) QUALIFIED INSPECTORS FROM THE PRIVATE SECTOR (I.E. THIRD PARTY ENGINEERS), MAY BE USED AS AN ALTERNATIVE TO THE SCRD ENGINEER FOR THE PURPOSES OF LEAKAGE TESTING AND DISINFECTION PROCEDURE, PROVIDED THAT THE SCRD HAS APPROVED OF THE USE OF THEIR SERVICES, AND THAT A QUALIFIED PROFESSIONAL ENGINEER PROVIDES A SIGNED AND SEALED LETTER, CONFIRMING THAT THE TEST(S) WERE COMPLETED TO MMCD, VCH, AWWA, AND SCRD STANDARDS.

4) THE SCRD ENGINEER, OR AUTHORIZED INSPECTOR, MUST BE PRESENT AND WITNESS THE LEAKAGE TESTING AS DESCRIBED IN BYLAW 320, SECTION VI, PAGE 9, ARTICLE 3.18. THE SCRD ENGINEER, OR AUTHORIZED INSPECTOR, MUST BE PRESENT WHEN THE MAIN IS FULLY PRESSURIZED AND AGAIN FOLLOWING TWO HOURS OF CONSTANT PRESSURIZATION.

5) PRIOR TO DISINFECTION OF THE WATERWORKS, THE SCRD MUST RECEIVE WRITTEN NOTIFICATION OF THE DE-CHLORINATION METHOD THAT WILL BE USED FOLLOWING THE FLUSHING OF THE WATERWORKS. THE SCRD ENGINEER, OR AUTHORIZED INSPECTOR, MUST BE PRESENT AND WITNESS THE DISINFECTION AS DESCRIBED IN BYLAW 320, SECTION VI, PAGE 10, ARTICLE 3.19. THE SCRD ENGINEER, OR AUTHORIZED INSPECTOR, MUST BE PRESENT WHEN THE MAIN IS FULLY CHLORINATED AND AGAIN FOLLOWING TWENTY-FOUR HOURS OF CHLORINATION.

6) THE COLLECTION OF SAMPLES FOR COLIFORM BACTERIA TESTING WILL BE PERFORMED BY THE SUNSHINE COAST REGIONAL DISTRICT SENIOR WATER TECHNICIAN, OR DULY AUTHORIZED REPRESENTATIVE. THIRD PARTY PERSONNEL WILL NOT BE PERMITTED TO COLLECT SAMPLES FOR COLIFORM TESTING. SAMPLES FOR COLIFORM TESTING WILL NOT BE TAKEN UNTIL THE DISINFECTION AND FLUSHING OF THE WATERWORKS HAS BEEN COMPLETED TO THE SATISFACTION OF THE SCRD ENGINEER.

7) THE SCRD UTILITIES COORDINATOR WILL BE ASKED TO PROCEED WITH THE FINAL TIE-IN UPON THE COMPLETION OF THE ABOVE MENTIONED LEAKAGE TESTING, DISINFECTION, AND COLIFORM BACTERIA TESTING TO THE SATISFACTION OF THE SCRD ENGINEER.

INSPECTION NOTES — DRAWING NUMBER: **N2**

MOTI POLICIES AND STANDARDS

1. ALL THE DESIGN AND CONSTRUCTION OF 3RD PARTY UTILITIES ON THE MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE (HERE IN AFTER CALLED "MOTI") OWNED ROW/PROPERTY CORRIDOR, ARE TO BE CARRIED OUT AS PER THE LATEST PUBLISHED "UTILITY POLICY MANUAL", UNLESS AND OTHERWISE SUPERSEDED BY ANOTHER STANDARD OR POLICY SET OUT BY THE MOTI. MOTI POLICIES, STANDARDS AND SPECIFICATIONS SUPERSEDES, THE SAME SET OUT BY THE SCRD OR MMCD, IN CONSTUCTIONS ON MOTI ROW CORRIDOR /PROPERTY.

2.ENGINEER ON RECORD(HEREIN AFTER CALLED "EOR") WILL BE THE 1ST POINT OF CONTACT BY THE MINISTRY FOR ANY MATTERS RELATED TO THIS SPECIFIC PROJECT. EOR WILL BE RESPONSIBLE FOR FIELD REVIEWS (HEREIN AFTER CALLED "FR'S") AND COMMUNICATION AND GETTING THE APPROVAL FOR ANY OF THE DESIGN CHANGES PRE AND POST APPROVAL OF THE DESIGN, BY THE MOTI DISTRICT OFFICE. APPOINTMENT OF "EOR" MUST BE DONE AS SET OUT ON MOTI'S UTILITY POLICY MANUAL 2019 V1.0 (HEREIN AFTER CALLED "UPM 2019")

3.. EOR TO SEEK WRITTEN APPROVAL FOR THE DESIGN AND CONSTRUCTION PRIOR TO COMMENCEMENT OF ANY TYPE OF WORK AS SET OUT IN UPM 2019 & TECHNICAL CIRCULAR T-06/09 - ENGINEER OF RECORD & REVIEW GUIDELINES (HEREIN AFTER CALLED "T-06/09")

4. EOR TO SEEK SPECIAL WRITTEN APPROVAL FOR ANY CONDITIONS OR SITUATIONS THAT ARE DEEMED "EXCEPTIONS" IN UPM 2019 AND MOTI TO CONSIDER AND ANALYZE EACH PROJECT AS SEPARATE SCENARIO AND CASE BY CASE.

5. TRENCHING ON MOTI ROW MUST BE CARRIED OUT AS PER THE POLICIES AND STANDARDS SET OUT ON UPM 2019 SECTION 25.3 , IF AND WHEN TESTING AND BACKFILLING PROCEDURES ARE DIFFERENT FROM SCRD STANDARDS, SPECIFICATION AND POLICIES , METHODS AND PROCEDURES STIPULATED IN UPM 2019 SUPERSEDES

6. SCRD TO FOLLOW ALL THE GUIDELINES STIPULATED ON SECTION 18 OF UPM 2019 WHEN, NOT LIMITED TO, INVESTIGATING, DESIGNING, CONSTRUCTING, INSPECTING, TESTING AND CONCLUDING THE CONTRACT.

7. ALL THE ABOVE GROUND FURNITURE BELONGING TO THE SYSTEM ARE TO BE DESIGNED AND CONSTRUCTED AWAY FROM THE CLEAR ZONE AS SPECIFIED IN SECTION 19.4.3 OF MOTI UPM 2019, ANY SPECIAL CASES OR SCENARIOS PROHIBITING SUCH COMPLIANCE, MUST BE APPROVED BY THE MOTI'S DISTRICT REPRESENTATIVE FOR THE AREA

8. VALVES, VALVE COVERS, MANHOLES, MANHOLE COVERS OR ANY OTHER SURFACE INFRASTRUCTURE THAT MAY BE LOCATED ON THE PAVED SURFACES ARE TO BE DESIGN AND CONSTRUCTED AS PER MOTI, 2016, STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION. REHABILITATION OF PAVED SURFACE ARE TO BE DONE AS PER THE SAME WITH FLUSHED FINISHED LEVEL OF SURFACE INFRASTRUCTURE MATCHING THE FINAL LIFT OF PAVEMENT.

9. TRENCH EXCAVATION AND BACKFILLING TO BE CARRIED OUT AS PER MOTI, 2016, STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, SECTION 201 & 202 RESPECTIVELY, WITH COMPLIANCE TO UPM 2019, SECTION 25.3

10. WHERE PIPELINES ARE ABANDONED IN PLACE, THEY SHALL BE ABANDONED AS PER MOTI, UPM 2019, SECTION 18.3.6 AND SECTION 17.3.6, COMPLYING TO CSA Z662 STANDARDS AND BE:
a. EMPTIED OF SERVICE FLUIDS;
b. PURGED OR APPROPRIATELY CLEANED OR BOTH IN A MANNER THAT LEAVES NO MOBILE MATERIALS REMAINING IN THE PIPELINE;
c. PHYSICALLY SEPARATED FROM ANY IN-SERVICE PIPING OR FACILITIES;
d. CAPPED, PLUGGED, OR OTHERWISE EFFECTIVELY SEALED;
e. INFILLED WITH CONCRETE;
f. CUT OFF AT PIPELINE DEPTH; AND
g. LEFT UNPRESSURIZED.

11. DESIGNING OF ANY REPLACEMENT OF GRADED AGGREGATE SEAL COAT (CHIP SEALED SURFACES) MUST BE CARRIED OUT AS PER SECTION 508 OF MOTI, 2016, STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION & TECHNICAL CIRCULAR T-01/15, PAVEMENT STRUCTURE DESIGN GUIDELINES.

UPM 2019 V1.0 — DRAWING NUMBER: **MOTI1**

MOTI STANDARD DETAIL DRAWING

TYPICAL COVER DEPTH AND VERTICAL ALIGNMENT REQUIREMENT

UPM 2019, SECTION 18.0, TABLE 18-1: DEPTH OF COVER FOR WATER AND SEWER LINES

PIPELINE PRESSURE	UNDER PAVEMENT AND SHOULDER	DEIGN DITCH BOTTOM	ELSEWHERE IN THE RIGHT OF WAY (ROW)
GRATER THAN 1,380 kPa (200 psi)	1.20m	1.00m	1.00m
LESS THAN OR EQUAL TO 1,380 kPa (200 psi)	1.20m	1.00m	0.75m

UPM 2019, SECTION 18.0, FIGURE 18-1: EXAMPLE WATER AND SEWER LINE CROSSING DIAGRAM

UPM 2019, SECTION 18.7, 18.7.2 LOCATION TEMPLATES 1, 2, AND 3 - FILL

NOTE: PLEASE REFER TO RELEVANT SECTIONS FOR EXCEPTIONS, PROHIBITIONS, SPECIAL CASES/SCENARIOS, APPROVAL SEEKING PROCESS & OTHER RELEVANT GUIDELINES

MOTI TYPICAL REQUIREMENTS — DRAWING NUMBER: **MOTI2**

MOTI STANDARD DETAIL DRAWING

TYPICAL VERTICAL ALIGNMENT REQUIREMENT

UPM 2019, SECTION 18.7, 18.7.3 TEMPLATE 1, 2, AND 3 - CUT

Notes:
1. Preferred location: minimum offset is generally 2 metres from the outside edge of the curb or 0.5 metres beyond the back of sidewalk, whichever is greater.
2. An exception may be granted for installation below sidewalks or curb & gutter.

UPM 2019, SECTION 18.8, 18.8.2 TEMPLATE 4 - UNDER DITCHES

UPM 2019, SECTION 18.8, 18.8.4 TEMPLATE 6 - UNDER SHOULDERS

NOTE: PLEASE REFER TO RELEVANT SECTIONS FOR EXCEPTIONS, PROHIBITIONS, SPECIAL CASES/SCENARIOS, APPROVAL SEEKING PROCESS & OTHER RELEVANT GUIDELINES

MOTI TYPICAL REQUIREMENTS — DRAWING NUMBER: **MOTI3**

MOTI STANDARD DETAIL DRAWINGS

NOTES:
1. MOTI STANDARDS AND PROCEDURES ARE TO BE FOLLOWED FOR ANY TRENCHES BELOW THE PAVEMT OR WITHIN 4.0m OF MOTI PAVEMENT EDGE.
2. ALL FILL MATERIALS EXCEPT ASPHALT AND BEDDING MATERIAL TO BE COMPACTED IN 200 mm MAXIMUM LIFTS TO 100% STANDARD PROCTOR DENSITY (UNDER LABORATORY CONDITIONS) IN COMPLIANCE WITH ASTM D698.
3. TRENCHING TO COMPLY WITH ALL REQUIREMENTS OF THE WORKERS' COMPENSATION BOARD.
4. REFER TO MMCD SECTIONS 31 23 01 AND 33 11 01 FOR DETAILED SPECIFICATIONS.
5. TRENCHING MUST COMPLY WITH BC MOTI UTILITY POLICY MANUAL (UPM) V1.0 (2019) SECTION 25.3 AND BC MOTI STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION VOLUME 1 SECTION 202
6. ASPHALT RESTORATION TO COMPLY WITH BC MOTI UTILITY POLCY MANUAL (UPM) V1.0 (2019) SECTION 25.4 AND BC MOTI STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION VOLUME 1 SECTION 502

SPECIAL NOTES:
7. ON CONSTRUCTION PROJECTS, THAT ARE BEING CARRIED OUT ON "MOTI'S" ROW CORRIDOR, MOTI STANDARDS AND SPECIFICATIONS SUPERSEDES SCRD ZND/OR MMCD STANDARDS AND SPECIFICATIONS. PLEASE REFER TO MOTI "OPEN CUT REQUIREMENTS","MOTI, 2016, STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, SECTION 2020.06 & UPM 2019, SECTION 25.3.5 & 25.3.4" FOR DETAILS

UTILITY TRENCH — DRAWING NUMBER: **MOTI4**

MOTI STANDARD DETAIL DRAWINGS

PAVEMENT STRUCTURE TYPE C:

ASPHALT PAVEMENT (AP) LAYER THICKNESSES MAY RANGE FROM A MINIMUM OF 50 MM UP TO A MAXIMUM OF 75 MM.

THE DESIGN DEPTH OF ASPHALT LAYER NEEDS TO BE DETERMINED BASED ON THE PROJECT, LOCATION AND ESAL'S FOR A 20 YEAR DESIGN PERIOD.

TYPICAL PAVEMENT STRUCTURE FOR TYPE C FOR LOW TO MEDIUM VOLUME ROADS,
ESAL'S < 100,000 SUBDIVISION ROADS, INFREQUENT USE BY HEAVY COMMERCIAL VEHICLES

NOTE:
1. 150 MM OF SGSB MINIMUM ON COARSE GRAINED SUB-GRADES (UNIFIED SOILS CLASSIFICATION SYSTEM - GW/GP/GM/GC/SW/SP/SM/SC) WHERE GROUND WATER DOES NOT POSE A DRAINAGE PROBLEM AND FROST PENETRATION DOES NOT AFFECT THE STRUCTURE.

2. 300 MM OF SGSB MINIMUM ON FINE GRAINED SUB-GRADES (UNIFIED SOILS CLASSIFICATION SYSTEM - ML/CL/OL/MH/CH/OH).

PAVEMENT RESTORATION (T-01/15) — DRAWING NUMBER: **MOTI5**

SCRD STANDARD DETAIL DRAWINGS

25mm Ø TO 50mm Ø CONNECTION

NOT TO SCALE

WATER SERVICE CONNECTION — DRAWING NUMBER: **W1**

SCRD STANDARD DETAIL DRAWINGS

SETTERS TO BE FORD VBHH, MANUFACTURED IN PLACE OR APPROVED EQUIVALENT

METER INSTALLATION IN VEHICULAR TRAFFIC AREAS — NOT TO SCALE — DRAWING NUMBER: **W2E**

SCRD STANDARD DETAIL DRAWINGS

SETTERS TO BE FORD VBHH, MANUFACTURED IN PLACE OR APPROVED EQUIVALENT

METER INSTALLATION IN NON-VEHICULAR TRAFFIC AREAS — NOT TO SCALE — DRAWING NUMBER: **W2F**

MMCD STANDARD DETAIL DRAWINGS

NOTE: 1. REFER TO CONTRACT DRAWINGS FOR VALVE INSTALLATION DETAILS IN AREAS OF UNSTABLE GROUND (WHERE APPLICABLE).
2. REFER TO CONTRACT DRAWINGS AND SECTION 02666 FOR DETAILED SPECIFICATIONS.

GATE VALVE INSTALLATION — DRAWING NUMBER: **W3**

MMCD STANDARD DETAIL DRAWINGS

NOTE: 1. REFER TO SUPPLEMENTAL SPECIFICATIONS FOR HYDRAND PAINTING REQUIREMENTS.
2. REFER TO CONTRACT DRAWINGS AND SECTION 02666 FIR THE DETAILED SPECIFICATIONS.
3. FOR INSTALLATIONS SHOWN ON CONTRACT DRAWINGS WHERE WATER (AT SEASONAL HIGH) IS ABOVE BASE OF DRAIN ROCK, INSERT THEREADED PLUGS IN DRAIN HOLES AND SUBSTITUTE GRANULAR PIPE BEDDING FOR DRAIN ROCK. (COMPACT PIPE BEDDING TO 95% MODIFIED PROCTOR DENSITY)
4. IF REQUIRED BY THE MOTI, UPM STANDARDS, FLANGED STUB IS TO INCORPORATE BETWEEN THE TEE AT THE MAIN AND THE HYDRANT GATE VALVE TO LOCATE HYDRANT VALVES AWAY FROM THE PAVED SURFACE

FIRE HYDRANT INSTALLATION — DRAWING NUMBER: **W4**

SCRD STANDARD DETAIL DRAWINGS

NOTES:
1. METER BOX TO BE ARMTEC AE UTILITY BOX OR APPROVED EQUIVALENT.
2. ALL MEASUREMENTS IN MILLIMETERS UNLESS STATED OTHERWISE.
3. ALL AIR VALVES TO BE OF THE DOUBLE ACTING TYPE: TERMINAL CITY IRON WORKS, A.V 24 OR EQUIVALENT

AIR VALVE ASSEMBLY — NOT TO SCALE — DRAWING NUMBER: **W6**

SCRD STANDARD DETAIL DRAWINGS

NOTE: 1. 20 Mpa CONCRETE.
2. REFER TO CONTRACT DRAWINGS AND SECTION 02666 FOR DETAILED SPECIFICATIONS.

BLOW-OFF WITH GATE VALVE — DRAWING NUMBER: **W8A**

MMCD STANDARD DETAIL DRAWINGS

NOTE: 1. 20 Mpa CONCRETE.
2. REFER TO CONTRACT DRAWINGS AND SECTION 02666 FOR DETAILED SPECIFICATIONS.

BLOW-OFF FOR WATERMAIN — DRAWING NUMBER: **W8**

SCRD STANDARD DETAIL DRAWINGS

NOTE:

MAXIMUM ALLOWABLE SOIL BEARING LOADS MPA	FITTING SIZE MM	THRUST KN	MINIMUM BLOCK BASE AREA M2	THRUST KN	MINIMUM BLOCK BASE AREA M2	THRUST KN	MINIMUM BLOCK BASE AREA M2	THRUST KN	MINIMUM BLOCK BASE AREA M2	THRUST KN	MINIMUM BLOCK BASE AREA M2
1915.2 -HARDPAN OR SHALE-	100	16	0.019	23	0.023	12	0.009	6	0.007	3	0.004
	150	33	0.037	47	0.046	25	0.023	13	0.009	7	0.065
	200	57	0.056	81	0.084	44	0.460	22	0.023	11	0.009
	300	122	0.130	172	0.177	93	0.093	48	0.046	24	0.023
1149.1 -HARD CLAY-	100	16	0.023	23	0.037	12	0.019	6	0.009	3	0.006
	150	33	0.056	47	0.084	25	0.046	13	0.019	7	0.009
	200	57	0.102	81	0.140	44	0.074	22	0.037	11	0.019
	300	122	0.214	172	0.297	93	0.458	48	0.084	24	0.037
574.6 -SAND- COURSE, LOOSE OR FINE COMPACT	100	16	0.056	23	0.084	12	0.046	6	0.019	3	0.009
	150	33	0.112	47	0.093	25	0.093	13	0.046	7	0.019
	200	57	0.165	81	0.279	44	0.149	22	0.074	11	0.037
	300	122	0.148	172	0.604	93	0.316	48	0.167	24	0.084
191.5 -SOFT CLAY-	100	16	0.167	23	0.242	12	0.150	6	0.065	3	0.037
	150	33	0.344	47	0.492	25	0.260	13	0.139	7	0.065
	200	57	0.595	81	0.845	44	0.455	22	0.232	11	0.121

1. CONCRETE THRUST BLOCKS SHALL EXTEND INTO UNDISTURBED SOIL. THRUST IN 50° UNSTABLE SOILS WILL REQUIRE REMOVAL OF SOIL AND REPLACEMENT WITH COMPATIBLE FILL OR SUFFICIENT STABILITY TO RESIST THRUST OR SPECIAL ANCHOR BLOCK AS DIRECTED BY THE CITY ENGINEER.
2. BLOCKING WILL BE REQUIRED FOR ALL ELBOWS, TEES, PLUGS, CAPS,PIPE DEFLECTIONS, AND OTHER FITTINGS ON LIVE MAINS WHERE ANCHOR RODS ARE NOT PRACTICAL.
3. THRUST BLOCKS SHALL BE AT LEAST 10MPa 20 DAYS CONCRETE OR HIGH EARLY STRENGTH CONCRETE IF REQUIRED
4. AT VERTICAL BENDS BLOCKING SHALL BE OF SUFFICIENT WEIGHT TO RESIST OUTWARDS THRUST
5. BLOCKING SHALL BE KEPT OFF BELLS WHEN POSSIBLE.
6. FOR SPECIFIC AT IF LARGER PIPES, SEE ENGINEER.

CONCRETE BLOCKING — DRAWING NUMBER: **W8**

SCRD STANDARD DETAIL DRAWINGS

THRUST BLOCK LOCATIONS — DRAWING NUMBER: **W9**

SCRD STANDARD DETAIL DRAWINGS

FOR USE IN CLEAN GRAVELS, SANDS, AND OTHER LOOSE, PERMEABLE NATIVE MATERIALS

MAXIMUM SPACING OF ANCHOR BLOCKS (SEE NOTE 4)			
SANITARY AND STORM GRAVITY SEWERS		WATERMAINS AND FORCEMAINS	
SLOPE	MAX. SPACING	SLOPE	MAX. SPACING
15% - 20%	25m	10% OR GREATER	10m
20% - 35%	20m		
35% - 50%	15m		
50% - OVER	10m		

NOTE: 1. APPLICABLE TO ALL PIPE MATERIALS.
2. USE ALTERNATIVES 1 OR 2 AS SPECIFIED ON CONTRACT DRAWINGS.
3. USE 20 MPa CONCRETE UNLESS SPECIFIED OTHERWISE ON CONTRACT DRAWINGS.
4. REFER TO CONTRACT DRAWINGS FOR SPECIFIED SPACING IF OTHER THAN MAXIMUM SHON IN TABLE.

PIPE ANCHOR BLOCKS — DRAWING NUMBER: **G8**

NOT FOR CONSTRUCTION

No.	DATE	REVISION	BY
1	2024-06-21	ISSUED FOR REZONING	DC

LANDEV Consulting Inc.
Engineering & Development Services
WWW.LANDEVCONSULTING.CA
EMAIL: INFO@LANDEVCONSULTING.CA PH: 604-989-7300

DRAWING DESCRIPTION
LOT D, CHASTER ROAD, GIBSONS, BC
PROPOSED 16 LOT SUBDIVISION
STANDARD DETAILS

CLIENT
AB COAST PROJECTS LTD.

PROJECT No. 2232
SCALE -

DATE 2024-06-21
DESIGN BY SB
CHECKED BY DC
SURVEYED BY P.M.G.

DWG. NO. DET-1
SHEET. NO. 9 OF 10
REV. 1

PLOT DATE: June 21, 2024 - C:\Users\DC\Landev Consulting Dropbox\LANDEV\PROJECTS\2200\2232 - Lot D Chaster\CAD\Final\DET-1.dwg

EGBC PERMIT # 1003416

ISSUED FOR REZONING

GENERAL CONSTRUCTION NOTES:

1) ALL CONSTRUCTION MATERIALS AND WORK MUST ADHERE TO THE LATEST STANDARDS AND SPECIFICATIONS SET BY THE MINISTRY OF TRANSPORTATION & INFRASTRUCTURE (M.O.T.I.), SUNSHINE COAST REGIONAL DISTRICT (SCRD), MASTER MUNICIPAL CONSTRUCTION DOCUMENT (MMCD), BC BUILDING CODE, AND BC PLUMBING CODE. THE ENGINEER MUST INSPECT EACH STAGE OF THE CONSTRUCTION PROCESS AND ALL M.O.T.I AND SCRD REQUIREMENTS TAKE PRECEDENCE.

2) CONTRACTOR TO CONTACT AND INFORM ALL HOMEOWNERS IMPACTED BY THE CONSTRUCTION AT LEAST FOUR WEEKS IN ADVANCE. REITERATE THE NOTIFICATION TO THOSE HOMEOWNERS AFFECTED BY THE WORK 48 HOURS BEFORE THE COMMENCEMENT OF THE WORK.

3) PRIOR TO COMMENCING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY M.O.T.I., THE ENGINEER, AND SCRD AT LEAST 48 HOURS IN ADVANCE TO SCHEDULE AN INSPECTION.

4) THE ENGINEER MUST BE INFORMED BY THE CONTRACTOR DURING THE FOLLOWING PHASES OF THE CONSTRUCTION SCHEDULE:
   a. DELIVERY OF STORM MATERIALS TO THE SITE
   b. DELIVERY OF THE SANITARY MATERIALS TO THE SITE
   c. DELIVERY OF THE WATER WORKS MATERIALS TO THE SITE
   d. INITIAL INSTALLATION OF STORM SEWER, SANITARY SEWER, AND WATER WORKS CONSTRUCTION PRIOR TO BACKFILLING
   e. GRADING OF ROAD SURFACES PRIOR TO PAVING
   f. COMMISSIONING OF A PUMP SYSTEM

5) PRIOR TO COMMENCING CONSTRUCTION, THE CONTRACTOR MUST ENSURE ALL NECESSARY APPROVALS AND PERMITS FROM THE APPROPRIATE AUTHORITIES AND AGENCIES ARE IN PLACE FOR THE PROPOSED WORKS.

6) WORKSAFE B.C. IS TO BE NOTIFIED PRIOR TO THE START OF CONSTRUCTION

7) PRIOR TO STARTING CONSTRUCTION, A PRE-CONSTRUCTION MEETING WITH THE ENGINEER, CONTRACTOR, M.O.T.I. AND SCRD IS NECESSARY.

8) BEFORE ENGAGING IN ANY WORK IN AND/OR AROUND TREES. CONTRACTOR IS TO CONTACT THE PARKS DEPARTMENT OF THE MUNICIPALITY. IT IS CRITICAL TO PRESERVE THE DESIGNATED TREES. IF WORKING NEAR A DESIGNATED TREE OR ENCOUNTERING ROOTS, THE CONTRACTOR MUST SEEK ADVICE FROM A CERTIFIED ARBORIST TO PREVENT ANY HARM TO THE TREES.

9) THE DESIGN DRAWINGS SHOW AN APPROXIMATE LOCATION OF EXISTING UTILITIES, BUT THIS INFORMATION MAY NOT BE FULLY ACCURATE OR COMPLETE. NOT ALL UTILITIES MAY BE SHOWN AS THEY ARE DERIVED FROM RECORD DRAWING INFORMATION. BEFORE CONSTRUCTION BEGINS, THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND EXPOSING ALL EXISTING UTILITIES AT ALL TIE-IN POINTS AND ANY SPOTS WHERE CONFLICTS MAY ARISE DURING THE PROPOSED WORKS, AND TO CONFIRM DESIGN ELEVATIONS. IF A CONFLICT ARISES, THE CONTRACTOR MUST IMMEDIATELY CONTACT THE ENGINEER FOR INSTRUCTIONS. ANY COSTS OR EXPENSES RESULTING FROM DAMAGES WILL BE ASSUMED BY THE CONTRACTOR.

10) WHEN WORKING NEAR EXISTING SERVICES, THE CONTRACTOR IS REQUIRED TO EXERCISE UTMOST CARE. IN CASE OF ANY DISTURBANCES TO THESE SERVICES, THEY MUST BE REPLACED TO THE SATISFACTION OF THE M.O.T.I., SCRD, THE ENGINEER, OR THE APPROPRIATE UTILITY CORPORATION.

11) DURING THE CONSTRUCTION PROCESS, IT IS IMPORTANT TO ENSURE THAT ALL EXISTING SERVICES REMAIN OPERATIONAL.

12) ANY DAMAGED OR REMOVED INFRASTRUCTURE OR PRIVATE PROPERTY DURING CONSTRUCTION MUST BE REPAIRED OR REPLACED TO BETTER THAN OR EQUAL TO PRE-CONSTRUCTION CONDITION. PRIVATE PROPERTY AND BOULEVARDS MUST BE REINSTATED TO PRE-CONSTRUCTION CONDITIONS AS WELL.

13) ALL MATERIAL TESTING MUST MEET M.O.T.I SPECIFICATIONS, CONDUCTED BY A QUALIFIED MATERIAL TESTING FIRM AND PAID FOR BY THE CONTRACTOR. THE CONTRACTOR MUST PROVIDE COPIES OF ALL TEST RESULTS TO THE ENGINEER AND NOTIFY THEM 48 HOURS PRIOR TO CONSTRUCTION, ENSURING THEY HAVE THE LATEST ISSUED CONSTRUCTION DRAWINGS.

14) 48 HOURS BEFORE ANY CONSTRUCTION TAKES PLACE WITHIN ROAD ALLOWANCES AND RIGHT OF WAYS, THE CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE APPROPRIATE APPROVING AUTHORITY ENGINEERING DEPARTMENT.

15) THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES INVOLVED IN THE CONSTRUCTION, AND FOR COORDINATING ALL PARTS OF THE WORK UNDER THE CONTRACT. WHILE THE CONTRACTOR HAS COMPLETE CONTROL OVER THE WORK, THE OWNER RETAINS THE RIGHT TO GIVE DIRECTIONS REGARDING THE WORK AS STATED IN THE CONTRACT DOCUMENTS.

16) FOR INSTALLATION RELATED TO BC HYDRO, TELUS/SHAW, AND FORTIS, THE CONTRACTOR SHOULD REFER TO THE APPROPRIATE UTILITY COMPANY DRAWINGS AND SPECIFICATIONS.

17) THE CONTRACTOR IS RESPONSIBLE FOR COMPLETING ALL WORK TO THE SATISFACTION OF THE INSPECTORS FROM THE ENGINEER AND REGULATORY AUTHORITY. ADDITIONALLY, THE CONTRACTOR MUST ENSURE THAT TELUS WORKS ARE INSPECTED AND APPROVED BY A TELUS INSPECTOR, HYDRO WORKS ARE INSPECTED AND APPROVED BY A BC HYDRO INSPECTOR, FORTIS WORKS ARE INSPECTED AND APPROVED BY A FORTIS INSPECTOR, AND SHAW WORKS ARE INSPECTED AND APPROVED BY A SHAW INSPECTOR, IF APPLICABLE. UPON COMPLETION OF THE WORK, THE CONTRACTOR MUST PROVIDE THE ENGINEER WITH CERTIFICATION OF ACCEPTANCE OR APPROVAL FROM THE AFOREMENTIONED INSPECTORS. IF ELECTRICAL WORK IS APPLICABLE, THE CONTRACTOR MUST OBTAIN A PERMIT FROM THE BC ELECTRICAL SAFETY BRANCH AND PROVIDE A COPY OF THE PERMIT AND SIGN-OFF TO THE ENGINEER. THE CONTRACTOR MUST GIVE TIMELY NOTICE TO THE RELEVANT INSPECTOR(S) TO ALLOW FOR INSPECTION OF THE WORK AND KEEP THE ENGINEER INFORMED THROUGHOUT THE PROCESS.

18) SUB-CONTRACTORS ARE NOT ALLOWED TO COMMUNICATE DIRECTLY WITH THE ENGINEERS OR OWNER REGARDING ANY CONTRACTUAL OR TECHNICAL ISSUE. INSTEAD, THEY SHOULD DIRECT THEIR CONCERNS TO THE CONTRACTOR, WHO IS RESPONSIBLE FOR DEALING WITH THEM ON THEIR BEHALF WITH THE ENGINEER. ANY MATTER RELATED TO THE CONTRACT, INCLUDING PROGRESS PAYMENT, CHANGE ORDER, PAYMENT OF HOLDBACK, FINAL PAYMENT, INSURANCE, AND WARRANTY, SHOULD BE DIRECTED TO THE ENGINEER FOR REVIEW AND APPROVAL. THE CONTRACTOR SHOULD ONLY TAKE DIRECTION FROM THE ENGINEER REGARDING CHANGES TO THE DESIGN OR ANY EXTRA WORK REQUIRED.

19) UNLESS OTHERWISE STATED IN THE CONTRACT DOCUMENTS OR SPECIFIED BY THE ENGINEER, THE CONTRACTOR IS CONSIDERED THE PRIME CONTRACTOR FOR ALL APPLICABLE LAWS RELATING TO OCCUPATIONAL HEALTH AND SAFETY. THIS INCLUDES THE DISCHARGE OF ALL DUTIES OF THE PRIME CONTRACTOR UNDER THE WORKERS COMPENSATION ACT (BRITISH COLUMBIA), REGARDLESS OF WHETHER THE ENGINEER, OWNER, OR ANY OTHER CONTRACTOR PROVIDES SOME OF THE SERVICES NORMALLY PROVIDED BY THE PRIME CONTRACTOR. IN THIS SECTION, "PRIME CONTRACTOR" REFERS TO THE CONTRACTOR DEFINED UNDER THE WORKERS COMPENSATION ACT (BRITISH COLUMBIA).

20) THE CONTRACTOR'S SURVEYOR IS RESPONSIBLE FOR RECORDING AND CERTIFYING ALL INFORMATION REQUIRED FOR THE ENGINEER TO PROVIDE A COMPLETE SET OF AS-CONSTRUCTED DRAWINGS, INCLUDING CENTERLINE, FOG LINE, EDGE OF ASPHALT, SIGNS, AND ALL APPURTENANCES.

21) IF NO UPGRADES ARE PROPOSED UNDER THIS CONTRACT, THE CURRENT ROADWAY SECTION(S) MUST STAY CLEAN AND OPEN THROUGHOUT THE CONSTRUCTION PERIOD, AND MUST REMAIN IN THE SAME STATE AS BEFORE CONSTRUCTION BEGAN.

22) THE CONTRACTOR MUST MANAGE TRAFFIC, PROVIDE SIGNS, BARRIERS, DELINEATORS, AND OTHER NECESSARY WARNING DEVICES TO PRESERVE THE FLOW OF VEHICLES AND PEDESTRIANS, IN ADDITION TO ENSURING EMERGENCY VEHICLE ACCESSIBILITY. A TRAFFIC MANAGEMENT PLAN WILL BE MADE AVAILABLE AS NECESSARY.

23) ANY CONSTRUCTION WORK IN OR NEAR A WATERCOURSE NECESSITATES APPROVAL AHEAD OF TIME FROM THE PROVINCIAL MINISTRY OF ENVIRONMENT AND/OR THE FEDERAL DEPARTMENT OF FISHERIES AND OCEANS CANADA, AS APPLICABLE.

24) PRIOR TO BEGINNING THE CONSTRUCTION, WRITTEN APPROVAL FROM THE ENGINEER MUST BE OBTAINED FOR ANY MATERIAL SUBSTITUTIONS AND/OR CHANGES IN DESIGN. NOTIFICATION OF ANY SUBSTITUTIONS AND/OR CHANGES IN DESIGN SHOULD BE GIVEN TO THE APPROPRIATE APPROVING AUTHORITY. IN CASE OF A CHANGE IN DESIGN, A DRAWING REVISION WILL BE NECESSARY.

25) IT IS MANDATORY TO SAFEGUARD ALL SURVEY MONUMENTS, BENCHMARKS, AND LEGAL PINS AND THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE CAUSED BY THEIR NEGLIGENCE AT THEIR OWN COST.

26) TO OBTAIN DETAILS AND DIMENSIONS FOR LANDSCAPING, PLEASE REFER TO THE LANDSCAPE DESIGN DRAWINGS CREATED BY THE LANDSCAPING CONSULTANT.

27) WHEN PAVING THE ROADWAY, JUNCTION BOXES, VALVE COVERS, MANHOLE FRAMES, AND COVERS SHOULD REMAIN LOW AT THE BASE LEVEL DURING BASE LIFT ASPHALT AND SHOULD ONLY BE RAISED JUST PRIOR TO THE FINAL LIFTING OF PAVING.

28) BEFORE CONSTRUCTION BEGINS, PLEASE REFER TO THE GEOTECHNICAL REPORT FOR RECOMMENDATIONS REGARDING SUBSURFACE CONDITIONS, SITE PREPARATION, AND THE PROPOSED ROAD STRUCTURE.

29) ALL PAVEMENT MARKINGS, LINE PAINTING, DIRECTIONAL LINES, ARROWS, ETC. MUST BE PLACED ACCORDING TO THE PAVEMENT MARKING DESIGN DRAWINGS.

ROADWORK NOTES:

1) CONSTRUCTION MUST ADHERE TO GUIDELINES SET BY THE MINISTRY OF TRANSPORTATION & INFRASTRUCTURE (MOTI), SCRD'S GENERAL SPECIFICATIONS, AND MMCD SPECIFICATIONS. THE COMPLETION OF EACH PHASE MUST PASS INSPECTION FROM MOTI AND SCRD, WITH THE OWNER RESPONSIBLE FOR PAYMENT. THE CONTRACTOR MUST GIVE MOTI & THE ENGINEER 48 HOURS NOTICE BEFORE SUBGRADE PROOF ROLL, BASE APPLICATION, AND PAVING.

2) TRENCHING CUTS IN EXISTING ASPHALT MUST BE VERTICAL AND THE SAME THICKNESS AS EXISTING ASPHALT (MINIMUM 80mm) AFTER BACKFILL AND COMPACTION. ANY PAVEMENT, BOULEVARDS, DRIVEWAYS, FENCES, ETC. AFFECTED BY THE CONSTRUCTION MUST BE RESTORED TO THEIR ORIGINAL CONDITION IF NO IMPROVEMENTS ARE PROPOSED UNDER THE CONTRACT. UTILITIES MUST BE COORDINATED BEFORE ANY ASPHALT IS CUT.

3) THE CONTRACTOR MUST NOTIFY MOTI'S CONSTRUCTION OFFICE 48 HOURS BEFORE STARTING CONSTRUCTION TO ESTABLISH AN INSPECTION SCHEDULE.

4) THE DURATION OF THE CONTRACT REQUIRES THE CONTRACTOR TO MAINTAIN VEHICULAR ACCESS TO EXISTING DWELLINGS.

5) PRIOR TO THE FINAL PLAN BEING SIGNED AND SUBMITTED, THE DEVELOPER MUST ADDRESS ALL OUTSTANDING CONSTRUCTION DEFICIENCIES.

6) IN ACCORDANCE WITH DFO/MOELP'S “ LAND DEVELOPMENT GUIDELINES FOR THE PROTECTION OF AQUATIC HABITAT” , THE CONTRACTOR MUST TAKE NECESSARY STEPS TO PREVENT SILTING IN STORM DRAINAGE SYSTEMS, ROADWAYS, AND ADJACENT PROPERTIES DURING CONSTRUCTION.

7) REFER TO THE APPROPRIATE UTILITY COMPANY DRAWINGS AND SPECIFICATIONS FOR BC HYDRO, TELUS, AND FORTIS INSTALLATION.

8) BEFORE CONSTRUCTION BEGINS, A PRE-CONSTRUCTION MEETING BETWEEN M.O.T.I., SCRD, THE CONSULTANT, AND CONTRACTOR IS MANDATORY.

9) AT THE START OF THE CONTRACT, THE CONTRACTOR IS REQUIRED TO SUBMIT SIEVE TEST RESULTS AND SOURCE DATA FOR AGGREGATES AND MIX DESIGN FOR ASPHALT. THESE WILL UNDERGO REVIEW AND APPROVAL.

10) ALL LOOSE AND ORGANIC MATERIALS FOUND IN THE ROADWAY MUST BE EXCAVATED. SUBGRADES WILL BE COMPACTED TO AT LEAST 95% MODIFIED PROCTOR DENSITY. PRIOR TO PLACEMENT OF GRAVEL SUBBASE, THE SUBGRADE WILL BE INSPECTED BY AN ENGINEER. SUBGRADE SOIL SOFTENED BY WATER SHALL BE OVEREXCAVATED AND THE GRADE SHALL BE RESTORED WITH GRANULAR SOILS, WHICH WILL BE COMPACTED TO AT LEAST 95% MODIFIED PROCTOR DENSITY.

11) IN ACCORDANCE WITH SECTION 202 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, THE BASE AND SUBBASE MATERIALS MUST BE PROPERLY PLACED AND COMPACTED TO AT LEAST 100% OF MODIFIED PROCTOR DRY DENSITY (ASTM D1557). COMPACTION TESTING WILL BE CONDUCTED AT A MINIMUM OF ONE TEST EVERY 10 METERS. THE BACKFILL MATERIAL MUST BE SIMILAR OR BETTER THAN THE EXCAVATED MATERIAL AT ANY GIVEN ELEVATION.

12) THE ROAD BASE SHALL EXTEND A MINIMUM OF 0.3 METERS BEYOND THE SIDEWALK AND/OR CURB AND GUTTER, WHICHEVER IS GREATER AND FILLED TO THE LEVEL OF THE SIDEWALK OR CURB FOR SUPPORT.

13) TRENCHES MUST BE FACKFILLED WITH GRANULAR MATERIAL THAT MEETS MINISTRY STANDARDS AS SET OUT IN SECTION 202.02 (TABLE 202-C), 2020 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION AND ALL SUBSEQUENT INTERIM REVISIONS AND UPDATES, IN ACCORDANCE WITH THE FOLLOWING MINIMUM REQUIREMENTS (1) - SUB-BASE MATERIAL MUST MEET OR EXCEED SPECIFIED REQUIREMENTS FOR SELECT GRANULAR SUB-BASE AGGREGATES. (2) - CRUSHED BASE COURSE DEPTH IS TO MATCH EXISTING DEPTH BUT MUST NOT BE LESS THAN 300mm COMPACTED THICKNESS AND CONSIST OF “ 25mm MINUS” WGB (OR IGB) CRUSHED AGGREGATE. BACKFILL MUST BE PLACED IN LAYERS NOT EXCEEDING 150mm COMPACTED THICKNESS AND SHALL BE COMPACTED WITH APPROVED TAMPING EQUIPMENT

14) FOR DRIVEWAYS, THE COVERS ON INSPECTION CHAMBERS AND VALVE RISERS MUST BE APPROPRIATE FOR AREAS WHERE VEHICLES TRAVEL.

15) THE LOCATION OF DRIVEWAYS, WHEELCHAIR RAMPS, ETC. SHOULD BE VERIFIED IN THE FIELD WITH ENGINEER BEFORE CONSTRUCTING THE PROPOSED CONCRETE CURB AND GUTTER.

16) ALL MANHOLE LIDS, VALVE COVERS, CATCH BASIN RIMS, AND OTHER STRUCTURE LIDS SHOULD BE PLACED AT THE FIRST LIFT ROAD ELEVATION AND THEN RAISED WHEN THE FINAL LIFT IS PLACED.

17) CATCH BASIN RIM ELEVATIONS MUST BE SET 25mm BELOW THE FINISHED GUTTERLINE GRADES. THE GUTTER AND ROAD SURFACE AREA MUST BE SHAPED TO FORM A DISH AROUND THE INLET.

18) TO CONNECT THE NEW PAVEMENT TO THE EXISTING ONE, THE CONTRACTOR MUST CUT BACK THE EXISTING PAVEMENT TO A SECURE MATERIAL. THIS WILL ENSURE THAT THE NEW PAVEMENT HAS A SMOOTH AND STRAIGHT EDGE BEFORE BEING COVERED WITH HOT MIX ASPHALTIC CONCRETE. THE EXPOSED SURFACES OF THE PAVEMENT MUST BE PAINTED WITH LIQUID ASPHALT AND HEATED TO A TEMPERATURE OF 65 DEGREES CELSIUS. WHEN THE PAVEMENT IS FINISHED, IT SHOULD BLEND SEAMLESSLY WITH THE EXISTING PAVEMENT. THE EDGE OF THE PAVEMENT MUST BE SAWCUT AND KEYED TO FORM A LAP JOINT WITH A WIDTH OF AT LEAST 200mm AND DEPTH OF 40mm, UNLESS OTHERWISE NOTED OR DIRECTED BY THE ENGINEER.

19) THE PAVING WORK MUST FOLLOW THE GUIDELINES STATED IN SECTION 502 OF THE MOTI STANDARD SPECIFICATIONS. THE PRESENCE OF BOTH MOTI AND ENGINEER INSPECTORS IS REQUIRED BEFORE PAVING CAN BEGIN. OBTAIN AND SUBMIT SAMPLES OF THE ASPHALT MIX TO BE TESTED BY AN INDEPENDENT TESTING LABORATORY TO ENSURE IT MEETS MOTI STANDARDS. THE RESULTS AND REPORTS OF THE TESTING MUST BE SUBMITTED BY THE CONTRACTOR.

20) IN ADDITION TO THE GRADING OF THE ROAD, THE CONTRACTOR WILL ALSO ROUGHLY GRADE THE BOULEVARDS ACCORDING TO THE CROSS-SECTION PROFILE.

21) MOTI APPROVAL REQUIRED FOR WORK ON OR ABOUT EXISTING ROAD. TRAFFIC CONTROL AND SIGNAGE TO MOTI SPECIFICATIONS

22) IF THE WORK FOR WHICH PERMISSION IS GRANTED INTERSECTS WITH ANY EXISTING BRIDGES, CULVERTS, DITCHES, OR OTHER FEATURES, IT IS IMPORTANT THAT THOSE FEATURES BE PROPERLY MAINTAINED AND SUPPORTED TO ENSURE THEY DO NOT IMPEDE THEIR PROPER FUNCTIONALITY DURING CONSTRUCTION. ONCE THE NEW WORK IS COMPLETE, ANY BRIDGES, CULVERTS, DITCHES, OR OTHER FEATURES THAT WERE INTERFERED WITH MUST BE FULLY RESTORED TO THEIR ORIGINAL CONDITION.

23) THE CONTRACTOR IS RESPONSIBLE FOR USING AND COMPLYING WITH THE LATEST VERSIONS OF THE FOLLOWING STANDARDS, SPECIFICATIONS, MANUALS, AND GUIDES DURING THE INSTALLATION, OPERATION, AND MAINTENANCE OF THE WORKS, WHICH INCLUDE THE MINISTRY UTILITY POLICY MANUAL, MINISTRY TRAFFIC CONTROL MANUAL FOR WORK ON ROADWAYS, MINISTRY TRAFFIC MANAGEMENT GUIDELINES FOR WORK ON ROADWAYS, AND MINISTRY STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

24) THE CONTRACTOR MUST PROVIDE CERTIFIED TRAFFIC CONTROL IN COMPLIANCE WITH THE "TRAFFIC CONTROL MANUAL FOR WORK ON ROADWAYS" WHENEVER NECESSARY. STANDARD TRAFFIC CONTROL DEVICES, AS PER THE MINISTRY OF TRANSPORTATION TRAFFIC CONTROL MANUAL ON ROADWAYS AND WCB REGULATION PART 18, MUST BE SUPPLIED, ERECTED AND MAINTAINED BY THE CONTRACTOR.

25) THE CONTRACTOR IS RESPONSIBLE FOR REMOVING EXISTING LANE MARKINGS, PLACING TEMPORARY MARKERS, AND COMPLETING FINAL LINE PAINTING. ALL MATERIALS AND PROCEDURES MUST MEET MINISTRY SPECIFICATIONS AND STANDARDS OUTLINED IN THE MANUAL OF STANDARD TRAFFIC SIGNS & PAVEMENT MARKINGS. AFTER COMPLETION, THE CONTRACTOR MUST SCHEDULE A FINAL INSPECTION OF THE INSTALLATION WITH MINISTRY PERSONNEL.

STORM SEWER NOTES:

1) PVC SDR 28 PIPE TO BE USED FOR SERVICE CONNECTIONS AND PVC SDR 35 PIPE FOR MAIN LINES WHEN INSTALLING BURIED GRAVITY SEWERS. THESE PIPES MUST BE TESTED IN ACCORDANCE WITH ASTM D3034 & CSA B182.1, AND THE PIPE STIFFNESS (F/Y) SHOULD BE 314 KPA AT 5% DEFLECTION WHEN TESTED IN ACCORDANCE WITH ASTM D2412, UNLESS OTHERWISE INDICATED.

2) IT IS REQUIRED THAT STORM SEWER PIPES WITH A DIAMETER UP TO 600mm HAVE A MINIMUM COVER OF 1.0 METER. FOR PIPES LARGER THAN 600mm AND FOR COVERS THAT ARE LESS THAN THE SPECIFIED MINIMUM, AN ENGINEERING DESIGN FOR COVER WILL BE NECESSARY.

3) THE MAXIMUM GRADE ALLOWED IS 15.0% UNLESS THE PIPE IS ANCHORED TO THE TRENCH BOTTOM BY POURING CONCRETE IN PLACE. TO INSTALL PIPE ANCHORS, FOLLOW MMCD STANDARD DRAWING NO. G8.

4) ALL MANHOLES TO BE 1050mm I.D. UNLESS NOTED OTHERWISE. MANHOLES AS PER MOTI STD. DWG. SP582-03.01.

5) REFER TO ROAD DESIGN DRAWINGS FOR CATCH BASIN LOCATIONS AND ELEVATIONS.

6) STORM SERVICE CONNECTIONS MUST MEET THE FOLLOWING REQUIREMENTS UNLESS NOTED OTHERWISE: THEY SHALL BE MADE USING 150mm DIAMETER PVC PIPE WITH A MINIMUM SPECIFICATION OF SDR 28 AND INSTALLED ACCORDING TO THE MMCD STANDARD DRAWING NUMBER S8. THE CONNECTIONS MUST BE INSTALLED BETWEEN THE MAIN AND THE PROPERTY LINE AT A MINIMUM GRADE OF 2.0%. ALL SERVICE CONNECTIONS MUST ENTER THE MAIN ABOVE THE SPRINGLINE, AND WYE FITTINGS MUST BE USED TO CONNECT THEM TO MAINS. FOR DESIGN PURPOSES, THE DEPTH OF THE CONNECTIONS FROM THE REAR OF THE HOUSE TO THE SEWER MAIN MUST BE NO GREATER THAN 600mm BELOW THE M.B.E. OR EXISTING BASEMENT OR CRAWL SPACE AND SLOPES UP AT 2% GRADE. HOWEVER, THE DEPTH CAN BE DIFFERENT IF DIRECTED BY THE ENGINEER. FINALLY, THE SERVICE CONNECTION AT THE PROPERTY LINE MUST BE ABOVE THE HYDRAULIC GRADE LINE OF THE MINOR FLOW.

7) ALL SEWER SERVICE CONNECTIONS THAT ENTER MANHOLES MUST HAVE AN INVERT ELEVATION AT THE CROWN ELEVATION OF THE DOWNSTREAM SEWER OUTLET.

8) AS PER MMCD STANDARD DRAWING NO. S9, STORM SERVICE INSPECTION CHAMBERS MUST BE INSTALLED FOR STORM SERVICES RANGING FROM 100mm TO 200mm. FOR STORM SERVICES RANGING FROM 250mm TO 375mm, INSTALLATION OF STORM SERVICE INSPECTION CHAMBERS MUST BE DONE IN ACCORDANCE WITH MMD STANDARD DRAWING NO. S10.

9) STORM INSPECTION CHAMBER LIDS TO BE GREEN IN COLOR.

10) STORM SERVICE CONNECTIONS TO BE MARKED WITH A 50mm x 100mm POST PAINTED GREEN. THE BELL END AND CAP AT THE TERMINATION IS ALSO TO BE PAINTED GREEN TO SUIT.

11) ALL WYES SHALL BE MANUFACTURED.

12) PIPE BEDDING TO CONFORM TO MMCD STANDARDS.

13) THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT THE FINISHED RIM ELEVATION OF THE STORM SEWER MANHOLES MATCHES THE FINISHED ROAD GRADES AND ELEVATIONS.

14) THE CONTRACTOR IS REQUIRED TO VERIFY EXISTING INVERTS BEFORE STARTING CONSTRUCTION.

15) STORM SERVICE CONNECTIONS SHALL BE INSTALLED BY THE CONTRACTOR FROM THE MAIN TO THE PROPERTY LINE INCLUDING THE INSPECTION CHAMBER AT THE PROPERTY LINE UNLESS NOTED OTHERWISE.

16) TYPE 1 OR TYPE 2 LAWN BASINS SHALL BE INSTALLED AS PER MMCD STANDARD DRAWING NO. S12. TYPE 1 LAWN BASIN LEADS SHALL BE 100mm DIAMETER PVC PIPE WITH A MINIMUM SDR 28 SPECIFICATION UNLESS NOTED OTHERWISE.

17) THE CONTRACTOR SHALL CONTACT THE SUNSHINE COAST REGIONAL DISTRICT (SCRD) AND/OR THE MINISTRY OF TRANSPORTATION & INFRASTRUCTURE (MOTI) PRIOR TO THE COMMENCEMENT OF TIE-IN CONNECTION PROCEDURES. TIE-INS AND CONNECTIONS SHALL BE COORDINATED WITH THE SCRD AND/OR MOTI. TIE-INS AND CONNECTIONS TO THE EXISTING STORM SEWER SHALL BE PERFORMED BY THE SCRD AND/OR THE MOTI AT THE DEVELOPER'S EXPENSE UNLESS NOTED OTHERWISE. THE CONTRACTOR SHALL EXPOSE THE TIE-IN LOCATIONS FOR THE DISTRICT CREWS. THE CONTRACTOR SHALL PROVIDE ALL MATERIALS REQUIRED TO COMPLETE THE TIE-INS.

18) THE CONTRACTOR IS TO PROVIDE CCTV CAMERA INSPECTIONS OF ALL STORM SEWERS UNDER 900mm DIAMETER, INCLUDING INSPECTION HARD COPIES AND DIGITAL FORMAT IN A FORMAT SATISFACTORY TO THE ENGINEER. ALL SEWERS ARE TO BE FLUSHED PRIOR TO CAMERA INSPECTION. INSPECTION TO BE ARRANGED AND PAID FOR BY THE CONTRACTOR.

19) WHERE SEWER CROSSES A WATERMAIN AND CLEARANCE IS LESS THAN 0.5m, THE UPPER PIPE SHALL BE ENCASED AS PER MMCD STD. DWG. G6.

WATERMAIN NOTES:

1) VALVES AND HYDRANTS IN THE CURRENT SYSTEM ARE RESTRICTED FROM OPERATION WITHOUT CONSENT FROM THE ENGINEER AND WATER UTILITY DEPARTMENT.

2) THE DEVELOPER WILL BEAR THE COST OF CONNECTING TO THE EXISTING WATER MAINS, WHICH THE SUNSHINE COAST REGIONAL DISTRICT (SCRD) WILL FACILITATE. PRIOR TO THE CONNECTION, THE CONTRACTOR MUST NOTIFY SCRD AND THE ENGINEER 72 HOURS IN ADVANCE.

3) ALL WATERMAINS SHALL BE DUCTILE IRON PIPE (CLASS 50 OR PRESSURE CLASS 350) AWWA C151 (CEMENT MORTAR LINED TO AWWA C104) OR POLYVINYL-CHLORIDE (PVC) PIPE SDR18 AWWA C900 FOR PIPES 100mm DIAMETER TO 300mm DIAMETER (CLASS 150 OR BETTER) OR HIGH DENSITY POLYETHYLENE PIPE CONFORMING TO DUCTILE IRON PIPE SIZE (D.I.P.S.) DR11 (200psi) PE4710 PRESSURE AWWA C096 AND CERTIFIED BY THE CANADIAN STANDARDS ASSOCIATION - CSA B137.1

4) TYTON JOINTS TO AWWA C111 AND ASTM D313.9 & GASKET TO ASTM F477

5) TESTING OF THE WATERMAIN TO BE COMPLETED BY THE CONTRACTOR AS NOTED IN THE CONSTRUCTION SPECIFICATIONS. ENGINEER & REGULATORY AUTHORITY MUST BE NOTIFIED 48 HOURS IN ADVANCE OF ANY TESTING.

6) ALL WORKS MUST ADHERE TO THE MMCD, MUNICIPAL REQUIREMENTS, CONTRACT DOCUMENTS AND THE BCBC WITHIN THE PROPERTY BOUNDARIES. IN CASE OF ANY DISCREPANCIES, THE SCRD STANDARDS AND SPECIFICATIONS WILL BE GIVEN PRIORITY.

7) SERVICE CONNECTIONS TO PROPERTY LINE TO BE TYPE K ANNEALED COPPER TO ASTM B88M UP TO 25mmØ AND SIZED AS SPECIFIED. CONTRACTOR TO ENSURE THE CONNECTION IS INSTALLED IN ACCORDANCE WITH THE DRAWINGS AND PROVIDE SCRD CREWS WITH FINAL GRADES.

8) ALL FITTINGS TO BE DUCTILE IRON TO AWWA C110 OR C153, CEMENT MORTAR LINED TO AWWA C104, TYTON JOINTS TO AWWA C111, WITH CLOSED LUGS.

9) SERVICE CONNECTIONS TO BE MARKED WITH A 40mm x 90mm POST PAINTED BLUE AT TERMINATION. SERVICES TO BE TERMINATED 1m BEYOND THE PROPERTY LINE, UNLESS OTHERWISE NOTED.

10) PRIOR TO ACCEPTANCE AND PRESSURIZING OF MAINS, THE CONTRACTOR MUST PLACE A 20mm PLYWOOD SHEET MEASURING 0.3m SQUARE OVER THE PUMPER NOZZLE OF THE HYDRANT TO INDICATE THE NON-OPERATIONAL HYDRANT DURING CONSTRUCTION OR ANY TIME BEFORE ACCEPTANCE.

11) WATERMAIN TO BE CONSTRUCTED A MINIMUM OF 0.5m ABOVE STORM OR SANITARY SEWERS AND MAINTAIN 3.0m HORIZONTAL CLEARANCE. IN AREAS WHERE LESS THAN 0.5m VERTICAL OR 3.0m HORIZONTAL CLEARANCE CAN NOT BE MAINTAINED, ALL JOINTS TO BE HEAT SHRINK WRAPPED OR TAPED AS PER MINISTRY OF HEALTH STANDARDS; ANSI/AWWA C214 (FACTORY APPLIED), ANSI/AWWA C209 (FIELD APPLIED) ANSI/AWWA C217-90 PETROLEUM TAPE) ALL TO MINSTRY OF HEALTH STANDARDS. WATERMAIN CROSSINGS OF STORM OR SANITARY SEWER TO BE MADE AT MIDPOINT OF PIPE.

12) WHERE SEWER MAIN CROSSES WATERMAIN AND CLEARANCE IS LESS THAN 0.5m, THE UPPER PIPE SHALL BE CONCRETE ENCASED AS PER MMCD STD. DWG. G6.

13) PIPE BEDDING TO CONFORM WITH MMCD STANDARDS. SEE MMCD STD. DWG. G4 AND BE COMPACTED TO 95% MODIFIED PROCTOR DENSITY PRIOR TO BACKFILLING THE TRENCH.

14) ACCORDING TO REGULATORY AUTHORITY REQUIREMENTS, MMCD STANDARDS, AND CONTRACT DOCUMENTS, THE CONTRACTOR IS RESPONSIBLE FOR COMPLETING THE EXCAVATION AND PAVEMENT RESTORATION. THE CONTRACTOR MUST ALSO PROVIDE PRIOR NOTICE BEFORE COMPLETING THE WORK.

15) INSTALLATION, TESTING AND CHLORINATING TO BE PERFORMED IN ACCORDANCE WITH SCRD AND MMCD CONSTRUCTION SPECIFICATIONS AND AWWA C600 AND C651.

16) WATERMAINSHALL BE INSTALLED WITH 1.2m MINIMUM COVER UNDER ROADWAYS AND 1.0m ELSEWHERE.

17) WATERMAIN SHALL BE INSTALLED TO SUIT EXISTING GROUND CONDITIONS. HDPE AND PVC WATERMAINS ARE TO BE LINED WITH TRACER WIRE.

18) THRUST BLOCKS AS PER SCRD STD. DWG. W9.

19) SERVICE CONNECTIONS AS PER SCRD STD. DWG. W-1.

20) THE COVERS OF INSPECTION CHAMBERS, VALVE RISERS, AND METER CHAMBERS SITUATED IN DRIVEWAYS MUST BE SUITABLE FOR TRAVELLED LOADING.

21) ONCE THE ROUGH GRADING WORK IS COMPLETE, THE ENGINEER WILL REVIEW AND VERIFY THE LOCATION OF SERVICE CONNECTIONS. APPROVAL FROM THE SCRD INSPECTOR WILL ALSO BE REQUIRED.

22) DEFLECT PIPE JOINTS TO A MAXIMUM ½ OF THE ALLOWABLE MANUFACTURERS RECOMMENDATIONS.

23) THE MINIMUM GRADE OF THE PROPOSED WATERMAIN SHALL BE 0.1%. THE MAXIMUM GRADE SHALL BE 10.0% UNLESS PROVISIONS ARE MADE TO ANCHOR THE PIPE TO THE BOTTOM OF THE TRENCH WITH CONCRETE POURED IN PLACE.

24) ASSURANCE OF WATERMAIN PROTECTION:

FOR PARALLEL LINES: TO ENSURE THE SAFETY OF THE WATERMAIN, IT SHOULD BE LAID AT A MINIMUM HORIZONTAL DISTANCE OF 3.0m FROM ANY SANITARY OR STORM SEWER. IF THIS IS NOT POSSIBLE, THE WATERMAIN SHOULD BE LAID AT A VERTICAL DISTANCE OF AT LEAST 0.45m ABOVE THE SEWER AND FAR ENOUGH AWAY TO ALLOW REPAIRS WITHOUT DISTURBING THE WATERMAIN. IF HORIZONTAL SEPARATION IS NOT POSSIBLE, THE SEWER SHOULD HAVE THE SAME SERVICE CAPABILITY AS THE WATERMAIN WITH PRESSURE CLASS JOINTS DESIGNED TO REMAIN WATER-TIGHT EVEN WHEN THE GROUNDWATER TABLE RISES ABOVE THE SEWER. OTHER PRECAUTIONS, SUCH AS USING WATERMAINS WITH IMPROVED JOINTS AND HIGHER STRENGTH, MAY BE NECESSARY.

FOR CROSSINGS: THE WATERMAIN SHOULD BE LAID OVER THE SEWER WITH THE MIDDLE OF PIPE LENGTHS LOCATED AT CROSSING POINTS TO MAXIMIZE THE SEPARATION BETWEEN JOINTS. PRECAUTIONS SHOULD BE TAKEN TO IMPROVE WATER-TIGHTNESS OF SEWER JOINTS AND TO PROVIDE STRUCTURAL IMPROVEMENTS SUCH AS HIGHER STRENGTH WATERMAINS AND/OR SEWERS. SUITABLE MEASURES LIKE SLEEVING OR PIPE BRIDGING SHOULD BE CONSIDERED. ALL JOINTS WITHIN 3 METERS OF THE CROSSING SHOULD BE WRAPPED WITH HEAT SHRINK OR PACKED WITH INERT PETROLEUM COMPOUND AND WRAPPED IN TAPE IN ACCORDANCE WITH ANSI/AWWA STANDARDS C209 ANC217-90.

NOT FOR CONSTRUCTION

No.	DATE	REVISION	BY
1	2024-06-21	ISSUED FOR REZONING	DC

LANDEV Consulting Inc.
Engineering & Development Services
WWW.LANDEVCONSULTING.CA
EMAIL: INFO@LANDEVCONSULTING.CA **PH:** 604-989-7300

DRAWING DESCRIPTION
LOT D, CHASTER ROAD, GIBSONS, BC
PROPOSED 16 LOT SUBDIVISION
GENERAL CONSTRUCTION NOTES

CLIENT
AB COAST PROJECTS LTD.

PROJECT No.	2232	DATE	2024-06-21
SCALE	-	DESIGN BY	SB
		CHECKED BY	DC
		SURVEYED BY	P.M.G.

DWG. NO.
N-1
SHEET. NO.
10 OF 10
REV. 1

PLOT DATE: June 21, 2024 - C:\Users\DC\Landev Consulting Dropbox\LANDEV\PROJECTS\2200\2232 - Lot D Chaster\CAD\Final\N-1.dwg

EGBC PERMIT # 1003416

ISSUED FOR REZONING

Attachment D

TECHNICAL MEMORANDUM

TO: **Adi Bunim,** AB Coast Projects
FROM: **Jan O. Voss, P.Eng.** Creative Transportation Solutions Ltd (CTS)
DATE: 5 November 2021
RE: Lot D Chaster Road Vehicle Trip Generation Memo
CTS FILE NO: 7607-07

Creative Transportation Solutions Ltd. (CTS) is pleased to submit this **DRAFT** technical memorandum summarizing our traffic review regarding the proposed development at Lot D Chaster Road in Elphinstone, BC.

The primary objectives of this study were:

1. To forecast the volume of NEW traffic that the proposed development would generate;
2. To determine if a traffic impact study is technically warranted or not; and
3. To document the findings in a technical memorandum.

1.0 BACKGROUND

1.1 Study Site

The proposed study site is located directly south of the intersection Kind Road & Chaster Road in the unincorporated community of Elphinstone in the Sunshine Coast Regional District (SCRD), Sunshine Coast, BC. The site, Lot D in development plans, is bounded to the north by Chaster Road, and to the west, east and south by adjacent residential properties. The proposed development is anticipated to contain either 24 single family detached homes or 48 duplex homes. Both scenarios have been studied in this memo.

1.2 Existing Road Network & Access

The study site is located directly south of the intersection King Road and Chaster Road, approximately a 10 km (15 minutes) and 4 km (6 minute) drive from Langdale Ferry Terminal and the Town of Gibsons respectively. **FIGURE 1** illustrates the study area and adjacent road network. **FIGURE 2** illustrates a more detailed view of the adjacent road network.

FIGURE 1
STUDY AREA AND ROAD NETWORK

FIGURE 2
DETAILED STUDY AREA

2.0 TRAFFIC ANALYSIS

2.1 Traffic Generation

The proposed residential development will comprise either a total of 24 single-family detached units or 48 single-family duplex units. **TABLE 1** and summarize the projected site generated traffic with reference to the Institute of Transportation Engineers *Trip Generation Manual 11th Edition, Code 210 – Single-Family Detached Housing, and Code 215 – Single-Family Attached Housing*, respectively.

TABLE 1
SUMMARY OF SITE GENERATED TRAFFIC – SINGLE-FAMILY DETACHED HOUSING

Proposed Land Use	Trip Generation Variable	Scope of Development	Trip Rate Source	Peak Hour	Vehicle Trip Generation Rate	Directional Split		Peak Hour Volumes (vph)		
						% in	% out	in	out	total
Single-Family Detached Housing	Dwelling Units	24	ITE 11th Edition - Code 210	Weekday Morning	0.70	26%	74%	4	13	17
				Weekday Afternoon	0.94	63%	37%	14	9	23

TABLE 2
SUMMARY OF SITE GENERATED TRAFFIC – SINGLE-FAMILY ATTACHED HOUSING

Proposed Land Use	Trip Generation Variable	Scope of Development	Trip Rate Source	Peak Hour	Vehicle Trip Generation Rate	Directional Split		Peak Hour Volumes (vph)		
						% in	% out	in	out	total
Single-Family Attached Housing	Dwelling Units	48	ITE 11th Edition - Code 215	Weekday Morning	0.48	31%	69%	7	17	24
				Weekday Afternoon	0.57	57%	43%	16	12	28

From **TABLE 1**, using the Single-Family Detached Housing trip generation rates, it is forecasted to generate a total of 17 vehicle trips (4 inbound and 13 outbound) during the weekday morning peak hour and 23 vehicle trips (14 inbound and 9 outbound) during the weekday afternoon peak hour. This is the equivalent of approximately one vehicle trip every 3.5 minutes during the weekday morning peak hour and one vehicle trip every 2.6 minutes during the weekday afternoon peak hour.

From **TABLE 2**, using the Single-Family Attached Housing trip generation rates, it is forecasted to generate a total of 24 vehicle trips (7 inbound and 17 outbound) during the weekday morning peak hour and 28 vehicle trips (16 inbound and 12 outbound) during the weekday afternoon peak hour. This is the equivalent of approximately one vehicle trip every 2.5 minutes during the weekday morning peak hour and one vehicle trip every 2.1 minutes during the weekday afternoon peak hour.

For reference, the Ministry of Transportation and Infrastructure threshold for undertaking traffic impact assessments is site generation in excess of 100 vehicle trips in any hour. Therefore, the development as currently proposed does not generate enough traffic to warrant a formal traffic impact study.

3.0 KEY CONCLUSIONS

1. The proposed study site is located directly south of the intersection Kind Road and Chaster Road in the unincorporated community of Elphinstone in the Sunshine Coast Regional District (SCRD), Sunshine Coast, BC. The site, Lot D in development plans, is bounded to the north by Chaster Road, and to the west, east and south by adjacent residential properties.

2. Depending on the type of housing units built, the proposed residential development is forecasted to generate the following trips:

    - Single-Family Detached Housing: 17 vehicle trips (4 inbound and 13 outbound) during the weekday morning peak hour and 23 vehicle trips (14 inbound and 9 outbound) during the weekday afternoon peak hour. This is the equivalent of approximately one vehicle trip every 3.5 minutes during the weekday morning peak hour and one vehicle trip every 2.6 minutes during the weekday afternoon peak hour.
    - Single-Family Attached Housing: 24 vehicle trips (7 inbound and 17 outbound) during the weekday morning peak hour and 28 vehicle trips (16 inbound and 12 outbound) during the weekday afternoon peak hour. This is the equivalent of approximately one vehicle trip every 2.5 minutes during the weekday morning peak hour and one vehicle trip every 2.1 minutes during the weekday afternoon peak hour.

3. The Ministry of Transportation and Infrastructure threshold for undertaking traffic impact assessments is site generation in excess of 100 vehicle trips in any hour. Therefore, the development as currently proposed does not generate enough traffic to warrant a formal traffic impact study.

We would like to take this opportunity to thank you for this unique project and we look forward to working with you again in the future. Please call the undersigned should you have any questions or comments.

Yours truly,

CREATIVE TRANSPORTATION SOLUTIONS LTD.

Mr. Jan O. Voss, M.Sc., P.Eng. PTOE
President

jvoss@cts-bc.com
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April 24, 2024

Project No.: 21-542-SC
AB Coast Projects Ltd
642 E, 26Th Avenue
Vancouver, BC, V5V 2H7

e: abvancouver@gmail.com t: 604.551-3507

Subject: Preliminary Geotechnical Assessment Report – Proposed Residential Development
Proposed 8 Acre – 16 Lot Subdivision Development
Lot D, Chaster Road, Gibsons, British Columbia (PID: 015-955-371)

1.0 INTRODUCTION

Arya Engineering Inc. (Arya) presents the following report providing the results of a geotechnical engineering assessment for the proposed 16 Lot subdivision at Lot D, Chaster Road, Gibsons, British Columbia (PID: 015-955-371). A plan view of the site can be seen in Figure 1 below, overlain atop of base imagery accessed via the Sunshine Coast Regional District (SCRD) web-maps property viewer application.

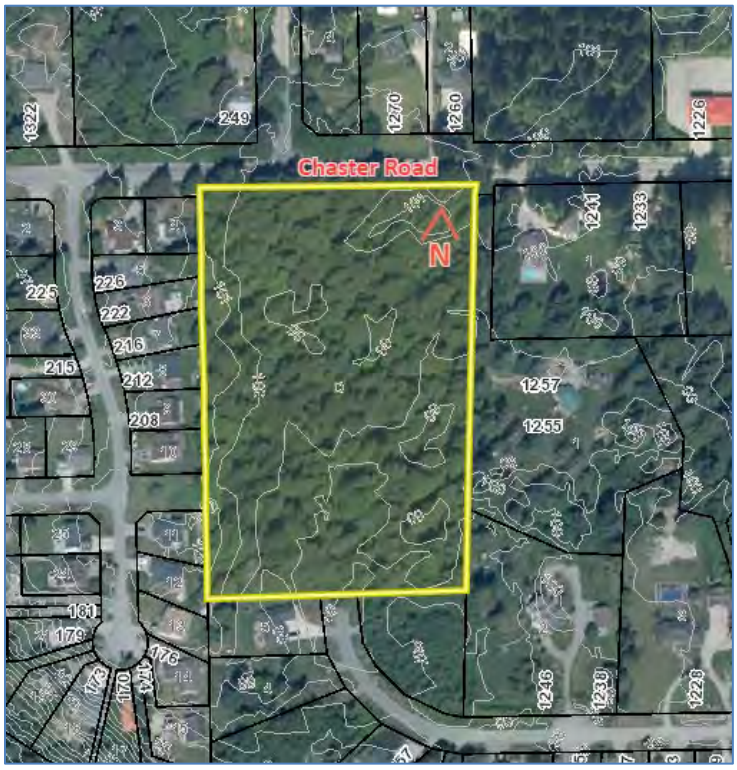


Figure 1: Proposed Lot D Subdivision Area (SCRD Map Viewer)

This report provides preliminary geotechnical engineering recommendations with respect to foundation design, continued site and subgrade preparation, seismic classification, groundwater and drainage recommendations, preliminary road and pavement structure design, and other associated construction considerations.

2.0 BACKGROUND INFORMATION / SCOPE OF WORK

Based on our communications with Mr. Adi Bunim of AB Coast Projects Ltd. (the Client), it is our understanding that the proposed subdivision development will consist of the construction of residential structures of variable sizes with access road structures and associated parking as shown in Figure 2 below. Detailed project plans including architectural plans and structural design drawings were not available for review at the time of drafting of this preliminary assessment report. A preliminary site plan provided by LANDEV Consulting Inc. and dated March 3, 2024, was provided to Arya by the Client. The site plan has been appended herein for reference.

The scope of work for this assessment was presented to the Client in a proposal dated October 20, 2021, included the following tasks:

- A geotechnical site reconnaissance and subsurface exploration program through manual auger drilling at the site.
- A desktop review of relevant background information including available topographical information for the site and surrounding area, related published subsurface information, and satellite imagery.
- Preparation of a preliminary geotechnical assessment report summarizing Arya's findings with relevant recommendations for foundation design, road pavement, site and subgrade preparation, seismic classification, and other associated geotechnical requirements for the design of the proposed structures.

The scope of this assessment did not include items related to other disciplines, and the site review did not include any evaluation of environmental hazards or contamination that may be present on or near the site. No testing or evaluation for the presence of corrosive materials or corrosive conditions was completed.

Written approval to proceed was received from the Client via an email on October 22, 2021. The geotechnical site reconnaissance was conducted on October 29, 2021.

3.0 SITE DESCRIPTION

The subject lot is approximately rectangular in shape, encompassing a total area of approximately 3.24 ha (8 Acre). Based on the LiDAR topographic data obtained from the Sunshine Coast Regional District (SCRD) public web-maps for the area, the site layout is oriented in a north – south direction. The site and surrounding area consist of a relatively flat to gently sloping terrain. To the east, west and south, the property is bordered by developed residential parcels, and the north is bordered by Chaster Road.

Vegetation across the site noted during the site reconnaissance consisted of grass, ferns, and salal, with some second growth coniferous and deciduous trees. No vegetative indications of geotechnical issues were noted based on the existing site vegetation.

4.0 SITE CONDITIONS

Arya representatives visited the site on October 29, 2021, to carry out a geotechnical site reconnaissance and to review the general site conditions of geotechnical relevance. No existing structures occupied the site during the site reconnaissance.

Subsurface conditions across the property, as presented below, were assessed through manual auger drilling and through a desktop study of published geologic information for the area.

4.1 Surficial Geology

Published surficial geologic maps for the Sunshine Coast area (McCammon, 1977) describe the site geology as comprising of marine and glacio-marine deposits comprising of varied gravelly, sandy, stoney, clay, and clay veneer (normally over Till). This description is consistent with Arya's site observations and findings at the time of the geotechnical site reconnaissance, as discussed below.

4.2 Subsurface Conditions

Subsurface conditions across the subject site were assessed through manual auger drilling of two exploratory auger holes at the site, probing and visual observations of local exposures at the time of the site reconnaissance. Arya's previous site work and project experience in the vicinity of the site was also considered.

The subsurface conditions encountered during Arya's site reconnaissance and during previous project work in the area were consistent with the findings of McCammon. Surficial soils across the parcel were observed to consist of up to a 0.6 m thick layer of organic laden, granular podzol, overlying compact to dense, grey sandy silt with some gravel. The drill holes were advanced to refusal at an approximate depth of 1.0 m below grade in compact to dense soils.

The subsurface exploration was supplemented with a desktop review of stratigraphy encountered in historic groundwater wells in the vicinity of the subject site. Based on a review of published well-log data, accessed through the British Columbia Groundwater Wells and Aquifers Registry Search, two wells (Well Tag #'s 15037 and 1931) are located within 270 m of the site, to the west. The wells generally corroborate the subsurface conditions encountered by Arya, with till soils generally noted with 1 m to 3.5 m below grade.

4.3 Bedrock

Bedrock was not observed within the vicinity of the proposed Lot and is not expected at depths such that it will influence the proposed works. If encountered during subsequent phases of development, our office should be given the opportunity to review and provide site specific recommendations pertaining to bedrock site preparation.

4.4 Groundwater Conditions

The presence of ponded surface water was noted across the site during the geotechnical site reconnaissance on local flat to gently sloping portions of the site. Groundwater was also encountered in the drill holes at an approximate depth ranging from 0.3 m to 0.6 m below grade. Groundwater conditions will be further assessed during the subsequent phases of development which should include a comprehensive subsurface exploration program through machine test pitting or borehole drilling.

Based on the extent of surface water and shallow groundwater encountered, a temporary groundwater control strategy may be required to facilitate constructability of the proposed works. Temporary groundwater control during construction may be achievable through the implementation of trench drains to divert water from the building areas, or through implementation of a local sump(s) and pumping strategy.

5.0 SEISMIC CONSIDERATIONS

The proposed structures may be designed under the seismic provisions of the British Columbia Building Code 2024 (BCBC 2024) and National Building Code of Canada (NBCC 2020). Horizontal Peak Ground Acceleration (PGA) and 5% damped spectral response acceleration values Sa(T) for four different periods (i.e., 0.2 s, 0.5 s, 1.0 s and 2.0 s) are outlined in Table 1 for the reference site (coordinates 49.390° N, -123.540° W) for a seismic event with a 2% probability of exceedance within 50 years (1 in 2,475-year event).

The seismic provisions of NBCC (2020) incorporate site effects by categorizing wide variety of possible soil conditions into six site classes (Class A to Class F) according to the average properties of the top 30 m of the soil profile. The factors Fa and Fv given in the BCBC (2024) reflect the effect of possible soil amplification (or de amplification) and soil-structure interaction resonance into the estimation for the seismic design forces for buildings having no unusual characteristics.

Based on the expected soil conditions at the proposed development site, a Site Designation "X_D" should be used for seismic site response in accordance with Table 4.1.8.4.-B of BCBC (2024). The seismic design parameters for the proposed development site are included in Table 1 as reference.

TABLE 1: SEISMIC DESIGN PARAMETERS (NBCC 2020)

$S_a(T)$ – Design Spectral Acceleration (g)*				Horizontal Peak Ground Acceleration (g)	Values of F	
Sa (0.2)	Sa (0.5)	Sa (1.0)	Sa (2.0)	PGA	F_a	F_v
1.21	1.21	0.865	0.534	0.521	1.12	1.89

* g = 9.81 m/s^2

6.0 RECOMMENDATIONS

Based on the planar to moderately sloping gradients encountered across the site, in addition to the inferred compact to dense till materials expected to underlay the site at relatively shallow depths, based on Arya's subsurface exploration and desktop study, the proposed subdivision is not considered to be susceptible to geotechnical hazards, No geohazard avoidance or mitigation strategies are warranted at this time.

It is important to note that the recommendations presented herein are preliminary and are subject to change pending a full-scale geotechnical assessment of the site, including a subsurface exploration program through machine test pitting and/or borehole drilling, such that we can confirm and augment the recommendations presented herein.

6.1 Site Preparation

Construction surfaces and footing subgrades should be flat, all topsoil and organics, fill/disturbed soils, and loose/soft soils, and any other deleterious materials should be removed below the proposed building foundations and grade-supported slabs to expose the natural, undisturbed compact to dense soils. Any local loose areas identified during subgrade preparation should be removed and replaced with lean concrete or suitable engineered fill, as approved by Arya. Where needed, engineered fill should be placed on competent subgrade to raise grades.

6.2 Temporary Excavations

Worksafe BC guidelines for stable excavations should be followed for excavations more than 1.2 m. WorkSafe BC guidelines for excavations should be adhered to in accordance with Section 20 of the Occupational Health and Safety (OHS) Regulation. For excavations in granular material less than 1.2 m, a 1H:1V (horizontal to vertical) slope angle should be maintained to promote excavation stability during construction.

Per WorkSafe BC guidelines, a qualified professional must be retained to conduct a WorkSafe BC Excavation Review in case excavation of more than 1.2 m is required for the project. This document should

specify instructions to promote excavation stability during construction and may include such items as sloping and shoring requirements.

Temporary shoring design is generally the responsibility of the General Contractor. Arya is available to provide geotechnical letters of assurance and is available to provide temporary shoring design recommendations and WorkSafe BC Excavation Reviews upon request, or as needed to satisfy WorkSafe BC criteria. Trenching, utility installation, and backfilling should be carried out in accordance with local municipal specifications.

6.3 Engineered Fill and Backfill

Engineered fill is defined as a material designed to be placed directly beneath any load bearing areas. The subgrade for the engineered fill must be approved by Arya prior to placement of engineered fill. All engineered fill material should be free of any organics and other deleterious materials and should consist of non-expansive/non-sensitive soil. Granular engineered fill below grade-supported slabs should consist of non-organic, clean, well-graded, 75 mm minus sand and gravel with less than 5% silt particles (finer than 0.075 mm). Alternatively, 19 mm clear crushed gravel could also be used as engineered fill under foundations, grade supported slabs and behind foundation walls.

Engineered fill should be tested and approved by Arya prior to use in any load bearing areas. The material should be compacted within 2% of the optimum moisture content (OMC) and a minimum of 100% standard proctor maximum dry density (SPMDD).

Engineered fill should extend beyond the building a distance equal to or greater than the depth of the engineered fill below the structural elements. Granular engineered fill should be placed sequentially in lifts exhibiting a maximum thickness of 300 mm.

Pipe bedding and surroundings should be implemented as specified in local municipal specifications. Trenches backfill soils under buildings should be compacted to within 2% of the material's OMC and a minimum of 100%, SPMDD. Laboratory standard proctor analysis (ASTM 698) and field density testing should be performed to confirm that the required compaction standards are achieved.

6.4 Foundation Design

6.4.1 General

In accordance with the National Building Code of Canada, the foundation recommendations included in this report are based on limit state design (LSD) methodology. The geotechnical resistance factor for shallow foundations was considered to be 0.5.

6.4.2 Conventional Strip and Spread Footings

Shallow foundations (i.e., strip and spread footings) can be considered for the proposed development site provided that recommendations in this report are followed.

Spread and strip footings should be placed a minimum 450 mm below the final grade to satisfy frost protection requirements. Strip and spread footings should have a minimum width of 450 mm and 600 mm, respectively. Shallow spread and/or strip footings supported on a compact, natural, undisturbed granular subgrade should be considered to have factored ultimate bearing capacity of 150 kPa. Design loads and tolerable total and differential settlements for the proposed building were not available at the time of preparation of this report. Based on our past experience with similar projects, it is expected that a maximum allowable bearing pressure of 100 kPa would be appropriate for serviceability limit (SLS) state design of the above-noted strip and spread footings. This would be based on an estimated post-construction total settlement of less than 25 mm with a differential settlement of less than 25 mm over a horizontal distance of approximately 10 m.

All prepared foundation and engineered fill subgrades should be reviewed by an Arya representative prior to engineered fill placement or footing construction to verify suitability of the exposed soil/rock conditions, and to confirm that the recommendations provided in this report are valid.

Footings should be stepped at no steeper than 2H:1V where adjacent footings should be placed at different elevations. Subgrade slopes between footings at different elevations should be done to expose undisturbed, natural soils. If this is not achievable, in the case that a maximum 2H:1V slope is not achievable, the lower footing and foundation soils should be designed to carry the load of the higher footing. Where buried services lie below the building foundations, the footing edge should be below a 2H:1V line, projected up from the invert elevation of the utility, to reduce the risk of undermining.

6.4.3 Grade-Supported Slab

The proposed grade-supported slab should be underlain with a minimum of 150 mm layer of free-draining 19 mm clear crushed gravel with less than 5% silt (particles finer than 0.075 mm) or an approved equivalent, compacted to a minimum of 100% of SPMDD. The gravel should be supported on natural, undisturbed subgrade or engineered fill placed on natural, undisturbed subgrade, approved by our office during construction.

A vapour barrier consisting of a minimum of 0.15 mm polyethylene sheeting, or approved equivalent, should be installed between the bedding and the underside of the floor slab. Consideration should be given to the effect of any vapour barrier on concrete slab curing. Sanitary and water lines beneath floor slab should be leak proofed.

6.4.4 Site Grading and Drainage

A perimeter drainage system should be installed to minimize the potential for water infiltration into the soil surrounding the shallow foundations and floor slabs. Drainage components should be installed in conformance with the recommendations provided by the project civil/stormwater management designer (professional undertaking responsibility for Item 4.2 on Schedule B).

Perimeter drainage should typically comprise a perforated rigid PVC pipe placed around the external sides of the buildings and below the base of the shallow foundations (underside footings, beyond a 1H:1V projection from the toe). The perimeter drainage should be designed to promote positive drainage. The perimeter drainage pipes should be provided with permanent cleanouts and should be surrounded by a minimum of 150 mm of drain rock. A layer of non-woven geotextile should be wrapped around the gravel drainage layer to act as a filter against piping of fines from the general backfill and surrounding natural soil. The perimeter drainage system should be designed to direct water by gravity flow to approved discharge locations.

The roof and surface runoff should be collected and directed to a storm sewer or permanent drain in solid wall pipes separate from the perimeter drainage.

Based on the extent of water encountered during manual auger drilling, a temporary groundwater management plan may be required to keep the subgrade dry and to control groundwater during construction. Our office is available to provide design recommendations for temporary groundwater management upon request and upon finalization of site plans.

6.5 PAVEMENT STRUCTURE

Based on the conducted preliminary site condition assessment, it is expected that compact to dense subgrade materials consisting of sandy silt and till-like soils, are posited at a depth ranging from between 0.6 to 1.0 m. The subgrade should be comprised of competent undisturbed soils (inferred till) approved by a professional geotechnical engineer. The final subgrade surface within the road should be graded in order to prevent ponding and to direct water away from the road footprint.

Pavement structures should conform to the Ministry of Transportation and Infrastructures (MOTI) 2020 Standard Specifications for Highway Construction, Volume 1 (SSHC, 2020), and the Low Volume and Subdivision Roadway designation outlined in the MOTI Pavement Structure Design Guidelines Technical Circular T-01/15, 2015 (2015 BC MOTI Technical Circular). Our office is available to provide site specific, detailed design recommendations for the pavement/road structures upon completion of a detailed subsurface exploration program.

7.0 CLOSURE

Recommendations presented herein are based on the geotechnical evaluation made during Arya's site reconnaissance. The findings in this report reflect Arya's best judgment based on the information that was available to Arya at the time of preparation of this report. If conditions other than those are noted during subsequent phases of the development, Arya should be given the opportunity to review and revise the recommendations included in this report, as necessary. It is recommended that our office be given the opportunity to conduct a full-scale geotechnical assessment of the site, including a subsurface exploration program through machine test pitting and/or borehole drilling, such that we can confirm and augment the preliminary recommendations presented herein.

This report has been prepared for the exclusive use of AB Coast Projects Ltd, their consultants, contractors and representatives, for the specific application of the developments described within this report. Any use of this report by third parties, or any reliance on or decisions made based on it are the responsibility of such third parties. Arya accepts no responsibility, if any, suffered by any third party because of decisions made or actions taken based on this report.

We appreciate the opportunity to be of service to you. If you have any questions regarding the contents of this report, please contact us at (604) 886 1515.

Sincerely,
Arya Engineering Inc.

Ufuoma Oki, P.Geo, M.Eng., PMP
Project Engineer

Emir Hot, P.Eng.,
Geotechnical Project Engineer

Attachments: Site Plan, Photographs 1 - 4, Terms and Conditions

References:

Canadian Commission on Building and Fire Codes. Natural Research Council of Canada. 2020. National Building Code of Canada. Volume 1. ISBN 0-660-03633-5. NR24-28/2015E. NRCC 56190. National Research Council of Canada 2015. Ottawa. 2018.

Canadian Geotechnical Society. 2023. *Canadian Foundation Engineering Manual. 5th Edition*. Richmond: BiTech Publisher Ltd.

McCammon, J. W. 1977. *Surficial Geology and Sand and Gravel Deposits of Sunshine Coast, Powell River, and Campbell River Areas*. Ministry of Mines and Petroleum Resources. 1977. Bulletin 65.

Province of British Columbia. 2024. *British Columbia Building Code Order*. Ministerial Order No. BA 2023 10. Province of British Columbia. November 24, 2023.

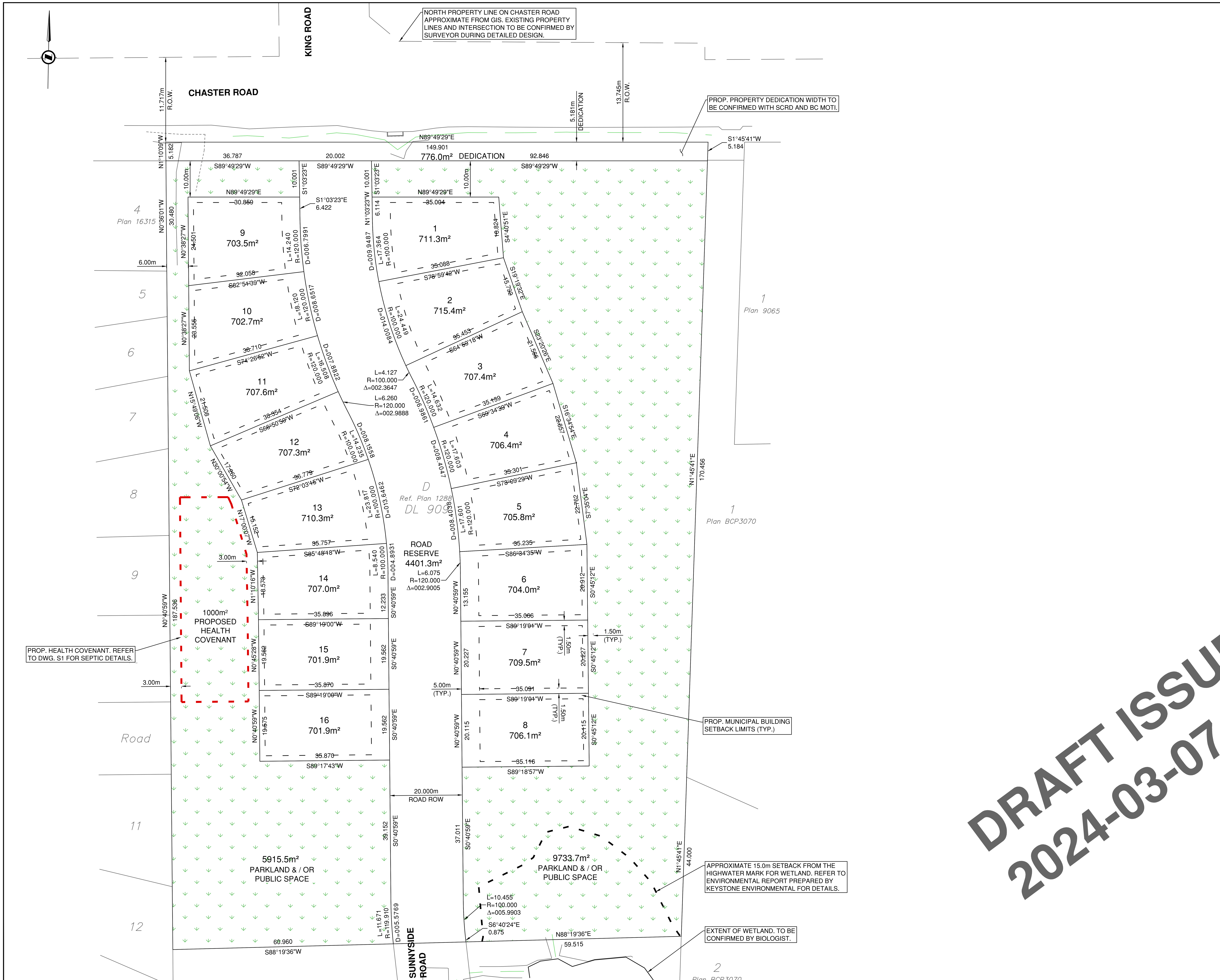
SCRD | P. Higgins | Sunshine Coast Regional District, Province of British Columbia, Esri Canada, HERE, Garmin, USGS, NGA, EPA, USDA, NPS, AAFC, NRCan | SCRD. "SCRD Maps | Property Viewer." Accessed March 11, 2024. https://maps.scrd.ca

LEGAL DESCRIPTION:

TOPOGRAPHIC PLAN OF LOT D REFERENCE PLAN 1288, DL 909

LOT AREA CALCULATIONS:

EXISTING PROPERTY AREA	= 3.214Ha
CHASTER ROAD DEDICATION AREA	= 0.078Ha (TO BE CONFIRMED)
PROPOSED PROPERTY AREA	= 3.136Ha
TOTAL PROPOSED LOT AREAS	= 1.567Ha
50% PARKLAND	= 1.56Ha
PROPOSED ROAD RESERVE	= 0.44 Ha



NOT FOR CONSTRUCTION

No.	DATE	REVISION	BY
1	23-08-28	REVISED PER SCRD COMMENTS	SB
2	24-02-27	REVISED PER SCRD COMMENTS	DC

LANDEV Consulting Inc. Engineering & Development Services
WWW.LANDEVCONSULTING.CA
EMAIL: INFO@LANDEVCONSULTING.CA PH: 604-989-7300

DRAWING DESCRIPTION
LOT D, CHASTER ROAD, GIBSONS, BC
PROPOSED 16 LOT SUBDIVISION
LOT LAYOUT PLAN

CLIENT
AB COAST PROJECTS LTD.

PROJECT No. 2232	DATE 2023-08-28	DWG. NO. LL
SCALE 1:500	DESIGN BY SB	
	CHECKED BY DC	SHEET. NO. 2 OF 2
	SURVEYED BY P.M.G.	REV. 2

PLOT DATE: March 7, 2024 - C:\Users\dean\Landev Consulting Dropbox\LANDEV\PROJECTS\2200\2232 - Lot D Chaster\CAD\Final\2232 - Lot D Chaster - Lot Layout.dwg

Photograph 1: Manually Drilled Auger Hole

Photograph 2: Relatively Flat Lot

Photograph 3: Surface Water Ponding

Photograph 4: Vegetated Lot

TERMS AND CONDITIONS OF ENGAGEMENT

1. **GENERAL:** Arya Engineering Inc. *(*ARYA*)* shall render the Services, as specified in the attached Scope of Services, to the Client for the Project in accordance with the following terms and conditions of engagement and related articles. ARYA may, at its discretion and at any stage, engage sub-consultants to perform any part or all of the Services.
2. **DEFINITIONS:**
    a. Agreement – is this Prime Agreement for professional Services.
    b. Consultant – shall mean professionals and other specialists other than ARYA or its officers, employees and agents engaged by the Client directly.
    c. Contractor – is the party contracting with the Client for the provision of labour, materials and equipment for the execution and quality control of the Work.
    d. Contract – is the agreement between the Client and the Contractor for the provision of labour, materials and equipment for the execution of the Work by the Contractor.
    e. Contract Documents – shall comprise all documents relating to the Project issued by or through ARYA, including the plans, drawing, specifications and schedules, and all variations and modifications thereto approved by ARYA.
    f. Field Services – shall mean applying such selective sampling and inspection procedures at the project site during construction as ARYA, and at ARYA's professional discretion, considers necessary to enable ARYA to ascertain whether the Contractor is carrying out the Work in general conformity with the design concept for the Project.
    g. Project– shall refer to the project described in the recital clauses to this Agreement.
    h. Services – shall mean ARYA's duties and responsibilities to the Client as set forth in the attached Scope of Services and Authorization to Proceed.
    i. Sub-Consultant – shall mean any registered professional engineers or other specialists engaged by ARYA in connection with the Project.
    j. Work – is the totality of all labour, materials and equipment used or incorporated into the Project by the Contractor pursuant to the Contract Documents.
3. **REPRESENTATIVES:** Each party shall designate a representative who is authorized to act on behalf of that party and receive notices under this Agreement.
4. **AUTHORIZATION TO PROCEED:** Verbal authorization by the Client, either in person or over the telephone, or by written instructions will serve as authorization for ARYA to proceed with the services called for in this services agreement and those delineated in related correspondence between ARYA and Client. This Agreement, including attachments incorporated herein by reference, represents the entire agreement between ARYA and Client. This Agreement may be altered only by written instrument signed by authorized representatives of both Client and ARYA.
5. **EXTENT OF AGREEMENT:** Work beyond the Scope of Services or redoing any part of the Project through no fault of ARYA, shall constitute extra Work and shall be paid for on a time-and-materials basis in addition to any other payment provided for in this Agreement. If, during the course of performance of this Agreement, conditions or circumstances are discovered which were not contemplated by ARYA at the commencement of this Agreement, ARYA shall notify the Client either verbally or in writing of the newly discovered conditions or circumstances, and the Client and ARYA shall renegotiate, in good faith, the terms and conditions of this Agreement.
6. **COMPENSATION**: Charges for the Services rendered will be made in accordance with ARYA's Schedule of Fees and Disbursements in effect from time the services are rendered. ARYA's Schedule of Fees and Disbursements are included in ARYA's budget estimate. All charges will be payable in Canadian Dollars. ARYA shall invoice the Client for the services performed under this Agreement and shall provide a summary of costs upon request. The Client shall pay such invoice upon receipt. Invoices not paid within thirty (30) days of the invoice date shall be subject to a late payment charge of 1.5 percent per month (18% per annum) from the date of billing until paid. The invoice amounts shall be presumed to be correct unless the Client notifies ARYA in writing within fourteen (14) days of receipt. Overdue accounts over ninety (90) days will be forwarded to a collections agency. The Client and ARYA expressly agree that ARYA's fee shall be payable by the Client even in the event that the Client does not, for any reason, proceed with the Project as described in the Contract Documents. The Client and ARYA further expressly agree that payment of the ARYA's fee by the Client pursuant to this Agreement shall be a condition precedent to the Client's use of the Contract Documents and models for the execution of the Work.
7. **PROBABLE COSTS:** ARYA does not guarantee the accuracy of probable costs for providing Engineering Services. Such probable costs represent only ARYA as a professional and are supplied only for the general guidance of the Client. The parties expressly acknowledge and agree that the cost of the Services and contract time estimates provided by ARYA to the Client under this Agreement are subject to change and are contingent upon factors over which ARYA has no control. ARYA does not guarantee the accuracy of such estimates.

TERMS AND CONDITIONS OF ENGAGEMENT

8. **STANDARD OF CARE:** ARYA shall perform its services in a manner consistent with the standard of care and skill ordinarily exercised by members of the profession practicing under similar conditions in the geographic vicinity and at the time the Services are performed. This Agreement neither makes nor intends a warranty or guarantee, either expressed or implied.
9. **INDEMNITY:** Client waives any claim against ARYA, its officers, employees and agents and agrees to defend, indemnify, protect and hold harmless ARYA and its officers, employees and agents from any and all claims, liabilities, damages or expenses, including but not limited to, delay of the project, reduction of property value, fear of or actual exposure to or release of toxic or hazardous substances, and any consequential damages of any nature, which may arise directly or indirectly, to any party, as a result of the services provided by ARYA under this Agreement, unless such injury or loss is caused by the sole negligence of ARYA.
10. **INSURANCE, LIMITATION OF LIABILITY:** The Client agrees to limit ARYA and its officers, employees, and agents liability due to professional negligence and to any liability arising out of or relating to this Agreement to fifty thousand dollars ($50,000) or the amount of ARYA's fee, whichever is less. This limit applies to all services on the project, whether provided under this or subsequent agreements, unless modified in writing, agreed to, and signed by authorized representatives of the parties. No claims may be brought against ARYA in contract or tort more than two (2) years after Services were completed or terminated under this engagement. If for any reason such insurance shall not be available or shall not apply to any claim made by the Client against ARYA in respect of the Services, then the liability of ARYA to the Client under this Agreement shall be absolutely limited to the amount of any professional liability available at the time such claims are made. In this case, any liability arising out of or relating to this Agreement will also be limited to fifty thousand dollars ($50,000), or the amount of ARYA's fee, whichever is less. Note: ARYA will not be responsible for water ingress related problems as ARYA's insurance policy contains an Absolute Water Ingress Exclusion. For special projects, higher liability limits are available from our underwriter for an additional fee. ARYA warrants it is protected by WorkSafe BC Insurance, General Liability Insurance, Professional Errors and Omissions Insurance, and Automobile Liability Insurance. Certificates for such policies of insurance shall be provided to the Client upon request.
11. **RESPONSIBILITY:** ARYA is not responsible for the completion or quality of work that is dependent upon or performed by the Client or third parties not under the direct control of ARYA, nor is ARYA responsible for their acts or omissions or for any damages resulting there from. ARYA shall not be responsible for the following:
    a. The failure of a Contractor, retained by the Client, to perform the Work required for the Project in accordance with the applicable Contract Documents;
    b. The design of or defects in equipment supplied or provided by the Client for incorporation into the Project;
    c. Any cross-contamination resulting from subsurface investigations;
    d. Any damage to subsurface structures and utilities which were identified and located by the Client;
    e. Any Project decisions made by the Client if the decisions were made without consultation of ARYA or contrary to or inconsistent with ARYA's recommendations;
    f. Any consequential loss, injury, or damages suffered by the Client, including but not limited to, loss of use, earnings, and business interruption; and,
    g. The unauthorized distribution of any document or report prepared by or on behalf of ARYA for the exclusive use of the Client.
12. **CLIENT'S RESPONSIBILITIES:**
    a. Make available to ARYA all relevant information or data pertinent to the project which is required by ARYA, and instruct ARYA fully in writing as to the Client's total requirements in connection with the Project. ARYA shall be entitled to rely upon the accuracy and completeness of such information and data furnished by or through the Client, including information and data originating with Consultants, whether such Consultants are engaged at the request of ARYA or otherwise. Where such information or data originates either with the Client or with Consultants, then ARYA shall not be responsible to the Client for the consequences of any error or omission contained therein or arising from ARYA's use of this data;
    b. When required by ARYA, to engage Consultants directly to perform services necessary to enable ARYA to carry out its duties and responsibilities. Such Consultants engaged by the Client shall be subject to the joint approval of the Client and ARYA;
    c. Authorize ARYA to act as the Client's for such purposes as are necessary to ARYA's rendering of its Services pursuant to this Agreement;
    d. Give prompt consideration to all sketches, drawing, specifications, tenders, proposals, contracts and other documents relating to the Project laid before the Client by ARYA, and whenever prompt action is necessary inform ARYA of the Client's decisions in such reasonable time so as not to delay the Services of ARYA, or to prevent ARYA from forwarding drawings or instructions to the Contractor or the Consultants or to Sub-Consultants in good time;
    e. Pay ARYA's fee and reimbursable expenses as provided for in this Agreement;

TERMS AND CONDITIONS OF ENGAGEMENT

f. Provide necessary advertising incidental to obtaining tenders, and provide or reimburse ARYA for obtaining necessary legal, accounting and insurance counseling services;
g. Arrange and make provision for ARYA's entry and ready access to property (public and private) as well as to the Project site, as necessary to enable ARYA to perform its Services;
h. Give prompt written notice to ARYA whenever the Client or the Client's representative becomes aware of any defects or deficiencies in the Work or in the Contract Documents; and,
i. Obtain required approvals, licences and permits from municipal, governmental or other authorities having jurisdiction over the Project so as not to delay ARYA in the performance of Services. The Client expressly undertakes not to enter into contracts in connection with the Project which describe duties and responsibilities of ARYA which are inconsistent with the duties and responsibilities of ARYA provided for in this Agreement without obtaining ARYA's prior written agreement thereto.

13. **EXCLUSIVE USE:** Services provided under this Agreement, including all reports, drawings, plans, models, specifications and other documents, information or recommendations prepared or issued by ARYA, are instruments of service for the execution of the Project. ARYA retains the property and copyright in these documents, whether the Project is executed or not. No other use of these documents is authorized under this Agreement without the prior written agreement and remuneration of ARYA.
14. **SAMPLES:** All non-consumed samples shall remain the property of the Client, and Client shall be responsible for and promptly pay for the removal and lawful disposal of samples, cuttings and hazardous materials, unless otherwise agreed to in writing. If appropriate, ARYA shall preserve samples obtained for the project for not longer than thirty (30) days after the issuance of any document that includes the data obtained from those samples.
15. **ENVIRONMENTAL**: ARYA's field investigation, laboratory testing and engineering recommendations will not address or evaluate pollution of air, soil and/or groundwater, unless otherwise specifically listed in the attached Scope of Services. ARYA will co-operate with the Client's environmental consultant during field work phase of the investigation is requested.
16. **FIELD SERVICES:** Where applicable, Field Services recommended for the Project are the minimum necessary, at the sole discretion of ARYA, to review whether the Work of a Contractor retained by the client is being carried out in general compliance with the intent of the Services and in compliance to information and recommendations presented in all reports, drawings, plans, models, specifications and other documents provided in the deliverables prepared by ARYA in fulfillment of the Scope of Services. It is understood and agreed by the Client that the performance of the Contract is not ARYA's responsibility, nor are Field Services rendered for the Contractor's benefit. The Contractor alone is responsible for the quality control of the Work. Any reduction from the level of services recommended will result in ARYA not providing qualified certifications for the Work. ARYA shall issue certifications only where Field Services have been performed by ARYA.
17. **TERMINATION:** This Agreement may be terminated by either party upon ten (10) days written notice to the other. Upon the receipt of such written notice from the Client to ARYA, ARYA shall perform no further Services other than those reasonably necessary. In the event of a termination, the Client shall pay for all charges for services performed and demobilization by ARYA, in addition to reasonable termination expenses incurred to the date of notice of Termination. The limitation of liability and indemnity obligations of this Agreement shall be binding notwithstanding any Termination of this Agreement.
18. **DISPUTE RESOLUTION:** If requested in writing by either the Client or ARYA, the Client and ARYA shall attempt to resolve any dispute between them arising out of or in connection with this Agreement by entering into structured, non-binding negotiations with the assistance of a mediator on a without prejudice basis. The mediator shall be appointed jointly by the parties. If a dispute cannot be settled within a period of thirty (30) calendar days with the mediator, the dispute shall be referred to and finally resolved by arbitration under the rules of British Columbia or by an arbitrator appointed by agreement of the parties or by reference to a Judge of the Supreme Court of British Columbia. No one shall be nominated to act as an arbitrator who is in any way financially interested in the conduct of the Project or in the business affairs of either the Client or ARYA. The award of the arbitrator shall be final and binding upon the parties.
19. **GOVERNING LAW:** This Agreement is governed by the law British Columbia, and any litigation shall be brought and tried in, the judicial jurisdiction of the ARYA office that entered this Agreement, as stated herein.
20. **NON-SOLICITATION:** The Client agrees they shall not recruit for employment or hire any ARYA employees who provide services pursuant to this Agreement during the term of this Agreement and for a period of one (1) year following its termination.

MDM Groundwater Consulting Ltd.
4255 Sunrise Road
Duncan, BC V9L 6G6
Tel: (236) 999-2254
info@mdmgroundwater.ca

June 6, 2024

Project No: BC240003

AB Coast Projects Ltd.
1800 – 1095 West Pender Street
Vancouver, BC
V6E 2M6

Attention: Mr. Adi Bunim

Reference: Hydrogeological Assessment – Proposed Residential Development
16 Lot Subdivision – Lot D Chaster Road, Gibsons, BC (PID 015-955-371)

Mr. Bunim,

1 INTRODUCTION

MDM Groundwater Consulting Ltd. ("MDM Groundwater") was retained by AB Coast Projects Ltd. to examine and characterize hydrogeological attributes of the above-referenced property (the "Site") for the purpose of identifying and assessing potential interactions of proposed residential Site development with the local groundwater regime.

All work undertaken by MDM Groundwater was completed in agreement with a Work Plan proposal delivered to AB Coast Projects Ltd. on February 23, 2024, and subsequent revisions agreed in consultation with AB Coast Projects Ltd. The primary objective of this Hydrogeological Assessment report is to provide reference information for citation (by others) in preparation of a "Wastewater Assessment" specified in Section 4 of the Sunshine Coast Regional District's (SCRD) Rezoning Pre-Application Outcome Letter (File PRE-00046) dated February 9, 2024. As additional details relating to sewerage management are developed by the project consultant team, MDM Groundwater will prepare a stand-alone report to separately address Vancouver Coastal Health's (VCH) Subdivision Guideline (Section L.1c) requirements, which are referenced in Section 2(d) of SCRD's letter.

This report has been prepared for the consideration of AB Coast Projects Ltd. and their project consultant team's reference for SCRD rezoning application purposes. Readers of this report should consider the document in its entirety, including the Section 5.0 Limitations.

2 INFORMATION SOURCES

MDM Groundwater's Hydrogeological Assessment is based on a review of information from the following primary sources:

- MDM Groundwater Consulting Ltd. monitoring well drilling program, groundwater monitoring program and in-situ hydraulic testing (April 4 to May 8, 2024);
- ARYA Engineering Inc. "Preliminary Geotechnical Assessment Report, Proposed Residential Development, Proposed 8 Acre - 16 Lot Subdivision Development, Lot D, Chaster Road, Gibsons, BC (PID: 015-955-371)" dated April 24, 2024;
- Landev Consulting Inc. drawing LL "Lot Layout" dated March 7, 2024 with revised covenant area for proposed community septic field and drawing S-1 "Septic Site Plan" dated April 3, 2023 with exploratory test pit locations, tabulated summaries of soil stratigraphy and borehole permeameter testing results;
- Keystone Environmental reports "Wetland and Stream Assessment, Lot D Chaster Road Gibsons, BC" dated November 25, 2022 and February 10, 2023;
- Peter M. Gordon Land Surveying Inc. "Topographic Plan" dated March 9, 2022;
- Waterline Resources Inc. report "Aquifer Mapping Study Update" for Town of Gibsons dated May 30, 2022 (update to 2013 report);
- Worley Parsons Canada Services Ltd. aquifer classification and mapping report "Foundational Mapping" for BC Ministry of Environment and Climate Change Strategy dated March 2019;
- BC Ministry of Environment and Climate Change Strategy "Water Resources Atlas"; and
- SCRD Property Information and Mapping "Property Viewer" online interface.

3 SITE CHARACTERIZATION

3.1 Regional Hydrogeologic Setting

The subject property covers an 8.3 acre, rectangular, single-parcel area of 150 m (metre) width (along Chaster Road right-of-way) and 220 m length (north-south) within the southern extent of the BC Ministry of Environment and Climate Change Strategy's (MOECCS) "Gibson/SCRD Grahams Landing/Elphinstone Aquifer" (Aquifer #560) [Figure 1, Attachment #1]. Aquifer #560 is comprised of highly-permeable Quadra Sands deposits (primarily glaciofluvial sands and gravels) that are locally mapped as overlain (i.e., confined) by fine-textured Capilano Sediments (i.e., clay and silt) deposits that generally overlie till.

Aquifer #560 has been assigned a "moderate" vulnerability classification based on mapping completed by Worley Parsons in 2019 (Attachment #2), which determined the protective confining strata (Capilano Sediments) are absent near both the Chapman Creek and Charman Creek catchments and are inferred to be absent within a large area extending inland (northwestward overall) approximately 4 km (kilometre) from the Shoal Channel shoreline in Lower Gibsons. The subject Site is not positioned within any of the areas where confining strata are either verified or inferred to be absent (Attachment #2). In 2022, Waterline Resources Inc. reviewed and updated the results of their 2013 mapping and numerical modelling of Aquifer #560 and concluded (i.e., reiterated) their opinion that protective (i.e., confining) Capilano Sediments are broadly distributed outside the polygons defined by Worley Parsons (Attachment #2). On this basis, the Aquifer #560 sub-area that underlies the Site and adjacent lands extending downslope to the Strait of Georgia shoreline is interpreted to be overlain by laterally continuous confining strata and, therefore, Aquifer #560 vulnerability to surface sources of contamination is locally interpreted to be low.

3.2 Site Investigations

3.2.1 ARYA Engineering Inc. (2024)

In 2021, ARYA Engineering Inc. (ARYA) completed a preliminary examination of subsurface conditions across the Site by excavating (hand auger) shallow test holes at undisclosed locations. ARYA concluded the Site is overlain by a veneer of "granular" sediments of up to 0.6 m thickness (at examined locations) overlying grey, compact to dense sandy SILT with some gravel.

3.2.2 Landev Consulting Inc. (2023)

In March 2023, Landev Consulting Inc. (Landev) excavated twelve (12) exploratory test pits (designated TP-1 to TP-12) at the locations shown on Figure 2 (Attachment #3) to assess sewage disposal viability within/near a proposed community sewerage covenant area along the western property boundary. Surficial soils at all locations were reported as "loamy sand with some cobbles" ranging in thickness from 0.91 m to 1.22 m (36 inches to 48 inches) to an average depth of 1.06 m (42 inches) below ground, underlain by "clay hardpan". Groundwater was not encountered in the test pits, which infers the mid-March 2023 water table depth exceeded approximately 1.0 mbgs (metre below ground surface) throughout the examined area.

Landev completed standard permeameter testing in 0.4 m deep auger holes located adjacent to all March 2023 test pit sites. The twelve (12) tests produced field-saturated hydraulic conductivity (*Kfs*) values varying by a factor of 18 from 282 mm/day (3.2×10^{-6} m/s) to 5067 mm/day (5.8×10^{-5} m/s) with a geometric mean value of 1814 mm/day (2.1×10^{-5} m/s).

3.2.3 MDM Groundwater Consulting Ltd. (2024)

Monitoring Well Installation

On April 2, 2024, MDM Groundwater personnel supervised the installation of five (5) monitoring wells (designated MW24-01 to MW24-05) at the locations shown on Figure 2 using a track-mounted drilling system. Solid stem augers (6-inch diameter) were advanced to total depths ranging from 1.90 mbgs (metre below ground surface) at MW24-01 to 3.35 mbgs at MW24-02. The augers were withdrawn intermittently during drilling for visual examination of soils and to obtain representative samples of major stratigraphic units. Monitoring wells MW24-01, MW24-04 and MW24-05 were completed with two (2) "nested" PVC standpipes (2-inch diameter) with 0.3 m or 0.6 m long machine-slotted screens (0.01-inch openings) installed near the bottom of the boreholes and at intermediate depths selected based on strata textural transitions. The other two (2) monitoring wells were similarly constructed with one (1) 2-inch diameter PVC standpipe. Borehole annular spaces below, above and within screen intervals were infilled with 10/20 filter sand to ensure standpipe hydraulic connectivity to the surrounding strata. Continuous bentonite seals were installed above all filter sand intervals to ground surface. All bentonite seals were initially hydrated by concurrently discharging potable water (supplied by drilling contractor) into each standpipe and into bentonite chips exposed at ground surface.

Monitoring well records with standpipe completion details and summaries of the stratigraphy encountered at each drilled location are provided on Figures 3a through 3e (Attachment #4).

Groundwater Monitoring

On April 4, 2024, MDM Groundwater established a short-term groundwater monitoring program (GMP) at the Site by installing automated pressure transducers in the eight (8) on-site monitoring well standpipes. All devices were programmed to record water levels on a synchronized 5-minute frequency. An automated barometer was also temporarily deployed at Site to record atmospheric pressures required for subsequent GMP data reduction. Manual water level measurements were obtained from all standpipes using a graduated electric tape (±0.001 m precision) prior to installing the monitoring devices and prior to removing the devices for data collection on May 7, 2024. Water introduced April 2, 2024 for bentonite seal hydration was fully purged from all standpipes using HDPE bailers before deploying monitoring devices.

Table 1 summarizes the GMP manual groundwater measurements in depth (mbgs) units and equivalent elevations (m-geod [geodetic]). Automated GMP data collected from the eight (8) standpipe monitoring devices during the 34-day monitoring period were initially corrected for atmospheric effects and then converted to equivalent elevation units (m-geod) as summarized graphically on Figure 4 (Attachment #5).

TABLE 1. Manual Groundwater Measurements

Monitoring Well	April 4, 2024		May 7, 2024	
	Depth (mbgs)	Elevation (m-geod)	Depth (mbgs)	Elevation (m-geod)
MW24-01 S	>0.960 (*dry*)	<97.840 (*dry*)	>0.960 (*dry*)	<97.840 (*dry*)
MW24-01 D	1.197	97.603	1.416	97.384
MW24-02	2.129	97.371	1.265	98.235
MW24-03	1.054	97.346	1.347	97.053
MW24-04 S	>1.150 (*dry*)	<98.050 (*dry*)	>1.150 (*dry*)	<98.050 (*dry*)
MW24-04 D	1.238	97.962	1.443	97.757
MW24-05 S	>0.700 (*dry*)	<97.200 (*dry*)	>0.700 (*dry*)	<97.200 (*dry*)
MW24-05 D	1.832	96.068	>2.250 (*dry*)	<95.650 (*dry*)

NOTES – Ground elevation datum from Peter M. Gordon Land Surveying Inc.
– ">" and "<" indicate groundwater depth exceeds standpipe tip (i.e., *dry*)
– "S" denotes shallow screen and "D" denotes deep screen
– Monitoring well records in Attachment #4

Single-Well Response Testing

On May 8, 2024, MDM Groundwater personnel completed single-well response testing comprised of conventional "slug tests" in monitoring wells MW24-02 and MW24-04D (Deep) and "borehole infiltration" testing in monitoring well MW24-01S (Shallow). Prior to commencing testing, pressure transducers with automated data loggers were installed at the bottom/tip of each tested standpipe and programmed to record water levels on a 1-second frequency. A separate barometric transducer was also deployed at Site to record atmospheric pressure at the same frequency.

Slug Tests

A falling-head slug test procedure was employed to rapidly displace the MW24-02 and MW24-04D standpipe water columns vertically upward by introducing potable water supplied from a tanker truck. The submerged transducers were removed after a minimum of 3 hours and the recorded data downloaded and corrected for atmospheric variations. Initial review of the data confirmed that the imposed water column displacements (increases) were 2.10 m (MW24-02) and 2.36 m (MW24-04D). Water level recovery data were analyzed using AQTESOLV©, which is industry-standard software designed specifically for the determination of hydraulic parameters, using the Bouwer Rice solution. Graphical summaries of the test data

and analytical results (i.e., field-saturated hydraulic conductivity) are provided as Attachment #6. Values for *K*fs determined from testing in these two (2) relatively deep monitoring wells varied by a factor of approximately 2.9 from 1.3 x 10^{-6} m/s (metre per second) to 4.5 x 10^{-7} m/s with an arithmetic mean value of 9.0 x 10^{-7} m/s.

Borehole Infiltration Testing

Borehole infiltration testing was completed in monitoring well MW24-01S in accordance with an ASTM D6391-11 Method A (Stage 2) modified approach for the determination of *K*fs. The receiving strata surrounding the MW24-01S screen was initially saturated by inundating the standpipe with potable water for two (2) hours to maintain a constant water level at approximately 0.5 m above ground. Discrete "falling head" test intervals were then repetitively applied by allowing the standpipe water level to decline for 30 seconds and then refilling the standpipe to commence another falling-head interval. Using this approach, sixty two (62) sequential falling-head intervals were applied. Field-saturated hydraulic conductivity values were calculated for each 30-second falling-head interval using the ASTM D6291 11 Method A (Stage 2) analytical expressions provided as Attachment #7. The resulting *K*fs values varied by a factor of 2 (approximately) from a lower-bound value of approximately 1.5 x 10^{-5} m/s to an upper-bound value of 2.9 x 10^{-5} m/s.

4 HYDROGEOLOGICAL ASSESSMENT

4.1 Stratigraphy

MDM Groundwater's exploration and testing program confirms the examined Site area is underlain by a two-unit stratigraphy comprised of reddish-brown silty sand ("surficial SAND") with varying gravel content that overlies either grey, compact to stiff/dense sandy silt or grey, silty to very silty fine sand ("SILT/SAND"). This profile agrees with previous subsurface exploration (Sections 3.2.1 and 3.2.2) and regional mapping interpretations (Section 3.1), which infers this two-unit stratigraphy is laterally continuous through the Site and adjoining lands extending fully to Strait of Georgia. The SILT/SAND stratum represents the Capilano Sediments sequence of fine-textured strata that form a protective (i.e., confining) surficial unit overlying Aquifer #560. The surficial SAND unit, which represents the "receiving sediments" for proposed on-site sewage management, varied in thickness from 0.60 m at monitoring well MW24-01 to 1.27 m at monitoring well MW24-02 with a median thickness of approximately 0.87 m (Attachment #4).

4.2 Flow Attributes

A north-south oriented topographic height-of-land is positioned near the western boundary of the Site (Figure 2). Terrain on the eastern side of the topographic divide has overall eastward aspects with gentle grades of approximately 0.03 (dimensionless, average) within Site areas adjacent to the western property line (including proposed septic covenant area). Terrain on the western of the divide slopes westward at progressively steeper grades with increased

distance from the divide. Accordingly, the proposed community septic field area has a very small (effectively negligible) off-site recharge area for rainwater to infiltrate and subsequently introduce groundwater flow to the Site, which infers that groundwater within the proposed covenant area originates almost entirely as rainwater and/or snowmelt directly infiltrating ground surface within the Site. Terrain within the central portion of the Site (immediately east of covenant area) and entire southeast corner of the Site is near-flat graded with overall southward aspects.

4.2.1 Groundwater Depths

The highest (i.e., shallowest) groundwater levels recorded during the 34-day groundwater monitoring program occurred near-simultaneously in all monitoring wells on April 10, 2024, following three (3) consecutive days of reported rainfall totaling 13.6 mm (Figure 4). Equivalent groundwater depths calculated from the GMP elevation data are summarized in Table 2 and indicate water table depths ranged from a minimum of 0.066 mbgs at MW24-05S to a maximum of 1.682 mbgs in MW24-05D.

TABLE 2. Groundwater Depths April 10, 2024

Monitoring Well	Depth (mbgs)	Elevation (m-geod)
MW24-01 S	0.920	97.880
MW24-01 D	1.199	97.601
MW24-02	1.125	98.375
MW24-03	0.979	97.421
MW24-04S	1.107	98.093
MW24-04D	1.176	98.024
MW24-05 S	0.660	97.240
MW24-05 D	1.682	96.218

NOTES – Ground elevation datum from Peter M. Gordon Land Surveying Inc.
– ">" and "<" indicate groundwater depth exceeds standpipe tip
– "S" denotes shallow screen and "D" denotes deep screen
– Monitoring well records in Attachment #4

April 10, 2024 groundwater depths are also depicted on the monitoring well schematic illustrations (Attachment #4) and verify the water table was positioned either at or slightly below the surficial SAND interface (with the deeper SILT/SAND unit) in monitoring wells MW24-03, MW24-04 and MW24-05, which confirms the entire surficial SAND profile at those locations was unsaturated throughout the GMP schedule. Conversely, the highest water table depths recorded in monitoring wells MW24-01 and MW24-02 were positioned 0.33 m to 0.14 m above the SAND/SILT interface, respectively. The Table 2 data collectively indicate the unsaturated surficial SAND profile ranged from 0.60 m at MW24-03 to 1.12 m at MW24-02.

4.2.2 Flow Directions and Gradients

The Site groundwater system configuration on April 10, 2024 is depicted on Figure 5 (Attachment #8) based on water table contours constructed using the highest (i.e., shallowest) recorded Site water table elevations (Table 2). The resultant water table piezometric surface very closely resembles Site ground topography with southeastward flow directions through the proposed septic covenant area toward the south-central portion of the Site. Estimated lateral flow gradients are consistently gentle (i.e., low) and range from approximately 0.02 (dimensionless) across the proposed field area to a maximum of approximately 0.06 magnitude immediately southeast of the field area (Figure 5).

Vertical flow gradients and directions (i.e., upward/downward) can be approximated by comparing groundwater elevations determined for the paired shallow and deep standpipes (Table 2). These data indicate a downward flow component at all three (3) paired standpipe locations with gradients ranging from low (0.04) at MW24-01 to moderately high (0.30) at MW24-04 to high (0.70) at MW24-05.

Although the Site water table configuration depicted on Figure 5 represents instantaneous (i.e., static) groundwater conditions on April 10, 2024, it is considered generally representative of year-round groundwater traits (i.e., flow directions and gradients). This interpretation is based mainly on the consistent relative positions of the water table at all monitored locations (Figure 4), which varied uniformly through the GMP interval and thereby maintained an overall consistent configuration.

4.2.3 Flow Rates

Accepting the gross Site water table configuration (Figure 5), the maximum estimated flow gradient of 0.06 (Section 4.2.2), a *K*fs of 1.5 x 10^{-5} m/s to 2.9 x 10^{-5} m/s (Section 3.2.3) and reasonably assuming a surficial SAND porosity (n) of 0.3 (dimensionless), the calculated average linear groundwater velocity (v) within the surficial SAND ranges from 0.26 m/day to 0.52 m/day. Applying this analytical approach and assumptions (except n = 0.2) to the SILT/SAND stratum (i.e., *K*fs = 4.5 x 10^{-7} m/s to 1.3 x 10^{-6} m/s) produces average linear velocities ranging from 0.012 m/day to 0.037 m/day.

4.3 Project Interactions

It is understood that Site development will be comprised of at-grade residences with above ground living spaces (i.e., no basements) and conventional building foundations with perimeter drainage systems. Wastewater will be managed communally, as described in the preceding sections, and stormwater management may include subsurface detention on each proposed lot prior to controlled discharge to ditching along a proposed north-south oriented access road (Figure 2). Ditch water will be ultimately conveyed to an existing on-site wetlands area located within the southeast corner of the Site. Potential project interactions with local water resources (including groundwater) are discussed in the following sections relative to this assumed Site development scenario.

4.3.1 Groundwater Resources

The highly productive sand/gravel aquifer (Aquifer #560) underlying the Site and adjacent properties is a primary source of drinking water for the SCRD's Chapman Creek Water System, which accesses Aquifer #560 water from high-yield production wells located on the north side of Charman Creek approximately 2 km east of the Site (Attachment #2). Impacts on Aquifer #560 water quality related to the proposed Site development are not anticipated due to the presence of broadly distributed, fine-textured sediments (i.e., primarily silt and deeper till) that locally overlie (i.e., confine) Aquifer #560 (per MOECCS's current mapping and classification [Section 3.1]) and provide an effective barrier from surface sources of contamination. This interpretation also applies to all terrain downslope of the Site, which Waterline (2013, 2022) has mapped/modelled as comprised entirely of Capilano Sediments with no exposure(s) of Aquifer #560 sediments, which infers that any water originating from the Site lacks a downslope pathway to impact the quality of aquifer water.

The vertical (downward) component of groundwater flow evident at monitoring wells MW24-01, MW24-04 and MW24-05 are likely representative of flow conditions across the entire Site, given the consistent two-unit stratigraphy. Accordingly, the Site is interpreted to be a groundwater recharge area that provides replenishment to Aquifer #560. Recharge rates (i.e., daily volumes) will be very low due to the fine textures of the confining sediments, which are interpreted by MOECCS to commonly include dense till below the SILT/SAND stratum present at Site. Because proposed Site development does not require interception and rapid off-Site conveyance of groundwater, it is unlikely the development will impact current Aquifer #560 recharge rates (on-Site).

4.3.2 Surface Water Resources

MDM Groundwater's review of MOECCS's Water Resources Atlas and SCRD's Property Viewer on-line mapping interface verifies there is one (1) surface water body located downslope (i.e., down-gradient) of the Site. It is an unnamed stream within a deeply-incised channel of approximately 600 m length aligned southwestward from the north side of Sunnyside Road to

the Strait of Georgia (Figure 6, Attachment #9). Stream flow originates from ditching along Sunnyside Road and from the wetlands area within the southeast corner of the Site (Figure 2) that extends partially across the southern Site boundary.

Groundwater within the Site, including below the proposed septic covenant area, contributes significantly to the hydraulic function of the wetlands. This interpretation is based on the confirmed southeastward (gross) groundwater flow direction and the change in topography from gentle east-facing slopes to near-flat terrain within the southeast corner of the Site, which results in groundwater emergence (i.e., discharge) to the wetlands. Accordingly, groundwater from the Site also contributes to the hydrology of the unnamed stream.

Building perimeter drains on the proposed lots will not be deeply buried but may intercept groundwater intermittently when the local water table temporarily rises in response to sustained wet weather and intense rainfall events. Provided the intercepted groundwater is stored and released in a controlled manner and ultimately discharged to the wetlands area, potential impacts on the hydrology of both the wetlands and unnamed stream should be fully mitigated.

4.3.3 Wastewater Management

The hydraulic conductivity (*K*fs) of the receiving sediments (Section 3.2.3) ranges from 1,300 mm/day (1.5 x 10^{-5} m/s) to 2,500 mm/day (2.9 x 10^{-5} m/s), which exceeds the equivalent HLR value of 42 mm/day (4.9 x 10^{-7} m/s) by a minimum factor of 30. Conservatively assuming Landev's lowest reported permeameter result (i.e., 282 mm/day) represents actual conditions throughout the entire disposal area, the HLR rate would still be exceeded by a factor of approximately 7. On this basis, the Surficial SAND infiltrative capacity is considered sufficient to initially receive and effectively convey effluent to the water table at the proposed HLR.

"Loamy sand" sediments have inherently high pathogen removal capacity and overall good effluent renovation potential. The potential for effective post-dispersal pathogen attenuation and overall effluent renovation is further improved at the subject Site by low groundwater velocities (i.e., approx. 0.26 m/day to 0.52 m/day) corresponding to local topographic trends.

The minimum unsaturated surficial SAND profile (Section 4.2.1) within the proposed septic covenant area during the 34-day monitoring period (Figure 4) averaged 0.95 m based on a 0.81 m profile within the southern end (at MW24-1) and 1.12 m profile within the northern end (MW24-02). Mottling of the surficial SAND indicates a transient water table may reside at 0.7 mbgs (Figure 4b). A water table elevation increase (i.e., mound) of approximately 0.4 m is preliminarily estimated within the field area based on the receiving sediment hydraulic parameters and groundwater attributes summarized in the preceding sections. This results in a water table (mounded) depth of approximately 0.3 mbgs, which indicates there is no potential for passive effluent breakout within the proposed field area. Breakout (to ground surface) can also be avoided within developed lots adjacent to covenant area by establishing gentle finished grades at elevations exceeding current ground surface.

5 LIMITATIONS

This report has been prepared for the consideration of AB Coast Projects Ltd. and their consultant team's reference and SCRD's reliance for rezoning application review purposes. Any use that a third party makes of this document, or any reliance on, or decisions to be made based on it, are the responsibilities of such third parties. MDM Groundwater Consulting Ltd. accepts no responsibility for damages, if any, suffered by a third party as a result of decisions made or actions taken, based on this document.

MDM Groundwater Consulting Ltd. has prepared this report in a manner consistent with the level of care and skill ordinarily exercised by members of the engineering and science professions currently practicing under similar conditions in the jurisdiction in which the services were provided, subject to limits and constraints applicable to the authorized Work Plan. No other warranty, expressed or implied is made.

This report has been prepared according to the objectives identified in Section 1.0 of this document and characterizes, interprets and assesses hydrogeological aspects of the subject property relative to the Section 1.0 objectives. This report is not applicable to any other project or site location. All opinions and interpretations presented in this document are based on a review of information summarized in Section 2.0, which are considered representative of Site conditions at the time of preparing this report.

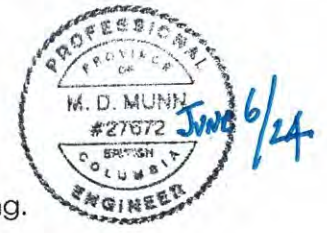
Any changes to the proposed land development, including building subsurface design details, may alter the relevance of the report findings, interpretations and assessments. If additional relevant geotechnical and/or hydrogeological information becomes available, MDM Groundwater Consulting Ltd. should be requested to reconsider and possibly re-evaluate the conclusions of this document, and to provide amendments, as required.

6 CLOSURE

We trust this Hydrogeological Assessment report meets your current needs. If you have questions regarding any aspect of the document, please contact the undersigned directly.

Regards,

MDM Groundwater Consulting Ltd.
Permit to Practice # 1001291



Matthew D. Munn, M.Sc., P. Eng.
Hydrogeologist

Attachments:
#1 – Figure 1. Site Location Plan (Aquifer #560)
#2 – Worley Parsons Aquifer #560 Mapping (2019)
#3 – Figure 2. Site Plan
#4 – Figure 3. Monitoring Well Records
#5 – Figure 4. Groundwater Monitoring Program
#6 – Hydraulic Testing Data and Results
#7 – ASTM Analytical Equations
#8 – Figure 5. Groundwater Flow Configuration

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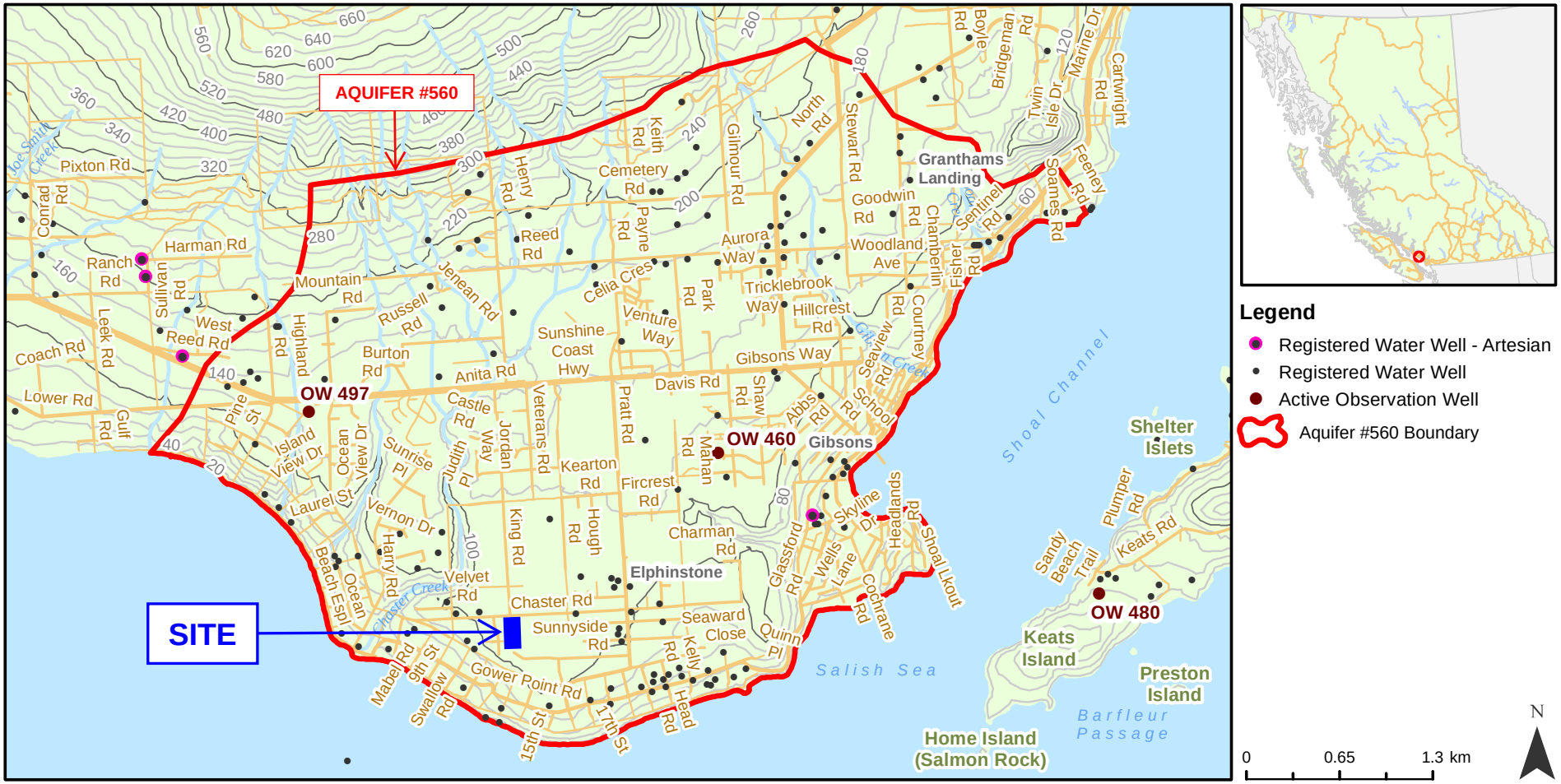
ATTACHMENT #1

Figure 1. Site Location Plan (Aquifer #560)

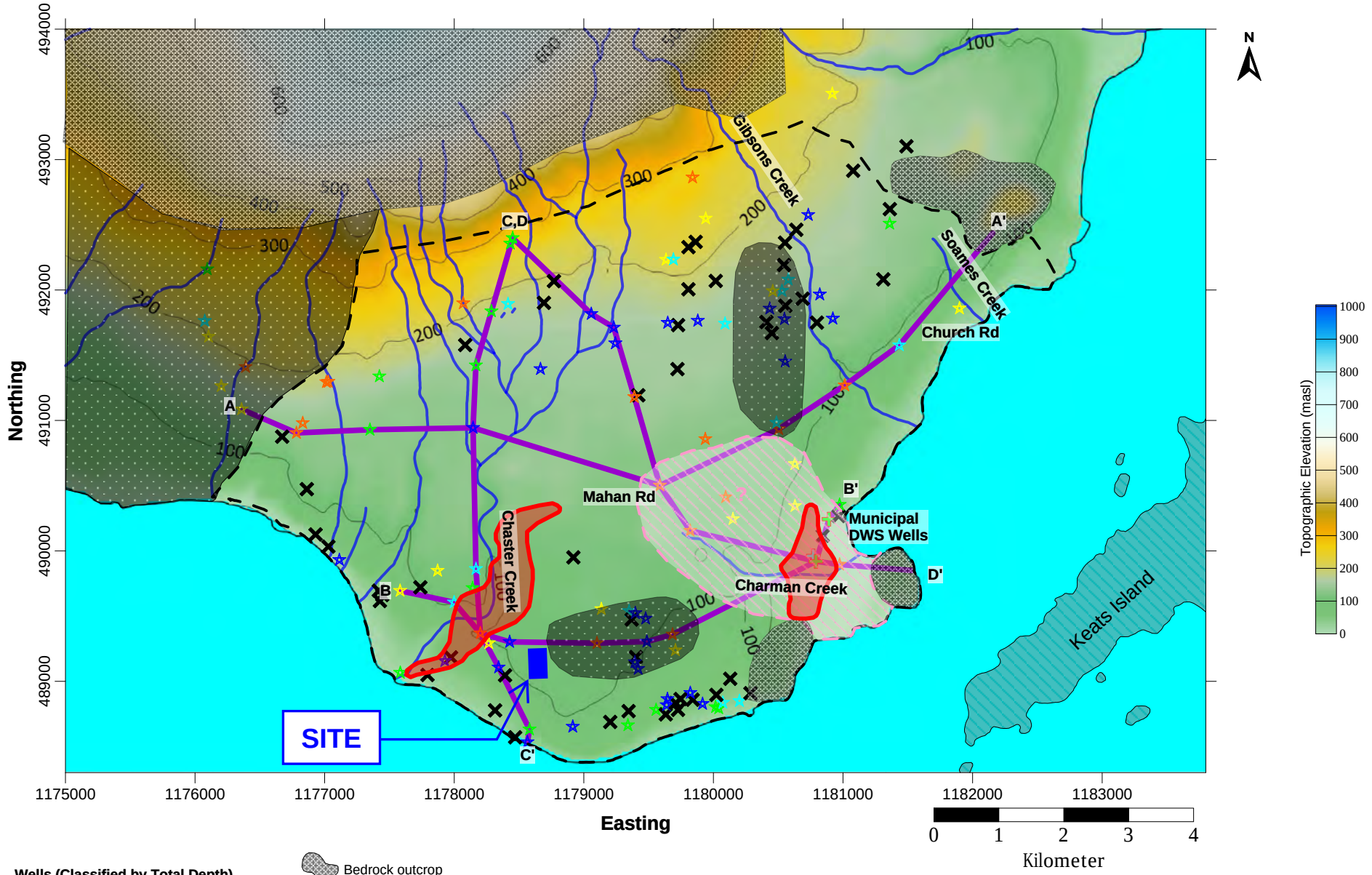


Base plan from BC Ministry of Environment and Climate Change Strategy AQ_00560_Aquifer_Factsheet

Figure 1. Site Location Plan

ATTACHMENT #2

Figure 2. Worley Parsons Aquifer #560 Mapping (2019)



Wells (Classified by Total Depth)

- 1-10
- 10-25
- 10-25 (Municipal Drinking Water Supply)
- 25-50
- 25-50 (Municipal Drinking Water Supply)
- 50-100
- 100+
- Depth/Lithology N/A

- Bedrock outcrop
- Key Bedrock Feature (masked by unconsolidated deposits)
- Exposed Pre-Vashon (High Vulnerability)
- Vashon Till Absent (Inferred) (Moderate to High Vulnerability)
- Rivers
- Ground Elevation Contour (masl)
- Cross-Section Line
- Inferred Aquifer Extent

Data Sources:
Digital Elevation Model - 1:20,000 TRIM Data
Water Features - Freshwater Atlas
Bedrock Outcrops and Pre-Vashon Exposure: McCammon 1977
Key subsurface bedrock features inferred from available lithology information.

British Columbia Albers Projection, NAD83

MINISTRY OF ENVIRONMENT & CLIMATE CHANGE
2019 WINTER AQUIFER MAPPING
GIBSONS

LOCATION MAP AND LOCATION OF CROSS-SECTIONS

Date:	Drawn by:	Edited by:	App'd by:
12-Mar-20	T.L.	S.F.	A.H.

Worley Project No. 307071-01251

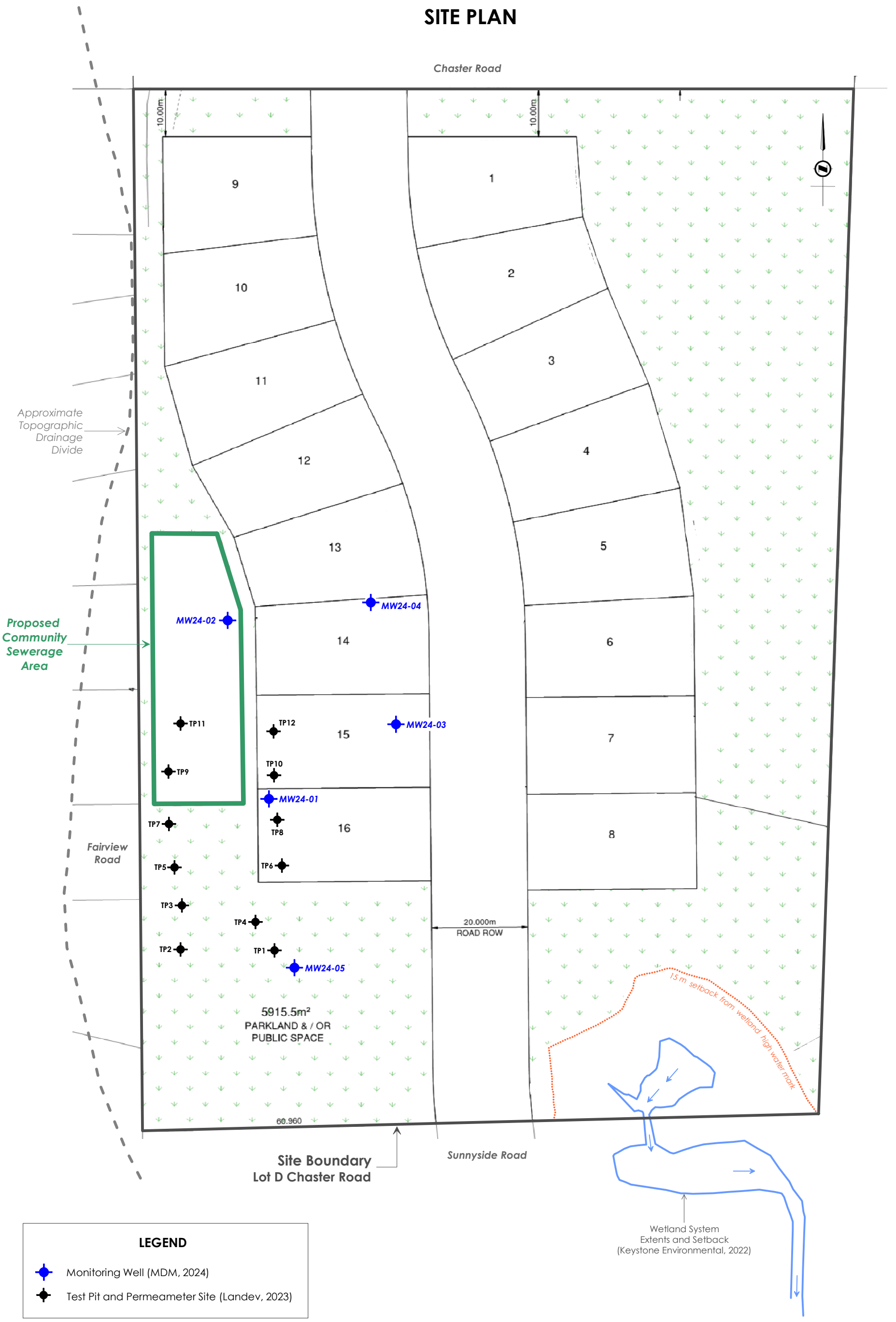
FIG No 1

REV 1

ATTACHMENT #3

Figure 2. Site Plan

SITE PLAN



LEGEND

- Monitoring Well (MDM, 2024)
- Test Pit and Permeameter Site (Landev, 2023)

NOTES - 1) Base plan from Landev Consulting Inc. drawing "Draft Layout Plan" dated March 7, 2024 and Peter M. Gordon Land Surveying Inc. "Topographic Plan" dated March 9, 2022
2) Monitoring well locations field-verified with property line offset measurements

Project No. BC240003 **Drawn** MDM **Reviewed** M.D.Mdmy **Date** May 2024	MDM Groundwater Consulting	**HYDROGEOLOGICAL ASSESSMENT** AB Coast Projects Ltd. Proposed 16-Lot Subdivision - Lot D, Chaster Road, Gibsons, BC	**Fig. 2**

ATTACHMENT #4

Figure 3. Monitoring Well Records
(MW24-01 to MW24-05)

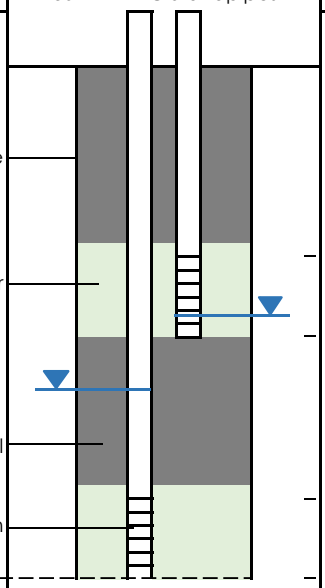
MONITORING WELL RECORD MW24-01

METHOD: Solid Stem
CONTRACTOR: VanMars Drilling
DATE DRILLED: April 2, 2024
ENGINEER: MDM

GROUND ELEVATION (Approx.): 98.8 m-geod
SHALLOW PIPE STICKUP: 0.93 m
DEEP PIPE STICKUP: 0.80 m

Depth (m)	Elevation	SUBSURFACE OBSERVATIONS (USCS)	Depth
0.0	98.80	*Ground Surface*	
		Red-brown, compact, silty, fine to medium **SAND** with some fine gravel. Damp to 0.6 m. Moist to 1.0 m. Wet below 1.0 m.	
	97.66		1.14
		Grey, stiff to very stiff **SILT**. Slightly sandy with trace fine gravel. Damp.	
	96.90		1.90
		END OF HOLE AT 1.90 m DEPTH	

MONITORING WELL CONSTRUCTION



Groundwater Monitoring
April 10, 2024
Shallow = 0.92 mbgs
Deep = 1.199 mbgs

HYDROGEOLOGICAL ASSESSMENT
Lot D, Chaster Road, Gibsons, BC

MONITORING WELL RECORD MW24-01

AB COAST PROJECTS LTD.

MDM Groundwater Consulting

PROJECT: BC240003

REVIEWED: M.D. Mann

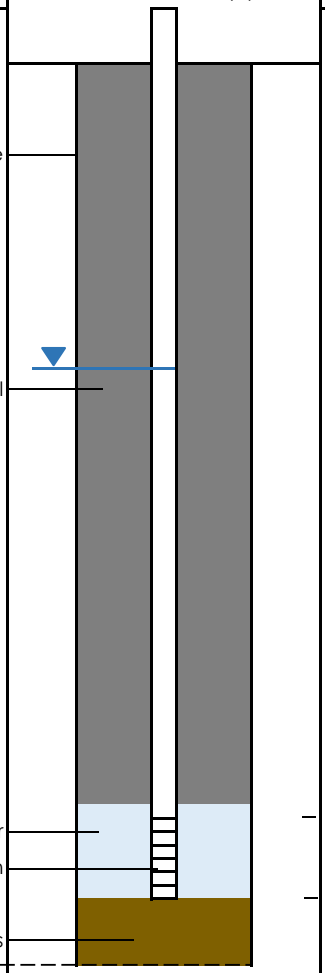
Fig. 3a

MONITORING WELL RECORD MW24-02

METHOD: Solid Stem
CONTRACTOR: VanMars Drilling
DATE DRILLED: April 2, 2024
ENGINEER: MDM

GROUND ELEVATION (Approx.): 99.5 m-geod
STANDPIPE STICKUP: 0.87 m

Depth (m)	Elevation	SUBSURFACE OBSERVATIONS (USCS)	Depth
0.0	99.50	*Ground Surface*	
		Brown-grey, compact, slightly silty to silty, fine to medium **SAND**. Mottled below 0.76 m. Some fine and medium gravel. Damp. Moist below 0.6 m.	
	98.23		1.27
		Grey, compact, silty fine **SAND**. Moist to very moist.	
	96.15		3.35
		END OF HOLE AT 3.35 m DEPTH	



MONITORING WELL CONSTRUCTION

Depths (m)

HYDROGEOLOGICAL ASSESSMENT
Lot D, Chaster Road, Gibsons, BC

MONITORING WELL RECORD
MW24-02

AB COAST PROJECTS LTD.

MDM Groundwater Consulting

PROJECT: BC240003

REVIEWED: M.D. Mann

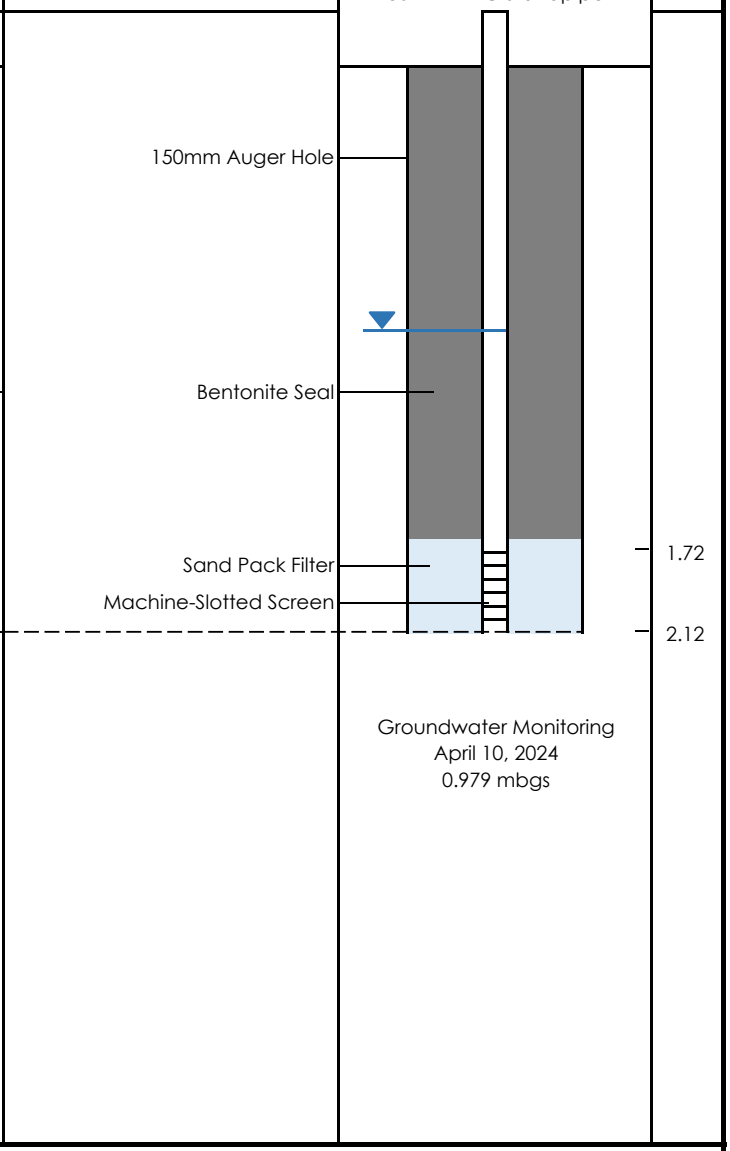
Fig. 3b

MONITORING WELL RECORD MW24-03

METHOD: Solid Stem
CONTRACTOR: VanMars Drilling
DATE DRILLED: April 2, 2024
ENGINEER: MDM

GROUND ELEVATION (Approx.): 98.4 m-geod
STANDPIPE STICKUP: 0.64 m

Depth (m)	Elevation	SUBSURFACE OBSERVATIONS (USCS)	Depth
0.0	98.40	*Ground Surface*	
		Red-brown, compact, slightly silty **SAND**. Trace fine gravel. Mottled, moist.	
0.5	97.80		0.60
		Grey, stiff, sandy **SILT** to silty **SAND**. Trace fine gravel. Mottled, moist.	
1.0	97.20		1.20
1.5		Grey, very silty, very fine **SAND** to very sandy **SILT**, compact/stiff. Moist.	
2.0	96.28		2.12
		END OF HOLE AT 2.12 m DEPTH	
2.5			
3.0			
3.5			



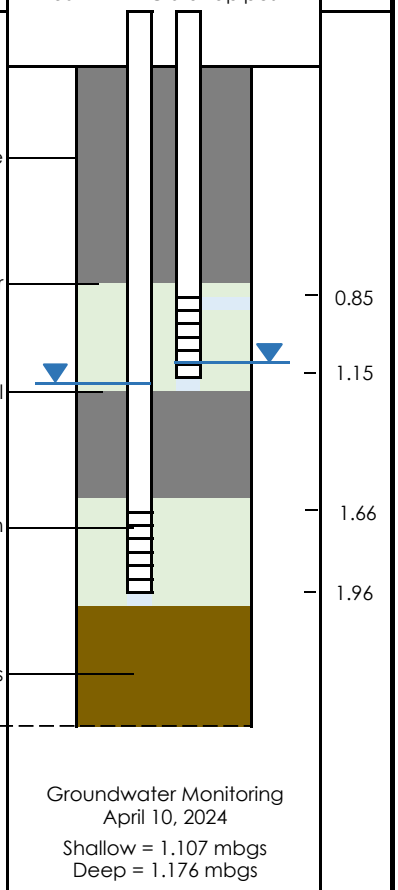
HYDROGEOLOGICAL ASSESSMENT Lot D, Chaster Road, Gibsons, BC	**MONITORING WELL RECORD** **MW24-03**
AB COAST PROJECTS LTD.	MDM Groundwater Consulting PROJECT: BC240003 REVIEWED: M.D. Mann **Fig. 3c**

MONITORING WELL RECORD MW24-04

METHOD: Solid Stem
CONTRACTOR: VanMars Drilling
DATE DRILLED: April 2, 2024
ENGINEER: MDM

GROUND ELEVATION (Approx.): 99.2 m-geod
SHALLOW PIPE STICKUP: 0.68 m
DEEP PIPE STICKUP: 0.97 m

Depth (m)	Elevation	SUBSURFACE OBSERVATIONS (USCS)	Depth
0.0	99.20	*Ground Surface*	
		Red-brown, compact, silty, fine **SAND** with trace to some fine gravel. Damp to 0.5 m, moist below.	
	98.54		0.66
		Grey, compact, slightly silty medium **SAND**. Moist to very moist.	
	97.53		1.67
		Grey, stiff to very stiff sandy **SILT**. Trace fine gravel. Moist to wet.	
	96.76		2.44
		END OF HOLE AT 2.44 m DEPTH	



HYDROGEOLOGICAL ASSESSMENT
Lot D, Chaster Road, Gibsons, BC

MONITORING WELL RECORD
MW24-04

AB COAST PROJECTS LTD.

MDM Groundwater Consulting

PROJECT: BC240003

REVIEWED: M.D. Mann

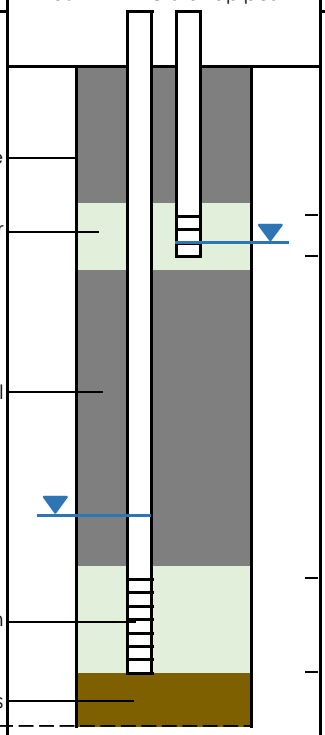
Fig. 3d

MONITORING WELL RECORD MW24-05

METHOD: Solid Stem
CONTRACTOR: VanMars Drilling
DATE DRILLED: April 2, 2024
ENGINEER: MDM

GROUND ELEVATION (Approx.): 97.9 m-geod
SHALLOW PIPE STICKUP: 0.98 m
DEEP PIPE STICKUP: 1.03 m

Depth (m)	Elevation	SUBSURFACE OBSERVATIONS (USCS)	Depth
0.0	97.90	*Ground Surface*	
		Red-brown, compact, silty, fine **SAND** with trace to some fine gravel. Damp to 0.5 m, moist below.	
	97.24		0.66
		Grey, compact to dense, silty to very silty fine **SAND** with some medium gravel. Damp to moist. Very moist to wet below 1.9 m.	
	95.46		2.44
		END OF HOLE AT 2.44 m DEPTH	



Depths (m): 0.55, 0.70, 1.95, 2.25

HYDROGEOLOGICAL ASSESSMENT
Lot D, Chaster Road, Gibsons, BC

MONITORING WELL RECORD MW24-05

AB COAST PROJECTS LTD.

MDM Groundwater Consulting

PROJECT: BC240003

REVIEWED: M.D. Mann

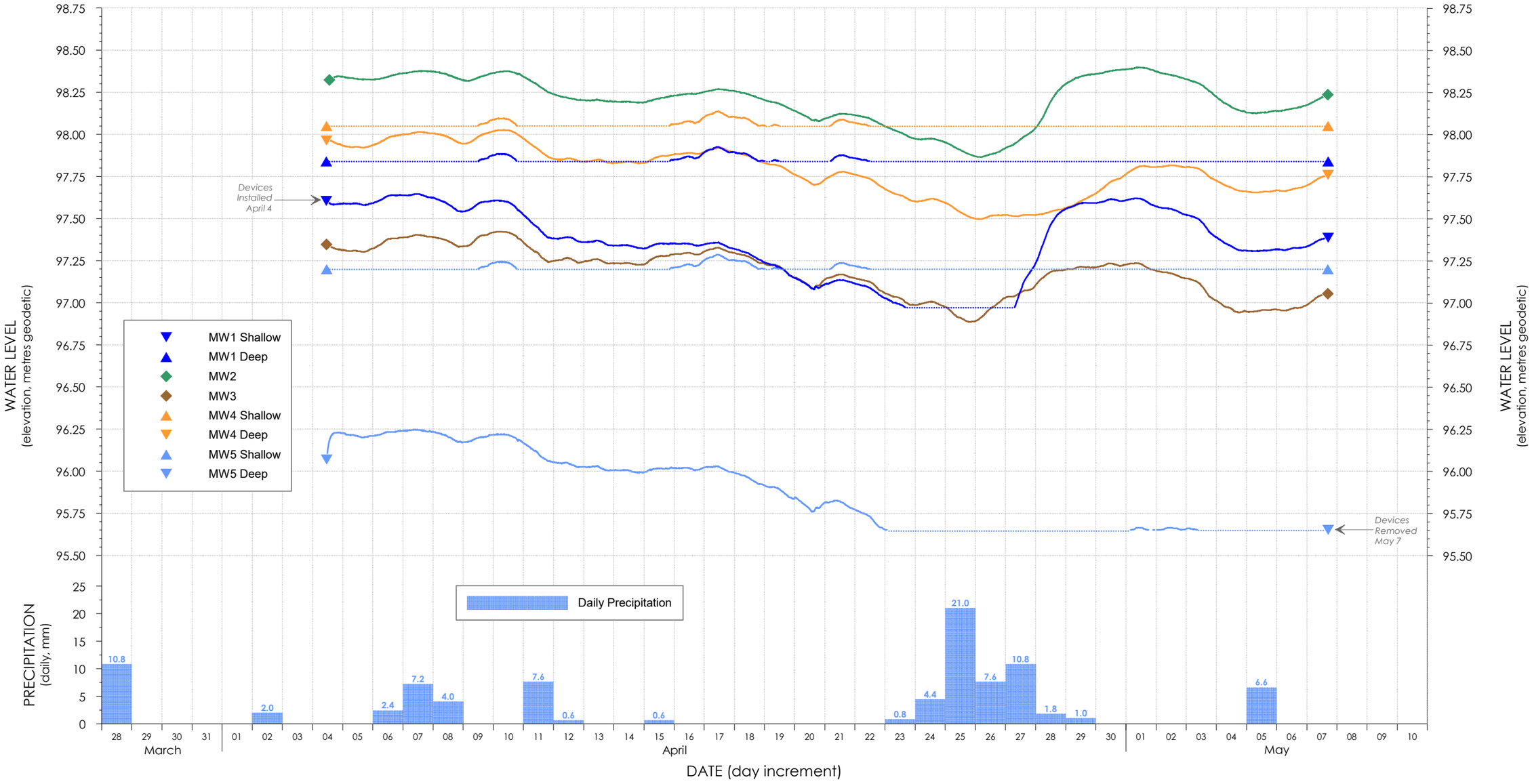
Fig. 3e

ATTACHMENT #5

Figure 4. Groundwater Monitoring Program

GROUNDWATER MONITORING PROGRAM

April 4 to May 7, 2024



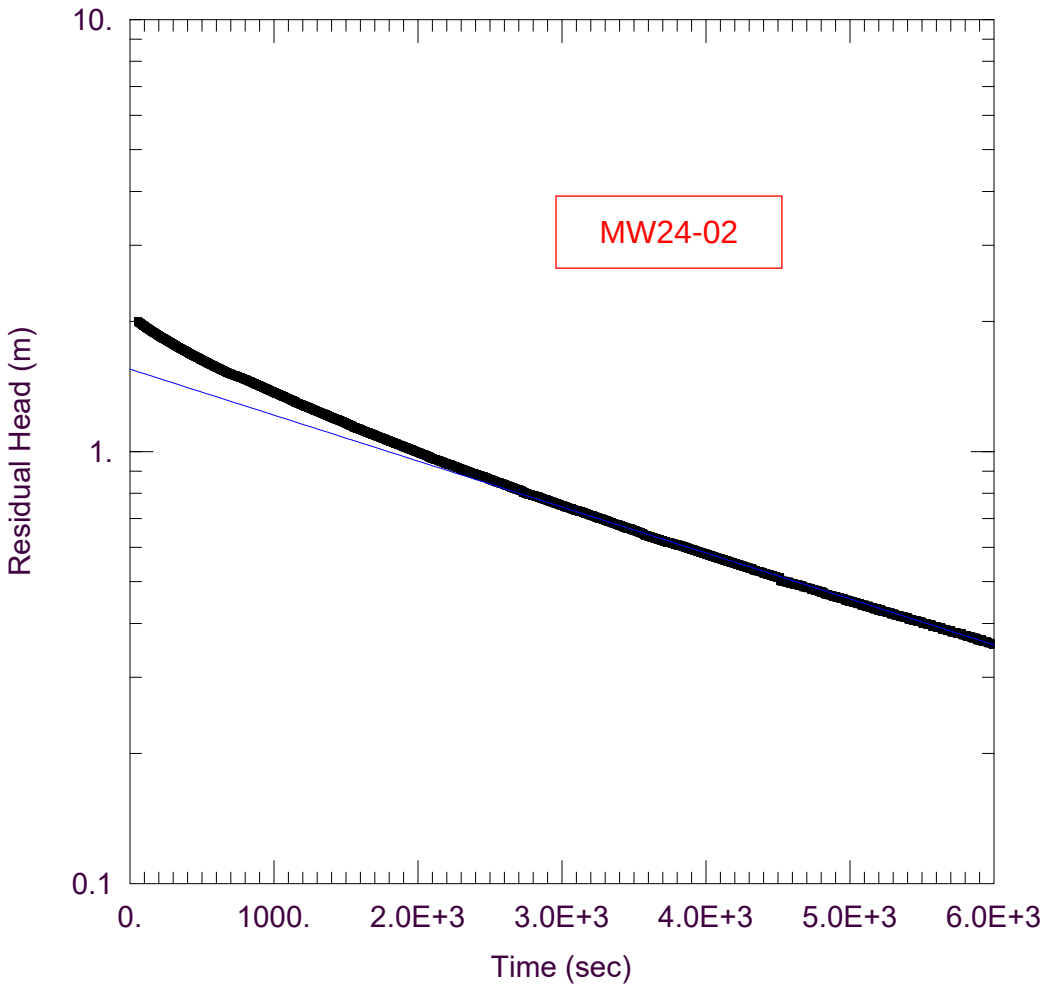
NOTES - 1) Solid coloured lines represent automated transducer data recorded on a 5-minute interval
2) Dashed lines indicate "dry" monitoring well standpipe
3) Coloured symbols represent manual water level measurements
4) Elevations from Bennett Land Surveying Ltd. BCLS

Project No. BC240003 **Drawn** MDM **Reviewed** M.D.Mmm **Date** May 2024	MDM Groundwater Consulting	**HYDROGEOLOGICAL ASSESSMENT** AB Coast Projects Ltd. Proposed 16-Lot Subdivision - Lot D, Chaster Road, Gibsons, BC

Fig. 4

ATTACHMENT #6

Hydraulic Testing Data and Results



WELL TEST ANALYSIS

Data Set: C:\Users\User\Documents\Projects\2024\BC240003_chaster_gibsons\aqtesolv\MW2.aqt
Date: 06/04/24 Time: 13:36:50

PROJECT INFORMATION

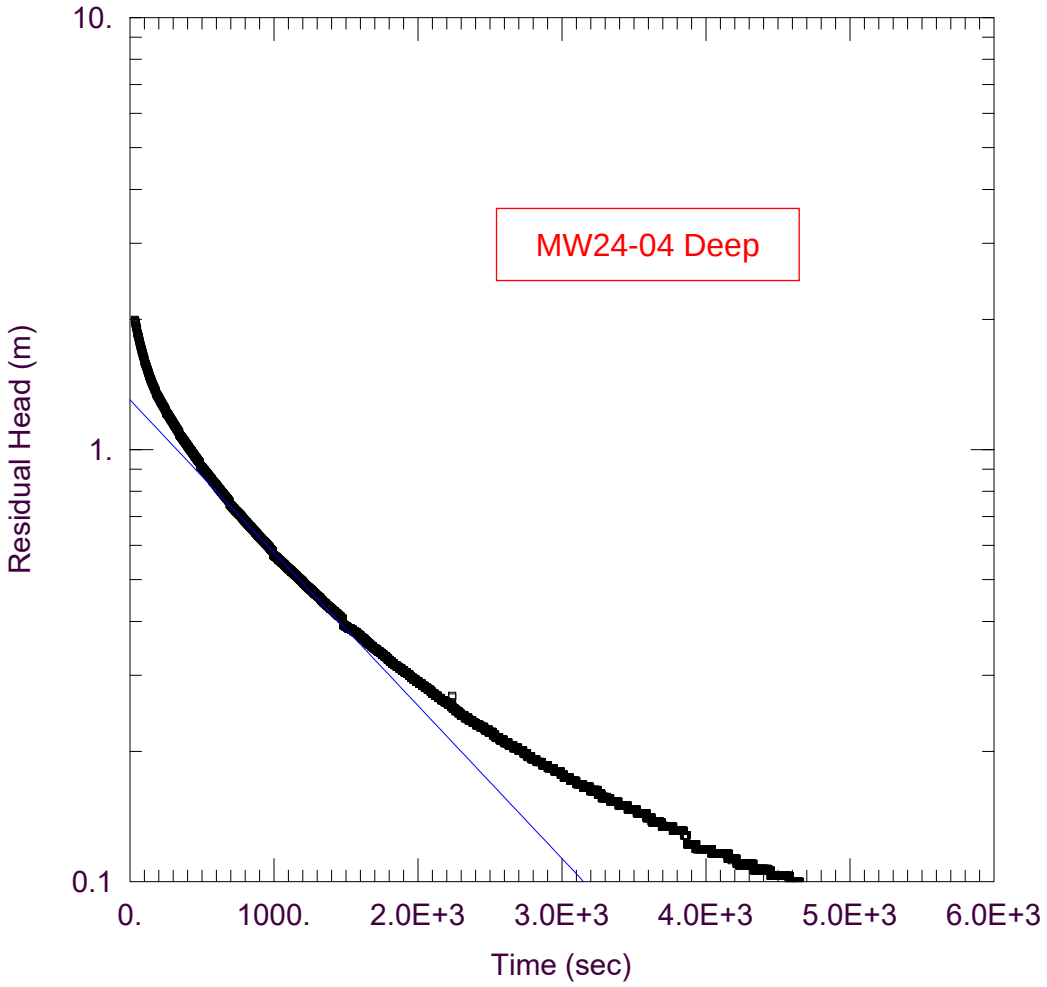
Company: MDM Groundwater Consulting Ltd
Client: AB Coast Projects Ltd.
Project: BC240003
Location: Lot D Chaster Rd, Gisbsons, BC
Test Well: MW24-02
Test Date: May 8, 2024

WELL DATA (MW24-02)

Initial Displacement: 2.099 m
Total Well Penetration Depth: 1.675 m
Casing Radius: 0.025 m
Static Water Column Height: 1.81 m
Screen Length: 0.3 m
Well Radius: 0.025 m

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 4.568E-7 m/sec
y0 = 1.551 m



WELL TEST ANALYSIS

Data Set: C:\Users\User\Documents\Projects\2024\BC240003_chaster_gibsons\aqtesolv\MW4D.aqt
Date: 06/04/24 Time: 13:37:35

PROJECT INFORMATION

Company: MDM Groundwater Consulting Ltd
Client: AB Coast Projects Ltd.
Project: BC240003
Location: Lot D Chaster Rd, Gisbsons, BC
Test Well: MW24-04D
Test Date: May 8, 2024

WELL DATA (MW24-04D)

Initial Displacement: 2.361 m
Total Well Penetration Depth: 0.5 m
Casing Radius: 0.025 m
Static Water Column Height: 0.5 m
Screen Length: 0.3 m
Well Radius: 0.025 m

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 1.272E-6 m/sec
y0 = 1.303 m

ATTACHMENT #7

ASTM Analytical Equations

ASTM D6291-11 Method A (Stage 2)
Analytical Expressions

$$K_2 = R_T G_2 \frac{\ln\left(\frac{h_1}{h_2}\right)}{(t_2 - t_1)}$$

And $$G_2 = \left(\frac{d^2}{16FL}\right) G_3;$$

$$G_3 = 2\ln G_4 + a \ln G_5$$

$$G_4 = \frac{L}{D} + \sqrt{1 + \left(\frac{L}{D}\right)^2}$$

$$G_5 = \frac{\left[\frac{4b_2}{D} + \frac{L}{D}\right] + \sqrt{1 + \left(\frac{4b_2}{D} + \frac{L}{D}\right)^2}}{\left[\frac{4b_2}{D} - \frac{L}{D}\right] + \sqrt{1 + \left(\frac{4b_2}{D} + \frac{L}{D}\right)^2}}$$

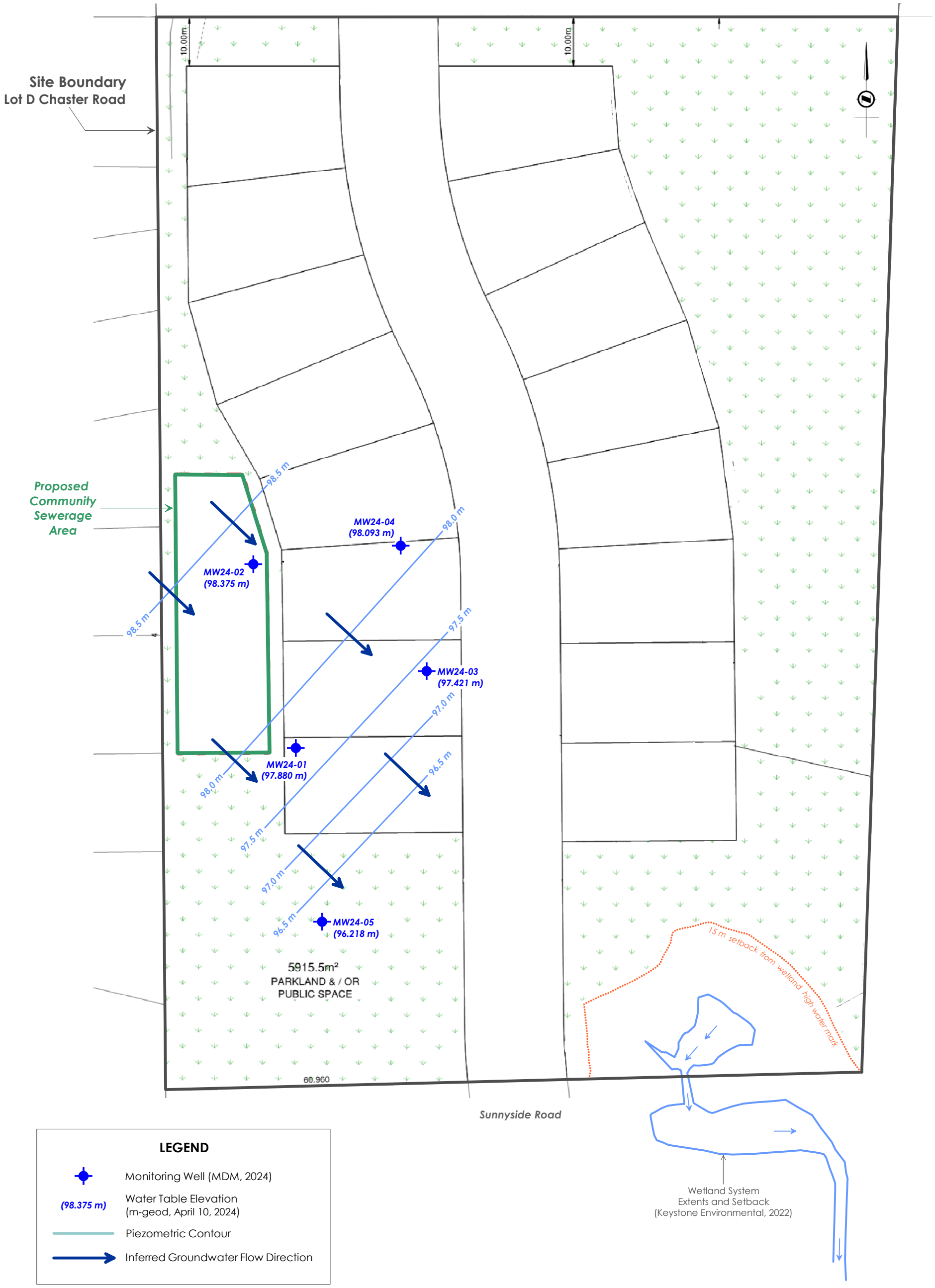
Where:

- K_2 is the field-saturated horizontal hydraulic conductivity
- R_T is $2.2902x(0.9842^T)/T^{0.1702}$ with T (temperature)
- d is the diameter of the standpipe or casing
- D is the effective diameter of the test section in the borehole
- a is assigned a value based on casing position relative to tested strata base
- b is the thickness of the tested material from the bottom of the standpipe
- h_1 is the height of water at time t_1
- h_2 is the height of water at time t_2
- t_1 is the time of the start of the increment
- t_2 is the time of the end of the increment
- b_2 is the length from the centre of the exposed screen section to the bottom of the layer being tested
- L is the screen length

ATTACHMENT #8

Figure 5. Groundwater Configuration

GROUNDWATER FLOW CONFIGURATION



LEGEND

- Monitoring Well (MDM, 2024)
- (98.375 m) Water Table Elevation (m-geod, April 10, 2024)
- Piezometric Contour
- Inferred Groundwater Flow Direction

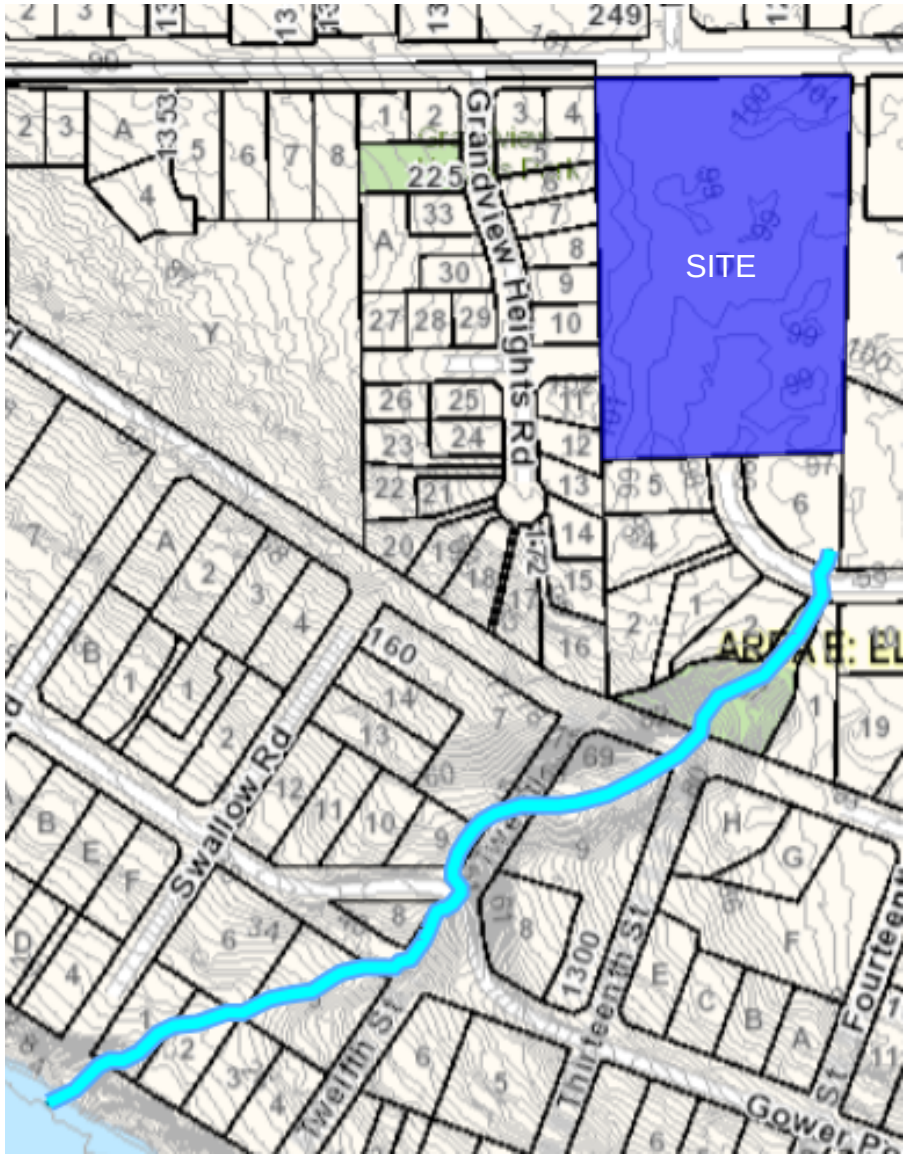
NOTES - 1) Base plan from Landev Consulting Inc. drawing "Draft Layout Plan" dated March 7, 2024 and Peter M. Gordon Land Surveying Inc. "Topographic Plan" dated March 9, 2022
2) Monitoring well locations field-verified with property line offset measurements

Project No. BC240003 **Drawn** MDM **Reviewed** M.D. Mann **Date** May 2024	MDM Groundwater Consulting	**HYDROGEOLOGICAL ASSESSMENT** AB Coast Projects Ltd. Proposed 16-Lot Subdivision - Lot D, Chaster Road, Gibsons, BC

Fig. 5

ATTACHMENT #9

Figure 6. Unnamed Stream Channel



Base plan from SCRD Maps Property Viewer.

Approx. Scale 1:4,500

Figure 6. Unnamed Stream Channel

Attachment F

Tree Summary

November 6, 2024

Summary commissioned by: Adi Bunim

Site Address: Lot D, Chaster Road, Gibsons

Site visit conducted by: Krista Braathen, ISA Certified Arborist PN -5458A, TRAQ Certified

Site inspection: Saturday, November 2. Weather was cool and cloudy.

Purpose

Heartwood Tree Consulting was contracted by Mr. Bunim to provide a summary of a site visit at Lot D, Chaster Road with regards to the forested lot.

Figure 1 – property in question (source: Google maps); approximate location of tree #66

The site visit on November 2 consisted of a very general overview of the trees which were not measured or tagged. Further hazard assessments and higher levels of inspection may be recommended and outlined in this summary. A small subdivision is planned for the property.

Photo 1 – north side of property in question

Observations

The undeveloped lot in question is approximately 8 acres of relatively flat forested land; the property is located within the Coastal Western Hemlock biogeoclimatic zone. The natural forest consists of red cedar (thuja plicata), Western hemlock (Tsuga heterophylla), Douglas fir (Pseudotsuga menziesii), Sitka spruce (Picea sitchensis), bigleaf maple (Acer macrophyllum), vine maple (Acer circinatum) and red alder (alnus rubra). There is estimated to be 350-450 trees on the lot.

Understory vegetation includes sword fern, bracken fern, salmon berry, blackberry, huckleberry as well as other native shrubs and herbs.

The overall health of the forest is considered to be good. However, many of the hemlocks were noted to be infected with Dwarf Mistletoe. One large hemlock, a 102cm diameter tree located near the northeast corner of the property was identified as infected with dwarf mistletoe and fungal activity was noted. This tree was tagged #66 and is considered hazardous due to the adjacent road and utility lines. Removal or this hemlock is suggested and leaving a wildlife snag would be beneficial to the environment.

Most trees on the lot are red cedars; the majority are in good condition with few showing signs of drought stress.

Recommendations

Removal of tree tagged #66 is suggested before it becomes more problematic; leaving a 3-4m wildlife snag would be considered beneficial to the environment.

Root protection areas can be assigned if needed once planned excavation areas are identified. Impact assessment of each tree adjacent to planned envelopes and foundations can be provided if and when required. Risk assessments can also be completed.

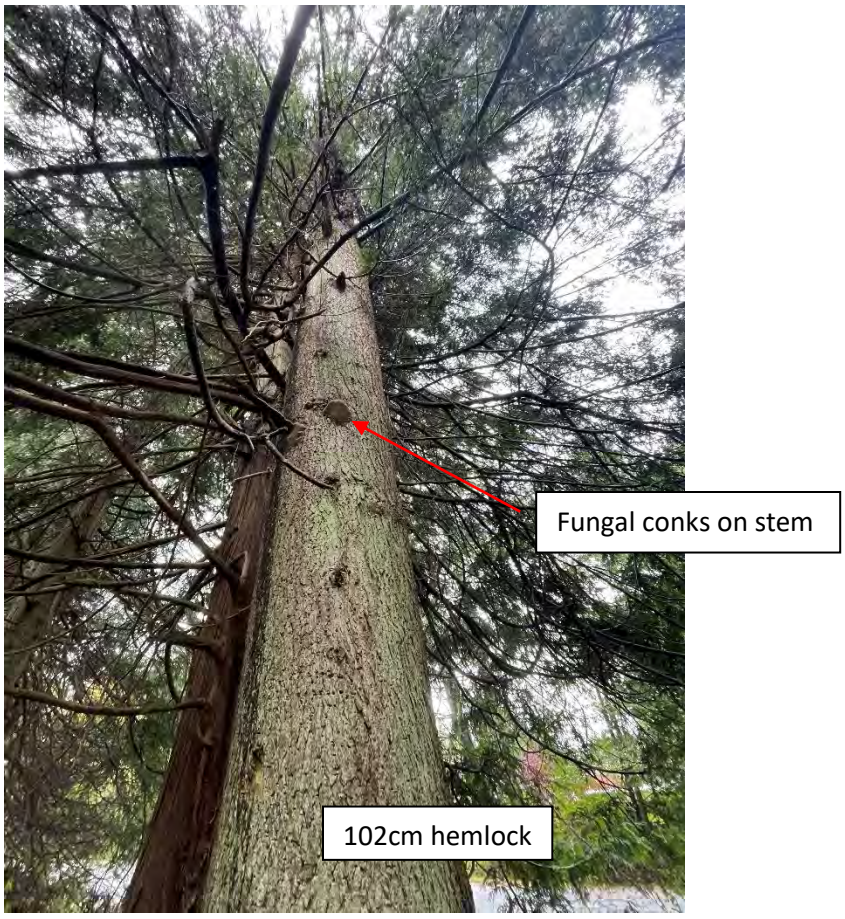
Photo 2 – large cedar tree

Summary

One large hemlock tree (tag #66) is expected to be removed.

Tree protection, impact assessments and risk inspections can be completed when more information is available.

Photo 3 – large hemlock tagged #66 suggested to be removed



Note

Trees were not individually inspected. This document is meant to serve as a tree management guide. More information would be needed to make recommendations based on planned excavation lines compared to assigned tree protection areas.

Photo 4 – natural trees and shrubs on site

Additional Notes regarding construction around trees

Integrity of the critical root zones (CRZ) of the trees are the main concerns with regards to construction. If excavation or construction takes place without careful consideration and appropriate protection of the trees, there will be heightened concern of potential failure and health decline.

Appropriate tree protection, as outlined, must be installed and maintained for the duration of the project. During excavation near the trees, it is recommended that a Certified Arborist be on site to ensure any challenges are managed appropriately. Any tree pruning, or root pruning required for clearance purposes should be done in a careful and appropriate manner to minimize stress to the trees and under the supervision of a Certified Arborist.

The following items should be considered to minimize stress or damage to the trees:

- Hydro-vac or air spade should be used to excavate in or around assigned protection zone.

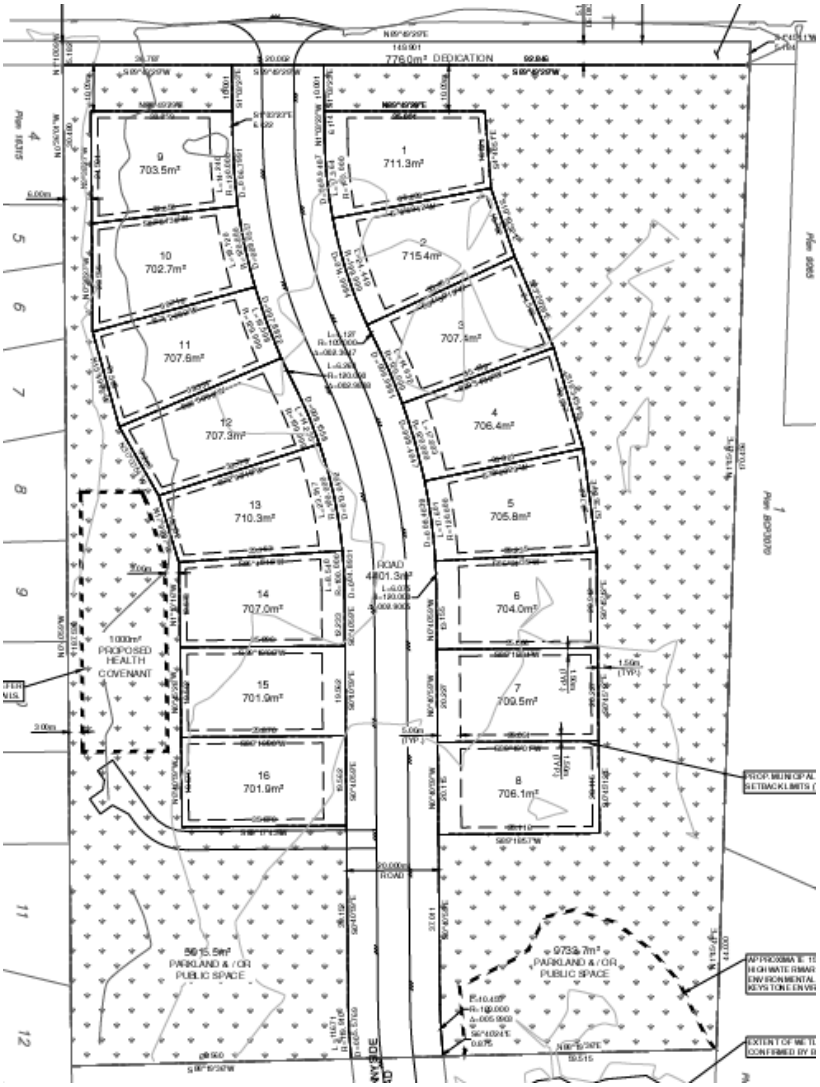
- When the area is filled in, gravel should be layered under the soil to reduce compaction and benefit the tree roots.

- Mulching, watering and fertilizing the trees may be advised depending on the amount of root damage and/or pruning noted.

- Any and all work or excavation within the assigned root protection zones must to supervised by a Certified Arborist. This will ensure that any damage is noted, required root pruning is done properly and that all necessary steps are taken to minimize stress

Krista Braathen
ISA Certified Arborist PN - 5458A
ISA Certified Tree Risk Assessor (TRAQ)
Heartwood Tree Consulting

Figure 2 – proposed lot layout



Assumptions, Limiting Conditions and General Waiver

I have no current or prospective financial interest in the vegetation or the property which is the subject of this report and have no personal interest or bias in favour of or against any of the involved parties or their respective position(s) if any.

The analysis, opinions and conclusions stated herein are the product of my independent professional judgement and based on current scientific procedures and facts, and the foregoing report was prepared according to commercially reasonable and generally accepted arboriculture standards and practices for British Columbia.

The information included in this report covers only those trees that were examined and reflects the condition of the trees as of the time and date of inspection. This report is 'valid' for the day of inspection only, as this is natural entity and weather conditions and site factors can change.

This report and the opinions expressed herein are not intended, nor should they be construed as any type of warranty or guarantee regarding the condition of the subject trees in the future.

To the best of my knowledge and belief, all statements and information in this report are true and correct and information provided by others is assumed to be true and correct.

I am not an attorney or engineer. This report does not cover those areas of expertise and represents advice only of arboricultural nature. Without limiting the generality of the preceding sentence, it is understood that nothing contained in this report is intended as legal advice or advice or opinions regarding soil stability or zoning laws, and this report should not be relied upon to take the place of such advice.

Attachment G

February 10, 2023

Mr. Adi Bunim
AB Coast Projects Ltd.
1800-1095 West Pender Street
Vancouver, BC V6E 2M6

Dear: Adi,

Re: Wetland and Stream Assessment
Lot D Chaster Road Gibsons, BC
Keystone Environmental No. 17811

Keystone Environmental Ltd. (Keystone Environmental) has prepared this letter report that summarizes the findings of a field assessment that identifies regulated streams and their required setbacks for Lot D Chaster Road Gibsons, BC (the Site).

The undersigned Qualified Environmental Professional (QEP) of Keystone Environmental conducted a survey of the Site to identify regulated watercourses (i.e., wetlands and/ or streams) for future development using the *Riparian Areas Protection Regulation* (*RAPR*) detailed riparian areas regulation (dRAR) assessment classification methods adopted for assessing 'streams' by the Sunshine Coast Regional District (SCRD).

1. DEVELOPMENT REGULATIONS

Federal, provincial and municipal regulations control changes made during development that may affect environmental resources on the Site. Relevant regulations are as follows:

1.1 Federal Legislation

- *Migratory Birds Convention Act:* protects migratory birds and their nests under the federal *Migratory Birds Convention Act* (*MBCA*) and the Migratory Bird Regulation (MBR July 2022).
- *Fisheries Act*: Provides protection for all fish and fish habitats; prohibits harmful alteration, disruption or destruction of fish habitat.
- *Species at Risk Act:* Protects the individual and critical habitat, as defined in the recovery strategy, of species listed as Threatened, Endangered, or Extirpated under Schedule 1 of the *Act* where they occur on federal land. Protection of species at risk on private land falls primarily to local government and voluntary stewardship.

Suite 320-4400 Dominion Street
Burnaby, BC V5G 4G3 | Canada
Ph: 604.430.0671
Fax: 604.430.0672
keystoneenvironmental.ca

1.2 Provincial Legislation

- *Water Sustainability Act* Section (11) regulates "changes in and about a stream".
- *Riparian Areas Protection Regulation* (*RAPR*)*:* defines stream classifications and the sizes of protective buffers that must be maintained around streams in each class.
- *Wildlife Act:* Section (34): protects birds and their nests.
- *Weed Control Act:* Requires a land owner control noxious weeds designated under the Weed Control Regulation.

2. SURVEY METHODOLOGY

2.1 Vegetation Survey

The Site was assessed by walking the area looking for plants identified as 'noxious' weeds under the *Weed Control Act.*

2.2 Fish and Fish Habitat Survey

The fish and fish habitat surveys were conducted according to the modified *RAPR* dRAR methods for regulated streams as defined under the *RAPR*[1].

3. RESULTS

A Site visit was conducted on November 24, 2022. Information on the Sites regulated biophysical attributes were collected to identify potential constraints to development and determine setback requirements by SCRD.

3.1 Watercourse Assessment

Using transects and perimeter searches of the Site regulated streams under federal and provincial regulations were identified and assessed for appropriate setbacks for future Site development. A total of three regulated 'streams' as defined by the *RAPR* were identified in association with the Site. They include a wetland and the ditches along Sunnyside Road.

3.1.1 Sunnyside Road Ditches

The two regulated streams along Sunnyside Road (Figure 1), were identified as ditches since they have the following characteristic:

- Flows are seasonal. Entirely manmade and straight without any observed significant headwaters or springs.
- They contain rooted vegetation that maintains their bank stability.

[1] (a) a watercourse, whether it usually contains water or not;
(b) a pond, lake, river, creek, brook;
(c) a ditch, spring or wetland that is connected by surface flow to something referred to in paragraph (a) or (b);

- Lateral movement is confined and stable in the channel.
- They form the property boundaries along the Site.
- They are aligned and constrained by Sunnyside Road.

They originate at the terminus of the road at the southern border of the Site (Figure 1). They obtain their flows from overland runoff and have been created to drain road and adjacent land runoff south along the east and west side of the road to a channel that flows south eventually terminating in the ocean (Figure 1). Both ditches are grass lined and were created for the purposes of draining overland flows when Sunnyside Road was created (Photographs 1 and 2).

They should not be considered 'streams' as defined under the *WSA* as they are not natural features in the landscape. They are defined as streams under the *Fisheries Act* and the *RAPR* as they contribute food and nutrient value to downstream fish and fish habitat. Under the *Fisheries Act* and the *RAPR* they will require 2 m setbacks perpendicular from their tops of banks for Site development.

3.1.2 Wetland

A wetland was located in the southeast corner of Site and on the adjacent parcel Lot 6[2] along Sunnyside Road (Figure 1).

The wetland originates from overland precipitation runoff of the forest forming an ephemeral pool that contains hydrophytic plants like various sedges (*Carex* sp.) and skunk cabbage (*Lysichiton americanus*, Photographs 3 and 4). The stagnant water that accumulates in the ephemeral pool drains once it reaches a certain capacity decanting via a swale to a permanent wetland located on Lot D (Figure 1, Photograph 5). The wetland then drains south through Lot 6 along the east side through a culvert under Sunnyside Road to a channel (Photographs 6 and 7), eventually terminating in the ocean.

The wetland is regulated under the *Fisheries Act*, the *WSA* and the *RAPR*. Under the *RAPR*, from its origin, it will require a 15 m setback along the north, west and east perpendicular to the high water mark as presented in Figure 1 for Site development.

[2] Lot 6 Plan EPP60000 Dist. Lot909 Land Dist. 1 Land Dist. 36

4. SITE DEVELOPMENT PROTECTION MEASURES

This section explains how the proposed application could be used to meet the protection measures for the area and it clarifies what measures can be implemented to protect the fouling of the SCRD storm sewer system and regulated streams associated with and south of Lot 6 during the development process.

During the development process the following is to be implemented in order to ensure the protection of the wetland and ditches as well as natural features of the Site:

- The Construction Environmental Plan (CEMP) should be implemented for the proposed development.
- An Erosion Sediment Control (ESC) Plan in accordance with the SCRD requirements for construction should be prepared to protect all regulated streams associated with the Site. The ESC Plan should be prepared by a QEP and include mitigation measures and Best Management Practices (BMPs) that avoid or minimize adverse impacts to the area. The ESC plan will be provided to the Contractor selected to perform the construction.
- Sediment control structures (e.g., sediment control fencing, orange snow fencing) should be installed as the first construction activity;
- The SPEAs for both ditches and the wetland on the Site shall be identified during construction with orange snow fencing and permanent fencing post construction shall be erected with protective signage to identify the setback areas in relation to the Site.
- Should any vegetation clearing on the Site occur for this project at any time of year, then in accordance with the federal *Migratory Birds Convention Act* Migratory (*MBCA*), the Bird Regulation (MBR, July 2022), and the provincial *Wildlife Act* (1996), all active bird nests as defined under the *Acts* and those identified in Schedule 1 of the MBR will need to be protected.
- The Site it is not expected to have a significant impact on the water quality of the entire drainage basin. The minimal increase in flow volume is not expected to increase the potential for flooding in this drainage basin. A minimal amount of additional surface water runoff (flow rate and quality) from the proposed roof leaders contributing to the area is considered insignificant to the total flow expected Best Management Practices during construction will be required to protect the storm sewer system of the area at the Site include:
    - Ministry of Environment (MOE) and the Department of Fisheries and Oceans Canada (DFO) Land Development Guidelines for the Protection of Aquatic Habitat;
    - Develop with Care 2014 – Environmental Guidelines for Urban and Rural Land Development in British Columbia; and
    - BC Ministry of Environment's A Users Guide to Working in and Around Water – Understanding the Regulation under British Columbia's *Water Sustainability Act*.
- Recommendations to be considered for the development include:
    - Bring water quality to the forefront through overland drainage that is vegetated;
    - Minimizing property paving by incorporating pervious pavement features into the development; and
    - Maintain current land situation for water discharge as much as possible (i.e., overland and ground infiltration to grass areas).

- A project kick-off meeting with the contractor and the QEP for this Project is recommended to go over sensitive areas (i.e., setback locations) and Site-specific measures (e.g., fencing) and general notes will be discussed for installation and maintenance of the system through the Project period.
- All copies of permits, licenses and approvals, where required, will be available for review on-Site. Works must comply with the terms of all permits, licenses and approvals. Changes to proposed works relevant to these permits, licenses and approvals must be approved by the appropriate regulatory agencies.
- All Project activities will be limited to the approved project footprint, which should be clearly delineated in the field by the QEP prior to commencement of the works.
- Care will be taken for all construction work for the facilities such that there is no release of any deleterious substances to the regulated streams.
- Development activity will minimize disturbance and installation of infrastructure in the Site slope to better align with tree retention goals, SPEA setbacks and geotechnical issues.

5. STATEMENT OF LIMITATIONS

Findings presented in this report are based upon (i) reviews of available documentation, (ii) observations of the project area and surrounding lands. The conclusions and recommendations documented in this report have been prepared in a manner consistent with that level of care and skill normally exercised by other members of the environmental science profession, practicing under similar circumstances in the area at the time of the performance of the work.

Report writer and Professional of Record is Libor Michalak R.P.Bio., QEP and demonstrable experience in conducting environmental assessments.

This report has been prepared solely for the internal use of AB Coast Projects Ltd., pursuant to the agreement between Keystone Environmental Ltd. and AB Coast Projects Ltd. By using this letter report, AB Coast Projects Ltd. agrees that they will review and use the letter report in its entirety. Any use which other parties make of this letter 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 letter report.

We trust the results of this letter report and recommendations provided herein are able to assist in the preliminary planning stages for Site development. If you have any questions or require additional information, please do not hesitate to contact the undersigned at 604-838-0475.

Yours truly,

Keystone Environmental Ltd.

Libor Michalak, R.P.Bio., QEP
Senior Biologist
I:\17800-17899\17811\17811 221125 Lot D Chaster Rd, Gibsons BC Stream Rpt.docx

ATTACHMENTS:
Photographs
Figure

PHOTOGRAPHS

Photograph 1: Ditch along Sunnyside Road (west side) south of Site (south view).

Photograph 2: Northern Ditch along Sunnyside Road (west view).

Photograph 3: Ephemeral pool in southeast of Site.

Photograph 4: Dried up ephemeral pool in southeast of Site.

Photograph 5: Wetland on Lot 6 south of Site (east view from trail).

Photograph 6: Wetland outflow on Lot 6 under Sunnyside Road (north view).

Photograph 7: Wetland outflow to stream south of Sunnyside Road (southwest view).

Attachment H

Topographic Plan of Lot D
Reference Plan 1288, DL 909

Scale – 1:500

0 10 30 METRES

The intended plot size of this plan is 560mm in width by 864mm in height (D size) when plotted at a scale of 1:500.

Contour Interval: Major 2m
Minor 0.5m

Contours derived from field survey.

Thaw layers Node and Elv for X,Y,Z coordinates.

Distances are horizontal ground level, in metres and decimals thereof.

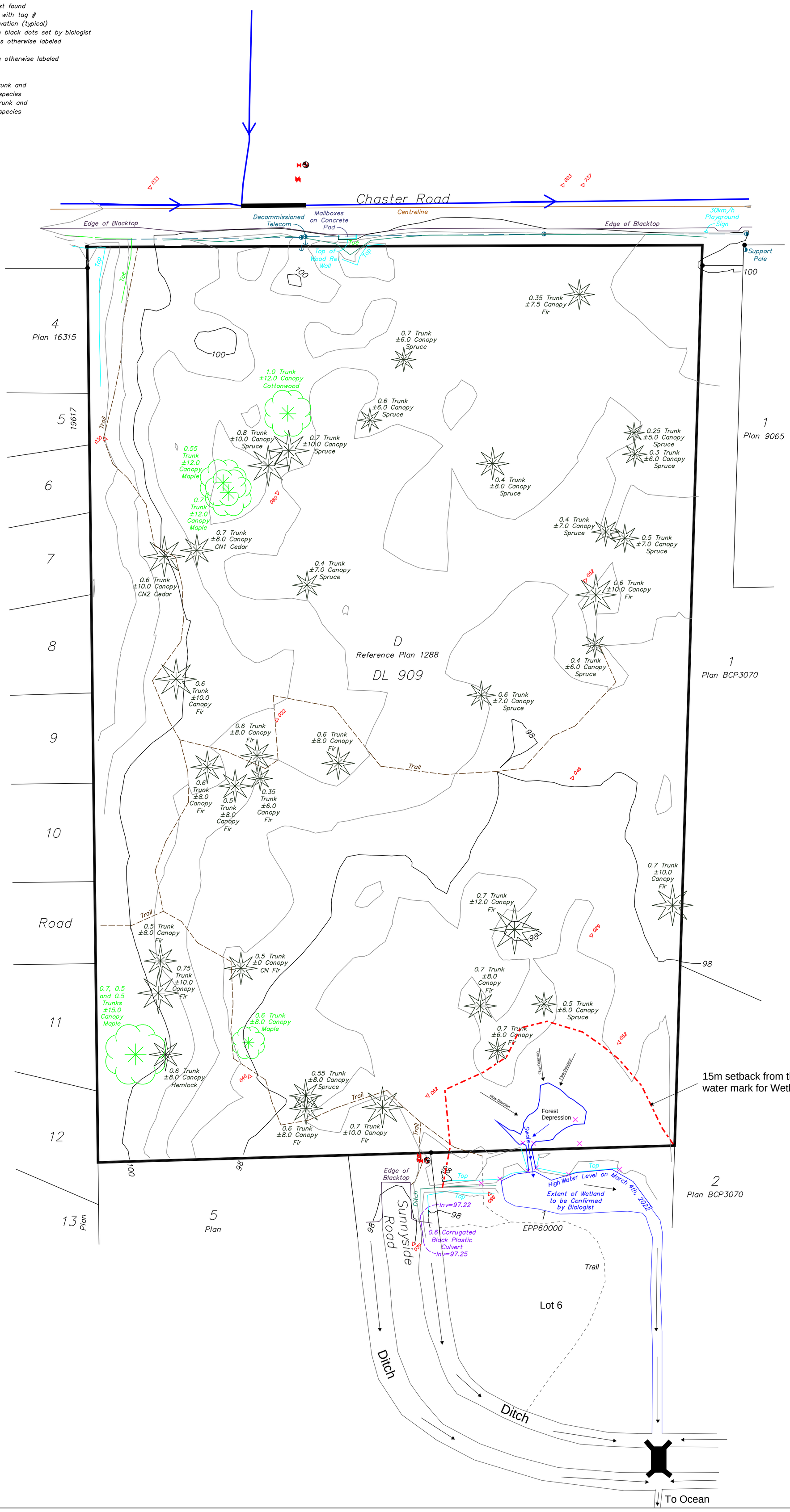
Elevations are in metres and decimals thereof, based on GPS observations.

This plan lies within the Sunshine Coast Regional District.

Date of this drawing: March 9th, 2022

Legend

- denotes standard iron post found
- 033 denotes traverse hub set with tag #
- ×100.3 denotes 3D node with elevation (typical)
- denotes pink flagging with black dots set by biologist
- denotes water valve unless otherwise labeled
- denotes fire hydrant
- denotes hydro pole unless otherwise labeled
- denotes anchor
- 0.55 Trunk ±4.0 Canopy Maple — denotes deciduous tree trunk and canopy diameters and species
- 0.8 Trunk ±4.0 Canopy Spruce — denotes coniferous tree trunk and canopy diameters and species



PETER M. GORDON
LAND SURVEYING INC.
PO BOX 2329 SECHELT B.C.
V0N 3A0 604-885-3286 CELL 604-740-2126
gordonsurveys@dccnet.com

Figure 1

S2200503

TO: SCRD Advisory Planning Commission – April 2025

AUTHOR: Julie Clark, Senior Planner

SUBJECT: HOUSING NEEDS REPORT;
OFFICIAL COMMUNITY PLAN (OCP) RENEWAL PROJECT SCOPE AND TIMELINE UPDATE

OVERVIEW

Purpose of Report

The purpose of this referral is to provide information to all Advisory Planning Commissions (APCs), with two attached reports. APC comments have not been requested for these reports.

Both reports relate to the SCRD's OCP Renewal Project. This information is referred by SCRD for information to assist APC members in familiarizing the scope, timeline and (some) data that forms the project.

The Housing Needs Report was commissioned in 2024 according to legislative requirements of the Province. It was received by SCRD Board in December 2024. It is Attached for APC members information (Attachment 1).

The OCP Renewal Project Scope and Timeline Update report was received by SCRD Electoral Areas Services Committee on February 20, 2025. This report followed a project pause, and served to confirm an updated scope and timeline for the project (Attachment 2).

Project Status updates are provided monthly at SCRD's Electoral Areas Services Committee and then uploaded to https://letstalk.scrd.ca/ocp-renewal, along with any other staff reports that are presented. APC members may wish to visit this site, share with their community and subscribe to the email list for project updates.

Attachment 1: Staff cover report, Housing Needs Report

Attachment 2: Staff report on OCP Renewal Project Scope and Timeline Update.

SUNSHINE COAST REGIONAL DISTRICT STAFF REPORT

TO: Electoral Area Services Committee – November 21, 2024

AUTHOR: Jonathan Jackson, Manager, Planning and Development

SUBJECT: **2024 Housing Needs Report**

RECOMMENDATION(S)

(1) THAT the report titled Housing Needs Report be received for information;

(2) AND THAT the Housing Needs Report be referred to the Advisory Planning Commissions for information.

BACKGROUND

The purpose of this report is to present the Sunshine Coast Regional District's 2024 Housing Needs Report (HNR) to the Board, before the legislated deadline of January 1, 2025.

Legislative Context

In BC, the *Local Government Act* (Division 22, Section 585) requires municipalities and regional districts to prepare HNRs based on a standard methodology provided in the *Housing Needs Report Regulation*. HNRs must include the total number of housing units required to meet anticipated housing needs for the next 5 years and 20 years for each electoral area. HNR data and findings must be considered when updating local government Official Community Plans (OCPs).

Identified housing needs are estimates that are calculated using the province's specified methodology. Staff recognize each electoral area has unique influences that may not be fully captured by the standardized provincewide methodology. As SCRD considers the application of these results to future growth planning, it may be prudent to plan for a range of new housing capacity that is nimble to adjust to actual demand. HNRs are required to be updated every 5 years to reflect new statistical data.

DISCUSSION

The HNR study area includes the electoral areas of Pender Harbour/Egmont, Halfmoon Bay, Roberts Creek, Elphinstone, and West Howe Sound. HNRs for the Town of Gibsons, District of Sechelt, and Islands Trust areas are complete or underway. shíshálh Nation Government District is not required to complete a HNR.

Summary of Key Findings & Insights

The SCRD study area has a population of 15,590 people and 7,195 households, with an average household size of 2.2 people, according to the 2021 Canada Census. HNR findings show 930 additional housing units are needed over the next 5 years, and a total of 3,018 additional housing units are needed within 20 years. This represents a 29.3% growth in total households from 2021. For comparison, 1,705 new housing units were constructed over the past 20 years from 2001 to 2021. For further results, the full HNR can be found in Attachment A.

The HNR demonstrates the current housing development pace in the study area is not sufficient to meet projected housing needs for the next 5 and 20 years. Legislation further requires, as a local government, SCRD must align OCP growth capacity with the HNR. While the HNR informs housing need, as a community SCRD gets to determine where new units go, what forms they take, and how growth management tools are applied to ensure new housing meets community vision.

Organization and Intergovernmental Implications

HNRs are intended to inform evidence-based land use and infrastructure decision making for local governments. Growth management tools such as OCPs and implementing bylaws (zoning, servicing, and development financing) can support effective and efficient delivery of housing and supporting infrastructure and amenities. SCRD has roles in supporting both housing needs within the electoral area HNR study area and also larger regional housing needs contained in member municipality HNRs. HNRs can inform cross-departmental rural and regional decision making on key service area issues related to growth, ranging from potable water supply, fire flows, solid waste, wastewater, parks, recreation, transit and more.

Currently there is adequate zoned land available for development of the number of housing units identified as required in the HNR. For example, there are thousands of residential or rural use parcels that are permitted to have second dwellings, auxiliary dwellings or secondary suites. OCP and zoning bylaw renewal offer the opportunity to engage the community in dialogue about the preferred location, form and amenities associated with future growth. As well, coordination between utilities planning and growth planning – at a regional scale; not just in electoral areas – will promote community and local government financial sustainability.

Financial Implications

The 2024 HNR was funded through the Capacity Funding for Local government implementation of Housing Legislation provided to the SCRD by the Province. In 2019, the HNR was also funded through a dedicated grant. The *Local Government Act* prescribes that a HNR needs to be prepared every five years to report on the current and anticipated housing needs. Looking ahead, SCRD must plan for the resourcing required to meet

ongoing legislated HNR requirements, including supporting growth management of determined housing needs.

Timeline for Next Steps

SCRD's HNR is due to the province and to be received by the Board before January 1, 2025. In alignment with legislation, the HNR data is required to be considered when updating OCPs and zoning bylaws to accommodate the number of new dwelling units identified.

Communications Strategy

The HNR is required by legislation to be published on SCRD's website. The HNR can be used by the public, First Nations, and stakeholders such as non-profit organizations, private developers, and other government agencies to inform housing investment decisions in the region.

The HNR can be referred to the Area Planning Commissions (APCs) for information, as noted in recommendation number two of this staff report. The HNR will also be added to the document library on https://letstalk.scrd.ca/ocp-update.

STRATEGIC PLAN AND RELATED POLICIES

HNR data directly informs planning for water and solid waste services, and therefore supports the Board's strategic priorities. The HNR also implements the Strategic Plan lenses of service delivery excellence, social equity and reconciliation, and governance excellence.

CONCLUSION

The 2024 Sunshine Coast Regional District HNR is due to the province by January 1, 2025. The report will help the SCRD, province, and community understand the current and future housing needs. Per the *Local Government Act*, the HNR will be used to inform the SCRD's forthcoming OCP and zoning bylaw update project.

ATTACHMENTS

Attachment A – 2024 Sunshine Coast Regional District Housing Needs Report

Reviewed by:			
Manager	X – J. Jackson	Finance	
GM	X – I. Hall X – R. Rosenboom	Legislative	X – S. Reid
CAO/CFO	X - T. Perreault	Other	

2024

Housing Needs Report

Sunshine Coast Regional District

November 2024

Acknowledgements

Land Acknowledgement

The Sunshine Coast Regional District is located on the territories of the shíshálh and Sḵwx̱wú7mesh Nations.

Table of Contents

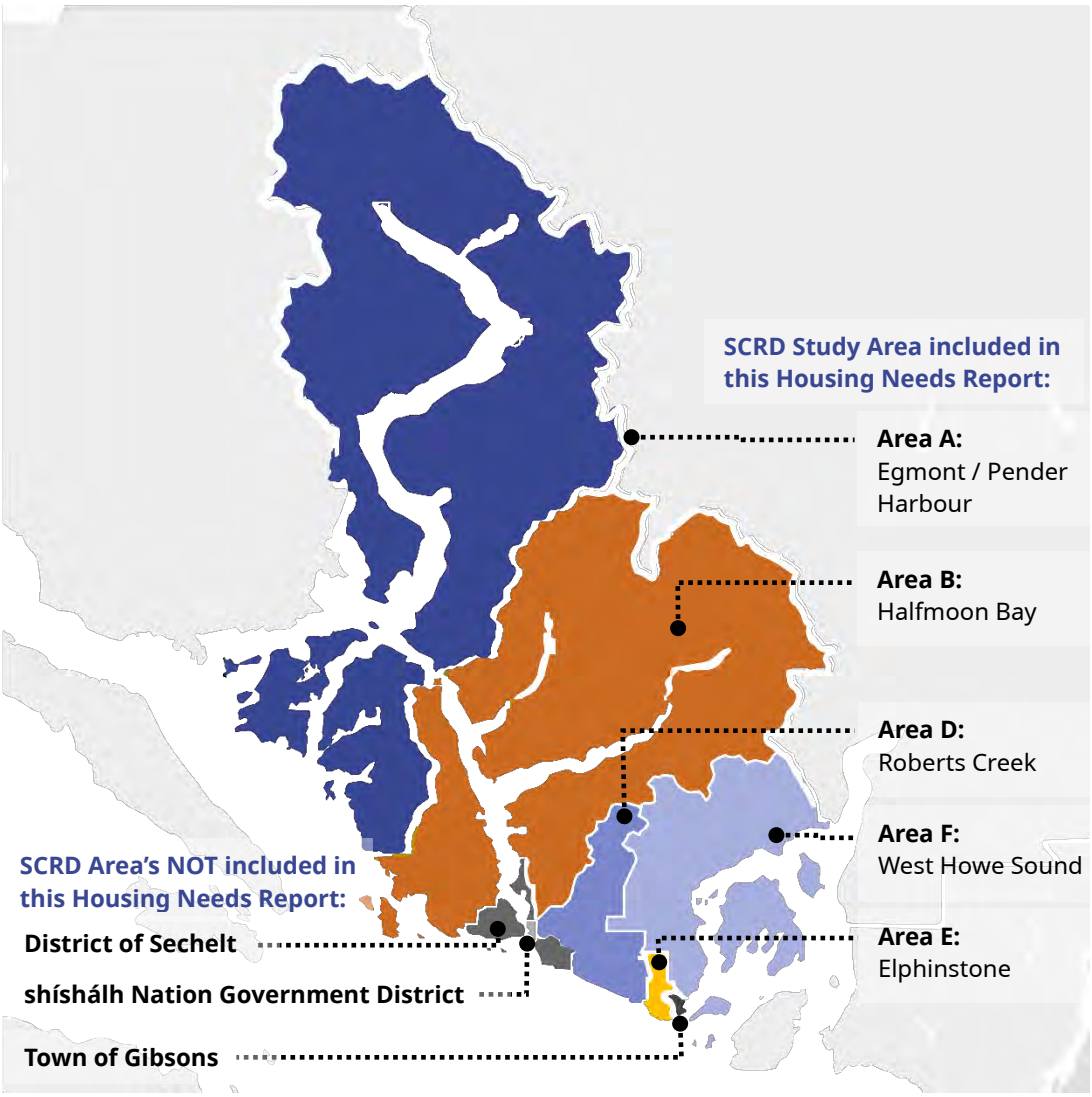
Introduction

The Sunshine Coast Regional District ("SCRD") is a local government located along the southwest coast of British Columbia, encompassing a diverse range of landscapes from rugged coastlines to dense forests. The SCRD is made up of eight electoral areas: Egmont / Pender Harbour (Electoral Area A), Halfmoon Bay (Electoral Area B), Roberts Creek (Electoral Area D), Elphinstone (Electoral Area E), West Howe Sound (Electoral Area F), District of Sechelt, Town of Gibsons, and the shíshálh Nation Government District.

This report covers the electoral areas (see Map 1 below) where SCRD has land use planning jurisdiction (the "study area"). The shíshálh Nation Government District, Islands Trust, and the municipalities of District of Sechelt and Town of Gibsons are not included in the study area. The District of Sechelt, Town of Gibsons, and Islands Trust are conducting their own housing needs assessments.

Map 1: SCRD Electoral Area Boundaries

Source: Sunshine Coast Regional District.



What is a 'Housing Needs Report' and why is it necessary?

In response to increasing concerns about housing costs and their impacts on residents across the Province, the BC Provincial Government has introduced additional Housing Needs Report (HNR) requirements.

As of August 2024, all municipalities and regional districts in BC must now prepare Interim HNRs by January 1, 2025, using the HNR Method to identify the 5- and 20-year housing need in their communities.

The first regular HNRs is required to be completed by December 31, 2028, and then every five years thereafter.

In addition to reporting on the anticipated housing need for the next 5 and 20 years, municipalities and regional districts must also provide statements about seven key areas of local need and actions taken by the local government, since receiving the most recent HNR, to reduce housing needs. The seven key areas of local need include affordable housing, rental housing, special needs housing, seniors housing, family housing, housing in proximity to transit, and shelters and housing for people at risk of homelessness.

In June 2024, the BC Provincial Government released legislative requirements for the HNR, which serve as the foundation for this written report. As a means of meeting the legislative requirements for a regional district, guidance was provided through consultation with the Province and the creation of the BC HNR Calculator – an online and provincially compliant tool developed by UBC's Housing Assessment Resource Tools (HART) that automates the HNR Method and the calculation of housing units communities need for over 5 and 20 years.

This report was developed to **complement SCRD's Official Community Plan (OCP) renewal initiative and is a provincial requirement**, providing **insights into the current and projected housing requirements** within the region.

The findings from this report will play a pivotal role in shaping the new OCP by **ensuring that the planning framework aligns with the region's evolving housing demands.** The HNR is designed to be **data-driven and to inform other SCRD housing strategies and plans**, including the OCP. However, the HNR is not intended to determine how and where housing should be delivered to meet the housing needs highlighted in this report. Such decisions will be made through other initiatives conducted by the SCRD, including the OCP renewal initiative. Furthermore, data from this HNR can also be used for targeted advocacy to senior government officials who have housing responsibilities.

Engagement with SCRD staff and the contractor working for the SCRD on regional housing coordination, alongside Census data from the years 2006, 2011, 2016, and 2021, formed a large portion of the in-depth data analysis conducted to show the current housing landscape in the study area. This report is further informed by growth projections of the region as well as a combination of multiple current state variables related to housing and demographics.

This analysis aims to capture the current and future housing need which can play a large role in shaping the direction of the SCRD's planning framework. In addition to capturing the status of housing, the data also reveals how many new housing units are needed to improve housing access and affordability for residents. Additionally, the data in this report will be used to inform future policies and regulations that relate to housing such as service provision (water and wastewater), transportation, climate resiliency, amongst many other topics that play a role in planning the future of a region.

By understanding the unique characteristics and needs of the region, targeted interventions can be developed to improve housing outcomes for all residents, ensuring the SCRD remains a vibrant and inclusive community.

Executive Summary

Current State of Housing in the Study Area

Like much of the rest of British Columbia (BC) and Canada, the SCRD is facing a range of complex housing challenges. Its desirability as a place to live has resulted in recent influxes of population that has put significant pressure on the study area's local housing market. The current supply of housing, mainly single-family dwellings, have become unaffordable for many people to buy or rent. As a result of these pressures, present demand for housing has outpaced supply, leading to rising property values and escalating rental costs.

Housing affordability and availability are key issues facing the housing system in the study area. Low-income households are particularly vulnerable to the impacts of rising housing costs, which can consume a large portion of their income The availability of affordable rental housing is limited, making it difficult for many residents to find appropriate and stable accommodation.

According to the BC Non-Profit Housing Association, the **study area contains the highest proportion of renters in BC who spend more than 50% of their pre-tax income on housing**.

Additionally, certain population groups face unique challenges in the housing market:

- Seniors
- People experiencing homelessness
- People with disabilities
- Families

These listed groups often require housing that is affordable and tailored to meet their unique needs, offering support and accessibility specific to each group's circumstances. The shortage of specialized housing falls short of meeting demand, worsening the challenges faced by these groups.

Key Findings from the Data Analysis

The study area is experiencing **pressures in the local housing markets related to affordability, overcrowding, and aging housing stock**. These three factors represent the adequacy, suitability, and affordability standards for housing and are used to measure "core housing need." Core housing need is a major metric for reflecting the housing challenges currently seen in Canada.

A household is considered to have a core housing need if it falls below the minimum threshold in at least one of the three adequacy, suitability, or affordability standards above and it would have to spend 30% or more of its income to afford the median rent of an alternative unit that meets the standards.

About **one in ten households** in the study area are **in core housing need** and facing **affordability challenges**.

Increases in Rent & Property Prices

Housing unit sales prices are increasing rapidly and have outstripped income growth. As property values and rental prices soar, the gap between housing unit affordability and median incomes continues to widen, making it increasingly difficult for many residents to find affordable housing. Although the median household pre-tax income in the study area increased by 32% over the last four Census periods, these increases are concentrated in established owner households rather than young families and first-time buyers.

Renter Disparity

Due to typically lower incomes, renters are more likely to be affected by ongoing affordability challenges than owners. The percentage of renters experiencing core housing need is substantially greater than that of owners. As of 2021, about one in four renter households (25.6%) across the study area is in core housing need, compared to only 7.6% of owner households. This disparity makes ownership less attainable for demographic groups like young families and single young professionals.

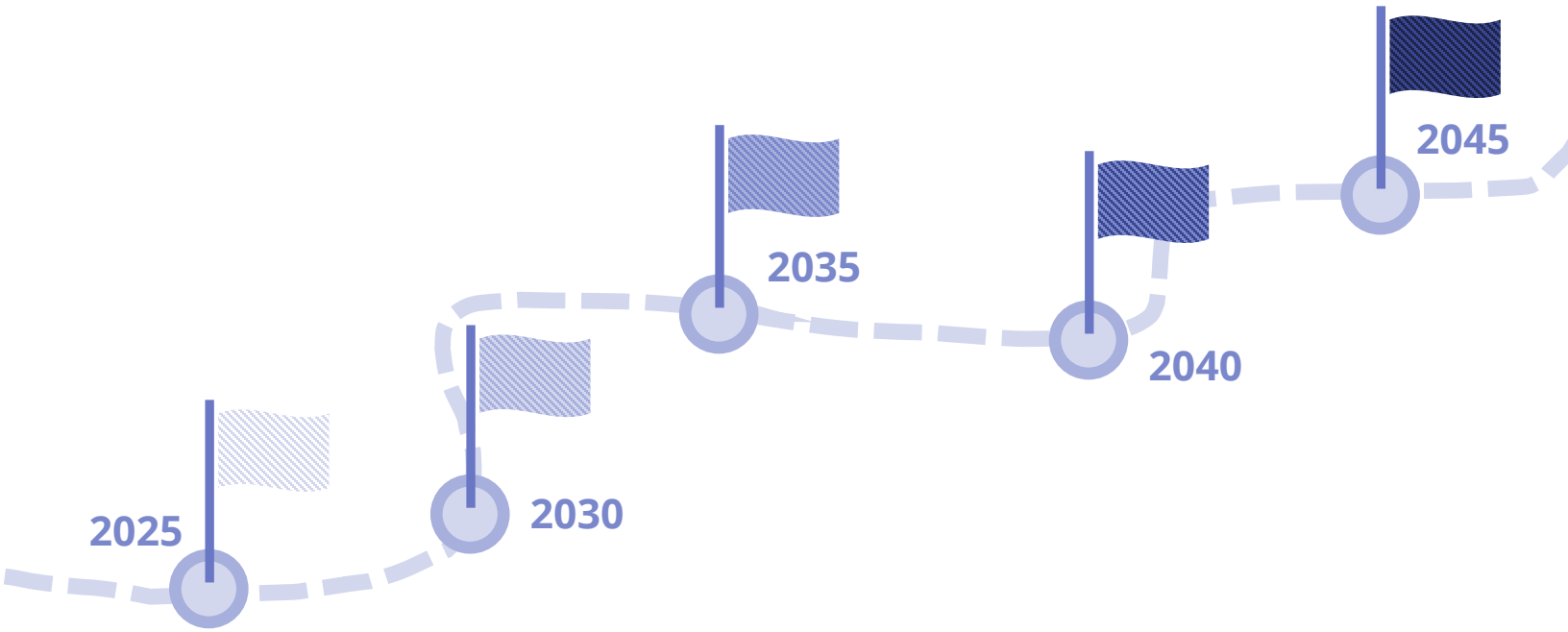
Outpaced by Growth

The study area is experiencing rapid population growth, with an increase of almost 10% between 2016 and 2021 within the study area. The increase in demand for various types of housing is not being met by commensurate supply, which will further strain the availability of affordable housing units. The result is a growing housing challenge affecting a broad spectrum of the population already struggling to find adequate, affordable housing.

Anticipated Housing Needs

In line with legislative requirements for HNRs published by the BC Provincial Government, municipalities and regional districts are required to prepare an analysis of the number of additional housing units required to meet the 5- and 20-year housing need in their communities.

An analysis of the current and future housing needs reveals that **3,018 additional housing units will be required** across the study area **over the next 20 years**.



Five Types of Housing Needs

There are 5 areas of investigation related to the housing needs of the study area, that are required by the Province and must be included in the HNR. Together, they provide data and paint a picture of the current and future housing need for a community.

Through the HNR there are five identified areas:	
1. Extreme core housing need	These are households falling below thresholds for housing adequacy or suitability that also spend more than 50% of their pre-tax income on shelter costs. Shelter costs are defined as, where applicable, mortgage payments, property taxes and condominium fees, along with the costs of electricity, heat, water and other municipal services. Households in extreme core housing need face severe challenges in securing and maintaining adequate, suitable, and affordable housing. These households spend a disproportionate amount of their income on housing costs, which may leave insufficient funds for other essentials.
2. People experiencing homelessness	These are situations for individuals, families, or communities without stable, safe, permanent, appropriate housing, or the immediate means and ability to acquire it.
3. Suppressed household formation	Suppressed household formation refers to instances where individuals or groups delay or forego forming independent households due to housing constraints. These may include adults living with family members or roommates because of affordability concerns and individuals wishing to leave unsafe or unstable environments but cannot due to a lack of places to go.
4. Anticipated household growth	The actual level of household growth depends on a variety of factors, including economic conditions, migration patterns, changes in birth and death rates, changes in household size and composition, as well as changes in trends and policies affecting housing demand and supply.
5. Rental vacancy rate adjustment	As per legislative requirements, local governments are mandated to estimate the number of additional housing units needed to achieve a target rental vacancy rate of 3%.

Housing Need Estimates for the Study Area

HNR provides standardized calculation methods that aid in establishing estimates on how many additional units are required to effectively meet a community's housing needs. For the study area, the following estimates were calculated:

250

Extreme core housing need

It is estimated that **250 additional housing units will be needed** across the study area over the next 20 years to support renters and owners with a mortgage **experiencing extreme core housing need**.

73

Homelessness

From the report, "2021 estimate of the homeless population in British Columbia", provided by the Province, 146 individuals were identified as experiencing homelessness in the SCRD. This number includes individuals in the study area, District of Sechelt, and Town of Gibsons.

Following the HNR Method, it is estimated that there are 73 individuals experiencing homelessness in the study area. This method assumes that one new housing unit per person experiencing homelessness is required; therefore, the total **new housing units required to reduce homelessness in the study area is 73 housing units over the next 20 years**.

570

Suppressed household formation

Following the HNR Method, it is estimated that 570 units could theoretically form if housing conditions were less constrained[1].

Therefore, **570 new housing units are needed over the next 20 years to reduce suppressed household formation** on the Sunshine Coast.

2,103

Anticipated household growth

Households in the study area has grown significantly and is expected to continue to do so in the future. More housing units are needed to accommodate the anticipated household growth and future demand.

Based on the SCRD's 20-year household growth rate of 29.3%, **the study area could see an increase of 2,103 households in 20 years**. This would require the addition of 2,103 new units to the study area's housing stock.

24

Rental vacancy rate adjustment

The current provincial vacancy rate is 1.4% which falls below the target rate of 3%.

Over the next 20 years, **24 new housing units will be needed to achieve the rental vacancy rate of 3%**.

[1] Based on the HNR Method, less constrained housing conditions are characterized by a headship rate from the 2006 Census data – the earliest available data when housing conditions were more favourable. 2006 headship rates allow for a calculation of how many additional households might have formed under more favourable housing conditions when housing supply was less constrained, which reveals the number of suppressed households on the Sunshine Coast.

In total**, the study area is in need of 3018 new housing units over the next 20 yea**rs to meet the estimated demand identified in this report. For comparison, **1,705 new housing units were constructed in the study area over the past 20 years** from 2001 to 2021.

Findings from Engagement with SCRD Staff

This HNR forecasts future housing needs based on the government-provided HNR Method, but also incorporates insights gathered from SCRD staff and the contractor working for the SCRD on regional housing coordination in order to present contextualized perspective on the housing needs of the study area.

Affordability Challenges

- Input from SCRD staff and its contractor have indicated that affordability is a key challenge for residents, local businesses, and service organizations alike.
- Renters in the study area are significantly more likely to experience core housing need[2] and extreme core housing need[3] compared to owners, largely due to a shortage of purpose-built rentals and non-market housing. This scarcity forces many households making median incomes to grapple with unaffordable rents or living in unsuitable or repair-needing housing units.
- Single-parent families, particularly those led by mothers who have experienced violence, are disproportionately affected by these affordability issues. Often, they find themselves in short-term transitional housing with limited options for permanent accommodation.

- Many young families are unable to enter the ownership market due to the scarcity of entry-level ownership options.
- This affordability crisis underscores the urgent need for more affordable housing options for families and residents in the study area.

[2] Core housing need refers to whether a private household's housing falls below at least one of the indicator thresholds for housing adequacy, affordability, or suitability, and would have to spend 30% or more of its total before-tax income to pay the median rent of alternative local housing that is acceptable (attains all three housing indicator thresholds).

[3] Extreme core housing need is similar to core housing need except for that a household would have to spend 50% or more of its before-tax income to pay the median rent of alternative local housing.

Gaps in Supportive Housing Supply

- The study area is home to diverse groups of people who require supportive housing. However, stakeholder engagement reveals a significant gap between the current supply of affordable and appropriately supported residential options and the actual needs.

- Aging and burnt-out caregivers of people of disabilities, seniors, and individuals with special needs emerged as the number one reason people seek for supportive housing. People experiencing homelessness, which include a high proportion of youth and people who identify as Indigenous, represent an extremely vulnerable group in the study area. Many of which live with addictions and/or mental illness and require an array of housing options, from transitional housing and shelters to deeply affordable housing with on-site supports like life-skills training and connections to primary healthcare.

Aging Population & Housing Stock

- The study area is also a preferred retirement destination for a significant number of retirees. These insights are supported by Census data which reveals that population in the study area is aging. The share of population over 65 in the region has consistently been relatively high compared to the rest of British Columbia and has increased from approximately 16% in 2006 to 31% in 2021.

- The predominance of single detached housing units in the study area poses accessibility challenges for seniors, such as problems with stairs and unsuitable bathrooms. These housing units also demand upkeep, which becomes more difficult with as the residents age. The need for housing that caters to seniors' needs, including assisted living facilities, as well as social and financial supports, will become increasingly critical in the future.

- It is evident that the demand for purpose-built rentals, rent supplement units, supportive and transitional housing is extremely high in the study area.

Data and Limitations

Data Sourcing & Availability

To provide a rich understanding of local housing needs, the HNR legislation requires local governments to collect approximately 33 datasets about population, households, housing stock, economic profiles, and anticipated housing needs. All required data, except for the local government data, can be obtained through the BC Data Catalogue.

The following outlines the sources of data used within this report:

- Statistics Canada 2006, 2011, 2016, and 2021 Censuses, drawn from custom data sets provided by the BC Province for HNRs
- BC Housing
- Canadian Mortgage and Housing Corporation (CMHC)
- Housing Assessment Resource Tools (HART)
- Engagement with internal and external stakeholders of the Sunshine Coast Regional District

For data available from Statistics Canada, data was required and collected from the previous four census reports (2006, 2011, 2016, and 2021). Throughout this report, some of the data from Statistics Canada is presented beyond the HNR's legislative requirements to provide additional critical insights into the current housing requirements within the region in support of the OCP renewal initiative undertaken by the SCRD. This data sourced is not solely based on the last four census reports but instead includes recent and available information to help better understand the current and future housing needs in the study area.

Limitations

Seven limitations were identified around the data referenced in this report:	
1. Outdated Data	The census is conducted every five years and the most recent available census data was published in 2021. It is important to note that the 2021 census data may not fully reflect the current housing situation in 2024. Economic conditions, population growth, migration patterns and housing market dynamics, such as post-pandemic shifts in housing demand and the Bank of Canada interest rate decisions, could have changed significantly since the data was collected. This may lead to a potential mismatch between the report's findings and the actual needs in 2024.

Seven limitations were identified around the data referenced in this report:	
2. Data Gaps	Some datasets are not available at the electoral-area level and as a result, required the use of provincial or regional district level data. This can lead to an incomplete picture of housing needs in the context of smaller communities.
3. Subjectivity in Projections	Future housing needs projections rely on a variety of assumptions that should be used with caution. The anticipated population growth rate used to inform future housing demand is an average for the entire SCRD due to the unavailability of electoral-level growth rates. Individual electoral areas may experience different growth rates, which could affect the distribution of housing demand. The projections should be considered in conjunction with an informed understanding of the context within the region.
4. Privacy and Confidentiality Restrictions	Some BC Housing data, including non-market housing data provided in Chapter 3, has been suppressed at the source and anonymized to protect privacy for communities with fewer than 10 datapoints. BC Housing data was used to analyse supportive housing and only represents non-market housing.
5. Current Household Data Only Includes Private Households	The Census datasets used in this report focus exclusively on occupied private dwellings in the study area. The terms "housing units" and “housing stock” refer to these occupied private dwellings and do not represent the entire current housing stock. Therefore, the Census data does not include vacant housing units or account for non-private dwellings such as group homes, nursing homes, or other types of communal living situations. Throughout this document when the term “total private households” is used, it refers exclusively to total private households in occupied private dwellings.
6. Data Discrepancies	There are minor and immaterial discrepancies between the total numbers provided by Statistics Canada's census and the numbers obtained when manually adding up the components of those totals. For example, Statistics Canada 2021 Census data provides a total number of people moving into an electoral area, called “movers” and a breakdown of that total into migrants and non-migrants. However, when the number of migrants and non-migrants is added up independently, the result does not match the total given by Statistics Canada. These differences are typically around +/- 5 units and are immaterial and do not affect the interpretation of the data. Where there is a discrepancy between the manual calculations and the data provided by Statistics Canada, the manually calculated total is used in this HNR.

Chapter 1
Community Demographic & Economic Profile

A first step to understanding the housing needs of its varied households is examining the demographic and economic conditions within the SCRD's communities.

Chapter 1 provides a baseline assessment of population, economic, and housing characteristics.

Data sources include:

- Statistics Canada
- BC Stats
- Local Governments

1. Demographic Profile

1.1. Population

As of 2021[4], the study area in the Sunshine Coast Regional District (SCRD) had a population of 15,595 people.

The population grew by **1,295 people** between 2016 and 2021.

Between 2016 and 2021, the study area experienced a growth rate of 9%. This represents the largest population increase across the study area over the last four Census periods, surpassing the growth rates observed between 2011 and 2016, as well as between 2006 and 2011.

The population trend for the study area is provided in Table 1 (see below) which includes the percent change in population between 2016 and 2021[5]. All electoral areas within the study area experienced population growth between 2016 and 2021, with Electoral Area F (West Howe Sound) experiencing the highest growth rate at 16.8%, followed closely by Electoral Area A (Egmont / Pender Harbour) at 16.2%.

Table 1: Historical Population 2006-2021

Location	2006	2011	2016	2021	% Change (2016-2021)
Study Area	**14,125**	**13,985**	**14,300**	**15,595**	**9.1%**
Electoral Area A (Egmont / Pender Harbour)	2,575	2,780	2,565	2,980	16.2%
Electoral Area B (Halfmoon Bay)	2,545	2,510	2,710	2,960	9.2%
Electoral Area D (Roberts Creek)	3,280	3,270	3,420	3,520	2.9%
Electoral Area E (Elphinstone)	3,505	3,550	3,620	3,810	5.2%
Electoral Area F (West Howe Sound)	2,220	1,875	1,990	2,325	16.8%

Source: Statistics Canada, Census Data 2006-2021.

[4] Data for this section draws on the Canadian Census. The last Canadian Census was conducted in 2021.
[5] Changes in population are calculated using Canadian Census data. This data is recorded and reported every five years.

The historical population of the study area between 2006 and 2021 is provided in Figure 1 and Figure 2 below.

Figure 1: Study Area - Historical Population 2006-2021

Source: Statistics Canada, Census Data 2006-2021.

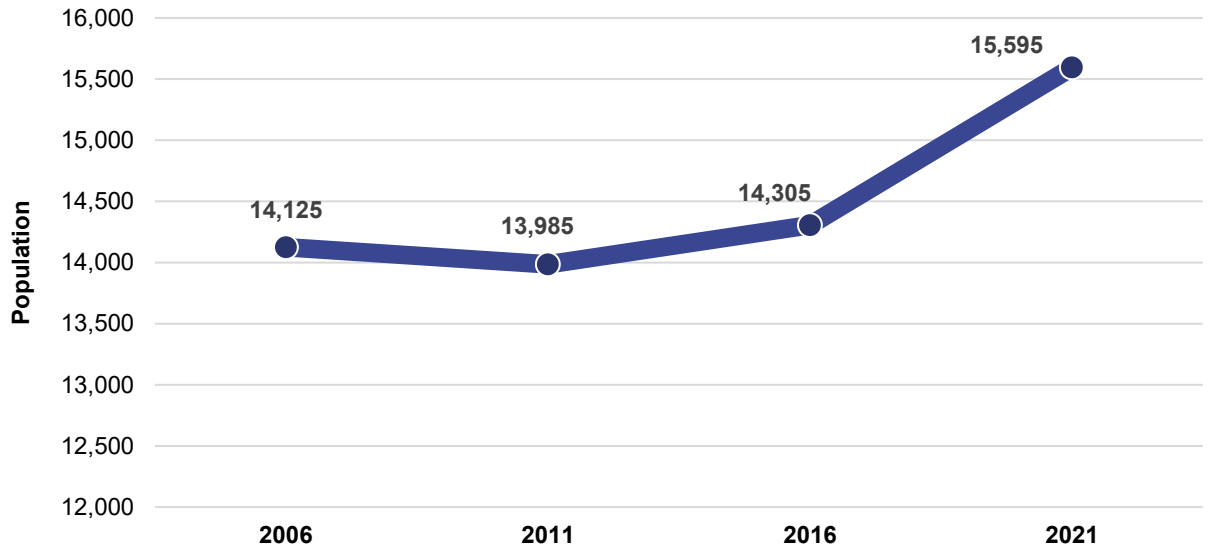
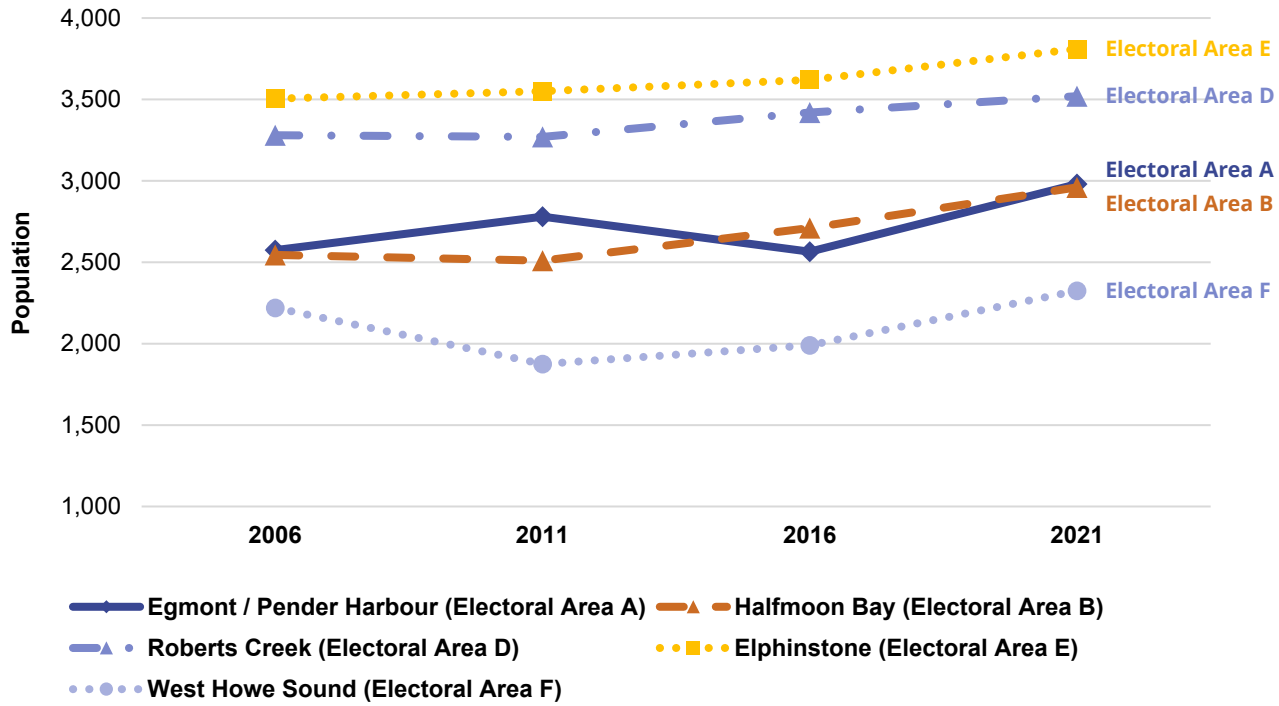


Figure 2: Study Area - Historical Population 2006-2021

Source: Statistics Canada, Census Data 2006-2021.



1.1. Age Characteristics

1.1.1. Median Age and Average Household Size

The average age of people living in communities across Canada and British Columbia has steadily increased over the last four Census periods, with the study area being no exception to this trend. According to Statistics Canada Census data, the median age of residents in the study area has increased from 47.8 in 2006 to 55.2 in 2021 (Table 2). West Howe Sound (Electoral Area F) experienced the largest median age increase between 2006 and 2021, with an increase of 8.7 years.

- **Youth** (persons between the ages of 15 and 29) **comprise nearly 10% of the study area's population.**
- **Nearly ~15% are 19 years or younger**.
- **31% of the study area's population is 65 years old or older** (Figure 3).

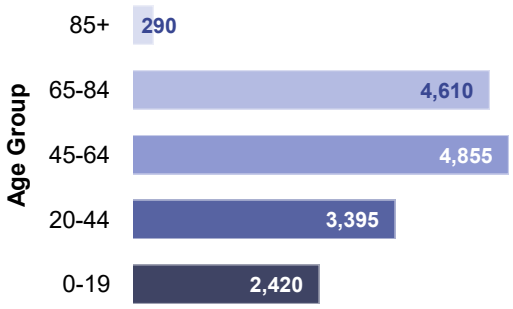
Table 2: Median Age 2006-2021

Location	2006	2011	2016	2021
Study Area	**47.8**	**51.3**	**54.3**	**55.2**
Electoral Area A (Egmont / Pender Harbour)	54.8	58.0	61.6	60.4
Electoral Area B (Halfmoon Bay)	49.0	49.8	55.7	56.8
Electoral Area D (Roberts Creek)	44.0	49.4	49.9	51.2
Electoral Area E (Elphinstone)	44.4	48.8	49.2	52.0
Electoral Area F (West Howe Sound)	46.9	50.3	55.3	55.6

Source: Statistics Canada, Census 2006 - 2021.

Figure 3: Study Area, Population by Age Group - 2021

Source: Statistics Canada, Census 2021.



Electoral Areas A (37.3%) and B (32.8%) have the highest percentage of residents aged 65 years and above, while Electoral Areas E (18.1%) and B (17.9%) have the highest percentage of residents aged 19 and below. Refer to Figures B.1 to B.5 in Appendix B for an electoral area-level breakdown of population by age group.

1.2. Mobility Characteristics

According to Statistics Canada, mobility is defined as the status of a person on Census day in relation to their place of residence on the same date 1 and 5 years earlier. Most people living in the study area have not moved and have lived in the same residence as they did one year earlier. These individuals are referred to as "non-movers".

Amongst those who have moved:

- **Elphinstone** (Electoral Area E) experienced **the highest number of movers at 500 people** based on the 2021 Census data.
- **Halfmoon Bay** (Electoral Area B) and **West Howe Sound** (Electoral Area F) had **the least amounts of movers at 275 and 295**, respectively.

Generally, more people moved to the study area from within British Columbia and within Canada, with very few people moving from outside of Canada.

Those who have moved from one residence to another in the same census subdivision are referred to as non-migrants. Migrants include internal migrants and external migrants. According to a definition provided by Statistics Canada, internal migrants refer to people who moved to a different city, town, township, village, municipality or Indian reserve within Canada and external migrants refer to migrants who did not live in Canada 1 year ago.

Across the study area, more than half of the movers are migrants, as of 2021:

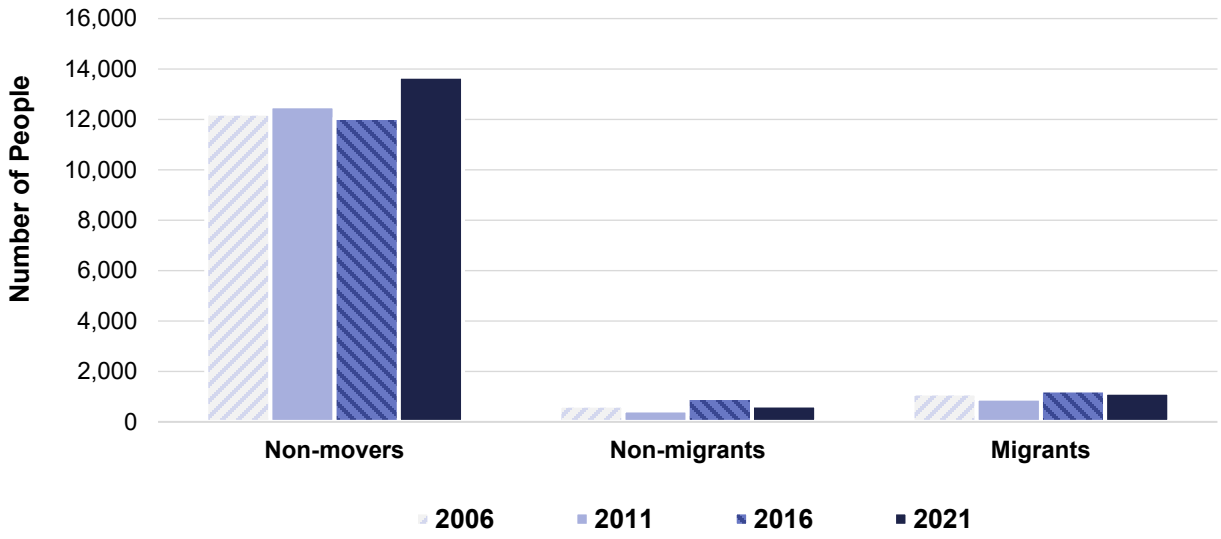
West Howe Sound (Electoral Area F) and **Halfmoon Bay** (Electoral Area B) had **the highest share of migrants** out of the total number of movers at **78% and 75%**, respectively.

Figures C.1 to C.5 in Appendix C provide the breakdown of the number of people by mobility status (non-movers, non-migrants, and migrants) in each of the study area's five electoral area based on Census data from 2006 to 2021.

Figure 4 below shows the number of non-movers, non-migrants, and migrants who have moved to the study area between 2006 and 2021.

Figure 4: Study Area, Mobility Status: 2006-2021

Source: Statistics Canada, Census 2006-2021.



1.3. Household Characteristics

Household characteristic data contains information about residents living in dwellings and includes the number of people living in dwellings and average and median household incomes.

"Household" refers to a **person or group of people who occupy the same dwelling** and do not have a usual place of residence elsewhere.

"Dwellings" is defined as a **set of living quarters** that households live in.

For additional clarity, "household" refers to the residents living in a housing unit, and "dwelling" refers to the housing unit itself.

1.3.1. Average Household Size

The average household size (persons per household) has been decreasing slightly over the last two decades in the study area. This trend is typical for areas with aging populations where a large proportion of households exist without children or spouses. The study area is no exception to this trend – in the last four Census periods, the average household size in the study area decreased slightly, from 2.3 persons per household in 2006 to 2.2 person per household in 2021 (Table 3).

Table 3: Average Household Size, 2006-2021

Location	2006	2011	2016	2021
Study Area	**2.3**	**2.3**	**2.2**	**2.2**
Egmont / Pender Harbour (Electoral Area A)	2.1	2.0	1.9	1.9
Halfmoon Bay (Electoral Area B)	2.3	2.3	2.2	2.2
Roberts Creek (Electoral Area D)	2.4	2.4	2.3	2.3
Elphinstone (Electoral Area E)	2.5	2.5	2.4	2.4
West Howe Sound (Electoral Area F)	2.3	2.1	2.1	2.1

Source: Statistics Canada, Census 2006 - 2021.

1.3.2. Households by Persons Per Household

Further details on household size are provided by the Census. The Census publishes data on the number of people living in a given area divided by the number of households. This yields a figure that indicates that average household size for a given area. All categories of household size in the study area experienced a marginal increase in the total number of houses that fell into each category between 2006 to 2021. Within this grouping, two-person households experienced the largest increase of 645 (+25%) households (Table 4).

Table 4: Total Private Households by Household Size, Study Area, 2006-2021

Household Size	2006	% of Total	2011	% of Total	2016	% of Total	2021	% of Total
1 person	1,625	26.6%	1,645	26.6%	1,980	29.9%	2,145	29.8%
2 persons	2,575	42.1%	2,680	43.4%	2,935	44.3%	3,220	44.8%
3 persons	800	13.1%	800	13.0%	800	12.1%	840	11.7%
4 persons	735	12.0%	745	12.1%	635	9.6%	665	9.2%
5 or more persons	380	6.2%	305	4.9%	275	4.1%	325	4.5%
Total private households	**6,115**	**100%**	**6,175**	**100%**	**6,635**	**100%**	**7,195**	**100%**
Total number of persons	**11,590**	**n/a**	**13,985**	**n/a**	**14,290**	**n/a**	**15,590**	**n/a**

Source: Statistics Canada, Census 2006 - 2021.

Two-person households remained the most common household size in the study area over this time period, followed by one-person households, although one-person households experienced a growth of +31% over the same time period.

Tables D.1 to D.5 in Appendix D show the number of households by household size in each of the study area's five electoral areas based on data sourced from the four most recent Census reports.

1.4. Households by Tenure

1.4.1. Renter Households

According to Statistics Canada, the term "renter households", also known as "tenant households", refers to a private household where no member of the household owns the respective dwelling. Alternatively, "owner households" refers to private households where at least one member of the household owns the dwelling or is currently maintaining a mortgage. The share of renter households in the study area grew by ~35% between 2006 and 2021 and represented 18.8% of the total private households (owners and renters) in 2021.

As of Census 2021, 1,350 households in the study area were renting, an 8.9% increase from 2016. Roberts Creek (Electoral Area D) had the highest number of renter households in 2021 at 380, an increase of 20 households from 2016. In 2021, Roberts Creek also had the highest proportion of renter households compared to the total private households in the area (24.6%). Table 5 shows the number and percentage of renter households in each of the study area's electoral areas from 2006 to 2021.

West Howe Sound saw the highest growth rate in renter households with a 22.2% increase between 2016 and 2021. This figure was caused in part due to the fact that the number of renter households in West Howe Sound actually decreased by 15 households (-6.4%) from 2006 to 2021.

Table 5: Number and Percentage of Renter Households, 2006-2021

Location	2006	% of total	2011	% of total	2016	% of total	2021	% of total
Study Area	**1000**	**16.4%**	**955**	**15.5%**	**1245**	**18.9%**	**1,350**	**18.8%**
Egmont / Pender Harbour (Electoral Area A)	185	15.0%	200	14.2%	230	16.7%	240	15.4%
Halfmoon Bay (Electoral Area B)	150	13.3%	90	8.4%	215	17.2%	225	16.5%
Roberts Creek (Electoral Area D)	245	18.2%	315	23.2%	360	24.6%	380	24.6%
Elphinstone (Electoral Area E)	185	13.1%	115	8.0%	260	17.1%	285	17.8%
West Howe Sound (Electoral Area F)	235	24.2%	235	26.7%	180	19.1%	220	20.0%

Calculated as the share of renter households in 2006 – 16.4% – subtract the share in 2021 – 18.8% – (=2.4) divided by the 2006 share (2.4/16.4 = ~0.14).

1.4.2. Subsidized Housing

Statistics Canada considers a housing unit as subsidized housing when a renter household lives in a dwelling that is subsidized; this includes rent geared to income housing, social housing, public housing, government-assisted housing, non-profit housing, rental supplement housing and housing supported by housing allowances. In 2021, only 1.5% of all renter households lived in subsidized housing across the study area (Table 6). This number is down from 6.4% of renter households in 2016. Across the Regional District in 2016, Elphinstone had the highest share of renters living in subsidized housing units at 13.5% (35 households) in 2016 – this number decreased significantly to 0% in 2021.

As of 2021, Roberts Creek (Electoral Area D) remains as the only Electoral Area with renters living in subsidized housing units with 20 households, representing 5.3% of the total renter households. It should be noted that data of renter households in subsidized housing is not available in the 2006 and 2011 Census reports.

Table 6: Number and Percentage of Renter Households in Subsidized Housing, 2016-2021

Location	2016	% of total	2021	% of total
Study Area	80	6.4%	**20**	1.5%
Egmont / Pender Harbour (Electoral Area A)	10	4.3%	0	0.0%
Halfmoon Bay (Electoral Area B)	10	4.7%	0	0.0%
Roberts Creek (Electoral Area D)	15	4.2%	20	5.3%
Elphinstone (Electoral Area E)	35	13.5%	0	0.0%
West Howe Sound (Electoral Area F)	10	5.6%	0	0.0%

Note: Data of renter households in subsidized housing [# and %] is not available in the 2006 and 2011 Census reports.
Source: Statistics Canada, Census 2016, 2021.

1.4.3. Owner Households

The study area has a greater number of owner households compared to the BC average, making up 81.2% of all households in the study area. In 2021, 5,820 households owned their housing units in the study area, which increased by 9.6% from 2016 (Table 7). The proportion of households that own their housing units compared to those that rent is relatively consistent across the study area, with Egmont / Pender Harbour (Electoral Area A) having the highest proportion of owner households at 84.6% in 2021. West Howe Sound (Electoral Area F) and Egmont / Pender Harbour (Electoral Area A) experienced the highest growth rates in owner households, increasing by 15.8% and 14.3% between 2016 and 2021, respectively.

Table 7: Number and Percentage of Owner Households, 2006-2021

Location	2006	% of total	2011	% of total	2016	% of total	2021	% of total
Study Area	**5,080**	**83.6%**	**5,205**	**84.5%**	**5,310**	**81.0%**	**5,820**	**81.2%**
Egmont / Pender Harbour (Electoral Area A)	1,045	85.0%	1,210	85.9%	1,150	83.3%	1,315	84.6%
Halfmoon Bay (Electoral Area B)	975	86.7%	985	91.6%	1,035	82.8%	1,140	83.5%
Roberts Creek (Electoral Area D)	1,100	81.8%	1,045	76.8%	1,105	75.4%	1,165	75.4%
Elphinstone (Electoral Area E)	1,225	86.9%	1,320	92.0%	1,260	82.9%	1,320	82.2%
West Howe Sound (Electoral Area F)	735	75.8%	645	73.3%	760	80.9%	880	80.0%

Source: Statistics Canada, Census 2006 – 2021.

1.5. Household Income

1.5.1 Average and Median Household Income

Household income includes salaries, wages, retirement income, and government transfers for all persons residing in a household. In 2021, the average after-tax household income in the study area was $80,580, a 16.4% increase from the 2016 average (Table 8). Elphinstone has the highest average after-tax household income in the study area at $87,600 in 2021. Roberts Creek experienced the largest income growth rates during this five-year period, with an increase of 23.7%. High household income in these two OCP Plan Areas are likely a result of Roberts Creek and Elphinstone having the lowest median age (51.2 and 52.0 in 2021) compared to the rest of the study area, which implies that a larger percentage of their population are likely members of the workforce.

Table 8: Average Household Income (after tax), 2006-2021

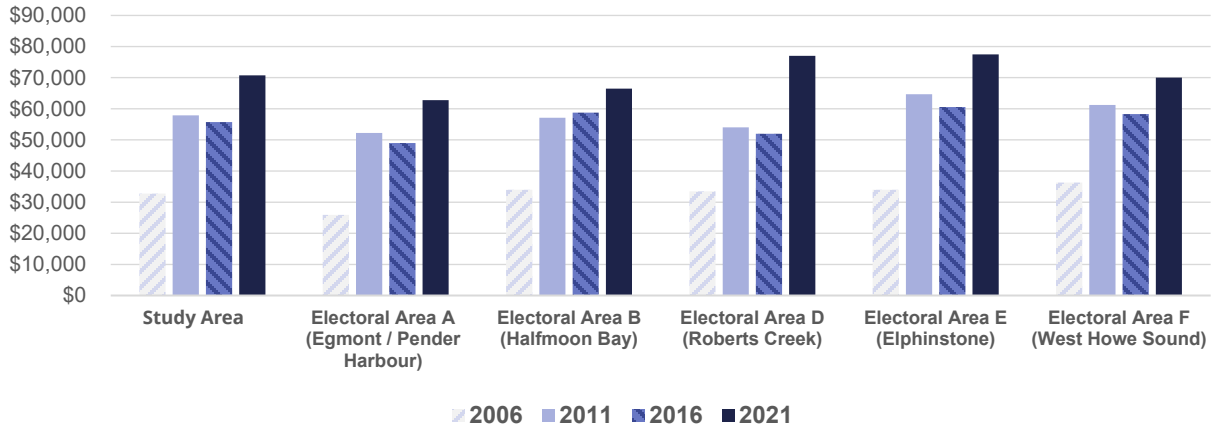
Location	2006	2011	2016	2021	% Change (2016-2021)
Study Area	**$38,197**	**$68,362**	**$69,227**	**$80,580**	**16.4%**
Egmont / Pender Harbour (Electoral Area A)	$33,650	$58,233	$64,505	$67,800	5.1%
Halfmoon Bay (Electoral Area B)	$36,458	$69,590	$69,079	$80,800	17.0%
Roberts Creek (Electoral Area D)	$38,596	$63,055	$68,160	$84,300	23.7%
Elphinstone (Electoral Area E)	$39,593	$75,305	$71,428	$87,600	22.6%
West Howe Sound (Electoral Area F)	$42,688	$75,629	$72,964	$82,400	12.9%

Source: Statistics Canada, Census 2006 - 2021.

Median household incomes are consistently lower than the average household incomes in the study area across the four most recent Census datasets. The study area's median household income increased by 27% from $55,714 in 2016 to $70,760 in 2021 (Figure 5).

Figure 5: Median Household Income (after tax), 2006-2021

Source: Statistics Canada, Census 2006-2021.

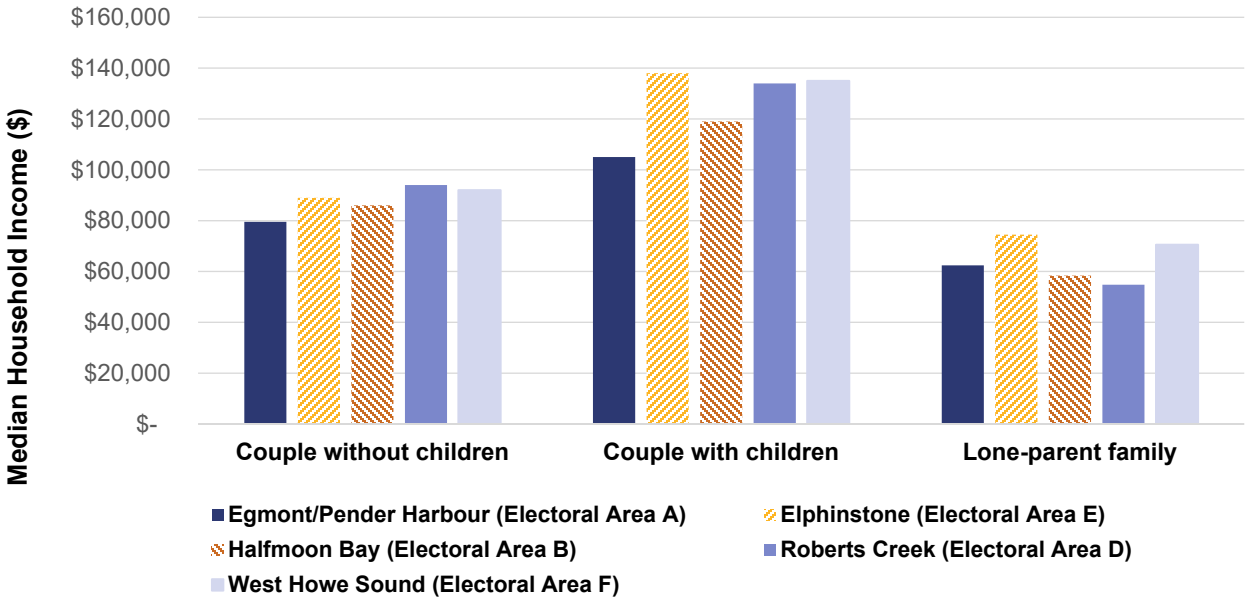


Household income distribution data clearly highlights the relative affluence of two-parent households as compared to single-parent households (Figure 6). Across the study area in 2021, couples with children had the highest median after-tax incomes (Figure 6) with Elphinstone having the highest median household income sitting at $138,000. Lone-parent families reported significantly lower median incomes compared to other household types in 2021.

Within the study area, lone-parent families in Roberts Creek had the lowest median income at $54,800, while those in Elphinstone had the highest at $74,500. This represents a 30.5% difference between Roberts Creek and Elphinstone.

Figure 6: Median Household Income by Household Type (after tax), 2021

Source: Statistics Canada, Census 2021.



1.5.2 Household Income by Tenure

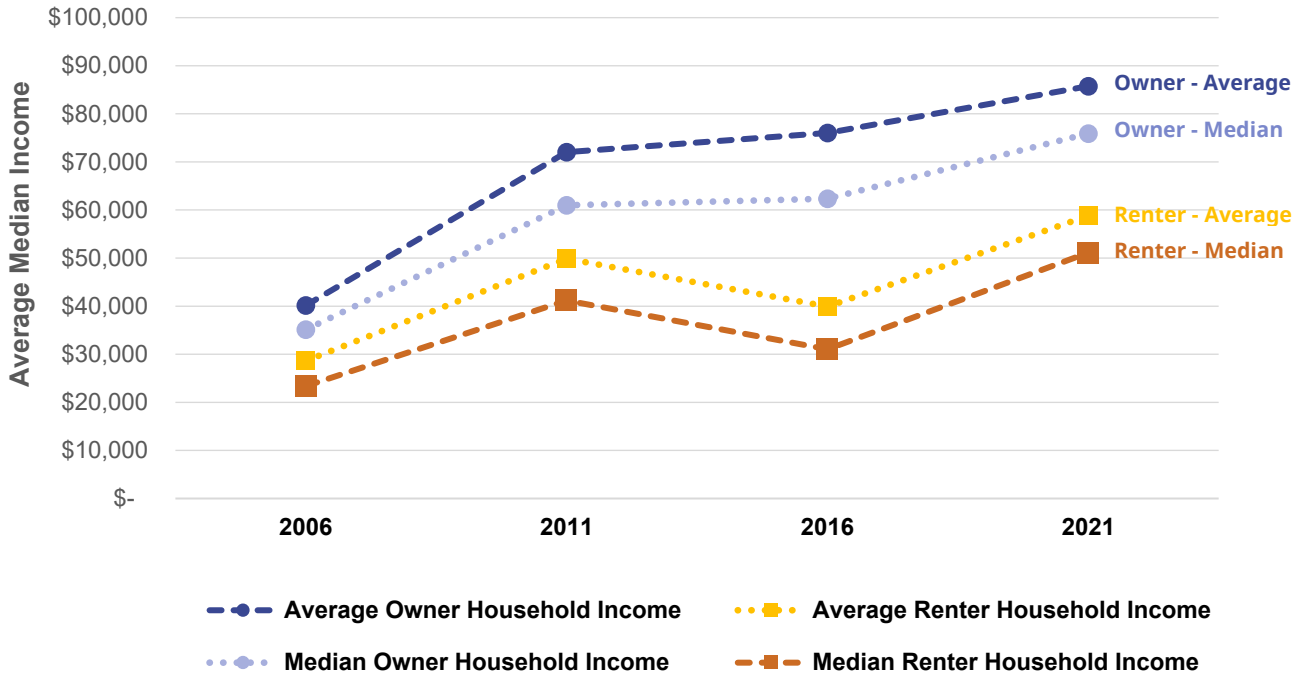
Owner households consistently earned more than renter households in both average and median after-tax incomes across the study area between 2006 and 2021. In 2021, the median owner household in the study area earned about $75,900 after tax, while the median renter household earned $51,120 (Figure 7).

Owners in Halfmoon Bay (Electoral Area B) earned roughly 33% more than renters in the same Area in 2021, representing the largest income disparity between tenure type across the study area. Between 2006 and 2021, median owner household income increased by 116%, while median renter household income increased by 119%.

Figures E.1 to E.5 in Appendix E further illustrate the average and median household earnings of owner and renter households across each of the five electoral areas within the study area.

Figure 7: Average and Median Household Income by Tenure (after tax): Sunshine Coast Regional District Study Area, 2006-2021

Source: Statistics Canada, Census 2006-2021.



Chapter 2
Current Affordable Housing Needs

Chapter 2 section summarizes the occupancy rate of affordable housing in the study area, and provides an assessment of current affordable housing need, as well as an analysis of housing unit prices compared to income growth.

Data sources include:

- Statistics Canada

2. Price vs Income Profile: Owner Households

2.1. Average and Median Value of Dwellings

The study area has experienced a significant escalation in housing unit prices and rents over the last four Census periods. The average value of dwellings in West Howe Sound (Electoral Area F) more than doubled between 2006 and 2021, growing from $471,310 in 2006 to $974,000 in 2021 (Table 14). This trend occurred similarly across two other Electoral Areas, with Elphinstone and Roberts Creek both seeing increases of ~106% in average dwelling values over the same time period. Halfmoon Bay had the lowest increase in housing value, with an increase of 86% as values grew from $538,206 in 2006 to $1,002,000 and 2021.

The average value of dwellings from 2006 to 2021 are listed for the study area's five electoral areas in Table 9 below.

Table 9: Housing Value – Average Value of Dwellings, 2006 and 2021

Location	2006	2016	2021	% Change (2006-2021)
Study Area	**$485,051**	**$ 661,038**	**$965,400**	**99.0%**
Electoral Area A (Egmont / Pender Harbour)	$470,909	$ 685,349	$907,000	92.6%
Electoral Area B (Halfmoon Bay)	$538,206	$ 713,719	$1,002,000	86.2%
Electoral Area D (Roberts Creek)	$533,149	$ 693,781	$1,096,000	105.6%
Electoral Area E (Elphinstone)	$411,679	$ 528,459	$848,000	106.0%
Electoral Area F (West Howe Sound)	$471,310	$ 683,881	$974,000	106.7%

Source: Statistics Canada, Census 2006, 2016, 2021[6].

[6] Average value of dwellings is not available in the 2011 Census report.

2.2. Income Trends

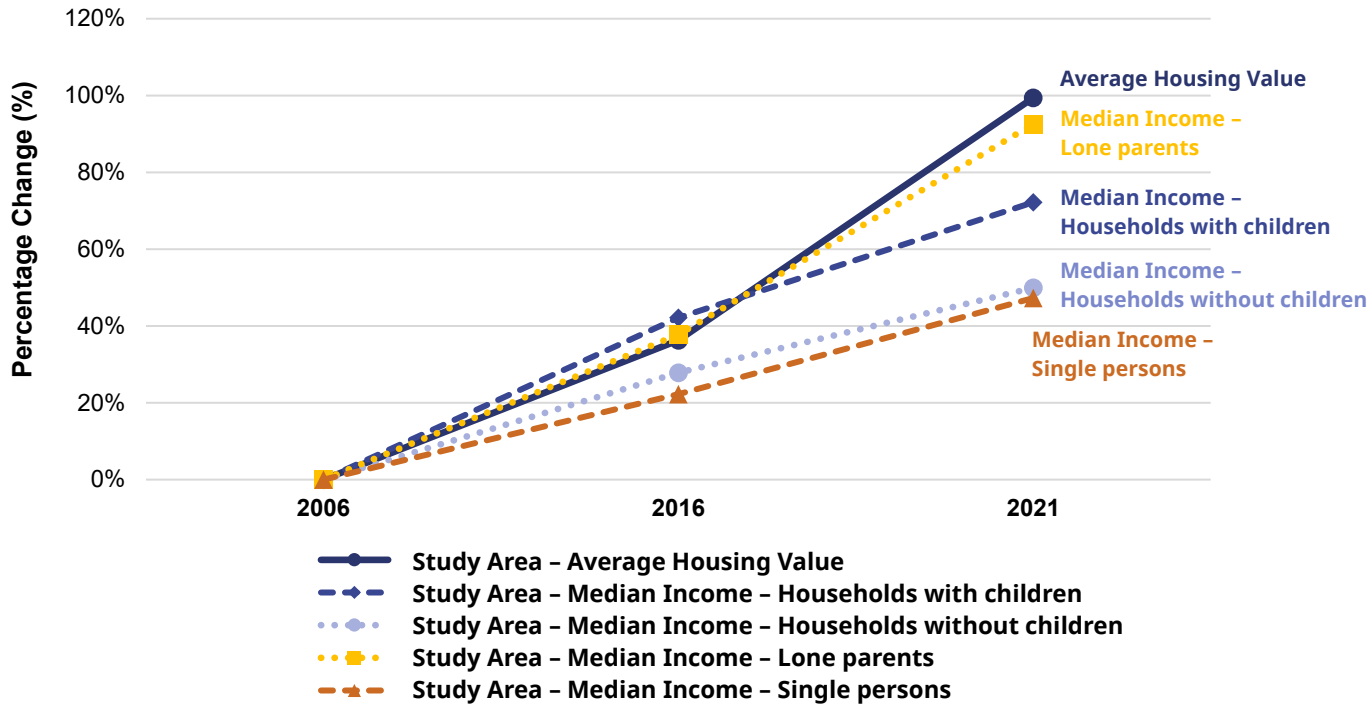
Compared to the rate of increase in housing unit prices over the last four Census periods, median household income across all tenure types in the study area increased at a slower rate between 2006 and 2021. Across each household composition type (i.e., one-person vs two-or-more-person households) the median after-tax income for single persons (i.e., one-person households) increased at the slowest rate (+47.3%), reaching $35,280 by 2021. Couple-only households (without children) experienced a similar growth rate in median after-tax income (+49.9%) between 2006 and 2021, settling at $78,800.

For couple households with children, the median after-tax income increased by 72.2% between 2006 and 2021, reaching $110,200 in 2021, while lone-parent families saw the highest growth rate in median incomes (92.5%), settling at $60,400 in 2021. It should be noted that the substantive difference in the household income growth rate between couple households with children and lone-parent households is a function of lone-parent household incomes being much lower than couple households with children at the start of the study period. In gross terms, both groups incomes appreciated by a similar amount. In both cases, however, the rate of increase was slower than the growth rate of housing unit prices, which doubled during the same period.

Figure 8 below illustrates the percentage change in the average value of dwellings compared to the median incomes of various household composition types across the study area in the SCRD.

Figure 8: Percentage Change in Housing Price and Income, 2006 and 2021

Source: Statistics Canada, Census 2006, 2016, 2021.



2.3. Average Monthly Rent

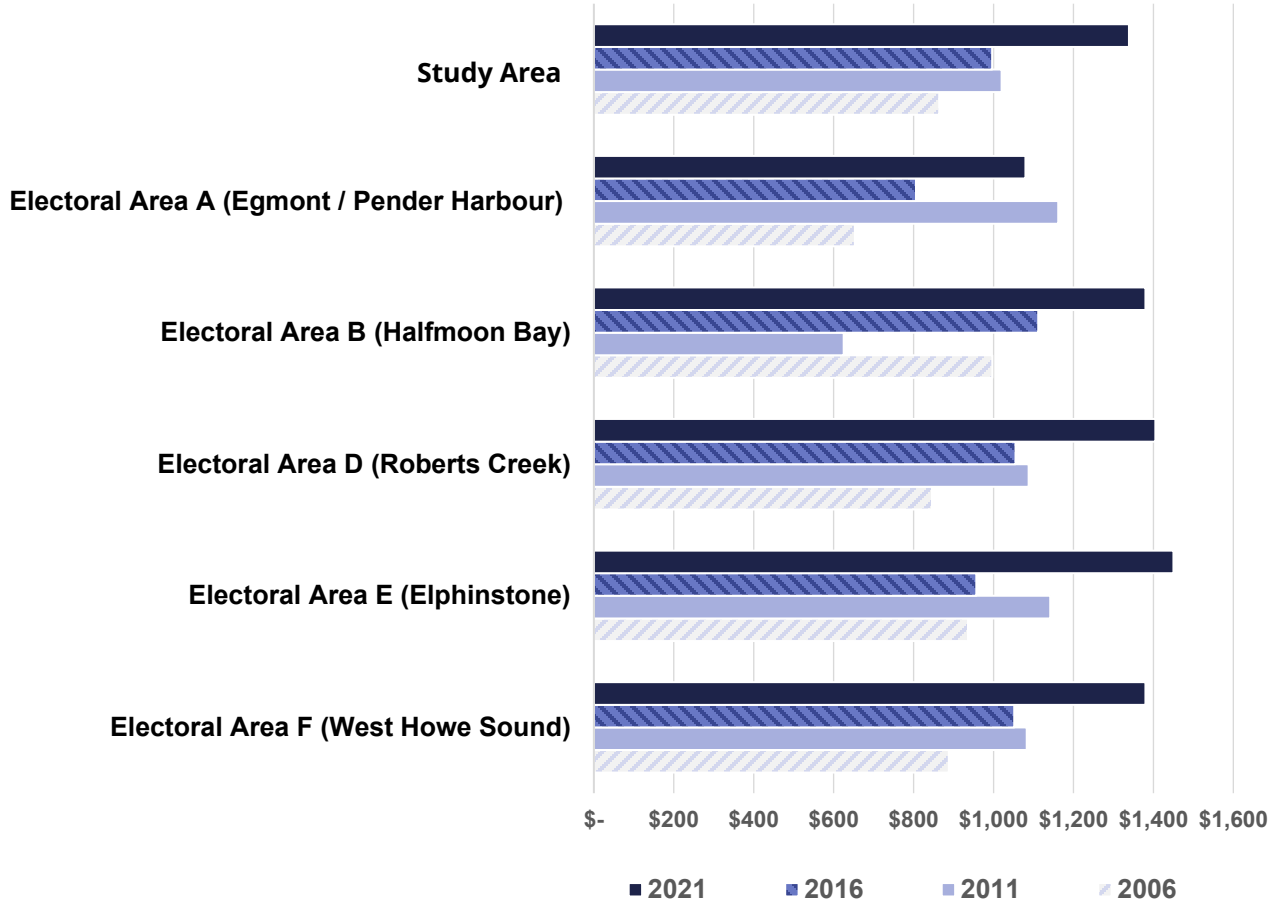
In the rental market, rents have risen across the study area, with an overall growth rate of 55% between 2006 and 2021, and a growth rate of approximately 66% for Roberts Creek. Between 2016 and 2021, average rents surged more rapidly, with an average growth rate of 34.4%.

Census data shows that average monthly rents are relatively consistent across four out of five electoral areas within the study area in 2021, ranging from $1,380 to $1,450. The exception here is Egmont / Pender Harbour (Electoral Area A), where 2021 rents were the lowest at $1,080. This figure falls ~20% below the regional average.

Figure 9 details the average monthly rents in the study area from 2006 to 2021.

Figure 9: Average Rental Prices, 2006-2021

Source: Statistics Canada, Census 2006-2021.



Chapter 3
Available Housing Stock

Chapter 3 provides high-level information about existing housing stock – its age, structural types[7], and types of dwellings.

As of 2021, there were a total of 7,165 occupied private dwellings across the SCRD's study area.

Data sources include:

- Statistics Canada
- BC Housing
- SCRD

Due to Census data collection limitations, the total number of housing units in the study area, which would include unoccupied units, is not available[8]. Census data is supplemented by BC Housing data reflecting non-market units, however, the same limitations with the Census data remain.

Throughout this chapter, occupied private dwellings will be referred to as **"housing stock"** or **"housing units".**

[7] Structural type refers to the structural characteristics and/or dwelling configuration, that is, whether the dwelling is a single-detached house, an apartment in a high-rise building, a row house, a mobile home, etc.

[8] The Census does not report on the total number of dwelling units, which would include unoccupied units in addition to the occupied units.

3.1. Housing Stock by Structural Types

As of 2021, nearly all of the housing stock in the study area consists of single-detached houses (6,530 out of 7,165 total units or 91%). The remaining 665 (9%) occupied private dwellings consist of semi-detached houses, row houses, apartments, mobile homes and other moveable dwellings[9].

Table 10 below presents the aggregate number and percentage of housing units categorized by structural type in the study area. Table 11 on the following page provides a detailed breakdown of the housing stock by structural type in each electoral area.

Table 10: Number of Housing Units by Structural Type, 2021

Structural Type of Dwelling	Number of Housing Units	% of Total Housing Stock
Single-detached house	6,530	91.1%
Mobile homes and other moveable dwelling	290	4.0%
Apartment or flat in a duplex	190	2.7%
Semi-detached house	100	1.4%
Apartment in a building that has fewer than five storeys	30	0.4%
Row house	25	0.3%
Other single-attached house[10]	0	0.0%
Apartment in a building that has five or more storeys	0	0.0%
Total	**7,165**	**100%**

Source: Statistics Canada, Census 2021.

[9] Based on the definition provided by Statistics Canada, other moveable dwellings refers to a single dwelling, other than a mobile home, used as a place of residence, but capable of being moved on short notice, such as a tent, recreational vehicle, travel trailer or houseboat.

[10] Other single-attached house refers to a single dwelling that is attached to another building and that does not fall into any of the other categories, such as a single dwelling attached to a non-residential structure (e.g., a store or a church) or occasionally to another residential structure (e.g., an apartment building).

Table 11: Number and Percentage of Housing Units by Structural Type, Electoral Areas, 2021

Structural Type of Dwelling	Egmont / Pender Harbour (Electoral Area A)		Halfmoon Bay (Electoral Area B)		Roberts Creek (Electoral Area D)		Elphinstone (Electoral Area E)		West Howe Sound (Electoral Area F)	
	#	% of total	#	% of total	#	% of total	#	% of total	#	% of total
Single-detached house	1,390	88.8%	1,285	94.5%	1,425	91.9%	1,470	91.6%	960	87.7%
Movable dwelling	115	7.3%	45	3.3%	50	3.2%	20	1.2%	60	5.5%
Apartment or flat in a duplex	0	0.0%	10	0.7%	40	2.6%	75	4.7%	65	5.9%
Semi-detached house	35	2.2%	10	0.7%	35	2.3%	30	1.9%	0	0.0%
Apartment, building that has fewer than five storeys	10	0.6%	0	0.0%	0	0.0%	10	0.6%	10	0.9%
Row house	15	1.0%	10	0.7%	0	0.0%	0	0.0%	0	0.0%
Other single-attached house	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Apartment, building that has five or more storeys	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%

Source: Statistics Canada, Census 2021.

Because 59.5% of the housing units in the study area are comprised of single-detached homes, there are a corresponding large percentage of housing units with three or more bedrooms. (Table 12)

Table 12: Number and Percentage of Housing Units by Number of Bedrooms, 2021

Location	Number of Housing Units					
	Number of Bedrooms					Totals
	Studio	1	2	3	4+	
Egmont / Pender Harbour (Electoral Area A)	30	205	565	530	230	1,560
Halfmoon Bay (Electoral Area B)	0	135	425	530	275	1,365
Roberts Creek (Electoral Area D)	0	180	445	530	385	1,540
Elphinstone (Electoral Area E)	0	100	400	640	465	1,605
West Howe Sound (Electoral Area F)	0	150	270	365	315	1,100
Totals	**30**	**770**	**2,105**	**2,595**	**1,670**	**7,170**
% of Total Housing Stock	**0.4%**	**10.7%**	**29.4%**	**36.2%**	**23.3%**	**100%**

Source: Statistics Canada, Census 2021.

Studio, one-bedroom units (typically found in apartment buildings and duplexes), and single-unit manufactured homes (trailers), and auxiliary units (garden cottages, carriages houses) were relatively scarce, making up roughly 11% of the total housing stock in 2021.

3.1.1. Housing Stock by Period of Construction

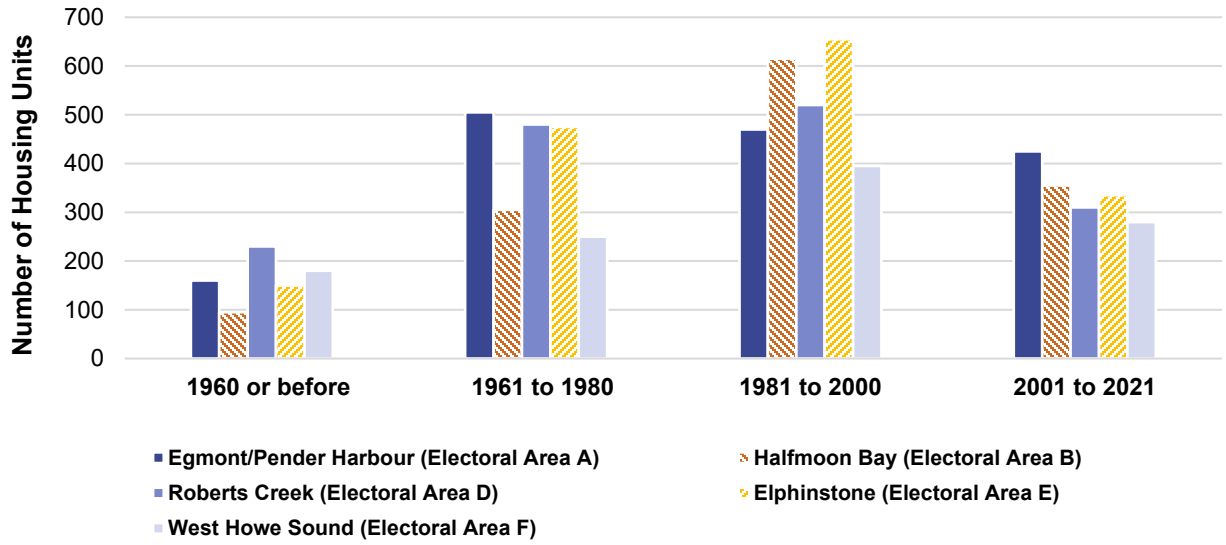
Figure 10 illustrates the number of units constructed in the study area by period of construction. The figure shows that nearly 36% of the housing stock across the study area was built before 1981 (>44 years old at the time of writing this report). Conversely, just 25% of the housing stock was constructed over the last four Census periods (i.e., between 2001 – 2021).

The period from 1961 to 1980, saw the construction of 2,655 units, which was the time when the most units were built. The last 20 years (combining the periods 2001 to 2021) saw a comparative decrease in new constructions, with a total of 1,705 units built across the study area, indicating a slow down in new construction for housing units.

Based on the age of the housing stock, there is a need for newer residential construction and newer housing stock options for current and incoming residents. Housing condition, such as the need for major repairs, is a key indicator of the adequacy of a housing unit. However, it should be noted that even though many housing units were built prior to 1981, it does not mean that all these housing units require major repairs.

Figure 10: Housing Stock by Year Built (20-Year Periods), pre-1960 to 2021

Source: Statistics Canada, Census 2021.



3.2. Non-Market Housing

In the study area, most non-market housing takes the form of rent assistance[11]. Based on the data from the BC housing Supportive Housing Registry, in March 2023, 53 non-market housing units in the study area received rent assistance. This assistance was provided through various programs such as the Rental Assistance Program (RAP), the Shelter Aid for Elderly Renters (SAFER), or other rent supplement units in the private market targeted towards families, seniors, and select households. Table 13 on the following page outlines the number of units receiving rent assistance across the study area.

"Non-market housing" is defined as **housing that is provided at below market prices**, and is owned or subsidized by a government, non-profit organization, or housing co-operative.

According to the BC Housing data, rent assistance in the SCRD study area can be categorized into 3 types:

"Rent Assistance Families" which refers to housing subsidy to provide eligible low-income families with cash assistance to help with their monthly rent payments in the private market. Housing under this category includes the Rental Assistance Program (RAP) as well as other rent supplement units in the private market targeted towards families.

"Rent Assistance Seniors" which refers to housing subsidies aimed at making private market rents affordable for BC seniors[12] with low and moderate incomes. Housing under this category includes the Shelter Aid for Elderly Renters (SAFER) program as well as other rent supplement units in the private market targeted towards seniors.

"Canada Housing Benefit" which refers to housing subsidies aimed at making rent more affordable for select households that do not qualify for SAFER or RAP.

The reader should note that BC Housing only tracks units where the organization has a financial relationship and that there may be other subsidized housing units in the community. The number of 'units' presented herein refers to housing units, beds, spaces, and rent supplements, depending on each program and does not refer to the number of 'people' assisted.

[11] Rent assistance is a form of financial aid provided to eligible low-income individuals and families to help them afford the cost of housing. This assistance can come in various forms, such as subsidies or direct payments to landlords.

[12] Seniors are usually defined as individuals who are 65 years of age and older.

Table 13: Number of Rent Supplement Units Under BC Housing Administration, 2023

Location	Number of Rent Supplement Housing Units
Study Area	**53**
Egmont / Pender Harbour (Electoral Area A)	10
Halfmoon Bay (Electoral Area B)	2
Roberts Creek (Electoral Area D)	10
Elphinstone (Electoral Area E)	10
West Howe Sound (Electoral Area F)	21

Source: BC Housing Administration, Unit Count Reporting Model, March 31, 2023. Includes units operated through an operating agreement with BC Housing only.

Small amounts of independent social housing, as well as transitional supported and assisted living housing units, are present in Elphinstone (Electoral Area E) and West Howe Sound (Electoral Area F).

As of March 2023, 22 senior independent living housing units are occupied by seniors where minimal or no additional services are provided, all located in West Howe Sound (Electoral Area F). These are housing arrangements designed for seniors who are capable of living on their own. Additionally, as of March 2023, there are four supportive housing units that provide transitional support and assisted living services, all located in Elphinstone (Electoral Area E).

This number includes three categories of supportive housing, namely:

"**Supportive Seniors Housing**" which is housing for seniors who cannot live independently and need access to housing with on-going supports and services.

"**Special Needs**" which includes housing for clients who need access to affordable housing with support services. For example, these clients can include adults with mental and/or physical disabilities or youth.

"**Women and Children Fleeing Violence**" which provides funding for transition houses, safe homes and second stage housing programs that support women and children who have experienced violence or at risk of experiencing violence by providing temporary shelter/housing and support services.

It is important to note that supportive housing data is suppressed by the Province, for privacy reasons, when there are 10 or fewer units in an electoral area. Therefore, the breakdown of units by supportive housing category is unavailable.

3.3. Housing Indicators

Housing standards are a key national indicator on housing and can be measured by the affordability, adequacy, and suitability of the housing stock:	
"Affordable housing"	is housing that costs less than 30% of total before-tax household income.
"Adequate housing"	is housing that does not require any major repairs as reported by residents.
"Suitable housing"	must have enough bedrooms for the size and composition of the households according to the National Occupancy Standard definition.

3.3.1. Housing Affordability

Census data offers crucial metrics that can help determine the number of households in the study area currently facing core housing need, establishing a baseline estimate of the existing needs for key population groups. This section provides a snapshot of the current housing affordability landscape across the study area through an analysis of monthly income allocation towards housing costs, delineated according to renters and owners. This affordability analysis juxtaposes local earnings with shelter costs, offering a perspective on housing affordability throughout the study area.

Affordability, for this analysis, is characterized as dedicating less than 30% of the total before-tax household income towards shelter costs, a standard set by Statistics Canada.

In 2021, 33.7% of renter households across the study area were spending 30% or more of their income on shelter costs, equating to approximately 455 total private households (Table 14 on the following page). This is a decrease from the previous census. The percentage of renter households in the study area facing affordability challenges was 40.6% or 505 households in 2016.

In West Howe Sound (Electoral Area F), the number of renter households spending 30% or more of their income on shelter costs reached 40.9% – the highest in the study area in 2021. In 2016, Elphinstone (Electoral Area E) had the highest share of renters lacking access to affordable housing at 48.1% or 100 households.

Table 14: Number and Share of Renter Households Spending Over 30% of Income on Housing, 2006-2021

Location	2006	% of total	2011	% of total	2016	% of total	2021	% of total
Study Area	**330**	**33.0%**	**305**	**31.9%**	**505**	**40.6%**	**455**	**33.7%**
Egmont / Pender Harbour (Electoral Area A)	65	35.1%	90	45.0%	80	34.8%	75	31.3%
Halfmoon Bay (Electoral Area B)	80	53.3%	20	22.2%	100	46.5%	75	33.3%
Roberts Creek (Electoral Area D)	55	22.5%	120	38.1%	140	38.9%	130	34.2%
Elphinstone (Electoral Area E)	70	37.8%	20	17.4%	125	48.1%	85	29.8%
West Howe Sound (Electoral Area F)	60	25.5%	55	23.4%	60	33.3%	90	40.9%

Source: Statistics Canada, Census 2006-2021.

The share of households facing affordability challenges is lower in the ownership category. Ownership shelter costs are generally comprised of the monthly mortgage payment and also includes other fixed monthly expenses related to ownership such as home insurance, strata fees, property tax, and municipal services charges.

In the study area, the average percentage of owner households spending 30% or more of their income on shelter costs was 14.4% in 2021 (Table 15). This was the equivalent of 840 households. During the same year, Halfmoon Bay had the highest share of owners facing affordability challenges at 18.4% of the total owner households in the Electoral Area or 210 households. On the other hand, Elphinstone had the least share of owners facing affordability challenges at 10.8% or 95 households in 2021.

Table 15: Number and Share of Owner Households Spending Over 30% of Income on Housing, 2006-2021

Location	2006	% of total	2011	% of total	2016	% of total	2021	% of total
Study Area	**975**	**19.2%**	**870**	**16.7%**	**845**	**15.9%**	**840**	**14.4%**
Egmont / Pender Harbour (Electoral Area A)	195	18.6%	165	13.6%	175	15.2%	205	15.6%
Halfmoon Bay (Electoral Area B)	220	22.4%	220	22.3%	180	17.4%	210	18.4%
Roberts Creek (Electoral Area D)	235	21.4%	180	17.2%	180	16.3%	170	14.6%
Elphinstone (Electoral Area E)	210	17.1%	210	15.9%	175	13.9%	160	12.1%
West Howe Sound (Electoral Area F)	115	15.6%	95	14.7%	135	17.8%	95	10.8%

Source: Statistics Canada, Census 2006-2021.

3.3.2. Housing Adequacy

In 2021, 6.6% of the total private dwellings in the study area resided in inadequate housing that required major repairs (Table 16). As of 2021, one in ten (9.6% or 150 households) households in Egmont / Pender Harbour live in inadequate housing. This is the highest proportion in the study area.

Table 16: Number and Percentage of the Total Private Households Living Below the Adequacy Standard, 2006-2021

Location	2006	% of total	2011	% of total	2016	% of total	2021	% of total
Study Area	**490**	**8.1%**	**495**	**8.0%**	**410**	**6.3%**	**475**	**6.6%**
Egmont / Pender Harbour (Electoral Area A)	105	8.5%	115	8.1%	70	5.1%	150	9.6%
Halfmoon Bay (Electoral Area B)	80	7.1%	85	7.9%	85	6.8%	40	2.9%
Roberts Creek (Electoral Area D)	100	7.4%	150	11.0%	100	6.8%	105	6.8%
Elphinstone (Electoral Area E)	90	6.4%	105	7.3%	100	6.6%	90	5.6%
West Howe Sound (Electoral Area F)	115	11.9%	40	4.5%	55	5.8%	90	8.2%

Source: Statistics Canada, Census 2006-2021.

Across the study area, renters are more likely than owners to live below the adequacy standard. Specifically, in 2021, 8.9% of renter households (120 households) in the study area lived in housing units needing major repairs, compared to 6.2% of owner households (360 households).

Egmont / Pender Harbour had the highest number and percentage of renters living in inadequate housing with 45 rental housing units requiring major repairs in 2021. This represented 18.8% of the total renter households in the same year.

Figures 11 and 12 illustrate the number and share of renter households living below the adequacy standard, based on data from the four most recent Census reports.

Figure 11: Number of Renter Households Living Below the Adequacy Standard, 2006-2021

Source: Statistics Canada, Census 2006-2021.

Note: The reader should note that, between 2011 and 2021, the number of renter households living below the adequacy standard in some electoral areas are reported as zero.

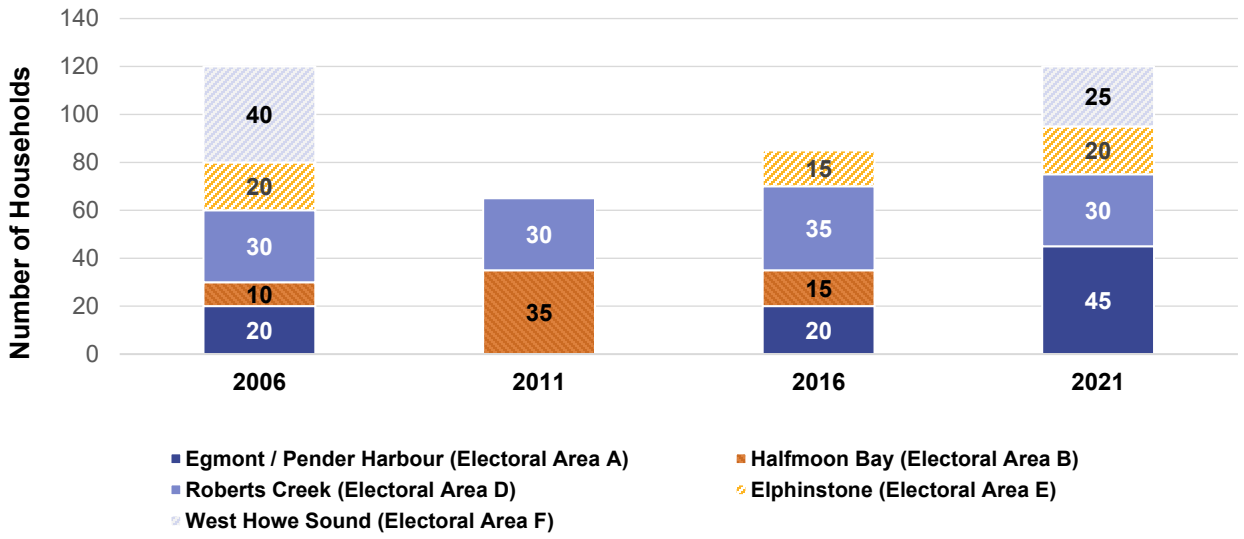
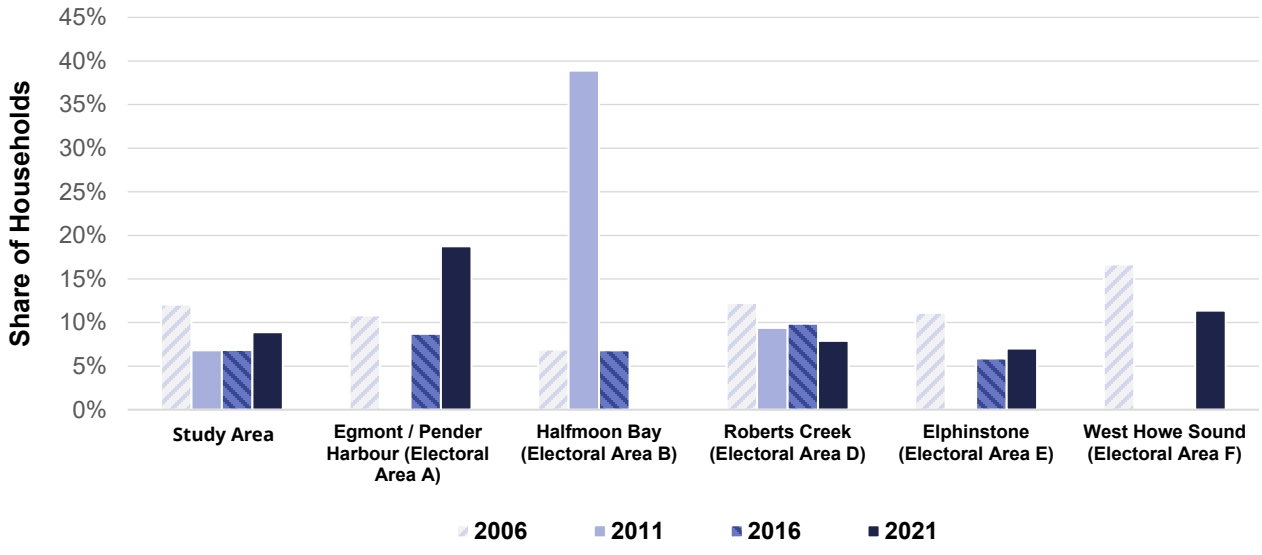


Figure 12: Percentage of Renter Households Living Below the Adequacy Standard, 2006-2021

Source: Statistics Canada, Census 2006-2021.

Note: The reader should note that, between 2011 and 2021, the percentage of renter households living below the adequacy standard in some electoral areas are reported as zero.



Figures 13 and 14 detail the number and proportion of owner households living below the adequacy standard.

Figure 13: Number of Owner Households Living Below the Adequacy Standard, 2006-2021

Source: Statistics Canada, Census 2006-2021.

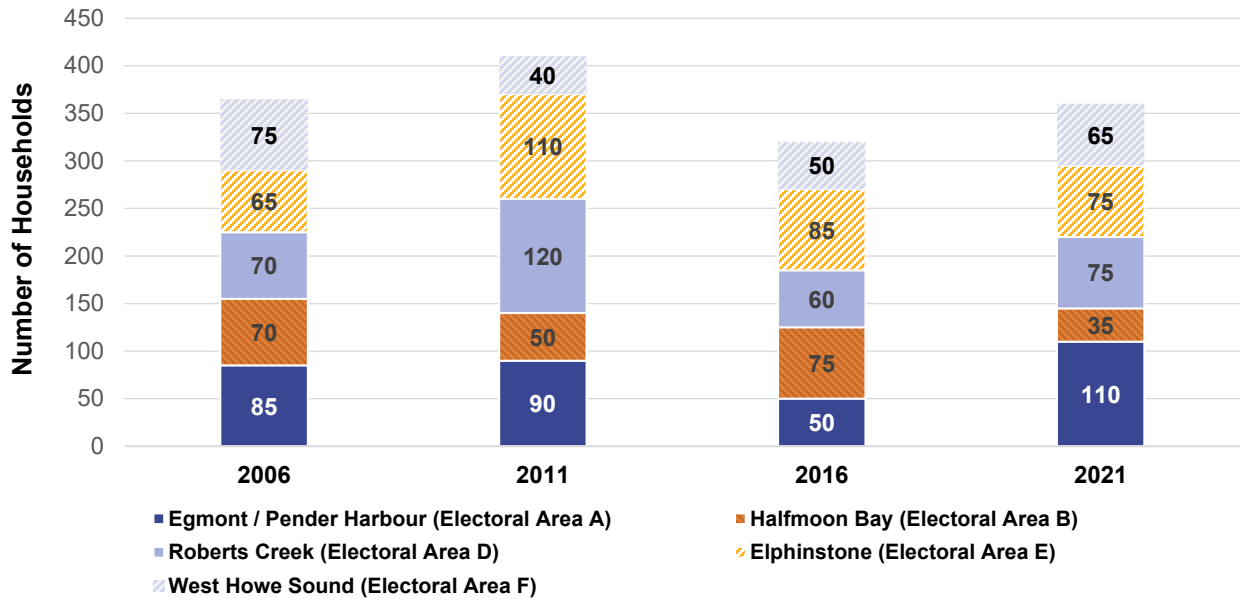
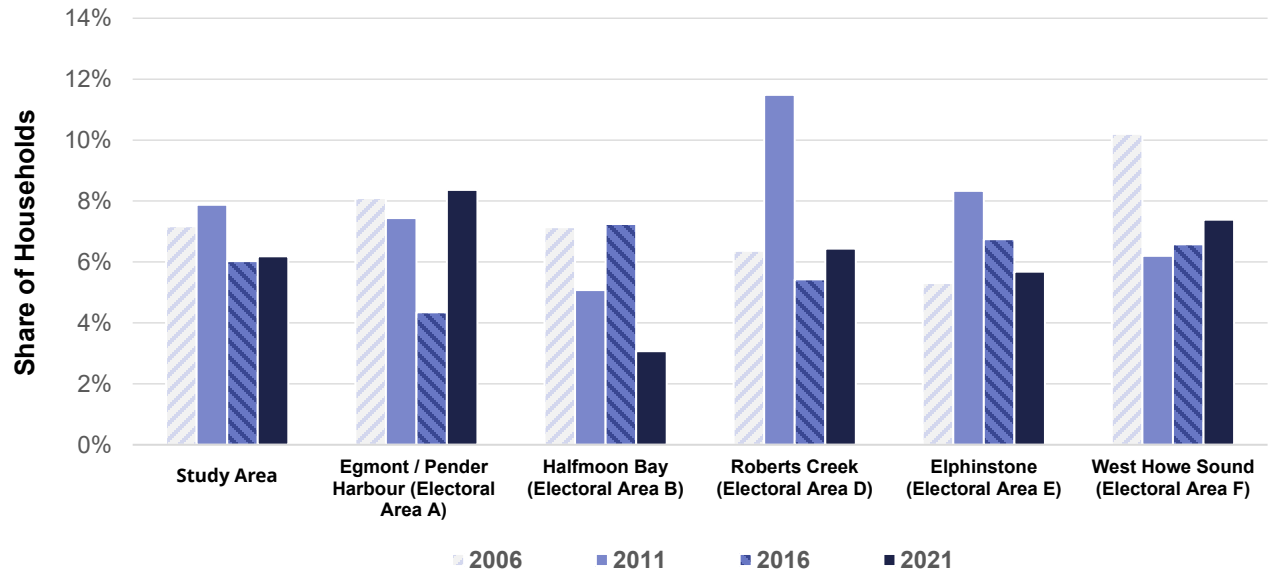


Figure 14: Percentage of Owner Households Living Below the Adequacy Standard, 2006-2021

Source: Statistics Canada, Census 2006-2021.



3.3.3. Housing Suitability

Suitability is a measure of whether housing has enough bedrooms for the size and make-up of households. Households that fall below the suitability standard are considered to be living in overcrowded conditions. In 2021, 210 households across the study area lived in overcrowded conditions representing 3% of all households (Table 17). The proportion of households with suitability challenges has decreased between 2006 and 2021, with 4.1% of the total private households (250 households) living in overcrowded dwellings in 2006.

Table 17: Number and Percentage of the Total Private Households Living Below the Suitability Standard, 2006-2021

Location	2006	% of total	2011	% of total	2016	% of total	2021	% of total
Study Area	**250**	**4.1%**	**145**	**2.4%**	**200**	**3.1%**	**210**	**3.0%**
Egmont / Pender Harbour (Electoral Area A)	50	4.0%	0	0.0%	25	1.8%	40	2.9%
Halfmoon Bay (Electoral Area B)	30	2.7%	55	5.1%	45	3.6%	35	2.6%
Roberts Creek (Electoral Area D)	80	5.9%	50	3.7%	30	2.1%	85	5.5%
Elphinstone (Electoral Area E)	50	3.6%	40	2.8%	70	4.6%	35	2.2%
West Howe Sound (Electoral Area F)	40	4.1%	0	0.0%	30	3.2%	15	1.4%

Source: Statistics Canada, Census 2006-2021.

The percentage of owner households living in overcrowded dwellings has also remained relatively consistent throughout the years, whereas the percentage of renter households has fluctuated more dramatically, ranging from 0% to nearly 12% in the study area in 2021.

Renters in Roberts Creek (Electoral Area D) are particularly affected, with over 11.8% of renters living in overcrowded conditions in 2021, up from 5.6% in 2016. Notably, no renters in other electoral areas in the study fell below the suitability standard in 2021.

Figures 15 to 18 provide data on the number and share of renter households and owner households below the suitability standard.

Figure 15: Number of Renter Households Living Below the Suitability Standard, 2006-2021

Source: Statistics Canada, Census 2006-2021.

Note: The reader should note that in 2006, 2011, and 2021, the number of renter households living below the suitability standard in some electoral areas are reported as zero.

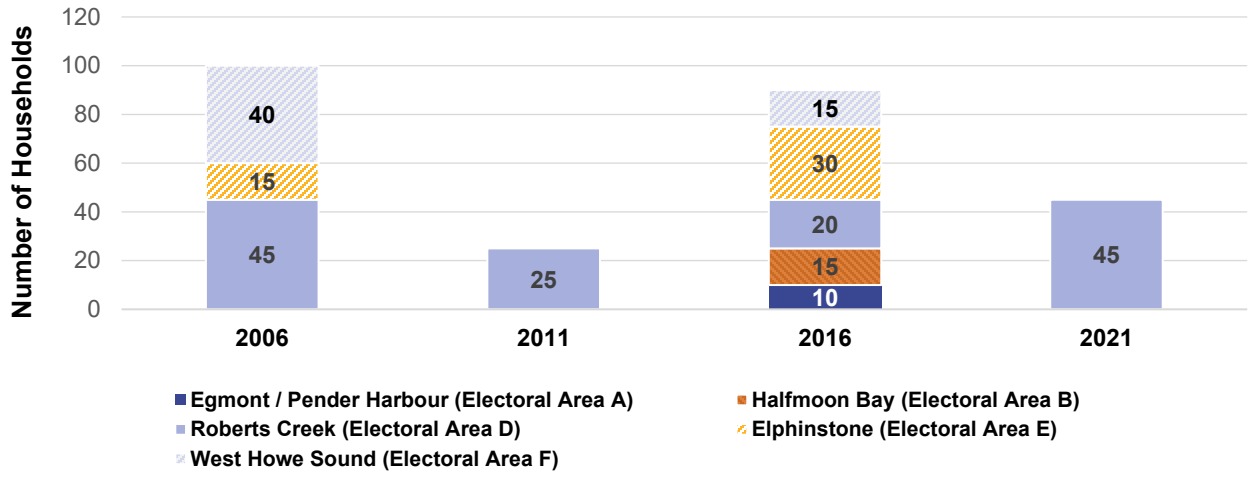


Figure 16: Number of Owner Households Living Below the Suitability Standard, 2006-2021

Source: Statistics Canada, Census 2006-2021.

Note: The reader should note that, between 2006 and 2011, the number of owner households living below the suitability standard in some electoral areas are reported as zero.

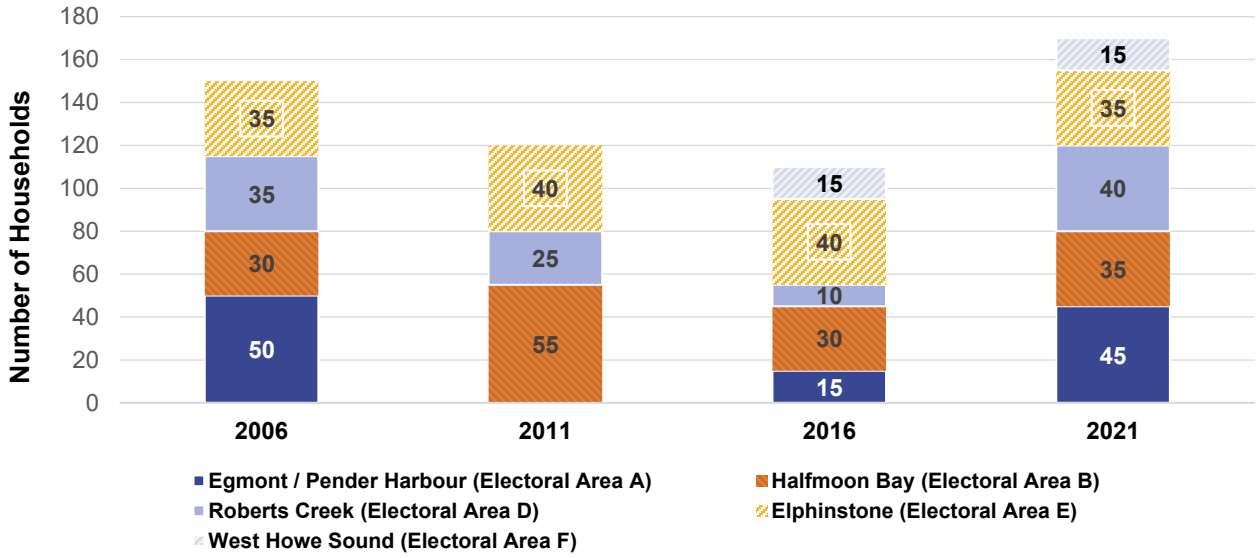


Figure 17: Percentage of Owner Households Living Below the Suitability Standard, 2006-2021

Source: Statistics Canada, Census 2006-2021.

Note: The reader should note that, between 2006 and 2011, the percentage of owner households living below the suitability standard in some electoral areas are reported as zero.

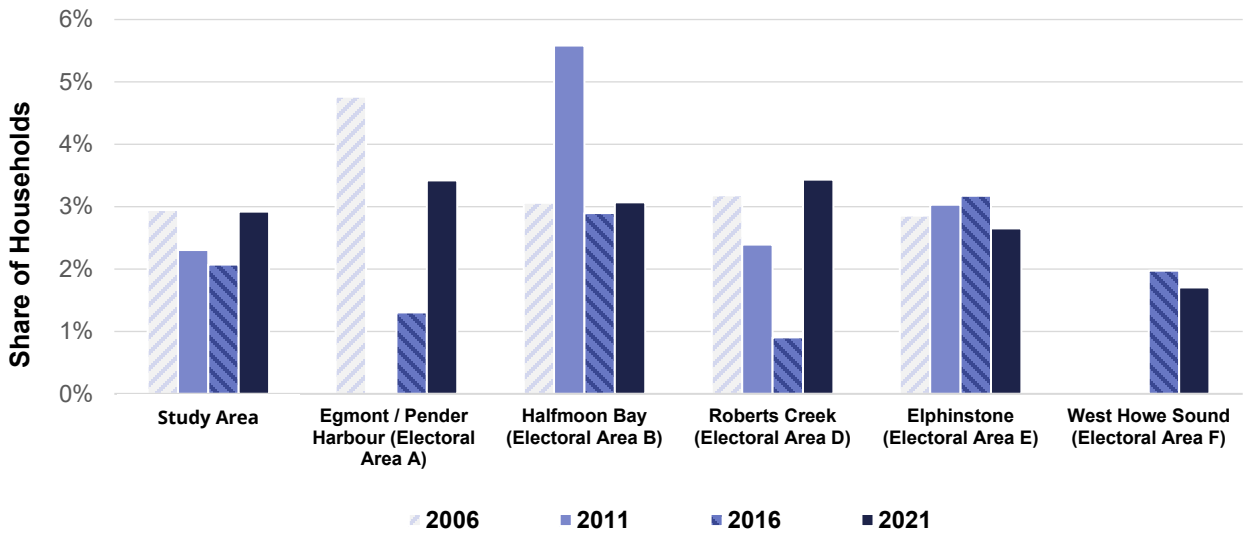
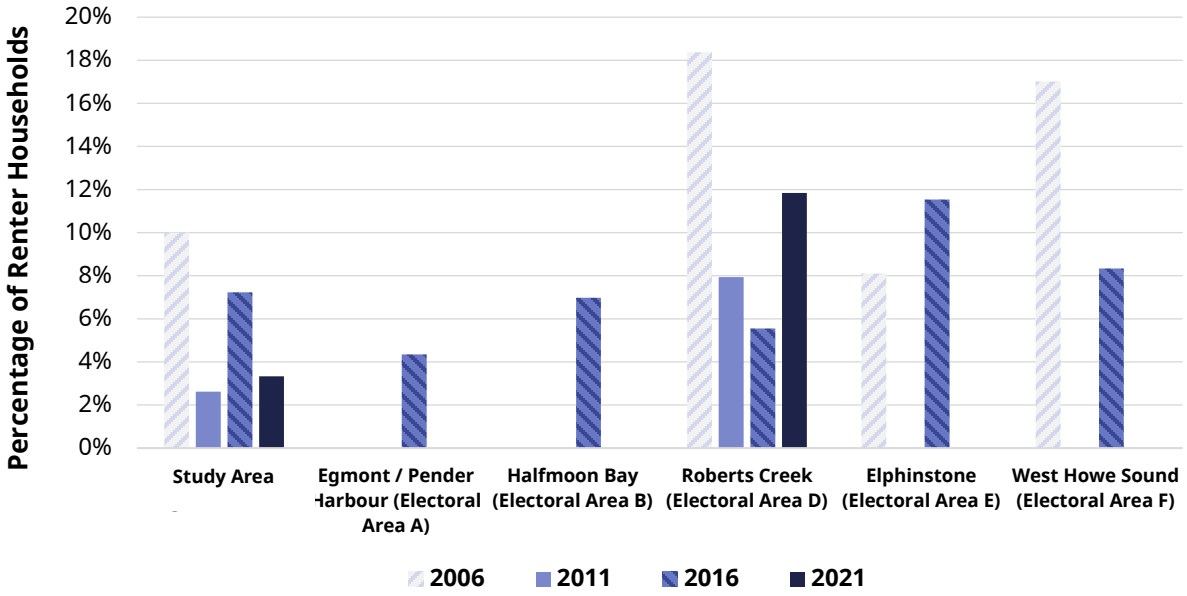


Figure 18: Percentage of Renter Households Living Below the Suitability Standard, 2006-2021

Source: Statistics Canada, Census 2006-2021.

Note: The reader should note that in 2006, 2011, and 2021, the percentage of renter households living below the suitability standard in some electoral areas are reported as zero.



3.3.4. Households in Core Housing Need

A household is considered to be in core housing need, as defined above, if it falls below at least one of the affordability, adequacy, or suitability standards and it would have to spend 30% or more of its income to afford the median rent of an alternative unit that is acceptable.

In 2021, a total of 785 households across the study area were identified as being in core housing need, encompassing all tenures. This represents 10.9% of the total private households. Notably, Egmont / Pender Harbour had a higher proportion of households in core housing need, with 315 households accounting for over 20.2% of the study area's total private households.

Renters are significantly **more likely to experience core housing need** due to typically lower incomes.

In 2021, about one in four renter households (25.6% or 345 renter households) across the study area was identified as being in core housing need. Renters in Egmont / Pender Harbour and Roberts Creek were most vulnerable. These two Electoral Areas had the highest proportions of renters in core housing need in 2021, at 41.7% and 36.8% respectively. Over the years, the percentage of renter households in core housing need has decreased across most electoral areas within the study area. Halfmoon Bay experienced the most significant reduction, declining from 51.7% (75 households) in 2006 to 6.7% (15 households) in 2021. Conversely, Roberts Creek was the only Electoral Area that saw an increase, doubling in the number of renters in core housing need from 70 to 140 during the same period.

Of all owner households 7.6% (440 households) were in core housing need in 2021. Among these households, almost half (215 households) were in Egmont / Pender Harbour.

Tables 18 to 20 on the following page present the overall households in core housing need from 2006 to 2021 Census reports as well as a breakdown by tenure of data from the same Census periods.

Table 18: Number and Percentage of Households in Core Housing Need, 2006-2021

Location	2006	% of total	2011	% of total	2016	% of total	2021	% of total
Study Area	**1190**	**19.6%**	**720**	**11.7%**	**910**	**13.9%**	**785**	**10.9%**
Egmont / Pender Harbour (Electoral Area A)	290	23.5%	290	20.6%	245	17.8%	315	20.3%
Halfmoon Bay (Electoral Area B)	210	18.7%	115	10.7%	140	11.2%	60	4.4%
Roberts Creek (Electoral Area D)	235	17.5%	170	12.5%	255	17.5%	245	15.9%
Elphinstone (Electoral Area E)	260	18.5%	60	4.2%	170	11.2%	95	5.9%
West Howe Sound (Electoral Area F)	195	20.0%	85	9.7%	100	10.6%	70	6.4%

Source: Statistics Canada, Census 2006-2021.

Table 19: Number and Percentage of Renter Households in Core Housing Need, 2006-2021

Location	2006	% of total	2011	% of total	2016	% of total	2021	% of total
Study Area	**395**	**39.7%**	**300**	**31.4%**	**485**	**39.1%**	**345**	**25.6%**
Egmont / Pender Harbour (Electoral Area A)	80	43.2%	120	60.0%	100	43.5%	100	41.7%
Halfmoon Bay (Electoral Area B)	75	51.7%	45	50.0%	80	36.4%	15	6.7%
Roberts Creek (Electoral Area D)	70	28.6%	90	28.1%	140	39.4%	140	36.8%
Elphinstone (Electoral Area E)	75	41.7%	0	0.0%	115	45.1%	50	17.5%
West Howe Sound (Electoral Area F)	95	39.6%	45	19.1%	50	27.8%	40	18.2%

Source: Statistics Canada, Census 2006-2021.

Table 20: Number and Percentage of Owner Households in Core Housing Need, 2006-2021

Location	2006	% of total	2011	% of total	2016	% of total	2021	% of total
Study Area	**795**	**15.6%**	**420**	**8.1%**	**425**	**8.0%**	**440**	**7.6%**
Egmont / Pender Harbour (Electoral Area A)	210	20.0%	170	14.0%	145	12.6%	215	16.3%
Halfmoon Bay (Electoral Area B)	135	13.8%	70	7.1%	60	5.8%	45	3.9%
Roberts Creek (Electoral Area D)	165	15.0%	80	7.7%	115	10.4%	105	9.0%
Elphinstone (Electoral Area E)	185	15.1%	60	4.5%	55	4.4%	45	3.4%
West Howe Sound (Electoral Area F)	100	13.6%	40	6.2%	50	6.6%	30	3.4%

Source: Statistics Canada, Census 2006-2021.

3.4. Changes in Housing Stock

3.4.1. Registered New Housing Units

New housing construction is continuing in the study area. Table 21[13] shows an annual breakdown of the different types of new construction from 2016 to 2022. During this period, roughly 530 new housing units were registered with BC Housing. Nearly all of the newly constructed units, were single-detached housing units. In 2022, 14 purpose-built rental housing units were constructed, while each of the years prior saw less than 5 new purpose-built rental housing units per year going back to 2016. Similarly, less than 5 multi-unit housing units were registered annually during this period.

Definitions of different types of new construction	
"Single Detached Homes"	includes both single detached homes enrolled in home warranty insurance and owner builder authorization homes which are exempt from licensing and home warranty insurance.
"Multi Unit Housing Units"	refers to housing units in multi unit buildings (two or more dwelling units) enrolled with home warranty insurance excluding multi unit buildings with rental exemptions.
"Purpose Built Rental"	(or Rental Exemption) refers to housing units in multi unit buildings built specifically for rental purposes and are not covered by home warranty insurance. These exempted housing units must be constructed for rental purposes, including social housing, and have a restrictive covenant registered on title restricting the sale of any dwelling unit for a 10-year period. Rental housing units with a covenant may however be captured under "multi-unit housing units" if the unit is voluntarily enrolled with home warranty insurance.

[13] New construction data of the Town of Gibsons, the District of Sechelt, and the shíshálh Nation Government District is excluded. This table includes data of all other communities and unincorporated areas on the Sunshine Coast.

Table 21: Number of New Housing Units Registered with BC Housing, 2016-2022

Type of New Construction	2016	2017	2018	2019	2020	2021	2022
Single Detached	62	76	73	64	67	92	82
Multi Unit Housing Units	*	*	*	*	*	*	*
Purpose Built Rental	*	*	*	*	*	*	14

***Note**: For privacy reasons data is suppressed for communities where there are less than 5 housing units registered in a year.
Source: BC Housing, 2016-2022.

3.4.2. Housing Units Completed – Building Permits Issued

Provincial guidelines advise local governments to report the housing units that were deemed substantially completed[14] in the past 10 years (if the data is available). Currently, the SCRD's database does not track housing units at the substantial completion stage. However, the database does track building permits that have achieved 'completed' status, as shown in Table 22 below. In the SCRD's database, 'completed' status indicates that the build was finished or, in some cases, reopened under a different permit number.

It should be noted the SCRD does not track a breakdown of completed units by tenure and structural type, so this information is not reported here. Additionally, building permit records before 2016 were recorded in an alternate database format and not standardized with current records. Review of individual building permits was beyond the scope of this report. As a result, data prior to 2016 is not included in this section. The number of building permits issued annually remained consistent from 2016 to 2022, with a notable increase to 191 building permits in 2023. The majority of these permits were for constructing new single- and two-family dwellings.

Table 22: Number of Building Permits at 'Completed Stage', 2016-2024

Location	2016	2017	2018	2019	2020	2021	2022	2023	2024[15]
Study Area	**86**	**92**	**98**	**114**	**97**	**104**	**92**	**191**	**36**
Egmont / Pender Harbour (Electoral Area A)	15	26	18	37	28	25	28	42	10
Halfmoon Bay (Electoral Area B)	22	15	16	19	21	13	18	26	7
Roberts Creek (Electoral Area D)	15	13	23	10	14	25	13	30	3
Elphinstone (Electoral Area E)	10	21	13	18	14	22	14	61	4
West Howe Sound (Electoral Area F)	24	17	27	27	15	15	15	27	9

[14] Substantial completion refers to a stage when a construction project is deemed to the point where the owner can use it for its intended purpose, even if some minor work remains to be done.
[15] 2024 data is comparatively low because it was extracted in July 2024.

Table 22: Number of Building Permits at 'Completed Stage', 2016-2024

Source: Export from the SCRD's Tempest application, July 2024.

3.4.3. Housing Units Demolished – Demolition Permits

In addition to the new housing units built, the housing stock in the study area is affected by the number of housing units demolished. The SCRD Building Department issues demolition permits and consistently tracks the housing units demolished annually from 2016 to 2024. During this period, 115 demolition permits were issued.

Table 23 presents the total number of demolition permits issued between 2016 and 2024 in the study area. It is important to note that the breakdown of demolished units by tenure and structural type is also not tracked by the SCRD.

Table 23: Number of Demolished Housing Units, 2016-2024

Location	2016	2017	2018	2019	2020	2021	2022	2023	2024[16]
Study Area	**12**	**20**	**12**	**19**	**11**	**21**	**12**	**7**	**11**
Egmont / Pender Harbour (Electoral Area A)	1	3	2	6	3	5	4	0	1
Halfmoon Bay (Electoral Area B)	3	3	2	5	1	0	1	3	2
Roberts Creek (Electoral Area D)	2	2	3	4	2	0	2	2	1
Elphinstone (Electoral Area E)	3	6	1	0	4	6	3	2	5
West Howe Sound (Electoral Area F)	2	5	2	3	1	5	2	0	2

Source: Export from the SCRD's Tempest application, July 2024.

[16] 2024 data is comparatively low because it was extracted in July 2024.

Chapter 4
Emerging Housing Needs

Chapter 4 provides an overview of the SCRD study area's housing trends and projections of the number of homes required to address each of the Electoral Area's current and anticipated housing needs over 5- and 20-year timeframes.

These timeframes commence from the most recent Census report, which is the 2021 Census.

Data sources include:

- Statistics Canada
- BC Stats
- Ministry of Housing
- CMHC
- Preventing and Reducing Homelessness Integrated Data Project

This section is composed of the following five components of housing need:

1. The supply of housing units for households in extreme core housing need.
2. The supply of housing units for individuals experiencing homelessness.
3. The supply of housing units for suppressed households.
4. The supply of housing units for anticipated household growth.
5. The supply of housing units required to increase the rental vacancy rate to 3%.

***The reader should note that the household projections are rounded to the nearest whole number to determine the total 5- and 20-year housing need.**

4.1. Housing Units and Extreme Core Housing Needs

As defined by Statistics Canada, extreme core housing need (ECHN) refers to private households falling below thresholds for housing adequacy or suitability that also spend more than 50% of their pre-tax income on shelter costs.

Households in extreme core housing need face severe challenges in securing and maintaining adequate, suitable, and affordable housing.

These households spend a disproportionate amount of their income on housing costs, which may leave insufficient funds for other essentials.

4.1.1. Current Renter Households in Extreme Core Housing Need

In 2021, across the study area, there were 150 renter households falling below thresholds for housing adequacy or suitability and that spent 50% or more of their income on rent. This accounted for 11.1% of the total renter households. Egmont / Pender Harbour (Electoral Area A) had the highest share of renter households in extreme core housing need at 16.7% (40 renter households). Conversely, there were no renter households in extreme core housing need out of the 225 renter households in Halfmoon Bay (Electoral Area B).

Since 2006, the number of renter households in extreme core housing need has been trending slightly upwards overall. Figures 19 and 20 show the number and share of renter households in extreme core housing need across the study area between 2006 and 2021.

Figure 19: Renter Households in Extreme Core Housing Need, 2006-2021

Source: Statistics Canada, Census 2006-2021.

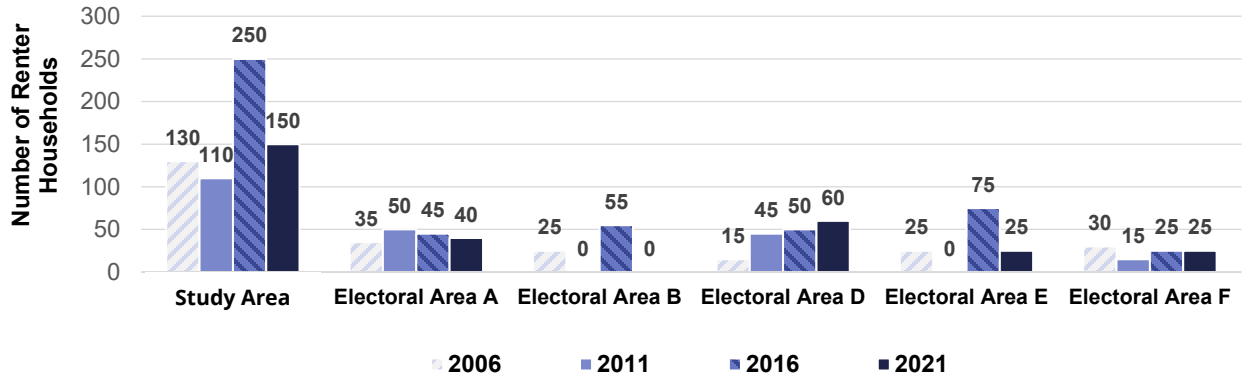
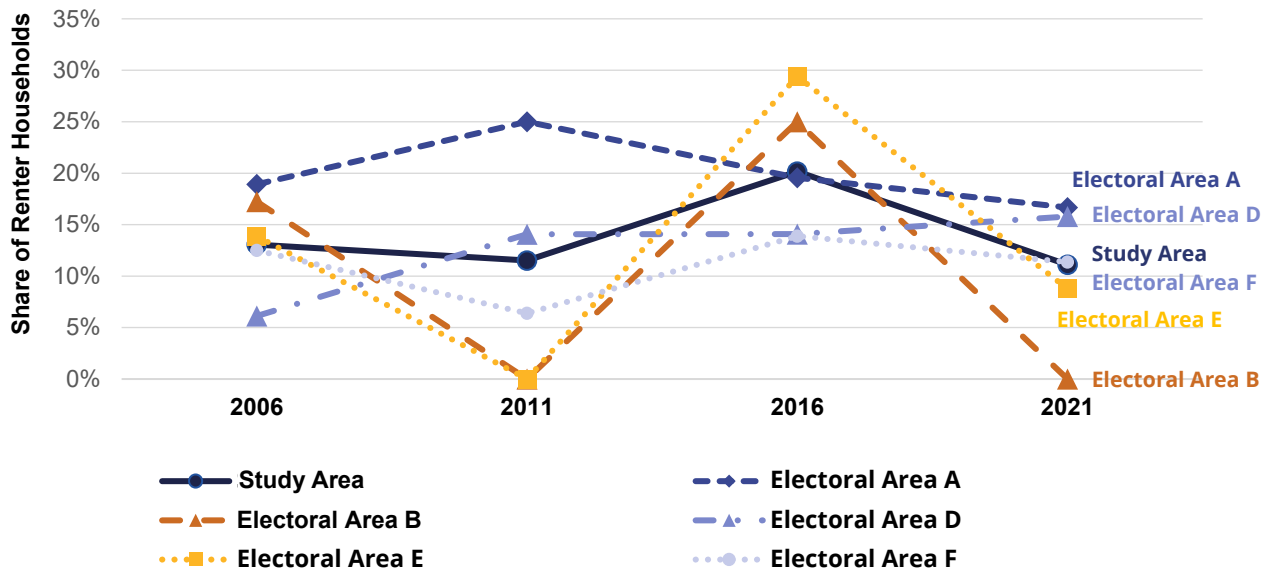


Figure 20 Percentage of Renter Households in Extreme Core Housing Need, 2006-2021

Source: Statistics Canada, Census 2006-2021.



4.1.2. Current Owner Households in Extreme Core Housing Needs

The proportion of owner households in extreme core housing need is significantly smaller than that of renter households in the study area. In 2021, across the study area, 130 owner households did not meet adequacy or suitability standards and spent 50% or more of their income on housing.

This only accounted for 2.2% of the total owner households. Again, Egmont / Pender Harbour (Electoral Area A) had the highest share of owner households in extreme core housing need, roughly 4.6% of the total owner households. West Howe Sound (Electoral Area F), however, reported no owner households in extreme core housing need out of the 880 owner households in the Electoral Area.

Over the years, the number and share of owner households in extreme housing need have decreased significantly. Figures 21 and 22 on the following page present the number and percentage of owner households in extreme core housing need based on the four most recent Census reports.

Figure 21: Owner Households in Extreme Core Housing Need, 2006-2021

Source: Statistics Canada, Census 2006-2021.

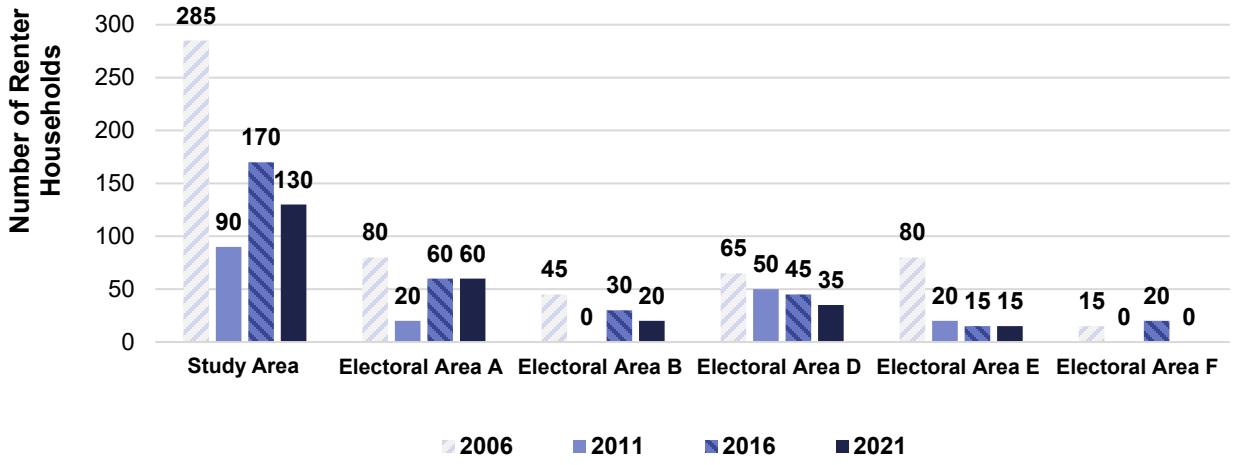
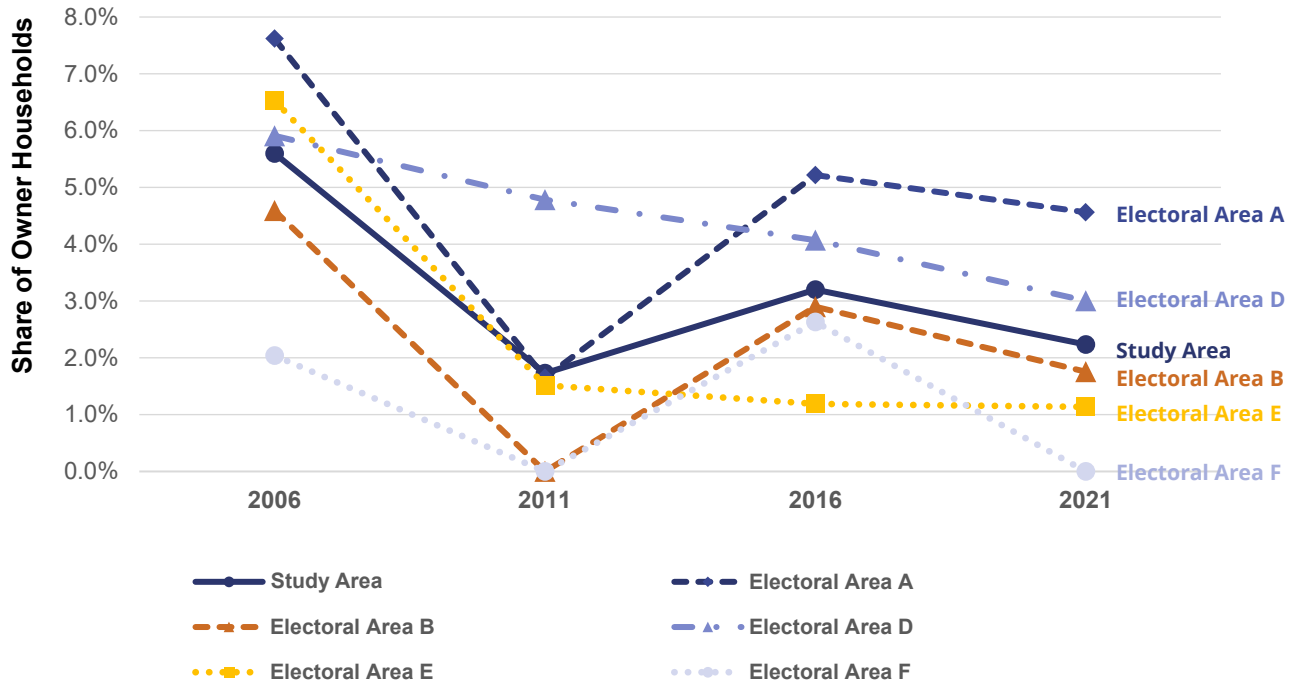


Figure 22: Percentage of Owner Households in Extreme Core Housing Need, 2006-2021

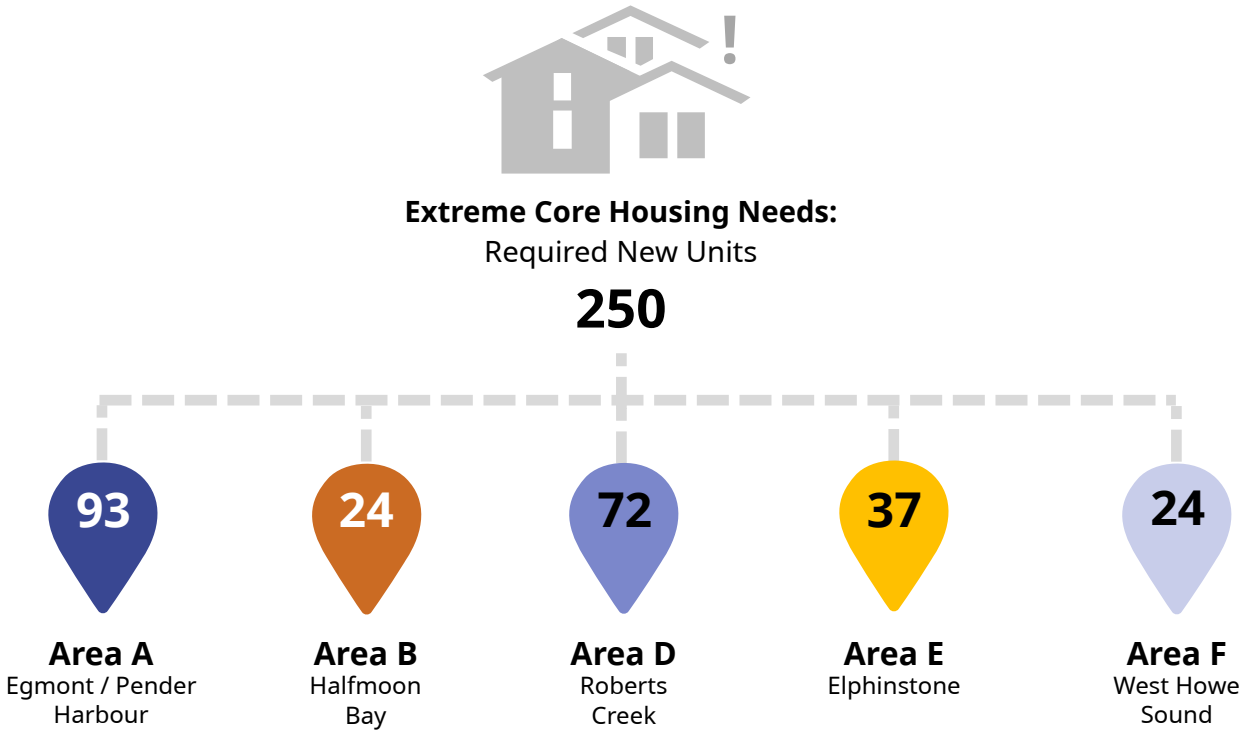
Source: Statistics Canada, Census 2006-2021.



4.1.3. Estimated Number of Units to Address Extreme Core Housing Needs

The HNR regulations mandate local governments to estimate the number of housing units required over a 20-year period in order to deliver more housing, in the right places, faster. The estimate for new units needed for those in vulnerable housing situations is based on the extreme core housing need for renters and owners with a mortgage[17].
The SCRD calculates this by multiplying the average rate of households in extreme core housing need in each electoral area within the study area by the total private households from the most recent Census report (2021 Census). This calculation yields an estimate of the number of units by tenure needed to support owner and renter households in extreme core housing need.

Between 2021 and 2041, it is estimated that 250 new units will be required across the study area to meet extreme core housing needs. Specifically, 69 units are needed for owner households with a mortgage and 181 units for renter households. Tables 24 to 33 provide the average ECHN rates and the total new units required to address ECHN in each electoral area.



[17] The number and percentage of owners with a mortgage in extreme core housing need were sourced from the BC HNR Calculator developed by Housing Assessment Resource Tools (HART). It should be noted that HART is still evolving, particularly concerning data at the electoral area level within regional districts. As a result, the data presented on the HART website (BC HNR Calculator | Housing Assessment Resource Project (HART) (ubc.ca)) may change over time and may not always align with the HART-sourced data provided in the report.

Table 24: Average Extreme Core Housing Need (ECHN) Rate: Egmont / Pender Harbour (Electoral Area A)

Households in Extreme Core Housing Need	2006		2011		2016		2021		Average ECHN Rate
	#	% of total	#	% of total	#	% of total	#	% of total	
Owners with a mortgage	N/A	N/A	N/A	N/A	N/A	N/A	45	3.4%	**3.4%**
Renters	35	18.9%	50	25.0%	45	19.6%	40	16.7%	**20.0%**

Source: Statistics Canada, Census 2006-2021; Housing Needs Assessment Tools (HART).

Table 25: Total New Units Needed to Address Extreme Core Housing Needs, 2021 to 2041: Egmont / Pender Harbour (Electoral Area A)

Total private Households	2021 Households	Average ECHN Rate	Households in ECHN
Owners	1,315	3.4%	45
Renters	240	20.0%	48
Total New Units to Meet Extreme Core Housing Needs – 20 years			**93**

Source: Statistics Canada, Census 2006-2021; Housing Needs Assessment Tools (HART).

Halfmoon Bay (Electoral Area B)

Table 26: Average Extreme Core Housing Need (ECHN) Rate: Halfmoon Bay (Electoral Area B)

Households in Extreme Core Housing Need	2006		2011		2016		2021		Average ECHN Rate
	#	% of total	#	% of total	#	% of total	#	% of total	
Owners with a mortgage	N/A	N/A	N/A	N/A	N/A	N/A	0	0.0%	**0.0%**
Renters	25	17.2%	0	0.0%	55	25.0%	0	0.0%	**10.6%**

Source: Statistics Canada, Census 2006-2021; Housing Needs Assessment Tools (HART).

Table 27: Total New Units Needed to Address Extreme Core Housing Needs, 2021 to 2041: Halfmoon Bay (Electoral Area B)

Total Private Households	2021 Households	Average ECHN Rate	Households in ECHN
Owners	1,140	0.0%	0
Renters	225	10.6%	24
Total New Units to Meet Extreme Core Housing Needs – 20 years			**24**

Source: Statistics Canada, Census 2006-2021; Housing Needs Assessment Tools (HART).

Roberts Creek (Electoral Area D)

Table 28: Average Extreme Core Housing Need (ECHN) Rate: Roberts Creek (Electoral Area D)

Households in Extreme Core Housing Need	2006		2011		2016		2021		Average ECHN Rate
	#	% of total	#	% of total	#	% of total	#	% of total	
Owners with a mortgage	N/A	N/A	N/A	N/A	N/A	N/A	25	2.1%	**2.1%**
Renters	15	6.1%	45	14.1%	50	14.1%	60	15.8%	**12.5%**

Source: Statistics Canada, Census 2006-2021; Housing Needs Assessment Tools (HART).

Table 29: Total New Units Needed to Address Extreme Core Housing Needs, 2021 to 2041: Roberts Creek (Electoral Area D)

Total Private Households	2021 Households	Average ECHN Rate	Households in ECHN
Owners	1,165	2.1%	24
Renters	380	12.5%	48
Total New Units to Meet Extreme Core Housing Needs – 20 years			**72**

Source: Statistics Canada, Census 2006-2021; Housing Needs Assessment Tools (HART).

Table 30: Average Extreme Core Housing Need (ECHN) Rate: Elphinstone (Electoral Area E)

Households in Extreme Core Housing Need	2006		2011		2016		2021		Average ECHN Rate
	#	% of total	#	% of total	#	% of total	#	% of total	
Owners with a mortgage	N/A	N/A	N/A	N/A	N/A	N/A	0	0.0%	**0.0%**
Renters	25	13.9%	0	0.0%	75	29.4%	25	8.8%	**13.0%**

Source: Statistics Canada, Census 2006-2021; Housing Needs Assessment Tools (HART).

Table 31: Total New Units Needed to Address Extreme Core Housing Needs, 2021 to 2041: Elphinstone (Electoral Area E)

Total Private Households	2021 Households	Average ECHN Rate	Households in ECHN
Owners	1,325	0.0%	0
Renters	285	13.0%	37
Total New Units to Meet Extreme Core Housing Needs – 20 years			**37**

Source: Statistics Canada, Census 2006-2021; Housing Needs Assessment Tools (HART).

Table 32: Average Extreme Core Housing Need (ECHN) Rate: West Howe Sound (Electoral Area F)

Households in Extreme Core Housing Need	2006		2011		2016		2021		Average ECHN Rate
	#	% of total	#	% of total	#	% of total	#	% of total	
Owners with a mortgage	N/A	N/A	N/A	N/A	N/A	N/A	0	0.0%	**0.0%**
Renters	30	12.5%	15	6.4%	25	13.9%	25	11.4%	**11.0%**

Source: Statistics Canada, Census 2006-2021; Housing Needs Assessment Tools (HART).

Table 33: Total New Units Needed to Address Extreme Core Housing Needs, 2021 to 2041: West Howe Sound (Electoral Area F)

Total Private Households	2021 Households	Average ECHN Rate	Households in ECHN
Owners	880	0.0%	0
Renters	220	11.0%	24
Total New Units to Meet Extreme Core Housing Needs – 20 years			**24**

Source: Statistics Canada, Census 2006-2021; Housing Needs Assessment Tools (HART).

4.2. Housing Units and Homelessness

As of the 2021 report "Estimate of the Homeless Population in British Columbia", 146[18] individuals were identified as experiencing homelessness in all eight electoral areas of the SCRD, including the study area, the District of Sechelt, the Town of Gibsons, and the shíshálh Nation. Data on homelessness is derived from the Province's Integrated Data Project (IDP), which is a program initiated through a partnership between the Ministries of Housing, Social Development and Poverty Reduction, Citizen Services, and BC Housing. According to the Ministry of Housing, individuals must have received income assistance and had no fixed address for three consecutive months, or they must have stayed in a BC Housing-affiliated shelter for at least one night, or both, to be included in the IDP counts.

Local governments are required to estimate the number of new units needed to support people experiencing homelessness (PEH). This calculation involves multiplying the PEH data by the share (%) of each electoral area's population to derive the proportional number of PEH in each electoral area. This method assumes one new unit per person experiencing homelessness; therefore, the total new units required to reduce homelessness in the study area over 20 years is 73 units.

Table 34 shows the supply of units that must be provided in the study area over a 20-year period to reduce homelessness in the study area.

Table 34: Total New Units Needed to Address People Experiencing Homelessness (PEH), 2021 to 2041

Location	Total Population	% of SCRD Population	PEH in the SCRD
Study Area	**31,510**[19]	**100%**	**146**
Egmont / Pender Harbour (Electoral Area A)	2,980	9.46%	13.81
Halfmoon Bay (Electoral Area B)	2,960	9.39%	13.72
Roberts Creek (Electoral Area D)	3,520	11.17%	16.31
Elphinstone (Electoral Area E)	3,810	12.09%	17.65
West Howe Sound (Electoral Area F)	2,325	7.38%	10.77
Total New Units to Reduce Homelessness – 20 years			**73**

Source: Statistics Canada, Census 2021; IDP 2021 Estimate of the Homeless Population in British Columbia.

[19] This is the population number of the SCRD, the District of Sechelt, and the Town of Gibsons. Instead of the population data of the SCRD's five Electoral Areas, this population data was used in conjunction with the PEH data in the SCRD, the District of Sechelt and the Town of Gibsons (146 individuals) to determine the proportional number of homeless individuals in each electoral area.

4.3. Housing Units and Suppressed Household Formation

Suppressed household formation (SHF) refers to instances where individuals or groups delay or forego forming independent households due to housing constraints. According to the Housing Assessment Resource Tools (HART), SHF includes, but is not limited to, adults living with family members or roommates because of affordability concerns and individuals wishing to leave unsafe or unstable environments but cannot due to a lack of places to go. These are households that were unable to form due to a constrained housing environment.

Local governments are mandated to estimate the supply of units needed to reduce the number of suppressed households in 20 years. To do so, headship rates[20] from the 2006 Census data – the earliest available data when housing conditions were less constrained – were calculated and applied to the 2021 Census population data, the most recent available. This approach estimates how many additional households might have formed under more favourable housing conditions when housing supply was less constrained.

It is estimated that a total **of 570 new units will be required** across the study area **to address suppressed household formation**.

Tables 35 to 40 show the number of suppressed households by tenure and age in each electoral area. The number of suppressed households is calculated as the difference between the households that could have theoretically formed based on 2006 headship rates and those that actually formed in 2021.

[20] A headship rate is a demographic measure that represents the proportion of individuals within a specific age group who are heads of households. It is calculated by dividing the number of households by population for a given age cohort.

Table 35: Total New Units Needed to Address Suppressed Household Formation, 2021 to 2041: Egmont / Pender Harbour (Electoral Area A)

Age Categories – Household Maintainers	2021 Suppressed Households		
	Owner	Renter	Total
15 to 24 years	0	0	0
25 to 34 years	-11*	0	0**
35 to 44 years	-11	6	0
45 to 54 years	15	-9	6
55 to 64 years	-49	-25	0
65 to 74 years	106	-13	93
75 years and over	-3	14	10
Total New Units to Address Suppressed Household Formation – 20 years			**109**

Note:
* = Negative values represent the age and tenure categories where there were more actual households formed in 2021 than what could have theoretically been formed at 2006 headship rates. This indicates that no household formations were suppressed in the particular category.

** = For any categories where the total supressed households are less than 0, it is considered that there are no suppressed households. Therefore, the total for that category is reported as 0.

Source: Statistics Canada, Census 2006 and 2021.

Table 36: Total New Units Needed to Address Suppressed Household Formation, 2021 to 2041: Halfmoon Bay (Electoral Area B)

Age Categories – Household Maintainers	2021 Suppressed Households		
	Owner	Renter	Total
15 to 24 years	7	-13	0
25 to 34 years	24	-5	19
35 to 44 years	-22	17	0
45 to 54 years	36	-4	32
55 to 64 years	15	-16	0
65 to 74 years	-31	-40	0
75 years and over	18	0	18
Total New Units to Address Suppressed Household Formation – 20 years			68

Source: Statistics Canada, Census 2006 and 2021.

Table 37: Total New Units Needed to Address Suppressed Household Formation, 2021 to 2041: Roberts Creek (Electoral Area D)

Age Categories – Household Maintainers	2021 Suppressed Households		
	Owner	Renter	Total
15 to 24 years	0	12	12
25 to 34 years	47	12	59
35 to 44 years	40	-20	20
45 to 54 years	48	-60	0
55 to 64 years	17	-5	12
65 to 74 years	114	-65	49
75 years and over	13	-1	12
Total New Units to Address Suppressed Household Formation – 20 years			**164**

Source: Statistics Canada, Census 2006 and 2021.

Table 38: Total New Units Needed to Address Suppressed Household Formation, 2021 to 2041: Elphinstone (Electoral Area E)

Age Categories – Household Maintainers	2021 Suppressed Households		
	Owner	Renter	Total
15 to 24 years	0	10	10
25 to 34 years	54	-24	30
35 to 44 years	61	-44	17
45 to 54 years	8	-1	7
55 to 64 years	44	-11	33
65 to 74 years	-29	46	17
75 years and over	46	-15	31
Total New Units to Address Suppressed Household Formation – 20 years			**145**

Source: Statistics Canada, Census 2006 and 2021.

Table 39: Total New Units Needed to Address Suppressed Household Formation, 2021 to 2041: West Howe Sound (Electoral Area F)

Age Categories – Household Maintainers	2021 Suppressed Households		
	Owner	Renter	Total
15 to 24 years	0	0	0
25 to 34 years	11	6	17
35 to 44 years	-1	21	20
45 to 54 years	-12	15	3
55 to 64 years	25	-17	7
65 to 74 years	37	0	37
75 years and over	14	-20	0
Total New Units to Address Suppressed Household Formation – 20 years			**84**

Source: Statistics Canada, Census 2006 and 2021.

4.4. Housing Units and Anticipated Household Growth

This section outlines the projections of the additional housing units required to accommodate household increases over the 20-year period between 2021 and 2041.

Table 45 presents the projected number of new housing units needed in the study area, calculated based on the regional household growth projections and provincial guidelines. According to these projections, the study area could see an increase of approximately 2,103 households between 2021 and 2041, representing a 29.3% growth in total private households from 2021.

The allocation shown here follows Provincial requirements and is proportional to current households but does not consider the relative land availability, (re)development potential or differences in servicing capacity between electoral areas or at a regional scale. These will be important future considerations as land use policy is updated and results of this report are used.

Table 40: Total New Units Needed to Meet Household Growth Needs, 2021 to 2041

Electoral Area	20-Yr SCRD Population Growth Rate	Households		New Units
		2021	2041	
Egmont / Pender Harbour (Electoral Area A)	29.3%	1,555	2,018	456
Halfmoon Bay (Electoral Area B)		1,365	1,772	400
Roberts Creek (Electoral Area D)		1,545	2,005	453
Elphinstone (Electoral Area E)		1,605	2,089	471
West Howe Sound (Electoral Area F)		1,100	1,429	323
Total New Units to Meet Household Growth Needs – 20 years				**2,101**

Sources: Statistics Canada, Census 2021; BC Stats; Housing Assessment Resource Tools (HART).

4.5. Housing Vacancy and Rental Vacancy Rate

The rental vacancy rate provides a snapshot of the current supply and demand balance in the rental housing market. This section estimates the number of new homes needed to achieve a target local vacancy rate of 3%, in line with provincial guidelines. It is important to note that the Canadian Mortgage and Housing Corporation (CMHC) does not publish rental vacancy rates at the electoral area level for the SCRD. Therefore, the provincial vacancy rate of 1.4% was used for the purposes of this calculation, following provincial guidance.

According on these calculations, 24 new homes are needed across the study area to reach the 3% vacancy rate. It is important to note that rental vacancy rates will be impacted by initiatives that support renters in the study area, such as providing relief for suppressed households and facilitating the movement of individuals experiencing or at risk of homelessness—for instance, those living in recreational vehicles and campgrounds—into rental properties. Table 41 details the number of new units required in each electoral area. These figures were determined by comparing the estimated number of units needed for a healthy 3% vacancy rate with the current number of rental units, based on the 1.4% provincial vacancy rate.

Table 41: Total New Units Needed to Achieve Target Rental Vacancy Rate, 2021 to 2041

Electoral Area	Target Vacancy Rate	Provincial Vacancy Rate	Renter Households	Target Estimated Number of Units	Local Estimated Number of Units	Total New Units to Achieve 3% Vacancy Rate – 20 years
Egmont / Pender Harbour (Electoral Area A)	3.0%	1.4%	240	247	243	4
Halfmoon Bay (Electoral Area B)			225	232	228	4
Roberts Creek (Electoral Area D)			375	387	380	7
Elphinstone (Electoral Area E)			285	294	289	5
West Howe Sound (Electoral Area F)			220	227	223	4
Total New Units to Achieve 3% Vacancy Rate – 20 years						**24**

Sources: Statistics Canada, Census 2021; Housing Assessment Resource Tools (HART).

4.6. Total 5-year and 20-year Housing Need

Tables 42 and Table 43 summarize the total number of new housing units required in 5- and 20-year timeframes based on the five components of housing need (components A-E) discussed above. Across all study area, 930 additional homes are needed within 5 years and a total of 3,018 new homes within 20 years.

The 5-year housing need calculation is derived from the 20-year estimates for each of the five components of current and anticipated need. In line with provincial guidelines, some components, such as homelessness, are relatively higher in the first 5 years, reflecting the urgency of addressing them.

Table 42: Total 5-Year Housing Need

Component	Total 5-Year Housing Need				
	Electoral Area A	Electoral Area B	Electoral Area D	Electoral Area E	Electoral Area F
1. Extreme Core Housing Need	23	6	18	9	6
2. Persons Experiencing Homelessness	7	7	8	9	6
3. Suppressed Household Formation	27	17	41	36	21
4. Anticipated Household Growth	148	130	147	152	104
5. Rental Vacancy Rate Adjustment	1	1	2	1	1
Total New Units – 5 years	**207**	**161**	**216**	**208**	**138**

Over the past five years, specifically from 2016 to 2021, a total of 420 new housing units were constructed (as indicated in Figure 10). This suggests that the number of new housing units required to be built over the next five years will need to more than double in order to meet the total 5-year housing demand of 930 additional units.

Table 43: Total 20-Year Housing Need

Component	Total 5-Year Housing Need				
	Electoral Area A	Electoral Area B	Electoral Area D	Electoral Area E	Electoral Area F
1. Extreme Core Housing Need	93	24	72	37	24
2. Persons Experiencing Homelessness	14	14	16	18	11
3. Suppressed Household Formation	109	68	164	145	84
4. Anticipated Household Growth	456	400	453	471	323
5. Rental Vacancy Rate Adjustment	4	4	7	5	4
Total New Units – 20 years	**676**	**510**	**712**	**675**	**445**

Chapter 5
Summary of the Key Areas of Local Need

Data sources include:

- Stakeholder Engagement conducted for the 2023 Social and Housing Needs Report
- Preventing and Reducing Homelessness Integrated Data Project
- SCRD

Residents across the study area are facing affordability challenges due to increasing market rental rates and ownership costs that are out of reach for many. Many families in the study area are unable to find their way onto the housing ladder due to substantive price barriers and a lack of suitable entry-level options. Renters, who typically earn lower incomes, are more likely to be impacted by these affordability challenges than owners, with impacts resonating across multiple key metrics. This is especially true for single-person households, single-parent families, and individuals with fixed incomes, many of whom spend over half of their income on housing.

The lack of affordable housing affects not only renters and owners but also the social and economic health of the SCRD. Many local businesses and essential service organizations are struggling to recruit and retain staff due to housing affordability issues.

Local Business & Service Organization Needs

In a 2021 survey of local businesses and service organizations, over 85% of respondents reported challenges hiring or retaining staff because of the community's the lack of affordable housing.

The relative remoteness of the study area exacerbates these affordability challenges, as barriers to public transportation such as infrequent bus routes and gaps in service necessitate the ownership and maintenance of a private vehicle for residents to maintain their quality of life. The costs of owning and maintaining private vehicles can further intensify the housing affordability challenges that residents are already grappling with.

Aging Population Needs

Vulnerable demographics in the study area, including seniors, people experiencing homelessness, and people with disabilities, grapple with unique challenges due to a lack of affordable housing and require tailored housing solutions and support services. Supportive housing, a form of provincially funded accommodation that offers on-site support to residents, and special needs housing, which is designed for individuals who require assistance due to physical, sensory, mental health, or cognitive disabilities, are critical resources for these vulnerable groups.

Services can range from assisted living and healthcare to addiction recovery support, providing much-needed assistance in the daily lives of vulnerable and at-risk populations. While some supportive housing exists within the study area, the data indicates that there is a critical shortage of supportive housing options.

Seniors, one of the fastest-growing demographic groups in the study area, are increasingly in need of supportive housing and suitable downsizing options.

The housing landscape in the study area is dominated by single-detached houses, which poses additional challenges for seniors. Many of these housing units are not equipped to meet their needs, with issues such as difficult staircases and low-accessibility bathrooms creating mobility and livability challenges for aging populations. The physical demands of maintaining these housing units, combined with the associated financial strain and the potential for social isolation created by single-family housing units, further exacerbate the situation.

Seniors who require medical and non-medical support services face long waiting lists for home care or assisted living and complex care housing. Much of the missing care is coming from family caregivers, who report high levels of burnout. Many seniors who require care are forced to sell their houses and leave the community.

Seniors who are renters and living on fixed incomes are vulnerable to homelessness. If they lost their long-term rental, they are unlikely to afford the current rental costs, which are often more than their entire monthly income.

The following quotes were obtained from focus groups with front-line workers in the study area in 2023:

"The thing is, they sell, but they have to leave that community, which doesn't seem right. Because all their supports are in the community."

"[W]e have a major crisis for affordable housing for seniors on the Sunshine Coast. And people don't seem to care that they're evicting seniors, and that they have nowhere to go sometimes. I have two clients [who] were evicted... a year ago, and they're still living in a hotel in Gibsons."

"I would say probably close to 40 to 50 percent of my clients over the last two years have been seniors who were living on fixed incomes and have been evicted."

Developing comprehensive strategies to expand senior housing options, including assisted living facilities and in-home services as part of supportive seniors housing, and increase the supply of below-market or subsidized independent housing units for seniors will be essential to accommodate the aging population.

Collaborative and proactive planning and investment in housing policy and seniors housing infrastructure will support the needs of senior residents, providing them with the housing options.

Accessibility Needs

A 2023 Social and Housing Needs Assessment, conducted by the Regional Housing Coordinator, focused on people with intellectual disabilities assessed that the current supply of affordable and appropriately supported residential options does not come close to meeting current needs. As a result of the compounding challenges facing the study area's aging and at-risk populations, many caregivers of people with disabilities are experiencing burnout.

The ongoing shortage of supportive and special needs housing has a direct impact on population groups who need housing that is accessible, that provides amenities that support mobility issues, and caters to other day-to-day life needs.

Input from an engagement session in 2023 involving persons living with intellectual disabilities and their caregivers highlights the concerns of residents seeking special needs housing:

"My wife and I are caregivers for a special needs 40-year-old man. Our ongoing concern is finding the necessary housing to accommodate the 3 of us."

"My sons are now 21 and 23 and I am hoping to have housing in place for the next five years. I am now 57 and my husband is 73 so it is important to us that they are independent so when the time comes for us to leave this earth that they are in a good place. A place where that have their own room and social supports and just support for day-to-day life needs."

Homelessness Needs

People experiencing homelessness are particularly vulnerable to the lack of supportive housing and affordable housing in the SCRD. As of 2021, approximately 146 people were counted as experiencing homelessness in the SCRD. Within the study area this corresponds to 73 individuals. However, this number is likely to be higher due to hidden homelessness, such as couch surfing, camping, and single mothers with children living with grandparents.

Engagement sessions conducted by the Regional Housing Coordinator in 2023 shed light on the need for accessible supportive housing, the intersection of homelessness with mental health and addiction, and the social responsibility towards public health and safety:

"I just want to have a door to close. I want to have security. I do not feel safe in a tent ... I don't like where I am, behind Hightide. But ... I'm afraid to be away from there. Because there's no buses in certain places ... I don't have a phone."

"Sleeping on the ground is not good for old bones, your nutrition, not having that level of protein that you need to heal. And one thing leads to another, and that's often the gateway to repeat admissions to the hospital, repeat visits to the emergency room, greater burden on the system and down a road of further health decline. And, you know, you see a lot of things, like chronic diseases like diabetes, which factor in as well. So it's a huge problem. The actual cost to society for somebody to be homeless is astronomical."

"And you have mental health and addictions, people that are plagued with that. And in that area, we are, I think, sorely underserved as a community, from every level, whether it's treatment beds, places for people to go after treatment, recovery houses, transition houses. I mean, it's a whole spectrum of things.... [Even for somebody to throw in 10 treatment beds on the coast, if they've got nowhere to go after their 28 days [what happens to that person next]."

"Even BC Parks provides hand washing and washrooms because you can't just live in a tent endlessly without those things. So I think, how can we do that in a way that is not enabling it or condoning it, but also making sure that we have a duty to provide public health and safety"

The data indicates that youth accounts for 12% of the homeless population, and people who identify as Indigenous make up 44% of the homeless population. This represents a troubling statistic, as children and individuals that identify as indigenous are often at risk of additional vulnerabilities that can compound precarious living situations.

Based on these figures, there is need for more transition houses and shelters across the study area. To meet the specific needs of many people experiencing homelessness, supportive housing providing on-site supports, such as life-skills training and connections to primary health care or substance use services, will be essential.

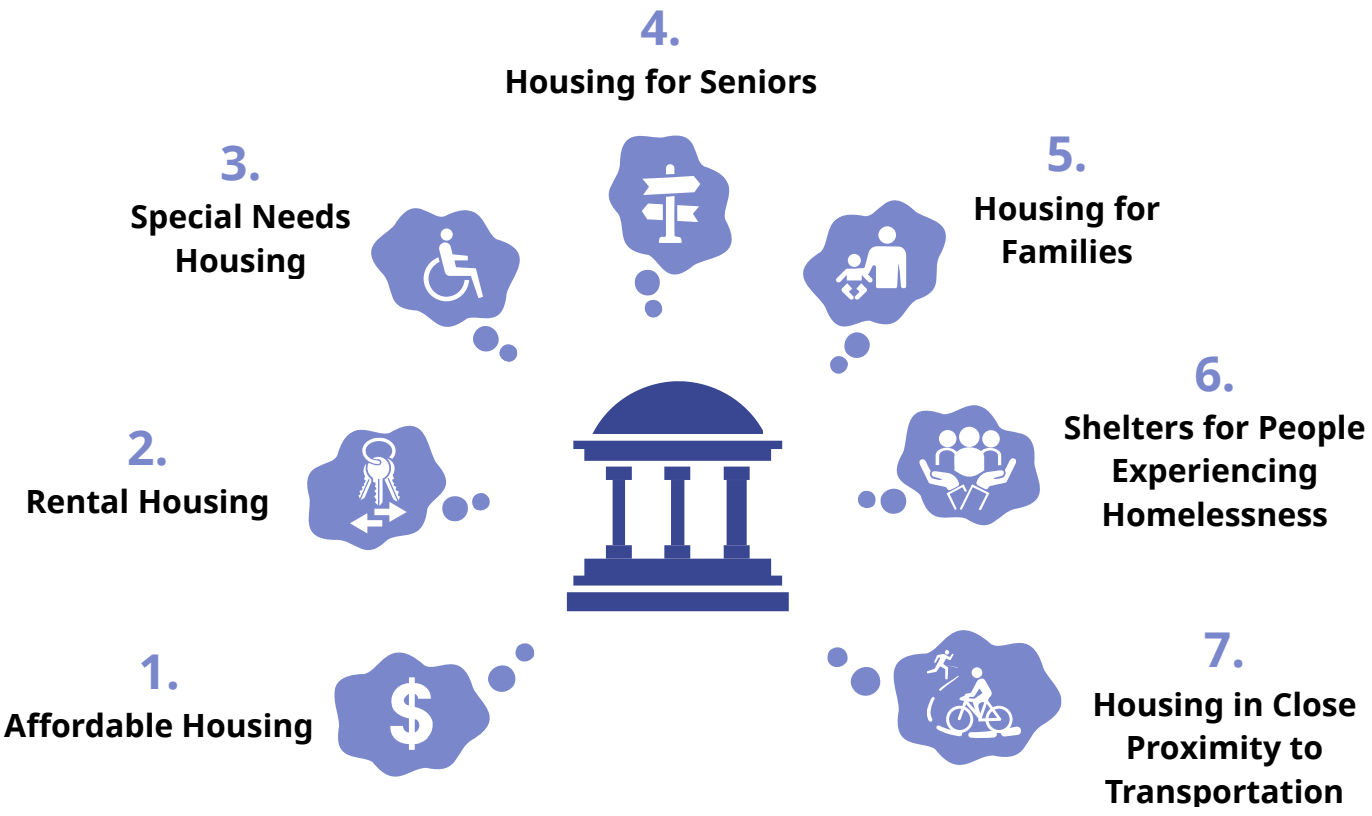
Despite their relatively low population density, many electoral areas in the study area are serviced by public transportation options, including bus services, with Egmont / Pender Harbour being the only exception. However, according to a survey conducted in 2024, respondents identified several significant barriers to transportation. These include the frequency and gaps in bus routes, which were noted by 35% of respondents, and concerns about highway safety, raised by 24% of participants.

Furthermore, many households in the study area are not conveniently located on a transit corridor or within a walking distance of essential services and amenities. These facilities are predominantly situated in more densely populated areas such as the District of Sechelt and the Town of Gibsons, creating accessibility barriers for those in more remote locations.

Due to the limited public transit options and the distance to amenities, the ownership and maintenance of a private vehicle is almost a necessity for many residents to maintain their quality of life. The costs associated with owning and maintaining private vehicles can further intensify the housing affordability challenges that residents are already grappling with.

5. Statements about Key Areas of Local Need of each Electoral Area

Legislation for the Provincial HNR mandates local governments to include statements about **seven key local needs** specific to each of their electoral areas. The sections below outline these statements, detailing the key local needs for each electoral area within the study area.



5.1 Egmont / Pender Harbour (Electoral Area A)

5.1.1. Affordable Housing

The study area has a high inventory of single-detached houses that are not affordable or suitable for most median-income households. Between 2006 and 2021, housing values in Egmont / Pender Harbour have increased significantly, with the average housing unit price nearly doubling (+92.6%). Like in the rest of the study area, Egmont / Pender Harbour's large inventory of single-detached houses has exacerbated an urgent demand for smaller housing units, including accessory dwelling units, secondary suites, multiplexes, and small-scale non-luxury purpose-built apartment buildings, particularly studio or 1-bedroom suites.

Median after-tax income of renters in Egmont / Pender Harbour is notably lower than that of owners, with renters earning 27.4% less than owner households as of 2021. Almost one in three renter households (31.3%) in Egmont / Pender Harbour are spending 30% or more of their income on rent, whereas 15.6% of the owners face a similar burden.

5.1.2. Rental Housing

Despite rising rental prices, rental household incomes have not kept pace, signalling the need for a greater supply of more affordable non-market housing. Average rents in Egmont / Pender grew by 65.4% between 2006 and 2021 to $1,080. The rent for recently listed market-rate units is not affordable for most households earning median incomes. This is especially difficult for single-person households, single-parent families, and individuals with fixed incomes, many of whom are paying over 50% of their income on housing.

Renter households are particularly vulnerable to issues of affordability, adequacy, and suitability. 41.7% of renter households (100 households) were in "core housing need" in 2021, meaning that the housing units they rent fail to meet standards for overall affordability, adequacy, or suitability, with 16.7% (40 households) in extreme core housing need.

Despite these challenges, there are only 10 rent supplement housing units in Egmont / Pender Harbour as of 2023. The demand for non-market housing in the study area is very high with many households on BC Housing's Housing Registry waitlist. It is estimated that Egmont / Pender Harbour will need an additional 48 rental units between 2021 and 2041 to support renter households in extreme core housing need.

5.1.3. Special Needs Housing

According to BC Housing, supportive housing is subsidized housing with on-site supports for single adults, seniors, and people with disabilities at risk of or experiencing homelessness. The availability of supportive housing in the study area is critically low; according to BC Housing's 2023 data there are no supportive housing units in Egmont / Pender Harbour. As noted in the section summary, this represents a challenge for the area, as individuals at risk of homelessness and other at-risk population often rely on supportive housing to help prevent falling into a cycle of homelessness. Like in the rest of the study area, single occupancy units were found to be the preferred option for special needs housing, with some seeking adjoining units for caregivers and families.

5.1.4. Housing for Seniors

At 60.4 years old, Egmont / Pender Harbour had the highest median age in study area in 2021. 37.2% of the population in Egmont / Pender Harbour are seniors, representing one of the fastest growing population groups in the Electoral Area. According to BC Housing's 2023 data, there are 22 independent seniors housing units in the study area. However, none are in Egmont / Pender Harbour. The availability of housing units for seniors requiring assisted living services remains critically low across the study area, although specific figures are not provided by BC Housing.

Almost half of the households in Egmont / Pender are headed by seniors (44% or 685 households in 2021). As the majority of housing units in the study area are single detached dwellings, seniors may face accessibility challenges such as difficulties with stairs and bathrooms not equipped for their needs. Single detached houses often also require significant maintenance, which can be physically demanding and increasingly challenging as they age.

Additionally, living in single detached homes can be financially burdensome and socially isolating, often lacking easy access to social activities, community services and healthcare facilities, all of which are crucial for seniors' well-being. These seniors have few options to downsize to suitable and safe housing in their community as they age. Many seniors who require care are forced to sell their houses and leave the community. Seniors who are renters and living on fixed incomes are vulnerable to homelessness. If they lost their long-term rental, they are unlikely to afford the current rental costs, which are often more than their entire monthly income.

5.1.5. Housing for Families

There is a need for affordable housing options for families in Egmont / Pender Harbour and in the study area. Of the 965 family households residing in Egmont / Pender Harbour, 265 are families with children. Many families cannot afford to enter the ownership market as there are few entry-level options for them in the Electoral Area. The cost of larger units in both ownership and rental markets are significant. Market-rate housing is not affordable for most single-parent families, particularly single-parent families including women and their children who have experienced violence and are living in short-term transitional housing with nowhere to go.

5.1.6. Shelters for People Experiencing Homelessness

The number of people who are homeless or at risk of homelessness is increasing in the region. Of the 73 individuals experiencing homelessness within the study area, 14 of them are estimated as living in Egmont/Pender Harbour.

5.1.7. Housing in Close Proximity to Transportation Infrastructure that Supports Walking, Bicycling, Public Transit, and Alternative Forms of Transportation

There are no public transit options that connect Egmont / Pender Harbour to Sechelt. Many households in the Electoral Area face difficulties accessing services and amenities, which are often not within walking distance and are concentrated in more densely populated areas like the District of Sechelt and the Town of Gibsons.

Without adequate public transit or closer amenities, owning and maintaining a private vehicle becomes almost a necessity for residents to maintain their quality of life. The costs of owning and maintaining private vehicles further compounds the housing affordability challenges that residents of Egmont / Pender Harbour are already facing. The SCRD would benefit from leveraging its existing data on public transit routes and housing distributions to understand key areas of need in terms of supporting transit-oriented development. Proximity analysis can reveal which transit routes best serve existing population distributions, where prospective key service gaps currently exist, and where the SCRD can focus its efforts in promoting additional growth and densification around transit routes.

5.2 Halfmoon Bay (Electoral Area B)

5.2.1. Affordable Housing

Between 2006 and 2021, housing values in the study area have seen a significant increase, with the average housing unit price in Halfmoon Bay increasing by 86.2%. Notably, this represented the slowest increase in housing unit prices compared to the rest of the study area. Despite the relatively slow increase, many houses are not affordable or suitable for most median-income households in Halfmoon Bay. Like in the rest of the study area, the Halfmoon Bay's large inventory of single-detached houses has exacerbated an urgent demand for smaller housing units, including accessory dwelling units, secondary suites, multiplexes, and small-scale non-luxury purpose-built apartment buildings, particularly studio or 1-bedroom suites.

As of 2021, 24.4% of renter households are considered low income in Halfmoon Bay, earning less than $60,000 annually after tax. For owner households, the proportion of low income earners is 33.3%. Similar to other electoral areas, median income of renters in Halfmoon Bay is significantly lower than that of owners, with renters earning 25% less in median household income than owner households as of 2021. One in three renter households in Halfmoon Bay are spending 30% or more of their income on rent, whereas 18.4% of the owners face a similar burden.

5.2.2. Rental Housing

Like the SCRD and British Columbia more broadly, there is considerable demand for affordable rental housing in Halfmoon Bay. Within the Electoral Area, the cost of rent has risen significantly over the last four Census periods. As of 2021, the average monthly rent in Halfmoon Bay stands at $1,380, representing an increase of $997 since 2006. Despite this increase, as compared to the rest of the study area, Halfmoon Bay has the smallest percentage of renters living in "core housing need" and "extreme core housing need", with the 2021 proportions being 6.7% and 0% respectively.

Since 2006, the population of renter households in Halfmoon Bay has grown by 55%. Like in much of the SCRD, however, increases in the supply of affordable rental properties has not helped to balance out the increase in demand over the last four Census periods. As evidenced by increasing rental prices across the Electoral Area, Halfmoon Bay continues to experience pressure related to shelter costs for the area's growing number of renter households.

With rising rental prices, renter households making the median annual income are expected to continue to experience financial strain related to expenditure of housing and related costs of living. Given that the area had the smallest inventory

of rental housing of all the study area in 2021, there is a risk that renter households will continue to experience increased precarity in the coming years.

Given that the majority of the rental housing stock in Halfmoon Bay is constituted by private investments rather than purpose-built rentals, there is considerable demand for non-market housing in the area. Despite these challenges, as of 2023, the BC Housing Administration maintains only 2 rental supplement units within the boundaries of Halfmoon Bay. It is estimated that Halfmoon Bay will need an additional 24 rental units over 20 years (2021 to 2041) to accommodate renters in extreme core housing need.

5.2.3. Special Needs Housing

As of 2023, data sourced from BC Housing indicates that there are no supportive housing units offering transitional support and assisted living services in Halfmoon Bay. As noted in the section summary, this represents a challenge for the area, as individuals at risk of homelessness and other at-risk population often rely on supportive housing to help prevent falling into a cycle of homelessness. Like in the rest of the study area, single occupancy units were found to the preferred option for special needs housing, with some seeking adjoining units for caregivers and families.

5.2.4. Housing for Seniors

As of 2021, the median age of residents in Halfmoon Bay was 56.8. About one in three residents (33.1%) in Halfmoon Bay are seniors, representing one of the fastest growing population groups in the Electoral Area. According to BC Housing's 2023 data, there are 22 independent seniors housing units in the study area. However, none are in Halfmoon Bay. The availability of housing units for seniors requiring assisted living services remains critically low across the study area, although specific figures are not provided by BC Housing.

Almost half of the households in Halfmoon Bay are headed by seniors (44.3% or 605 households in 2021). As the majority of housing units in Halfmoon Bay are single detached dwellings, seniors living in the Electoral Area may face accessibility challenges such as difficulties with stairs and living with bathrooms not equipped for their needs. Single detached houses often also require significant maintenance, which can be physically demanding and increasingly challenging as they age. With few options to downsize to smaller, more suitable and more accessible housing in the Halfmoon Bar area, the growing senior population in Halfmoon Bay may experience increasing challenges related housing as they age.

5.2.5. Housing for Families

As of 2021, there are 910 family households in Halfmoon Bay – representing 66.7% of the total private households in the Electoral Area. Of these family households, 335 are families with children. There is a need for affordable housing options for families in Halfmoon Bay and in the rest of the study area. The cost of larger units in both ownership and rental markets are significant and rising, and many families cannot afford to enter the ownership market as there are few entry-level options for them. Like in the rest of the study area, single-parent families are most severely impacted by the affordability challenges in Halfmoon Bay. This situation is particularly acute for single-parent families led by mothers who have experienced violence. These lone-parent families often find themselves living in short-term transitional housing with limited options for permanent accommodation. As noted previously, there are only 2 transitional housing options maintained within Halfmoon Bay.

5.2.6. Shelters for People Experiencing Homelessness

Of the 73 individuals within the study area experiencing homelessness, 14 were estimated to be residing in Halfmoon Bay. It is crucial to understand that this figure may not fully represent the actual number of homeless individuals due to the prevalence of hidden homelessness, such as couch surfing, camping, and single mothers with children living with grandparents.

5.2.7. Housing in Close Proximity to Transportation Infrastructure that Supports Walking, Bicycling, Public Transit, and Alternative Forms of Transportation

Halfmoon Bay is one of the 4 electoral areas serviced by bus routes within the study area. The SCRD would benefit from leveraging its existing data on public transit routes and housing distributions to understand key areas of need in terms of supporting transit-oriented development. Proximity analysis can reveal which transit routes best serve existing population distributions, where prospective key service gaps currently exist, and where the SCRD can focus its efforts in promoting additional growth and densification around transit routes.

5.3 Roberts Creek (Electoral Area D)

5.3.1. Affordable Housing

Housing values on the Roberts Creek have increased significantly in recent years, with the average housing unit price increasing by 105.6% between 2006 and 2021. Across the study area, Roberts Creek has the highest share of renters earning less than $60,000 annually with 155 households, representing 40.8% of the total renter households in the Electoral Area. For owner households, the proportion in 2021 stood at 730, or 31.8% of all owner household. Similar to the rest of the study area, median after-tax income of renters in Roberts Creek is significantly lower than that of owners, with renters earning 65% of the median owner household income.

Affordability is a significant challenge in Roberts Creek and many houses are not affordable or suitable for most median-income households in the Electoral Area. Compared to the rest of the study area, Roberts Creek has the highest share of renters that do not have access to affordable housing. As of 2021, 34.2% (130 renter households) of the renter households in Roberts Creek are spending 30% or more of their income on rent, whereas 14.6% (170 owner households) of the owners face a similar burden. Like in the rest of the study area, the Electoral Area's high inventory of single-detached houses has helped to stimulate demand for smaller housing units, including accessory dwelling units, secondary suites, multiplexes, and small-scale non-luxury purpose-built apartment buildings, particularly studio or 1-bedroom suites.

5.3.2. Rental Housing

The cost of rent in Roberts Creek has risen significantly over the past four Census periods. As of 2021, the average monthly rent in Roberts Creek stood at $1,405 as of 2021, representing a substantive increase from 2006 where average rent was just $846. One factor driving this increase has been a significant increase in the number of renter households residing in Roberts Creek over this period. Like in the rest of the study area, rising rental prices frequently outstrip increases in household incomes in Roberts Creek, meaning that renter households making the median income are likely to continue to experience financial strain related housing and cost of living expenses. Compared to the rest of the study area, renters in Roberts Creek are more likely to live in housing that is unaffordable, inadequate, or unsuitable, with 36.8% identified as being "core housing need" and 15.8% in "extreme core housing need". As of 2023, however, only 10 rent assisted units are currently in operation within Roberts Creek, and it is estimated that the area will need an additional 48 rental units over the next 20 years to support renters in extreme core housing need.

5.3.3. Special Needs Housing

As of 2023, data sourced from BC Housing indicates that there are no supportive housing units offering transitional support and assisted living services in Roberts Creek. As noted in the section summary, this represents a challenge for the area, as individuals at risk of homelessness and other at-risk population often rely on supportive housing to help prevent falling into a cycle of homelessness. Like in the rest of the study area, single occupancy units were found to the preferred option for special needs housing, with some seeking adjoining units for caregivers and families.

5.3.4. Housing for Seniors

As of 2021, the median age of residents in Roberts Creek is 51.2 years old – the lowest median age in the study area. Seniors represent about 30% of the population in Roberts Creek (1,050 individuals being 65 years or older as of 2021) and about 41.7% of the households in Roberts Creek are led by seniors (645 households in 2021). According to BC Housing's 2023 data, there are 22 independent seniors housing units in the study area; however, none are in Roberts Creek. The availability of housing units for seniors requiring assisted living services remains critically low across the study area, although specific figures are not provided by BC Housing.

As the majority of housing units in Roberts Creek are single detached dwellings, seniors living in the Electoral Area may face accessibility challenges such as difficulties with stairs and living with bathrooms not equipped for their needs. Single detached houses often also require significant maintenance, which can be physically demanding and increasingly challenging as they age. With few options to downsize to smaller, more suitable and more accessible housing in the Roberts Creek area, the growing senior population in Roberts Creek may experience increasing challenges related to housing as they age.

5.3.5. Housing for Families

As of 2021, there are 990 family households in Roberts Creek (64% of the total private households in Roberts Creek). Of these family households, 470 are families with children. The cost of larger units in both ownership and rental markets are significant. This has created a pressing need for more affordable housing options for families in Roberts Creek. The scarcity of entry-level options in the Electoral Area has made it particularly challenging for many families to enter the ownership market.

5.3.6. Shelters for People Experiencing Homelessness

Within the study area there were an estimated 73 individuals experiencing homelessness in 2021. Of these, 16 were estimated to be residing in Roberts Creek. It is crucial to understand that this figure may not fully represent the actual number of homeless individuals due to the prevalence of hidden homelessness, such as couch surfing, camping, and single mothers with children living with grandparents.

5.3.7. Housing in Close Proximity to Transportation Infrastructure that Supports Walking, Bicycling, Public Transit, and Alternative Forms of Transportation

Roberts Creek is one of the four electoral areas serviced by bus routes within the study area. The SCRD would benefit from leveraging its existing data on public transit routes and housing distributions to understand key areas of need in terms of supporting transit-oriented development. Proximity analysis can reveal which transit routes best serve existing population distributions, where prospective key service gaps currently exist, and where the SCRD can focus its efforts in promoting additional growth and densification around transit routes.

5.4 Elphinstone (Electoral Area E)

5.4.1. Affordable Housing

Between 2006 and 2021, the average housing unit price in Elphinstone increased by 106%. Notably, this represented one of the highest increases in housing unit prices within the study area. With a median after-tax household income of $77,500, many houses in Elphinstone are not affordable or suitable for most median-income households in the Electoral Area. Like in the rest of the study area, the Electoral Area's high inventory of single-detached houses has helped to stimulate demand for smaller housing units, including accessory dwelling units, secondary suites, multiplexes, and small-scale non-luxury purpose-built apartment buildings, particularly studio or 1-bedroom suites.

As of 2021, one in three renter households (95 renter households and 33.3% of the total renter households) in Elphinstone are considered low income, earning less than $60,000 annually. For owner households, the proportion is 25.4% (335 owner households). Similar to the rest of the study area, median income of renters in Elphinstone is significantly lower than that of owners, with renters earning 34.6% less than owner households as of 2021[21]. About 30% of renter households (85 households) in Elphinstone are spending 30% or more of their income on rent, whereas only 12% of the owners (160 households) face a similar burden.

5.4.2. Rental Housing

There is a high demand for rental housing in Elphinstone and across the study area. Cost of rent has risen significantly over the years. The average monthly rent in Elphinstone is $1,450 as of 2021, increasing from $936 in 2006. A significant portion of renters in Elphinstone are living in rental units that are unaffordable, inadequate, or unsuitable, with 17.5% identified as being in "core housing need" and 8.8% in "extreme core housing need".

The population of renter households in Elphinstone has grown by 58.3% since 2006. However, with more renters in the Electoral Area, the increase in rental properties has not kept pace, pushing up the cost of rent. With rising rental prices, renter households making the median income are likely unable to find appropriate rental units suited to their respective income levels.

[21] Based on the 2021 Census data, the median after-tax incomes of renter households and owner households in Elphinstone were $55,600 and $85,000, respectively.

5.4.3. Special Needs Housing

As of 2023, data sourced from BC Housing indicates that there are four supportive housing units offering transitional support and assisted living services in Elphinstone. As noted in the section summary, this represents a challenge for the area, as individuals at risk of homelessness and other at-risk population often rely on supportive housing to help prevent falling into a cycle of homelessness. Like in the rest of the study area, single occupancy units were found to the preferred option for special needs housing, with some seeking adjoining units for caregivers and families.

5.4.4. Housing for Seniors

As of 2021, the median age of residents in Elphinstone is 52 years old and about 27% of the residents in the Electoral Area are seniors. According to BC Housing's 2023 data, there are 22 independent seniors housing units in the study area; however, none are in Elphinstone. These are housing arrangements designed for seniors who are capable of living on their own. As for seniors requiring transitional support and assisted living services, the number of housing units designed for these individuals remains very low in Elphinstone. According to BC Housing, there are only 4 supportive housing that provide transitional support and assisted living services in the Electoral Area.

About 40% of the households in Elphinstone are headed by seniors (645 households in 2021). As the majority of housing units in the Electoral Area are single detached dwellings, seniors may face accessibility challenges such as difficulties with stairs and bathrooms not equipped for their needs. Single detached houses often also require significant maintenance, which can be physically demanding and increasingly challenging as they age. Additionally, living in single detached homes can be financially burdensome and socially isolating, often lacking easy access to social activities, community services and healthcare facilities, all of which are crucial for seniors' well-being. These seniors have few options to downsize to suitable and safe housing in their community as they age.

5.4.5. Housing for Families

As of 2021, there are 1,095 family households in Elphinstone (68.2% of the total private households in the Electoral Area). Of these family households, 485 are families with children. The need for affordable housing options for families in Elphinstone is high. The cost of larger units in both ownership and rental markets are significant and many families cannot afford to enter the ownership market as there are few entry-level options in the Electoral Area and across the study area.

5.4.6. Shelters for People Experiencing Homelessness

146 individuals were identified as experiencing homelessness in the SCRD in 2021. This corresponds to 73 individuals within the study area. Of these, 18 were estimated to be residing in Elphinstone. It is crucial to understand that this figure may not fully represent the actual number of homeless individuals due to the prevalence of hidden homelessness, such as couch surfing, camping, and single mothers with children living with grandparents.

5.4.7. Housing in Close Proximity to Transportation Infrastructure that Supports Walking, Bicycling, Public Transit, and Alternative Forms of Transportation

Elphinstone is one of the four electoral areas serviced by bus routes within the study area. The SCRD would benefit from leveraging its existing data on public transit routes and housing distributions to understand key areas of need in terms of supporting transit-oriented development. Proximity analysis can reveal which transit routes best serve existing population distributions, where prospective key service gaps currently exist, and where the SCRD can focus its efforts in promoting additional growth and densification around transit routes.

5.5 West Howe Sound (Electoral Area F)

5.5.1. Affordable Housing

Between 2006 and 2021, housing values in West Howe Sound have increased by 106.7%. Notably, this represented the highest increase in housing unit prices compared to the rest of the study area. With the median after-tax household income of $70,000, many houses in West Howe Sound are not affordable or suitable for most median-income households in the Electoral Area. Like in the rest of the study area, the Electoral Area's high inventory of single-detached houses has helped to stimulate demand for smaller housing units, including accessory dwelling units, secondary suites, multiplexes, and small-scale non-luxury purpose-built apartment buildings, particularly studio or 1-bedroom suites.

As of 2021, one in three renter households (70 renter households and 31.8% of the total renter households) in West Howe Sound are considered low income, earning less than $60,000 annually. For owner households, the proportion is 26.1% (230 owner households). Like the rest of the study area, the median income of renters in West Howe Sound is significantly lower than that of owners, with renters earning almost 40% less than owner households as of 2021[22]. About 41% of renter households (90 households) in West Howe Sound are spending 30% or more of their income on rent, whereas only 10.8% of the owners (95 households) face a similar burden.

5.5.2. Rental Housing

The cost of rent has risen significantly in West Howe Sound over the last 4 years. In 2021, the average monthly rent in West Howe Sound was $1,380, a sharp increase from $888 in 2006. A significant portion of renters in West Howe Sound are living in rental units that are unaffordable, inadequate, or unsuitable, with 18.2% identified as being in "core housing need" and 11.4% in "extreme core housing need".

Despite the challenges faced by renters, as of 2023, there are only 21 rent supplement units under BC Housing Administration in West Howe Sound. Yet, it holds the highest inventory of rent supplement units compared to the rest of the study area. It is estimated that West Howe Sound will need an additional 24 rental units over 20 years (2021 to 2041) to support rental households in extreme core housing need.

[22] Based on the 2021 Census data, the median after-tax incomes of renter households and owner households in West Howe Sound were $46,000 and $76,000, respectively.

5.5.3. Special Needs Housing

The availability of supportive housing in West Howe Sound is very low. According to BC Housing's 2023 data there are no supportive housing units that provide transitional support and assisted living services in West Howe Sound. As noted in the section summary, this represents a challenge for the area, as individuals at risk of homelessness and other at-risk population often rely on supportive housing to help prevent falling into a cycle of homelessness. Like in the rest of the study area, single occupancy units were found to the preferred option for special needs housing, with some seeking adjoining units for caregivers and families.

5.5.4. Housing for Seniors

As of 2021, the median age of residents in West Howe Sound is 55.6 years old and about 32% of the residents in the Electoral Area are seniors. According to BC Housing's 2023 data, there are 22 independent seniors housing units in the study area – all are in West Howe Sound. These are housing arrangements designed for seniors who are capable of living on their own. As for seniors requiring assisted living services, the availability of housing units designed to accommodate this vulnerable group remains critically low in West Howe Sound and across the study area.

About 45% of the households in West Howe Sound are headed by seniors (495 households in 2021). Like the rest of the study area, the majority of housing units in West Howe Sound are single detached dwellings. This population is more likely to face accessibility challenges such as difficulties with stairs and bathrooms not equipped for their needs. Single detached houses often also require significant maintenance, which can be physically demanding and increasingly challenging as the residents age. Living in single detached homes can be financially burdensome and socially isolating, often lacking easy access to social activities, community services and healthcare facilities, all of which are crucial for seniors' well-being. These seniors have few options to downsize to suitable and safe housing in their community.

5.5.5. Housing for Families

As of 2021, there are 700 family households in West Howe Sound (63.6% of the total private households in the Electoral Area). Of these households, 260 are families with children. The need for affordable housing options for families in West Howe Sound is high. The cost of larger units in both ownership and rental markets are significant and many families cannot afford to enter the ownership market as there are few entry-level options in the Electoral Area and across the study area.

5.5.6. Shelters for People Experiencing Homelessness

146 individuals were identified as experiencing homelessness across the SCRD in 2021. Within the study area this corresponds to 73 individuals. Of these, 11 were estimated to be residing in West Howe Sound. It is crucial to understand that this figure may not fully represent the actual number of homeless individuals due to the prevalence of hidden homelessness, such as couch surfing, camping, and single mothers with children living with grandparents.

5.5.7. Housing in Close Proximity to Transportation Infrastructure that Supports Walking, Bicycling, Public Transit, and Alternative Forms of Transportation

West Howe Sound is one of the four electoral areas serviced by bus routes within the study area. The SCRD would benefit from leveraging its existing data on public transit routes and housing distributions to understand key areas of need in terms of supporting transit-oriented development. Proximity analysis can reveal which transit routes best serve existing population distributions, where prospective key service gaps currently exist, and where the SCRD can focus its efforts in promoting additional growth and densification around transit routes.

5.6 For Consideration

This HNR has identified different types of housing that are currently in short supply withing the community. To address affordability challenges and to support vulnerable members in the study area communities will require more than a single solution:

Housing Supply & Demands

The data presented in this report indicates the need to increase the supply of affordable, below-market housing for residents across the study area. Due to a high inventory of single-detached dwellings, renters, first-time owners, and seniors are in need of smaller housing units, such as accessory dwelling units, secondary suites, multiplexes, and small-scale purpose-built apartment buildings, particularly studio or 1-bedroom suites.

Housing Options & Services

Additionally, with seniors representing one of the current fastest growing demographic groups in the study area, developing strategies to expand senior housing options such as assisted living facilities and subsidized independent housing units for seniors will be essential to accommodate the aging population.

Housing Assistance & Solutions

The SCRD has received input from previous housing needs reports and the Regional Housing Coordinator which outline strategies that can assist vulnerable groups to improve their current housing situation. These strategies are particularly intended to assist individuals living at the intersection of homelessness, addiction, and mental health issues, as well as senior citizens.

The emphasis of these initiatives is on devising services and solutions that prioritize prevention and successful transitions out of homelessness. These include addressing the affordability challenges and supporting the vulnerable members of the SCRD community necessitates a comprehensive approach undertaken by the SCRD and all levels of government.

Possible Actions include:	
1	Housing for people going through addiction recovery, including short-term treatment and recovery housing, second-stage housing, and long-term abstinence-based supportive housing.
2	Housing that supports people living with mental illness or requiring complex care.
3	Emergency and supportive housing for youth.
4	Deeply affordable housing for people living on fixed incomes, single-parent families, and young working adults.
5	Supportive housing for seniors who are living with addictions and require long-term care.
6	Appropriate transitional housing for people to move out of encampments, unsafe living conditions, emergency shelters, or low-barrier supportive housing.
7	Diversion and rapid rehousing (temporary housing) for people who are experiencing sudden homelessness.
8	Housing options that address the 'missing middle' challenge that are deployed in the right locations, providing necessary amenities and mobility options.
9	Planning and strategizing for diverse housing developments beyond single-family dwellings.
10	Proactively planning for the increasing needs of the growing senior population.
11	Improved understanding of servicing capacity within each of the electoral areas in order to determine whether and how existing infrastructure can accommodate housing developments and additional residents.
12	Reinvestment in the aging housing stock, such as the maintenance and upgrade of older buildings.
13	Readiness to scale up the development pipeline through enhanced administrative capacity.

The goal is to foster a community where everyone has access to safe, affordable housing options that cater to the diverse needs of the various demographics in the study area.

Provincial legislation requires that local governments must consider the most recent housing need when amending an OCP. As such, the SCRD is committed to leveraging the insights found within this report to inform their future Official Community Plan, with a key focus on developing an integrated and coherent policy framework that outlines clear goals and initiatives designed to help the SCRD to address its existing housing challenges.

The findings of this HNR are intended to **provide the SCRD with an understanding of the housing needs within the study area**. This understanding will be used to **inform future plans and initiatives** by the SCRD, including identifying strategies to address these needs and determining the locations and sizes of new developments in the area.

Chapter 6 further delves into the specifics of some of the action that have been conducted since the SCRD's last HNR and which will help to form the basis of momentum for continued progress.

Chapter 6
Looking Back

Chapter 6 provides a summary of the actions undertaken by the Sunshine Coast Regional District to address housing needs, since the publication of the most recent HNR.

Data sources include:

- SCRD

The SCRD, in collaboration with the Town of Gibsons and the District of Sechelt, published an HNR in November 2020.

Since the publication of the 2020 HNR, the SCRD has taken seven key action items to reduce housing needs:	
1	Creation of Regional Housing Coordinator Position
2	Increase in allowable size of Auxiliary Dwelling Units (ADUs), permit suites in all houses, and further regulate Short Term Rentals (STRs) in Electoral Areas B, D, E, and F
3	Senior Housing Project Collaboration: Campbell House at Lily Lake in Pender Harbour (Electoral Area A)
4	Negotiated a Community Amenity Contribution toward Affordable Housing policy development: 268 Stella Maris in West Howe Sound (Electoral Area F)
5	Negotiated a Strata Lot Donation to Habitat for Humanity (Affordable Housing Contribution): 1457 North Road in West howe Sound (Electoral Area F)
6	Completed Development Approvals Process Review (DAPR)

Action 1 - Creation of the Regional Housing Coordinator Position

One of the key steps taken by the SCRD was the creation of a Regional Housing Coordinator position. The position is made possible through revenue sharing of the provincial Municipal & Regional District Tax on accommodations. Since 2022, the Regional District has overseen the contracted services of a shared Regional Housing Coordinator. This role involves the development and implementation of a regional housing plan, including community engagement related to the implementation of the plan and ongoing housing priorities.

Action 2 - Increase in allowable size of Auxiliary Dwelling Units (ADUs), permit suites in all houses, and further regulate Short Term Rentals (STRs)

The SCRD has made significant changes to zoning regulations in four of its electoral areas. Zoning Bylaw No. 722, which establishes the zoning and subdivision districts for Electoral Areas B (Halfmoon Bay), D (Roberts Creek), E (Elphinstone) and F (West Howe Sound), was adopted by the SCRD Board on October 13, 2022. The new bylaw replaced the over 30-year-old Zoning Bylaw 310 and puts forward new regulations in key areas, such as housing, residential agriculture and home-based business, and provides a new more user-friendly format, with expanded definitions.

Examples of where the new bylaw helps address housing needs includes:

- Increased Auxiliary Dwelling Unit (ADU) size from 55m^2 to 90m^2 to enhance housing option.
- New accessory housing allowance (secondary suite up to 55m2) for a single-unit dwelling.
- Established clear rules for Short Term Rentals (STRs).

Action 3 - Senior Housing Project

Campbell House at Lily Lake in Pender Harbour (Electoral Area A)

Since the publication of the 2020 HNR, 14 new affordable rental housing units have been approved for construction. These housing units provide supports for seniors with low to moderate incomes in Pender Harbour (Electoral Area A).

Additionally, since 2021, a partnership between the Province, through BC Housing, the SCRD, and Pender Harbour Seniors Housing Society (PHSHS) is spearheading the construction of a three-storey apartment building: Campbell House. The apartment building, located at 12730 Lagoon Rd., will have a mix of one- and two-bedroom units, including two accessible units. Each unit at Campbell House will be wheelchair accessible, have its own balcony, basic kitchen, and other features designed to make it easier for seniors to get around. Construction of Campbell House began in 2021 and is currently still underway at the time of writing this report. As part of the project's funding, the Province, through BC Housing, is providing approximately $4.15 million to the project.

BC project funding and grant included:

- Approximately, $2.75 million of the funding is provided through the Provincial Investment in Affordable Housing fund; and,
- A Deepening Affordability grant of approximately $1.4 million. Without the additional Deepening Affordability investment, the rents would not have been as affordable for people in the community.

In addition to the $4.15 million in government funding, the Pender Harbour Seniors Housing Society (PHSHS) provided the land for the project and the SCRD provided $45,000 of in-kind support.

Action 4 - Cash Contribution to Affordable Housing

268 Stella Maris in West Howe Sound (Electoral Area F)

The SCRD negotiated a Community Amenity Contribution toward affordable housing policy development as a result of the zoning bylaw application at 268 Stella Maris in West Howe Sound (Electoral Area F). The owners and the SCRD entered into a covenant, under Section 219 of the *Land Title Act*, to ensure that a cash contribution of $7,500 per new lot created by the subdivision of the lands would be made towards affordable housing policy development. The covenant registered in March 2024 and was made possible via Policy 7.3.4 of the West Howe Sound Official Community Plan (OCP). At the time of writing this report, the subdivision is underway with an anticipated 16-lot subdivision.

Action 5 - Strata Lot Donation to Habitat for Humanity (Affordable Housing Contribution)

1457 North Road in West howe Sound (Electoral Area F)

The SCRD negotiated the donation of a strata lot through an application to amend the Zoning Bylaw and the Official Community Plan (OCP). The application was to facilitate a cluster housing development located in the Gateway Neighbourhood of West Howe Sound (Electoral Area F). The OCP and Zoning Bylaw amendments were adopted on October 8, 2020, which will enable subdivision of ten bare-land strata lots. The owners of the lot and the SCRD agreed to donate a strata lot to the Sunshine Coast Habitat for Humanity as part of their affordable housing contribution. At the time of writing this report, the subdivision is currently underway and therefore the lot has not yet been transferred to Habitat for Humanity.

Action 6 - Development Approvals Process Review (DAPR)

In February 2023, the SCRD launched the Development Approvals Process Review (DAPR) project to critically examine the Regional District's development review and approvals process. Through DAPR, the SCRD identified challenges and opportunities to improve the current development approvals process in order to reduce barriers to affordable housing and accelerate the construction of the housing units in the SCRD.

On July 27, 2023, the SCRD Board endorsed the final DAPR report and directed staff to proceed with the recommendations presented in a report to improve the SCRD's current development approval processes. The implementation of the recommendations resulted from the DAPR is underway at the time of writing this report.

Chapter 7
Appendices

Appendix A: Glossary

Appendix B: Population by Age by Electoral Area

Appendix C: Mobility Characteristics by Electoral Area

Appendix D: Household Characteristics (Household Size) by Electoral Area

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Appendix A: Glossary

Acronym	Definition
ADU	Auxiliary Dwelling Unit
BC	British Columbia
CMHC	Canadian Mortgage and Housing Corporation
DAPR	Development Approvals Process Review
ECHM	Extreme Core Housing Need
HART	Housing Assessment Resource Tools
HNR	Housing Needs Report
IDP	Integrated Data Project
OCP	Official Community Plan
PEH	People experiencing homelessness
PHSHS	Pender Harbour Seniors Housing Society
RAP	Rental Assistance Program
SAFER	Shelter Aid for Elderly Renters
SCRD	Sunshine Coast Regional District
SHF	Suppressed household formation
STR	Short Term Rentals
UBC	University of British Columbia

Term	Definition
Subsidized Housing	A renter household is considered to live in subsidized housing if they are not paying the full market cost of housing and includes rent geared to income, social housing, public housing, government-assisted housing, non-profit housing, rent supplements and housing allowances. **Source**: Dictionary, Census of Population, 2021

Appendix B: Population by Age by Electoral Area

Figures B.1 to B.5 provide an electoral area-level breakdown of population by age group based on Census data from 2021.

Figure B.1: Electoral Area A, Population by Age Group - 2021

Source: Statistics Canada, Census 2021.

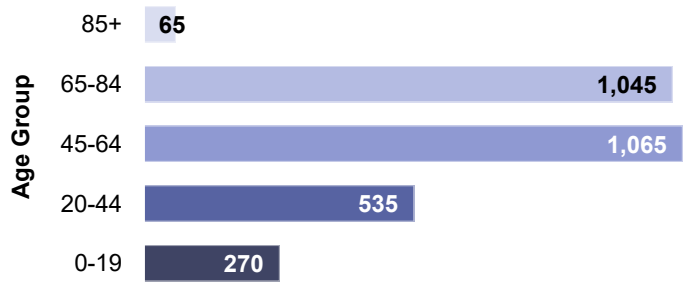


Figure B.2: Electoral Area B, Population by Age Group - 2021

Source: Statistics Canada, Census 2021.

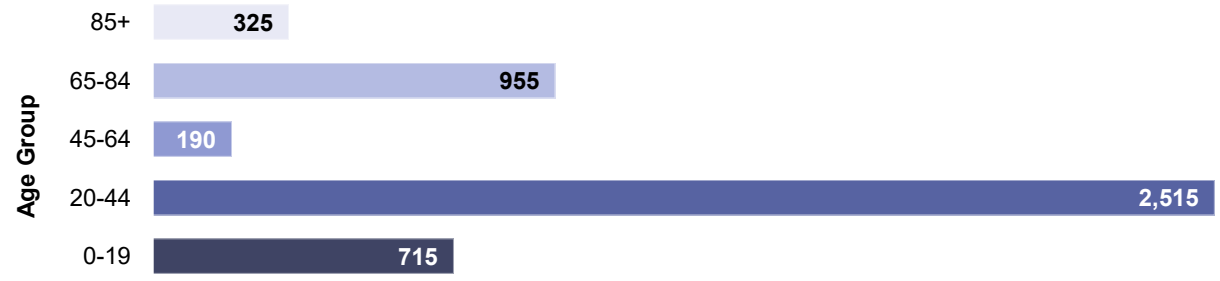


Figure B.3: Electoral Area D, Population by Age Group - 2021

Source: Statistics Canada, Census 2021.

Figure B.4: Electoral Area E, Population by Age Group - 2021

Source: Statistics Canada, Census 2021.

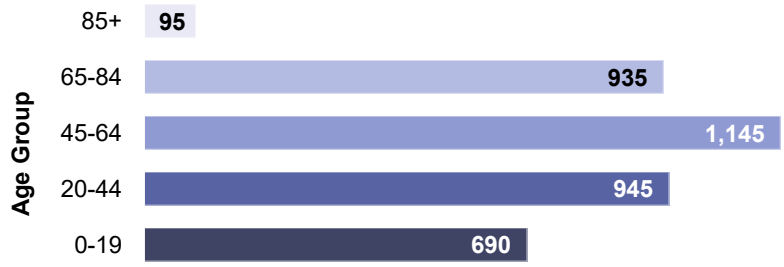
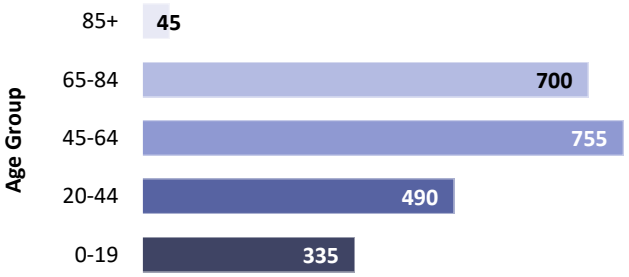


Figure B.5: Electoral Area F, Population by Age Group - 2021

Source: Statistics Canada, Census 2021.



Appendix C: Mobility Characteristics by Electoral Area

Figures C.1 to C.5 below provide the breakdown of the number of people by mobility status (non-movers, non-migrants, and migrants) in the study area based on Census data from 2006 to 2021.

Figure C.1: Electoral Area A, Mobility Status: 2006-2021

Source: Statistics Canada, Census 2006-2021.

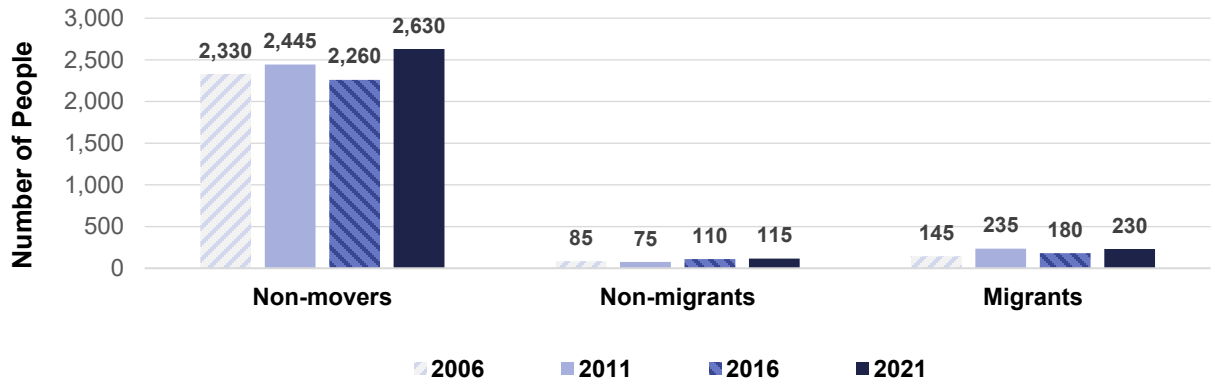


Figure C.2: Electoral Area B, Mobility Status: 2006-2021

Source: Statistics Canada, Census 2006-2021.

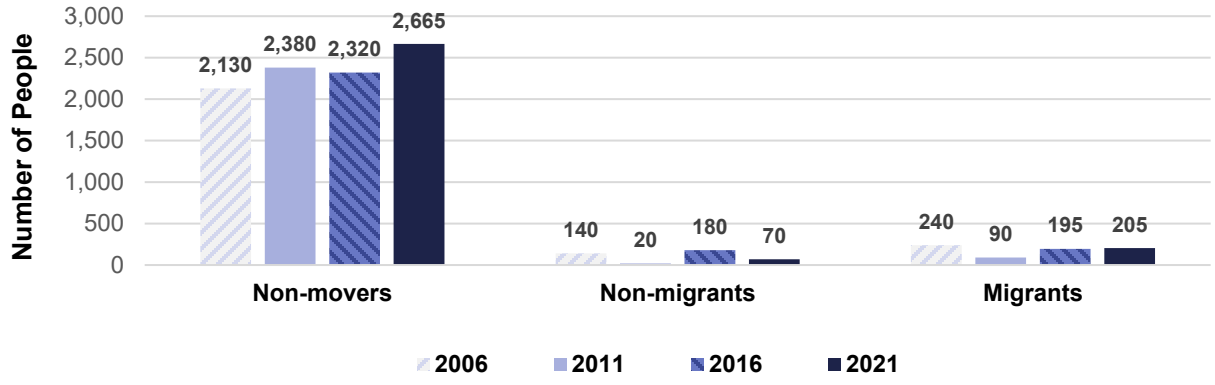


Figure C.3: Electoral Area D, Mobility Status: 2006-2021

Source: Statistics Canada, Census 2006-2021.

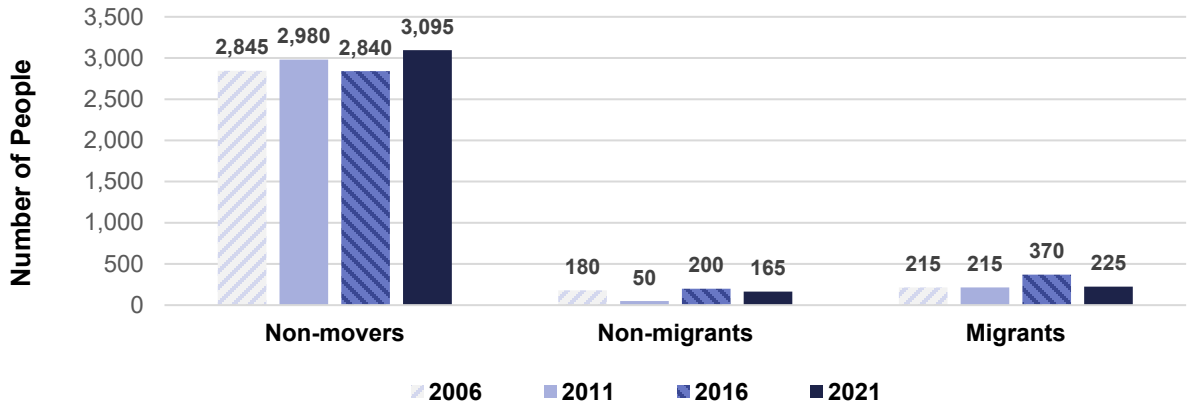


Figure C.4: Electoral Area E, Mobility Status: 2006-2021

Source: Statistics Canada, Census 2006-2021.

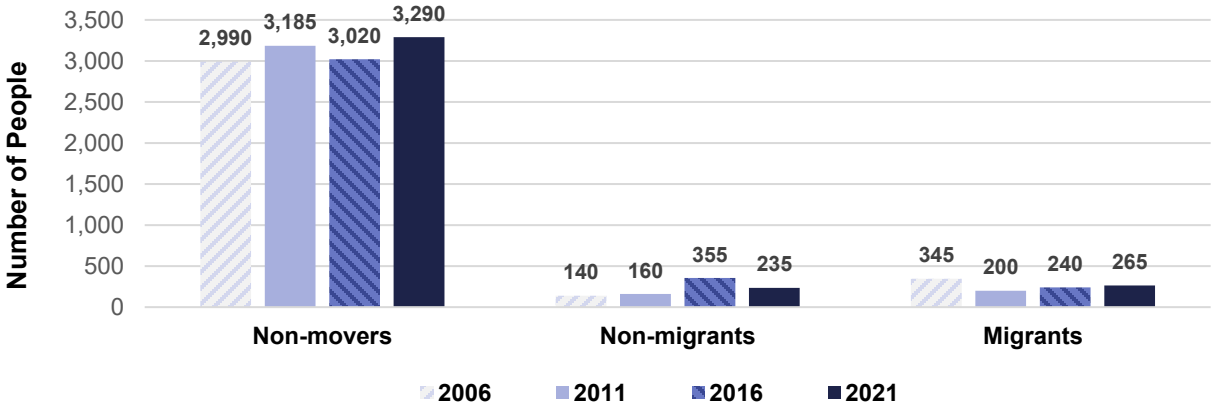
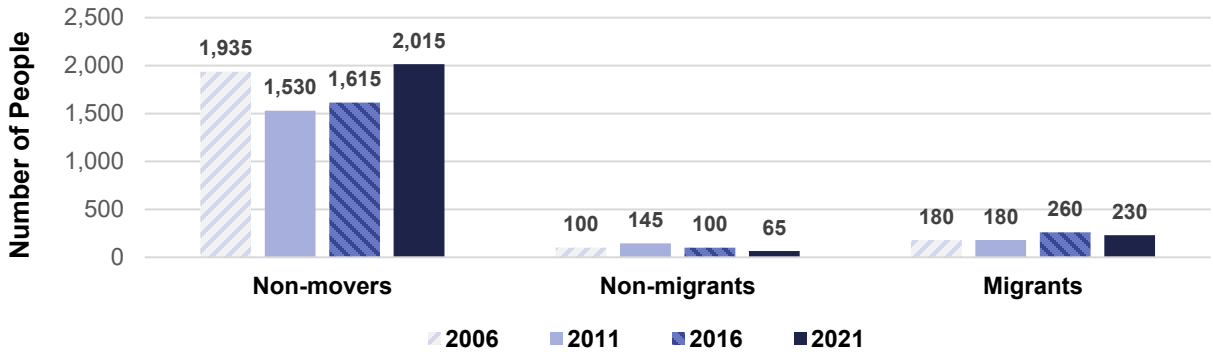


Figure C.5: Electoral Area F, Mobility Status: 2006-2021

Source: Statistics Canada, Census 2006-2021.



Appendix D: Household Characteristics by Electoral Area

Tables D.1 to D.5 show the number of households by household size in each of the five electoral areas within the study area based on data sourced from the four most recent Census reports (2006 to 2021).

Table D.1: Total Private Households by Household Size, Egmont / Pender Harbour (Electoral Area A), 2006-2021

Electoral Area A Household Size	2006	% of Total	2011	% of Total	2016	% of Total	2021	% of Total
1 person	365	29.4%	410	29.3%	505	36.6%	530	34.0%
2 persons	615	49.6%	790	56.4%	690	50.0%	785	50.0%
3 persons	125	10.1%	90	6.4%	105	7.6%	145	9.3%
4 persons	85	6.9%	110	7.9%	45	3.3%	80	5.1%
5 or more persons	50	4.0%	0	0.0%	30	2.2%	20	1.3%
Total private households	**1,240**	**100%**	**1,400**	**100%**	**1,375**	**100%**	**1,560**	**100%**
Total number of persons	**2,580**	**n/a**	**2,780**	**n/a**	**1,385**	**n/a**	**2,980**	**n/a**

Source: Statistics Canada, Census 2006 - 2021.

Table D.2: Total Private Households by Household Size, Halfmoon Bay (Electoral Area B), 2006-2021

Electoral Area B Household Size	2006	% of Total	2011	% of Total	2016	% of Total	2021	% of Total
1 person	280	25.0%	300	27.8%	370	29.6%	405	29.7%
2 persons	515	46.0%	405	37.5%	580	46.4%	635	46.5%
3 persons	140	12.5%	170	15.7%	145	11.6%	140	10.3%
4 persons	140	12.5%	135	12.5%	90	7.2%	120	8.8%
5 or more persons	45	4.0%	70	6.5%	70	5.6%	70	5.1%
Total private households	**1,120**	**100%**	**1,080**	**100%**	**1,255**	**100%**	**1,370**	**100%**
Total number of persons	**2,545**	**n/a**	**2,510**	**n/a**	**2,710**	**n/a**	**2,960**	**n/a**

Source: Statistics Canada, Census 2006 - 2021.

Table D.3: Total Private Households by Household Size, Roberts Creek (Electoral Area D), 2006-2021

Electoral Area D Household Size	2006	% of Total	2011	% of Total	2016	% of Total	2021	% of Total
1 person	375	27.6%	375	27.3%	395	26.2%	440	28.4%
2 persons	485	35.7%	490	35.6%	640	42.5%	630	40.6%
3 persons	200	14.7%	215	15.6%	225	15.0%	205	13.2%
4 persons	195	14.3%	200	14.5%	180	12.0%	180	11.6%
5 or more persons	105	7.7%	95	6.9%	65	4.3%	90	5.8%
Total private households	**1,360**	**100%**	**1,375**	**100%**	**1,505**	**100%**	**1,545**	**100%**
Total number of persons	**3,285**	**n/a**	**3,275**	**n/a**	**3,420**	**n/a**	**3,520**	**n/a**

Source: Statistics Canada, Census 2006 - 2021.

Table D.4: Total Private Households by Household Size, Elphinstone (Electoral Area E), 2006-2021

Electoral Area E Household Size	2006	% of Total	2011	% of Total	2016	% of Total	2021	% of Total
1 person	330	23.2%	310	21.6%	415	27.0%	395	24.4%
2 persons	550	38.7%	575	40.1%	600	39.1%	705	43.5%
3 persons	215	15.1%	225	15.7%	200	13.0%	220	13.6%
4 persons	220	15.5%	220	15.3%	245	16.0%	185	11.4%
5 or more persons	105	7.4%	105	7.3%	75	4.9%	110	6.8%
Total private households	**1,420**	**100%**	**1,435**	**100%**	**1,535**	**100%**	**1,615**	**100%**
Total number of persons	**3,505**	**n/a**	**3,545**	**n/a**	**3,620**	**n/a**	**3,810**	**n/a**

Source: Statistics Canada, Census 2006 - 2021.

Table D.5: Total Private Households by Household Size, West Howe Sound (Electoral Area F), 2006-2021

Electoral Area F Household Size	2006	% of Total	2011	% of Total	2016	% of Total	2021	% of Total
1 person	275	28.2%	250	28.2%	295	30.9%	375	33.9%
2 persons	410	42.1%	420	47.5%	425	44.5%	465	42.1%
3 persons	120	12.3%	100	11.3%	125	13.1%	130	11.8%
4 persons	95	9.7%	80	9.0%	75	7.9%	100	9.0%
5 or more persons	75	7.7%	35	4.0%	35	3.7%	35	3.2%
Total private households	**975**	**100%**	**885**	**100%**	**955**	**100%**	**1,105**	**100%**
Total number of persons	**2,220**	**n/a**	**1,875**	**n/a**	**1,990**	**n/a**	**2,320**	**n/a**

Source: Statistics Canada, Census 2006 - 2021.

Appendix E: Household Income by Electoral Area

Figures E.1 to E.5 illustrate the average and median household earnings of owner and renter households across each of its five electoral areas within the study area.

Figure E.1: Average and Median Household Income by Tenure (after tax): Electoral Area A, 2006-2021

Source: Statistics Canada, Census 2006-2021.

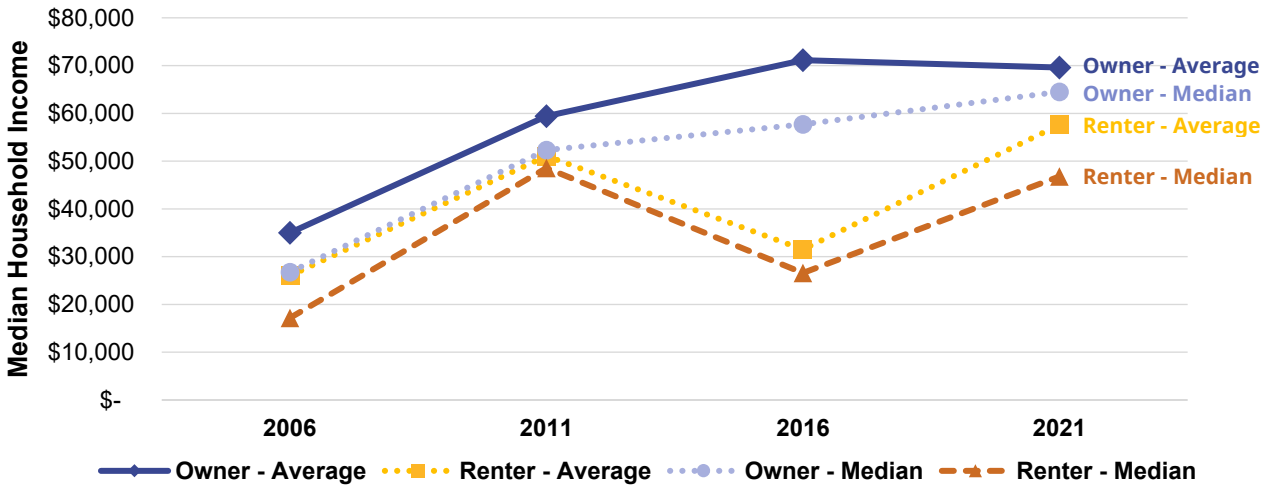


Figure E.2: Average and Median Household Income by Tenure (after tax): Electoral Area B, 2006-2021

Source: Statistics Canada, Census 2006-2021.

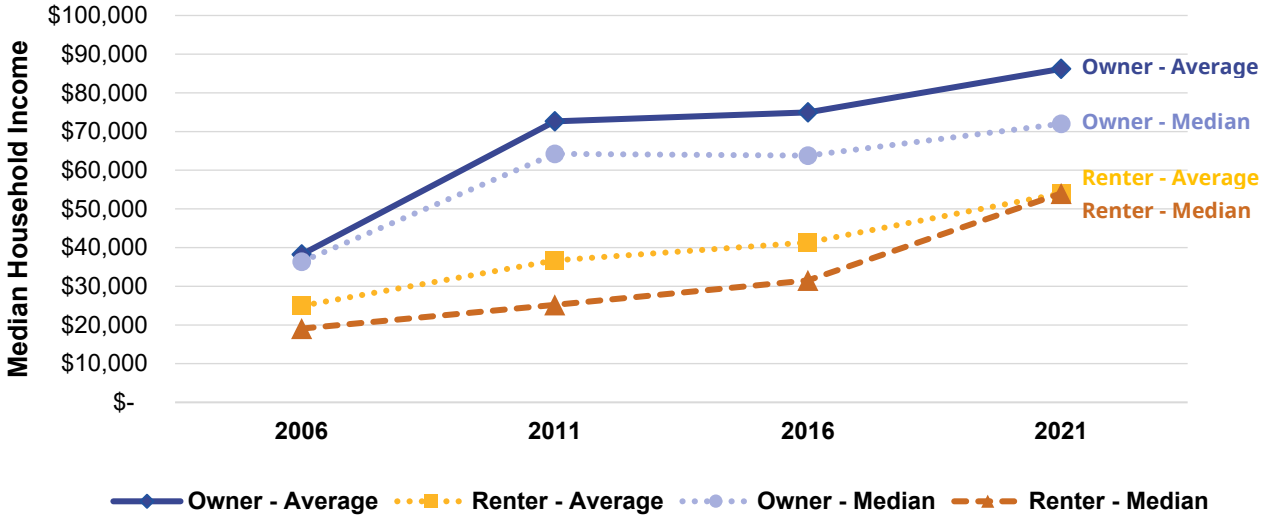


Figure E.3: Average and Median Household Income by Tenure (after tax): Electoral Area D, 2006-2021

Source: Statistics Canada, Census 2006-2021.

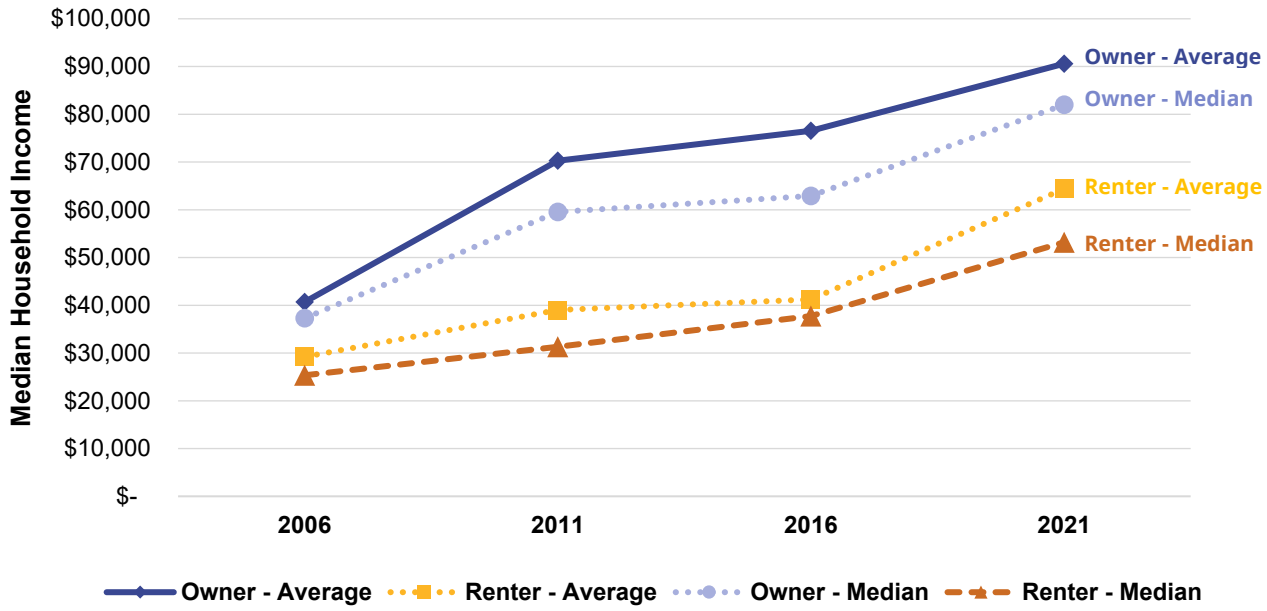


Figure E.4: Average and Median Household Income by Tenure (after tax): Electoral Area E, 2006-2021

Source: Statistics Canada, Census 2006-2021.

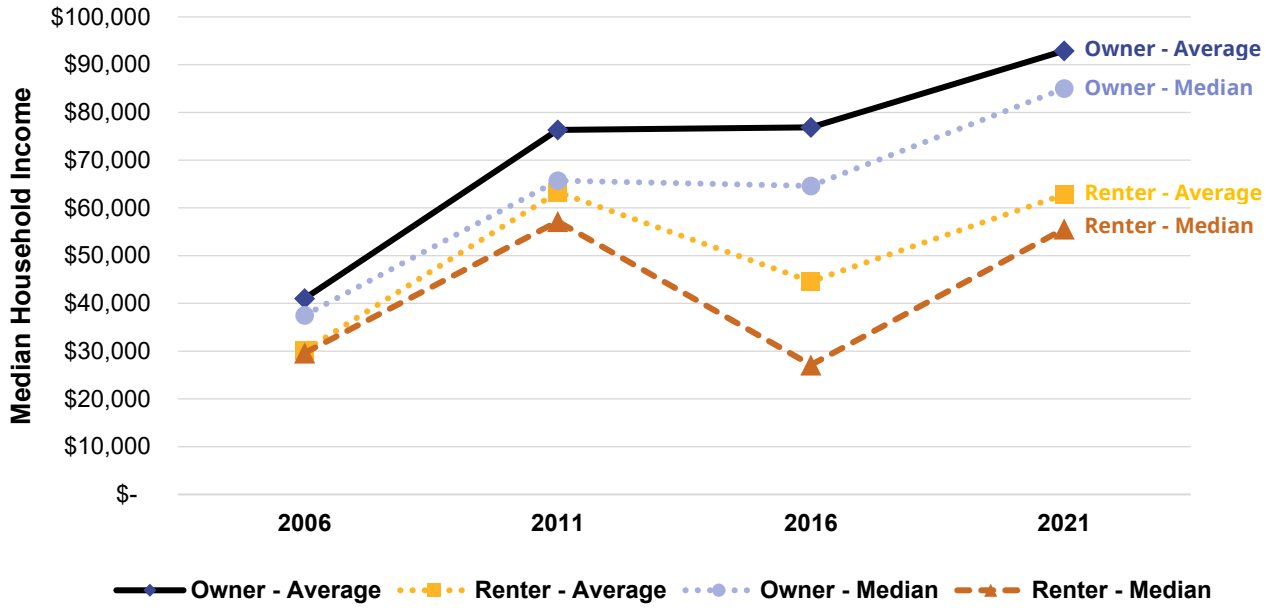
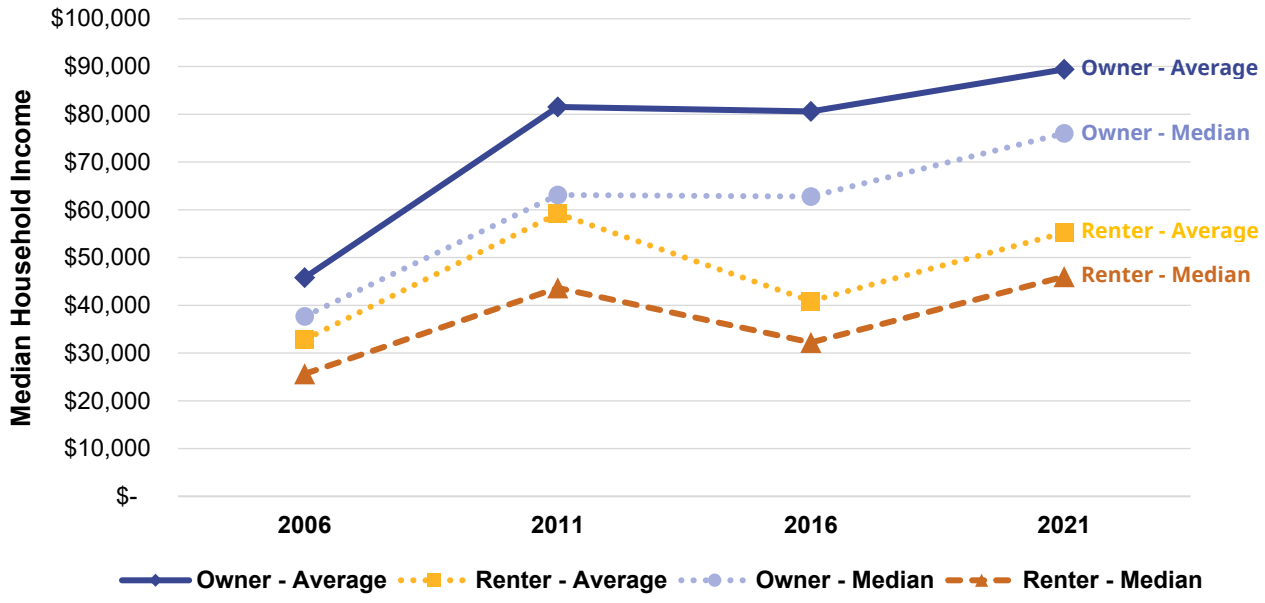


Figure E.5: Average and Median Household Income by Tenure (after tax): Electoral Area F, 2006-2021

Source: Statistics Canada, Census 2006-2021.



Appendix F: Dataset Sources, Limitations, and Uses

This table provides an overview of the datasets used throughout this report, in which chapters they are used, and their associated limitations.

Dataset	Source	Limitations	Chapter(s)
SCRD Electoral Area Boundaries	Sunshine Coast Regional District	This map reflects the electoral area boundaries of the SCRD, as this represents the "Study Area" referenced in the HNR. This does not reflect the SCRD's OCP/Planning Areas as these do not conform exclusively to the Electoral Area boundaries.	Introduction, 1
Stats Canada Custom Census Query	Statistics Canada	This data only reflects total private households; it does not include non-market housing or unoccupied dwellings and so does not provide a perfect representation of the SCRD's total housing stock. However, the proportion of non-market housing and unoccupied housing is very small as compared to total private dwellings, and so the underestimation is highly unlikely to have a material affect on the analysis.	Introduction, 2, 4
Annual Estimate Report (BC Homelessness)	Preventing and Reducing Homelessness Integrated Data Project	This data enumerates the number of individuals experiencing homelessness across BC local governments based on administrative attendance records. An individual is considered to be experiencing homelessness if they have accessed a BC shelter and/or have received BC Employment and Assistance for 3 consecutive months with No Fixed Address.	Introduction, 4

Dataset	Source	Limitations	Chapter(s)
		The data does not account for the residing location of individuals accessing the services, but instead associates them with the locale in which they accessed the service. The data also does not account for Indigenous peoples experiencing homelessness. This number therefore likely underestimates the total number of individuals experiencing homeless in a given area as it does not account for unobserved individuals.	
BC Stats Household Growth Projections (20 years)	BC Stats	BC Stats relies on population and household estimates rather than data derived from a population census. Therefore, the numbers reported by BC stats represent estimates rather than Census enumerations and will likely vary slightly from numbers reported by Statistics Canada.	Introduction, 2, 4
Primary Rental Market Vacancy Rate	CMHC	This number is derived from CMHC Rental Market Survey which does not include electoral area vacancy rates. This analysis therefore uses the Provincial vacancy rate as a proxy.	Introduction, 4
Local Housing Demand Factor Multiplier	Ministry of Housing	The demand factor multiplier is an estimated coefficient indicating how changes in demand factors (i.e., population growth, household formation growth) impact overall demand for housing units. This is a generalized multiplier that has been refined for application at local levels and does not account for unanticipated shifts in fundamental market conditions.	Introduction, 4

Dataset	Source	Limitations	Chapter(s)
Stakeholder Engagement	SCRD	Stakeholder engagement data was assembled through multiple different engagement exercises conducted by community research professionals working with the SCRD. As is inherent to qualitative research, participation bias impairs the ability of researchers to establish that they have achieved a 'representative sample' of participants. While rigorous methods were applied to collect and analyze the data (i.e., triangulation, repetitive sampling) there is a chance that some perspectives were missed. Qualitative research also reflects a snapshot in time limited to the time period in which the engagement occurred; there is therefore also a risk that novel perspectives have emerged that are not fully represented in the research.	Introduction, 5, 6
BC Supportive Housing Unit Counts	BC Housing	BC Housing's Supportive Housing Dataset provides dwelling unit counts for supportive housing across British Columbia. The data does not account for total private dwellings and instead is used to supplement analyses of total private dwelling counts. The dataset is also not perfectly reflective of conditions on the ground; stakeholder engagement and ground truthing have been used to double check the figures reported in this report.	5, 3
BC New Registered Housing Units	BC Housing	BC Housing records and publishes the number of new housing units registered across local governments in BC. The data does not cover the years 2023 - 2024 due to publication timelines.	3

Dataset	Source	Limitations	Chapter(s)
		The dataset therefor underestimates the total number of registered new housing units across the SCRD. The data does not indicate the distribution of market and non-market housing within the data set.	
Building Permits Issued	SCRD	Engagement with the SCRD indicated the data on building permits issued over the last ten years is only available for the years 2016 – 2024. At the time of writing, 2024 did not have a full months of data, meaning that the number of units enumerated in 2024 is likely lower than the actual number of issued permits for the year.	3
Demolition Permits Issued	SCRD	Engagement with the SCRD indicated the data on building permits issued over the last ten years is only available for the years 2016 - 2024. At the time of writing, 2024 did not have a full months of data, meaning that the number of units enumerated in 2024 is likely lower than the actual number of issued permits for the year.	3

SUNSHINE COAST REGIONAL DISTRICT STAFF REPORT

TO: Electoral Area Services Committee – February 20, 2025

AUTHOR: Ian Hall, General Manager, Planning & Development
Jonathan Jackson, Manager, Planning & Development

SUBJECT: **OFFICIAL COMMUNITY PLAN (OCP) RENEWAL PROJECT SCOPE AND TIMELINE UPDATE**

RECOMMENDATION(S)

(1) THAT the report titled Official Community Plan (OCP) Renewal Project Scope and Timeline Update be received for information;

(2) AND THAT updated OCP Renewal project goals focus on:

- **a. A policy framework of one OCP and one Zoning Bylaw that integrates Development Approval Process Review (DAPR) objectives**
- **b. Two pillars of Housing and Environment & Climate**
- **c. Meeting legislative requirements**
- **d. Integration of the Regional Growth Baseline Study with supporting Growth Management Principles;**

(3) AND THAT a project timeline be confirmed that:

- **a. Provides high-level bylaw frameworks including maps and policies by Q3 2026**
- **b. Includes three longer-duration rounds of public engagement**
- **c. Enables adoption of new Official Community Plan and Zoning bylaws in 2027;**

(4) AND THAT a budget proposal be brought to the 2026 annual budget process to support project sustainment into 2027;

(5) AND THAT SCRD request the Province extend the deadline for Small-Scale Multi-Unit Housing zoning compliance until December 31, 2027 in alignment with the OCP Renewal Project timeline;

(6) AND THAT staff provide an updated Background Report and Engagement and Communication Strategy to support the confirmed scope to a future Committee;

(7) AND THAT the report titled Official Community Plan (OCP) Renewal Project Scope and Timeline Update be referred to Advisory Planning Commissions for information;

(8) AND FURTHER THAT an Advisory Planning Commission workshop be convened in spring 2025 on OCP Renewal to build project capacity and support future APC workshops and referrals.

BACKGROUND

In Q4 2024 the Board directed further exploration on OCP Renewal scope and timeline, relative to alignment with legislated requirements, electoral area and organizational priorities and staff capacity (directives 292/24 and 342/24, included as Attachment A). Other goals included affirming document structure, enhancing shared project understanding and ensuring effective public participation, including the roles of Advisory Planning Commissions (APCs). A Housing Needs Report was received on November 28, 2024 (directive 318/24) which further informs this work.

Rural directors caucused at workshops on December 11, 2024 and January 17, 2025.

This report reflects the topics discussed during these workshops and seeks to confirm direction for the OCP Renewal project, regarding the following components:

A. Scope and Key Directions
B. Supporting Scope
C. Engagement

DISCUSSION

A. Scope and Key Directions:

1. A User-Friendly, Integrated OCP and Zoning Bylaw

During workshops, Directors talked about the value of a document structure comprised of **one integrated OCP and one companion zoning bylaw** designed to work together with an easy to follow, user-friendly format and communication style.

The 2023 Development Approval Process Review (DAPR) found that SCRD's existing document structure of 7 OCPs and 2 zoning bylaws results in confusing interpretation challenges for all users. Developing an integrated, user-friendly document structure contained in one OCP and zoning bylaw facilitates:

a) Delivery of a clear, effective and comprehensive land-use planning framework
b) Coordination of efficient key infrastructure and services
c) Ability to prioritize organizational business decisions
d) Directing housing needs to areas most suitable for growth
e) Ability to enhance clarity regarding electoral area local needs and uniqueness, while considering larger regional context

f) Ability to have a united voice when advocating to senior levels of government

2. OCP Pillars: Housing and Environment & Climate

During workshops, Directors' dialogue focused on two pillars, Housing and Environment & Climate. These pillars will ensure prioritization and focus on these identified community needs and can be supported by technical studies. These are focus areas derived from core legislative requirements set in the *Local Government Act.*

The **Housing Pillar** will consider complete communities and economic-generating uses. Generally, growth should be accommodated through a variety of housing options and densities in areas that are or easily can be serviced, particularly in relation to fire flows. Conversely, this will also mean limiting new growth in locations that burden SCRD's infrastructure, services and natural assets.

The **Environment & Climate Pillar** will ensure minimum legislative requirements are met in relation to providing appropriate restrictions on hazardous or environmentally sensitive conditions and setting greenhouse gas (GHG) reduction targets. Beyond this, the Environment & Climate Pillar will seek to align with Board directed policies contained within the Community Climate Action Plan (CCAP) and consider an integrated approach between community building and natural assets. Specifically, climate adaptation and resilience considerations will include stormwater management, wildfire prevention and protection, as well as adaptation strategies including managed retreat in climate hazard areas. Environmental stewardship will further consider appropriate protection and restoration frameworks for riparian areas and sensitive ecosystems.

3. Legislative Alignment

This project further seeks to **comply with all necessary provincial legislation**. DAPR identified that SCRD's land-use planning framework is out of alignment with provincial legislation, which creates inefficiencies in development approvals; reduces clarity, particularly when multi-jurisdiction approvals are required; and may increase risk in some cases for residents and SCRD.

Provincial Bill 44 introduced new housing statutes in late 2023 that have obligatory actions for local governments. SCRD has recently completed its requirement for an updated Housing Needs Report (HNR) in late 2024 and must consider this document as part of OCP development. SCRD is also obligated to implement aspects of the province's Small Scale Multi-Unit Housing (SSMUH) requirements. For SCRD, this involves permitting either secondary suites or auxiliary dwelling units on single-unit zoned residential properties unless doing so increases risk to health, public safety, or the environment.

4. Integration of Regional Growth Baseline Study

As previously directed by the Board, the Regional Growth Baseline Study will inform OCP renewal, including helping to determine where growth should and should not occur.

Building from the Regional Growth Baseline mapping, the OCP Renewal project will add new data from further research and analysis. This approach recognizes that some data gaps exist in the Regional Growth Baseline mapping data, particularly in relation to natural assets, sensitive environmental features (e.g. marine habitat, aquifer vulnerability and productivity) and infrastructure and servicing (e.g. active transportation routes and fire flow capacity).

B. Supporting Scope Analysis:

1. Natural Assets Inventory

In scope: To support the pillars of housing and environment & climate, the inclusion of a Natural Assets Inventory will identify areas and/or assets that are appropriate for environmental stewardship and/or in need of climate adaptation considerations. Policy development and legislatively available tools, such as development permit areas and zoning, will be evaluated for usefulness in guiding desired levels of stewardship or adaptation.

2. Supporting Infrastructure Analyses:

In scope: Integration of recently completed fire flow capacity analysis, which is critical to support safe development. Consideration of 2025 inputs from the Fire Flow Action Plan, Water Strategy and Water Efficiency Plan. Integrative analysis required to confirm a decision on any SSMUH-related zoning directions.
Not in project scope/future work: Additional detailed infrastructure and servicing analysis, as well as associated capital planning and cost recovery bylaw work will be directed to the OCP Implementation Section.

3. Development Permit Area Modernization

In scope: The OCP Renewal project will consider how to efficiently and effectively modernize and re-implement the use of Development Permit Areas to achieve OCP and DAPR objectives and meet legislative requirements related to restrictions on use of land subject to hazardous conditions or that is environmentally sensitive.

Not in scope/future work: Additional detail / ground-truthing for many DPAs will be directed as future work through the OCP Implementation Section.

4. Implementation Plan

Structuring of future work: SCRD's new OCP will include an Implementation Section to provide policy direction on the prioritization of key work to support successful policy implementation, with examples including known needs such as:

- Cost Charge bylaws, which are tools provided to local governments to fund financially sustainable growth through the ability to collect monies to support related components of capital projects as governed by the *Local Government Act*.
- Neighbourhood Plans, which are subplans to the OCP, actioning area-specific needs, responding to local conditions and character. Additional planning (and local engagement) is required to successfully implement these plans and consequently this work will follow the adoption of the OCP given project budget and timing goals.

Implementation Plans are the established way to make OCPs relevant, functional and more than just "words on paper".

C. Engagement

1. Project & Engagement Design

During workshops, Directors talked about timely completion of this project and a desire for substantial completion prior to the October 2026 local government election. A desire was expressed for engagement that moves at a speed that builds public understanding and trust and allows local knowledge to add value.

Combining these two directions, staff have prepared project timeline options (Attachment B). Option 1 (recommended, based on perceived alignment with Directors' goals to build community trust) proposes three longer periods of engagement. Option 2 contemplates four shorter periods of engagement. Both options would see presentation of high-level bylaw frameworks including maps and policies in mid-2026, with draft bylaws and a final round of engagement in early 2027 and consideration of adoption in 2027.

2. Engagement in the Community

SCRD uses the International Association of Public Participation (IAP2) pillars to define the purpose and level of engagement for projects. Activities in this project will inform the community as well as consult the community. This means that ideas and information collected during the engagement phases will be analyzed and summarized for the Board to consider in addition to the technical and legal requirements informing the OCP and Zoning Bylaw development.

Engagement in the community will include a blend of in-person events and virtual opportunities to share information and invite feedback about proposed policies and a new land use framework.

3. Roles

Directors will be supported, through regular briefings and supporting material, to lead communication with the community about this project and how OCP renewal will tackle big community challenges. Formal engagement and informing campaigns will be designed to augment and support SCRD Board as project champions.

APCs will serve as local context advisors. Approximately three to four interactive workshops for APCs are proposed, timed with key project milestones. The first workshop is suggested for early spring. These workshops would generally precede rounds of community engagement, with results informing the work that follows through advice provided to the Board for decision. Details for the APC role will be included in the updated engagement strategy. Examples of how APCs could participate in the project include as liaisons with community groups, being involved in community presentations or pop-ups, etc.

Community groups will be engaged and either the project will "go to them" by invitation or they will be invited to provide input.

The public will have easy access to project information, be "met where they are" online or in person, and have opportunities for input.

Staff, with consultant support, will facilitate engagement in alignment with Board direction.

Based on direction received from this report, a practical, clear and detailed engagement strategy will be presented to a future Committee. The strategy will consider feedback received from APCs in Q4 2024.

Organizational and Intergovernmental Implications:

The project will involve interdepartmental collaboration at all levels with emphasis on Planning & Development, Infrastructure Services, GIS, Community Services, Finance and Legislative Services. Coordination and engaging with First Nations, neighbouring municipalities and other agencies is required.

The draft Corporate Workplan allocated 4,860 hours to this project as of January 1, 2025 and through to December 31, 2025. This estimate remains accurate; the prospective scope

change and timeline adjustments change the quarters where hours will be focused, but the overall project size in 2025 is similar to what was previously estimated. Of these hours, 1,790 (37%) are one-time/project-specific (i.e. project-specific GIS and Planner roles). Of the total hours, 3,600 (74%) are drawn from Planning & Development Division. Other extraordinary contributions are: Asset Management: 80 hours; Infrastructure Services: 160 hours, Community Services: 100 hours; Planning & Development (other than Planning Division): 270 hours; Communications 150 hours; CAO & SLT: 250 hours.

The Province has granted SCRD until June 30, 2026 to address zoning requirements associated with SSMUH under Bill 44 that enable auxiliary dwelling units or secondary suites in areas served by wastewater treatment plants and regional water systems. Technical analysis is required to ascertain whether zoning on parcels within these areas can be updated without furthering hazardous risks related to wastewater processing or fire protection. It is recommended that SCRD apply to the province for an amendment to this extension to align SSMUH compliance with updated OCP Renewal project timelines (no later than December 31, 2027). If the extension is denied, interim SSMUH compliant zoning would be required. Currently, 76% of all rural residential parcels in SCRD permit an auxiliary dwelling and/or a secondary suite. Requesting an extension does not prevent SCRD from amending zoning before the deadline should technical analysis be completed sooner.

Financial Implications

OCP Renewal is an approved project within the financial plan, with a budget based on the scope developed several years ago. Resourcing the updated scope and timeline will require a mix of existing and future resources.

SCRD has $94,383 of unallocated provincial capacity funding that could be used for infrastructure analysis required to address aspects of the new provincial housing mandate.

First Nations will be invited to engage, based on defined consultation areas provided by the Province of BC. The cost and time involved in fulfilling this part of the engagement process is unknown at this time. More information will be reported to a future Committee.

Staff will conduct further project analysis and provide financial/resourcing comments and recommendations in future project update reports.

3. Upcoming Budget Cycles

Next year: The OCP Renewal project timeline, as proposed, is one year longer than originally budgeted. While substantial completion of draft bylaws will be reached in 2026, resources to support work into 2027 will be required. Staff recommend that a budget proposal be presented in 2026 to ensure project continuity.

Future Implementation Work: The proposed scope of work for 2025-2027 recognizes there is future work outside of this scope that will be necessary to fully operationalize new OCP policy and keep the adopted land use planning framework relevant will necessitate future budget cycle proposals.

3. Contract Updates

The updated scope, key directions, timeline, and additional resourcing, noted in this report, will require updates to SCRD's contract for consulting services with KPMG LLP. Pending Board direction, staff will prepare an update. Any amendment will require a Board decision based on the total contract value, per Delegation Bylaw No. 710.

Timeline for next steps

The proposed project timeline is reflected in Attachment B (option 1 recommended).

Pending Board confirmation of scope, timeline and resources, the next steps will be:

1. Provide updated Background Report and Engagement Strategy (target March EAS Committee)
2. Schedule APC workshops (initial workshop in March)
3. Initiate regular project communications briefings for Directors
4. Initiate regular project status reports
5. Project launch in June 2025, as shown on timeline

STRATEGIC PLAN AND RELATED POLICIES

OCP and zoning bylaws can update policy direction in support of Water Stewardship and Solid Waste Solutions.

CONCLUSION

This report presents proposed updates to the scope and timeline of the OCP Renewal project based on dialogue convened by Directors in December 2024 and January 2025. A series of recommendations flowing from the new scope and timeline are also provided.

Following the Board's consideration of the recommendations in this report, the updated project can be launched this spring. Further direction on engagement will be sought prior to launch.

ATTACHMENTS

Attachment A: Referenced Board directives

Attachment B: Project Timeline

Reviewed by:			
Manager	X - J. Jackson	Finance	X - A. Taylor
GM	X – I. Hall X - R. Rosenboom	Legislative	X – S. Reid
CAO	X – T. Perreault	Information Technology/GIS	X – D. Nelson

ATTACHMENT A: Referenced Board Directives

Resolution Date	Resolution	Progress
October 24, 2024 **292/24**	THAT a report be provided to a future Committee outlining the options for an amended timeline and narrowing the scope for the Official Community Plan (OCP) Renewal Project to the legislated requirements, including staff resourcing considerations, as part of the 2025 budget; AND THAT regular monthly or bi-monthly check-ins be scheduled so that Board members can be fully informed about the progress of the OCP renewal project.	This is the first check-in report on the OCP renewal project.
November 28, 2024 **342/24**	THAT a workshop session regarding the Official Community Plan be convened with the Board to: a. Collaboratively explore and provide input on the scope (the "why"), purpose, and goals of the Official Community Plan (OCP), enhancing shared understanding between the Board and staff; b. Present and discuss options for local neighbourhood and electoral area representation within the OCP document, including consideration of a single regional document, a regional document with sub-area plans, or maintaining separate electoral area OCPs; c. Gather feedback from Directors to align with electoral area priorities, strengthen local participation, and establish a collaborative process with staff for ongoing refinement throughout the OCP development; d. Review and offer feedback on the OCP public engagement plan, including guiding principles and the role of Advisory Planning Commissions (APCs), to ensure an inclusive and transparent engagement process; e. Discuss options for flexible, achievable timelines for the OCP process, balancing resource capacity and effective public engagement; AND FURTHER THAT the initiation of the OCP engagement process be temporarily paused to allow for these elements to be addressed in a collaborative manner.	Rural Director workshops held on December 11, 2024 and January 17, 2025

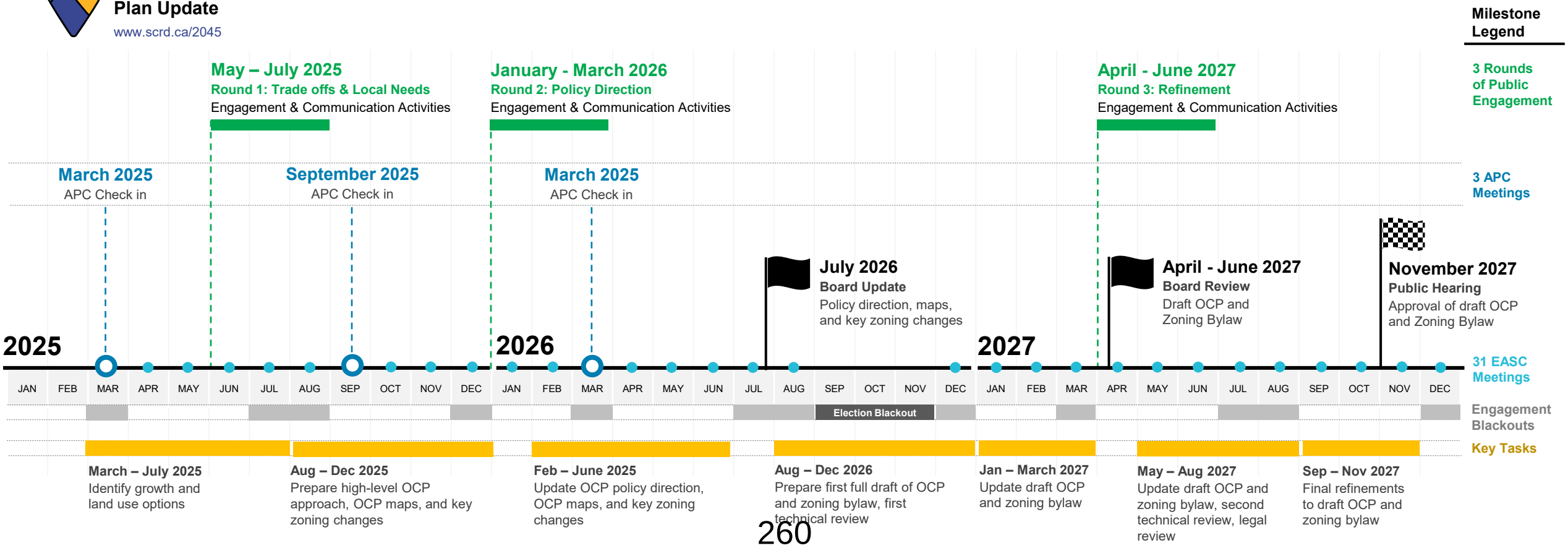
DRAFT FOR DISCUSSION

OCP Project Timeline

2025-2027 Roadmap – Option 1 (Recommended)

Official Community Plan Update

www.scrd.ca/2045



DRAFT FOR DISCUSSION

OCP Project Timeline

2025-2027 Roadmap – Option 2 (Not Recommended)

Official Community Plan Update

www.scrd.ca/2045