

MNP Ltd.  
Suite 430 - 505 Burrard Street  
Vancouver, BC  
V7X 1M3

July 9, 2025  
File: 23403-A/B/C  
R2

Attention: Mario Minella

**Re: Geotechnical Comments: Steep Slopes Construction Feasibility – Proposed Subdivision Development  
Pinnacle Ridge, Anmore, BC**

As part of the submission of the Rezoning Addendum for the Pinnacle Ridge Hillside Development Application, we understand the Village of Anmore has requested comment on the feasibility of developments constructed on slopes greater than 30% from a geotechnical slope stability and constructability perspective. Specific to the proposed Anmore Gate subdivision, lots 15-23 and 25, 26 propose to have residential structures which are intended to be constructed on slopes greater than 30%. We note that our geotechnical investigation reports provide detailed slope stability assessments and recommendations and confirm geotechnical feasibility of construction on steep slopes. The below is intended to provide a brief summary for the Village of Anmore.

**Development Overview:**

The Pinnacle Ridge Hillside Estate is comprised of four parcels, totalling approximately 75 acres, along the Village of Anmore's eastern boundary. These parcels are under the ownership of three entities: MNP Ltd., Anmore Gate Limited Partnership and Bella Terra Investments 2 Inc. The collaborative efforts between the landowners have yielded a thoughtfully united site design that emphasizes connectivity throughout the area, a large network of green space and trails and strategically clustered housing to reduce the amount of development on steep slopes. This application seeks to rezone the site from Residential 1 (R-1) zone to Comprehensive Development (CD) zone. Rezoning the site to the CD zone will allow for specific land use controls to address the site's hillside topography and allow for clustered housing. The proposed CD zone introduces new housing types (semi-detached and townhomes) in addition to single family homes which will be regulated by specific land use controls within the CD zone.

The intention is to cluster residential homes in areas of a gentler slope, whilst preserving steeper slopes as dedicated green spaces. The large areas of green space across the site are to be complemented with an extensive trail network, enriching the outdoor recreational opportunities for future residents.

According to the preliminary subdivision concept plan and overlay slope map drawings by Ekistics Town Planning (both dated July 3, 2025), the four parcels of development would include the extension of the existing Ridge Mountain Drive, which provides access to the east portion of the sites, the extension of North Charlotte Drive, which connects to Charlotte Crescent in Port Moody, along with new internal roads and cul-de-sacs. Each subdivision includes single family, semi-detached homes and townhomes over up to a single level of below grade. Due to the sloping topography of the site, we envisage basements would typically daylight downslope and below grade foundation walls may extend up to 2 levels at the up-slope side of structures. The elevation of the basement slabs will vary across the site.

### **Subsurface Soil and Groundwater Conditions:**

Based on the Geological Survey of Canada Map 1484A – the site is underlain by Vashon Drift (Va) deposits comprised of lodgement till (with sandy loam matrix) and minor flow till containing lenses and interbeds of glaciolacustrine laminate stony silt, and the site is underlain by Pre-Tertiary Mesozoic bedrock (PT) including granitic and associated rock types; where bedrock is not at the surface, it is overlain by glacial deposits and colluvium. Based on the Geological Survey of Canada Map 1151A – the glacial deposits are underlain by granodiorite of the Coast Plutonic Rocks.

The subsurface soil conditions were investigated in 2023 utilizing solid stem auger drill to complete 20 test holes throughout the proposed development property, and detailed soil logs and are presented in our geotechnical investigation reports. In general, the soil conditions consist of forest litter/topsoil extending 0.3 to 0.6 m below grade, underlain by post-glacial sandy silt to silty sand extending 0.5 to 0.9 m below grade or sand and gravel up to 1.1 m below grade, underlain by silty sand and gravel glacial till which extended to the end of borehole up to 6.1 m below grade or was locally underlain by per-tertiary bedrock at 3.7 to 4.7 m below grade, at test hole locations.

### **GeoPacific Comments on Feasibility of Construction on Steep Slopes Greater than 30%:**

The site is within a bedrock controlled steep slope area with very dense glacial till overlying the bedrock. We understand the maximum slope around the aforementioned development lots is up to around 40% slope (22 degrees incline), which is considered moderate from a geotechnical perspective and is be considered to be relatively stable against slope instability considering the very dense glacially derived soils near the surface grades throughout the site and pre-tertiary bedrock below.

Structures (residential homes and retaining wall structures, such as those along roadways and yards) which are founded on steep slope areas would have the foundations constructed directly above the very dense glacial till layer. Once detailed design and grading drawings are completed, slope stability assessments in accordance with EGBC can be completed for relevant lots with grades exceeding 30%.

From a geotechnical perspective, permitted the residential structures and roadways are constructed in accordance to the recommendations in our geotechnical reports and future recommendations throughout the permitting process after detailed design drawings are available and those during construction, it is our opinion the construction the subdivision and residential homes is feasible from a geotechnical perspective for areas with slopes up to around 40%. GeoPacific has also been involved in residential developments within the Pinnacle Ridge Estate Phase 1 development which were constructed on slopes greater than 30%, including 1975 North Charlotte Road where geotechnical aspects (below grade foundation walls and retaining walls) have been constructed successfully. We note other residential developments in the Pinnacle Ridge Estate Phase 1 are also constructed on slopes over 30%.

We are pleased to assist you with this project and we trust that this information is helpful and sufficient for your purposes at this time. Should you require any further details or if you would like clarification of any of the above, please do not hesitate to call or contact us.

For:

**GeoPacific Consultants Ltd.**

Wyatt Johnson, B.Eng., P.Eng.  
Project Engineer

# **APPENDIX A**

Ekistics Preliminary Concept Plan



- Subject Sites

Open Space

Single Family /  
Semi-Detached

Townhomes

Public R.O.W.

Trails

Waterway to Remain

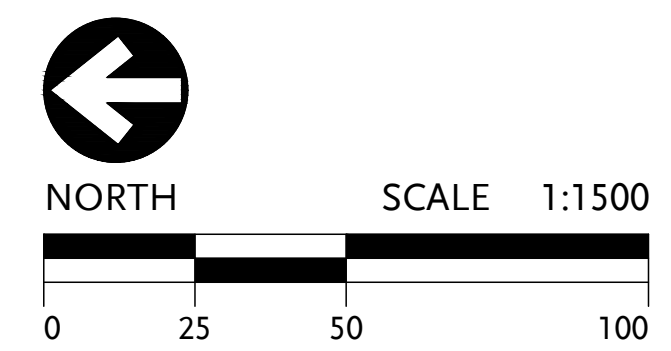
Waterway to Relocate

REZONING APPLICATION  
NOT FOR CONSTRUCTION

|     |                     |                |
|-----|---------------------|----------------|
|     |                     |                |
|     |                     |                |
|     |                     |                |
|     | Rezoning Addendum 3 | July 3, 2025   |
|     | Rezoning Addendum 2 | April 22, 2025 |
|     | Rezoning Addendum 1 | June 27, 2024  |
| REV | DESCRIPTION         | DATE           |

DATE  
December 19, 2023

PROJECT NUMBER  
EH01

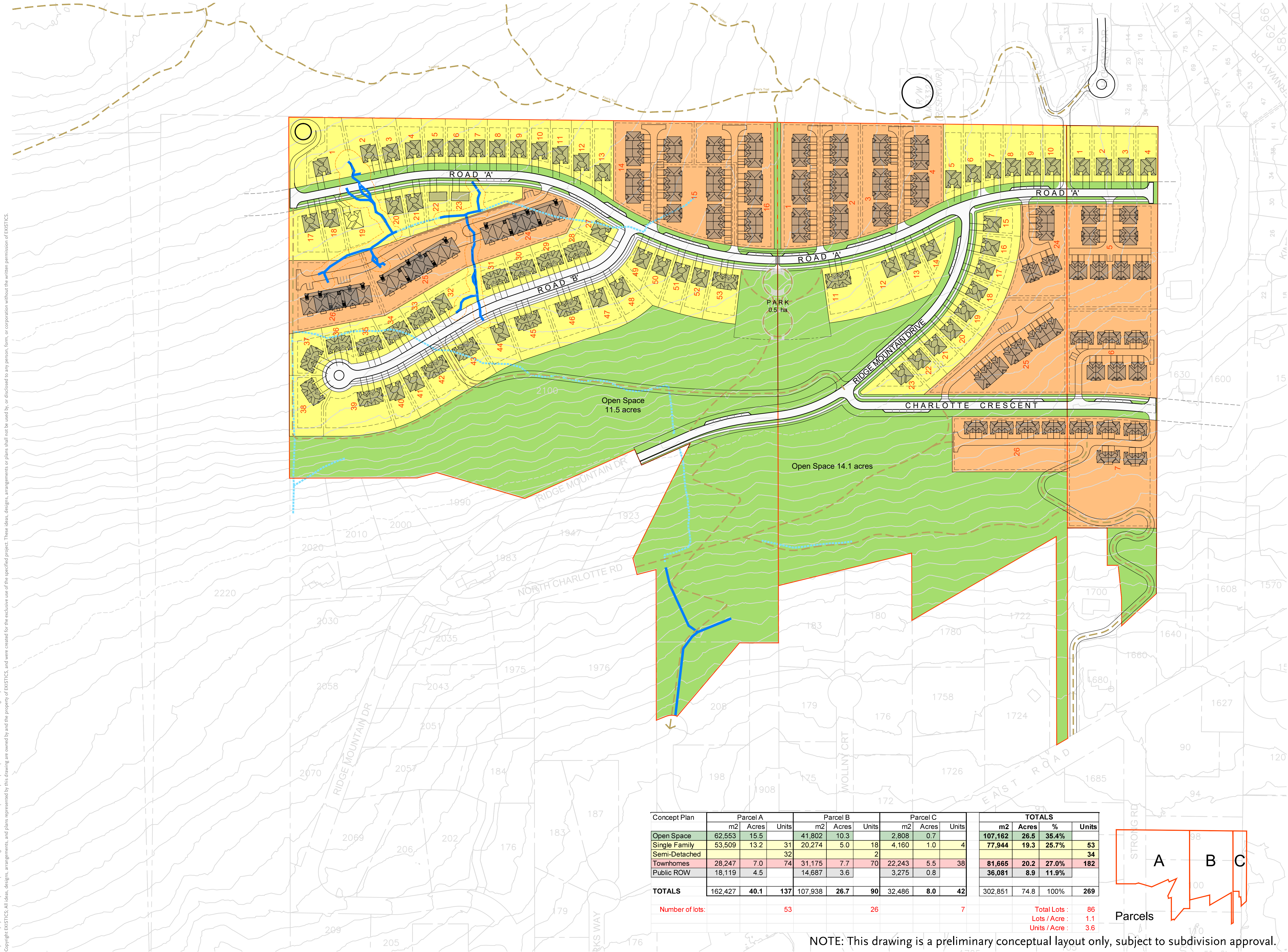


PINNACLE  
RIDGE  
HILLSIDE  
ANMORE, BC

PRELIMINARY  
CONCEPT PLAN

RZ-2

Bayer 03 July 2023 2:49pm K:\EH01 - Village of Anmore Urban\3-Masterplan\CAD\20630-EH01-MasterPlan.dwg Layout - RZ-2  
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| Concept Plan    | Parcel A |       |       | Parcel B |       |       | Parcel C |       |       | TOTALS         |       |       |       |
|-----------------|----------|-------|-------|----------|-------|-------|----------|-------|-------|----------------|-------|-------|-------|
|                 | m2       | Acres | Units | m2       | Acres | Units | m2       | Acres | Units | m2             | Acres | %     | Units |
| Open Space      | 62,553   | 15.5  |       | 41,802   | 10.3  |       | 2,808    | 0.7   |       | 107,162        | 26.5  | 35.4% |       |
| Single Family   | 53,509   | 13.2  | 31    | 20,274   | 5.0   | 18    | 4,160    | 1.0   | 4     | 77,944         | 19.3  | 25.7% | 53    |
| Semi-Detached   |          |       | 32    |          |       | 2     |          |       |       |                |       |       | 34    |
| Townhomes       | 28,247   | 7.0   | 74    | 31,175   | 7.7   | 70    | 22,243   | 5.5   | 38    | 81,665         | 20.2  | 27.0% | 182   |
| Public ROW      | 18,119   | 4.5   |       | 14,687   | 3.6   |       | 3,275    | 0.8   |       | 36,081         | 8.9   | 11.9% |       |
| TOTALS          | 162,427  | 40.1  | 137   | 107,938  | 26.7  | 90    | 32,486   | 8.0   | 42    | 302,851        | 74.8  | 100%  | 269   |
| Number of lots: |          |       | 53    |          |       | 26    |          |       | 7     | Total Lots :   |       |       | 86    |
|                 |          |       |       |          |       |       |          |       |       | Lots / Acre :  |       |       | 1.1   |
|                 |          |       |       |          |       |       |          |       |       | Units / Acre : |       |       | 3.6   |

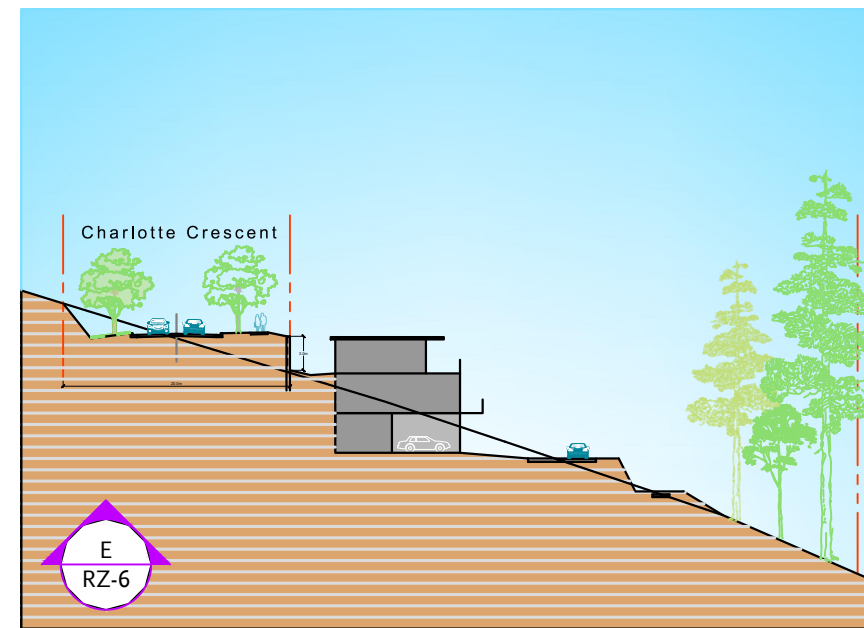
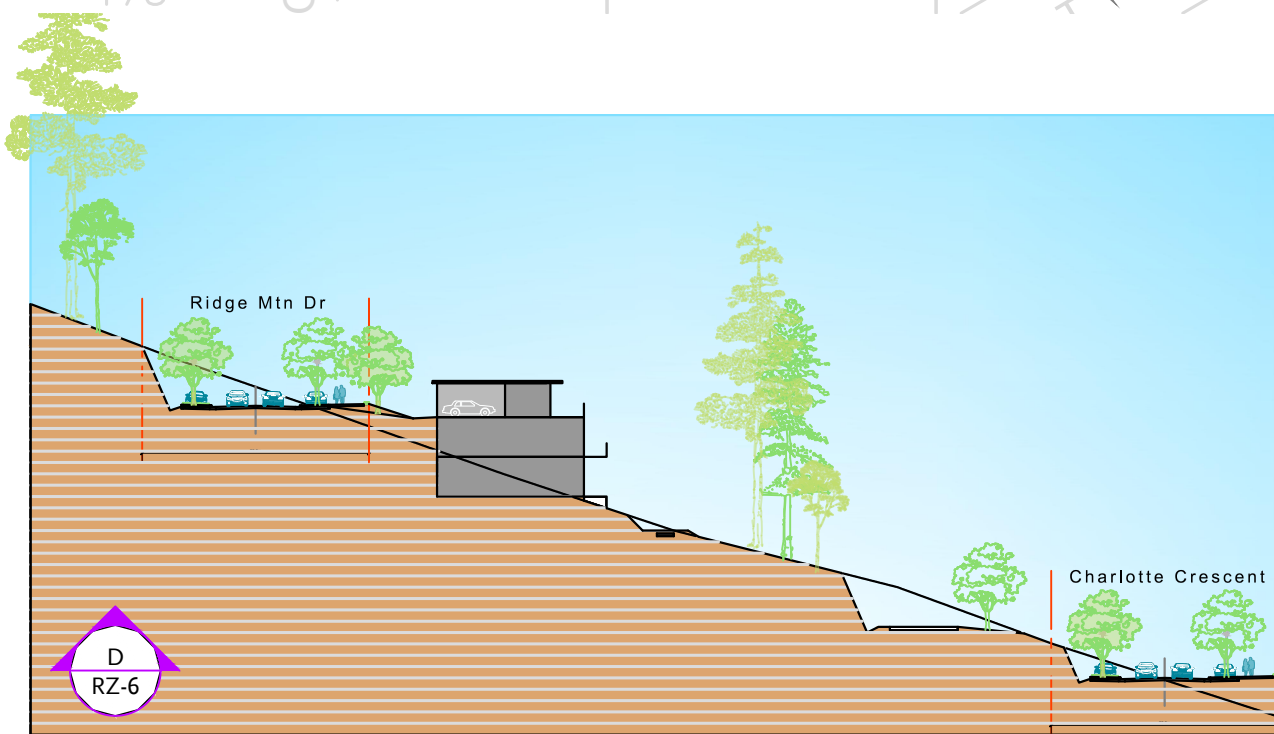
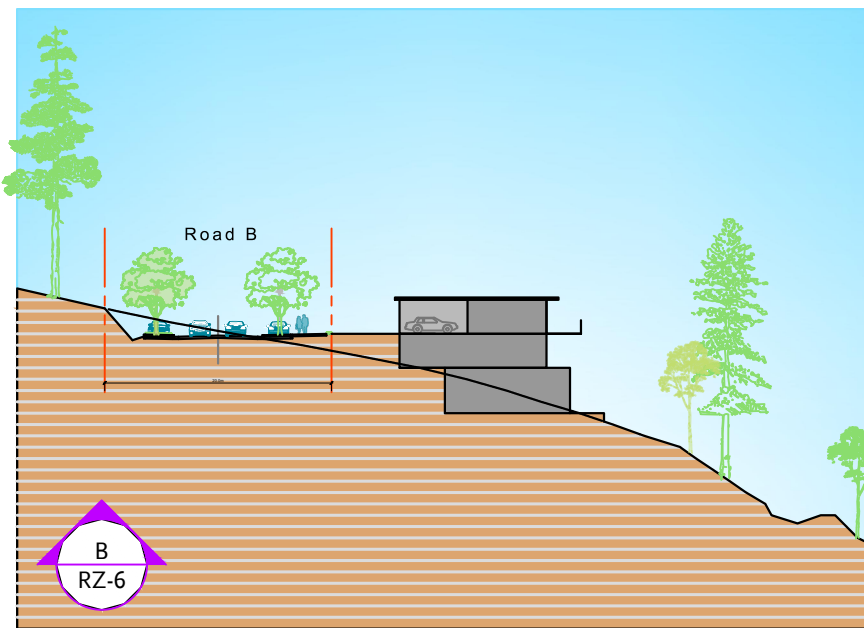
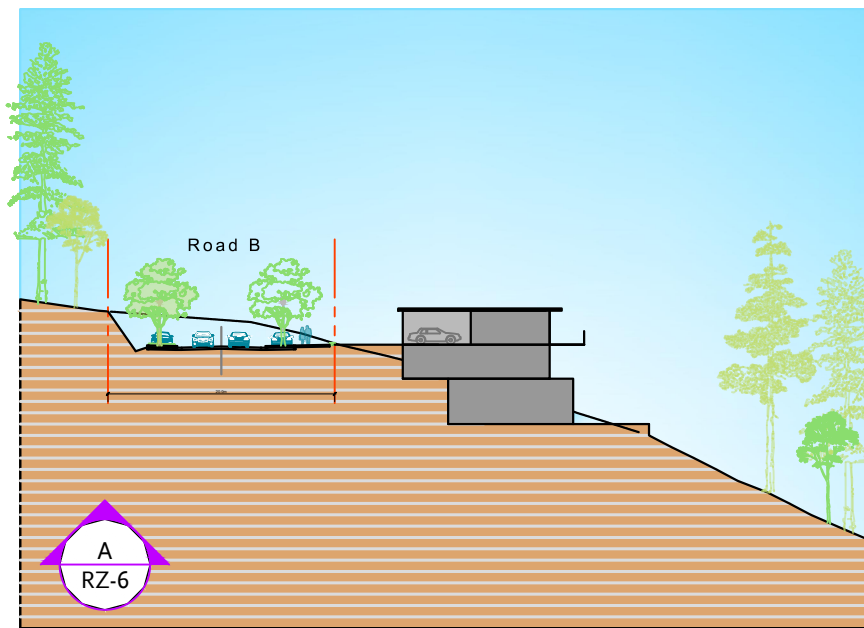
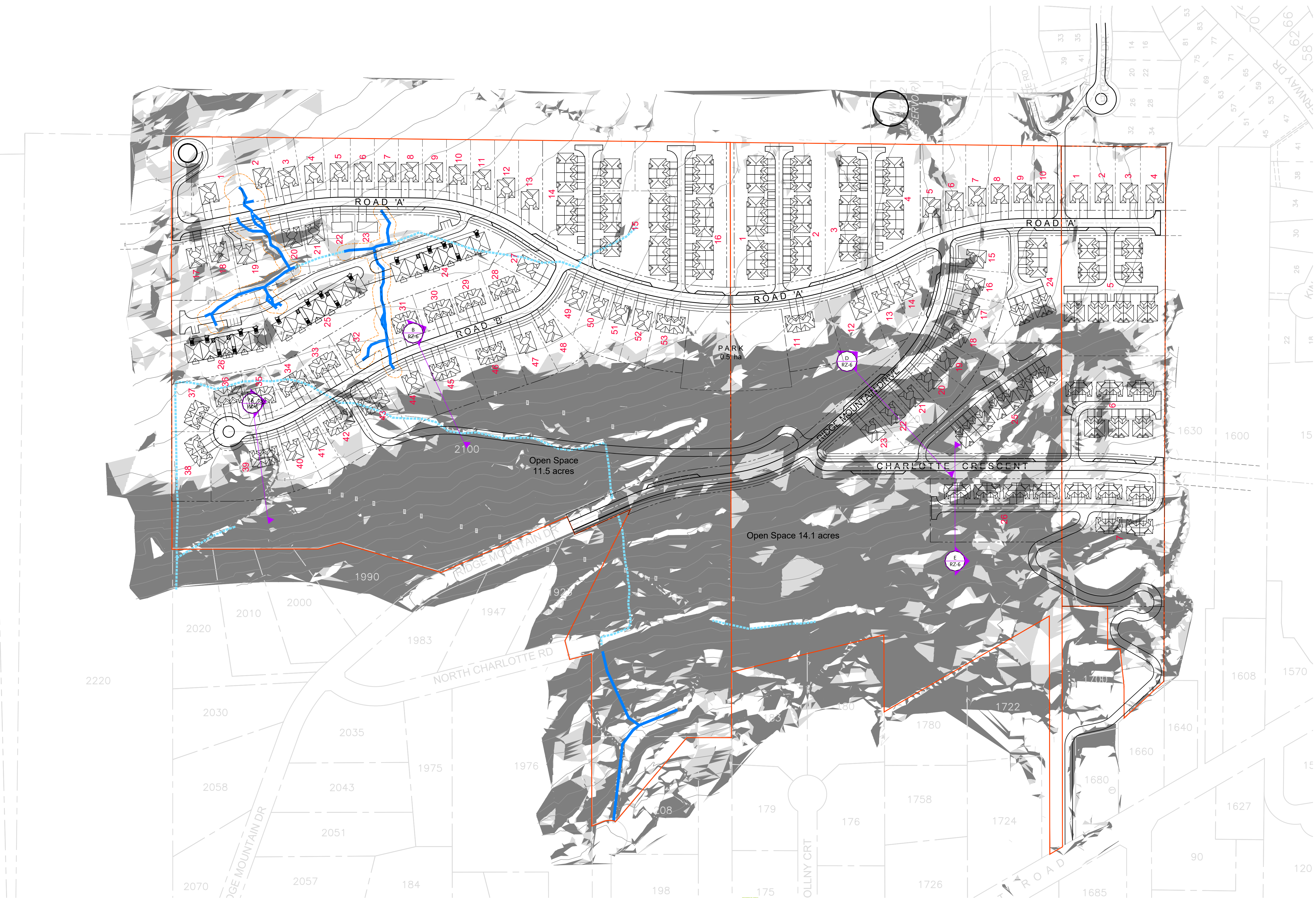
NOTE: This drawing is a preliminary conceptual layout only, subject to subdivision approval.



# **APPENDIX B**

Ekistics Proposed Plan Overlay Slope Map and Sections





# EKISTICS

## Town Planning

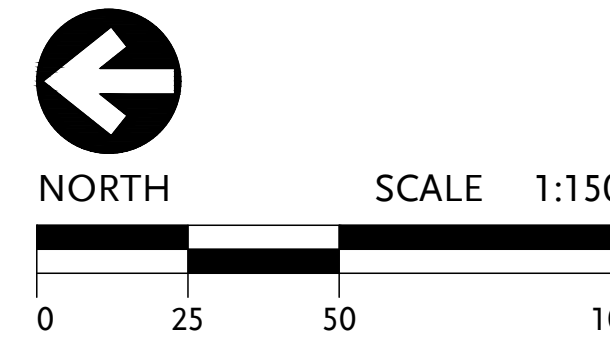
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PINNACLE  
RIDGE  
HILLSIDE  
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PROPOSED PLAN  
OVERLAY  
SLOPE MAP

RZ-6