



January 4, 2022.

**Re: Ministry of Transportation and Infrastructure (MoTI) File 2021-05737 - Zincton Farms Ltd. Formal Proposal. Request for Crown tenure north of Highway 31A, between Kaslo and New Denver.**

Attn: Zoran Boskovic and Barb Wheatley  
Mountain Resorts Branch  
Ministry of Forests, Lands, Natural Resources and Rural Development

MoTI has had an opportunity to review the above noted referral and can advise that we do **not** support the Zincton Formal Proposal at this time because the following items have not been addressed:

1. Public safety associated with avalanche management on and adjacent to Highway 31A.
2. Public safety associated with geotechnical stability and the potential for landslides caused by the proponent's road construction.
3. The safety and mobility of the travelling public, and efficiency of highway operations on Highway 31A.

West Kootenay District MoTI staff and the Provincial Approving Officer have engaged with Mr. David Harley over several years in the development of the private land subdivision that is a key part of the Zincton Farms proposal. A Preliminary Subdivision Review letter (PLRS 2019-06431) was issued for the initial phase of the private land subdivision in 2020 (Appendix A), with a list of preliminary requirements and professional reports that will required for the project to be considered. In general, these letters are issued with a deadline of one year, but extensions may be granted.

## **1. AVALANCHE MANAGEMENT CONSIDERATIONS**

For 33 years, professionals with the Ministry's Avalanche Safety Program have managed nine distinct avalanche paths within the proposed Crown tenure that directly impact the Highway 31A corridor. MoTI seeks to minimize the frequency and duration of avalanche-related road closures, while ensuring the safety of the travelling public.



**Figure 1. Highway 31A avalanche paths. Ministry of Transportation and Infrastructure.**

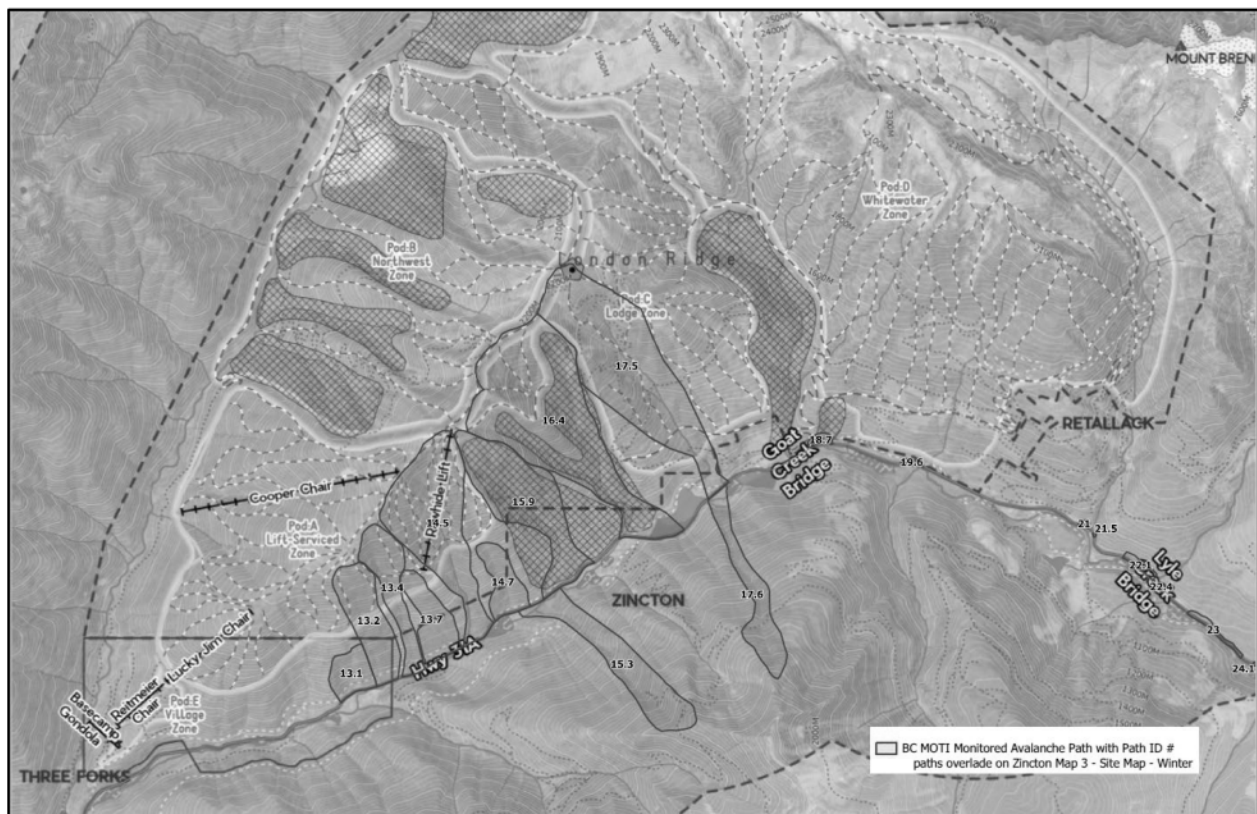
Avalanche control on London Ridge requires the use helicopters to place and discharge explosives, a practice governed by WorkSafeBC (WSBC) OHS Regulation Part 21: Blasting Operations. The *blaster of record* is the risk owner, responsible for persons and property within the area. The *danger area* is the whole area that could be influenced by blasting operations, and it will vary in size depending on the landscape and current conditions. Some effects of blasting operations include but are not limited to avalanche, rock debris, and soil instability.

Ministry professionals are required to sweep and clear the whole danger area prior to commencing blasting operations. For explosive shot placements in London Ridge avalanche start zones, the danger area can extend for 2000m or more on either side of the ridge. Remotely triggered avalanches routinely occur on the opposite side of the ridge from the placed shots, or in adjacent paths.

WSBC approved blasting procedures dictate that in the event of a mis-light, the blaster of record must deploy the explosives within 45 seconds in a safe location. The Ministry's mis-light disposal sites are located in safe locations along London Ridge, but regulations allow that these devices may not be recovered until the spring if staff cannot safely do so in the winter. On these occasions, unexploded charges may remain in the snow for some time.

Helicopter time for avalanche management is costly; flight time must be managed for successful completion of the work, travel from the air base and return, plus contingencies. Weather, local conditions and the presence of backcountry users can cause costly delays in a mission or postpone control operations. An increased density of users within danger areas would inevitably affect management operations and cost to the public.

Mapping of the proposed tenure area in the Zincton Farms Formal Proposal includes 2 chair lifts, a Backcountry Lodge, Emergency Huts and Potential Ski Zones (Figures 3.2, 4.2, 4.3a, 4.3b, 4.4, 4.5), that overlay existing avalanche paths, avalanche start zones, current and potential hazard areas. In addition, landscape changes over time (for example due to fire or slope movement) could increase hazards and avalanche potential, and physically increase areas of concern within or near the proposed tenure.



**Figure 2. Map of proposed tenure with avalanche path overlay. Ministry of Transportation and Infrastructure.**

It is critical that a formal, quantitative analysis of the proposal and snow avalanche risk assessment to the Highway 31A corridor is undertaken prior to further consideration of the application.

## Additional References



London Ridge\_Path  
IDs.kmz

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- Avalanche Hazard Index <https://nrc-publications.canada.ca/eng/view/ft/?id=58656d6e-a227-41b6-a7e4-e5c2ea6e3cb0>
- Ministry of Transportation and Infrastructure Avalanche Safety Plan [https://www2.gov.bc.ca/assets/gov/driving-and-transportation/transportation-infrastructure/highway-bridge-maintenance/avalanche/avalanche\\_safety\\_plan.pdf](https://www2.gov.bc.ca/assets/gov/driving-and-transportation/transportation-infrastructure/highway-bridge-maintenance/avalanche/avalanche_safety_plan.pdf)
- Probability of Death for Individuals [https://schulich.ucalgary.ca/asarc/files/asarc/Issw2012\\_Vulnerability\\_Jamieson\\_15Aug2012f6.pdf](https://schulich.ucalgary.ca/asarc/files/asarc/Issw2012_Vulnerability_Jamieson_15Aug2012f6.pdf)
- Snow Avalanche Safety Measures for Highways Manual <https://www2.gov.bc.ca/assets/gov/driving-and-transportation/transportation-infrastructure/highway-bridge-maintenance/avalanche/snow-avalanche-safety-measures-2018.pdf>
- Threshold Guidelines for Avalanche Safety Measures [https://www2.gov.bc.ca/assets/gov/driving-and-transportation/transportation-infrastructure/highway-bridge-maintenance/avalanche/threshold\\_guidelines\\_avalanche\\_safety\\_measures.pdf](https://www2.gov.bc.ca/assets/gov/driving-and-transportation/transportation-infrastructure/highway-bridge-maintenance/avalanche/threshold_guidelines_avalanche_safety_measures.pdf)
- WorkSafeBC OHS Regulations Part 4 <https://www.worksafebc.com/en/law-policy/occupational-health-safety/searchable-ohs-regulation/ohs-regulation/part-04-general-conditions#SectionNumber:4.1.1>

## 2. GEOTECHNICAL CONSIDERATIONS

Roads accessing the proposed village traverse steep slopes which have landslide and avalanche hazards. Conditions within the appended PLRS 2019-06431 (Appendix A) require professional assessments and design for the access road construction that must consider all potential hazards, especially where they may impact safety in the proposed village area and Highway 31A. A drainage plan and design must also be completed to address current runoff patterns, and mitigate drainage impacts due to construction.

Professional reports and designs must work from terms of reference set by Ministry technical and professional staff, and submitted reports and designs may require changes to meet EGBC standards and address all aspects of the public interest. Since the PLRS was issued in June 2020, no conversation has occurred between the Ministry and the developer's professionals to set the terms of reference.

In addition, rock in this area is known to be acid rock and metal leaching. It is recommended that a qualified professional be retained to assess materials, and ensure the necessary precautions are taken during development.

### **Additional Reference**

- Technical circular T-04/13 <https://www2.gov.bc.ca/assets/gov/driving-and-transportation/transportation-infrastructure/engineering-standards-and-guidelines/technical-circulars/2013/t04-13.pdf>

### **3. TRAFFIC IMPACT CONSIDERATIONS**

One of the requirements of the letter of PLRS 2019-06431 (Condition #7), is for a professional traffic impact assessment (TIA) for the proposed development at full build. The 31A corridor is low volume, mountainous highway, so improvements such as turnaround areas, vehicle storage, sightlines and passing lanes could be required based on the results of a TIA. Access to the development from Kane Creek, common lot access or strata road, or any other development intersection or highway improvement would require professional analysis, planning, design and ultimately construction to Ministry standards, as detailed in the [BC Supplement to TAC](#). All costs would be borne by the developer.

The Ministry is committed to the safety, mobility and efficiency of the Highway 31A corridor. Analysis of potential changes to highway classification and any associated costs of increased maintenance over time should be calculated as real impacts to the public interest.

### **ADDITIONAL INFORMATION**

- In 2001, Brent Harley and Associates Inc. on behalf of Retallack Alpine Adventures, applied to the Crown for an overlapping tenure area. MoTI records from that time indicate the same concerns for skier presence in the danger areas. A memorandum of understanding governs their operation on the north side of Highway 31A.
- MoTI has a duty to consult with Indigenous Peoples as a primary aspect of any major development approval. During review of the Zincton Farms subdivision proposal (PLRS 2019-06431), MoTI engaged in consultation with First Nations whose interests lie within the subject area. Based on numerous Crown tenure applications in the 31A corridor in recent years, the Ktunaxa Nation issued a blanket response calling for a halt to all provincial approvals until a comprehensive cumulative effects assessment has occurred, and extensive landscape planning has been completed for the area. First Nations have faced reduced administrative capacity due to Covid 19, and MoTI has not pursued engagement on this project although Ministry staff are aware that MRB has started this process.
- The Regional District of Central Kootenay (RDCK) is the local government for the proposed tenure area. Should the RDCK pursue an Official Community Plan or zoning for the development area, the MoTI Development Officer will have approval authority over any changes that affect

the public interest under the Section 52 of the Transportation Act. The issues raised in this response to MRB would also arise in such an approval process.

- Ministry staff responded to MRB in the Expression of Interest (EOI) phase of the tenure application (June 2020, Appendix B), after extensive conversation about issues such as First Nations consultation, approval authority and an interagency site visit. Ministry avalanche professionals attended the field day and provided initial feedback to MRB and the developer. No further information has been provided, or conversation has occurred between MoTI staff and the developer in advance of this Formal Proposal.
- A quantitative analysis of the potential impact to other agencies including EMBC, SAR, RCMP, and other emergency services is recommended due to the inherent risks at this location.

The Ministry of Transportation and Infrastructure holds the risk for all provincial public highways, and has the duty of care over public safety on all provincial rights of way. These cannot be delegated to other parties. Fundamentally, private land or business developments should not create safety issues or negatively impact any aspect of the public interest.

Thank you for the request for comments on this proposal.

Sincerely,



Development Services Officer  
Ministry of Transportation and Infrastructure  
West Kootenay District  
[Christine.Nichol@gov.bc.ca](mailto:Christine.Nichol@gov.bc.ca)

## Appendix A – Letter of Preliminary Subdivision Review



BRITISH  
COLUMBIA

Ministry of Transportation  
and Infrastructure

### PROPOSED SUBDIVISION REVIEW STATUS

Zincton Farms Ltd;  
c/o Muirhead Land Development Solutions Ltd  
918 Sproat Drive  
Nelson, BC V1L 7B7

eDAS File #: 2019-06431  
Date: June 9, 2020

Attention: Peter Muirhead

**Re: Proposed Subdivision of (PID: 009-112-375) Parcel A (See Plan DD 15425)  
District Lot 810 Kootenay District**

Your proposal for a 4 lot limited access subdivision is in the review process however additional information is required before the preliminary review can be completed.

- a. The Approving Officer considers that the land within your proposal may be subject to natural hazard(s) such as, but not limited to, flooding, erosion, land slip or avalanche. If the risk to persons and/or property is too great your proposal could be refused. If you wish to explore this aspect further, you should engage a Qualified Professional, registered with Engineers and Geoscientists British Columbia (EGBC), to advise you.

For assessing landslide hazards the professional shall follow the most recent version of the EGBC Guidelines for Legislated Landslide Assessments for Residential Developments in BC and include the Appendix D: Landslide Assessment Assurance Statement, duly executed, with any report. Please note that for the purposes of that Appendix D statement, the province of British Columbia does not have an adopted level of landslide safety. Also, the report must be provided for the approving officer to refer to and retain in the record of the approval decision.

For assessing flood hazards the professional shall follow the most recent version of the EGBC Guidelines for Legislated Flood Assessments in a Changing Climate in BC and include the Appendix I: Flood Assurance Statement, duly executed, with any report. Please note that for the purposes of that Appendix I statement, the province of British Columbia does not have an adopted level of flood hazard or flood risk tolerance. Also, the report must be provided for the approving officer to refer to and retain in the record of the approval decision.

The Approving Officer could consider a subdivision plan at risk from an event, based upon a specific probability of occurrence of that event. When quantifying the frequency of occurrence of natural hazards, the Qualified Professional must distinguish between two different types of events: damaging events and life-threatening events.

When considering damaging events only, unless otherwise specified, a probability of occurrence of 1 in 475 years (10% probability in 50 years) for individual landslide hazards should be used as a minimum standard. This value is the probability of the damaging event occurring. The qualified professional is to identify the run-out extent, or area of influence, of the event.

Local District Address
West Kootenay District 4 <sup>th</sup> Floor - 310 Ward Street Nelson, BC V1L 5S4 Phone: (250) 354-6400 Fax: (250) 354-6547

H343b-eDAS (2020/01)

Page 1 of 7

Where the damaging event is a flooding hazard, a probability of occurrence of 1 in 200 years should be used as a minimum standard.

Where the damaging event is a snow avalanche hazard, a probability of occurrence of 1 in 300 years should be used as a minimum standard.

Where life-threatening catastrophic events are known as a potential natural hazard to a building lot the Qualified Professional is to consider events having a probability of occurrence of 1 in 10,000 years and is to identify areas beyond the influence of these extreme events.

Large scale development must consider the same 1:10,000 year events and must also consider the total risk to the new development. When the total risk approach is used, international standards must be identified. The consultant should clearly identify the calculation procedures used.

If there are any questions regarding terms of reference, please ask your Qualified Professional to contact us. Original reports are to be provided and are to be submitted in electronic form.

- b. The Ministry of Transportation and the Provincial Approving Officer have concerns about the public utilizing the proposed ski area and gaining access to London Ridge will increase skiers in the location of existing avalanche paths currently being managed by MOTI staff. The avalanche portion of the natural hazards assessment shall include recommendations on how to mitigate this potential conflict.
- c. Assessment of natural hazards requires the expertise of qualified professionals, typically a Professional Geoscientist (in geology, or environmental geoscience) or a Professional Engineer (in geological, mining, or civil engineering).

You may need both to address your subdivision requirements. Engineers or Geoscientists are responsible to determine whether they are qualified to accept responsibility for landslide assessments. Engineers and Geoscientists of BC (EGBC) provides information on registered professionals, and related guidance (see [www.EGBC.bc.ca](http://www.EGBC.bc.ca)) on retaining the appropriate professional expertise.

In seeking a professional to do an assessment, you are advised to look at professional designation in the appropriate field of practice (directly and/or through EGBC), the extent of professional experience (number of years and similar assessments), the professional liability insurance and past work references.

Further information can be found in the Guidelines for Legislated Landslide Assessments for Proposed Residential Development in British Columbia; APEGBC, in particular, Section 6.0 - Professional Registration; Education, Training and Experience and Section 2.2 for guidance on the role of the professional, the client, and the approver. Investigation or interpretation of complex geological conditions in support of landslide assessments is typically done by a Professional Geoscientist in the discipline of geology, OR a Professional Engineer in the discipline of geological engineering.



Designs for reinforced or mechanically stabilized slopes, retaining walls and other geotechnical structures to reduce landslide hazards need to be done by a Professional Engineer.

- d. Access by Common Lot pursuant to Section 11 of BC Regulation 334/79 is being proposed. To consider approval under this regulation, the Approving Officer has concerns that the proposed subdivision is not consistent with good land use planning as the application has stated that further subdivision of the initial 4 lots into future commercial, 150 two-bedroom building strata cabins, 145 bare land strata lots and a four season mountain recreational lot open to the public will be pursued in phases.

Firstly, please demonstrate why a public road serving this development cannot be reasonably constructed to all proposed lots for the Approving Officer's consideration. See condition 2 for road design requirements.

Secondly, if the reasons provided for above are acceptable to the Approving Officer, please demonstrate how the common lot will function at full development build out in terms of how the road will be managed and maintained when there are hundreds of shareholders of the common lot as well as the general public utilizing the lot but not having an ownership share; how disputes will be resolved and how liability will be shared. It is recommended that the developer provide examples of developments in BC accessed via a common lot serving a variety of different types of development (including for public use) for consideration. The examples the Approving Officer has found for Mara Lake (EPP51587) and Panorama (NEP66884) do not appear to include public use and are nowhere near the scale of development proposed here.

Thirdly, the application indicates that future access to the site will be from the road adjacent to Kane Creek where a parking lot will be constructed on private land. From there a gondola will transport people to the development. The road near Kane Creek is under permit with a forestry company and has not been legally established as a Forest Service Road (FSR) established under the Forest Act where Section 15 of BC Regulation 334/79 is being contemplated. If this road is not an established FSR, another form of legal tenure, such as a Land Act Section 80 road will be required. It is unknown at this time how the original four lots with limited access via common lot (if approved) could be re subdivided using a different means of access as the ownership shares will be reassigned to the re-subdivided lots. The same issues presented above will remain. Please describe how the developer expects future subdivision with an alternate access could occur within the legislated framework available for subdivision considerations.

Further review of your application will not occur until we receive the above noted information.

We can provide the following conditions based on the information we have received. Please note these preliminary conditions are for guidance only and may be amended or expanded upon, depending on the additional information received and further review of the application. It is recommended that you do not invest in satisfying these conditions at this time:

1. Pursuant to BC Regulation 334/79, Section 11(2) requires all the lots that will access and have the benefit of the common lot shall be shown on the subdivision plan (and surveyed as a lot, not left as a remainder). Please submit a revised layout labeling the portion of the remainder that is located north of Highway 31A as Lot 4 and the area south of the highway shown as the remainder. An additional cheque for \$350 is also required as the proposal now includes 4 lots

and one remainder (not including the common lot for access).

2. The proposed access road will need to function like a standard public road and be accessible by the public and emergency vehicles in all weather conditions.

Proposed access road shall be designed from Highway 31A into the development clearly showing necessary and reasonable access to all 4 lots terminating in a 15 meter radius cul-de-sac or acceptable hammerhead. Prior to commencement of any works the applicant shall provide to the Development Officer and Provincial Approving Officer for written acceptance, engineered drawings of the proposed road. The drawings shall include a minimum of the plan view, vertical alignment, horizontal alignment, proposed utility locations, cross-section and drainage. The drawings shall be submitted in a manner and scale as per the Transportation Association of Canada (TAC) Geometric Design for Canadian Roads manual and Chapter 1400 of the BC Supplement to TAC Geometric Design Guide (April 2019) <https://www2.gov.bc.ca/assets/gov/driving-and-transportation/transportation-infrastructure/engineering-standards-and-guidelines/highway-design-and-survey/tac/tac-2019-supplement/bctac2019-chapter-1400.pdf>. The road shall be designed to a paved standard. Any deviation from these guidelines must be justified by the engineer and accepted.

3. A storm water management plan or a drainage plan prepared by a Professional Engineer registered in British Columbia and experienced in hydrology is required. The Professional Engineer shall follow the requirements for Land Development Drainage Design in Section 1010.03 of the B.C. Supplement to TAC Geometric Design Guide. An electronic copy of the report shall be submitted for review and acceptance prior to submission of the final plans. Any drainage infrastructure that will be maintained by the Ministry upon completion of the subdivision shall include climate change considerations within the design. The Professional Engineer shall follow Ministry Technical Circular T04/19: Resilient Infrastructure Engineering Design – Adaptation to the Impacts of Climate Change and Weather Extremes and a completed Design Criteria Sheet for Climate Change Resilience shall be included in the report. The Technical Circular can be found on our website at <https://www2.gov.bc.ca/assets/gov/driving-and-transportation/transportation-infrastructure/engineering-standards-and-guidelines/technical-circulars/2019/t04-19.pdf>

4. Pursuant to section 87 of the Land Title Act, the applicant shall provide with submission of final plans, written confirmation from the Regional District of Central Kootenay (RDCK) stating all the conditions of their bylaws, policies and applicable provisions of the Local Government Act have been addressed.

RDCK subdivision servicing bylaw requires proof of a year round source of water for each lot created. If ground water (well) or surface water (water license) are proposed the RDCK requires a restrictive covenant stating "No building until the owner has obtained information from the Interior Health Authority regarding the potability of a surface or ground water source". Please submit the same proof of water information provided to the RDCK with your final plans to the Ministry of Transportation and Infrastructure for review and filing.

NOTE: Shared systems will require a Construction and Operating Permit from the Interior Health Authority.

5. Highway 31A to be dedicated and established a minimum of fifteen (15) metres from existing mean centreline or three (3) metres beyond the extremities of cuts or fills, whichever is greater.

Written confirmation from a BCLS is required if this criteria is satisfied and sufficient right-of-way exists and no additional dedication is required.

6. If land is to be dedicated as Parkland per Section 510 of the Local Government Act, please submit a revised plan showing the parkland for review and comment.
7. An access permit will be required pursuant to Section 62 of the Transportation Act for the Common Lot intersection with Highway 31A (or for the intersection of Kane Creek Road). As part of this application process and due to the projected build out of the development, a traffic impact assessment is required. It is recommended to have your traffic engineer contact the Development Officer to arrange a scope meeting and terms of reference prior to initiating the traffic impact study.

Application for the permit can be found at the following site:

<http://www.th.gov.bc.ca/permits/Apply.asp>

8. Ministry of Transportation & Infrastructure file number (2019-06431) to be noted on the face of the plan of subdivision.
9. Provincial records indicate the proposed development is located within an area with only limited potential to contain archaeological sites protected by the Heritage Conservation Act.

However, the applicant should be aware that there is still a chance that the lot may contain previously unrecorded archaeological material that is protected under the Heritage Conservation Act. This would most likely be indicated by the presence of areas of dark-stained soils containing conspicuous amounts of fire-stained or fire-broken rock, artifacts such as arrowheads and other stone tools, or even buried human remains. If such material is encountered during demolition or construction, a Heritage Conservation Act Permit may be needed before further development is undertaken. This may involve the need to hire a qualified archaeologist to monitor the work.

Please contact the Archaeology Branch immediately at (250) 953-3334 if archaeological site deposits are encountered on the subject property.

10. The property being subdivided is within a wildfire interface area and may be subject to a hazard of wildfire. It is therefore recommended that the owner consult the Firesmart BC website and review the Firesmart Manual for information about reducing the risk, or contact the Ministry of Forests, Lands & Natural Resource Operations for more information. Appropriate protection measures should be implemented and maintained, and property purchasers should be advised of the risk.
11. This subdivision application is subject to First Nations consultation. The COVID-19 emergency presents an unprecedented challenge for governments and First Nations, including the ability to respond and process applications. As such, we may need to extend timelines to allow First Nations adequate time to respond.

12. On June 8, 2020, the PAO became aware of environmental and wildlife reports submitted as part of the Zinton Expression of Interest for the portion of the development proposed for Crown Land. The reports submitted by the Valhalla Wilderness Society to the Mountain Resorts Branch contain concerns about the impact of wildlife and the environment within the privately owned portion of the development as well as the Crown land portion.

The developer is welcome to submit its own environmental report to the Approving Officer for consideration.

In the meantime, our office has sent a referral to the Ministry of Forests, Lands and Natural Resource Operations to gather any comments the Environmental Protection Group may have on this proposal.

Further considerations pursuant to the Land Title Act, Section 86(1)(c)(vi) may be forthcoming when additional information is received.

Please note that addressing all the above will not automatically bring approval. Also, at any time changes in acts, regulations, bylaws or policy may make this review invalid.

If you have any questions or wish to set up an appointment, please do not hesitate to call Christine Nichol at (250) 354-6380. Please quote file number 2019-06431 when contacting this office.

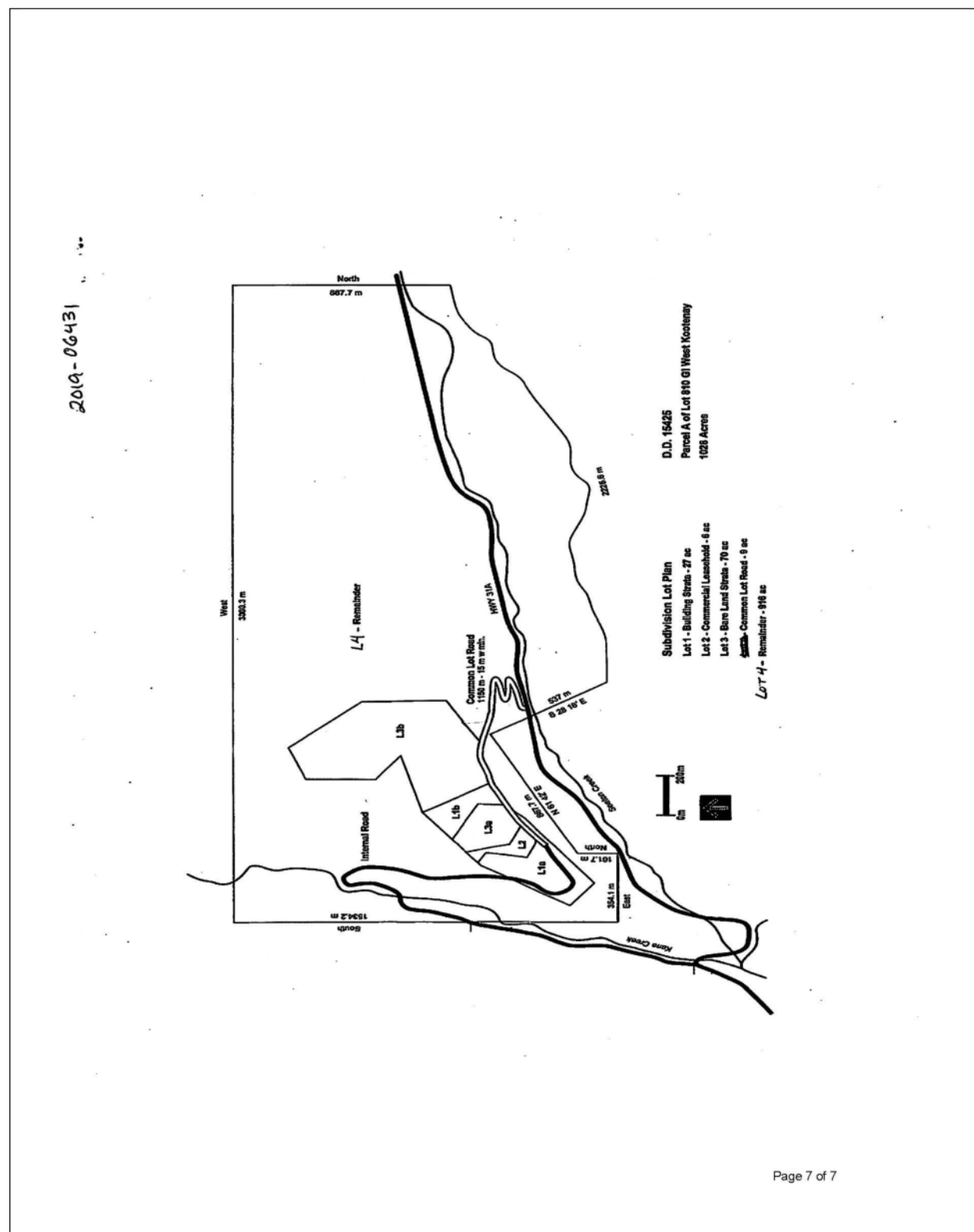
Signed on behalf of Provincial Approving Officer by:



Christine Nichol  
Development Services Officer

Attachment: Layout

cc: Regional District of Central Kootenay



**Appendix B – MoTI West Kootenay District Response to Crown Referral , Zincton Farms EOI**

MoTI EOI Crown Referral Response (2020-02480)

Response June 18: The Zincton Mountain Village proposal is a major project under the purview of the Ministry of Transportation and Infrastructure, West Kootenay District. We have a proposed private land subdivision from the developer in our workflow (MoTI file 2019-06413) that would become the core of the mountain resort development. The project has been issued an early list of work to be completed before the application will be considered; some but not all of the issues include: Access from a controlled access highway to be professionally assessed by Traffic Impact Assessment. Road construction to paved standard to be professionally designed by an EGBC engineer. Avalanche start zones in adjacent Crown lands that are managed by MoTI Avalanche professionals to be professionally assessed and public use management plans proposed. Drainage plan to be professionally designed. Environmental values to be assessed and impacts to be addressed. There are other items that are specific to private land subdivision that are also part of the preliminary letter. Completion of professional reports does not automatically assure acceptance by Ministry of Transportation. The Ministry is undertaking consultation with First Nations and awaits their responses; these are not on a strict timeline due to Covid 19, but we hope to have this communication established by the end of summer. Please stay connected with our Development Services group as this project is assessed, and we are happy to meet and be available through the process to ensure protection of the public interest. Project documents have not been uploaded to this referral response; let us know what information would be helpful in your review. Christine Nichol - Development Services Officer, West Kootenay District Ministry of Transportation and Infrastructure