

Request for Proposals (RFP) Professional Land Surveying Services Boundary Monument Inspection – Tent Mountain Ridge

May 31, 2023

1.0 Introduction

On behalf of the Alberta–British Columbia Boundary Commission, the Land Title and Survey Authority of British Columbia (“LTSA”) is accepting proposals from professional land surveyors to inspect monuments marking the boundary between Alberta and British Columbia at Tent Mountain Ridge, located about 24 km southeast of Sparwood, BC and about 17 km southwest of Coleman, AB. The location straddles Tent Mountain along a ridge between Tent Mountain Pass and Ptolemy Pass. This work is being conducted under the authority of the Alberta-British Columbia Boundary Commission.

This portion of the interprovincial boundary was originally surveyed in 1914 by R.W. Cautley, DLS and later re-surveyed in 1953 by Emerson, BCLS, DLS, in 1974 by Mortimer, BCLS, in 1978 by Asher, BCLS, and again in 1981 by Robinson, CLS, BCLS and Engler, CLS, ALS, BCLS. The purpose of this project is to once again investigate and report on the condition of monuments 81F through 89F or the location of the former monuments that have been removed due to mining activities occurring in this area. The Boundary Commission will use this investigation report to determine how best to restore monuments in 2024 in order to preserve the physical definition of this portion of the interprovincial boundary.

2.0 Background of the LTSA

The LTSA is a statutory corporation responsible for administering British Columbia’s land title and survey systems. These systems provide the foundation for all real property business and ownership in British Columbia. The LTSA has a close relationship with the Provincial Government. The Province establishes the mandate, responsibilities and performance standards of the LTSA in the *Land Title and Survey Authority Act* and the LTSA’s Operating Agreement with the Province.

The Surveyor General of British Columbia is an employee of the LTSA and has been appointed by the Province of BC as Boundary Commissioner pursuant to section 3 of the *Boundary Act*. In cooperation with the boundary commissioners for Alberta and Canada, the Surveyor General of British Columbia has the authority to establish, restore, and maintain survey monuments and other physical evidence of the interprovincial boundary.

3.0 Background of the Alberta-British Columbia Boundary Commission

The Alberta-British Columbia Boundary Commission is comprised of the Surveyor General of Canada Lands, the Director of Surveys of Alberta, and the Surveyor General of British Columbia. The commission meets semi-annually to carry out its responsibilities, which include: maintaining the records of the commission, settling problems or disputes referred to the Commissioners concerning the interprovincial boundary, restoring and maintaining boundary monuments, and managing surveys of the interprovincial boundary.

4.0 Overview of Requirements

The work to be done at Tent Mountain Ridge includes two phases. However, only the Phase 1 work is covered by this RFP.

Under Phase 1, the LTSA is seeking a contractor to inspect, geo-reference and document the status of interprovincial boundary monuments 81F through 89F in accordance with the Statement of Work below.

Phase 1 of the project is expected to take place during summer/fall 2023 and involves the inspection and geo-referencing of all boundary monuments and the preparation of a survey report outlining their condition.

Phase 2 is tentatively scheduled for summer 2024 and includes restoring or re-establishing and further geo-referencing boundary monuments as appropriate, preparing a survey report, and preparing official field notes in plan form for the survey. The number of monuments to be included in Phase 2 will ultimately be determined by the Alberta-British Columbia Boundary Commission upon review of the Phase 1 inspection survey report and available funding for the project.

In responding to this request, the LTSA requests the following information:

- 4.1 Identify the land surveyor in your company who is authorized to practice in Alberta or British Columbia (a dual commission is not required), and who will have professional responsibility for this project if you are successful in your bid;
- 4.2 For reference purposes, provide the names and contact information for three organizations to which your company presently provides, or has recently provided, professional land surveying services; and
- 4.3 Set forth your proposal for Phase 1, providing a **fixed fee** to complete the inspection and geo-referencing of all monuments and prepare the survey report.

Evaluation of proposals will be conducted by the Alberta-British Columbia Boundary Commission. Consideration will be given to the fixed fee quoted in 4.3.

5.0 Information Provided

The following information is provided by the LTSA to assist proponents in identifying the scope of work and format of the deliverables, many of these items are available in full from the Canada Lands Survey Records system directly. The information listed here is available in a ZIP file to be downloaded for reference purposes.

- 5.1 Tent Mtn Ridge Monument List

- 5.2 Monument Photos
- 5.3 AB/BC Boundary Atlas Sheets (original and 2nd editions) 4 and 4A – from 34895CLSRBC
- 5.4 Relevant pages from Cautley 1914 Field Notes – FB14707CLSRBC and FB14708CLSRBC
- 5.5 Select Pages from 34893CLSRBC-Part I-1913 to 1916-Report
- 5.6 Select Pages from FB23465CLSRAB-Field Notes-Emerson
- 5.7 Plan 41596CLSRAB-Traverse 81F-89F
- 5.8 Plan 41597CLSRAB-Traverse 81F-89F
- 5.9 Plan 59368CLSRBC-Mortimer
- 5.10 Plan 64811CLSRBC-Asher
- 5.11 Report FB33262CLSRBC-Robinson Engler
- 5.12 Plan 68245CLSRBC-Robinson Engler
- 5.13 Review FB33315CLSRBC-Blackie
- 5.14 ParcelMap BC Prints at Tent Mountain Ridge
- 5.15 Google Earth-Tent Mountain Ridge
- 5.16 KMZ Points file-Tent Mountain Ridge
- 5.17 Original Boundary Monument Specifications – Concrete Monolith and Brass Bolt in Cairn
- 5.18 **Example Report on Monument Condition Investigation**
Tent Mountain Pass – FB43039CLSRCA

Provided for information only as an example of the work required in Phase 2 of a boundary project, not included in the Inspection (Phase 1).

- 5.19 **Example Report on Monument Restoration**
Yellowhead Pass - FB42515CLSRCA
- 5.20 **Example Official Field Notes in Plan Form**
Yellowhead Pass – 108250CLSRCA

Note: In order to determine appropriate access routes and access methods for Tent Mountain Ridge it is recommended that proponents consult the modern Inspection and Restoration surveys completed of Ptolemy and Tent Mountain passes which terminated at 91F and 79F respectively. These are available from the CLSR system at 109923CLSRBC, FB43395CLSRBC, FB43038CLSRCA, 109924CLSRBC, FB43396CLSRBC and FB43039CLSRCA and clearly explained the current available and possible access to this area of the BC Alberta Border.

6.0 Statement of Work

General Requirements

- 6.1 The survey and survey report are to be in accordance with the *National Standards for the Survey of Canada Lands* and the additional specific instructions contained herein.
- 6.2 Monument locations 81F thru 89F at Tent Mountain Ridge are to be inspected and geo-referenced. The types of Monuments 81F through 89F are as noted in the newest entries in item 5.1 above.
- 6.3 A survey report is to be prepared and certified correct. The survey report is to include the following:
 - 6.3.1 For each monument found, at minimum three photographs: two of the sides from different viewpoints indicating direction of view, and one looking down at the top of the monument.
 - 6.3.2 For rock cairn and brass bolt type monuments, the cairn must be dismantled enough to inspect and photograph the brass bolt within and the cairn must then be rebuilt in place to equal or larger size.
 - 6.3.3 A written description of the condition of each monument (including an explanation of any monument that has been lost).
 - 6.3.4 A description of all evidence found and placed including monument markings and ancillary evidence.
 - 6.3.5 For each monument found, adjusted positions (geographical coordinates and UTM Zone 11 coordinates) referenced to NAD83(CSRS) Epoch 2002, and ellipsoidal heights. Geo-referencing may be done by an autonomous hand-held receiver, to an accuracy of a few metres, for those monuments that cannot be observed directly with geodetic quality observations due to trees or other overhead obstructions.
 - 6.3.6 An explanation of all symbols and abbreviations used in the report and included sketches.
 - 6.3.7 Identification of circumstances where these instructions could not be complied with and the resulting action taken.
 - 6.3.8 Any observed activity which might result in monument destruction in the future.
 - 6.3.9 Indication of possible industrial/mining/forestry activity between and at monument locations. This would help to identify locations that may warrant the installation of boundary location signs, during the restoration survey, along the boundary between monumented points to assist the public and industrial users to more easily identify the boundary location on the ground.
 - 6.3.10 Any useful information regarding access, or impediments to access, to the monuments.
 - 6.3.11 Any contact made with local tenure holders or provincial staff, and the reason for contact.

- 6.3.12 The report must indicate whether direct observations of the monuments with survey-grade GNSS receivers in Phase 2 is likely, or whether traversing will be required.

Location Specific Instructions

- 6.4 **Monument 81F** was last visited in 2018 separately by Mark Derosher, ALS, CLS while hiking and Luke Dixon, ALS while working on the adjacent inspection survey and was not located. To ensure that this monument is truly lost a more extensive search based on accurate calculated location relative to the modern 79F coordinates from the Global Raymac restoration survey of 79F should be undertaken. The location should be thoroughly documented to indicate a suitable restoration method if the monument is found to be lost.
- 6.5 **Monument 83F** should be searched for and documented according to the general requirements above. As of 1981 this was found and it is hoped that it is still in place.
- 6.6 **Monument 85F** was reset in 1981 and this monument should be searched for and documented according to the general requirements above.
- 6.7 The location of the original **87F** is known to now land in a deep depression containing water created by the mining activities of the past. At this location an investigation and documentation of the current conditions and a suitable location for a possible witness monument should be considered the task assigned.
- 6.8 The location of the original **89F** is known to have been altered by the mining activities of the past and the monument lost. At this location an investigation and documentation of the current conditions and a suitable location for a possible witness monument should be considered the task assigned.

7.0 Request for Proposals Process

The deadline for submissions is **Friday, June 23rd, 2023 at 4:00pm PDT**. All enquiries should be directed to the contact person listed in section 9.0 "Request for Proposal Submission Details".

The estimated time frames for this project are as follows:

Activity	Date(s)
Request for Proposals issue date	May 31, 2023
Quotation submission closing date	June 23, 2023
Complete review and evaluation of proposals by the AB-BC Boundary Commission	by July 3, 2023
Successful proponent enters into contract with the LTSA	by July 11, 2023
Deadline for submission of preliminary survey inspection report	August 25, 2023
Deadline for submission of final survey inspection report incorporating feedback from the Commission	September 21, 2023

8.0 Evaluation of Proposals

Further consideration by the Alberta-British Columbia Boundary Commission will only be given to proposals that meet the following Mandatory Criteria:

Mandatory Criteria
Proposal received at the Closing Location before the Closing Date
Complete proposal received in PDF format, and in English
Proposal identifies a land surveyor who is authorized to practice in Alberta or British Columbia and who will have professional responsibility for the project

Proposals meeting the Mandatory Criteria above will be further assessed against the following Desirable Criteria:

Desirable Criteria	Weighting
Understanding of Project Requirements	10
Approach and Work Plan	30
Communications	10
Demonstrated Experience and Capability	10
Safety Plan	10
Total Phase One Fixed Fee	30
Total Points	100

9.0 Request for Proposals Submission Details

Requests for additional information - please email surveyor.general@ltsa.ca, and include in the subject line, *Attention: Peter Haas – Tent Mountain Ridge Boundary Inspection Question*

Closing Location and Time:

The Land Title and Survey Authority of British Columbia
Attention: Peter Haas – Tent Mountain Boundary Inspection

Proposals to be received in PDF format, by email at surveyor.general@ltsa.ca, by no later than **Friday, June 23rd, 2023 at 4:00pm PDT.**