

PROPOSAL FOR BRIDGE INSPECTION SERVICES

Submitted by



KEYSTONE
INFRASTRUCTURE LTD.

Submitted to

CITY OF RIVERBEND

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1.0 Executive Summary

Keystone Infrastructure Ltd. is pleased to submit this proposal to provide bridge inspection services for the City of Riverbend. With nearly two decades of experience in structural inspections, our firm brings a deep understanding of regulatory standards, field methodology, and reporting requirements that ensure accuracy, safety, and actionable recommendations.

To support specialized fieldwork and additional capacity, we are pleased to partner with **Ridge Technical Services Ltd.** as a subconsultant. Ridge brings extensive experience in bridge inspections throughout Alberta and British Columbia and has provided key support on several recent municipal assignments.

This project includes the inspection and condition rating of 14 municipal bridge structures in accordance with CSA S6 and Alberta's Bridge Inspection and Maintenance System (BIM). Our proposed team includes licensed structural engineers and experienced technicians from both firms, who together have delivered over 350 bridge inspections across Western Canada.

2.0 Company Overview



Keystone Infrastructure Ltd. is a multidisciplinary civil and structural engineering firm based in Calgary, Alberta. Founded in 2007, we have grown into a team of over 40 professionals dedicated to transportation

infrastructure design, inspection, and rehabilitation.

We are licensed to practice in Alberta and Saskatchewan and maintain all necessary WCB coverage and COR safety certification. Our core services include:

- Bridge and culvert inspections (BIM and NBIS formats)
- Load rating and rehabilitation design
- Asset management planning
- Structural evaluations post-flood or collision

Our strength lies in combining in-depth technical knowledge with hands-on field experience and fast, clear reporting.

3.0 Understanding of the Project

The City of Riverbend is seeking professional bridge inspection services for a portfolio of 14 bridge structures. Based on the RFP documents and our prior experience, we understand the scope to include:

- Field inspections (visual and tactile) of all structures
- Identification and photographic documentation of deficiencies
- Condition coding using the Alberta BIM manual
- Prioritization of recommended maintenance or repair actions
- Preparation and submission of draft and final reports

We understand that access to some structures may require temporary lane closures or confined space entry protocols. Our team is fully prepared with the equipment and certifications required for these conditions.

4.0 Project Team

4.1 Keystone Infrastructure Ltd.

Our proposed project team is composed of seasoned professionals with complementary experience in structural inspection, documentation, and quality assurance:



David Lin, P.Eng, MBA – Project Manager

David is a Professional Engineer with over 24 years of experience in bridge inspection, assessment, and design across Western Canada. He has led multidisciplinary teams on numerous municipal and provincial bridge inspection programs, overseeing the planning, coordination, and execution of both routine and detailed inspections.

David brings strong technical expertise in load rating analysis, structural evaluation, and rehabilitation design, complemented by his business management background (MBA). His leadership ensures that all deliverables are completed on schedule, within budget, and in full compliance with client and regulatory standards. David's attention to detail and collaborative approach make him a trusted liaison between clients, contractors, and regulatory agencies.



Arman Chen, EIT – Field Inspector

Arman is an Engineer-in-Training with 4 years of experience in bridge inspection reporting and field data collection. He is confined space certified and has conducted inspections for various bridge types, including concrete culverts, timber structures, and steel girder bridges.

Arman is proficient in visual condition assessments, photographic documentation, and report preparation using client-specified inspection software and GIS platforms. His hands-on approach and technical accuracy contribute to high-quality inspection deliverables and reliable

data interpretation in support of load rating analysis.



Leah Chow, CET – Field Inspector

Leah is a Certified Engineering Technologist with extensive experience supporting bridge inspection programs through digital photo tagging, field measurements, and CAD drafting. She is skilled in AutoCAD, MicroStation, and image management systems, ensuring that all field data is clearly organized and presented for efficient report production.

Leah plays a key role in coordinating inspection logistics and maintaining data integrity between field and office teams. Her strong technical acumen

and attention to detail ensure that visual records and as-built documentation meet the highest quality standards.

All team members will be supported by our internal Quality Control Officer and administrative staff to ensure timely, high-quality deliverables.

4.2 Ridge Technical Services Ltd. (Subconsultant)



Marta Singh, P.Eng. – Senior Bridge Engineer

Marta is a Professional Engineer with over 15 years of experience specializing in the inspection, evaluation, and rehabilitation design of bridge structures throughout Canada. Her expertise encompasses emergency response inspections, detailed condition assessments, and confined space evaluations for a wide range of bridge types including steel truss, concrete girder, and culvert structures.

Marta has authored and reviewed more than 200 bridge inspection reports prepared in accordance with OSIM and provincial inspection standards.



Melanie Cho, E.I.T. – Field Inspector

Ms. Cho is an Engineer-in-Training with 4 years of experience in structural inspection, data collection, and field coordination. She has participated in numerous bridge and culvert inspection programs for municipal and provincial clients, supporting both routine and detailed assessments.

All team members will be supported by our internal Quality Control Officer and administrative staff to ensure timely, high-quality deliverables.

5.0 Approach and Methodology

Our inspection approach follows the principles of safety, thoroughness, and actionable insight. Key steps include:

1. **Pre-Inspection Planning:**
Review existing drawings, previous inspection reports, and coordinate access with municipal crews.
 2. **Field Inspection:**
Perform visual and tactile inspections of substructure, superstructure, and deck components. We document element conditions and note signs of deterioration (e.g., spalling, corrosion, cracking).
 3. **Photo Documentation:**
Each defect is photographed, geotagged, and referenced within the report using a digital index.
 4. **Reporting:**
Reports are prepared using the Alberta BIM format, including condition ratings, defect maps, photo logs, and maintenance priorities.
 5. **Review and Submission:**
All reports undergo internal QA review before submission of drafts and final versions to the City.
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6.0 Relevant Experience

Keystone Infrastructure has completed more than 350 bridge inspections, including:

- **City of Airdrie** – 18 structures inspected in 2023 with condition assessments and rehabilitation priority matrix.



Keystone Infrastructure Ltd. was retained by the City of Airdrie to complete the 2023 bridge inspection program, which included the **inspection and condition assessment of 18 municipal structures** ranging from short-span culverts to multi-span concrete girder bridges. The project scope encompassed detailed visual inspections, defect identification, and photographic documentation in accordance with the **Alberta Bridge Inspection and Maintenance (BIM)**

Manual. Each structure was evaluated using standardized condition codes, ensuring compatibility with the City's asset management system.

The project also involved developing a **rehabilitation priority matrix**, which ranked structures based on condition, risk, and cost factors. This deliverable provided City staff with a clear and actionable plan for short- and long-term maintenance. Keystone's field and office teams worked collaboratively to complete the project within the designated schedule, delivering **accurate, organized, and ready-to-use inspection reports** that continue to inform the City's infrastructure planning decisions.

- **Town of Cochrane** – Emergency post-flood inspection of 5 pedestrian bridges in 2022.



Following a significant flood event in 2022, the Town of Cochrane engaged Keystone Infrastructure Ltd. to conduct **emergency structural assessments of five pedestrian bridges** affected by high water levels and debris impact. The scope included site visits to evaluate foundation exposure, scour, superstructure deformation, and damage to ancillary components such as handrails and deck planking.

Working under time-sensitive conditions, Keystone coordinated with Town staff to provide **same-day inspection summaries and risk classifications**, allowing for

immediate decision-making on closures and repairs. A detailed follow-up report included structural condition ratings, photographic documentation, and recommendations for remedial measures. The project demonstrated Keystone’s ability to **mobilize quickly and deliver clear, concise engineering assessments** under challenging field conditions.

- **Alberta Transportation** – Routine inspections on Highways 1, 3, and 22 for various structures.



Keystone Infrastructure Ltd. has provided **routine bridge inspection services** for Alberta Transportation across multiple highway corridors, including **Highways 1, 3, and 22**. The assignments have included a wide variety of bridge types—reinforced concrete, steel girder, and precast structures—spanning both rural and high-traffic routes. Fieldwork has been conducted in accordance with provincial inspection standards and the

Bridge Information Management System (BIM) protocols.

Our team has developed a reputation for delivering **high-quality, standardized inspection reports** that integrate photographic documentation, defect mapping, and precise condition coding. The work has contributed to Alberta Transportation’s ongoing asset management program by maintaining up-to-date records and identifying structures requiring rehabilitation. Through this project, Keystone continues to support the Province’s goal of maintaining a **safe, reliable, and sustainable transportation network**.

We have consistently delivered projects on time and on budget, with repeat contracts issued due to our clarity in reporting and responsiveness.

7.0 Project Schedule

We propose the following schedule to complete all work by the City’s requested deadline of October 30, 2025:

Task	Date Range
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Contract Award & Kickoff	August 12, 2025
Pre-Inspection Coordination	August 13–16, 2025
Field Inspections	August 19 – September 13, 2025
Draft Reports	September 27, 2025
Final Reports Submission	October 10, 2025

We are flexible and can adjust this schedule based on City staff or utility availability.

8.0 Fee Structure

We propose a **fixed, all-inclusive fee** of **\$24,800 CAD**, which covers:

- Project management and planning
- Field inspection labor and travel
- Reporting and quality control
- Photography and mapping
- Any disbursements (meals, fuel, mileage, printing)

No additional charges will be billed without prior written approval.

9.0 Health & Safety

Keystone Infrastructure maintains a COR certification and comprehensive safety program. All personnel have completed:

- WHMIS 2015
- Fall Protection and Confined Space Training

- Alberta Roadside Work Zone Safety (Flagging and Traffic Control)

Safety meetings will be held before each inspection day, and job hazard assessments will be submitted upon request.

10.0 Quality Assurance

Our QA/QC process includes:

- A senior engineer (not involved in fieldwork) reviewing all reports.
- Automated data validation using inspection software to ensure format compliance.
- A three-tier document control process before submission.

This ensures all deliverables meet municipal and provincial standards without rework.

11.0 Contact Information

David Lin, P.Eng.

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12.0 Subconsultant Corporate Profile



Ridge Technical Services Ltd.

Ridge Technical Services is a structural engineering consultancy specializing in transportation infrastructure inspection and asset evaluation. Founded in 2013 and based in Edmonton, Alberta,

Ridge provides structural engineering services with a focus on municipal and highway structures.

Core Services Include:

- Bridge and culvert inspections
- Confined space inspections
- Load evaluations and risk assessments
- Drafting and reporting for BIM and NBIS standards

Ridge Technical Services is a COR-certified firm with current WCB coverage in Alberta and British Columbia. Their team includes engineers and field staff certified in fall protection, confined space entry, and traffic accommodation.