Township of Centre Wellington

Bridge and Transportation Network Study

Bridges 21-WG, 29-WG & 30-WG

Public Open House

June 10, 2025

Centre Wellington Community Sportsplex - Unity Hall

The Study

Reasoning:

- Deteriorating state of 3 bridges has resulted in closures and load limitations
- Closures / load limits of multiple bridges within localized area resulting in impacts to road network and community connectivity

Purpose:

- Evaluate role of each structure within the transportation network & community
- Identify whether there is a need for improvements at the sites
- Evaluate opportunities to provide safe and reliable bridge crossings suitable for current and future uses of the study area

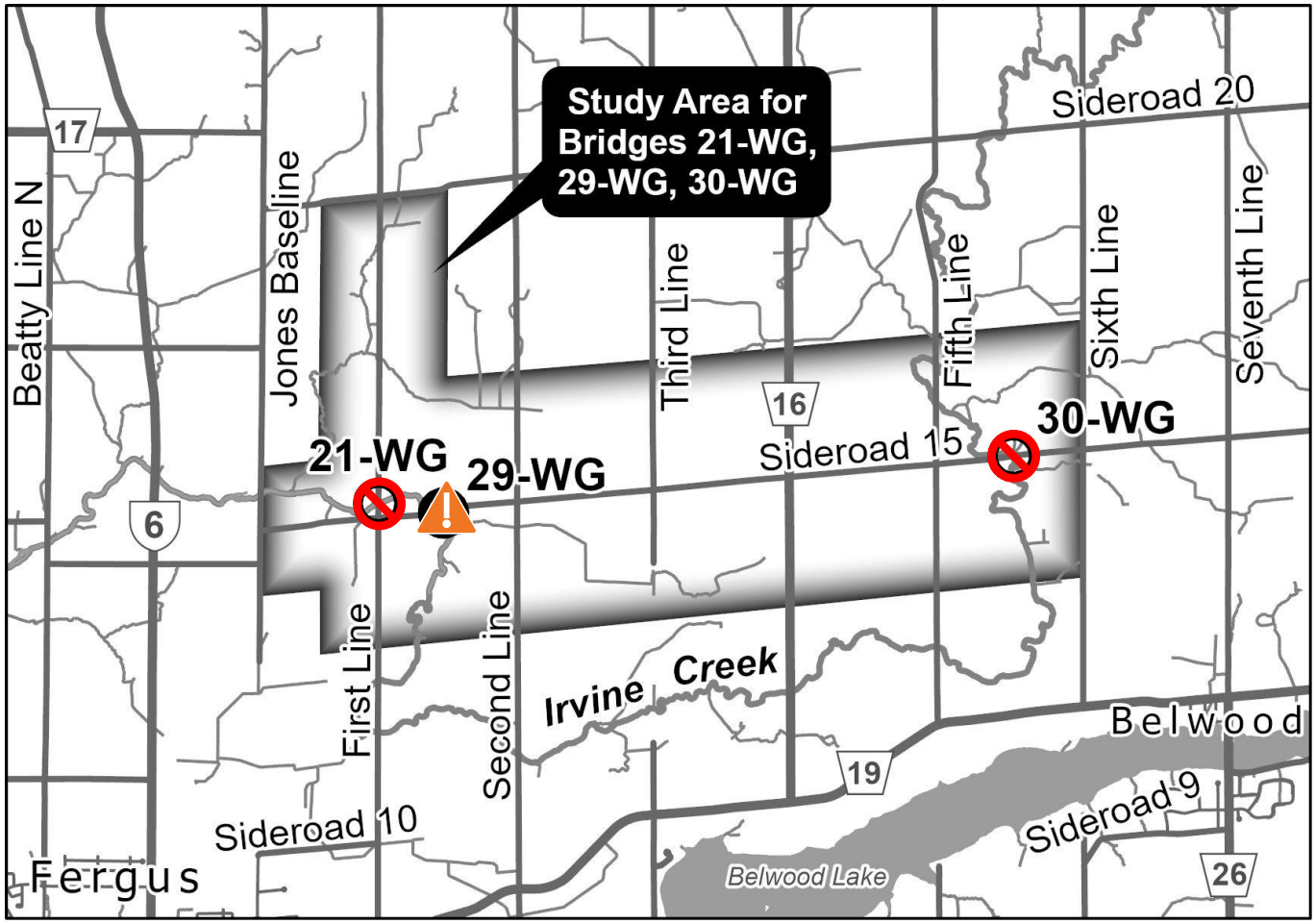
Objectives:

- Engage with Community to gain increased understanding of local needs
- Gather background data to allow for meaningful, systematic review & evaluation
- Consider impacts of the entire study, not just on an individual site basis
- Determine preliminary conceptual design for preferred solution at each site

Results of this study will guide Township's capital planning for the future of the bridges.

Study Area

- Located in Ward 5
- Previously West-Garafraxa
- Rural Area located Northeast of Fergus
- Primarily Agricultural & Residential land use.
- Sideroad 15 is nearest alternative to Wellington Road 19
- Bridges cross the Irvine Creek within a Regulated Area of the Grand River Conservation Authority
- Located within Treaty lands of Indigenous Communities



Study Process

WE ARE HERE



The intent of today's Public Open House is to consult with the public and provide an opportunity for input on the Problems & Opportunities that should be addressed with this study.

An additional Public Open House will be held (Fall 2025), following evaluation of alternatives, to present the preliminary preferred alternative for further public comment

Bridge 21-WG

- First Line, immediately north of Sideroad 15
- Constructed circa 1929
- Closure Status: Closed to Traffic in 2024
- Structure Type: Cast-in-Place Concrete Bowstring Arch


Concrete Bowstring Arch


Narrow Bridge with Height Restrictions


Severe Deterioration of Concrete Tension Tie and Rebar Corrosion


Deteriorating Concrete in Arch

- Closure was recommended due to the state of deterioration of the main load carrying members, whose failure could lead to collapse

Bridge 29-WG

- Sideroad 15, approximately 600m northeast of First Line
- Constructed circa 1928
- Load Limited to 5 tonnes
- Structure Type: Cast-in-Place Concrete Bowstring Arch


Concrete Bowstring Arch



Narrow Bridge with Height Restrictions


Disintegrating Concrete in Abutments


Severe Deterioration of Concrete & Rebar Corrosion in Tension Tie


Exposed corroded Rebar in Arch

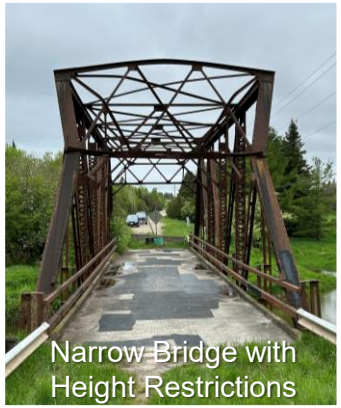
- Current load limitation was recommended based on significant section loss noted in reinforcing steel in the main structural elements including the concrete tension tie

Bridge 30-WG

- First Line, mid-way between 5 Line and 6 Line
- Constructed circa 1942
- Closure Status: Closed to Traffic in 2010
- Structure Type: Steel Through Truss











- Closure was recommended due to damaged main truss elements and elements with significant section loss (perforations) which greatly reduce their capacity

Problem / Opportunities

Alternatives will be defined and evaluated based on their ability to address the problems and opportunities associated with this study.



Help define the problems and opportunities of this study by providing your. You may want to consider the following:

What capacity is needed for your use of this bridge?

Have you historically noticed flooding in this area?

Do you enjoy the decreased traffic related to the bridge closure?

Do you or your family have ties to the heritage of this bridge?

How would you be affected if the bridge were to be permanently closed?

Problems

- Increased commute times
- Limited accessibility for farm equipment / hauling
- Impacts to Emergency Response times
- Ineffective routes for service vehicles (buses, deliveries, waste pick-up, ploughs, etc.)
- Disconnect for travel between properties within neighbourhood
- Safety Risk of potential bridge failure due to deteriorated condition
- Environmental / ecological impacts would occur if bridge collapses

Opportunities

- Consider use of lower cost bridge alternatives to reduce overall capital expenditures
- Provide widened bridge platform to allow for passage of wide loads / farming equipment
- Reduce potential of flooding / overtopping of roads by increasing hydraulic capacity

Add your sticky notes here!

Please also add your comments to the aerial map regarding your property usage, local areas of interest to the community, and how you utilize the local roads and these bridges!

PLACEHOLDER FOR AERIAL IMAGE MAP OF STUDY AREA WITH PARCEL BOUNDARIES SHOWN

Alternative Solutions

The following preliminary Alternative Solutions have been developed and will be evaluated for each site after appropriate studies & consultations have been complete:

Alternative 1: Do Nothing
Leave the existing structures in their current deteriorating state and continue to restrict public use.

Alternative 2: Permanent Removal of Structure
Removal of existing bridge structure resulting in no watercourse crossing at the current location moving forward

Alternative 3: Rehabilitate Existing Structure
Complete repairs to the existing structure to meet engineering and public safety standards and re-open the structure, if achievable. Likely to still require load limitations.

Alternative 4: Replacement of Structure
Construction of a new bridge. Consideration will be given to full capacity two-lane bridge replacements, as well as low-volume bridges with limited load or traffic capacities.

The study will also evaluate several scenarios with different combinations of structures being closed (Alternative 1 or 2) or opened (Alternative 3 or 4) to assess the preferred alternatives from a transportation perspective.

Evaluation Criteria

The alternatives being assessed will be evaluated based on a series of considerations including, but not limited to:



Technical Environment

- Transportation Connectivity
- Bridge Capacity
- Hydraulic Performance
- Design Standards



Natural Environment

- Environmentally Sensitive Areas
- Wildlife Habitats
- Fisheries/Aquatic Habitat
- Species at Risk



Social & Cultural Environment

- Socio-Economic Conditions
- Archaeological, Built & Cultural Heritage
- Community Input



Economic Environment

- Capital Costs
- Operational and Maintenance Costs

Supporting Studies

Transportation Connectivity Study	▪ Cross-Community Connectivity Study ▪ Emergency Response Time Analysis
Structural Assessment	▪ Physical Condition Review ▪ Rehabilitation Feasibility Study ▪ Replacement Structure Options (geometry, bridge type, etc.)
Hydraulic Analysis	▪ Review conveyance capacity and flood risk under rainfall events ▪ Analysis of replacement structure geometry to meet standards
Natural Environment	▪ Terrestrial Ecology Review ▪ Aquatic Ecology Review ▪ Species at Risk Review
Social Environment	▪ Consultations with Public to determine impacts ▪ Legal Survey for Property Impacts ▪ Land Use and Transportation Master Plan Review
Cultural Heritage Investigations	▪ Cultural Heritage Evaluation report and Impact Assessment ▪ Archaeological studies
Economic Environment	▪ Capital Cost Estimation ▪ Lifecycle Cost Analysis

Next Steps

Today (Open House #1)

- Public to provide comments to the Project Team:
  - How will the bridge opening or permanent closure affect your life, property, business, etc.
  - Identify interests, preferences and recommendations for the bridges

Summer 2025

- Complete Field Studies and Additional Investigations
- Consultation with Agencies, Indigenous Communities, and other interested parties
- Evaluate Alternatives

Fall 2025

- Determine Preliminary Preferred Alternative
- **Public Open House #2** to share evaluation & Preferred Alternative
- Confirm / adjust Preferred Alternative based on feedback

Winter 2025/2026

- Document summarizing study available for Public's review and comment
- Study Completion

Ongoing Public Consultation

Additional Notices will be sent prior to the next Public Consultation meeting

We want to hear from you!

Invitation for Participation

You are invited to provide comments by completing a comment sheet and submitting it to the comment box today or emailing one of the Project Team members below by July 10th, 2025:

Adam Dickieson
Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square
Elora, ON N0B 1S0
Tel: 519-846-9691 ext. 355
adickieson@centrewellington.ca

Andrew Dawson, P.Eng
Consultant Project Manager
R. J. Burnside and Associates Limited
292 Speedvale Avenue West, Unit 20
Guelph, ON N1H 1C4
Tel: 705-797-4310
andrew.dawson@rjburnside.com

The display boards, a narrated slideshow and all project updates will be available on the Township's project webpage after the open house:

www.connectcw.ca/CW-3Bridge-Study