Meadowlily Footbridge Rehabilitation

Municipal Class EA

Civic Works Committee
December 3, 2012
Background

• The existing structure is a 3 span steel truss bridge over the south branch of the Thames River, built in 1910.

• It is one of the few surviving truss bridges in the London area.

• A 2009 Council resolution recognized the bridge as an important cultural heritage resource that should be protected under Part IV of the Ontario Heritage Act and be recognized in perpetuity as a footbridge.

• A 2011 report confirmed the cultural significance and identified rehabilitation as the best possible solution for the bridge (to be confirmed through EA process).

• On July 24, 2012, City Council approved a By-Law to designate the bridge under Part IV of the Ontario Heritage Act.
Issues To Be Addressed

- There is no significant need or benefit in opening the bridge to vehicles.
- The bridge does not need to be designed to carry vehicle traffic or other utilities other than those required for snow plowing and maintenance.
- The design should consider some form of physical access control to ensure usage is limited to pedestrians and bicycles.
- The site is a significant destination for pedestrians and cyclists, therefore lighting and signage should be considered.
- Rehabilitation should include deck replacement, strengthening the existing members and replacing some members, installation of new railings and recoating of the superstructure (trusses).
- Rehabilitation measures should be implemented such that no in-water work is required. All work should be contained in the City’s right-of-way limits where possible.
- Improvements to approach roads at both ends of the bridge should be considered.
- Crime Prevention Through Environmental Design (CPTED) principles should be considered where possible to improve safety and reduce vandalism.
- Construction to be completed in 2013.
Alternative Solutions Considered

The following alternative solutions were identified and assessed:

**DO NOTHING**
- This alternative provides a base to which the other alternatives can be compared.
- No measures to improve the condition of the structure are considered and the bridge remains in its present condition.

**REHABILITATE THE EXISTING BRIDGE**
- Rehabilitate the bridge using either historic or contemporary materials and techniques.

**PARTIAL REHABILITATION & REPLACEMENT**
- Partially rehabilitate sections of the bridge & replace pony trusses.

**REPLACE THE EXISTING BRIDGE**
- Replace existing bridge with a new bridge that complies with acceptable design standards.
Summary of Alternative Solutions Evaluation

**Option 2 A: Bridge Rehabilitation (Historic)**
- Increased load restriction on the bridge;
- Overall aesthetics preserved;
- Not all elements would be replaced;
- Longer construction time required due to replacement of some items;
- Risk of increased construction costs due to limited specialty labour force (some items);
- In-water works not required; and
- Moderate cost option.

**Option 2 B: Bridge Rehabilitation (Contemporary)**
- Contemporary materials/techniques;
- Overall aesthetics preserved;
- Reduced dead load on the bridge;
- Not all elements would be replaced;
- In-water works not required; and
- Lowest cost option.

**Option 3: Partial Rehabilitation & Replacement**
- Selective repairs made to the main span of the bridge;
- Replacement of existing pony trusses required;
- New footings required;
- In-water works required and
- Moderate cost option.

**Option 4: Bridge Replacement**
- Does not comply with Council resolution;
- Loss of a culturally significant structure;
- Removal and replacement construction could be faster than rehabilitation;
- In-water works would be required; and
- Most expensive option.
Public Comments Received

• Provide a safe bridge to cross;
• Reduce vandalism;
• Reduce light pollution;
• Install a temporary bridge during construction;
• Provide signage;
• Limit removal of trees;
• Install railing similar to King Street Bridge;
• Bridge rehabilitation was supported.
Recommended Solution

**Option 2 B: Bridge Rehabilitation (Contemporary)**

This option represents the preliminary preferred solution for the following reasons:

- Culturally significant structure retained;
- Dead load reduced;
- Existing chain link fence removed;
- Bridge deck restored to full width;
- Design will incorporate CPTED principles for safety;
- Anticipated service life of 50 years;
- High durability restoration/low maintenance materials;
- No in-water work is required;
- Contemporary materials will be used but historic appearance retained;
- Restricts access to area beneath the bridge;
- Limited, formal parking provided at both ends of bridge;
- Access maintained to properties during and after construction;
- Barriers and bollards will be installed at both approaches to discourage vehicular traffic across the bridge; and
- Minor ditch erosion associated with Meadowlily Road, within the study area, has been addressed.

- Estimated Project Cost **$1.9M** (lowest cost alternative).
Project Schedule

Summer 2012
- Notice of Project Commencement issued August 2012
- Distribution of:
  - Letter
  - Newspaper Notice
  - City of London website
- Project Meetings
  - Project Team meets regularly throughout the study
  - Includes City personnel and consultants
- Class EA Phase 1 & 2
  - Review existing conditions
  - Identify the Problem
  - Confirm the need and justification
  - Identify solutions
- Agency Consultation
  - UTRCA
  - MNR
  - MOE
  - AANDC

Fall 2012
- Notice of PIC October 2012
- PIC November 2012
- Receive and Address Comments
- Distribution of:
  - Letter
  - Newspaper Notice
  - City of London website
- Project Meetings
  - Project Team meets regularly throughout the study
  - Includes City personnel and consultants
- Agency Consultation
  - UTRCA
  - MNR
  - MOE
  - AANDC

Winter 2012
- Draft Recommendations to the City
- Notice of Meeting before Civic Works Committee
- City Council Endorsement
- Notice of Project Completion
- 30 Day Review Period
- Design & Construction
- Pre-Construction PIC
- Implementation
- Distribution of:
  - Letter
  - Newspaper Notice
  - City of London website
  - File Class EA documentation for mandatory 30 day review period.

Indicates where we are in the process.
Project Schedule

Fall 2012
- Present recommendations to Civic Works Committee & Council (opportunity for public participation at Civic Works Committee).

Winter 2012
- Detailed Design
- Project Tendering & Selection
- Issue a Notice of Completion and File the Screening Report for the mandatory 30 day review period.

Spring 2013 – Fall 2013
- Construction

Meadowlily Footbridge Rehabilitation Municipal Class EA
Examples of details and construction methods used on the King Street Bridge (AECOM 2010).