

Corporate Policies and Procedures				
<b>DEPARTMENT:</b> Public Work and Engineering				<b>POLICY #:</b> PW-02
<b>POLICY:</b> Bridges				
<b>DATE CREATED:</b> April 2001	<b>REVIEW DATE:</b> February 2023	<b>REVISION DATE:</b> April 2023	<b>COVERAGE:</b> County Structures and Bridges on Municipal Roads	<b>PAGE #:</b> 1 of 5

## POLICY STATEMENT:

The County of Renfrew (County), as the upper tier Municipality, has responsibility for all bridges located on either local Municipal roads or County roads within the boundaries of the County of Renfrew. This Policy outlines the criteria that must be met for new, existing, or replaced bridges to be considered County Structures. This Policy also outlines the standard to which County Structures must be designed and the procedure to be followed should a replaced bridge no longer meet the criteria to be a County Structure.

### 1.0 DEFINITIONS

**Approach:** The portion of a roadway or pathway leading to a bridge, and all appurtenances belonging thereto. The portion under jurisdiction of the County of Renfrew, for County Structures, shall be 30m as measured from the outer most extreme of the structure.

**Bridge:** A structure, or series of structures, having a cumulative span of 3.0 metres or greater, which provides a roadway or walkway for the passage of vehicles and pedestrians across an obstruction, gap or facility.

**Low Volume Road:** Roadway supporting an Average Annual Daily Traffic (AADT) of less than 400.

**Road Classification:** A hierarchal grouping of roads according to the function they serve within the overall road system. Refer to Policy PW-01 (Roadway Classification and Design) for complete definitions of each road class.

**Return Period:** The average period in years between occurrences of a discharge (flow) equalling or exceeding a given value, also referred to as the 'Design Flood Event Period'.

### 2.0 COUNTY STRUCTURE CRITERIA

Bridges, to qualify as a County Structure, must meet the following criteria:

- Be located within the municipal boundaries of the County of Renfrew;
- Be located within a public right-of-way; and
- Have a cumulative span of 3.0 metres, or greater.

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### **2.1 Criteria No Longer Being Met**

All crossings, designed in accordance with this Policy, which cease to meet the criteria of a County Structure after reconstruction, shall return to the jurisdiction of the local roadway authority.

During preliminary design for the crossing, the County of Renfrew shall maintain discussions with the local Municipality. Should it be identified during preliminary design that the subject bridge does not meet the criteria of a County Structure, County staff shall ensure reasonable alternatives to either remove the crossing while maintaining adequate access to each site or maintain the structure in its current status are explored. These alternatives shall be presented to County of Renfrew Operations Committee and the local Municipality for consideration and input prior to commencing with detailed design of a preferred alternative.

Following construction, transfer to the local roadway authority shall commence upon acceptance of the finished works by representatives of the County of Renfrew and the local road authority. An amending By-law shall be passed by County Council to finalize the transfer to the local road authority.

### **2.2 Requests for Assumption as County Structure**

Where a crossing, that is not considered a County Structure, requires replacement and it is anticipated that the replacement crossing will meet criteria of a County Structure, a hydraulic design meeting the provisions of this Policy shall be completed. The cost of the hydraulic design shall be the responsibility of the local municipality. Where the proposed replacement crossing is confirmed to meet the criteria of a County Structure, the local municipality may request the structure be assumed by the County of Renfrew.

All requests for assumption as a County Structure shall be submitted, with hydraulic design, for review by the County Director of Public Works and Engineering, or designate. Following review, a recommendation regarding assumption as a County Structure shall be presented to the County of Renfrew Operations Committee by the Director of Public Works and Engineering, or designate. The recommendation of the Operations Committee shall be subsequently presented to County Council for approval. The County of Renfrew shall be the ultimate authority in determining whether or not a proposed replacement structure will qualify as a County Structure.

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Following approval of the assumption of a proposed replacement crossing as a County Structure, the cost of the design and construction of the replacement structure shall be shared equally between the County of Renfrew and the local Municipality. The structure shall be replaced subject to availability of funding and other priorities within the Asset Management Plan of both the local Municipality and the County of Renfrew. Maintenance and monitoring of the condition of the crossing shall remain the responsibility of the local Municipality until such time that construction for replacement of the crossing commences. However, except where an emergent need for replacement should arise, coordination of design, supervision of construction, and overall project management shall be responsibility of the County of Renfrew.

Following replacement, an amending By-law shall be passed by County Council to finalize the transfer to the County of Renfrew. Until such time as the structure is transferred to the County of Renfrew, it shall remain under the jurisdiction of the local road authority.

**3.0 DESIGN OF COUNTY STRUCTURES**

As per Ontario Regulation 104/97, Standards for Bridges, as amended, of the Public Transportation and Highway Improvement Act (PTHIA), all bridges shall be designed in accordance with the most current version of the Canadian Highway Bridge Design Code (CHBDC) as amended by the MTO Structural Manual.

All bridge crossings over water shall have a hydraulic design completed in accordance with the provisions of this Policy. Bridges shall be designed to convey flows having a design return period as defined in Table 1 below, with the proper design soffit clearance and freeboard as stipulated in the MTO Highway Drainage Design Standards, as amended.

<b>Table 1 – Design Return Periods</b>	<b>Design Return Period (Years)</b>	
	<b>Rural Roads</b>	<b>Urban Roads</b>
<b>Arterials</b>	50	100
<b>Collector</b>	25	50
<b>Locals</b>	10	25
<b>Seasonal/Alley</b>	5	10

A 100-year return period shall be used as a check-flow for the design of all new or reconstructed County Structures to ensure that the travelled road over the bridge is not overtopped during such an event.

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### **3.1 County Structures on Low Volume Roads**

MTO Structural Manual Guidelines for the Design of Bridges on Low Volume Roads, as amended, shall be taken into consideration for all County Structures where the current and the 10-year projected AADT does not exceed 400.

### **3.2 County Structures on Seasonally Maintained Roads**

County Structures located on seasonally maintained municipal roads shall be maintained to the same regulatory standard as other County Structures. When rehabilitated or replaced, County Structures on seasonally maintained roads shall be designed to the same standard as County Structures on Low Volume Roads. However, during the preliminary design phase, staff shall explore alternatives for removal of the structure, reviewing its necessity to maintain access on either side. The Preliminary Design Report, exploring all design alternatives, shall be shared with the local Municipality in which the structure is located for their input. If removal of the County Structure is recommended by staff to proceed, approval from County Council shall be required prior to commencing past Preliminary Design. The requirements of a Municipal Class Environmental Assessment must be met if proceeding with removal of a County Structure.

## **4.0 RESPONSIBILITIES**

### **4.1 Design**

Design of and construction on a County Structure, or a new crossing anticipated to meet criteria to be a County Structure, shall be prepared under the supervision of, and approved by, a Professional Engineer licensed in the Province of Ontario. The Director of Public Works and Engineering, or designate, shall oversee and approve design and construction on all County Structures, or on new crossings anticipated to meet criteria to be a County Structure.

### **4.2 Construction**

In reconstructing or rehabilitating a County Structure, the County of Renfrew shall carry out the construction of the approaches so as to meet the design standards in force at that time. Should the work be required to extend beyond the 30m statutory limit of authority to meet these design standards, the County of Renfrew shall be responsible for all costs associated with the works.

A local road authority may, with approval of the County of Renfrew, undertake works on behalf of the County of Renfrew on a County Structure and its approaches. The County of Renfrew

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shall reimburse the cost of the works applicable to the structure and the portion of the approaches under the jurisdiction of the County of Renfrew.

### 4.3 Maintenance

The County of Renfrew shall be responsible for maintenance activities on all County Structures and the 30m statutory limit of authority for the approaches to the structures. However, if local Municipal staff should note minor road maintenance needs within the 30m statutory limit of authority to the structures, they may undertake that maintenance. If local Municipal staff should note significant maintenance needs on a County Structure located on their local Municipal Road, they shall notify County Public Works and Engineering staff at their earliest opportunity.

### 5.0 REFERENCES

- Municipal Act, 2001, c. 25, as amended
- Bridges Act Chapter B12-RSO 1990, as amended
- Public Transportation and Highway Improvement Act Chapter P50-RSO 1990, as amended
- Canadian Highway Bridge Design Code, as amended
- MTO Structural Manual
- MTO Drainage Manual