



## **Staff Report PW2020-051**

**Title of Report:** PW2020-051 2020 Bridge Inspection Report  
**Department:** Public Works  
**Branch:** Transportation & Public Safety  
**Council Date:** October 7, 2020

### **Recommendation:**

**Be it resolved that** Council receive Staff Report PW2020-051 for information.

### **Background:**

R.J. Burnside & Associates Limited, engineering consultant for the Township, completes bridge inspections annually, with one half of the township one year and the other half the next year on this rotating schedule. The inspections are conducted in accordance with the Ministry of Transportation (MTO) – Ontario Structure Inspection Manual (OSIM), and the Bridge Conditions Index (BCI). The rating uses a methodology system with inspections showing a BCI of 100 on a new structure to a BCI of 70 is in the Good range. The Fair condition rating is in the 50 to 70 BCI range and if a BCI shows lower than 50, Poor range, the bridge is suggested to be a priority within 1 year and will require replacement or rehabilitation. The Township has received the west half of the Township, former Egremont Township Bridges Inspection Report for 2020 from R.J. Burnside & Associates and some of the points in the report are: Southgate has 15 structures with a BCI of less than 50, or 12.7% of the total number of structures, Southgate has 46 structures or 39 % in the Fair range; and Southgate has 57 structures or 48.3 % in the Good rating. The current BCI average of Township bridges and culverts is 67.3 in 2020 Table 5 Top Priority Replacement Structures of the attached report has recommended replacement of structures that total \$6,322,500.00. Table 6 Top Priority Rehabilitation Structures of the report has recommended rehabilitation of structures that total \$5,925,000.00 Of those structure S31 was replaced with twin 2.7 metre CSP culverts in the fall of 2020.

### **Staff Comments:**

The 2020 Southgate Bridge Inspection Report, reflects similar past reports recommendations of capital costs that are out of reach for the municipality and likewise throughout the province to manage these assets to try to meet MTO's established goal of 85% of their structures in Good condition by 2021. The report indicates capital works costs requirements of \$ 12,540,500.00 within the next year, \$10.2 million in the next 5 years and \$5.5 million in the next 6 to 10 years for at total of approximately \$28,322,400.00. The Table 5 and Table 6, Top Priority

Structures Replacements and Rehabilitation identifies 25 structures in the next 1 year by the Burnside list could be assessed for some of the structures to be load restricted, replaced with CSP pipe or closed. In that list could be considerations for structures S16, S32, S34, S55, S98, S75, S125, and S128 for multi-cell replacements.

The Report in Table 4 Load Postings and Recommendations identifies S114 to have a load evaluation on the structure, and the Township is looking into this recommendation. Bridge S119, staff meet onsite with Burnside engineer and contractor on work needed to address the repair with installing steel beams at each end of the structure and have authorized the repair works to be completed in Fall 2020.

Township staff will continue to evaluate and assess bridge replacement priorities moving forward with considerations of transportation and public safety use, access and economic efficiencies.

### **Financial Implications:**

The 2020 Capital Budget includes the replacement of Bridge S31 at cost of \$200,000.00. The Burnside Report carried a cost replacement of \$352,500.00 Staff confirmed the replacements of the above structures with twin CSP culverts at costs well below the budgets for a total replacement costs of an estimated \$143,000.00 savings of \$57,000.00.

The estimated S119 repair cost is \$35,000.00, which will be funded by the Operational Bridge Maintenance Budget of \$65,600.00.

### **Communications & Community Action Plan Impact:**

Goal 5 - Upgrading our "Hard Services"

#### **Action 5:**

The residents and businesses of Southgate recognize our linear services - roads, bridges, water and sewer works, for example - to be a fundamental purpose of municipal government. This infrastructure needs to be serviceable and sustainable so that our businesses and communities can thrive and grow.

#### **Strategic Initiatives:**

**5-E** - The Township will have produced savings by examining alternatives when bridges or culverts require replacement, including where appropriate installing dual culverts instead of replacing box culverts.

### **Concluding Comments:**

Staff recommends that Council receive Staff Report PW2020-051 for information.

Respectfully Submitted,

**Dept. Head:** **Original Signed By**  
Jim Ellis, Public Works Manager

**Treasurer Approval:** **Original Signed By**  
William Gott, CPA, CA Treasurer

**CAO Approval:** **Original Signed By**  
Dave Milliner, CAO

**Attachments:**

Attachment # 1 Capital Works by the ranking of the lowest BCI of the Southgate structure inventory.

Attachment # 2 Southgate Bridge and Culvert Map

Attachment # 3 Section 6.0 Prioritization and Recommended Work