

Completed bridge structure – September 2006



Due to the extensive corrosion of the beam webs, it was determined that the superstructure required replacement.



Pouring the deck – December 30, 2005.



James Avenue Bridge Rehabilitation Town of Wasaga Beach

In October 2004, the Town of Wasaga Beach retained the Ainley Group to undertake a condition appraisal of the James Avenue Bridge. The appraisal revealed that the timber deck was in very good condition, as were the concrete abutments, with only minor surface scaling and some honeycombing evident. The condition of the beams however varied, with some in fair shape while others were badly deteriorated with heavy corrosion and scaling of both their flanges and webs. Three of the beams had sections of their webs corroded completely away.

After completion of the bridge appraisal report, a load evaluation was completed and the structure was monitored over an eight (8) month period, from December 2004 to July 2005. During this time, the bridge was inspected periodically and observed under varying traffic loads with the condition of the beams recorded to determine the change in extent and rate of deterioration. During the evaluation period, a noticeable increase in the extent of deterioration of the steel beams was evident including an increase in the size of holes in the webs of three beams. The evaluation and monitoring results, combined with the initial appraisal report, confirmed that the beams were deficient to support full traffic loading and that the bridge superstructure should be replaced.

After submission of the final report, the Town retained the Ainley Group to complete the detailed design, permitting, tendering and provide construction administration for the replacement of the structure. After contract tendering and award, construction began in early December 2005 and was completed by the beginning of January 2006.

Project Facts

Client: Town of Wasaga Beach

Scope of Work:

- Condition appraisal and report
- Load evaluation and monitoring
- Detailed design
- Permits and approvals
- Contract tendering
- Construction administration.

Key Project Criteria:

- Load capacity of structure increased to CHBDC 2000 requirements
- Scour protection works required in stream channel
- Winter construction
- Traffic diversion/detouring.

Project Cost: \$60,000 (2005)

Client Reference:

Mr. Jim McIntosh
Director of Public Works
(705) 429-2540