### A. IDENTIFICATION

- **Bridge Name:** WHITES BRIDGE, LOT 31, CONC 6/7
- **Road Name:** COLUMBUS ROAD WEST
- **Location:** 0.30 km W of COUNTRY LANE
- **Roadside Env.:** R
- **Bl. Posting:** t t t
- **Low Clear Sign:** Narrow Structure Sign: NS
- **Bylaw No.:** Easting: 660251
- **Bylaw Exp. Date:** Northing: 4869757

### B. RAILWAY OVERPASS/UNDERPASS

- **Railway Level Crossing Number:**
- **Railway Company:**
- **Railway Subdivision:**
- **Subdivision Mileage:** 0.00
- **Transport Canada Crossing No.:**
- **Number of Tracks:** 0

### C. JURISDICTION

- **Owner:** WHITBY
- **Owner Share:** 100.00 %
- **Special Designation:**
- **Designation 2:** MunicB 00000
- **Shared?:** Adjacent Bridge No.: Patrol:
- **Shared With:**
- **Heritage Status:** R

### D. EXISTING CONDITIONS

- **Substructure Year:** 1930
- **Superstruct. Year:** 1930
- **Bridge Type:** C - TB - C
- **Crossing Skew:** 0
- **Number of Spans:** 3
- **Span Length:** 24.4 m
- **Deck Type:** CC - Concrete, Cast in Place
- **Deck Length:** 26.2 m
- **Deck Width:** 7.3 m
- **Deck Area:** 191.3 m²
- **Longitudinal Joints:** 0
- **Transverse Joints:** 0
- **Number of Bearings:** 0
- **Soil Condition:** U
- **Abutment and Foundation Type:** Open - UN
- **Existing Road Class:** 700
- **Operational Status:** 2W - OAT
- **Wearing Surface:** A Safety Curb/ (A) N N 0.2 m
- **Travel Deck Width:** 6.00 m Sidewalk and Curb (B) N / S 0.2 m
- **Barrier Walls/Railings:** SP
- **Min Vertical Clearance:** m
- **Existing Road Class:**
- **Operational Status:**
- **Opening Under:** m Safety Curb/ (A) m
- **Surface Width:** m Sidewalk and Curb (B) / m

### E. TRAFFIC DATA

- **Legal Speed Limit:** 50
- **Traffic Count:**
- **10 Year Traffic Forecast:**

### F. INSPECTIONS

- **Date:** 4/27/2009
- **Inspected By:** Dave Richmond
- **Approved By:** D. Baxter, P. Eng.
- **Municipality:** Town of Whitby
- **Bridge No.:** 000025
# MUNICIPAL BRIDGE APPRAISAL

## G. BRIDGE NEEDS

<table>
<thead>
<tr>
<th>Field</th>
<th>MCR</th>
<th>PCR</th>
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<tbody>
<tr>
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<tr>
<td>Wearing Surface</td>
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<td>6</td>
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<tr>
<td>Deck Condition</td>
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<td>Expansion Joints</td>
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<td>Railings</td>
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<td>Curb/Sidewalk</td>
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## H. FUNCTIONAL NEEDS

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<tbody>
<tr>
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<tr>
<td>RO-Trav. Deck Width</td>
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<tr>
<td>RO-LOS</td>
<td>A</td>
<td>E</td>
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<td>N</td>
<td>ADEQ</td>
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</tr>
<tr>
<td>Road Under Bridge</td>
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<tr>
<td>RU-Surface Width</td>
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<tr>
<td>RU-Level of Service</td>
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<td>RU-Min. Vertical Cle.</td>
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## Recommended Needs

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<tr>
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<th>Improvement</th>
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</table>

## I. ENGINEERING RECOMMENDATIONS

- Bridge Drawings:
- Estimated Posting:
- Evaluated Posting:
- Closure Date:
- Closure Type:
- Monitoring Interval:

## J. DESIGN PARAMETERS

- Design Class: RCHU
- Operational Status:
- Abutment Type: 0
- Design Deck Width: 13.0
- Design Deck Length: 30.0

## K. IMPROVEMENT COSTS

- Total Construction/Rehab: 2,324,000
- Total Inspection: 0
- TOTAL: 2,324,000
- WHITBY share @100%: 2,324,000
INSPECTION NOTES

Bridge No. 000025 (Whites Bridge), MTO Site No. 22-102, Columbus Road West, 0.30 km West of Country Lane, Town of Whitby:

- Structure is not posted with a load limit.
- Three span (7.6 m + 9.2 m + 7.6 m) concrete bridge, of T-beam and slab construction, with a concrete deck and asphalt wearing surface.
- Aluminum vertical bar handrails are in good condition. Several post caps are lifting with a few caps missing. Some posts exhibit minor collision damage.
- Concrete end posts have been reconstructed and are in generally good condition with localized spalls.
- Concrete curbs have been repaired and are in generally good condition with localized spalls, delaminations, cracking and surface rust stains.
- Asphalt wearing surface is in generally good condition, with cracking.
- Concrete deck fascias are in fair to good condition with minor staining, cracking, spalling, delaminations and patching.
- Concrete deck soffit is in fair to good condition with delaminations, transverse cracks and previous repairs. The curb cantilevers exhibit delaminations, spalls, narrow stained cracks, patching and staining.
- Concrete T-beams are in fair to good condition with extensive patching, localized delaminations and longitudinal and transverse cracking.
- Concrete piers are in fair to good condition with localized cracking and spalls. Localized severe scaling was noted at the base of the piers.
- Concrete abutments are in fair to good condition with localized delaminations and cracks.
- Embankment in front of the east abutment is in generally good condition with minor erosion.
- Embankment in front of the west abutment is in poor condition with severe erosion.
- Watercourse is unobstructed with no evidence of scour of the streambed.
- Sedded roadway embankments and rock protection are in generally good condition. Northwest and southwest quadrants exhibit erosion which is undermining the concrete curb and road adjacent to the structure and on the approach.
- Spillways are in good condition.
- Asphalt paved approach roads are in generally good condition with asphalt paving, cracks, and settlement.
- Concrete curb and gutter on the approaches are in good condition with localized vertical cracks.
- Steel beam guiderail on the bridge approaches are in good condition. Extruder end treatments complete with hazard markers are provided in all four quadrants. Two end guiderail posts are damaged. Guiderail posts and offset blocks exhibit vertical cracking. Channel has not been provided at the structure.
- Concrete wingwalls are in good condition with localized spalls. Timber retaining wall in the northwest quadrant exhibits forward rotation.
- Deck drainage is accommodated by 4 - 152 mm diameter steel deck drains which outlet flush with the bottom of the T-beams.
- No serious evidence of structural distress.
- Structure does not require posting with a load limit.
- Should replace existing structure to eliminate the deck width deficiency.
- Should place erosion protection in the northwest and southwest quadrants and in front of the west abutment.

L. HISTORY/ GENERAL

Bridge No.: 000025
MUNICIPAL BRIDGE APPRAISAL

Coments: LOOKING EAST AT BRIDGE  Bridge No.: 000025
Path: D:\Work\Tech Data\Whitby\Photos\Whitby MBADEs 2009\Day 1\P4270009.jpg

Coments: SOUTH ELEVATION  Bridge No.: 000025
Path: D:\Work\Tech Data\Whitby\Photos\Whitby MBADEs 2009\Day 1\P4270010.jpg
Comments: DELAMINATION AND SPALLING OF CONCRETE CURB CANTILEVER
Path: D:\Work\Tech Data\Whitby\Photos\Whitby MABDEs 2009\Day 1\P4270013.jpg
Bridge No.: 000025

Comments: EROSION IN FRONT OF WEST ABUTMENT
Path: D:\Work\Tech Data\Whitby\Photos\Whitby MABDEs 2009\Day 1\P4270018.jpg
Bridge No.: 000025
Comments: EROSION OF NORTHWEST ROADWAY EMBANKMENT. NOTE TEMPORARY
Path: D:\Work\Tech Data\Whitby\Photos\Whitby MBE\Es 2009\Day 1\P4270019.jpg

Comments: DELAMINATION OF EXTERIOR T-BEAM AT WEST ABUTMENT
Path: D:\Work\Tech Data\Whitby\Photos\Whitby MBE\Es 2009\Day 1\P4270016.jpg
Comments: SPALLING OF CONCRETE CURB CANTILEVER SUPPORT
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Bridge No.: 000025

Comments: CRACKING OF CONCRETE T-BEAM AT WEST PIER
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Bridge No.: 000025
Comments: DELAMINATION OF CONCRETE DECK SOFFIT
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Bridge No.: 000025