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Ref. No. 03-010

April 29, 2003

Product Manager, Railing  
**GSW Building Products**  
26 Lorena Street  
Barrie, ON  
L4N 4P4

Re: Bodycote Materials Testing Canada Incorporated, (BMTc Inc.) Report No. 03-06-M0066 for Yardcrafters™ Vinyl Railing System, – Strength Testing

Guardrail specifications:

- 3,050 mm (10') Rail System,
- 914 mm (36") high Colonial Spindles

Anchorage specifications:

- Pressure treated 101 mm x 101 mm (4" x 4") wooden post stiffeners adequately supported by the substructure.

This letter confirms that the Yardcrafters™ Vinyl Railing System, manufactured by GSW Building Products has been tested for structural compliance with the design load and factored load requirements for guardrail systems specified in the following codes / standards at BMTc Inc. facility:

- 1995 National Building Code of Canada Section 4.1.10.1(c); 4.1.10.1.2; 4.1.10.1.4
- 1997 Ontario Building Code Section 4.1.10.1 (c); 4.1.10.1.2; 4.1.10.1.4

The following table summarizes the test results for the 3050 mm, (10') Yardcrafters™ Vinyl Railing System.

<b>Table 1.0 - NBCC / OBC 4.1.10.1 – Loads on Guards</b>				
<b>Criteria</b>	<b>Specified Load</b>	<b>Minimum Design Load Required</b>	<b>1.5 x Factored Load Required</b>	<b>Test Result</b>
<b>Section 4.1.10.1.1(c) – 0.75kN/m or 1.0kN applied at any point</b>				
Uniformly distributed load applied in horizontal direction	0.75kN/m	2.29kN	3.43kN	Not Done
Concentrated load applied at the midpoint of the rail in a horizontal direction	1.0kN	1.0kN	1.5kN	Not Done
Concentrated load applied at end of the rail in horizontal direction	1.0kN	1.0kN	1.5kN	Not Done
Concentrated load applied at the midpoint of the rail in vertical down direction	1.0 kN	1.0 kN	1.5 kN	Pass
Concentrated load applied at the end of the rail in vertical down direction	1.0 kN	1.0 kN	1.5 kN	Pass
Concentrated load applied at the midpoint of the rail in vertical up direction	1.0 kN	1.0 kN	1.5 kN	Pass
Concentrated load applied at the end of the rail in vertical up direction	1.0 kN	1.0 kN	1.5 kN	Pass
<b>Section 4.1.10.1.2 – 0.5 kN applied to elements within the guard</b>				
Concentrated load applied to individual spindles	0.5 kN	0.5 kN	0.75 kN	Pass
<b>Section 4.1.10.1.4 – 1.5 kN/m applied vertically at the top of every guard</b>				
Uniformly distributed load applied in vertical down direction	1.5 kN/m	4.58 kN	6.86 kN	Pass
Uniformly distributed load applied in vertical up direction	1.5 kN/m	4.58 kN	6.86 kN	Pass

These test results confirm that the Yardcrafters™ Vinyl Railing System described above, complies with the 1995 National Building Code of Canada and 1997 Ontario Building Code sections 4.1.10.1.1(c), 4.1.10.1.2, 4.1.10.1.4 entitled “Loads on Guards”.

Details of the test procedure and results for the Yardcrafters™ Vinyl Railing System can be found in the report noted above. (BMTc Inc. Report No. 03-06-M0066)

For further information, please contact the Building Performance Group at the Bodycote Materials Testing Canada Inc., Ortech Laboratory.

Sincerely,

Prepared by:

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Building Performance Center

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Material Technologies Division

