



## **CONSTRUCTION SPECIFICATION FOR THE GRINDING OF CENTRELINE AND SHOULDER RUMBLE STRIPS IN ASPHALT**

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### **TABLE OF CONTENTS**

<b>342.01</b>	<b>SCOPE</b>
<b>342.02</b>	<b>REFERENCES</b>
<b>342.03</b>	<b>DEFINITIONS – Not Used</b>
<b>342.04</b>	<b>DESIGN AND SUBMISSION REQUIREMENTS – Not Used</b>
<b>342.05</b>	<b>MATERIALS – Not Used</b>
<b>342.06</b>	<b>EQUIPMENT</b>
<b>342.07</b>	<b>CONSTRUCTION</b>
<b>342.08</b>	<b>QUALITY ASSURANCE – Not Used</b>
<b>342.09</b>	<b>MEASUREMENT FOR PAYMENT</b>
<b>342.10</b>	<b>BASIS OF PAYMENT</b>

### **APPENDICES**

<b>342 -A</b>	<b>Commentary</b>
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### **342.01 SCOPE**

This specification covers the requirements for the installation of centreline rumble strips (CRS) into the surface course of asphalt pavement, and the grinding of shoulder rumble strips (SRS) into the surface course of fully or partially paved asphalt shoulders.

#### **342.01.01 Specification Significance and Use**

This specification is written as a provincial-oriented specification. Provincial-oriented specifications are developed to reflect the administration, testing, and payment policies, procedures, and practices of the Ontario Ministry of Transportation.

Use of this specification or any other specification shall be according to the Contract Documents.

### **342.01.02 Appendices Significance and Use**

Appendices are not for use in provincial contracts as they are developed for municipal use, and then, only when invoked by the Owner.

Appendices are developed for the Owner's use only.

Inclusion of an appendix as part of the Contract Documents is solely at the discretion of the Owner. Appendices are not a mandatory part of this specification and only become part of the Contract Documents as the Owner invokes them.

Invoking a particular appendix does not obligate an Owner to use all available appendices. Only invoked appendices form part of the Contract Documents.

The decision to use any appendix is determined by an Owner after considering their contract requirements and their administrative, payment, and testing procedures, policies, and practices. Depending on these considerations, an Owner may not wish to invoke some or any of the available appendices.

### **342.02 REFERENCES**

When the Contract Documents indicate that provincial-oriented specifications are to be used and there is a provincial-oriented specification of the same number as those listed below, references within this specification to an OPSS shall be deemed to mean OPSS.PROV, unless use of a municipal-oriented specification is specified in the Contract Documents. When there is not a corresponding provincial-oriented specification, the references below shall be considered to be to the OPSS listed, unless use of a municipal-oriented specification is specified in the Contract Documents.

This specification refers to the following standards, specifications and publications:

#### **Ontario Provincial Standard Specifications, Construction**

OPSS 313	Hot Mix Asphalt – End Result
OPSS 510	Removal
OPSS 710	Pavement Marking

### **342.06 EQUIPMENT**

The construction equipment shall employ a rotary type cutting head capable of installing rumble strips with a smooth surface to the lines and dimensions as specified in the Contract Documents.

### **342.07 CONSTRUCTION**

#### **342.07.01 General**

Centreline rumble strips (CRS) shall be installed at the centreline of the highway as specified in the Contract Documents.

Shoulder rumble strips (SRS) shall be installed at the partially paved asphalt shoulder or fully paved asphalt shoulder as specified in the Contract Documents.

The pavement surface shall be cleaned and all debris shall be disposed of as specified elsewhere in the Contract Documents.

**342.07.02 Placement**

Centreline rumble strips and SRS shall not be placed within 200 mm of routed and filled transverse joints.

Centreline rumble strips shall be installed prior to the final pavement markings being placed.

Shoulder rumble strips shall be installed after the final pavement markings have been placed. Any damage to the final pavement markings shall be repaired according to OPSS 710.

Where SRS are installed in conjunction with a bicycle buffer zone, the SRS shall be installed prior to the placement of the outer pavement marking edge line.

**342.07.03 Tolerances**

Tolerances for the width and depth of each rumble strip groove shall be as specified in the Contract Documents. If any one of these tolerances is exceeded in more than two grooves within a one metre length section, the section shall be rejected.

Rejected sections shall be repaired or assessed a payment reduction as directed by the Contract Administrator.

Rejected sections shall be repaired by partial depth asphalt removal according to OPSS 510, replacement of the hot mix asphalt according to OPSS 313, the reinstallation of rumble strips according to this specification, and reinstatement of damaged pavement markings according to OPSS 710. The depth of the partial depth removal shall be 50 mm and the width shall be 500 mm centred over the rumble strip. However, when this will result in a narrow remaining width of asphalt pavement on either side that is less than 300 mm, the removal width shall be extended to include the narrow width of asphalt pavement.

**342.09 MEASUREMENT FOR PAYMENT**

**342.09.01 Actual Measurement**

- 342.09.01.01 Shoulder Rumble Strips - Asphalt**
- Centreline Rumble Strips – Asphalt**
- Shoulder Rumble Strips for Bicycle Buffer Zone - Asphalt**

Measurement of rumble strips shall be by horizontal length in metres in which the CRS or SRS have been placed.

**342.09.02 Plan Quantity Measurement**

When measurement is by Plan Quantity, such measurement shall be based on the units shown in the clauses under Actual Measurement.

**342.10 BASIS OF PAYMENT**

- 342.10.01 Shoulder Rumble Strips - Asphalt – Item**
- Centreline Rumble Strips- Asphalt - Item**
- Shoulder Rumble Strips for Bicycle Buffer Zone – Asphalt - Item**

Payment at the Contract price for the above tender items shall be full compensation for all labour, Equipment, and Material to do the work.

When the Contract contains separate items for work required by this specification, payment shall be at the Contract prices and according to the specifications for such work.

**Appendix 342-A, November 2015  
FOR USE WHILE DESIGNING MUNICIPAL CONTRACTS**

**Note:** This is a non-mandatory Commentary Appendix intended to provide information to a designer, during the design stage of a contract, on the use of the OPS specification in a municipal contract. This appendix does not form part of the standard specification. Actions and considerations discussed in this appendix are for information purposes only and do not supersede an Owner's design decisions and methodology.

**Designer Action/Considerations**

No information provided here.

**Related Ontario Provincial Standard Drawings**

No information provided here.

