



## **CONSTRUCTION SPECIFICATION FOR CONCRETE STEPS**

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<b>352.01</b>	<b>SCOPE</b>
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This specification covers the requirements for the construction of concrete steps including pedestrian railing.

<b>352.01.01</b>	<b>Significance and Use of Appendices</b>
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Appendices are not a mandatory part of this specification and must be invoked by the Owner.

**Appendix 352-A:** is a commentary appendix to provide designers with information on the use of this specification in a Contract.

**352.02****REFERENCES**

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

**Ontario Provincial Standard Specifications, General:**

OPSS 180      Management and Disposal of Excess Material

**Ontario Provincial Standard Specifications, Construction:**

OPSS 351      Concrete Sidewalk  
OPSS 904      Concrete Structures  
OPSS 905      Steel Reinforcement for Concrete  
OPSS 908      Metal Traffic Barriers and Metal Railings for Structures  
OPSS 919      Formwork and Falsework

**Ontario Provincial Standard Specification, Materials:**

OPSS 1308      Joint Filler (Concrete)  
OPSS 1350      Concrete - Materials and Production  
OPSS 1440      Steel Reinforcement for Concrete

**352.05****MATERIALS****352.05.01****Concrete**

Concrete shall be as specified in the Contract Documents, and according to OPSS 1350 except as noted in the following:

Coarse Aggregate      19 mm nominal max. size  
Slump                      70 ± 20 mm

**352.05.02****Joint Filler**

Joint filler shall be a Type A material with a minimum thickness of 12 mm according to OPSS 1308.

**352.05.03****Reinforcing Steel**

Reinforcing steel shall be according to OPSS 1440.

**352.07****CONSTRUCTION****352.07.01****General**

Concrete steps shall be constructed as specified in the Contract Documents and shall include the excavation, the supply and placement of materials, and the fabrication, supply and erection of the pedestrian railing.

**352.07.02                      Excavation and Preparation of Subgrade**

Excavation and preparation of subgrade shall be according to OPSS 351.

**352.07.03                      Formwork**

Formwork shall be according to OPSS 919.

**352.07.04                      Reinforcing Steel**

Reinforcing steel shall be placed according to OPSS 905.

**352.07.05                      Concrete**

**352.07.05.01                  General**

Concrete steps shall be constructed as specified in the Contract Documents. Concrete placement, curing, protection, and field sampling and testing shall be according to OPSS 904. The frequency of testing shall be according to Construction Category II in Table 2 of OPSS 904.

**352.07.05.02                  Finishing**

Concrete finish shall be according to OPSS 351.

**352.07.06                      Expansion Joints**

Where steps are placed against an existing rigid object, joint filler shall be placed between the step and the existing rigid object.

**352.07.07                      Pedestrian Railing**

Pedestrian railing shall be fabricated and erected according to OPSS 908.

**352.07.08                      Management and Disposal of Excess Material**

Management and disposal of excess material shall be according to OPSS 180.

**352.09                          MEASUREMENT FOR PAYMENT**

**352.09.01                      Actual Measurement**

**352.09.01.01                  Concrete Steps**

For measurement purposes, a count shall be made of the number of concrete step sets installed.

**352.09.02                      Plan Quantity Measurement**

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

**352.10**

**BASIS OF PAYMENT**

**352.10.01**

**Concrete Steps - Item**

Payment at the Contract price for the above tender item shall be full compensation for all labour, equipment, and material necessary to do the work.

## **Appendix 352-A: Commentary for OPSS 352, November 2000**

**Note:** This appendix does not form part of the standard specification. It is intended to provide information to the designer on the use of this specification in a contract.

### **Designer Action/Considerations**

This specification is intended to be used in a relatively simple situation, where the stairs are isolated from the structure. Anytime more complicated steps are required, they should be designed by a professional engineer.

### **Significant Clauses**

Where the steps are placed against an existing rigid object, joint filler shall be placed between the step and the existing rigid object. (352.07.05)

### **Related Ontario Provincial Standard Drawings**

OPSD 512.010 and 512.020.