

Date: August, 2024  
DSEL File: 24-1403

**OV Phase 4  
City of Ottawa  
DICB 1 Inlet Grate Calculation  
(600x1200mm @ Horz Slope)**

**Design Parameters**

Average Flow Depth:	0.110 m	Total Flow per Grate (100yr):	0.243 m <sup>3</sup> /s
Width of Intake Grate	0.600 m	Blockage Factor	50%

**Calculations**

A blockage factor has also been applied.

**Orifice Flow**

$$Q = CA(2gH)^{0.5}$$

where: C = 0.62

A = total area = 78% of total grate area  
(OPSD 403.01 grate) X (1 - blockage factor)

H = maximum depth

Length of Grate Required = 1.14 m

Length of Grate Provided = 1.20 m

Date: August, 2024  
DSEL File: 24-1403

**OV Phase 4  
City of Ottawa  
RYCB 2 Inlet Grate Calculation  
(600x600mm @Horz Slope)**

**Design Parameters**

Average Flow Depth:	0.140 m	Total Flow per Grate (100yr):	0.090 m <sup>3</sup> /s
Width of Intake Grate	0.600 m	Blockage Factor	50%

**Calculations**

A blockage factor has also been applied.

**Orifice Flow**

$$Q = CA(2gH)^{0.5}$$

where: C = 0.62

A = total area = 78% of total grate area  
(OPSD 403.01 grate) X (1 - blockage factor)

H = maximum depth

Length of Grate Required = 0.40 m

Length of Grate Provided = 0.60 m