



CONSTRUCTION SPECIFICATION FOR LOW FLOW CHANNELS

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823.01 SCOPE

This specification covers the requirements for the construction of low flow channels to maintain and enhance fish passage in a waterbody or a culvert.

823.01.01 Specification Significance and Use

This specification is written as a provincial-oriented specification. Provincial-oriented specifications are written 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.

823.01.02 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.

823.02 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, or publications:

Ontario Provincial Standard Specifications, Construction

OPSS 517 Dewatering

Ontario Provincial Standard Specifications, Materials

OPSS 1005 Aggregates - Streambed Material

823.03 DEFINITIONS

For the purpose of this specification, the definitions in OPSS 182 and the following definitions apply:

Low Flow Channel means the part of a streambed occupied by water during periods of low flow.

Streambed Material means as defined by OPSS 1005.

823.05 MATERIALS

823.05.01 Streambed Material

When the installation of a low flow channel includes supply of streambed material, it shall be according to OPSS 1005 and as specified in the Contract Documents.

823.07 CONSTRUCTION

823.07.01 General

Low flow channels shall be installed in the dry.

Excavation of the streambed and supply of streambed material from off-site may not be required if the existing streambed material can be adjusted to create the required low flow channel as specified in the Contract Documents.

When excavation of the streambed and supply of streambed material are required to achieve the design as specified in the Contract Documents, any materials that are suitable for reuse that must be temporarily removed from the streambed shall be stored on-site as specified in the Contract Documents.

823.07.02 Low Flow Channel

Once the streambed has been prepared, streambed material according to OPSS 1005 shall be installed as specified in the Contract Documents.

Streambed material placement shall be adjusted as necessary to achieve the design as specified in the Contract Documents.

Proper function shall be verified to ensure the flow is contained within the low flow channel, as constructed, when waterbody flow has been reinstated and that the grade and transition areas from the low flow channel to the waterbody do not present any barriers to flow or fish passage or direct flow outward towards the waterbody banks.

Streambed material placement may need to be adjusted to rectify any of these conditions.

823.07.03 Protection of Waterbodies and Waterbody Banks

Protection of waterbodies and waterbody banks shall be according to the Contract Documents.

823.07.04 Dewatering and Temporary Flow Control

Dewatering and/or temporary flow control shall be according to OPSS 517.

823.07.05 Management of Excess Materials

Management of excess materials shall be according to the Contract Documents.

823.09 MEASUREMENT FOR PAYMENT

823.09.01 Actual Measurement

823.09.01.01 Low Flow Channel

Measurement of low flow channels using existing streambed material shall be in linear metres installed.

Measurement of low flow channels that include supply of streambed material shall be by mass in tonnes of streambed material.

823.09.02 Plan Quantity Measurement

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

823.10 BASIS OF PAYMENT

823.10.01 Low Flow Channel - Item

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