Ontario

MTO Highway Drainage Design Standards (November 2023)

Comments received by TCP			
Comment ID	**Organization**	**Comment**	**Response**
401	Individual	WC-12 - 1.2 The design flow for sizing of Culvert Substrate is defined in standard WC-1 (1.1), Check Flow for Scour. Designing culvert substrate for the check flow event creates scenarios where the size of the substrate required to withstand the check flow can be impractical. There are outcomes in MTO projects where the invert of the culvert is so far below the streambed elevation that up to 30%-40% of the culvert itself is buried. This affects the excavation limits, dewatering requirements and efforts for the entire culvert replacement. I think this requirement should be relaxed or the standards should provide for	The purpose of the 2023 update was to incorporate existing memorandums, policies and specifications into the Highway Drainage Design Standards. This comment will be considered for a subsequent update to the Standards or interim policy.

		site to site considerations for sizing the substrate i.e. matching the existing native substrate within the waterbodies u/s and d/s from the crossing location. Or using a check flow for scour that is based on the 2% AEP to produce a more practical outcome. I've seen some projects where retention sills are incorporated in precast box culvert in an attempt to reduce the culvert invert depth but the outcome has not been that to which was desired. I base this finding on completing post construction site inspections following a larger rain event at these sites. This is possibly because it is not standardized in MTO drawing standards or that the movement of water through these sills and the affect on the substrate in the sills is difficult to model and predict.	

Comments received by email			
Number	**Organization**	**Comment**	**Response**