

The following checklist has been compiled to assist the applicant in preparing their application for approval pursuant to Ontario Regulation 162/06. This checklist is valid for a period of six months following issuance. The level of detail required in the application will be dependent on the proposed works as well as the natural hazards, and environmental conditions on site. We recommend that applicants contact Conservation Halton staff prior to submitting the application to determine what level of detail is deemed appropriate. **Note: Please be advised that even after all the information requested below is submitted and the application is deemed complete, additional information may be identified as the review progresses or as a result of changes to regulatory requirements.** 

This checklist **<u>must be returned</u>** with the Permit application indicating in the appropriate spaces that all required information has been provided.

## **GENERAL DEVELOPMENT APPLICATIONS**

PROJECT TITLE:	DATE:
LOCATION:	

		Applicable	Provided
	General Submission Requirements	1	
Application Form	Completed and signed application form. At a minimum, the landowner must sign the form. If an agent is representing the landowner, the agent must also sign the form.		
Application Fee	Non-refundable administrative fee as per category on the fee schedule attached to permit application.		
Electronically Submitted	All materials submitted electronically either through email or digital transfer.		
Project Description	Description of, and rationale for, the proposed works including discussion of other alternatives considered. If a replacement structure is proposed, details regarding the current conditions of the existing structure are requested.		
Photographs	Photographs of the watercourse, valley slope, adjacent vegetation and/or representative vegetation communities (if applicable) during ice-free conditions.		
Drawings	Digital drawings and ( ) hard copy sets of all drawings, folded to 8½" x 11", in standard metric scale. See 'Drawing Requirements' section.		
Reports	Digital reports and ( ) hard copy of reports listed under 'Technical Study Requirements'.		

		A	Applicable	Provided
Qualified Persons	Where a drawing or report is required to be prepared by a P.Geo., P.Eng., OALA, or OLS, it must be stamped, dated and signed.			
	Drawing Requirements			
Digital Copies	Technical drawings and plans provided in pdf format unless requested otherwise (i.e. the most recent version of AutoCAD). GIS data and mapping should be submitted in an acceptable ESRI format and be properly georeferenced to real world coordinates (i.e., NAD83, UTM, Zone 17). It is highly desirable that mapping related data be submitted in ArcGIS Geodatabase format, containing all spatial, attribute, metadata and spatial joins/data rules. ESRI shape file format is an acceptable alternative.			
Topographic Survey	A detailed topographical survey. An OLS or qualified P.Eng must complete the survey. The survey must note the benchmark and vertical datum utilized and must include a number of spot elevations that would allow the survey to be compared to the topographic information provided on Conservation Halton's mapping. Staff require the following information to be on the survey:         Feature Associated Allowances/Setbacks         Watercourse(s)         Flood plain(s)         Regulatory storm flood plain elevation is         Conservation Halton staked top of bank         Physical toe of slope         Stable top of bank       7.5m         Meander Belt       7.5m         15m       Otherm			
Building	Please see Technical Study Requirements for additional guidance         Geodetically referenced elevations provided by a professional			
Openings	Engineer for all building openings at or below grade.			

		Applicable	Provided
Plan View(s)/ Site Plan	<ul> <li>Plan view(s) showing existing conditions and proposed development conditions including:</li> <li>Detailed grading (clearly illustrate how the proposed works will blend in with the undisturbed areas)</li> <li>Limit of work/disturbance</li> <li>Watercourses (bankfull width)</li> <li>Hazard limits (flood plain, top of bank, wetland, etc. and associated setbacks as indicated under 'Topographic Survey' above)</li> <li>Culvert/bridges</li> <li>Vegetation</li> <li>Structures/buildings</li> <li>Utilities/infrastructure/septic/wells</li> <li>Location of cross-sections and profile views, etc.</li> </ul>		
Aerial Photograph(s)	Plan view of the proposed works and limits of disturbance (or other, specifically), superimposed over top of a recent aerial photograph of the site. Please specify date of imagery.		
Cross-sectional and Profile Views	Existing and proposed cross-sectional and/or profile views of the intended works. Drawings should be representative of the existing and proposed grades as shown on the plan view drawings. Specifically, Conservation Halton requires the following be represented through appropriate cross sections/profile views:		
Architectural Drawings	<ul> <li>Existing and proposed floor plans and elevation drawings. Please include:</li> <li>Existing and proposed sizing calculations of the proposed structure(s)</li> <li>Finished floor elevation(s)</li> </ul>		
Floodproofing Details	Proposed floodproofing details. For Guidance, please refer to Appendix 6: Floodproofing of the of Natural Resources & Forestry (MNRF) Technical Guide – River and Stream Systems: Flood Proofing Hazard Limit.		
Structural Drawings	<ul> <li>Proposed structural drawings stamped, dated and signed by the qualified P.Eng.</li> <li>Where structures are proposed within the floodplain, the drawings must be accompanied by a letter from the structural engineer stating that the structure will be able to withstand the depths, velocities and hydrostatic pressures associated with the Regulatory design storm event.</li> <li>Where structures are proposed within the erosion hazard, the drawings must be accompanied by a letter from the geotechnical engineer stating that the structures design and location is in accordance with the geotechnical slope stability assessment that has been reviewed and accepted by Conservation Halton.</li> </ul>		

		Applicable	Provided
Existing Vegetation	A vegetation inventory is required (including scientific names) A Tree Preservation Plan is also required. Tree protection fencing location and details must be illustrated on the drawings. Follow applicable municipal guidelines, by-laws and Conservation Halton's <i>Guidelines</i> <i>on Landscaping and Preservation Plans (2021)</i> , available at www.conservationhalton.ca.		
Proposed Vegetation	Details on restoration, including a locally native, non-invasive seed mix for disturbed areas as well as compensatory trees and/or shrubs must be indicated on the drawings (including scientific names). Follow Conservation Halton's <i>Guidelines on Landscaping and Restoration</i> <i>Plans</i> , available at www.conservationhalton.ca. unless as directed below:		
	Include a copy of the Landscaping Checklist (Table 5-1 Drawing Requirements). Follow Conservation Halton's <i>Guidelines on</i> <i>Landscaping and Rehabilitation Plans (2021)</i> , available at <u>www.conservationhalton.ca</u> .		
Erosion and Sediment Control Plans	Details regarding sediment and erosion control measures, staging/stockpiling, phasing, site dewatering, equipment, materials, access to and from work area, monitoring, site supervision, etc. See <i>Erosion &amp; Sediment Guidelines for Urban Construction</i> prepared by the Greater Golden Horseshoe Area Conservation Authorities (www.sustainabletechnologies.ca) for additional guidance.		
	Above plan is to be prepared by a qualified professional (i.e. CISEC, CPESC or an approved equivalent).		
Technical Study Requirements			
Studies pertaining to flooding and erosion hazards must be completed in accordance with the Ministry of Natural Resources & Forestry (MNRF) Technical Guidelines (MNR, 2002).			
Hydraulic Analysis	A hydraulic analysis by a qualified P.Eng to verify that the proposed works will not increase flooding risks to life or property. The analysis must verify that there will be no increased flood levels on adjacent properties and no increased on-site flood risks. The assessment must be completed for the full range of rainfall events (typically 2, 5, 10, 25, 50, 100 year and Regional Storm). A hard copy and digital copy of all models must be provided and must be accompanied by a summary table of pre and post development flood elevations. The source of the hydraulic model must be specified. A plan view drawing showing the existing and proposed flooding hazard limit as well as the location of hydraulic cross-sections overlain on an existing topographic mapping and/or grading plan (if grading changes are proposed) must be provided, with vertical datum specified.		

		Applicable	Provided
Meander Belt or Stream Erosion Assessment	A meander belt or stream erosion assessment by a qualified P.Geo. or P.Eng.to establish the limits of the erosion hazard associated with the watercourse. Multiple methodologies should be utilized for comparison to determine the most appropriate setback.		
Geotechnical Assessment (Slope Stability)	A geotechnical slope assessment by a qualified P.Eng. The scope of the study must be determined through the completion of the Slope Stability Rating Chart (Table 4.2, MNRF, Understanding Natural Hazards and Technical Guide for River and Stream Systems: Erosion Hazard Limit). Where the location of stable top of bank is required, staff will require plan and cross-sectional views that illustrate, at a minimum, the site's topographical information, location of watercourse, toe of slope, staked top of bank, recommended toe erosion allowance, recommended stable slope allowance and analyzed long term stable top of bank For structures on the valley wall geotechnical analysis and resulting factor of safety for bearing capacity, overturning and sliding, must be provided. Structural details, including foundation, depth of embedment, buttressing, tie-backs, drainage etc. must be discussed and accompanied by cross-sectional and profile drawings.		
Geotechnical Assessment (Soil Investigation)	A geotechnical assessment by a qualified P.Eng for the purposes of mitigation of geotechnical risks at the site by providing recommendation for items such as foundations, excavation limits, design parameters and construction. Indication of groundwater levels and potential for construction dewatering is required to determine if additional hydrogeological study is warranted.		
Hydrogeological Assessment	A hydrogeological assessment by a qualified P.Eng or P.Geo. to study the potential impacts to surface/groundwater interactions The assessment must provide adaptive management, mitigation and monitoring strategies with considerations for discharge (quality and quantity of water), construction phasing, etc.		
Hydrologic Evaluation	Assessment of the impact of hydrologic changes to wetlands using a multi-disciplinary approach by Qualified Person(s).		
Ecological Study	An Ecological Study. Reference must be made to Conservation Halton's <i>Guidelines for Ecological Studies</i> , available at: <u>www.conservationhalton.ca</u> .		

		Applicable	Provided
On-Title Agreement	As a result of the works proposed, you will be required you to enter into an on-title agreement with Conservation Halton stating that you acknowledge you are aware that the structures are susceptible to flooding and/or erosion, that you will notify future landowners and tenants of this fact, The on-title agreement will be prepared upon review of submitted drawings.		

Other Requirements			
Fisheries Act	Alteration, Disruption or Destruction (HA	proponent is responsible for avoiding Harmful, ADD) to fish and fish habitat under the <i>Fisheries Act</i> . Is Canada (DFO) website for additional information. None 1 855 852-8320 or email	
Endangered Species			
Prepared by: _		Signature:	