



**Environmental
Hydraulics
Group**

**Water Resources & SWM
- Environment**

Project:	HWY 407 Western Extension: Culvert Crossings – Project Review	1999-413
Location:	Town of Oakville (Greater Toronto Area)	
Client:	SNC Lavalin	
Completed:	August 1999	

Description:

EHG was retained by the client to evaluate drainage and stormwater management aspects for the Highway 407 Western Extension located within the Town of Oakville and City of Burlington. The Project encompassed the area constraints, drainage criteria, operating requirements and the assessment and planning work for all proposed facilities throughout the thirteen watersheds within this 23-kilometre highway extension.

Drainage assessment and detailed design work between the Queen Elizabeth Way (QEW) and Highway 5 were completed separately. This includes the drainage strategy associated with the Hager Creek and Rambo Creek flood control works initiated in the 1980's by various municipal and provincial agencies to provide flood mitigation within the City of Burlington.

The following stormwater management aspects were considered"

- resource and background information
- external consultation
- assessment methodologies
- watershed descriptions, impacts, constraints
- proposed highway facilities in the watershed
- drainage design criteria
- hydrologic analyses
- hydraulic analyses
- alternative stormwater management practices
- selected stormwater management facilities
- design summary of the recommended facilities

Benefit to the Client:

The existing grassed swales have been used extensively throughout the entire corridor. EHG recommended extended detention ponds to be implemented for water quality and quantity control at 13 separate locations throughout the study corridor. Subsequently EHG summarized and provided all aspects of the conceptual sizing of all Stormwater management facilities for the client. In addition, EHG also outlined work associated with Stormwater management, summarizing hydraulic and sizing requirements of all Highway #407 West extension cross culverts throughout the project limits and providing for the client all computer hydrologic and hydraulic simulations analyses.

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