

1. SUBJECT: STORM CONNECTIONS TO ROADSIDE DITCHES & MUNICIPAL DRAINS**2. DEFINITIONS**

Roadside Ditch: A ditch or swale (typically U or V shaped) on the public right-of-way, which collects overland stormwater runoff from the local municipal road and boulevard and conveys it through a series of ditches, drains and/or storm sewers to a receiving body of water. These ditches typically service a relatively small, localized area and are not adequate for conveying runoff from private property.

Municipal Drain: A large sized ditch which collects overland stormwater runoff from a *regional area* to another Municipal Drain or other receiving body of water. Municipal Drains are regulated by the Drainage Act.

Infill Development: Development of a vacant property or group of properties which are surrounded by existing, established properties.

3. DRAWINGS

AS-105 – Rainfall Intensity Curve

AS-325 – Private Drain Connection Cleanout at Property Line as Required by B/L 4921

4. BEST PRACTICE**1. *Connections to Roadside Ditches:***

A property may be permitted a new stormwater piped private drain connection or farm tile outlet to a Roadside Ditch to the satisfaction of the City Engineer.

2. *Connections to Municipal Drains:*

A property may be permitted a new stormwater, piped private drain connection or farm tile outlet to a Municipal Drain, with an accompanying Engineer's Report under the Drainage Act specific to that individual connection.

3. *Residential Infill Properties:*

All infill residential developments, with existing roads not serviced by municipal storm sewers, may be permitted to outlet stormwater from the development to the existing ditch or drain system. A lot grading plan is required to show how stormwater runoff will migrate from the land to the ditch or drain system to the satisfaction of the City Engineer.

Sump pumps are not permitted to outlet directly to a roadside ditch or Municipal Drains and must discharge onto a splash pad. Rear yard drains may outlet directly to a roadside ditch or Municipal Drains to the satisfaction of the City Engineer. This may be accomplished by grading of the property, installation of swales, french drains, etc. The invert of the outlet pipe must be a minimum of 300 mm from the bottom of the roadside ditch or Municipal Drain.

The owner agrees to obtain street opening permits for drain connections from the City Engineer, prior to commencement of any construction on the public highway.

The owner shall agree to sign petitions for and not oppose the construction, under the provisions of Ontario Regulation 586/06 for local improvements of a storm sewer abutting the subject lands. Any such local improvement must be reviewed and approved by the City's Drainage Superintendent.

4. Commercial/Industrial Development:

Every commercial and industrial development requires that stormwater runoff from the site be limited to pre-development runoff rates, or to another standard as determined by the City Engineer and/or the Essex Region Conservation Authority. Prior to the issuance of a construction permit, the owner shall agree to retain a Consulting Engineer for the design and preparation of drawings, satisfactory to the City Engineer and Chief Building Official, for an internal stormwater detention scheme to service the subject lands.

Where the site can only be serviced by roadside ditches and/or Municipal Drains, rules 1 and 2 above shall apply. A proposed stormwater piped private drain connection to a roadside ditches and/or Municipal Drains will be reviewed through the Site Plan Control Process.

The owner agrees to obtain street opening permits for drain taps from the City Engineer, prior to commencement of any construction on the public highway.

Any restriction or pumping system required by the storm detention scheme shall be on private property. Spillways in curbing of parking areas may be permitted to allow for drainage of the parking area to natural overland surface features, however spillways will not be permitted as flow restriction devices due to the effects of weathering on those spillways. The invert of the outlet pipe must be a minimum of 300 mm from the bottom of the roadside ditch or Municipal Drain.

The owner shall obtain from the Corporation a Local Improvement petition for the extension of a storm sewer. The sewer would be built in the year in which the expenditure is approved by the Corporation's City Council, if the petition is returned sufficiently signed. The owner's share will be based on charges applicable under the Municipal Act, 2001 – Ontario Regulation 586/06 for that year. Any such local improvement must be reviewed and approved by the City's Drainage Superintendent.

5. Existing Connections:

Existing piped connections may be permitted. If an existing piped connection is to be replaced, the property owner shall consider, if possible, the following options to mitigate against backup of the stormwater:

- Remove the connection and re-route the stormwater overland to the ditch or drain system
- Re-grade the new pipe to provide an outlet as close to the top of bank of the ditch or drain as possible to decrease the likelihood that the outlet pipe will be obstructed by plants or ice build-up.
- Disconnect any downspouts on the building to splash on grade. Disconnection of downspouts is not recommended where the water has no option but to be directed close to the foundation walls of the building or onto a paved surface, posing a trip or slip hazard.

6. Connections to Combined Sewers:

Storm private drain connections may be permitted to a municipal combined sewer at the discretion of the City Engineer. Should a storm private drain connection be permitted to a combined sewer, the property owner shall disconnect all downspouts which can be safely splashed on grade.

For new residential infill construction, the sump pump discharge shall splash on grade.

7. New Subdivisions:

Developers wishing to construct a new subdivision outletting to a roadside ditch or Municipal Drain shall ensure that:

- All roads within the subdivision have separate municipal storm and sanitary sewers
- Each lot has a private drain connection to each the storm and the sanitary sewer with a cleanout at the property line
- A stormwater management report has been completed and the recommendations followed, including any ponds or other internal drainage systems as required

An Engineer's Report under the Drainage Act be completed for the connection from the subdivision to the Municipal Drain.

5. RELATED BEST PRACTICES

N/A

6. RELATED CITY STANDARDS

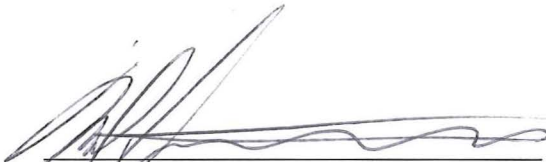
S-1 – Sewers

S-2 – Manholes, Catchbasins, and Adjustments

7. RELATED Ontario Provincial Standards

OPSD 810.010

OPSD 810.020



City Engineer or Designate

AUG 22/17

Date

Attachment –