GENERAL NOTES

1. General Notes

1.1 All services to be to the Town of East Gwillimbury Engineering Department Standards and Specifications and to the satisfaction of the Town Engineer.

1.2 Locations of existing services NOT guaranteed - contractor to notify utility companies. Forty-eight (48) hours notice required prior to commencement of any work.

1.3 For dimensions and details not shown, see Standard Drawing referred to on the profile.

1.4 All excavations must be carried out according to the Occupational Health and Safety Act and Regulations 2007 for Construction Projects.

1.5 Sewer and watermain trenches to be backfilled to Town of East Gwillimbury Standards and compacted to a minimum of 95% Standard Proctor Density.

1.6 All Standard drawings are to be OPSD (most recent revision) unless otherwise specified.

2. Measurements

2.1 All dimensions in metres, except pipe diameter, which is in millimetres, unless otherwise specified.

3. Roadwork's

3.1 Compaction - road subgrade to be compacted to minimum 95% Standard Proctor Density - granular materials to be spread and compacted in 200 mm layers to a minimum of 100% Standard Proctor Density. Asphalt to be compacted to minimum 96% Standard Proctor Density.

Item	Compaction Required (% of Standard Proctor Density)
Granular "B"	Minimum 95%
Granular "A"	Minimum 100%
HL-6 or HL-8	Minimum 96%
HL-3	Minimum 96%

3.2 Road Design - (Minimum)

Item	Compacted Thickness (Residential)
HL-3	40 mm
HL-6 or HL-8	50 mm
Granular "A"	150 mm
Granular "B"	300 mm

Note: *Asphalt and granular thickness shall vary as recommended by the soils report, but are still subject to the Town Engineer's approval.*

3.3 Curbs – Urban - Town Standards OPSD 600.070 (two-stage curb)
-- Estate Residential - Town Standard OPSD 600.100

3.4 Intersections of curbs and sidewalks shall be depressed, as per Standard OPSD 310.030.

3.5 All areas disturbed by construction shall be reinstated to original condition or better by the Contractor.

3.6 Sub-drains are to be installed throughout.

3.7 All new signs will be **Type IV high reflectivity** signs, will be made of steel and will include the Town name and year of manufacture on the border of the sign. Sign retro-reflectivity is determined using MUTCD Table 2A.3 (The standards in the OTM refer to new sign retro-reflectivity)

4. Storm Sewers

4.1 Pipe - all concrete pipe shall have sealed joints with gaskets and class as shown on drawings.

4.2 All PVC gravity sewer pipe shall conform to CSA Specification B182.1 or B182.2 (or most recent revision) DR 35 with "lock-in" rubber sealing ring.

4.3 Manholes:

4.3.1 Manholes to be Standard Drawings OPSD 701.010 to 701.015 (inclusive).

4.3.2 All storm manholes to be benched throughout to the crown of all pipes on a vertical projection from spring line, as per Standard Drawings, except as otherwise noted.

4.4 Bedding - sewer bedding to be to Standard Drawing OPSD 802.030 Class "B" bedding or approved by the Town Engineer.

4.5 Catchbasins:

4.5.1 Leads for a single catchbasin to be 250 mm and for a double catchbasin 300 mm

4.5.2 All catchbasins to be connected to the storm sewer by tees where possible, Standard Drawings OPSD 705.010 to 705.040. All rear lot catchbasins to be installed without sump pit or alternatively, sump to be filled with concrete to outlet invert.

4.6 All storm outfalls that empty into a ditch or watercourse must blend with the flow of same.

4.7 All PVC joints at manholes shall be done by means of a PVC manhole adapter.

4.8 Service connection 150 mm PVC, c/w 150 x 125 sealed cleanout at property line and extension pipe 1.5 metres into property with sealed cap. Pipe to be white in colour. Marker to be painted white.

5. Watermain

5.1 Pipe - watermain to be AWWA C900 (Thick wall Pipe) minimum class 150 (DR 18). Watermain is to be wrapped with 14-gauge strand copper wire to be brought to grade at all mainline valves and hydrant secondary valves all splices are to be done above grade or using a moisture-proof seal. Top of watermain shall be minimum 1.7 m below centreline of road grade.

5.2 Hydrants and Valves - as per Town Standards Drawing No. OPSD 1105.010. All hydrants are to be self-draining (unless in areas with high water table). All hydrants are to be equipped with one (1) four-inch (4") pumper port with manufacturer's "Stortz" fitting. Town-approved hydrants are Canada Valve (CanVal) - **ONLY.**

5.3 Services:

5.3.1 Residential - services to be 19 mm, Type "K" copper, as per Standard Drawing OPSD 1104.01 and have a minimum cover of 1.6 m.

5.3.2 All services shall be single services to the middle of the lot.

5.4 Markers - all connections to be marked with 50 mm x 100 mm x 2.4 m stakes, painted blue for water.

5.5 All curb stops, main stops and couplings are to be compression-type fittings, i.e. Cambridge Successor ball valve type, which must be approved by the Town Engineer complete with stainless steel rods and brass pin.

5.6 All bends and tees must be OPSD 1103.010 and 1103.020 and blocked to undisturbed ground. Mechanical restraining joints are permitted where approved by the Town.

5.7 When watermain does not have sufficient cover due to other appurtenances, i.e. catchbasins, etc., the watermain must be insulated.

5.8 All mechanical connections to be protected against corrosion through the use of corrosion protection duration nuts. Nuts to be used on 50% of all T-bolts per connection and are to be used in addition to standard fastening nuts, ***not*** in place of standard nuts.

6. Sanitary Sewers

6.1 Pipe:

6.1.1 All PVC gravity sewer pipe shall conform to CSA Specification B182.1 or B182.2 (or most recent revision) DR 35 with "lock-in" rubber sealing ring.

6.1.2 All house services shall be connected to sewer with tees. Pipe: 125 mm PVC, c/w 125 x 100 sealed cleanout at property line and extension pipe 1.5 metres into property with sealed cap. Pipe to be green in colour. Marker to be painted green.

6.1.3 All sewer connections to manholes shall be done by means of a PVC manhole adapter.

6.1.4 The bedding material shall extend to 300 mm above the pipe and compaction tests are required before the trench is backfilled. Backfill to be compacted to minimum 95% Standard Proctor Density.

6.2 Manholes:

6.2.1 Manholes to be Standard Drawings OPSD 701.010 to 701.015 (inclusive)

6.2.2 All sanitary manholes to be pre-benched monolithic base, with sealed connections for all pipes.

6.2.3 Manhole lids in cul-de-sac locations and at all low points to be water-tight type.

6.3 Bedding - sewer bedding to be to Standard Drawing OPSD 802.03, Class "B" (unless otherwise noted and approved).

6.4 Markers - all connections to be marked with 50 mm x 100 mm x 2.4 m stakes painted green.

6.5 Laterals - all laterals shall be constructed according to Standard Drawings OPSD 1006.01 and 1006.02.

(7th Revision): November, 2001
(8th Revision): October, 2002
(9th revision): December, 2003
(10th revision): October, 2008
(11th revision): May, 2012
(12th revision): October 2012