

CITY OF **WELLAND** REQUIREMENTS FOR LANDS TO BE CONVEYED TO THE CITY

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The Owner will be responsible to ensure that all lands which will be transferred to the City for parkland, drainage or boulevard purposes shall be developed in conformity with the following:

The following requirements must be met in all subdivisions for lands which will be transferred to the City either for parkland, drainage or boulevard purposes.

**PREPARATION**

1. Protect existing trees as directed on site by the Parks Department prior to commencing grading.
2. Clear site of all rubbish, rocks, boulders, tree stumps and other useless materials and debris, remove from site.
3. Cut all dead trees and remove stumps and roots to a minimum depth of 600 mm below proposed finished grade.
4. All areas designated for paving or excavation (i.e. drainage courses, waterways) shall be stripped of all topsoil and organic matter to its full depth taking care not to contaminate with any sub-soil.
5. All stripped topsoil shall be stockpiled for use in open space lands as required.
6. Topsoil shall be re-used for landscape work.
7. Commence topsoil stripping only after areas have been cleared (see #2).

**GRADING**

8. After stripping of topsoil, do all necessary rough grading, excavating and filling, where required, to establish the sub-grade in conformity with the approved grading plans.
9. Establish and maintain sub-grade parallel to finished grade and shape to allow adequate surface runoff and prevent ponding, scouring and erosion.

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- 10.** Provide for uniform slopes between points for which finished grades are shown on drawings. Meet and blend with existing grades in a smooth manner.
  - 11.** Establish smoothly rounded grades at top and toe of slopes and banks.
  - 12.** Do not grade when soil is wet or frozen.
  - 13.** Fill material shall be clean, free of topsoil and organic matter and debris and shall be approved by the Parks Department before placing. On site excavated material may be used for filling when approved by the Parks Department.
  - 14.** All topsoil shall be a fertile, friable natural loam containing 4% minimum organic matter for clay loams and 2% minimum organic matter for sandy loams with an acidity range of 6 - 7.6 PH and shall be capable of sustaining vigorous plant growth. It shall be free of any admixture of sub-soil, clay, lumps, stones and roots over 25 mm diameter and other extraneous matter and shall be reasonably free of weeds and weed seeds.

**TOPSOIL SPREADING/FINE GRADING**

- 15.** Spread topsoil on prepared sub-grade a minimum depth of 100 mm for all areas to be seeded/sodded (compacted depth).
- 16.** Fine grade topsoil to produce a smooth, even surface free from debris, sod, stones and roots over 25 mm diameter.
- 17.** Meet and match all existing turf areas, curbs, manholes, catchbasin frames etc. in a smooth uniform line to the satisfaction of the Parks Department.

**SEEDING/SODDING**

**HYDRO-SEEDING**

- 18. Materials**
  - a. Fertilizer: complete commercial fertilizer, minimum of 50% of elements derived from organic sources.

- b. Grass seed mixture must be approved by the Parks Department.
  - c. Mulch:
    - 1. Straw: oat, barley, alfalfa or wheat straw, reasonably free from weeds, foreign matter detrimental to plant life, in dry condition to allow even distribution when processed through blower. Other vegetative material (hay) may be used when approved by the Parks Department.
    - 2. Fiber: wood or wood cellulose fiber free of germination or growth-inhibiting ingredients and forming blotter like ground cover allowing absorption and percolation of water.
  - d. Erosion Control Agent: Asphalt emulsion to CAN2-16.2-M77, Type III (SS-1) water dilutable liquid dispersion containing thermoplastic resin (Curasol Ah).
  - e. Water: potable, free of impurities that would inhibit germination.
  - f. Grass Seed: Canadian No. 1 seed mixture in accordance with the Canadian Seeds Act for lawn grass mixtures, having minimum purity of 97% and germination of 75%.
19. Cultivate areas to be sodded to a depth of 25 mm and areas to be seeded to a depth of 50 mm - fine grade free of humps and hollows and free of deleterious and refuse materials.
20. Obtain Parks Department approval of topsoil grade and depth before starting seeding. (NOTE: Minimum 24 hours notice must be provided to Parks Department.)
21. Seeding
- a. Seed area during early spring or between **August** 15th and September 15th.
  - b. Apply when winds less than 10 km/h using equipment suitable for area involved to the approval of the Parks Department.

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- c. Measure quantities of material by mass or mass-calibrated volume measurement to satisfaction of the Parks Department.
  - d. Charge seeder with water, mulch, seed, fertilizer and mix thoroughly. Add material into seeder under agitation. Pulverize and add material slowly into seeder and mix thoroughly to complete seeding slurry.
  - e. Add erosion control agent into seeder and mix thoroughly to complete seeding slurry.
  - f. Accurately measure quantities of materials before charging into the seeder at the following rates:
    - Grass seed     •     1 12 kg/hectare
    - Fertilizer       •     560 kg/hectare
    - Water               5560 l /hectare
    - Mulch                as per manufacturer's recommendation.
  - g. Blend applications into adjacent grass areas.

## **SODDING**

### **22. Delivery and Storage**

- a. Schedule delivery in order to keep storage on the job site to a minimum without causing delays.
- b. Deliver, unload and store sod on pallets.
- c. Deliver sod to site within 24 hours of being lifted and lay sod within 36 hours of being lifted.
- d. Do not deliver small, irregular or broken pieces of sod.
- e. During dry weather, protect sod from drying and water sod, as necessary, to ensure

its vitality and prevent dropping of soil in handling. Sod which dries out will be rejected.

- 23.** Sod shall be turf grass nursery sod, specially sown and cultivated in nursery field all in compliance with the specifications in the latest issue of the Nursery Sod Growers Association of Ontario for (A) Number One Kentucky Bluegrass - Fescue Sod.

**24.** *Laying of Sod*

- a. Lay sod during growing season. Sodding at freezing temperatures or on frozen ground is not acceptable.
- b. Sodding during dry weather is acceptable only if sufficient and continuous watering is assured.
- c. Where slippage of sod is likely to occur because of the degree of slope, pegging is required and shall be at no extra cost to the Owner. When sod is established, drive pegs flush with sod.
- d. Obtain the approval of the Parks Department of fine grade prior to beginning sodding.
- e. Lay sod even with adjoining areas. The rows shall have staggered joints. Butt sections closely without overlapping or leaving gaps between sections. Cut out irregular or thin sections.
- f. Provide close contact between sod and soil by means of light roller. Heavy rolling to correct irregularities in grade is not permitted.
- g. Water immediately after laying to obtain moisture penetration through sod into top 150 mm of topsoil.
- h. Provide adequate protection of sodded areas against erosion and other damage. Remove this protection after sod has become established and if approved by the Parks

Department

**GENERAL**

**25. Workmanship**

- a. Keep site well drained.
- b. Clean up immediately soil, mulch or other debris spilled onto pavement.
- c. Take reasonable care to prevent contamination, by seeding slurry, of structures, signs, guiderails, fences and utilities.
- d. Where contamination occurs, remove seeding slurry to the satisfaction of and by means approved by the City.

**26. Maintenance**

- a. Maintain seeded and sodded areas for a period of 60 days of growing season after installation. Maintenance includes, but is not limited to, weeding, fertilizing, cutting at least once and watering as required.
- b. Apply water in sufficient quantities to prevent grass and underlying soil from drying out. The Developer is responsible for supplying water to the site.
- c. Maintain grassed areas free of pests and disease.
- d. Cut grass to maintain a height of **60** mm. Do not cut more than 33% of blade at any one mowing. Request inspection by the Parks Department after cutting grass once. If grass cover is accepted, City of Welland Staff will become responsible for subsequent mowing. Developer is responsible to continue fertilizer program as specified in "f".
- e. Re-seed areas which show root growth failure, deterioration, bare or thin spots or which have been damaged by any means, including replacement operations.

- f. Fertilize seeded area eight weeks after seeding with 27-1 4-0 fertilizer. Spread evenly at a rate of 3 kg./100m<sup>2</sup>, water in well.
- g. Postpone fertilizing until spring if application falls after August 15.

27. **Acceptance**

- a. Areas will be accepted by the Parks Department provided that:
  - 1. Seeded and sodded areas are properly established.
  - 2. Turf is free of eroded, bare or dead spots and is 98% free of weeds.
  - 3. No surface soil is visible when grass has been cut to a height of 60 mm.
  - 4. Sodded areas have been cut within 24 hours prior to acceptance inspection.
- b. Areas seeded in the fall will be accepted in the following spring one month after start of growing season provided acceptance conditions are fulfilled.

28. **Warranty**

All Hydro-seeded and sodded areas shall be guaranteed for a period of one (1) year from the date of acceptance by the City.

29. **Boulevards**

A strip 1 .83 metres (6 feet) in width down the middle of all street boulevards to within 0.6 metres of all driveways shall be excavated to a depth of 305 mm with all stone, concrete, rocks and other extraneous material removed. The boulevard shall be filled with topsoil and sodded in accordance with the above Sections.

30. **Walkways (Footpaths)**

All walkways shall be a minimum of 3.0 metres in width unless otherwise noted. They shall be excavated to a minimum depth of 380 mm. The excavation is to be backfilled with a

minimum 305 mm stone base, properly compacted, with a 75 mm topping of asphalt. On either side of the walkway, the Developer shall construct a 1.5 metre high chain link fence (industrial type posts, No. 9 gauge wire) except such fence shall be 0.9 metres high in any required front yard. Fence shall have a 1 1 1/16" O.D. top rail and single strand bottom tension wire No. 6 gauge fastened 457 mm on centre.