

## RESIDENTIAL LOT DRAINAGE

### A. GENERAL

1. ALL LOTS (INCLUDING DRAINAGE DITCHES OR SWALES) ARE TO BE SODDED WITH A MINIMUM DEPTH OF 100MM (NOT AVERAGE) OF TOPSOIL AND No. 1 NURSERY SOD, AND THE MINIMUM DEPTH (NOT AVERAGE) OF 150mm OF CRUSHED STONE TO BE PROVIDED ON THE ENTIRE LENGTH OF EACH DRIVEWAY ON A FIRM SUBGRADE.
2. GRADE ALL AREAS TO:
  - I) PROVIDE PROPER SURFACE DRAINAGE AND MAXIMIZE USABLE LAND AREA.
  - II) PRESERVE EXISTING TREES WHERE POSSIBLE.
  - III) DIRECT FLOWS AWAY FROM HOUSES
3. MINIMUM YARD SLOPE - 2.00 %
4. DRIVEWAY SLOPES:
  - I) MIN. 2.00 % AWAY FROM HOUSE.
  - II) PREFERRED MAX. 7.50 % (FROM STD. SIDEWALK LOCATION).
  - III) ABSOLUTE MAX. 10.00 %.
5. MAXIMUM SLOPE BETWEEN HOUSES IN ANY DIRECTION 3 Hor : 1 Ver., USE STEPS AND/OR RETAINING WALLS IF THIS CRITERIA CANNOT BE MET, CONSTRUCT RETAINING WALL WITHIN SIDE LOT LINE.
6. PROVIDE A 0.60 M GENTLY SLOPING AREA (2.00 % MAX) AWAY FROM THE HOUSE ON AT LEAST ONE SIDE OF THE BUILDING WHERE SIDE YARD SETBACK PERMITS. (USUALLY THE SIDE DOOR ENTRANCE OR GARAGE SIDE).
7. CLEAR STONE RATHER THAN TOPSOIL AND SOD IS REQUIRED FOR 1.2m OR LESS COMBINED SIDE YARDS BETWEEN TWO BUILDINGS.

### B. TYPE OF DRAINAGE PATTERN

1. BACK TO FRONT DRAINAGE (FOR ALL LOTS) IS PREFERRED WHERE FEASIBLE.
2. GENERALLY, SPLIT LOT DRAINAGE WITH REAR YARD CB<sub>s</sub> IS REQUIRED FOR NARROW FRONTAGE LOTS WHERE DIFFICULTIES IN PROVIDING SIDE YARD SWALES ARE ENCOUNTERED.
3. REAR YARDS WHICH DRAIN THROUGH ABUTTING LOWER BACK-TO-FRONT TYPE LOTS ARE PERMITTED WHERE:
  - I) SUFFICIENT FALL IS AVAILABLE BETWEEN THE ADJACENT STREETS TO ACHIEVE DESIRED GRADES FOR SWALES AND YARDS.
  - II) CUT-OFF SWALES AT THE REAR OF THE UPPER LOTS DIRECT RUN-OFF INTO THE LOWER LOT SIDE YARD SWALES.

### C. REAR YARD

1. AT LEAST 75 % OF THE REAR LOT AREA IS TO BE SUFFICIENTLY FLAT (2.00 % TO 4.00 % SLOPE) TO BE USEABLE.
2. RETAINING WALLS ARE TO BE EMPLOYED WHERE GRADE DIFFERENCE IS MORE THAN 0.6m. CONSTRUCT RETAINING WALLS WITHIN THE REAR LOT LINE.
3. SLOPES OF 3 HORIZONTAL TO 1 VERTICAL MAXIMUM.

### D. SWALES

1. ALL SWALES:
  - I) LONGITUDINAL SLOPE - MIN 2.00 %.
  - II) SIDE SLOPES - MAX. 3:1, PREFERRED 4:1 OR LESS.
2. REAR YARD SWALE:
  - I) MAXIMUM LENGTH TWO LOTS FOR LOTS WIDER THAN 12.0 m, OR 3 LOTS FOR LOTS 12m IN WIDTH OR LESS.
  - II) LOCATION - REAR LOT LINE TO SWALE CENTRELINE - 1.0m MAXIMUM
  - III) SWALE DEPTH - MIN. 150mm, PREFERRED 230mm, MAX. 450mm.
  - IV) WHERE REAR TO FRONT DRAINED LOTS ALL CARRY FROW FROM AN ABUTTING REAR YARD, A SHALLOW CUT-OFF SWALE SHALL BE PROVIDED AT THE REAR LOT LINE OF THE UPSTREAM LOT.
3. CUT OFF SWALES TO BE MIN 1.50 %, PREFERRED 2.00 %
4. SIDE YARD SWALE:
  - I) CONFINED FLOWS CARRIED AROUND HOUSES TO DEFINED SWALES LOCATED AS FAR FROM THE HOUSE AS POSSIBLE.
  - II) SWALE DEPTH: - MINIMUM 150mm FOR SIDE AND REAR YARD CUT-OFF SWALES. - MAX 250mm (450mm IF COMBINED SIDE YARD IS MORE THAN 3.6m).

### E. RETAINING WALLS

1. RETAINING WALLS ARE GENERALLY REQUIRED WHERE THE DIFFERENCE IN ELEVATION EXCEEDS 0.60M AND A 3:1 SLOPE CANNOT BE USED BECAUSE OF OTHER FACTORS.
2. CONSTRUCT RETAINING WALLS ENTIRELY ON THE HIGHER LOT SO THAT TIE BACKS DO NOT CROSS PROPERTY BOUNDARIES.
3. CERTIFICATION BY THE CONSULTANT IS REQUIRED ATTESTING TO STRUCTURAL INTEGRITY, MATERIAL AND TIE BACKS, LINE AND GRADE.
4. A) FENCING WILL BE REQUIRED WHERE WALL HEIGHT EXCEEDS 0.6m.  
B) SCREEN FENCING, WHERE APPLICABLE, WILL GENERALLY BE PLACED ON TOP OF THE RETAINING WALL, HOWEVER, DUE CONSIDERATION SHOULD BE GIVEN TO THE AESTHETIC IMPACT OF THE COMBINED WALL/FENCE HEIGHT.
5. DETAILS OF WALLS OVER 0.6m ARE TO BE SUBMITTED WITH GRADING PLANS AND STAMPED BY A PROFESSIONAL ENGINEER.



STANDARD

### RESIDENTIAL LOT GRADING AND DRAINAGE NOTES

EFF. DATE	2006-01-01	SCALE	N.T.S.
REV.	I	STANDARD No.	285I.060