

Minimum Grading and Servicing Plan Specifications Infill Serviced Lots

Developments of infill residential lots are to maintain existing development drainage patterns. New grades are to be designed to direct surface drainage within the lot to a suitable outlet, as approved by Infrastructure Approvals Branch. Consideration must be given to existing finished grades on adjacent properties to ensure a suitable design with no adverse impact on the adjacent properties. The Infrastructure Approvals Division reserves the right to ask for additional reports, or impose additional conditions based on site-specific conditions.

Grade and Servicing Control Guidelines

1. Grading in grassed areas is to be between 2% to 7% unterraced. Grades in excess of 7% will require terracing at a maximum of 3:1. Terracing will not be permitted in Amenity areas or Access Easements.
 2. Grading on driveways shall not exceed 6% and shall have a positive grade from the curb/edge of pavement to the front of garage/house.
 3. Maintain a minimum 150 mm clearance between the proposed top of foundation elevation and the finished grade at the structure. Maintain positive surface drainage away from all foundation walls.
 4. Swales with average gradients of less than 2% will require a rigid perforated (100 mm dia.) subdrain with a 25 mm clear stone bedding and backfill, with the clear stone wrapped in geotextile where permitted to do so by the Infrastructure Approvals Division. The subdrain is to be terminated in a rear yard catchbasin and the lead end of the subdrain is to be capped. In the event there is no existing rear yard catchbasin, the owner shall either install a private catchbasin which will outlet to the storm sewer system within the municipal road right-of-way fronting the lot or provide a direct connection to a roadway catchbasin. In areas adjacent to existing developments, which pose drainage problems, small lawn catchbasins may be installed along the subdrain to collect potential ponding, which may occur. NOTE: Other permits are required for connections in the road right-of-way. In no circumstances shall the grade in a swale be less than 1%.
 5. Existing residential homes which were constructed with no perimeter subdrains and are now placing an addition to the existing home require perimeter drains around the new footings and a sump pit for storm water discharge. Discharge of storm water at grade must not affect adjacent properties.
 6. Proposed service locations are to be identified on the drawing and are not to be located within the proposed driveway. Existing sewer and watermain elevations are required to be indicated on the drawing to conform to City of Ottawa and Building Code requirements. Residential servicing will comprise of the following:
 - 19 mm dia. Soft copper, Type “K” water service complete with curbstop located 300 mm outside the property line within the boulevard.
 - 100 mm dia. P.V.C. SDR 28 storm service at a minimum 1% slope.
 - 125 mm dia. P.V.C. SDR 28 sanitary service at a minimum 1% slope.
- All services are **not** to be located within the proposed/existing driveways (exception: Row Townhouses)
7. Retaining walls may be required in situations where there is extreme change in elevation, but where the extreme grade cannot be accommodated by normal terracing. Any walls, which exceed 1.0 m in height, must be designed and certified by a qualified Professional Engineer, licensed in the Province of Ontario. Retaining walls, including tiebacks or other components of the retaining wall, shall be located entirely on owner’s private property.
 8. No retaining wall shall resist or support public property. Any proposed fencing along the top of the retaining wall shall conform to the City of Ottawa Fence By-law which addresses the total combined height (fence height and retaining wall height together).
 9. For lots which require Stormwater Management designs to control increased storm water runoff, a Report shall be prepared, stamped, signed and dated by a Professional Civil Engineer, licensed in the Province of Ontario.
 10. Additional reports and/or studies maybe required to address any other issues which may arise as a result of the proposed development (i.e. soils reports to address slope stability issues, compaction concerns, or any other condition which may seem relevant, establishing high groundwater levels from the Septic System Approval by the Ottawa-Carleton Septic Approval Office).
 11. Residential lots within approved Subdivisions must comply with the approved Grading Plan of the Subdivision.
 12. All existing easements must be shown on the plan.

Minimum Drawing Requirements – Grading and Servicing Plan

The grading and servicing plan shall be prepared, stamped and dated by a qualified Professional Engineer, Certified Engineering Technologist registered in the Province of Ontario, or Ontario Land Surveyor.

1. Wherever practical, drawings shall be on 8^{1/2}"x11" or 8^{1/2}"x14" sheet to a metric scale with scale sizes of 1:100, 1:200, 1:250, 1:400 or 1:500. Imperial scaled drawings will not be accepted.
2. Drawings shall include a north arrow; title block and a key plan indicating general location of the building lot.
3. Drawing shall have legal survey boundaries indicated along with any easements and/or right-of-ways along with boundary dimensions. Location of existing/proposed permanent structures are to be referenced to the property lines.
4. Ground elevations and all permanent structures (i.e. Sheds, house, driveways, garages, catchbasins, decks, pools, utility poles, etc.) located on the lot and beyond 5 meters of the exterior property line shall be identified on the drawing.
5. All details within a minimum of half the road right-of-way abutting the lot shall be indicated on the drawing. This will include but not be limited to culverts, centerline of ditches, edge of sidewalks, edge of pavement, center line of road, adjacent driveways, proximity to nearby street intersections, and cul-de-sacs.
6. Existing and Proposed grade elevations are required at:
 - a) all lot corners and at midpoints of front, rear and side yard, property lines and intermediate points of the site.
 - b) points of grade change and transition areas
 - c) front, rear, sides at the foundation of the proposed dwelling/addition unit
 - d) break points
 - e) edge of pavement/top of curb at projected property lines and proposed driveway entrance for road urban sections, edge of pavement, edge of gravel at projected property lines and proposed driveway entrance for road rural sections. Centerline of road, edge of pavement and if applicable edge of gravel or top of curb spaced appropriately along the frontage of the lot.
 - f) driveway at foundation line
 - g) building/addition top of foundation, underside of footing and finished floor elevations.
 - h) centerline of ditches and swales
 - i) drainage structures (i.e. top of grate, pipe inverts)
 - j) trees, sidewalks, utility poles and or posts, bus stops.
 - k) other locations or items as may be required by the City.
7. Location of all underground service pipes from the public street to the unit (including services which maybe located along the side and/or rear of the property) along with the following specified item locations; basement service clean-out, water meter, perimeter weeper sump pump pit along with discharge location outside the building, septic tank, leaching bed and gas meter.
8. Culvert diameter, length, end treatment and invert elevations.
9. Arrows indicating the direction of surface water runoff along with slope percentage. Surface Water Run-off shall be to an approved outlet or if not available, to be controlled on-site.
10. A benchmark (geodetic for urban lots, assumed fixed point may be permitted for rural lots) is to be identified on the plan. An assumed elevation can be a nail in the side of a utility pole, some permanent fixed structure or the centerline of road elevation at the center of the driveway.