



CITY OF BROADVIEW HEIGHTS ENGINEERING DEPARTMENT

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Retaining Wall Design Requirements

For Retaining Walls under 4 feet (from bottom of footer to top of wall):

- Show in plan view with proposed and existing contours. Plan must be to scale.
- Provide a cross-sectional view(s).
- Must include existing and proposed elevations.
- Include note how area will be restored (i.e. Seeding) and erosion control measures.
- Show all existing and proposed structures.
- Typical engineering scale, 1"=10', 1"=20', etc.
- Show right of way if applicable.
- Walls exceeding 30" must include railing, guardrails or hedging for fall protection.
- Wall material, thickness and reinforcements if necessary.
- Include backfill material information including type and width.

For Retaining Walls over 4 feet (from bottom of footer to top of wall):

- Two copies of plans and calculations. Copies must be signed and sealed by a professional engineer registered in the State of Ohio.
- Specification of the construction material. Referencing ODOT Specifications is acceptable.
- Specifications for backfill material and compaction requirements.
- Wall elevations and multiple cross sections for each retaining wall, to include structural details. The actual ground slope at the top and the toe of the wall.
- Bearing capacity of the soil.
- Method of drainage behind the wall.
- Calculations demonstrating the structural and geotechnical stability. Calculations shall address the effect of any surcharges on the wall.
- Must show the wall structure is safe against overturning. Minimum Factor of Safety for overturning is 1.5.
- Must show the wall is safe against sliding. Minimum Factor of Safety for sliding is 1.5.
- Must show the capability of the structural components of resisting internal shears and bending moments developing as a result of soils and other loading.
- Must show foundation material supporting the wall will not exceed the bearing capacity.
- Must show the settlement and distortion of the wall due to compression of the foundation soil are limited to a tolerable value.
- Guardrail and/or fencing along the top of the retaining wall.
- Typical Engineering or Architectural Scale.
- Show right of way if applicable.
- 4 foot and under retaining wall requirements must be complied with also.

Please note: The information below and calculations requested below are the minimum requirements. Additional information and/or calculations may be requested after review.

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