



Building Department
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GRADING PLAN REVIEW CHECKLIST

This list is provided as a guide to help you understand the information that must be contained in the grading plan. The list is not all inclusive of all building codes but is used as a general guide for plan review. Please address the following items marked with an "X". These comments should be given to the State Licensed Civil Engineer or Surveyor to make correct revisions to you plans.

GENERAL

- _____ Grading plans shall be submitted in duplicate to the Building Department for review.
- _____ Plans shall be prepared neatly and accurately on a minimum 24" x 36" or 18" x 24" sheet paper.
- _____ Plans shall be prepared, signed and sealed by a Civil Engineer or Surveyor registered in the State of Michigan. They shall also be dated current to the year prepared for building permit submittal, not to exceed one (1) year.
- _____ Legal description of the property and a statement affirming that the property has been surveyed and boundary corners of the property have been marked by placing permanent points at each corner of the property.
- _____ North point compass.
- _____ Drawn to scale of not less than 1" = 20'.
- _____ Exact dimensions of the property including bearings and distances as described in the legal description.
- _____ Proper relation of the subject property with all abutting property lines.
- _____ Street names and property addresses. **(Lot number is insufficient)**
- _____ Outline footprint of all existing on-site features (i.e. accessory structures, buildings, driveways, fences, retain walls, etc.). Existing developed sites proposed for demolition may be required to be cleared of all existing features. Intent of each feature shall be identified and clearly noted, "To be demolished and removed from the site" or "To remain on site without change". Each feature will be reviewed for ordinance conformity. Zoning Board of Appeals approval may be required to retain existing on-site features.
- _____ Setback dimensions for building envelope as per Union Township Ordinance.

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ELEVATIONS

- _____ Proposed finished first floor elevations shall not exceed the average finished first floor elevations taken from the immediate adjacent homes to the proposed site for development. Both sides if available.
- _____ Proposed brick ledge elevations shall not exceed the average existing brick ledge elevations taken from the immediate adjacent homes to the proposed site for development.
- _____ Grading plan shall clearly identify extent of all proposed grad changes in relation to the existing established grade elevations and adjacent properties.
- _____ Proposed grade cut to allow for a “forced” walk-out basement, shall be properly designed and detailed to control its surface runoff by means of an independent drainage system separate from the building foundation drainage system. Independent mechanical sump pump or gravity system shall discharge into an approved location.
- _____ Forced walkouts and/or daylight basements proposed for development will be reviewed individually to determine feasibility. Total cubic yards of soil proposed for cut and/or fill shall be shown on the proposed grading plan with section detail identifying top and bottom elevations and slope.
- _____ Location of retaining walls with top and bottom elevations. Provide section detail of the proposed wall construction identifying material type and dimensions drawn to scale.
- _____ Elevations shall be based on U.S.G.S. datum. Benchmark locations for the work shall be indicated on the plan with its proper elevation.
- _____ Existing grade elevations shall be shown as 50 foot on center pegged elevations across the entire property and not less than 50 feet outside the perimeter of the property lines.
- _____ Proposed grade elevations shall be shown as 2 foot on center contour lines across the entire property. The proposed shall overlay the existing elevations.
- _____ Proposed brick ledge elevations (PBL) shall be shown around the entire foundation perimeter footprint and at points of building corners.
- _____ Existing brick ledge elevations (EBL) shall be shown at corners of each existing principle building on adjacent properties to the site of proposed development.
- _____ Proposed finished floor elevations shall be identified (Finished first floor, finished basement floor and finished garage floor).
- _____ Existing finish floor elevations of the existing principal building on site proposed to be demolished shall be shown.
- _____ Existing finish floor elevations of each principle building on adjacent properties to the site proposed for development.

_____ Proposed foundation perimeter footprint dimensions properly corresponding with the proposed building foundation plan.

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DRAINAGE

_____ In no way shall surface runoff be directed so as to adversely impact adjacent properties with a flooding condition. The grading plan should continue as far as a storm sewer outlet or other natural outlet point of discharge to assure proper control of surface runoff. Surface runoff shall be diverted to a storm sewer or other approved point of collection so as not to create a flooding condition.

_____ Swales, ditches, drainage easements, catch basins, pipes and/or other points to which surface runoff is to be directed and controlled. Centerline elevations, drainage direction arrows, pipe sizes with invert elevations shall be clearly identified.

_____ Lots shall be graded so as to direct surface runoff away from foundation walls. The grade away from foundation walls shall fall a minimum of 6 inches within the first 10 feet. Where lot lines, walls, slopes or other physical barriers prohibit 6 inches of fall within 10 feet, drains or swales shall be provided to ensure drainage away from the structure.

_____ Driveway perimeter edge elevations shall show proper control of surface runoff protecting the building foundation and the adjacent properties from flooding. Driveways that are proposed to extend to a property line edge shall be designed so as to control runoff by means of a minimum 6 inch high curb with gutter, a driveway centerline swale or catch basin structured designed with a minimum 2 foot sump and pipe to direct runoff into an approved discharge location.

_____ Sump pump and roof gutter downspout discharge locations. Maintain a minimum distance of 3 feet away from the building foundation and 20 feet away from a property line. Discharge shall be directed into an approved location (i.e. swale, pipe ditch line and/or storm sewer if available).

UTILITIES

_____ Location and sizes of all existing and/or proposed utilities underground and overhead including manholes, hydrants, water, sewer, storm, electric, gas, etc.

_____ Location and sizes of water and sewer connections into building foundation.

_____ Location and sizes of existing and/or proposed septic system and/or well.

_____ Location and widths of all existing and/or proposed rights-of-way and/or easements and all abutting streets and alleys.

NATURAL FEATURES

_____ Existing natural features such as, watercourses, river, lake or stream, high waters edge elevation, wetland edge and flood plain base elevation shall be identified on the site plan. All-natural features shall be protected, identify on the site plan and denoting in the field the “Area of No Disturbance” including installation of a silt fence and establishment of a minimum 25-foot buffer zone. Flood plain base elevation. Natural Features and wetland edges shall be flagged on site for site inspection.

_____ Waterfront properties proposed for development shall be prepared by and bear the signature and seal of the registered professional. Dimensions shall be taken from the closest point between the water's edge and the furthest projection of the principle building. All dimensions and calculations shall be shown.

SOIL EROSION

_____ Silt fence location, installation details and timing sequence of re-establishment of permanent vegetation.

_____ Temporary gravel driveways shall be a minimum 16' x 40' area of crushed concrete; location must be indicated on site plan. Access to the building site shall be large enough to accommodate for all construction traffic.

_____ You must obtain and supply Union Township Building Division with an Isabella County Soil Erosion Permit and show silt fence location around the entire perimeter of proposed areas of soil disturbance.

OTHER

_____ No water main work allowed

_____ No sanitary work allowed

_____ Storm water work must have a Design Professionals seal prior to commencing any related work.

NOTE: A pre-site inspection is required before your permit can be issued.