

TOWNSHIP COOPERATIVE PLANNING ASSOCIATION -- GRADING PERMIT/EROSION CONTROL APPLICATION

4111 11th Avenue SW Room 10
Rochester, MN 55902

-- TCPA --

(507) 529-0774
Fax: (507) 281-6821

TOWNSHIP: _____

DATE: _____

Legal Property Description/Address: _____

Property Owner/Address: _____

Telephone #: _____

Engineer/Soils Scientist: _____ Telephone#: _____

Excavator: _____ Telephone#: _____

Type of Request: Grading Permit Erosion Control Review

Request Description: _____

Existing Use of Property: _____

Present Zoning Classification: _____

Signature of Applicant _____ Date _____

Filing Fee \$ 235.00, made payable to **TCPA**.

Surety in Place: Y N Surety Amount _____ Engineer's Estimate \$ _____

Reviewed by the Zoning Administrator on _____, to consider the above request.

_____ Approved _____ Approved with Attached Conditions:

Signature _____

TCPA Grading Plan Policy

If your grading project is disturbing more than 10,000 square feet, TCPA requires that you obtain a grading permit. Grading of less than 10,000 square feet requires a zoning certificate.

Additionally, if any of the below conditions exist, TCPA requires that a registered civil engineer prepare the grading plan and complete the grading plan checklist. **Any of the below also require you to reimburse the township for engineering fees associated with the review, approval and construction inspection of the grading project:**

- Any grading within public property (except driveway culverts)
- Any grading activity which disturbs more than 1 acre of land
- Any grading activity involving more than 10,000 cubic yards
- Any grading activity which alters the contours by more than 10 feet vertically

A grading plan must be deemed complete by TCPA staff before a preliminary plat application will be received.

Preliminary Plat submittal deadlines are 3 weeks prior to the next scheduled planning and zoning meeting.

A performance bond in the amount of 125% of the engineer's estimate is required for any work performed within public property and any storm water pond work performed within a storm water easement.

TCPA 2015 Schedule of engineering review fees:

Professional Engineer \$167.00/hour

Engineering Aid \$87.00/hour

Survey Crew \$201/hour

TCPA GRADING PLAN CHECKLIST

-2015-

KEY

= Yes

= No

Blank = Not Applicable

Project Name: _____

Township: _____

Prepared By: _____ **Date:** _____

Reviewed By: _____ **Date:** _____

| GENERAL |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> NPDES permit and SWPPP referred to on plan |
| <input type="checkbox"/> Completed TCPA grading permit application |
| <input type="checkbox"/> 5 copies of signed grading submitted (one copy directly to reviewing engineer) |
| <input type="checkbox"/> Owner name and address shown on plan |
| <input type="checkbox"/> Plan is 1"=50' or larger scale |
| <input type="checkbox"/> North arrow shown on plan |
| <input type="checkbox"/> Plan drawn in two-foot contours (solid lines) |
| <input type="checkbox"/> Existing contours are labeled (dashed lines) |
| <input type="checkbox"/> Directional arrows shown for proposed drainage |
| <input type="checkbox"/> Details of terrain and drainage are provided for areas adjacent to proposed grading |
| <input type="checkbox"/> Existing public and private utilities are shown |
| <input type="checkbox"/> Boundaries of drainage areas shown (drainage report) |
| <input type="checkbox"/> Soil types shown (drainage report) |
| <input type="checkbox"/> Grading limits clearly shown on plan |
| <input type="checkbox"/> All receiving waters, including wetlands, within ½ mile shown or identified on plan |
| <input type="checkbox"/> Property limits are shown |
| <input type="checkbox"/> Streets (existing and proposed) are labeled |
| <input type="checkbox"/> Lot & Block or Section quadrant labeled on plan |
| <input type="checkbox"/> Schedule of BMP installation shown |
| <input type="checkbox"/> BMP details included on plan |
| <input type="checkbox"/> County or MnDOT permit obtained for work in ROW |
| <input type="checkbox"/> Any Township Board approval conditions are met |
| SITE GRADING, SEDIMENT & EROSION CONTROL |
| <input type="checkbox"/> Down-slope sediment control scheduled before grading |
| <input type="checkbox"/> Adjacent property protected from drainage and sediment |
| <input type="checkbox"/> Stabilized vehicle exits are provided |
| <input type="checkbox"/> Silt fences are provided. "High flow, heavy duty" designated in concentrated areas |
| <input type="checkbox"/> All storm inlets (existing & proposed) include temporary sediment control and remain in place until upstream stabilization |
| <input type="checkbox"/> Maximum unbroken slope 3:1 or steeper of 75 feet horizontal. Min. break of 8 feet horizontal. |

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| <input type="checkbox"/> Temporary stockpiles include additional silt fence or other sediment control |
| <input type="checkbox"/> Percent of slope shown for streets & drainage swales |
| <input type="checkbox"/> Proposed elevation of garage and lowest floor, ground at front and rear of buildings, along with structure type indicated on the plan. |
| <input type="checkbox"/> Top of foundation min. 6" from ground |
| <input type="checkbox"/> Grade 1' below top of foundation 10' from building |
| <input type="checkbox"/> Lowest opening of buildings at least 1' above any overflow elevation, 2' above low road crossing, 2' above pond 100-yr water level and 1' above 100-yr flood elevation (FEMA or other approved) |
| <input type="checkbox"/> Seeding schedule for areas within 200' of surface water within maximum time allowed shown on plan: |
| <input type="checkbox"/> Steeper than 3:1 - 7 days |
| <input type="checkbox"/> 10:1 to 3:1 - 14 days |
| <input type="checkbox"/> Flatter than 10:1 - 21 days |
| <input type="checkbox"/> Temporary or permanent cover is indicated for all disturbed areas. Temp. seeding specifies seed mix, including disk anchored mulch on all slopes >200' or >5%. Permanent cover specifies 4" min. topsoil, seed mix and disk anchored mulch, or 4" min. topsoil and sod |
| <input type="checkbox"/> Slopes steeper than 4:1 and 4:1 slopes longer than 30' are seeded and protected with erosion control blankets or sodded and staked. Blanket category specified per MnDOT 3885.1. Plan shows required blanket locations. |
| <input type="checkbox"/> Statement that slopes steeper than 4:1 are stable from land-sliding and surface erosion. Geotechnical report for slopes > 3:1 |
| <input type="checkbox"/> For sites where temporary or permanent cover will not be complete by November 15, plan indicates adequate measures to control spring erosion & sedimentation |
| <input type="checkbox"/> Minimum slope of drainage swales shall not be flatter than adjacent street profile, or 1% in all other locations without prior approval |
| <input type="checkbox"/> Typical sections for roadways and drainage ditches shown on the plan |

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| <input type="checkbox"/> Drainage easements are shown and labeled on the plan |
| <input type="checkbox"/> Drainage easements are provided where concentrated flow is received from more than 1 adjacent lot. 100-yr max flow contained within easement. |
| <input type="checkbox"/> Minimum drainage easements for flows from 1 acre or less or 4 lots or less are a min. of 15' wide. 4:1 side slopes on ditches. |
| <input type="checkbox"/> Minimum drainage easements for flows from more than 1 acre or more than 4 lots are a min. of 20' wide. 4:1 side slopes on ditches. |
| <input type="checkbox"/> Control elevations for drainage ways are provided |
| <input type="checkbox"/> Velocity computations are provided for drainage easements where concentrated flow from more than 2 acres or 8 lots is directed. Where 10-yr velocities exceed 5 ft/sec, permanent turf reinforcement mats are installed. Blanket per MnDOT 3888.2A2 is specified. Plan depicts blanket locations and cross sections. |
| <input type="checkbox"/> Easement documents are signed and submitted to TCPA with recording fees, or included on plat |
| <input type="checkbox"/> Ditches stabilized within 24 hours of connection to surface water outlet |
| OUTLETS & ENERGY DISSIPATION |
| <input type="checkbox"/> Discharge direction of flow generally 45 degrees or less to the flow direction of receiving ditch or stream |
| <input type="checkbox"/> Where discharge velocities are 10 fps or less, riprap and filter volumes are indicated in accordance with MnDOT Standard Plates. |
| <input type="checkbox"/> Where discharge velocities are greater than 10 fps, energy dissipater is provided along with riprap and filter. |
| <input type="checkbox"/> Pipe outlet energy dissipation complete within 24 hours of connection to surface water or outlet |
| TEMPORARY SEDIMENT BASINS |
| <input type="checkbox"/> Temporary sediment basins provided |
| <input type="checkbox"/> Sized to store 2-yr, 24-hr storm from the drainage area below the outlet pipe (no smaller than 1800 cf/acre of drainage area), or |
| <input type="checkbox"/> Sized at 3,600 cf/ acre or drainage area |
| <input type="checkbox"/> Designed to minimize short-circuiting |
| <input type="checkbox"/> Discharge of Floating debris prevented |
| <input type="checkbox"/> Designed for full dewatering |
| <input type="checkbox"/> Principal and emergency spillway designed per BMP storm frequency standards |
| <input type="checkbox"/> Plan requires any temp. or permanent sediment ponds to be constructed at the beginning of construction |
| <input type="checkbox"/> For areas draining less than 10 acres, alternative sediment control provided: <ul style="list-style-type: none"> <input type="checkbox"/> Multiple lines of silt fence <input type="checkbox"/> Smaller basins <input type="checkbox"/> Vegetative strips |

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| INLETS & OVERFLOWS |
| <input type="checkbox"/> All apron elevations (inlets and outlets) are labeled. Area inlet elevations are labeled. Pipe sizes and materials are labeled. |
| <input type="checkbox"/> 400' max. manhole spacing for lines 15" dia or less |
| <input type="checkbox"/> 500' max. manhole spacing for lines 18" to 30" dia. |
| <input type="checkbox"/> Flow direction change no greater than 90 degrees |
| <input type="checkbox"/> Apron inlets include trash racks |
| <input type="checkbox"/> Trash racks on inlet structures in wooded areas designed assuming a minimum 50% plugging condition. |
| <input type="checkbox"/> Drainage does not cross intersections |
| <input type="checkbox"/> Overflow swales are provided which limit the depth of ponding in the roadways to 2' or less |
| <input type="checkbox"/> Minimum depth of road ditch = 3', with 4' bottom and 3:1 side slopes |

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| PERMANENT PONDS |
| <input type="checkbox"/> Entire drainage area shown (drainage report) |
| <input type="checkbox"/> Pond cross section included on plan |
| <input type="checkbox"/> Where possible, locate inlet and outlets at opposite ends of ponds and provide forebay at inlet |
| <input type="checkbox"/> 10:1 bench provided for first 1 foot below normal water elevation |
| <input type="checkbox"/> 4:1 max slope from normal water elevation to 100-yr water elevation |
| <input type="checkbox"/> 3:1 max slope below normal water elevation |
| <input type="checkbox"/> Pond depth is 3 to 10 feet based on normal water level |
| <input type="checkbox"/> Normal water elevation is labeled on the plan |
| <input type="checkbox"/> 100-y high water level is labeled on the plan |
| <input type="checkbox"/> Permanent pool volume of 1800 cf/acre drained |
| <input type="checkbox"/> Water quality volume equal to ½ inch runoff over total impervious surface area at ultimate development |
| <input type="checkbox"/> Outlet sized to discharge no more than 5.66 cfs/acre of pond surface |
| <input type="checkbox"/> Outlet designed to prevent short-circuiting and discharge of floating debris |
| <input type="checkbox"/> Emergency overflow spillway is provided to accommodate 100-yr event. High point elevation and direction of flow are shown on the plans. |
| <input type="checkbox"/> Emergency overflow spillway is located to protect adjacent property and large fill sections |
| <input type="checkbox"/> 100-yr runoff which is designed to flow to the pond does not bypass the pond; unmodeled 100-yr flow does not enter the pond |
| <input type="checkbox"/> Minimum 10' width at top of dam (if dam is <15') |
| <input type="checkbox"/> 12' wide access and turn-around area for maintenance vehicles is shown on a slope <15% |
| <input type="checkbox"/> DNR Dam Safety Permit obtained if dam height is >6' and storage to top of dam is > 15 acre-ft. |

| INFILTRATION/FILTRATION BASINS |
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| <input type="checkbox"/> Type(s) used: |
| <input type="checkbox"/> Infiltration basins |
| <input type="checkbox"/> Infiltration trenches |
| <input type="checkbox"/> Rain gardens |
| <input type="checkbox"/> Sand filters |
| <input type="checkbox"/> Organic filters |
| <input type="checkbox"/> Bioretention |
| <input type="checkbox"/> Natural depressions (wetland not included) |
| <input type="checkbox"/> Other _____ |
| <input type="checkbox"/> Floating debris removed before infiltration system |
| <input type="checkbox"/> Site sensitivity analysis included |
| <input type="checkbox"/> Evaluation of hydrologic impact included |
| <input type="checkbox"/> Infiltration scheduled after full site development and stabilization |
| <input type="checkbox"/> Runoff routed away from infiltration system during construction |
| <input type="checkbox"/> Site controlled to minimize soil compaction |
| <input type="checkbox"/> Pretreatment sediment removal included |
| <input type="checkbox"/> Designed for 1 inch of runoff from total impervious surface areas for ultimate development within 48 hours |
| <input type="checkbox"/> System bypass for flows that cannot be filtered |
| <input type="checkbox"/> Minimum vertical separation of 3 feet between seasonal high ground water and bottom of infiltration system |
| <input type="checkbox"/> Minimum vertical separation of 3 feet between impermeable layer and bottom of infiltration system |
| <input type="checkbox"/> Soil test results, system capacity calculations, and computer modeling results provided (drainage report) |
| <input type="checkbox"/> Min. 10' width maintenance access provided |
| <input type="checkbox"/> Emergency overflow spillway provided and located to protect adjacent property and large fill sections |

| DRAINAGE REPORT |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> Map of existing watersheds |
| <input type="checkbox"/> Map of proposed watersheds |
| <input type="checkbox"/> Soil type map |
| <input type="checkbox"/> Discussion of existing and proposed conditions |
| <input type="checkbox"/> Comparison of existing and proposed runoff. Proposed runoff shall not exceed existing runoff for the 2-yr, 10-yr and 100-yr storm events (Atlas 14 rainfall depth) |
| <input type="checkbox"/> Modeling calculations and results included |
| <input type="checkbox"/> Discharge and storage calculations for all stormwater ponds and infiltration basins |
| <input type="checkbox"/> Velocity computations for all pipe outlets |
| <input type="checkbox"/> Velocity computations for all drainage swales |
| <input type="checkbox"/> Culvert sizing calculations |
| <input type="checkbox"/> Storm sewer design calculations |
| <input type="checkbox"/> Calculations for compliance with NPDES requirements |

| ON-SITE SEWAGE TREATMENT SYSTEMS |
|-------------------------------------------------------------------------|
| <input type="checkbox"/> ISTS investigation submitted to TCPA |
| <input type="checkbox"/> ISTS areas shown on plan |
| <input type="checkbox"/> Grading does not extend into ISTS areas |
| <input type="checkbox"/> ISTS areas are protected from soil compaction |
| <input type="checkbox"/> Storm drainage is not directed over ISTS areas |

COMMENTS:

TCPA GRADING PLAN APPROVAL

Project Name: _____

Township: _____

Prepared By: _____ **Date:** _____

Firm: _____

Reviewed By: _____ **Date:** _____

Firm: _____

Approved By: _____ **Date:** _____

Firm: _____

COMMENTS:
