

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: Haverhill

DATE: 9/7/21

Legal Property Description/Address: 3255 65th St NE

Rochester, MN 55906 [NW 1/4 SW 1/4 Section 5, Twp. 107N, Range 013W]

Property Owner/Address: Nathan Augeson

2135 E Heights Ln NE

Telephone #: (507) 319-9918

Rochester, MN 55906

Engineer/Soils Scientist: G-Cubed Inc. Telephone#: (507) 867-1666

Excavator: Ottman Excavating, Inc. Telephone#: (507) 367-2777

Type of Request: Grading Permit Erosion Control Review

Request Description: This project is for the construction of a new private driveway serving a new building site.

Existing Use of Property: The property is currently open area and not utilized for agricultural purposes.

Present Zoning Classification: A-2

Signature of Applicant  Date 9/7/21

Filing Fee \$ 235.00, made payable to TCPA.

Surety in Place: 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: Augeson Driveway

Township: Haverhill

Prepared By: Jason Kappers, EIT - G-Cubed, Inc. **Date:** 9/7/21

Reviewed By: Geoffrey G. Griffin, PE - G-Cubed **Date:** 9/7/21

GENERAL
<input checked="" type="checkbox"/> NPDES permit and SWPPP referred to on plan
<input checked="" type="checkbox"/> Completed TCPA grading permit application
<input type="checkbox"/> 5 copies of signed grading submitted (one copy directly to reviewing engineer)
<input checked="" type="checkbox"/> Owner name and address shown on plan
<input checked="" type="checkbox"/> Plan is 1"=50' or larger scale
<input checked="" type="checkbox"/> North arrow shown on plan
<input checked="" type="checkbox"/> Plan drawn in two-foot contours (solid lines)
<input checked="" type="checkbox"/> Existing contours are labeled (dashed lines)
<input checked="" type="checkbox"/> Directional arrows shown for proposed drainage
<input checked="" 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 checked="" type="checkbox"/> Boundaries of drainage areas shown (drainage report)
<input checked="" type="checkbox"/> Soil types shown (drainage report)
<input checked="" type="checkbox"/> Grading limits clearly shown on plan
<input checked="" type="checkbox"/> All receiving waters, including wetlands, within 1/2 mile shown or identified on plan
<input checked="" type="checkbox"/> Property limits are shown
<input checked="" type="checkbox"/> Streets (existing and proposed) are labeled
<input checked="" type="checkbox"/> Lot & Block or Section quadrant labeled on plan
<input checked="" type="checkbox"/> Schedule of BMP installation shown
<input checked="" 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 checked="" type="checkbox"/> Down-slope sediment control scheduled before grading
<input checked="" type="checkbox"/> Adjacent property protected from drainage and sediment
<input checked="" type="checkbox"/> Stabilized vehicle exits are provided
<input checked="" type="checkbox"/> Silt fences are provided. "High flow, heavy duty" designated in concentrated areas
<input checked="" type="checkbox"/> All storm inlets (existing & proposed) include temporary sediment control and remain in place until upstream stabilization
<input checked="" type="checkbox"/> Maximum unbroken slope 3:1 or steeper of 75 feet horizontal. Min. break of 8 feet horizontal.

<input checked="" type="checkbox"/> Temporary stockpiles include additional silt fence or other sediment control
<input checked="" type="checkbox"/> Percent of slope shown for streets & drainage swales
<input checked="" 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 checked="" 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 checked="" type="checkbox"/> Seeding schedule for areas within 200' of surface water within maximum time allowed shown on plan:
<input checked="" 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 checked="" 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 checked="" 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 checked="" type="checkbox"/> Statement that slopes steeper than 4:1 are stable from land-sliding and surface erosion. Geotechnical report for slopes > 3:1
<input checked="" 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 checked="" 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 checked="" type="checkbox"/> Typical sections for roadways and drainage ditches shown on the plan

<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

- Discharge direction of flow generally 45 degrees or less to the flow direction of receiving ditch or stream
- Where discharge velocities are 10 fps or less, riprap and filter volumes are indicated in accordance with MnDOT Standard Plates.
- Where discharge velocities are greater than 10 fps, energy dissipater is provided along with riprap and filter.
- Pipe outlet energy dissipation complete within 24 hours of connection to surface water or outlet

TEMPORARY SEDIMENT BASINS

- Temporary sediment basins provided
- 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
- Sized at 3,600 cf/acre or drainage area
- Designed to minimize short-circuiting
- Discharge of Floating debris prevented
- Designed for full dewatering
- Principal and emergency spillway designed per BMP storm frequency standards
- Plan requires any temp. or permanent sediment ponds to be constructed at the beginning of construction
- For areas draining less than 10 acres, alternative sediment control provided:
 - Multiple lines of silt fence
 - Smaller basins
 - Vegetative strips

INLETS & OVERFLOWS

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

PERMANENT PONDS

- Entire drainage area shown (drainage report)
- Pond cross section included on plan
- Where possible, locate inlet and outlets at opposite ends of ponds and provide forebay at inlet
- 10:1 bench provided for first 1 foot below normal water elevation
- 4:1 max slope from normal water elevation to 100-yr water elevation
- 3:1 max slope below normal water elevation
- Pond depth is 3 to 10 feet based on normal water level
- Normal water elevation is labeled on the plan
- 100-y high water level is labeled on the plan
- Permanent pool volume of 1800 cf/acre drained
- Water quality volume equal to 1/2 inch runoff over total impervious surface area at ultimate development
- Outlet sized to discharge no more than 5.66 cfs/acre of pond surface
- Outlet designed to prevent short-circuiting and discharge of floating debris
- Emergency overflow spillway is provided to accommodate 100-yr event. High point elevation and direction of flow are shown on the plans.
- Emergency overflow spillway is located to protect adjacent property and large fill sections
- 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
- Minimum 10' width at top of dam (if dam is <15')
- 12' wide access and turn-around area for maintenance vehicles is shown on a slope <15%
- DNR Dam Safety Permit obtained if dam height is >6' and storage to top of dam is > 15 acre-ft.

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

DRAINAGE REPORT
<input checked="" type="checkbox"/> Map of existing watersheds
<input checked="" type="checkbox"/> Map of proposed watersheds
<input checked="" type="checkbox"/> Soil type map
<input checked="" type="checkbox"/> Discussion of existing and proposed conditions
<input checked="" 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 checked="" type="checkbox"/> Modeling calculations and results included
<input checked="" type="checkbox"/> Discharge and storage calculations for all stormwater ponds and infiltration basins
<input checked="" type="checkbox"/> Velocity computations for all pipe outlets
<input checked="" type="checkbox"/> Velocity computations for all drainage swales
<input checked="" type="checkbox"/> Culvert sizing calculations
<input checked="" type="checkbox"/> Storm sewer design calculations
<input checked="" 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: Augeson Driveway

Township: Haverhill

Prepared By: Jason Kappers, EIT & Geoffrey G. Griffin, PE **Date:** 9/7/21

Firm: G-Cubed, Inc.

Reviewed By: _____ **Date:** _____

Firm: _____

Approved By: _____ **Date:** _____

Firm: _____

COMMENTS:
