

***Appendix K:
Soil Erosion and Sedimentation Control
Plan Check List***

SOIL EROSION AND SEDIMENTATION CONTROL PLAN CHECK LIST

Items listed below must be clearly depicted on plans for review

Cover Page

- Seal of A State of Michigan Registered Professional Engineer.
- North arrow
- Location Map
- Sheet index
- Legend
- Legal Description of entire project.
- Timing Sequence.
- Project Name
- Owners Name
- Job Number
- Amount of area to be disturbed.
- Drainage tributary map
- A note clearly stating that the Detention / Retention / Sedimentation Ponds shall be excavated, top soiled, seeded, mulched and tacked prior to the start of the massive earth disruption.

Soil Survey

- Soil Borings data indicating surfacial soil types or information provided from the Livingston County Soil Survey.

Overall Site & Grading Plan

- Distance to any and all wetlands, lakes, county drains etc.
- Predominant land features, (critical areas, swale's, wetlands, lakes, steams, county drains, steep slopes, buildings, roads, property lines etc.).
- Slope Contours on and off site.
- Silt Fence or Straw Bale location, clearly indicated on plans.
- Limits of grading for entire project.
- A Maintenance schedule is needed for all soil erosion controls, both temporary and permanent. (A maintenance schedule should be designed to reflect the preventative maintenance practices during the course of the project by the managers).

Storm Sewer Calculations

- Storm sewer drainage calculations must be on the plans or accompanied as an attachment.

Top Soil & Soil Storage Areas

- Location of Top soil or soil storage areas. Top soil or soil storage areas shall be seeded and mulched, or matted with straw, immediately after the stripping process is completed, to prevent wind and water erosion. Top soil storage areas should be shown on plans depicting all Soil Erosion Controls.

Slopes and Ditches

- On site ditches shall be of the flat bottom type minimum width of 2' with a minimum of 3' horizontal to 1' vertical side slopes, 3:1.
- Side slopes in excess of 3' horizontal to 1' vertical shall not be used except with a mechanical device such as a retaining wall, terracing.
- Ditches with steep grades will need "stone flow checks" to prevent scouring of the ditch bottoms. They may be used as a temporary measure and removed once sufficient stabilization has been established. These shall be depicted on plans by the engineer. Indicate flow checks on all slopes 3.00% and greater.

Detention / Retention, Sedimentation Ponds

- New land developments within Livingston County shall be equipped with detention / retention facilities for storm water in accordance with the Drainage Policies of the Livingston County Drain Commissioner.
- Inlets into detention ponds must not discharge at the same location as the outlet structure.
- Detention Pond Stand Pipe Outlet Detail must be the Livingston County Drain Commissioners standard Detention Pond outlet, e.g. orifice outlets without sedimentation control devices are prohibited.
- Stand pipe structure must have a 2 ft. Sump.
- Detention Pond stand pipe structure shall show staggering of outlet holes at different elevations. This will minimize plugging and provide for more effective filtering .
- A note should be placed on the plans stating that prior to the completion of the project, the stone around the stand pipe structure shall be refreshed with clean stone.

- Detail of Detention/Retention pond depicting slope % , Spillway and ultimate outlets from project are needed.
- Detention/Retention, Sedimentation Ponds shall be excavated, top soiled, seeded, mulched and tacked prior to the start of massive earth disruption. (This must be called out and depicted on the plans).
- Inlets into Detention/Retention Ponds must be located within two feet of the bottom floor of the pond.

Detention Pond Spillway

- The plan should identify the spillway location.
- Rip-rap proposed in the construction of the emergency spillway must be placed over keyed-in geo-fabric blanket.

Drainage Easements

- All on site and off site drainage easements shall be clearly shown on plans.

Silt Fence

- All commercial projects constructed in Livingston County shall install 36" silt fence.

Inlet Protection

- Sedimentation protection for catch-basin inlets. Silt sacks are the preferred choice in the winter months, because they are less likely to be disturbed by the process of snow plowing.
- Open-Pipe, inlet protection must be provided with straw bales, stone or geo - fabric.

Outlet Protection

- For each outlet location, provide the pipe size, slope, and design discharge to determine the proper amount and size of rip/rap.
- All storm drains 15" in diameter or larger shall have animal guards installed to prevent entrance to the system.
- All rip-rap must be placed over keyed in geo-fabric and detailed as such on plans.
- Storm drain outlets that do not empty into the retention/detention pond shall have a temporary 5' x 10' x 3' sump installed at the termination of the storm sewer. Upon completion of the stabilization work the sump area shall be filled and rip rapped with cobble stone over keyed in filter fabric. Silt traps shall be inspected after each storm.

- Splash blocks may be required depending on outlet flow rate or velocity.

Tracking onto public roadway

- It is required that each development have an ingress/egress of crushed stone to restrict tracking of material onto the Public Roadway. All commercial construction sites require a minimum 75-foot tracking mat shown at ingress/egress. Each development may have different circumstances.

Stabilization Standards

- For subdivision and site condominium developments: As of May 01, 2000, it is required that temporary stabilization of the entire site be completed and approval from the Livingston County Drain Commissioner's Office obtained prior to the issuance of single family dwelling permits.
- For commercial or industrial sites, common areas shall be called out on plans, in accordance with Part 17, prescribed by R 323.1709 and R 323.1710, pursuant to PART 91, Soil Erosion and Sedimentation Control, of the Natural Resources and Environmental Protection Act (Previously known as P.A. 347 of 1972) of Act 347, Public Acts of 1972, as amended) indicating areas to be stabilized after 15 days of grade work. Areas to be outlined are as follows: detention/retention, drainage easements, utility easements, boulevards, etc.

Seeding, Fertilizer and Mulch Bare Ground Ratio

- This information shall be detailed on the construction plans.
- Top-Soil 3" in depth
- Grass Seed 217.84lbs per acre
- Fertilizer 150lbs per acre
- Straw Mulch 3" in depth (All mulching must have a tie down (asphalt tackifier, net binding, etc.)
- Hydroseeding is not acceptable for slopes exceeding 1%, in such cases stabilization shall be done with seed and straw mulch with a tackifier.

Details

- Detention pond stand pipe outlet detail.
- Detail of detention/retention pond depicting slope %. Spillway and ultimate outlets from project are needed.
- Details for rip-rap, geo-fabric
- Details for silt fence (36"), straw bales, diversion berms.
- Details for storm structure protection.
- Detail of emergency spillway

- Detail of animal guard
- Detail of stabilization blankets, mulch, fertilizer and seeding. (Type, size and installation procedure).
- Detail of tracking mat.

***Appendix L:
Storm Drain Backfill Detail***
