1. INSTALL ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES IN ACCORDANCE WITH THE SWPPP, PROJECT PLANS, AND SPECIFICATIONS IN ORDER TO EFFECTIVELY REDUCE THE VOLUME AND VELOCITY OF RUNOFF AND REDUCE EROSION OF SURFACE SOILS AND TO CONTROL SEDIMENT TRANSPORT OFF SITE DURING THE CONSTRUCTION PERIOD.

2. INSPECT AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES DURING THE DURATION OF THE PROJECT.

3. SEED MIX SHALL BE SELECTED BASED ON SITE CONDITIONS INCLUDING SOIL TYPE, MOISTURE CONDITIONS, FLOW CONDITIONS, SUN VS. SHADE CONDITIONS, AESTHETICS, AND MAINTENANCE REQUIREMENTS. MINDDOT SPECIFICATION 3876 PROVIDES USEFUL CRITERIA FOR SELECTING APPROPRIATE SEED MIXTURES.

4. EROSION CONTROL BLANKET SHALL BE SELECTED IN ACCORDANCE WITH MINDDOT SPECIFICATION 3876 FOR THE SPECIFIC SITE CONDITIONS. THE MINIMUM RECOMMENDED EROSION CONTROL BLANKET IS CATEGORY 3, 2S. MORE PERMANENT EROSION CONTROL BLANKET MAY BE REQUIRED BASED ON SWALE GRADIENT, FLOW VELOCITY, AND EROSION CONTROL BLANKET SHALL BE SELECTED IN ACCORDANCE WITH MINDDOT SPECIFICATION 3885 FOR THE SPECIFIC SITE CONDITIONS. THE MINIMUM RECOMMENDED EROSION CONTROL BLANKET SHALL BE SELECTED IN ACCORDANCE WITH MINDDOT SPECIFICATION 3885 AND MANUFACTURERS RECOMMENDATIONS FOR ANCHORING, FLOW DEPTH.

5. IF POSSIBLE, STABILIZE ALL UPSTREAM TRIBUTARY AREAS BEFORE COMPLETING FINISH GRADING OF SWALES. THIS WILL MINIMIZE THE DEPOSITION OF SEDIMENT IN THE FINISHED SWALE.

6. IN THE EVENT THAT SEDIMENT IS INTRODUCED INTO THE BMP DURING OR IMMEDIATELY FOLLOWING EXCAVATION, THE MATERIAL WILL NEED TO BE REMOVED FROM THE SWALE PRIOR TO INITIATING THE NEXT STEP IN THE CONSTRUCTION PROCESS. IF SEDIMENT IS INTRODUCED TO THE SWALE, IT HAS BEEN DESIGNED TO INFILTRATE STORMWATER. SEDIMENT THAT HAS BEEN WASHED INTO THE SWALE DURING THE EXCAVATION PROCESS CAN SIGNIFICANTLY REDUCE THE INFILTRATION CAPACITY OF THE SOIL.

7. FINISH GRADE THE SWALE USING METHODS THAT AVOID RECOMPACTION OF LOOSED SOIL. ACCEPTABLE METHODS INCLUDE HAND RAKING, SMOOTHING WITH A BACKHOE BUCKET FROM OUTSIDE THE LIMITS OF THE SWALE, AND/OR PULLING A DRAG BEHIND LOW GROUND PRESSURE EQUIPMENT LIKE AN ATV.

8. SOW SEED AND PLACE EROSION CONTROL BLANKET AFTER FINISH GRADING AND BEFORE THE FIRST RAINFALL EVENT (WITHIN 24 HOURS IF PREPARED). DEPOSITION OF SEDIMENT ON TOP OF THE EROSION CONTROL BLANKET MAY KILL SEED AND BECOME A SOURCE OF SEDIMENT WASHING OFF SITE. SEDIMENT ON TOP OF THE EROSION CONTROL BLANKET SHALL BE REMOVED TO A DEPTH LESS THAN ONE INCH.


**Table 1: MIDS Grass Channel Soil Amendment Matrix**

<table>
<thead>
<tr>
<th>Vegetation Type</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
</table>
| MODIFIED TURF SWALE OR NATIVE GRASS SWALE | Place 0" imported topsoil ** on top of subsoil by loosing subsoil to a minimum depth of 12" | Place 0" imported topsoil ** on top of subsoil by loosing subsoil to a minimum depth of 12" | Place 0" imported topsoil ** on top of subsoil by loosing subsoil to a minimum depth of 12" | Place 0" imported topsoil ** on top of subsoil by loosing subsoil to a minimum depth of 12"

**Topsoil shall be sandy loam, loam, or loam mixture per USDA textural triangle with less than 5% clay content.**

**Notes:**
- Table 1 is for proper sequence for locating subsurfaces and adding soil amendments.
- Erosion repair and sediment removal shall be completed without compacting the soil.
- The minimum recommended erosion control blanket is category 3, 2S. More permanent erosion control blanket may be required based on swale gradient, flow velocity, and erosion control blanket shall be selected in accordance with MNDOT specification 3885.

**General Notes - Grass Channels and Dry Swales:**
- Install all temporary erosion and sediment control measures in accordance with the SWPPP, project plans, and specifications in order to effectively reduce the volume and velocity of runoff and reduce erosion of surface soils and to control sediment transport off site during the construction period.
- Inspect and maintain all erosion and sediment control measures during the duration of the project.
- Seed mix shall be selected based on site conditions including soil type, moisture conditions, flow conditions, sun vs. shade conditions, aesthetics, and maintenance requirements. MNDOT specification 3876 provides useful criteria for selecting appropriate seed mixtures.
- Erosion control blanket shall be selected in accordance with MNDOT specification 3876 for the specific site conditions. The minimum recommended erosion control blanket is category 3, 2S. More permanent erosion control blanket may be required based on swale gradient, flow velocity, and flow depth.
- Erosion control blankets installation shall be in accordance with MNDOT specification 3876 and manufacturers recommendations for anchoring, check, trenches, and edge and end overlaps.
- Avoid compaction of all in-situ soils and imported soils unless directed otherwise. Do not loosen subsurfaces under check dams.
- If possible, restrict flow or divert flow from swale until vegetation is established.

**Typical Construction Sequencing - Grass Channel:**
- Excavate channel to subgrade elevations per the plan.
- Construction sequence varies depending on in-situ soil type. See Table 1 for proper sequence for locating subsurfaces and adding soil amendments.
- Loosen soil in a manner that avoids recompaction of the soil by construction traffic.
- After soil loosening and addition of soil amendments, the surface of the swale will be rough.
- If possible, stabilize all upstream tributary areas before completing finish grading of swales. This will minimize the deposition of sediment in the finished swale.
- In the event that sediment is introduced into the BMP during or immediately following excavation, the material will need to be removed from the swale prior to initiating the next step in the construction process. If sediment is introduced to the swale, it has been designed to infilt rate stormwater. Sediment that has been washed into the swale during the excavation process can significantly reduce the infiltration capacity of the soil.
- Finish grade the swale using methods that avoid recompaction of loosened soil. Acceptable methods include hand raking, smoothing with a backhoe bucket from outside the limits of the swale, and/or pulling a drag behind low ground pressure equipment like an ATV.
- Sow seed and place erosion control blanket after finish grading and before the first rainfall event (within 24 hours if preferred). Deposition of sediment on top of the erosion control blanket may kill seed and become a source of sediment washing off site. Sediment on top of the erosion control blanket shall be removed to a depth less than one inch.
- If step 8 is not completed before the first rainfall event, repair resulting erosion and remove all accumulated sediment from the swale before sowing seed and placing erosion control blanket. Erosion repair and sediment removal shall be completed without compacting the soil (see step 5).