

SECTION 4.00
SOIL EROSION AND SEDIMENTATION CONTROL

4.01 SCHEDULING

Temporary and permanent erosion control measures shall be provided for all land disturbing work in accordance with an erosion control plan approved by the City of Asheville. A grading permit shall be obtained from the Engineering Department prior to beginning site work. Temporary measures shall be installed and inspected by the City of Asheville for compliance prior to any land disturbing activity. All permanent erosion control measures shall be incorporated into the work at the earliest practical time. All temporary measures shall be maintained until the permanent measures have taken effect. Temporary and permanent measures shall be coordinated to provide effective and continuous erosion control throughout the construction and post-construction period to minimize siltation of streams, lakes, reservoirs, and other impoundments, ground surfaces, and other property. These measures shall remain in effect until Final Approval is given by the City of Asheville.

4.02 TEMPORARY MEASURES

Silt Fence is recommended to be installed at the toe of all fill slopes and any other necessary locations as directed by the Engineering Department. Silt fence shall be erected in accordance with Standard Detail 4.01.

Diversion Ditches shall be installed at the top of cut and fill slopes and any other necessary locations as directed by the Engineering Department . Diversion ditches shall be installed in accordance with Standard Detail 4.09.

Construction Entrances shall be installed at all points of access to construction sites. Any access point which does not have a construction entrance shall be barricaded to prevent its use. Construction entrances shall be installed in accordance with Standard Detail 4.08. The contractor shall be responsible for maintaining cleanliness of existing streets and routes impacted by construction activities.

Sediment Pits or Filter Basins shall be installed at all points where accumulated runoff is released to natural drainage channels as directed by the Engineering Department. Sediment pits and filter basins shall be sized to hold 1800 cubic feet of sediment for every acre of denuded area tributary

to the structure. Sediment basins shall be installed in accordance with Standard Detail 4.02. Filter basins shall be installed in accordance with Standard Detail 4.03 - 4.05.

Temporary Seeding is the use of rapid growing annual grasses, small grains or legumes to provide initial, temporary cover for erosion control on disturbed areas for less than twelve (12) months. Seed bed preparations and soil amendments shall be in accordance with the method described under "Seeding and Mulching".

Seeding and Mulching shall be done immediately behind construction. All disturbed areas shall be dressed to a depth of 5 inches. The top 2 inches shall be pulverized to provide a uniform seedbed. Agricultural lime shall be applied at the rate of 95 lbs./1000 sq. ft. immediately before plowing. Grass seed shall be applied at the rates outlined in Tables 4.1 and 4.2.

5-10-10 fertilizer shall be applied to all disturbed areas at a rate of 21 lbs./1000 sq. ft. mulching shall consist of small grain straw applied at a rate of 70 lbs./1000 sq. ft. Mulched areas shall be tacked with asphalt or other approved method sufficient to hold the straw in place, 200 to 400 gallons per acre.

If active construction ceases in any area for more than 30 days all disturbed areas must be seeded, mulched, and tacked unless written approval is granted by the **Engineering Department**.

4.03 PERMANENT MEASURES

Ground Cover

After construction is complete, all disturbed areas shall receive a permanent ground cover in accordance with the seeding and mulching schedule in Section 4.02 "Seeding and Mulching". Permanent seeding and temporary seeding differ only in the type of seed to be used - annual versus perennial.

Permanent Ground Cover is the establishment of perennial vegetation cover for periods longer than twelve (12) months. Seed bed preparations and soil amendments shall be in accordance with Section 4.02 "Seeding and Mulching". As a part of permanent seeding, maintenance may be required to maintain vegetative growth for twelve (12) months. This maintenance shall be considered a part of establishing permanent ground cover.

Riprap Dissipation Pads and Riprap Protection

After construction is complete, all points of stormwater release shall be protected by riprap dissipation pads designed to reduce discharge velocities to nonerosive levels.

The dissipation pads shall be designed and constructed with either an engineering fabric or washed stone barrier between the dissipation pad and the natural ground. Calculations shall be furnished to indicate the sufficiency of the dissipation pads specified. Riprap pad design shall be in accordance with NYDOT or SCS methods. Filter fabric, or a washed stone liner shall be used on all sediment basins, riprap dissipators, or channel designs.

4.04 COMPUTATIONS

All computations and assumptions used to formulate an erosion control plan shall be reviewed by the Engineering Department and in compliance with the City's Stormwater Ordinance and Soil Erosion and Sedimentation Control Ordinances to verify their sufficiency.

Erosion and sedimentation control measures, structures, and devices shall be planned, designed, and constructed to control the calculated peak runoff from a 10-year frequency storm. Runoff rates shall be calculated using the USDA Soil Conservation Service Method, the Rational Method, or other acceptable calculation procedures. Runoff computations shall be based on rainfall data published by the National Weather Service for this area.

4.05 CONSTRUCTION SEQUENCE

The construction sequence on projects shall be as follows:

1. Submit plans for review;
2. Install all erosion control measures as shown;
3. Obtain grading permit;
4. Obtain certificate of compliance through on-site inspection by the Inspector;
5. Proceed with grading;
6. Clean sediment basins when one-half full;
7. Repair or replace all erosion control measures as needed;
8. Seed and mulch denuded area within thirty (30) days after finished grades are established;
9. Maintain soil erosion control measures until permanent ground cover established;
10. Request final approval by the **Inspector**;

11. Remove all temporary soil erosion control measures and stabilize these areas.

TABLE 4.1

SHOULDERS, SIDE DITCHES, SLOPES
(Maximum 3:1)

Date	Type	Planting Rate
Aug 15 - Nov 1	Tall Fescue	300 lbs/acre
Nov 1 - Mar 1	Tall Fescue and Abruzzi Rye	300 lbs/acre
Mar 1 - Apr 15	Tall Fescue	300 lbs/acre
Apr 15 - June 30	Hulled Common Bermudagrass	25 lbs/acre
July 15 - Aug 15	Tall Fescue and ***Browntop Millet ***or Sorghum-Sudan Hybrids	35 lbs/acre

Consult Soil Conservation Service for additional information concerning other alternatives for vegetation of denuded areas. The above vegetation rates are those which do well under local conditions; other seeding rate combinations are possible.

***Temporary - Reseed according to optimum season for desired permanent vegetation. Do not allow temporary cover to grow over 12 inches in height before mowing to keep fescue from being shaded out.

TABLE 4.2

SHOULDERS, SIDE DITCHES, SLOPES
Slopes (3:1 and 2:1)

Date	Type	Planting Rate
Mar 1 - June 1	Sericea Lespedeza (scarified)	50 lbs/acre
Mar 1 - Apr 15	and Add Tall Fescue	120 lbs/acre
Mar 1 - June 30	or Add Weeping Lovegrass	10 lbs/acre
Mar 1 - June 30	or Add Hulled Common Bermuda grass	25 lbs/acre
June 1 - Sept 1	***Tall Fescue and ***Browntop Millet ***or Sorghum-Sudan Hybrids	120 lbs/acre 25 lbs/acre 30 lbs/acre
Sept 1 - Mar 1	Sericea Lespedeza (unhulled/unscarified) and Tall Fescue Add Abruzzi Rye	70 lbs/acre 120 lbs/acre 25 lbs/acre

Consult Soil Conservation Service for additional information concerning other alternatives for vegetation of denuded areas. The above vegetation rates are those which do well under local conditions; other seeding rate combinations are possible.

***Temporary - Reseed according to optimum season for desired permanent vegetation. Do not allow temporary cover to grow over 12 inches in height before mowing to keep fescue from being shaded out.