Erosion and Sediment Control Schedule

General
Any sediment-laden groundwater encountered during construction shall be treated prior to discharge.

Ingress-Egress
A stone access drive complete with under lying geo-textilefabric for ingress and egress at the site shall be installed if there is not already an existing access drive. This drive shall be the only entrance and exit to the site.

Silt Fence
All silt fence shall be installed prior to any earthwork activities at the site in the locations shown on the site plan as well as along the front of any lot that slopes towards the street. On sites where a perimeter of temporary seeding (or pre-existing vegetation) cannot be maintained due to limited space, a complete perimeter of silt fence shall be established.

Temporary Seeding
Disturbed areas of the site that are to remain idle for more than twenty one (21) days shall be properly seeded and straw mulched within seven (7) days of completion of initial grading. Temporary seeding and mulching of a thirty (30) foot strip of the entire front of the lot shall be maintained on the site once initial grading is complete.

Stabilization of critical areas within fifty (50) feet of any stream or wetland shall be complete within two (2) days of the disturbance if the site is to remain inactive for longer than fourteen (14) days.

Following completion of the construction activities, and the contractor leaving the site, the site soils must be fully stabilized by temporary seeding and/or mulching (or other acceptable process).

Mulching
Straw-mulch shall be applied at a rate of 1 bale per every ten (10) feet of curb, at a width of thirty (30) feet (or 1 bale/300 sqft.) of the entire length of the lot. Wood chips may also be used but must be spread at a minimum depth of four inches over the thirty-foot
width and must be accompanied by a properly installed silt fence.

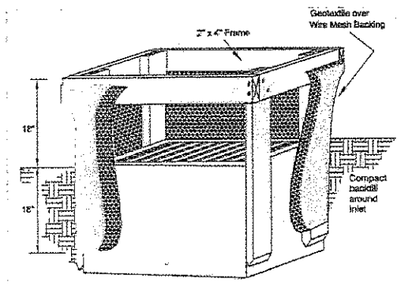
Maintenance
Erosion and sediment controls shall be inspected every seven (7) days or within 24 hours of a 0.5" or greater rainfall event. Necessary repairs shall be made at this time.

Note:
All erosion and sediment control specifications, applications, and timetables are based on the descriptions and standards of The Ohio Department of Natural Resources Rainwater and Land Development Manual".

The specified erosion and sediment control standards are the general guidelines and shall not limit the right of the county to impose, at any time, additional, more stringent requirements. Nor shall the standards limit the right of the county to
waive, in writing, individual requirements.

Inlet Protection
Inlet protection shall be constructed before the storm drain becomes operational. The earth around the inlet shall be excavated completly to a depth of at least 18 inches. The 2 by 4 inch frame shall be driven 1 foot into the ground and the top portion of the 2 by 4 inch frame assembled using the overlap joint shown (see diagram to right). The top of the frame shall be 5 inches below grade of adjacent road if ponded water would pose a safety hazard to traffic. Geotextile shall have an equivalent opening size of 20-40 inches below the inlet notch elevation. The geotextile shall overlap across one side of the inlet so the ends of the cloth are not fastend to the same post.

Specifications
for
Geotextile Inlet Protection



SECTION

1. Inlet protection shall be constructed either before upslope land disturbance begins or before the inlet becomes functional.
2. The earth around the inlet shall be excavated completely to a depth at least 18 inches.
3. The wooden frame shall be constructed of 2-inch by 4-inch construction grade lumber. The 2-inch by 4-inch posts shall be driven one (1) ft. into the ground at four corners of the inlet and the top portion of 2-inch by 4-inch frame assembled using the overlap joint shown. The top of the frame shall be at least 6 inches below adjacent roads if ponded water will pose a safety hazard to traffic.
4. Wire mesh shall be of sufficient strength to support fabric with water fully impounded against it. It shall be stretched tightly around the frame and fastened securely to the frame.
5. Geotextile material shall have an equivalent opening size of 20-40 sieve and be resistant to sunlight. It shall be stretched tightly around the frame and fastened securely. It shall extend from the top of the frame to 18 inches below the inlet notch elevation. The geotextile shall overlap across one side of the inlet so the ends of the cloth are not fastened to the same post.
6. Backfill shall be placed around the inlet in compacted 6-inch layers until the earth is even with notch elevation on ends and top elevation on sides.
7. A compacted earth dike or check dam shall be constructed in the ditch line below the inlet if the inlet is not in a depression. The top of the dike shall be at least 6 inches higher than the top of the frame.

Temporary Seeding Specifications

Seeding Dates	Species	Lb. / 1000sqft	Per Acre
March 1 to August 15	Oats Tall Fescue Annual Ryegrass	3 1 1	4 bushel 40 lb. 40 lb.
	Perennial Ryegrass Tall Fescue Annual Ryegrass	1 1 1	40 lb. 40 lb. 40 lb.
August 16 to November 1	Rye Tall Fescue Annual Ryegrass	1 1 1	2 bushel 40 lb. 40 lb.
	Wheat Tall Fescue Annual Ryegrass	1 1 1	40 lb. 40 lb. 40 lb.
	Perennial Ryegrass Tall Fescue Annual Ryegrass	1 1 1	40 lb. 40 lb. 40 lb.
November 1 to Spring Seeding	Use mulch only, sodding practices or dormant seeding		

Note: other approved seed species may be substituted.

PERMANENT SEEDING SPECIFICATIONS

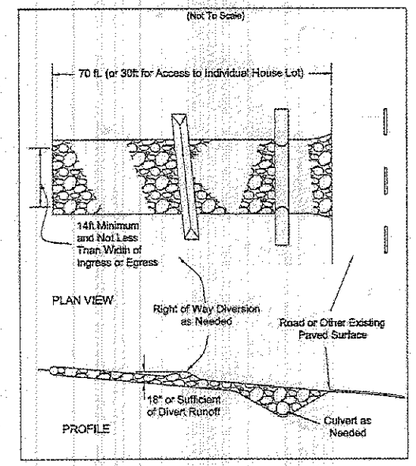
Seed Mix	lb./ac.	lb. / 1000sqft	Notes:
General Use			
Creeping Red Fescue	20-40	1/2-1	
Domestic Ryegrass	10-20	1/4-1/2	
Kentucky Bluegrass	10-20	1/4-1/2	
Tall Fescue	40	1	
Dwarf Fescue	40	1	
Steep Banks or Cut Slopes			
Tall Fescue	40	1	
Crown Vetch	10	1/4	Do not seed later than August.
Tall Fescue	20	1/2	
Flat Pea	20	1/2	Do not seed later than August.
Tall Fescue	20	1/2	
Road Ditches and Swales			
Tall Fescue	40	1	
Dwarf Fescue	90	2 1/4	
Kentucky Bluegrass	5		
Lawns			
Kentucky Bluegrass	60	1 1/2	
Perennial Ryegrass	60	1 1/2	
Kentucky Bluegrass	60	1 1/2	For Shaded areas.
Creeping Red Fescue	60	1 1/2	

Note: other approved seed species may be substituted.

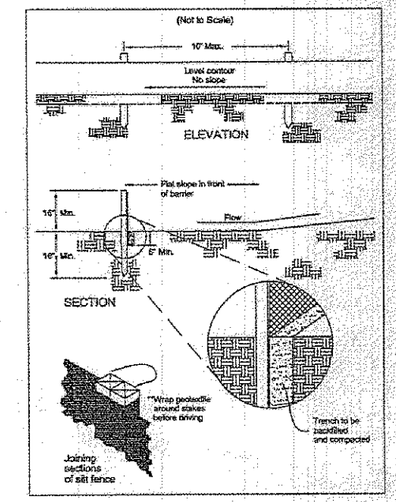
Mulching

Straw mulch shall be unrotted small-grain straw applied at the rate of 2 tons/ac. or 90 lb./1,000 sq. ft. (two to three bales). The mulch shall be spread uniformly by hand or mechanically so the soil surface is covered. For uniform distribution of hand-spread mulch, divide area into approximately 1,000 sq. ft. sections and spread two 45-lb. bales of straw in each section.

Specifications
for
Construction Entrance



Specifications
for
Silt Fence



Specifications
for
Construction Entrance

1. Stone Size—ODOT # 2 (1.5-2.5 inch) stone shall be used, or recycled concrete equivalent.
2. Length—The Construction entrance shall be as long as required to stabilize high traffic areas but not less than 70 ft. (exception: apply 30 ft. minimum to single residence lots).
3. Thickness -The stone layer shall be at least 6 inches thick for light duty entrances or at least 10 inches for heavy duty use.
4. Width -The entrance shall be at least 14 feet wide, but not less than the full width at points where ingress or egress occurs.
5. Geotextile -A geotextile shall be laid over the entire area prior to placing stone. It shall be composed of strong rot-proof polymeric fibers and meet the following specifications:

Figure 7.4.1

Geotextile Specification for Construction Entrance	
Minimum Tensile Strength	200 lbs.
Minimum Puncture Strength	80 psi.
Minimum Tear Strength	50 lbs.
Minimum Burst Strength	320 psi.
Minimum Elongation	20%
Equivalent Opening Size	EOS < 0.6 mm.
Permeability	1 x10-3 cm/sec

6. Timing—The construction entrance shall be installed as soon as is practicable before major grading activities.
7. Culvert -A pipe or culvert shall be constructed under the entrance if needed to prevent surface water from flowing across the entrance or to prevent runoff from being directed out onto paved surface.
8. Water Bar -A water bar shall be constructed as part of the construction entrance if needed to prevent surface runoff from flowing the length of the construction entrance and out onto paved surfaces.
9. Maintenance -Top dressing of additional stone shall be applied as conditions demand. Mud spilled, dropped, washed or tracked onto public roads, or any surface where runoff is not checked by sediment controls, shall be removed immediately. Removal shall be accomplished by scraping or sweeping.
10. Construction entrances shall not be relied upon to remove mud from vehicles and prevent off-site tracking. Vehicles that enter and leave the construction site shall be restricted from muddy areas.
11. Removal—The entrance shall remain in place until the disturbed area is stabilized or replaced with a permanent roadway or entrance.

Specifications
for
Silt Fence

1. Silt fence shall be constructed before upslope land disturbance begins.
2. All silt fence shall be placed as close to the contour as possible so that water will not concentrate at low points in the fence and so that small swales or depressions that may carry small concentrated flows to the silt fence are dissipated along its length.
3. Ends of the silt fences shall be brought upslope slightly so that water ponded by the silt fence will be prevented from flowing around the ends.
4. Silt fence shall be placed on the flattest area available.
5. Where possible, vegetation shall be preserved for 5 feet (or as much as possible) upslope from the silt fence. If vegetation is removed, it shall be reestablished within 7 days from the installation of the silt fence.
6. The height of the silt fence shall be a minimum of 16 inches above the original ground surface.
7. The silt fence shall be placed in an excavated or sliced trench cut a minimum of 6 inches deep. The trench shall be made with a trencher, cable laying machine, sliding machine, or other suitable device that will ensure an adequately uniform trench depth.
8. The silt fence shall be placed with the stakes on the downslope side of the geotextile. A minimum of 8 inches of geotextile must be below the ground surface. Excess material shall lay on the bottom of the 6-inch deep trench. The trench shall be backfilled and compacted on both sides of the fabric.
9. Seams between sections of silt fence shall be spliced together only at a support post with a minimum 6-in. overlap prior to driving into the ground. (see details).
10. Maintenance—Silt fence shall allow runoff to pass only as diffuse flow through the geotextile. If runoff overtops the silt fence, flows under the fabric or around the fence ends, or in any other way allows a concentrated flow discharge, one of the following shall be performed, as appropriate: 1) the layout of the silt fence shall be changed, 2) accumulated sediment shall be removed, or 3) other practices shall be installed.

Sediment deposits shall be routinely removed when the deposit reaches approximately one-half of the height of the silt fence.

Silt fences shall be inspected after each rainfall and at least daily during a prolonged rainfall. The location of existing silt fence shall be reviewed daily to ensure its proper location and effectiveness. If damaged, the silt fence shall be repaired immediately.

Criteria for silt fence materials

1. Fence post – The length shall be a minimum of 32 inches. Wood posts will be 2-by-2-in. nominal dimensions. Hardwood of some quality. They shall be free of knots, splits and other visible imperfections, that will weaken the posts. The maximum spacing between posts shall be 10 ft. Posts shall be driven a minimum 16 inches into the ground, where possible. If not possible, the posts shall be adequately secured to prevent overturning of the fence due to sediment/water loading.
2. Silt fence fabric – See chart below.

Table 6.3.2 Minimum criteria for Silt Fence Fabric (ODOT, 2002)

PHYSICAL PROPERTIES OF FABRIC	VALUES	TEST METHOD
Minimum Tensile Strength	120 lbs. (535 N)	ASTM D 4632
Maximum Elongation at 60 lbs	50%	ASTM D 4632
Minimum Puncture Strength	50 lbs (220 N)	ASTM D 4833
Minimum Tear Strength	40 lbs (180 N)	ASTM D 4533
Apparent Opening Size	≤ 0.84 mm	ASTM D 4751
Minimum Permittivity	1X10-2 sec.-1	ASTM D 4491
UV Exposure Strength Retention	70%	ASTM G 4355

polaris Engineering & Surveying

POLARIS ENGINEERING & SURVEYING, INC.
34600 CHARDON ROAD
SUITE D
WILLOUGHBY HILLS, OH 44094
(440) 944-4433
(440) 944-3722 (Fax)
www.polaris-es.com

DATE: 8/21/13

SCALE: HOR. 1"=30'
VERT. none

FILENAME: Unit 8 Site Plan

SITE PLAN FOR:
UNIT 8
ARIA'S WAY
PHASE 4
CONCORD TOWNSHIP – LAKE COUNTY – OHIO

OWNER:
RYAN HOMES
5770 W. SNOWVILLE ROAD
SUITE 100
BRECKSVILLE, OHIO 44141

PHONE: (440) 584-4221

CONTACT:
MARK FAIR

CONTRACT No.
12032

SHEET	OF
2	2