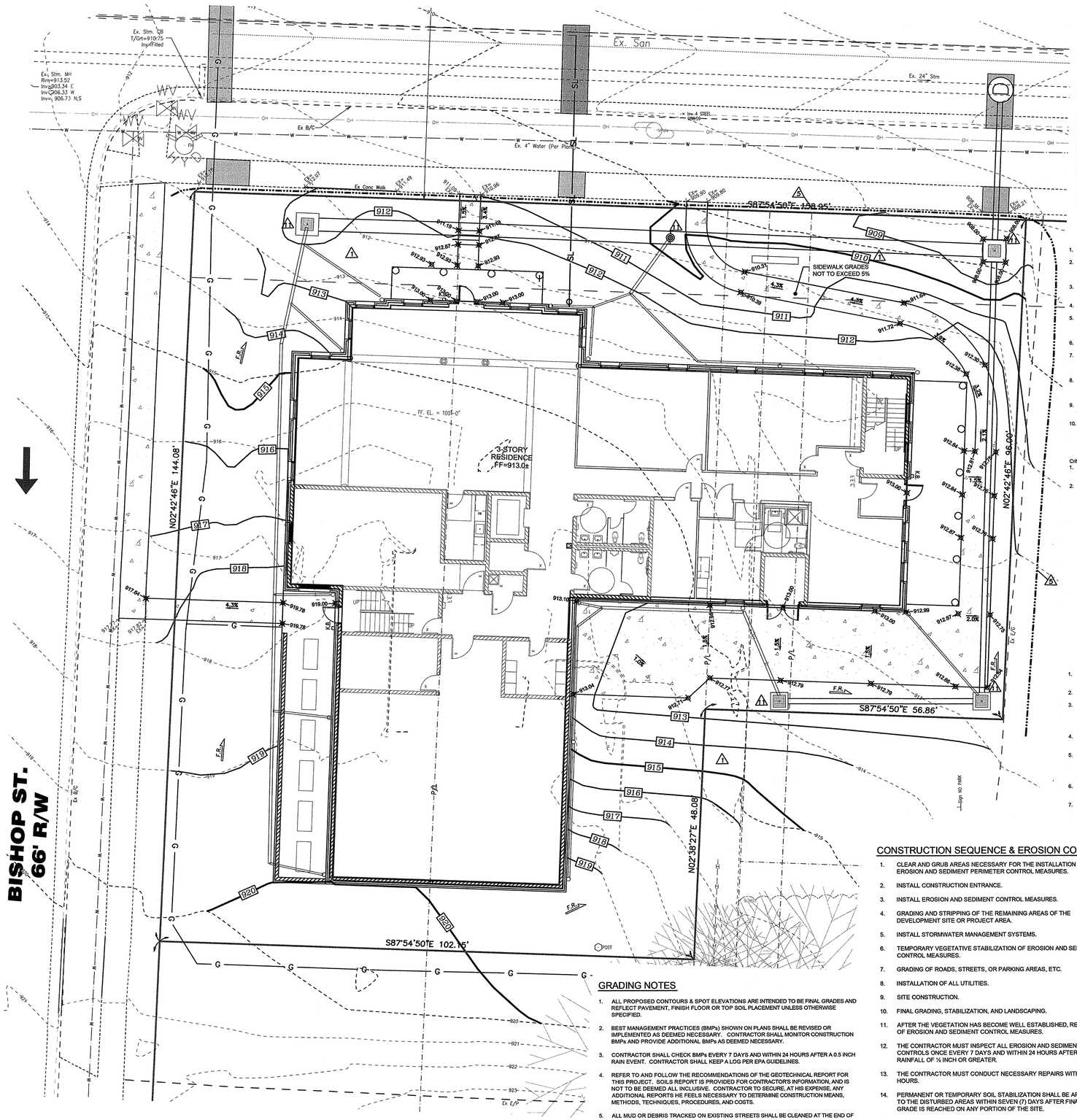
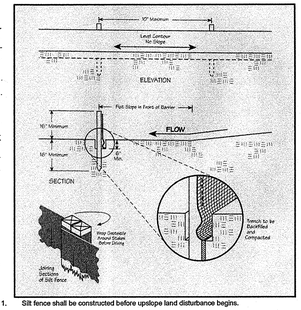


GRADING NOTES

1. ALL PROPOSED CONTOURS & SPOT ELEVATIONS ARE INTENDED TO BE FINAL GRADES AND REFLECT PAVEMENT, FINISH FLOOR OR TOP SOIL PLACEMENT UNLESS OTHERWISE SPECIFIED.
2. BEST MANAGEMENT PRACTICES (BMPs) SHOWN ON PLANS SHALL BE REVISED OR IMPLEMENTED AS DEEMED NECESSARY. CONTRACTOR SHALL MONITOR CONSTRUCTION BMPs AND PROVIDE ADDITIONAL BMPs AS DEEMED NECESSARY.
3. CONTRACTOR SHALL CHECK BMPs EVERY 7 DAYS AND WITHIN 24 HOURS AFTER A 0.5 INCH RAIN EVENT. CONTRACTOR SHALL KEEP A LOG PER EPA GUIDELINES.
4. REFER TO AND FOLLOW THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT FOR THIS PROJECT. SOILS REPORT IS PROVIDED FOR CONTRACTOR'S INFORMATION, AND IS NOT TO BE DEEMED ALL INCLUSIVE. CONTRACTOR TO SECURE, AT HIS EXPENSE, ANY ADDITIONAL REPORTS HE FEELS NECESSARY TO DETERMINE CONSTRUCTION MEANS, METHODS, TECHNIQUES, PROCEDURES, AND COSTS.
5. ALL MUD OR DEBRIS TRACKED ON EXISTING STREETS SHALL BE CLEANED AT THE END OF EACH DAY OR AS DIRECTED BY THE CITY OR THE OWNER. ANY COSTS INCURRED BY THE CITY TO ENSURE THIS IS ACCOMPLISHED WILL BE CHARGED TO THE CONTRACTOR.

SILT FENCE ⚠5

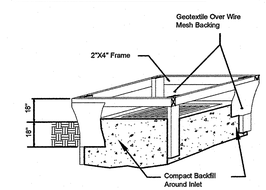


1. Silt fence shall be constructed before upslope land disturbance begins.
2. All silt fence shall be placed as close to the contour as possible so that water will not concentrate at low points in the fence and so that small swales or depressions which may carry small concentrated flows to the silt fence are dissipated along its length.
3. To prevent water ponded by the silt fence from flowing around the ends, each end shall be constructed upslope so that the ends are at a higher elevation.
4. Where possible, silt fence shall be placed on the flattest area available.
5. Where possible, vegetation shall be preserved for 5 ft. (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 in. above the original ground surface.
7. The silt fence shall be placed in a trench cut a minimum of 6 in. deep. The trench shall be cut with a trencher, cable laying machine, or other suitable device which will ensure an adequately uniform trench depth.
8. The silt fence shall be placed with the stakes on the downslope side of the geotextile and so that 8 in. of cloth are below the ground surface. Excess material shall lay on the bottom of the 6-in.-deep trench. The trench shall be backfilled and compacted.
9. Seams between section of silt fence shall be overlapped with the end stakes of each section wrapped together before driving into the ground.
10. Maintenance--Silt fence shall allow runoff to pass only as diffuse flow through the geotextile. If runoff overtops the silt fence, flows under or around the ends, or in any other way becomes a concentrated flow, 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.

Criteria for Silt Fence Materials

1. Fence Posts--The length shall be a minimum of 32 in. long. Wood posts will be 2-by-2-in. hardwood of sound quality. The maximum spacing between posts shall be 10 ft.
2. Silt Fence Fabric shall be ODOT Type C Geotextile Fabric or as described by the chart below:

INLET PROTECTION IN SWALES, DITCH LINES OR YARD INLETS ⚠6



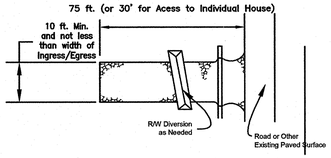
1. Inlet protection shall be constructed either before upslope land disturbance begins or before the storm drain becomes operational.
2. The earth around the inlet shall be excavated completely to the depth at least 18in.
3. The wooden frame shall be constructed of 2-by-4-in. construction grade lumber. The 2-by-4-in. posts shall be driven 1 ft. into the ground at four corners of the inlet and the top portion of 2-by-4-in. frame assembled using the overlap joint shown. The top of the frame shall be at least 6 in. below adjacent roads if ponded water would 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 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 in. 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-in. layers until the earth is even with notch elevation on ends and top elevation on sides.
7. A compacted earth dike or a check dam shall be constructed in the ditch line below the inlet if the inlet is not in a depression and if runoff bypassing the inlet will not flow to a setting pond. The top of earth dikes shall be at least 6 in. higher than the top of the frame.

CONSTRUCTION SEQUENCE & EROSION CONTROL NOTES

1. CLEAR AND GRUB AREAS NECESSARY FOR THE INSTALLATION OF EROSION AND SEDIMENT PERIMETER CONTROL MEASURES.
2. INSTALL CONSTRUCTION ENTRANCE.
3. INSTALL EROSION AND SEDIMENT CONTROL MEASURES.
4. GRADING AND STRIPPING OF THE REMAINING AREAS OF THE DEVELOPMENT SITE OR PROJECT AREA.
5. INSTALL STORMWATER MANAGEMENT SYSTEMS.
6. TEMPORARY VEGETATIVE STABILIZATION OF EROSION AND SEDIMENT CONTROL MEASURES.
7. GRADING OF ROADS, STREETS, OR PARKING AREAS, ETC.
8. INSTALLATION OF ALL UTILITIES.
9. SITE CONSTRUCTION.
10. FINAL GRADING, STABILIZATION, AND LANDSCAPING.
11. AFTER THE VEGETATION HAS BECOME WELL ESTABLISHED, REMOVAL OF EROSION AND SEDIMENT CONTROL MEASURES.
12. THE CONTRACTOR MUST INSPECT ALL EROSION AND SEDIMENT CONTROLS ONCE EVERY 7 DAYS AND WITHIN 24 HOURS AFTER EACH RAINFALL OF ½ INCH OR GREATER.
13. THE CONTRACTOR MUST CONDUCT NECESSARY REPAIRS WITHIN 72 HOURS.
14. PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO THE DISTURBED AREAS WITHIN SEVEN (7) DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE.
15. AFTER THE VEGETATION HAS BECOME WELL ESTABLISHED, REMOVE TEMPORARY EROSION OR SEDIMENT CONTROL PRACTICES.

CONSTRUCTION ENTRANCE ⚠2

1. Stone Size--Two-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 50 ft. (except on single residence lot where a 30-ft. minimum length applies).
3. Thickness--The stone layer shall be at least 6 in. thick.
4. Width--The entrance shall be at least 10 ft. wide, but not less than the full width at points where ingress or egress occurs.
5. Bedding--A geotextile shall be placed over the entire area prior to placing stone. It shall have a Grab Tensile Strength of at least 200 lb. and a Mullen Burst Strength of at least 190 lb.
6. Culvert--A pipe or culvert shall be constructed under the entrance if needed to prevent surface water flowing across the entrance from being directed out onto paved surfaces.
7. 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.
8. Maintenance--Top dressing of additional stone shall be applied as conditions demand. Mud spilled, dropped, washed or tracked onto public roads, or any surfaces where runoff is not checked by sediment controls, shall be removed immediately. Removal shall be accomplished by scraping or sweeping.
9. Construction entrances shall not be relied upon to remove mud fro vehicles and prevent off-site tracking. Vehicles that enter and leave the construction-site shall be restricted from muddy areas.



LEGEND

- ⚠1 SEEDING & MULCHING
- ⚠6 INLET PROTECTION
- ⚠2 CONSTRUCTION ENTRANCE
- ⚠5 SILT FENCE
- F.R. FLOOD ROUTE

TEMPORARY SEEDING ⚠1

Temporary seeding provides erosion control on areas in between construction operations. Grasses which are quick growing are seeded and usually mulched to provide prompt, temporary soil stabilization. It effectively minimizes the area of a construction-site prone to erosion and should be used everywhere the sequence of construction operations allows vegetation to be established.

CONDITIONS WHERE PRACTICE APPLIES

Temporary seeding should be applied on exposed soil where additional work (grading,etc.) is not scheduled for more than 21 days. Permanent seeding should be applied if the areas will be idle for more than a year.

PLANNING CONSIDERATIONS

This practice has the potential to drastically reduce the amount of sediment eroded from a construction-site. Control efficiencies greater than 90% will be achieved with proper applications of temporary seeding. Because practices used to trap sediment are usually much less effective, temporary seeding is to be used even on areas where runoff is treated by sediment trapping practices. Because temporary seeding is highly effective and practical on construction-sites, its liberal use is highly recommended.

Temporary Seeding Species Selection

Seeding Dates	Species	Lb./1,000 ft.²	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	3 1 1	2 bushel 40 lb. 40 lb.
	Wheat Tall Fescue Annual Ryegrass	3 1 1	2 bushel 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.

1. Structural erosion- and sediment-control practices such as diversions and sediment traps shall be installed and stabilized with temporary seeding prior to grading the rest of the construction-site.
2. Temporary seed shall be applied between construction operations on soil that will not be graded or reworked for 21 days or more. These idle areas should be seeded as soon as possible after grading or shall be seeded within 7 days. Several applications of temporary seeing are necessary on typical construction projects.
3. The seedbed should be pulverized and loose to ensure the success of establishing vegetation. However, temporary seeding shall not be postponed if ideal seedbed preparation is not possible.
4. Soil Amendments--Applications of temporary vegetation shall establish adequate stands of vegetation which may require the use of soil amendments. Soil tests should be taken on the site to predict the need for lime and fertilizer.
5. Seeding Method--Seed shall be applied uniformly with a cyclone seeder, drill cultipacker seeder, or hydroseeder. When feasible, seed that has been broadcast shall be covered by raking or dragging and then lightly tamped into place using a roller or cultipacker. If hydroseeding is used, the seed and fertilizer will be mixed on-site and the seeding shall be done immediately and without interruption.

MULCHING TEMPORARY SEEDING

1. Applications of temporary seeding shall include mulch which shall be applied during or immediately after seeding. Seedings made during optimum seeding dates and with favorable soil conditions and on very flat areas may not need mulch to achieve adequate stabilization.
2. Materials:

   * Straw--If straw is used, it 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.

   * Hydroseeders--If wood cellulose fiber is used, it shall be used at 2,000 lb/ac. or 46 lb./1,000 sq. ft.

   * Other--Other acceptance mulches include mulch mattings applied according to manufacturer's recommendations or wood chips applied at 6 tons/ac.
3. Straw mulch shall be anchored immediately to minimize loss by wind or water. Anchoring Methods:

   * Mechanical--A disk, crimper, or similar type tool shall be set straight to punch or anchor the mulch material into the soil. Straw mechanically anchored shall not be finely chopped but, generally, be left longer than 6 in.

   * Mulch Nettings--Nettings shall be used according to the manufacturer's recommendations. Netting may be necessary to hold mulch in place in areas of concentration runoff and on critical slopes.

   * Asphalt Emulsion--Asphalt shall be applied as recommended by the manufacturer or at the rate of 160 gal./ac.

   * Synthetic Binders--Synthetic binders such as Acrylic DLR (Agri-Tac), DCA-70, Petroset, Terra Tack or equal may be used at rates recommended by the manufacturer.

   * Wood-Cellulose Fiber--Wood-cellulose fiber binder shall be applied at a net dry weight of 750 lb./ac. The wood-cellulose fiber shall be mixed with water and the mixture shall contain a maximum of 50 lb./100 gal.



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PROJECT #	08015	PROJECT MANAGER	EMR
PLOT DATE	07-24-14	DRAWN BY	DGB
SCALE	1"=10'-0"	REVIEWED BY	EMR

NO.	REVISION DESCRIPTION	DATE

NOTES

Basis of Bearing:
State Plane NAD83 GPS Observations
0 10 20
SCALE: 1" = 10'

Know what's **below.**
Call before you dig.

LOCATION OF ALL EXISTING UTILITIES TO BE DETERMINED IN THE FIELD PRIOR TO CONSTRUCTION

NO.	ISSUE DESCRIPTION	DATE

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SHEET TITLE:
GRADING & EROSION CONTROL PLAN
EVANS SCHOLARS MIAMI

SHEET NO.
C4.0