

Roanoke City Construction Procedure Requirements

1. Right-of-Way Excavation Permit – Prior to the commencement of any digging, alteration, or construction within the public right-of-way (streets, alleys, public easements), a public right-of-way permit shall be applied for and obtained by the contractor from the City of Roanoke.
2. Land Disturbance Permit – An approved erosion and sediment control plan for any borrow/fill sites associated with the project must be submitted prior to the issuance of a land disturbance permit.
3. Plans and Permits – A copy of the plans as approved by the City (signed by the proper City officials) and all permits issued by the City shall be available at the construction site at all times of ongoing construction.
4. Location of Utilities – The contractor shall verify the location of all exiting utilities prior to the commencement of any construction.
5. Construction Entrance – The contractor shall install an adequate construction entrance for all construction related egress from the site. Size and composition of construction entrance shall be as shown on the plans.
6. Streets to Remain Clean – It shall be the responsibility of the contractor to insure that the public street adjacent to the construction entrance remains free of mud, dirt, dust, and/or any type of construction materials or litter at all times.
7. Barricades/Ditches – The contractor shall maintain the integrity of all excavated ditches and shall furnish and ensure that all barricades proper and necessary for the safety of the public are in place.
8. Sewer and Pavement Replacement – Construction of sanitary sewers and the replacement of pavement shall be in accordance with approved standards and specifications of the City of Roanoke and the Western Virginia Water Authority .
9. Approved Plans/Construction Changes – Any change or variation from construction design as shown on the officially approved plans shall be approved by the erosion and sediment control agent prior to said changes or variation in construction being made.
10. Final Acceptance/City – The owner or developer shall furnish the City of Roanoke's Planning Building and Development Department with a final set to as-built plans prior to final acceptance by the City.

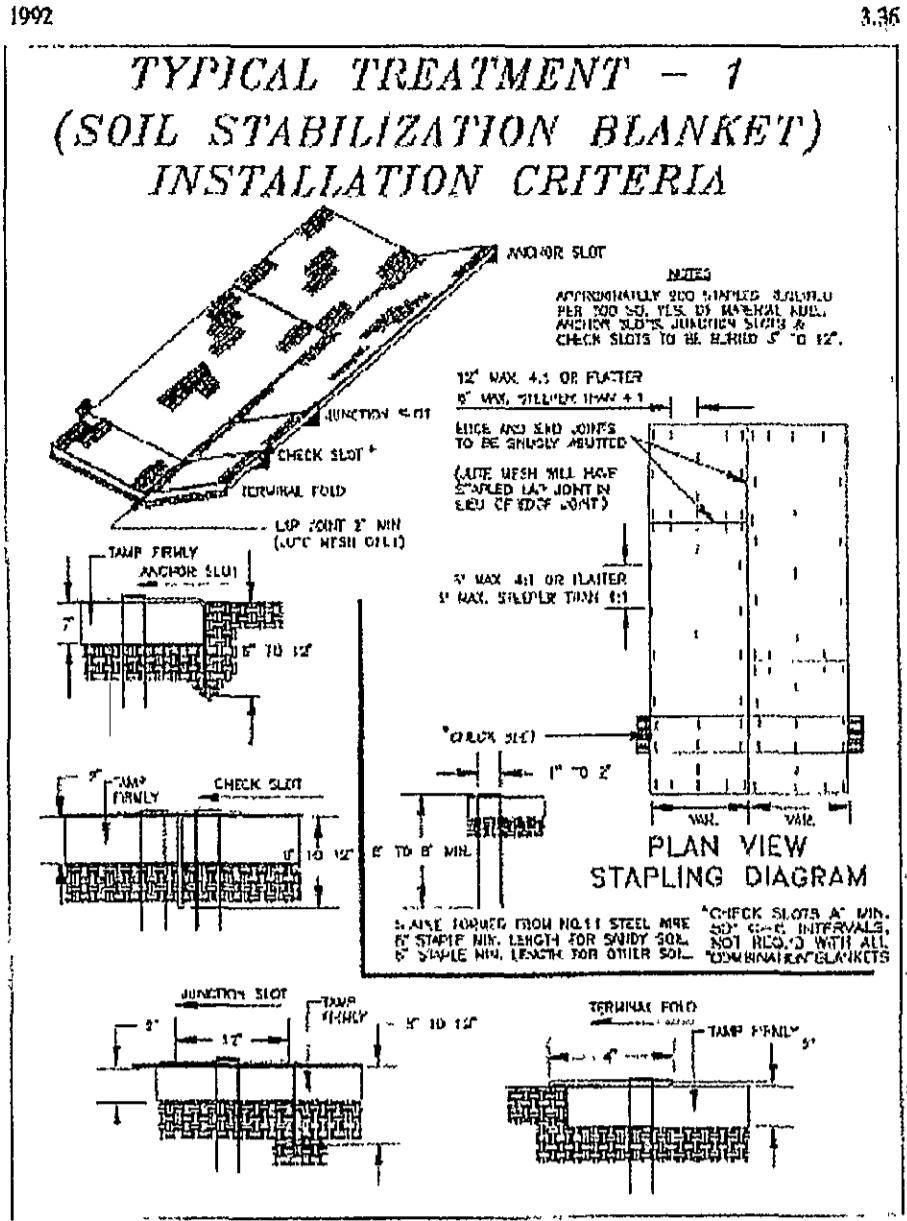
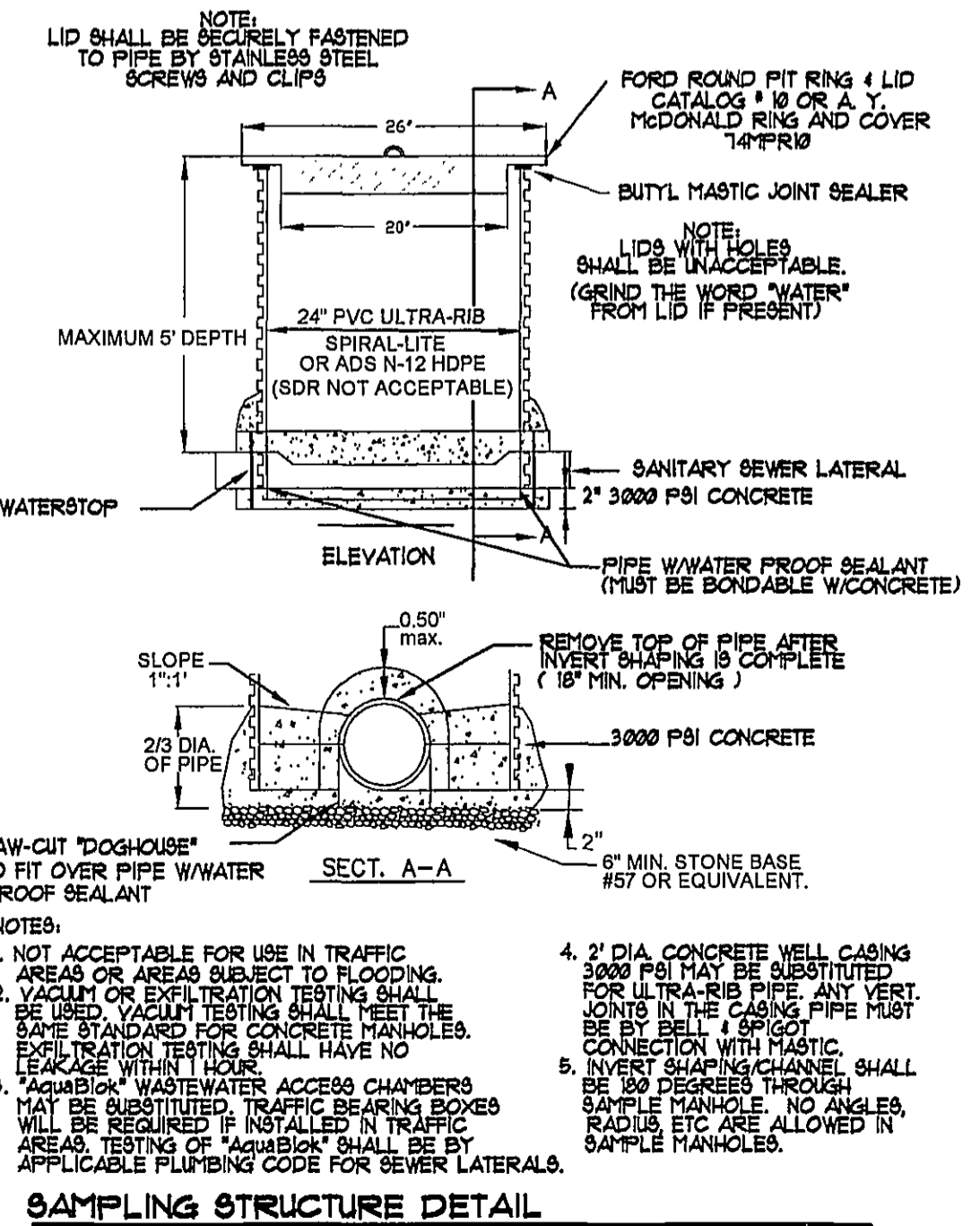
GRADING NOTES

1. REMOVE ALL TOPSOIL AND OTHER DELETERIOUS MATERIAL FROM GROUND SURFACES TO RECEIVE CONTROLLED FILL MATERIAL.
2. PROOF ROLL SUBGRADE SURFACES OF ORIGINAL GROUND SURFACES WHICH HAVE BEEN STRIPPED FOR PLACEMENT OF CONTROLLED FILL WITH A LOADED DUMP TRUCK OR OTHER HEAVY VEHICLE TO LOCATE AREAS OF SOFT MATERIAL. IF SOFT MATERIAL IS FOUND, REMOVE AND REPLACE IT ACCORDING TO NOTES BELOW FOR PLACEMENT OF CONTROLLED FILL.
3. PLACE FILL MATERIAL IN LIFTS NOT TO EXCEED 8" IN COMPACTED THICKNESS. ROCK MATERIAL OF MAXIMUM DIMENSION GREATER THAN 12" SHALL NOT BE INCLUDED IN THE FILL MATERIAL.
4. COMPACT EACH LIFT TO THE FOLLOWING DENSITIES PER ASTM D1557, MODIFIED PROCTOR:

BENEATH BUILDING:	95%
YARD AREAS:	90%
BENEATH PAVED AREAS:	90%
5. BED STORM DRAIN AS SHOWN IN THE BEDDING DETAIL, THIS SHEET.
6. PAVEMENT BASE STONE TO BE COMPACTED TO 100% MAXIMUM DENSITY, MODIFIED PROCTOR .
7. PLACE BITUMINOUS CONCRETE PAVEMENT ACCORDING TO THE REQUIREMENTS OF VDOT, "ROAD AND BRIDGE SPECIFICATIONS", LATEST EDITION.

PAVEMENT AND CURB MATERIAL NOTES

1. CONCRETE : 3000 PSI 28 DAY COMPRESSIVE STRENGTH, WITH 3% TO 6% AIR ENTRAINMENT.
2. BITUMINOUS CONCRETE : TYPE SM-9.5A AS SPECIFIED IN VDOT "ROAD AND BRIDGE SPECIFICATIONS", LATEST EDITION.



B/M SOIL STABILIZATION BLANKET

EROSION CONTROL NARRATIVE

PROJECT DESCRIPTION  
THE PURPOSE OF THIS PROJECT IS THE CONSTRUCTION OF A NEW BUILDING HOUSING BUSINESS OFFICES ON THE FIRST AND SECOND FLOORS AND VEHICLE MAINTENANCE FACILITY ON THE GROUND FLOOR. TOTAL DISTURBED AREA IS 24180 SF.

EXISTING SITE CONDITIONS  
THE EXISTING SITE CONSISTS OF GENTLY SLOPING LAND SLOPING FROM CENTRE AVE TO THE PUBLIC ALLEY. THE SITE IS VEGETATED WITH DENSE, WELL MAINTAINED GRASS.

ADJACENT PROPERTY  
THE PROPERTY IS BOUNDED BY 19TH ST. NW ON THE WEST, CENTRE AVE, ON THE NORTH, THE PROPERTY OF ANTHONY HAUPT TO THE EAST, AND THE PUBLIC ALLEY TO THE SOUTH.

OFFSITE AREAS  
NO OFFSITE AREAS ARE INVOLVED IN THE DEVELOPMENT.

SOILS  
LAND SURFACES TO BE DISTURBED BY DEVELOPMENT CONSTRUCTION CONSIST OF A CLAYEY SILT SOIL. THE SOIL POSSESSES MODERATE ERODIBILITY AND IS COMPATIBLE WITH THE ANTICIPATED VEGETATIVE COVER TO BE ESTABLISHED.

CRITICAL AREAS  
THERE ARE NO AREAS OF THE UNDEVELOPED OR DEVELOPED PROPERTY WHICH PRESENTS UNUSUAL CONDITIONS WITH RESPECT TO DRAINAGE OR SOIL EROSION. THERE ARE SLOPES OF 2:1 TO 1.5:1 AROUND THE STORMWATER RETENTION BASIN. TEMPORARY STABILIZATION OF THESE SURFACES IS ACHIEVED BY THE USE OF SOIL STABILIZATION BLANKETS OVER THE SEEDED GROUND SURFACE.

PERMANENT STABILIZATION  
THE SITE WILL BE PERMANENTLY SEEDED WITH ORDINARY SEEDING TECHNIQUES, USING A MIXTURE OF ANNUAL RYE AND PERENNIAL GRASSES PER VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK MINIMUM STANDARDS SEEDING IS TO BE DONE IMMEDIATELY UPON COMPLETION OF GRADING TO MINIMIZE VULNERABILITY TO EROSION.

STORMWATER MANAGEMENT CALCULATIONS  
IN ORDER TO MAINTAIN THE SHEET FLOW OF THE EXISTING DEPARTURE OF RUNOFF FROM THE PROJECT SITE ONTO THE NEIGHBORING LOT AND THE ALLEY A RETENTION BASIN WITH A LONG, LEVEL SPILLWAY IS IMPLEMENTED. POST-DEVELOPED RUNOFF RATE IS REDUCED BY ALMOST 50% FOR THE 10 YEAR STORM. THIS IS OUTLINED IN THE STORMWATER MANAGEMENT CALCULATIONS.

EROSION CONTROL METHODS  
DEPARTURE OF WATER BORNE SILT FROM THE SITE IS ACCOMPLISHED BY TWO LINES OF SILT FENCE PER STD 3.02 OF THE VIRGINIA ESC HANDBOOK (HEK). DEPARTURE OF SILT VIA CONSTRUCTION TRAFFIC IS ACCOMPLISHED BY THE INSTALLATION OF A GRAVEL PAD TYPE CONSTRUCTION ENTRANCE PER HEK STD 3.02. ALL YARD AREAS ARE TO BE LIMED, FERTILIZED, SEEDED, AND MULCHED PER HEK STD 3.31 & 3.35. AREAS WHICH WILL NOT RECEIVE PERMANENT SEEDING FOR MORE THAN 30 DAYS BEYOND COMPLETION OF FINE GRADING ARE TO BE LIMED, FERTILIZED, AND SEEDED PER HEK STD 3.31. PORTIONS OF YARD AREAS WITH SLOPES 2:1 AND STEEPER ARE TO BE SEEDED AND ALSO RECEIVE STABILIZATION BLANKET PER HEK STD 3.31 AND 3.36. SHEET C3 OF THESE DRAWINGS ILLUSTRATES THESE MEASURES.

SEDIMENT BASIN  
THE DISTURBED AREA IS MUCH LESS THAN THE 3.0 ACRE THRESHOLD INDICATED IN THE EROSION CONTROL HANDBOOK FOR A SEDIMENTATION BASIN SO NONE IS EMPLOYED.

MAINTENANCE SCHEDULE  
SEDIMENT SHALL BE REMOVED FROM SILT FENCES AND SEDIMENT BASIN MONTHLY UNTIL THE COMPLETION OF THE PROJECT. ALL SILT FENCING SHALL BE REMOVED WITHIN ONE YEAR OF ISSUANCE OF A CERTIFICATE OF OCCUPANCY. ADJOINING STREETS AND PAVEMENT SHALL BE SWEEP DAILY TO REMOVE DEPOSITED SILT AND SEDIMENTS DUE TO PROJECT EXCAVATION.

ESC MINIMUM STANDARDS PER VA ESC  
4VAC50-30-40

M8-1 & 3 GRADING WILL BE COMPLETED IN ONE OPERATION WHEREBY PERMANENT SEEDING WITH MULCH COVER WILL BE APPLIED AS SOON AS PRACTICABLE, WITHIN SEVEN DAYS OF REACHING FINAL GRADE. BASE STONE FOR PAVEMENT AND STONE FOR GRAVELLED AREAS WILL BE PLACED IMMEDIATELY UPON COMPLETION OF GRADING.

M8-2 PROJECT EARTHWORK IS BALANCED FOR CUT AND FILL. THERE WILL BE NO BORROW MATERIAL STOCKPILED ON-SITE. A SMALL AMOUNT OF TOPSOIL WILL BE STOCKPILED FOR DEPARTURE OF TOPSOIL FROM THIS LOCATION IS ACHIEVED BY SILT FENCE INSTALLED AT ITS LOWER PERIMETER.

M8-4 SILT FENCE BARRIERS WILL BE IN PLACE PRIOR TO COMMENCEMENT OF GRADING OPERATIONS.

M8-5 THE BERM FORMING THE LOWER EDGE OF THE BIORETENTION BASIN WILL BE SEEDED IMMEDIATELY UPON ITS PLACEMENT.

M8-6 N/A.

M8-7 SLOPES STEEPER THAN 2:1 ARE PROVIDED WITH STABILIZATION MATTING AS ON SHEET C3.

M8-8 N/A.

M8-9 IN CASE OF SEEPAGE FROM SLOPED GROUND SURFACES THESE SURFACES WILL BE STABILIZED WITH SOIL STABILIZATION MATTING.

M8-10 N/A.

M8-11 N/A.

M8-12 N/A.

M8-13 N/A.

M8-14 N/A.

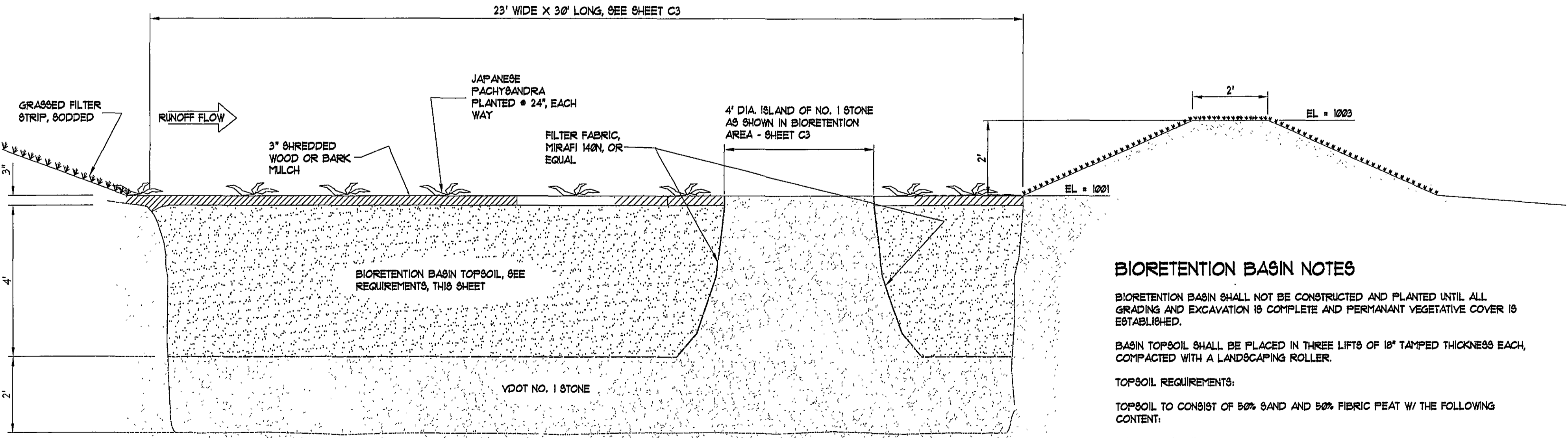
M8-15 N/A.

M8-16 WITH REGARD TO UTILITY LINE INSTALLATION: EXCAVATED MATERIAL WILL BE PLACED ON THE UPHILL SIDE OF TRENCHES; MATERIAL USED TO BACKFILL TRENCHES TO BE ACCORDING TO DETAIL ON SHEET C2.

M8-17 THE CONSTRUCTION ENTRANCE SHALL BE CLEANED WEEKLY TO REMOVE SEDIMENT FROM STONE BALLAST. EXISTING PARKING SHALL BE SWEEP AT THE END OF EACH WORK DAY TO MINIMIZE SEDIMENTS.

M8-18 SILT FENCING AND INLET PROTECTION SHALL BE REMOVED WITHIN 30 DAYS OF ESTABLISHMENT OF VEGETATIVE COVER ON YARD AREAS AND PLACEMENT OF BASE STONE IN AREAS TO BE PAVED.

M8-19 A RETENTION BASIN IS UTILIZED FOR STORMWATER DISCHARGE MANAGEMENT SO AS TO NOT CONCENTRATE RUNOFF AT A DISCRETE RELEASE POINT. A LONG SPILLWAY WITH LEVEL SPREADER IS USED TO ENSURE SHEET FLOW OF THE RUNOFF FROM THE BASIN AND OFFSITE.



BIORETENTION BASIN NOTES

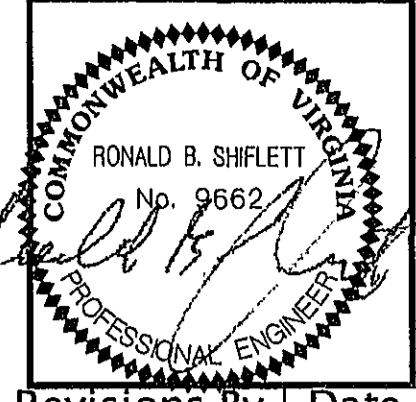
BIORETENTION BASIN SHALL NOT BE CONSTRUCTED AND PLANTED UNTIL ALL GRADING AND EXCAVATION IS COMPLETE AND PERMANENT VEGETATIVE COVER IS ESTABLISHED.

BASIN TOPSOIL SHALL BE PLACED IN THREE LIFTS OF 18" TAMPED THICKNESS EACH, COMPACTED WITH A LANDSCAPING ROLLER.

TOPSOIL REQUIREMENTS:

TOPSOIL TO CONSIST OF 50% SAND AND 50% FIBRIC PEAT W/ THE FOLLOWING CONTENT:

pH 5.0-7.0  
ORGANIC MATTER GREATER THAN 1.5  
MAGNESIUM 100+ UNITS  
PHOSPHORUS 150+ UNITS  
POTASSIUM 120+ UNITS  
SOLUBLE SALTS:  
LESS THAN 900 PPM (SOIL)  
LESS THAN 3000 PPM (ORGANIC MIX)



Revisions By Date


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SITE DETAILS  
NEW OFFICE & SHOP FOR  
A. BYRON SMITH OIL COMPANY  
ROANOKE, VA

Scale: AS SHOWN  
Date: 4-21-08  
Design By: RBS  
CAD By: RBS  
Checked By:  
Comm. No.: 08038

Sheet No.  
C4

APPROVED  
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