

EROSION AND SEDIMENT CONTROL NARRATIVE

PROJECT DESCRIPTION

The project consists of the development of a Bojangles restaurant and commercial building on 2.22 acres in Roanoke County. Utilities are planned for the site. Total disturbed area is approximately 2.45 acres.

EXISTING SITE CONDITIONS

The site has previously been graded and contaminated material removed from the site. The existing sediment trap will be relocated to its proposed location as shown on the erosion control plans. The site currently drains to an existing ditchline that parallels Brambleton Avenue & Route 221.

ADJACENT PROPERTIES

The adjacent property to the south is zoned C-1. All of sides of the property are fronting on public right of way of the following roadways: Brambleton Avenue, Colonial Avenue, and Merriman Road.

OFF-SITE AREAS

Silt fence will be installed downhill of all disturbed areas and diversions will be installed where necessary to prevent sediment laden runoff from exiting the site or impacting the existing or proposed ditchline.

SOILS

On site soils are identified as 3C3 (Chilhowie silty clay loam). Soils information is from the U.S. Department of Agriculture soils survey map containing a soils survey of Roanoke County and the Cities of Roanoke and Salem Virginia.

The existing soils on-site are contaminated from past activities on the site. E.C.S. has performed an analysis of the site and contaminated material has been removed to date. Any future contaminated material that is encountered on site shall be brought to the attention of E.C.S. and the engineer and E.C.S. shall coordinate the removal of these contaminated materials to an approved location suitable for disposal. All soil removal and stream disturbance shall follow all rules and regulations established by the E.C.S. report and Department of Environmental Quality Report.

CRITICAL EROSION AREAS

Silt fence should be installed along the existing and proposed ditchlines. This silt fence should be regularly maintained along with the diversions on site. Also see ditch construction notes.

EROSION AND SEDIMENT CONTROL MEASURES

All measures to be in accordance with the Virginia Erosion and Sediment Control Handbook, latest edition.

Construction Entrance-3.02

A gravel construction entrance will prevent mud and dust from entering Brambleton Avenue.

Diversion -3.12

A channel constructed across a slope with supporting earthen ridge on the lower side to reduce slope length and to intercept and divert stormwater runoff to stabilized outlets at non-erosive velocities.

Silt Fence-3.05

Silt fence will protect downstream property from sediment laden runoff.

Temporary Seeding-3.31

Any denuded areas left dormant for extended periods of time will be seeded temporarily within seven days.

Permanent Seeding-3.32

Areas not receiving buildings, paving or landscaping will be seeded.

Inlet Protection-3.07

A sediment trapping measure for stormwater inlets and culverts to prevent sediment from entering the system and temporary stabilization.

Quiet Protection-3.16

A structurally lined apron or other acceptable energy dissipating devices to prevent scour at stormwater outlets.

Stockpile-3.30

Topsoil and stock pile to be implemented to protect topsoil

Mulching-3.35

To reduce erosion and sedimentation by stabilizing disturbed areas that will not be brought to final grade for a period of more than 30 days.

Sediment Trap-3.13

A temporary trap which collects sediment laden runoff and contains the runoff until the sediment has been removed.

MANAGEMENT STRATEGIES

Construction will be sequenced so that grading operations can begin and end as quickly as possible.

The gravel construction entrance will be installed as a first step in construction. Install silt fence as the second step in construction.

Other measures will be installed as work progresses into these areas. Temporary seeding or other stabilization will follow immediately after grading.

The job superintendent shall be responsible for the installation and maintenance of all erosion and sediment control practices.

After achieving adequate stabilization, the temporary erosion and sediment control measures will be cleaned and removed.

DITCHLINE CONSTRUCTION

1. Existing ditchline to remain while the proposed ditchline is being constructed and stabilized.

2. The proposed ditchline shall be graded, seeded, & blanketed match as required and brought to finished grade.

3. Any contaminated material found during excavation of the ditchline shall be brought to the attention of E.C.S. & the Engineer and disposed of properly in an approved landfill or applicable location on-site.

4. The junction box and culvert shall be installed during dry periods of time where rainy conditions are unlikely.

5. Any work within the proposed or existing ditchline shall follow all E.C.S. recommendations and the permit from the Department of Environmental Quality.

6. Any discrepancies or items discovered during construction shall be brought to E.C.S. and the engineer's attention at the time of discovery.

7. G.C. shall notify V.D.O.T. prior to any ditch construction within the right of way.

PERMANENT STABILIZATION

All areas disturbed by construction which do not receive buildings or paving shall be stabilized with permanent seeding as specified. All seeding shall be tacked and mulched and placed immediately after reaching finished grade.

STORMWATER MANAGEMENT

A underground stormwater management facility is planned for this development.

MAINTENANCE

In general, all erosion and sediment control measures will be checked daily and after each significant rainfall. In particular:

Silt fence will be checked regularly for undermining or deterioration of the fabric. Sediment shall be removed when the level of sediment deposition reaches halfway to the top of the barrier.

The seeded areas shall be checked regularly to ensure that a good stand is maintained. Areas should be fertilized and reseeded as needed.

The contractor shall inspect all erosion control devices immediately after each significant rainfall and daily during periods of prolonged or heavy rainfall and repair all structures as necessary with in 48 hours.

VIRGINIA DEPARTMENT OF TRANSPORTATION NOTES:

Quality Control

All work done in the proposed, or existing right of way, including but not limited to street grading, street paving and all construction of all structural components, shall be done in accordance with current Virginia Department of Transportation Road and Bridge Standards and Specifications. All materials used shall be tested in accordance with VDOT standard policies. The developer shall contact the office of the resident engineer, prior to beginning any construction within the proposed or existing right of way. At the time, the resident engineer shall prepare an inspection and testing schedule. The developer will produce test reports from approved independent laboratories at the developer's expense.

The sub-grade shall be approved by the Department prior to placement of the base. Base shall be approved by the Virginia Department of Transportation for depth, template and compaction before surface is applied.

Utilities

All necessary utility laterals along with provisions for conduits (i.e. water, sewer, storm, gas and telephone) will be constructed prior to placement of base materials.

Gas or petroleum transmission lines will not be permitted within the pavement or shoulder element (back curb to back of curb) of this development. Service laterals crossing and pipe lines located outside the pavement but inside the right-of-way will be constructed in conformity with ASA B 31.8 specifications and safety regulations. Distribution lines with pressures less than 120 lbs. are unaffected by the above.

Permits will be required for all utilities within street right-of-way prior to acceptance into the secondary highway system. Any easements granted to a utility company for placement of power, telephone, etc. shall be released prior to acceptance.

Private entrances

Modified CG-9D gutter will be provided at all entrances to private lots where standard CG-8 curb and gutter is approved for use. A VDOT standard PE-1 is required for private entrances on streets without curb and gutter. It is the developer's responsibility to ensure that all private entrances have either a CG-9D or a PE-1. A street shall not be brought into the system where existing houses (occupied, unoccupied, or under construction) have neither a CG-9D or a PE-1.

Permits will be required for all private entrances constructed on street right-of-way after acceptance into the secondary highway system.

All private entrances within the right-of-way area should not exceed eight percent (8%) maximum grade.

Erosion control and landscaping

Care shall be taken during construction to prevent erosion, dust and mud from damaging adjacent property, clogging ditches, tracking public streets and otherwise creating a public or private nuisance to surrounding areas.

The entire construction area including ditches, channels, back of curbs and/or pavement is to be back filled and seeded at the earliest possible time after final grading.

Drainage easements shall be defined by excavated ditched or channels for their full length to well defined existing natural watercourses.

The road will be reviewed during construction for the need of paved ditches. If erosion is encountered in any drainage easement, it will be the responsibility of the developer to sod, rip rap, grout, pave or to do whatever is necessary to correct the problem.

All vegetation and overburden shall be removed from shoulder to shoulder prior to the conditioning (cutting and/or preparation) of the sub-grade.

Intersection Pavement Radius

Minimum pavement radius of 25 feet is required at all street intersections.

Connections to State Maintained Roads

While these plans have been approved such approval does not exempt connections with existing state-maintained roads from critical review at the time permit applications are made. This is necessary in order that the prevailing conditions be taken into consideration regarding safety accommodations such as turning lanes.

Guardrails

Standard guardrails with safety end sections may be required on fills as deemed necessary by the resident engineer. After completion of rough grading operations, the office of the resident engineer, shall be notified so that a field review may be made of the proposed locations.

Where guardrails are to be installed the shoulder width shall be increased in accordance with VDOT road and bridge standards.

Storm Drainage

Field review will be made during construction to determine the need and limits of paved ditched and/or ditch stabilization treatments, and to determine the need and limits of additional drainage easements. All drainage easements shall be cut and made to function to a natural watercourse. Any erosion problems encountered in an easement shall be corrected by whatever means necessary prior to subdivision acceptance.

Ditch slopes are to be four to one (4:1) for shoulder widths of six feet (6') or greater and three to one (3:1) for shoulder widths of four feet (4') or five (5'), unless otherwise specified in the plans.

Entrance Permit

Contractor shall obtain entrance permit to the existing Virginia Department of Transportation's right-of-way resident engineer prior to road construction.

Inspection

An inspector will not be furnished except for periodic progress inspections, the above mentioned field reviews and checking for required stone depths. The developer will be required to post a surety to guarantee the road free of defects for one year after acceptance by the Department of Transportation.

Street Maintenance

The streets shall be properly maintained until acceptance. At such time as all requirements have been met for acceptance, another inspection will be made to determine that the street has been properly maintained.

Underground Utilities

Contractor shall verify location and elevation of all underground utilities shown on the plans in areas of construction prior to starting work by contacting Miss Utility. Contact site engineer immediately if location or elevation is different from that shown on the plans. If there appears to be a conflict, and upon discovery of any utility not shown on this plan, call "Miss Utility" of Central Virginia at 1-800-552-7001.

Revisions of specifications and standards

Approval of these plans will be based on specifications and standards in effect at the time of approval and will be subject, until completion of the roadway and acceptance by the Department, to future revisions of the specifications and standards.

Traffic Control Devices

The developer shall be responsible for installation of all traffic control devices, STOP SIGNS, YIELD SIGNS, SPEED LIMIT SIGNS, pavement striping, etc., required by the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD). The developer shall be responsible for reinstalling and maintaining all traffic control devices required as part of this development until the streets are taken into the Secondary System. All traffic control devices shall be installed according to the MUTCD.

LANDSCAPE SPECIFICATIONS

1. PLANT MATERIAL NAMES ARE IN COMPLIANCE WITH HORTUS THIRD SIZES AND GRADING ARE TO COMPLY WITH THE LATEST EDITION OF AMERICAN STANDARDS FOR NURSERY STOCK, PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMAN.

2. ALL WORK SHALL BE COORDINATED WITH TRADES.

3. USE EXISTING TOPSOIL AND/OR PROVIDE NEW TOPSOIL, WHICH IS FERTILE, FRIABLE, NATURAL LOAM, SURFACE SOIL, REASONABLY FREE OF SUBSOIL, FOREIGN MATTER AND ROOTS, STUMPS AND STONES LARGER THAN 2" IN DIMENSION.

4. CONTRACTOR SHALL ASCERTAIN LOCATION OF ALL UTILITIES PRIOR TO EXCAVATION.

5. CONTRACTOR SHALL MAINTAIN PLANT MATERIAL DURING INSTALL-ATION MAINTENANCE SHALL BECOME RESPONSIBILITY OF OWNER UPON ACCEPTANCE OF WORK.

6. WHERE THE LANDSCAPE WORK IS COMPLETED, THE OWNER'S REP-RESENTATIVE WILL, UPON WRITTEN REQUEST, MAKE AN INSPECTION TO DETERMINE ACCEPTABILITY. IF WORK IS NOT ACCEPTABLE, REJECT REJECTED WORK AND CONTINUE MAINTENANCE UNTIL REINSPECTION AND APPROVAL.

7. GUARANTEE ALL MATERIALS AND LABOR FOR 12 CALANDER MONTHS AFTER ACCEPTANCE.
A. MAKE REPLACEMENTS OF ALL DEAD PLANTS IN IMPAIRED CONDITIONS IN EARLY FALL FOLLOWING PLANTING.
B. ADD ADDITIONALLY IN THE EARLY SPRING FOR THE SAME OR OTHER MATERIALS WHICH ARE DEAD OR IMPAIRED FROM THE WINTER CONDITIONS.

8. WITHIN 10 DAYS AFTER ACCEPTANCE, THE CONTRACTOR SHALL DELIVER AN OUTLINE OF MAINTENANCE PROCEDURES RECOMMENDED FOR THIS PLANTING FOR THE OWNER.

9. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY DURING THE GUARANTEE PERIOD TO PROVIDE WRITTEN NOTICE TO THE OWNER OF ANY MAINTENANCE PRACTICE WHICH IN THEIR OPINION WILL AFFECT THE GUARANTEE IF NOT REMEDIED PROMPTLY.

10. DO NOT MAKE SUBSTITUTIONS. BID MATERIALS SHOWN ON PLANS, CONTRACTOR IS ENCOURAGED TO PROVIDE WRITTEN ALTERNATE LIST OF MATERIALS, SIZES AND NUMBERS SUBSTITUTION FOR COST-EFFECTIVE MAINTENANCE OF DESIGN INTEGRITY.

11. THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO ACCEPT OR REJECT ANY MATERIAL THAT HE/SHE DEEMS UNACCEPTABLE. REJECTED MATERIAL SHALL BE REMOVED PROMPTLY FROM THE SITE.

12. BALLED AND BURLAPPED PLANTS SHALL BE DUG WITH FIRM NATURAL BALLS OF EARTH. BALL SIZES SHALL BE IN ACCORDANCE WITH A.A.N. SPECIFICATIONS. ALL CONTAINER GROWN STOCK SHALL BE WELL ROOTED AND ESTABLISHED IN THE CONTAINER IN WHICH IT IS SODDED. AN ESTABLISHED CONTAINER GROWN PLANT SHALL HAVE A ROOT SYSTEM DEVELOPED SUFFICIENTLY TO RETAIN ITS SHAPE WHEN REMOVED FROM THE CONTAINER.

13. ALL PLANT MATERIAL SHALL BE NURSERY GROWN UNLESS OTHERWISE SPECIFIED. PRUNING SHALL BE DONE BEFORE PLANTING OR DURING THE PLANTING OPERATION.

14. ALL PLANT MATERIAL SHALL BE COVERED AND PROTECTED FROM EXCESSIVE DRYING DURING TRANSIT.

15. ANTI-DESICCANTS SHALL BE APPLIED ON ALL MATERIAL DUG WHILE IN FOLIAGE.

16. MULCH MATERIAL SHALL BE EITHER SHREDDED HARDWOOD MULCH OR APPROVED EQUAL. MATERIAL SHALL BE MULCHING GRADE, UNIFORM IN SIZE AND FREE OF FOREIGN MATTER.

17. TOPSOIL MIXTURE SHALL BE 2 PARTS EXISTING SOIL MIXED EVENLY WITH 1 PART SPAGNUM PEAT MOSS OR PEAT HUMUS. EXISTING SOIL SHALL BE FREE OF STONES, LUMPS, PLANTS, ROOTS AND OTHER DEBRIS OVER 1 1/2 INCHES. IT SHALL NOT CONTAIN TOXIC SUB-STANCES HARMFUL TO PLANT GROWTH. TOPSOIL SHALL HAVE A PH RANGE OF 5.0 TO 7.0.

18. PLANTING PROCEDURES FOR TREES AND SHRUBS
A. PLANTING SHALL OCCUR IN ACCORDANCE WITH ALL DETAILS.
B. TREES AND SHRUBS SHALL BE PLACED IN THE PLANTING PIT, BY LIFTING FROM THE BALL (NEVER FROM THE BRANCHES OR TRUNK). ALL PLANT MATERIAL SHALL BE PLACED IN A STRAIGHT POSITION WITHIN THE PLANTING PIT. WITH THE MOST DESIRABLE SIDE PLACED TOWARDS THE PROMINENT VIEW (SIDEWALK, STREET, ETC.).
C. THE TREE PIT SHALL BE BACKFILLED WITH A SOIL MIXTURE AS PER SPECIFICATIONS. THE PIT SHALL BE FILLED HALFWAY INITIALLY AND TAMPED FIRMLY. ALL ROPES, WIRES, ETC. ON THE ROOTBALL SHALL BE CUT AND THE BURLAP OR BALL WRAP PULLED BACK TO THE EDGE OF THE ROOTBALL. COMPLETE BACKFILLING PLANT PIT AND TAMP FIRMLY. BACKFILL SOIL SHALL NOT COVER TOP OF ROOTBALL. MULCH ROOTBALL AND SAUCER WITH MINIMUM OF 3 INCHES SHREDDED OR CHIPPED HARDWOOD OR PINE MULCH. WATER THOROUGHLY OR UNTIL PLANT PIT IS FILLED.

MINIMUM STANDARDS

THE FOLLOWING STANDARDS ARE TO BE PROVIDED OR ADDRESSED ON EVERY DEVELOPMENT PROJECT EXCEEDING 5000 S.F. IN AREA OF DISTURBANCE THESE STANDARDS ARE CONSIDERED A MINIMUM AND MAY REQUIRE ADDITIONAL MEASURES AS DEEMED NECESSARY BY THE LOCAL APPROVING AUTHORITY OR THE CONSULTING ENGINEER.

No.	CRITERIA, TECHNIQUE OR METHOD	PRACTICES PROVIDED
1	PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN (7) DAYS AFTER FINAL GRADE HAS BEEN REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN (7) DAYS TO DENUDED AREAS THAT MAY BE AT FINAL GRADE BUT WILL REMAIN DORMANT (UNDISTURBED) FOR LONGER THAN THIRTY (30) DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE (1) YEAR.	(TS) (PS) (MU) FOR ALL DENUDED AREAS
2	DURING CONSTRUCTION OF THE PROJECT, SOIL STOCKPILES SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE CONTRACTOR IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS WELL AS SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE.	(TS) (PS) (MU) FOR PROPOSED STOCKPILE
3	A PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED ON DENUDED AREAS NOT OTHERWISE PERMANENTLY STABILIZED. PERMANENT VEGETATION SHALL NOT BE CONSIDERED ESTABLISHED UNTIL A GROUND COVER IS ACHIEVED THAT, IN THE OPINION OF THE LOCAL PROGRAM ADMINISTRATOR OR DESIGNATED AGENT, IS UNIFORM, MATURE ENOUGH TO SURVIVE AND WILL INHIBIT EROSION.	(TS) (PS) (MU) FOR ALL DENUDED AREAS
4	SEDIMENT BASINS AND TRAPS, PERIMETER DIKES, SEDIMENT BARRIERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND-DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UPLSLOPE LAND DISTURBANCE TAKES PLACE.	(ST) (SF) (DD) (RWD) FOR ALL DRAINAGE DIVIDES
5	STABILIZATION METHODS SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.	(TS) (PS) (MU) FOR ALL EARTHEN STRUCTURES
6	SEDIMENT TRAPS AND BASINS SHALL BE DESIGNED AND CONSTRUCTED BASED UPON THE TOTAL DRAINAGE AREA TO BE SERVED BY THE TRAP OR BASIN.	SEE SUPPLEMENTAL CALCULATIONS
7	CUT AND FILL SLOPES SHALL BE CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SLOPES THAT ARE FOUND TO BE ERODING EXCESSIVELY WITHIN ONE (1) YEAR OF PERMANENT STABILIZATION SHALL BE PROVIDED WITH ADDITIONAL SLOPE STABILIZATION MEASURES UNTIL THE PROBLEM IS CORRECTED.	(TS) (PS) (MU) FOR ALL ERODING SLOPES
8	CONCENTRATED RUNOFF SHALL NOT FLOW DOWN CUT OR FILL SLOPES UNLESS CONTAINED WITHIN AN ADEQUATE TEMPORARY OR PERMANENT CHANNEL, FLUME OR SLOPE DRAIN STRUCTURE.	NOT APPLICABLE
9	WHENEVER WATER SEEPS FROM A SLOPE FACE, ADEQUATE DRAINAGE OR OTHER PROTECTION SHALL BE PROVIDED.	(IP) FOR ALL STORM WATER INTAKES
10	ALL STORM SEWER INLETS THAT ARE MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT SEDIMENT-LADEN WATER CANNOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT.	(OP) FOR ALL STORMWATER OUTLETS
11	BEFORE NEWLY CONSTRUCTED STORMWATER CONVEYANCE CHANNELS ARE MADE OPERATIONAL, ADEQUATE OUTLET PROTECTION AND ANY REQUIRED TEMPORARY OR PERMANENT CHANNEL LINING SHALL BE INSTALLED IN BOTH THE CONVEYANCE CHANNEL AND RECEIVING CHANNEL.	FOLLOW DEQ PERMIT
12	WHEN WORK IN A LIVE WATERCOURSE IS PERFORMED, PRECAUTIONS SHALL BE TAKEN TO MINIMIZE ENCROACHMENT, CONTROL SEDIMENT TRANSPORT AND STABILIZE THE WORK AREA TO THE GREATEST EXTENT POSSIBLE DURING CONSTRUCTION. NONERODIBLE MATERIAL SHALL BE USED FOR THE CONSTRUCTION OF CAUSEWAYS AND COFFERDAMS. EARTHEN FILL MAY BE USED FOR THESE STRUCTURES IF ARMORED BY NONERODIBLE COVER MATERIALS.	FOLLOW DEQ PERMIT
13	WHEN A LIVE WATERCOURSE MUST BE CROSSED BY CONSTRUCTION VEHICLES MORE THAN TWICE IN ANY SIX (6) MONTH PERIOD, A TEMPORARY STREAM CROSSING CONSTRUCTED OF NONERODIBLE MATERIAL.	FOLLOW DEQ PERMIT
14	ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS PERTAINING TO WORKING IN OR CROSSING LIVE WATERCOURSES SHALL BE MET. THE BEDS AND BANKS OF ANY WATERCOURSE SHALL BE STABILIZED IMMEDIATELY AFTER WORK IN THE WATERCOURSE IS COMPLETED.	FOLLOW DEQ PERMIT
15	THE BEDS AND BANKS OF A WATERCOURSE SHALL BE STABILIZED IMMEDIATELY AFTER WORK IN THE WATERCOURSE IS COMPLETED.	FOLLOW DEQ PERMIT
16	UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS IN ADDITION TO OTHER APPLICABLE CRITERIA: 1) NO MORE THAN 500 LINEAR FEET OF ANY TRENCH MAY BE OPENED AT ONE TIME. 2) EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES. 3) EFFLUENT FROM Dewatering OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF-SITE PROPERTY. 4) MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION. 5) RESTABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THESE REGULATIONS. 6) APPLICABLE SAFETY REGULATIONS SHALL BE COMPLIED WITH.	NOT APPLICABLE ALL UTILITY PIPING ON-SITE
17	WHERE CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED OR PUBLIC ROADS, PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY VEHICULAR TRACKING ONTO THE PAVED SURFACE. WHERE SEDIMENT IS TRANSPORTED ONTO A PAVED OR PUBLIC ROAD SURFACE, THE ROAD SURFACE SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM THE ROADS BY SHOVELING OR SWEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER.	(CE) FOR ALL POINTS OF INGRESS/EGRESS
18	ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN THIRTY (30) DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED, UNLESS OTHERWISE AUTHORIZED BY THE LOCAL PROGRAM ADMINISTRATOR. TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION.	(TS) (PS) (MU) SELF-EXPLANATORY
19	PROPERTIES AND WATERWAYS DOWNSTREAM FROM DEVELOPMENT SITES SHALL BE PROTECTED FROM SEDIMENT DEPOSITION, EROSION AND DAMAGE DUE TO INCREASES IN VOLUME, VELOCITY AND PEAK FLOW RATE OF STORMWATER RUNOFF FOR THE STATED FREQUENCY STORM OF 24-HOUR DURATION IN ACCORDANCE WITH THE APPLICABLE CRITERIA.	SEE SUPPLEMENTAL CALCULATIONS, PERMANENT SWM FACILITY PROVIDED



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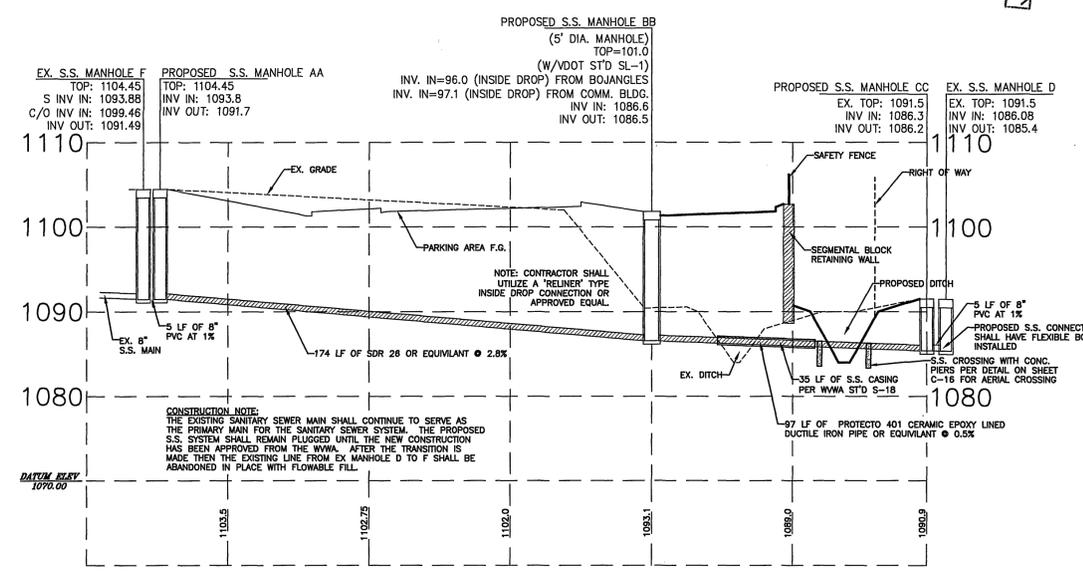
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BOJANGLES - BRAMBLETON
NOTES
CAVE SPRING, VIRGINIA
COUNTY OF ROANOKE, VIRGINIA

DRAWN BY: BTC
DESIGNED BY: BTC
CHECKED BY: RIS
DATE: 11-26-07
REVISIONS:
1-9-08
2-27-08
3-11-08

SCALE: 1"=30'
SHEET NO. **C-12**
JOB NO. R0700128.00



EX. SANITARY SEWER REPLACEMENT PROFILE

1"=30' HORIZONTAL
1"=10' VERTICAL