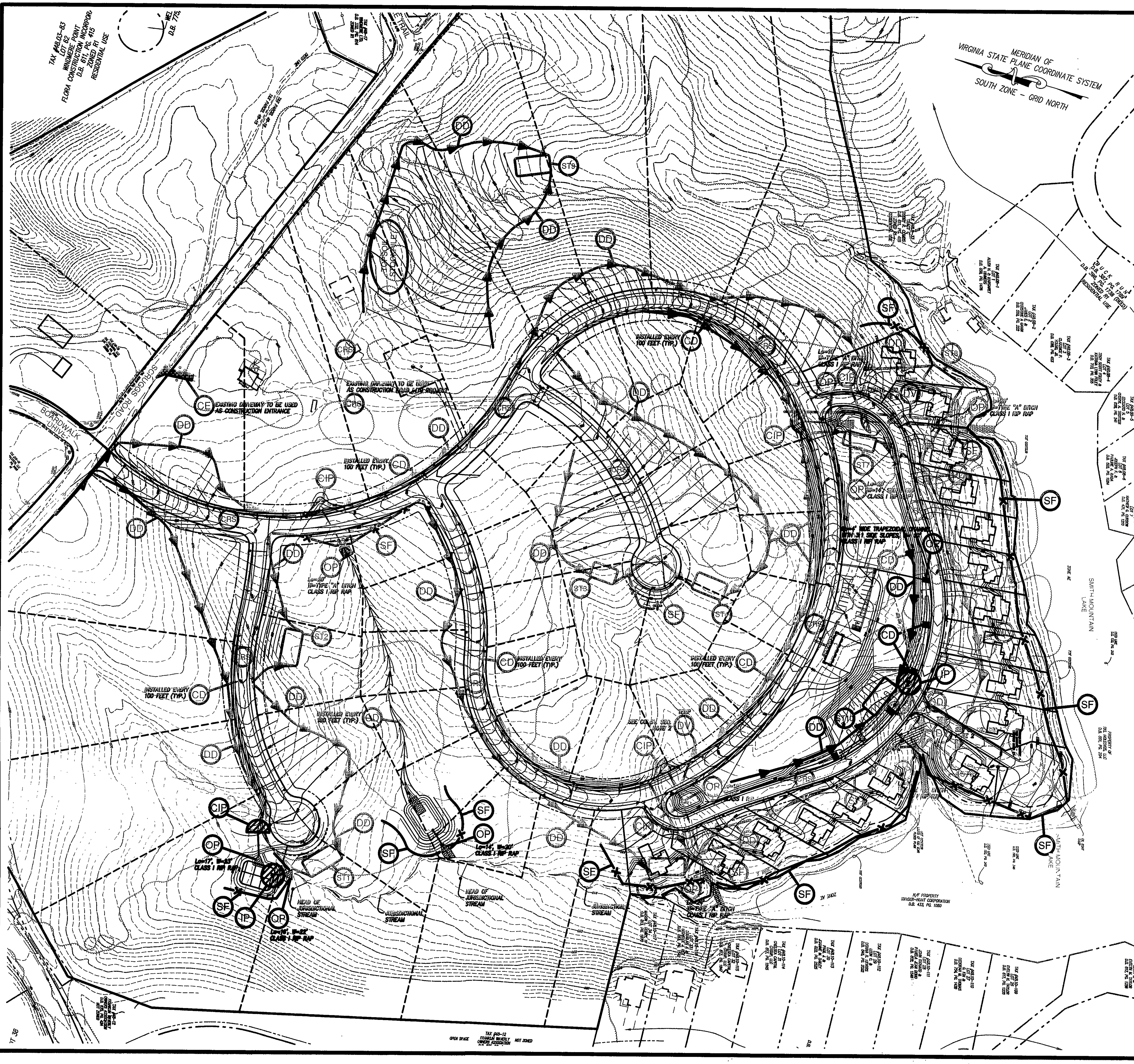

EROSION CONTROL NARRATIVE

PROJECT DESCRIPTION
THIS PROJECT CONSISTS OF THE INSTALLATION OF THE ROADWAYS AND REQUIRED DRAINAGE STRUCTURES FOR A RESIDENTIAL SUBDIVISION ALONG WITH THE CONSTRUCTION OF WATERLINE AND PRIVATE SANITARY SEWER SYSTEM. TOTAL DISTURBED AREA IS APPROXIMATELY 24 ACRES.

EXISTING SITE CONDITIONS
THE SITE CONSISTS OF MILD SLOPES FROM ROUTE 616 DOWN TO SMITH MOUNTAIN LAKE. ONE JURISDICTIONAL STREAM EXISTS ON THE PROPERTY NEAR THE CONSTRUCTION AREA, BUT IT IS NOT IMPACTED WITH THIS PROJECT. THE PROPERTY IS HAS MIXED LAND COVER WITH PORTIONS OF THE SITE BEING OPEN FIELDS AND PORTIONS BEING WOODED.

ADJACENT AREAS
THIS DEVELOPMENT IS BORDERED ON THE NORTH BY ROUTE 616, TO THE EAST AND WEST BY SINGLE FAMILY RESIDENTIAL PROPERTY AND TO THE SOUTH BY SMITH MOUNTAIN LAKE.

OFFSITE AREAS
THE LOCATION OF ALL OFFSITE FILL OR BORROW AREAS ASSOCIATED WITH THIS CONSTRUCTION PROJECT WILL BE PROVIDED TO FRANKLIN COUNTY. AN EROSION AND SEDIMENT CONTROL PLAN OR MEASURES MAY BE REQUIRED FOR THESE AREAS. NO OFFSITE BORROW OR FILL AREAS ARE ANTICIPATED WITH THIS DEVELOPMENT.

SOILS
SOILS INFORMATION IS BASED ON AN INSPECTION OF THE SOIL SURVEY OF FRANKLIN COUNTY AND HAS NOT BEEN FIELD VERIFIED. THE ONSITE SOILS FALL INTO FOUR DIFFERENT UNITS. THE MAJORITY OF THE UNITS ARE THE CLIFFORD FINE SANDY LOAM – MAP SYMBOLS 7C (8 TO 15% SLOPES) AND 7D (15 TO 25% SLOPES). THE NEXT GROUP OF UNITS ARE THE MINNIEVILLE LOAM – MAP SYMBOLS 27C (8 TO 15% SLOPES) AND 27D (15 TO 25% SLOPES). SOME OF THE SOIL CHARACTERISTICS FOR THESE UNITS ARE LISTED BELOW:

CLIFFORD FINE SANDY LOAM, 8 TO 15% SLOPES (MAP SYMBOL 7C); 15 TO 25% SLOPES (MAP SYMBOL 7D) THE TYPICAL PROFILE FOR CLIFFORD SOILS IS AS FOLLOWS: 0 TO 7 INCHES – FINE SANDY LOAM, 7 TO 54 INCHES – CLAY LOAM, 54 TO 62 INCHES – CLAY LOAM, 62 TO 82 INCHES – FINE SANDY LOAM. THE SOIL HAS MODERATE EROSION POTENTIAL AND IS WELL DRAINED.

MINNIEVILLE LOAM, 8 TO 15% SLOPES (MAP SYMBOL 27C); 15 TO 25% SLOPES (MAP SYMBOL 27D) THE TYPICAL PROFILE FOR MINNIEVILLE SOILS IS AS FOLLOWS: 0 TO 4 INCHES – LOAM, 4 TO 53 INCHES – CLAY, 53 TO 81 INCHES – CLAY LOAM. THE SOIL HAS MODERATE EROSION POTENTIAL AND IS WELL DRAINED.

CRITICAL AREAS

THE CONTRACTOR SHALL TAKE SPECIAL CARE TO ESTABLISH PERMANENT STABILIZATION ON ALL STEEP SLOPES. IN ADDITION, THERE IS LOCATED ON THIS SITE ONE JURISDICTIONAL STREAM THAT IS NOT TO BE DISTURBED WITHOUT PERMITS FROM THE US ARMY CORPS OF ENGINEERS AND THE VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY. NO IMPACTS TO THIS JURISDICTIONAL STREAM ARE PROPOSED WITH THIS DEVELOPMENT. AREAS DIRECTLY IN CONTACT WITH SMITH MOUNTAIN LAKE WILL BE TREATED CAREFULLY. ALL ESC MEASURES SHOWN IN THESE AREAS WILL BE INSTALLED PRIOR TO START OF ANY ACTIVITY IN THIS AREA.

EROSION AND SEDIMENT CONTROL MEASURES
CONSTRUCTION ENTRANCE (3.02) – A STONE CONSTRUCTION ENTRANCE WILL BE INSTALLED TO MINIMIZE THE AMOUNT OF MUD TRANSPORTED INTO EXISTING ROADS.

CONSTRUCTION ROAD STABILIZATION (3.03) – CONSTRUCTION ROAD STABILIZATION WILL BE TO MINIMIZE EROSION WITHIN THE TEMPORARY CONSTRUCTION ROAD.

SILT FENCE (3.05) – SILT FENCE WILL BE INSTALLED AT THE LOWER ENDS OF THE PROJECT SITE TO INTERCEPT SEDIMENT LADEN RUN-OFF PRIOR TO EXITING THE SITE.

INLET PROTECTION (3.07) – INLET PROTECTION WILL BE INSTALLED AT EACH STORM DRAIN INLET TO MINIMIZE THE AMOUNT OF SEDIMENT LADEN RUNOFF FROM ENTERING THE STORM DRAIN SYSTEM.

DIVERSION DIKE (3.09) – TEMPORARY DIVERSION DIKES WILL BE INSTALLED TO DIVERT OFFSITE RUNOFF AROUND THE CONSTRUCTION AREA AND ALSO TO DIVERT SEDIMENT LADEN RUNOFF INTO THE SEDIMENT TRAPS.

DIVERSION (3.12) – TEMPORARY DIVERSIONS WILL BE INSTALLED TO CONVEY OFFSITE DRAINAGE AROUND THE CONSTRUCTION SITE WITHOUT ACCUMULATING SEDIMENT.

TEMPORARY SEDIMENT TRAPS (3.13) – SEDIMENT TRAPS WILL BE UTILIZED TO ALLOW SEDIMENT TO SETTLE OUT OF RUNOFF PRIOR TO EXITING THE SITE.

OUTLET PROTECTION (3.18) – OUTLET PROTECTION WILL BE INSTALLED AT THE OUTLET ENDS OF ALL STORM DRAIN OR CULVERT OUTFALLS TO PREVENT SCOUR AND MINIMIZE THE POTENTIAL FOR DOWNSTREAM EROSION. NOTE ALL OUTLET PROTECTION STONE SHALL BE VDOT STD. CLASS I RIP RAP AND PLACED IN THE RECEIVING CHANNEL FOR THE LENGTH AS SHOWN ON THE PLAN.

ROCK CHECK DAMS (3.20) – ROCK CHECK DAMS SHALL BE INSTALLED WITHIN DITCHES AS SHOWN ON THE PLAN TO REDUCE THE VELOCITY OF RUNOFF AND THEREBY REDUCING THE EROSION WITHIN THE DITCH.

SURFACE ROUGHENING (3.29) – SURFACE ROUGHENING SHALL BE PERFORMED ON ALL SLOPES 3:1 OR STEEPER AS SHOWN ON THE PLANS.

TOPSOILING (3.30) – TOPSOIL SHALL BE STRIPPED FROM AREAS TO BE GRADED AND STOCKPILED FOR FUTURE USE. TOPSOIL STOCKPILES SHALL BE PROTECTED BY SILT FENCE INSTALLED ALONG THE DOWNHILL SIDES AROUND THE STOCKPILE. TOPSOIL SHALL BE UNIFORMLY SPREAD OVER DISTURBED AREAS PRIOR TO PERMANENT SEEDING.

TEMPORARY SEEDING (3.31) – TEMPORARY SEEDING SHALL BE APPLIED TO TEMPORARY DIVERSION DIKES, TOPSOIL STOCKPILES, AND ALL AREAS TO BE ROUGH GRADED, BUT NOT FINISHED GRADED DURING THE INITIAL PHASE OF CONSTRUCTION. TEMPORARY SEEDING SHALL BE FAST GERMINATING, TEMPORARY VEGETATION AND INSTALLED IMMEDIATELY FOLLOWING GRADING, OR INSTALLATION IF A TEMPORARY MEASURE. SEE ALSO MINIMUM STANDARDS.

PERMANENT SEEDING (3.32) – PERMANENT SEEDING SHALL BE INSTALLED ON ALL DISTURBED AREAS OF THE SITE NOT OTHERWISE STABILIZED.

MULCHING (3.35) – ALL DISTURBED AREAS SHALL BE MULCHED AFTER SEEDING. STRAW MULCH SHALL BE APPLIED AT A RATE OF TWO TONS PER ACRE AND ANCHORED WITH 750 LBS PER ACRE OF FIBER MULCH OVER THE SEEDED AREA.

STORMWATER MANAGEMENT
SIX STORMWATER MANAGEMENT FACILITIES ARE PROPOSED TO TREAT THE QUALITY OF FIRST 0.5INCH OF RUN-OFF FROM THE IMPERVIOUS SURFACE. PLEASE SEE SORMWATER MANAGEMENT CALCULATIONS FOR THE DETAILS.

MAINTENANCE
ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE CHECKED DAILY AND AFTER EACH SIGNIFICANT RAINFALL. A LOG OF DATES AND INSPECTIONS SHALL BE KEPT. ANY DEFICIENCIES THAT ARE FOUND SHALL BE CORRECTED IMMEDIATELY. IN PARTICULAR:

1. THE SEDIMENT TRAPS WILL BE CHECKED REGULARLY FOR SEDIMENT BUILDUP. CLEAN OUT AS NECESSARY TO MAINTAIN DESIGN VOLUMES.
2. INLET PROTECTION WILL BE CHECKED REGULARLY FOR SEDIMENT BUILDUP WHICH WILL PREVENT DRAINAGE. IF STONE IS CLOGGED BY SEDIMENT, IT WILL BE REMOVED AND CLEANED OR REPLACED.
3. ROCK CHECK DAMS WILL BE CHECKED REGULARLY FOR SEDIMENT BUILDUP WHICH WILL PREVENT DRAINAGE. IF STONE IS CLOGGED BY SEDIMENT, IT WILL BE REMOVED AND CLEANED OR REPLACED.
4. THE SILT FENCE WILL BE CHECKED REGULARLY FOR UNDERMINING OR DETERIORATION OF THE FABRIC. SEDIMENT SHALL BE REMOVED WHEN THE SEDIMENT BUILDUP REACHES THE MIDWAY POINT OF THE SILT FENCE.
5. THE CONSTRUCTION ENTRANCE WILL BE CHECKED REGULARLY FOR SEDIMENT BUILDUP. IF STONE IS CLOGGED BY SEDIMENT, IT WILL BE REMOVED AND CLEANED, OR REPLACED.
6. DIVERSIONS AND STORMWATER CONVEYANCE CHANNELS WILL BE CHECKED REGULARLY FOR SEDIMENT BUILDUP, BREACHES, AND DIKE INTEGRITY. IF DEFICIENCIES IN THE DIVERSIONS OR CHANNELS ARE FOUND, THEY SHALL BE REPAIRED AND RESTABILIZED IMMEDIATELY.
7. ALL SEEDED AREAS WILL BE CHECKED REGULARLY TO ENSURE THAT A GOOD STAND OF GRASS IS MAINTAINED. AREAS SHALL BE FERTILIZED AND RESEEDED AS REQUIRED TO ACHIEVE A GOOD STAND OF GRASS.

CONSTRUCTION SEQUENCE

1. THE CONTRACTOR'S CERTIFIED RESPONSIBLE LAND DISTURBER (RLD) SHALL BE NAMED AND THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS FROM DCR. COPIES OF ALL THIS INFORMATION SHALL BE PROVIDED TO FRANKLIN COUNTY.
2. NO OFFSITE BORROW OR FILL AREAS ARE ANTICIPATED WITH THIS DEVELOPMENT OR COVERED WITH THESE DEVELOPMENT PLANS. HOWEVER IF DURING CONSTRUCTION, IT IS DETERMINED THAT THEY ARE REQUIRED, THE LOCATION OF THOSE OFFSITE FILL OR BORROW AREAS SHALL BE PROVIDED TO FRANKLIN COUNTY. AN EROSION AND SEDIMENT CONTROL PLAN OR MEASURES MAY BE REQUIRED FOR THESE AREAS.
3. THE CONSTRUCTION PROCESS SHOULD BE SEQUENCED AS MUCH AS POSSIBLE SO THAT EACH AREA IS SEEDED AND STABILIZED PRIOR TO BEGINNING GRADING OPERATIONS IN ANOTHER AREA.
4. INSTALL NEW EROSION CONTROL MEASURES SHOWN WITH BOLD DARK LINES AS GRADING PROGRESSES. OLD EROSION CONTROL MEASURES (REFER TO "GRADING AND EROSION AND SEDIMENT CONTROL MEASURES FOR THE FARM" DATED FEB. 14, 2007) SHOWN WITH LIGHT SHADED LINES SHALL REMAIN IN PLACE UNTILL THE SLOPES ARE STABILIZED AND GRADING OPERATIONS ARE COMPLETE.
5. INSTALL SILT FENCE ALONG THE SHORELINE PRIOR TO START GRADING OPERATIONS IN THOSE AFFECTED AREAS.
6. INSTALL INLET AND OUTLET PROTECTION ALONG WITH THE STORM DRAIN CONSTRUCTION.
7. INSTALL THE ROCK CHECK DAMS ALONG WITH THE GRASS-SWALES.
8. INSTALL WATER QUALITY GRASS SWALES AND BIO-RETENSION AREA AT THE END OF GRADING OPERATIONS. NO SILT OR CLAY MATERIAL SHOULD BE ALLOWED TO ACCUMMULATE IN THESES FACILITIES.
9. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES, I.E. SEDIMENT TRAPS, DIVERSION CHANNELS, FILL DIVERSIONS, DIVERSION DIKES, ETC., SHALL BE REMOVED AFTER THOSE AFFECTED AREAS HAVE BEEN BROUGHT TO FINAL GRADE AND AFTER PERMANENT VEGETATION HAS BEEN ESTABLISHED.

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10/2/07
PROFESSIONAL ENGINEER

EROSION AND SEDIMENT CONTROL PLAN

"THE FARM"

PREPARED FOR

RKL HOLDINGS, LLC

GILLS CREEK MAGISTERIAL DISTRICT
FRANKLIN COUNTY, VIRGINIA

REVISIONS

NO.	DATE	DESCRIPTION
1		
2		
3		
4		
5		

DATE: OCTOBER 02, 2007
SCALE: 1" = 100'
COMMISSION NO: 2005-213

SHEET 18 OF 22

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