SITE LOCATION AND DESCRIPTION

THIS PROJECT CONSISTS OF THE CONSTRUCTION OF APPROXIMATELY 2,100–FEET OF 12–INCH DUCTILE IRON WATERLINE LOCATED IN THE BOONE MAGISTERIAL DISTRICT OF FRANKLIN COUNTY, VIRGINIA. MULTIPLE TAX MAP AND PARCEL IDENTIFICATION NUMBERS FOR THE PROPERTIES INVOLVED ARE AS SHOWN ON THE PLANS. THE PROJECT IS EXPECTED TO BEGIN IN THE SPRING OF 2011 AND TAKE 1 TO 2 MONTHS TO COMPLETE.

EXISTING SITE CONDITIONS

THE EXISTING CONDITIONS VARY, BUT CONSISTS OF INSTALLING THE WATERLINE ON THE SHOULDER OF U.S. ROUTE 220 SOUTH.

ADJACENT AREAS

THE VDOT RIGHT OF WAY IS BOUNDED BY NUMEROUS PROPERTY OWNERS AS SHOWN ON PLANS.

OFF–SITE AREAS

AT THIS TIME, OFF–SITE GRADING IS NOT ANTICIPATED. SHOULD ADDITIONAL SOIL BE NECESSARY TO COMPLETE THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING THE EROSION & SEDIMENT CONTROL REGULATIONS AT THE OFF–SITE LOCATION.

CRITICAL AREAS

CRITICAL AREAS ASSOCIATED WITH THIS SITE:

1. THE SECTION OF WATERLINE TO BE PLACED BETWEEN STATIONS 23+00 AND 28+00 IS THE MOST CRITICAL AREA FOR THIS PROJECT. THE BANK ON THE WEST SIDE OF THE GUARDRAIL IS EXTREMELY STEEP (GREATER THAN 2:1) AND SHALL HAVE SILT FENCE INSTALLED BEHIND THE GUARDRAIL TO MINIMIZE EROSION IMPACT ON THE BANK.

EROSION & SEDIMENT CONTROL MEASURES
IN ACCORDANCE WITH THE VIRGINIA EROSION & SEDIMENT CONTROL HANDBOOK (VESCH), EROSION AND SEDIMENT CONTROL MEASURES SHALL BE USED TO CONTROL THE MOVEMENT OF SURFACE WATER AND DEPOSITION OF SEDIMENT ON SITE DURING CONSTRUCTION ACTIVITIES, TO ENSURE THE STORAGE CAPACITY OF THE DRAINAGE SYSTEM, AND FOR THE ESTABLISHMENT OF A PROPER VEGETATIVE COVER AFTER CONSTRUCTION. BASED ON THE CONSTRUCTION DESIGN AND PROPERTY ATTRIBUTES, SPECIFIC EROSION AND SEDIMENT CONTROL MEASURES HAVE BEEN IDENTIFIED AND ARE EXPLAINED IN THE FOLLOWING SECTIONS. THE MINIMUM STANDARDS OF THE VESCH SHALL BE ADHERED TO UNLESS OTHERWISE WAIVED OR APPROVED BY A VARIANCE.

SILT FENCE (VESCH STANDARD AND SPEC. 3.05)
SILT FENCE WILL BE USED TO INTERCEPT AND DETAIN SMALL AMOUNTS OF SEDIMENT FROM DISTURBED AREAS DURING CONSTRUCTION OPERATIONS AND TO MINIMIZE SEDIMENT FROM LEAVING THE SITE.

CULVERT INLET PROTECTION (VESCH STANDARD AND SPEC. 3.08)
CULVERT INLET PROTECTION WILL BE USED TO MINIMIZE SEDIMENT FROM ENTEERING THE CULVERT AND BEING TRANSFERRED DOWNSTREAM.

TEMPORARY SEEDING (VESCH STANDARD AND SPEC. 3.31)
TEMPORARY SEEDING WILL BE USED TO ESTABLISH VEGETATIVE COVER AND TO REDUCE SILT RUNOFF FROM DISTURBED AREAS.

PERMANENT SEEDING (VESCH STANDARD AND SPEC. 3.32)
PERMANENT SEEDING WILL BE USED TO ESTABLISH VEGETATIVE COVER AND TO REDUCE SILT RUNOFF FROM DISTURBED AREAS NOT BEING DEVELOPED.

MULCHING (VESCH STANDARD AND SPEC. 3.35)
MULCHING WILL BE USED TO MINIMIZE EROSION BY PROTECTING THE SOIL SURFACE FROM RAINDROP IMPACT AND REDUCING THE VELOCITY OF OVERLAND FLOW. PRIMARY MULCHING WILL BE DONE WITH STRAW, AND SOIL STABILIZATION MATTING WILL BE APPLIED TO AREAS THAT DO NOT PROVIDE A GOOD STAND OF GRASS AFTER THE FIRST SEEDING OPERATION.

SOIL STABILIZATION BLANKETS AND MATTING (VESCH STANDARD AND SPEC. 3.36)
PROTECTIVE BLANKETS WILL BE UTILIZED ON PREPARED SLOPES 2:1 OR STEEPER AND ALSO TO LINE DITCH CHANNELS WHERE VELOCITIES EXCEED THE ALLOWABLE FOR GRASS LINED CHANNELS.

MANAGEMENT STRATEGIES
CONSTRUCTION WILL BE SEQUENCED SO THAT GRADING OPERATIONS CAN BEGIN AND END AS QUICKLY AS POSSIBLE. AREAS WHICH ARE NOT TO BE DISTURBED WILL BE CLEARLY MARKED BY FLAGS.

EROSION AND SEDIMENT CONTROLS WILL BE CONDUCTED IN THE FOLLOWING SEQUENCE:

- INSTALL SILT FENCE GRADIENT OF DISTURBED AREAS AS NOTED ON THE PLAN SHEETS.
- PERMANENT SEEDING AND MULCH WILL BE PLACED ON NON–DEVELOPED DISTURBED AREAS WITHIN 7 DAYS.
- REMOVE ALL TEMPORARY SEDIMENT AND EROSION CONTROL FEATURES ONCE FINAL STABILIZATION HAS BEEN OBTAINED.

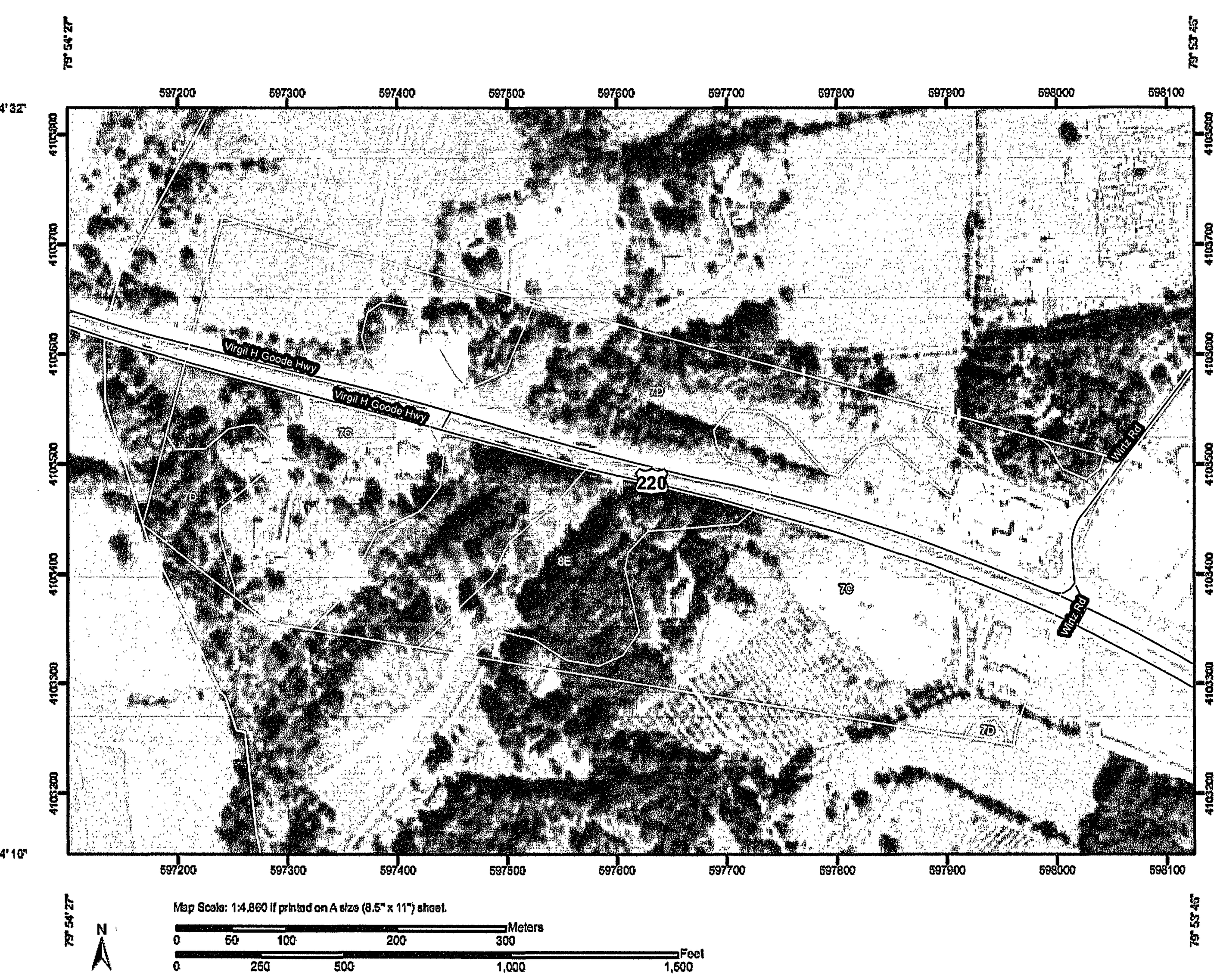
THE JOB SUPERINTENDENT SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL PRACTICES.

PERMANENT STABILIZATION
ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE STABILIZED IMMEDIATELY FOLLOWING FINISHED CLEARING. SEEDING SHALL BE DONE WITH KENTUCKY 31 TALL FESCUE OR TURF–TYPE FESCUE ACCORDING TO VESCH STANDARD AND SPEC. 3.32, UNLESS A SPORTS–TYPE TURF GRASS IS INSTALLED FOR HIGHER TRAFFIC. IN ALL SEEDING OPERATIONS, SEED, FERTILIZER, AND LIME WILL BE APPLIED TO HELP PROMOTE A HEALTHY STAND OF VEGETATION.

MAINTENANCE
ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE CHECKED DAILY DURING CONSTRUCTION AND AFTER EACH SIGNIFICANT RAINFALL. THE FOLLOWING ITEMS WILL BE CHECKED IN PARTICULAR:

- THE SILT FENCE BARRIER WILL BE CHECKED REGULARLY FOR UNDERMINING OR DETERIORATION OF THE FABRIC. SEDIMENT SHALL BE REMOVED WHEN THE LEVEL OF THE SEDIMENT DEPOSITION REACHES HALF WAY TO THE TOP OF THE BARRIER.
- SEEDED AREAS WILL BE CHECKED REGULARLY TO ENSURE THAT A GOOD STAND OF GRASS IS MAINTAINED. AREAS SHOULD BE FERTILIZED, IRRIGATED, AND RE–SEEDED AS NECESSARY.

Soil Map—Franklin County, Virginia



Map Scale: 1:4,860 if printed on A size (8.5" × 11") sheet.

USDA Natural Resources Conservation Service — Web Soil Survey, National Cooperative Soil Survey — 5/2/2011, Page 1 of 3

Soil Map—Franklin County, Virginia

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Units

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other

Special Line Features
- Gully
- Short Steep Slope
- Other

Political Features
- Cities

Water Features
- Oceans
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

MAP INFORMATION

Map Scale: 1:4,860 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: UTM Zone 17N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Franklin County, Virginia
Survey Area Date: Version 13, Aug 9, 2010

Date(s) aerial images were photographed: 9/16/2003

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

USDA Natural Resources Conservation Service — Web Soil Survey, National Cooperative Soil Survey — 5/2/2011, Page 2 of 3

EXISTING SOIL INFORMATION:

NOT ALL MAPPING UNIT DESCRIPTIONS ARE SHOWN. SOILS LISTED BELOW RELATE TO THE PROJECT AREA.

7C - CLIFFORD FINE SANDY LOAM, 8 TO 15 PERCENT SLOPES

CLIFFORD IS A STRONGLY SLOPING TO MODERATELY STEEP, VERY DEEP, WELL DRAINED SOIL. TYPICALLY THE SURFACE LAYER IS FINE SANDY LOAM ABOUT 7 INCHES THICK. THE SURFACE LAYER HAS A MODERATE CONTENT OF ORGANIC MATTER. THE SLOWEST PERMEABILITY IS MODERATE. IT HAS A MODERATE AVAILABLE WATER CAPACITY AND A LOW SHRINK SWELL POTENTIAL. THIS SOIL IS NOT FLOODED AND IS NOT PONDED. THE SEASONAL HIGH WATER TABLE IS AT A DEPTH OF MORE THAN 6 FEET. THE LAND CAPABILITY CLASSIFICATION IS 3E. THE VIRGINIA SOIL MANAGEMENT GROUP IS X. THIS SOIL IS NOT HYDRIC.

7D - CLIFFORD FINE SANDY LOAM, 15 TO 25 PERCENT SLOPES

CLIFFORD IS A MODERATELY STEEP TO STEEP, VERY DEEP, WELL DRAINED SOIL. TYPICALLY THE SURFACE LAYER IS FINE SANDY LOAM ABOUT 7 INCHES THICK. THE SURFACE LAYER HAS A MODERATE CONTENT OF ORGANIC MATTER. THE SLOWEST PERMEABILITY IS MODERATE. IT HAS A MODERATE AVAILABLE WATER CAPACITY AND A LOW SHRINK SWELL POTENTIAL. THIS SOIL IS NOT FLOODED AND IS NOT PONDED. THE SEASONAL HIGH WATER TABLE IS AT A DEPTH OF MORE THAN 6 FEET. THE LAND CAPABILITY CLASSIFICATION IS 4E. THE VIRGINIA SOIL MANAGEMENT GROUP IS X. THIS SOIL IS NOT HYDRIC.

8E - CLIFFORD-HICKORYKNOB COMPLEX, 25 TO 45 PERCENT SLOPES

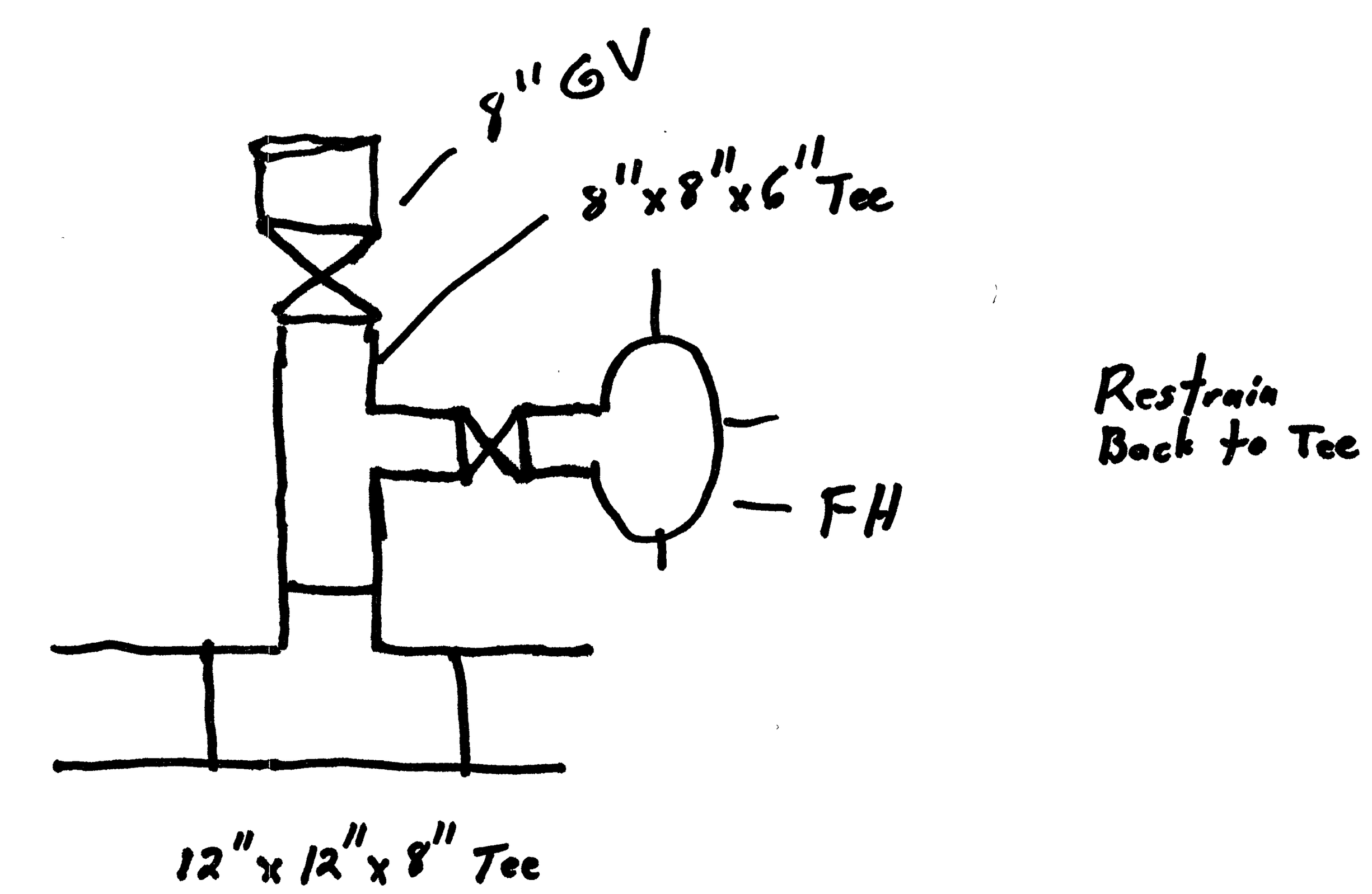
CLIFFORD IS A STEEP, VERY DEEP, WELL DRAINED SOIL. TYPICALLY THE SURFACE LAYER IS FINE SANDY LOAM ABOUT 7 INCHES THICK. THE SURFACE LAYER HAS A MODERATE CONTENT OF ORGANIC MATTER. THE SLOWEST PERMEABILITY IS MODERATE. IT HAS A MODERATE AVAILABLE WATER CAPACITY AND A LOW SHRINK SWELL POTENTIAL. THIS SOIL IS NOT FLOODED AND IS NOT PONDED. THE SEASONAL HIGH WATER TABLE IS AT A DEPTH OF MORE THAN 6 FEET. THE LAND CAPABILITY CLASSIFICATION IS 7E. THE VIRGINIA SOIL MANAGEMENT GROUP IS X. THIS SOIL IS NOT HYDRIC.

HICKORYKNOB IS A STEEP, MODERATELY DEEP, WELL DRAINED SOIL. TYPICALLY THE SURFACE LAYER IS LOAM ABOUT 4 INCHES THICK. THE SURFACE LAYER HAS A MODERATE CONTENT OF ORGANIC MATTER. THE SLOWEST PERMEABILITY IS MODERATE. IT HAS A LOW AVAILABLE WATER CAPACITY AND A LOW SHRINK SWELL POTENTIAL. THIS SOIL IS NOT FLOODED AND IS NOT PONDED. THE SEASONAL HIGH WATER TABLE IS AT A DEPTH OF MORE THAN 6 FEET. THE LAND CAPABILITY CLASSIFICATION IS 7E. THE VIRGINIA SOIL MANAGEMENT GROUP IS N. THIS SOIL IS NOT HYDRIC.

8E - CLIFFORD-HICKORYKNOB COMPLEX, 25 TO 45 PERCENT SLOPES

CLIFFORD IS A STEEP, VERY DEEP, WELL DRAINED SOIL. TYPICALLY THE SURFACE LAYER IS FINE SANDY LOAM ABOUT 7 INCHES THICK. THE SURFACE
LAYER HAS A MODERATE CONTENT OF ORGANIC MATTER. THE SLOWEST PERMEABILITY IS MODERATE. IT HAS A MODERATE AVAILABLE WATER CAPACITY
AND A LOW SHRINK SWELL POTENTIAL. THIS SOIL IS NOT FLOODED AND IS NOT PONDED. THE SEASONAL HIGH WATER TABLE IS AT A DEPTH OF MORE THAN 6 FEET. THE LAND CAPABILITY CLASSIFICATION IS 7E. THE VIRGINIA SOIL MANAGEMENT GROUP IS X. THIS SOIL IS NOT HYDRIC.

HICKORYKNOB IS A STEEP, MODERATELY DEEP, WELL DRAINED SOIL. TYPICALLY THE SURFACE LAYER IS LOAM ABOUT 4 INCHES THICK. THE SURFACE LAYER HAS A MODERATE CONTENT OF ORGANIC MATTER. THE SLOWEST PERMEABILITY IS MODERATE. IT HAS A LOW AVAILABLE WATER CAPACITY AND A LOW SHRINK SWELL POTENTIAL. THIS SOIL IS NOT FLOODED AND IS NOT PONDED. THE SEASONAL HIGH WATER TABLE IS AT A DEPTH OF MORE THAN 6 FEET. THE LAND CAPABILITY CLASSIFICATION IS 7E. THE VIRGINIA SOIL MANAGEMENT GROUP IS N. THIS SOIL IS NOT HYDRIC.



No:	Revisions:	Date:

earth environmental and civil

ADDRESS:
235 CLAIBORNE AVE.
ROCKY MOUNT, VA 24151

PHONE NUMBERS:
PHONE: (540) 483–5975
FAX: (540) 483–2221

WEBSITE
WWW.EARTHENV.COM

COMMONWEALTH OF VIRGINIA — JAMES NELSON LOVELL, JR. — Lic. No. 025230 — 5/2/2011 — PROFESSIONAL ENGINEER

DESIGN BY: BKS	PROJECT: ROUTE 220 WATERLINE EXTENSION		DATE: 5/2/2011
DRAWN BY: BKS	TITLE: US 220 WATERLINE EXTENSION EROSION AND SEDIMENT CONTROL NARRATIVE WITH SOILS INFORMATION		DRAWING NUMBER: C3
REVIEWED BY: BKS			
PROJECT NUMBER: 11-0013	DRAWING NAME: 11-0013.dwg	SCALE: NO SCALE	SHEET NUMBER: 4 of 5