## EROSION & SEDIMENT CONTROL NARRATIVE

1. PROJECT DESCRIPTION:

1.1. THE PURPOSE OF THIS PROJECT IS TO PERFORM DEMOLITION & REMOVAL, CLEARING & GRADING, STORM DRAINAGE INSTALLATION, UTILITY CONSTRUCTION, PAVING, BRIDGE CONSTRUCTION, AND OTHER RELATED CONSTRUCTION ACTIVITIES REQUIRED FOR THE REPLACEMENT OF BERKLEY ROAD BRIDGE OVER GLADE CREEK - TRIBUTARY "A".

1.2. THE PROJECT SITE AREA IS IDENTIFIED AS THE PUBLIC RIGHT-OF-WAY OF EXISTING BERKLEY ROAD AND AREAS OF ADJOINING PROPERTY ALL LOCATED WITHIN THE CITY OF ROANOKE (INDEPENDENT CITY), VA. THE PRIMARY PROJECT SITE (THE BRIDGE REPLACEMENT) IS LOCATED APPROXIMATELY 200-FEET EAST OF THE INTERSECTION OF BERKLEY ROAD AND KING STREET.

1.3. THE TOTAL AREA OF PROPOSED LAND DISTURBANCE IS 1.359-ACRES AS SHOWN ON THE E&SC PLANS. THE AREA OF LAND DISTURBANCE IS ALSO DIVIDED INTO TWO SEPARATE AREAS: 1.) TEMPORARY ROADWAY DETOUR (0.507-ACRES), AND 2.) THE BRIDGE REMOVAL / REPLACEMENT AND ROADWAY IMPROVEMENT (0.852-ACRES).

1.4. TO MINIMIZE THE POTENTIAL FOR SILT-LADEN RUNOFF LEAVING THE PROJECT SITE, EROSION AND SEDIMENT CONTROL (E&SC) MEASURES SHALL BE PROVIDED AS SHOWN AND SPECIFIED ON THESE EROSION & SEDIMENT CONTROL (E&SC) PLANS AND AS OUTLINED IN THIS E&SC NARRATIVE. THE E&SC MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAILS AND SPECIFICATIONS FOUND IN THE "VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK", LATEST EDITION AND THE REQUIREMENTS ADOPTED BY THE CITY OF ROANOKE.

2. EXISTING SITE CONDITIONS:

2.1. LAND COVER: THE EXISTING SITE AREA IS CURRENTLY DEVELOPED AS A PAVED PUBLIC STREET AND BRIDGE WITHIN A DEDICATED PUBLIC RIGHT-OF-WAY. THE SHOULDERS OF THE ROADWAY ARE GENERALLY GRASSED OR COVERED WITH A MIXTURE OF GRAVEL OR CRUSHED STONE WITH INTERSPERSED GRASS. THE SIDE-SLOPES BEYOND THE ROADWAY SHOULDER ARE GRASSED. THE SOUTHEAST QUADRANT OF THE PROJECT AREA IS SPARSELY COVERED WITH MATURE TREES AND OTHER WOODY VEGETATION. THE SOUTHWEST QUADRANT OF THE PROJECT AREA IS SPARSELY COVERED WITH PLANTED EVERGREEN TREES WITH LITTLE TO NO UNDERSTORY GROWTH AND IS CONSIDERED A CULTIVATED TREE FARM. THE NORTHERN PERIMETER OF THE PROJECT SITE AREA IMMEDIATELY ADJACENT GLADE CREEK - TRIBUTARY "A" IS COVERED WITH MATURE TREES AND MODERATE UNDER UNDERSTORY GROWTH. AREAS OTHER THAN DESCRIBED ABOVE ARE FREE OF TREE COVER AND ARE GENERALLY STABLE WITH GOOD GRASS COVER.

2.2. SLOPES / TOPOGRAPHY:

2.2.1. THE EXISTING TOPOGRAPHY IS SHOWN AT 1-FOOT CONTOUR INTERVALS ON THESE E&SC PLANS AND ON SHEET C-7. THE TOPOGRAPHY OF THE SITE IS GENERALLY DEFINED BY GLADE CREEK - TRIBUTARY "A" WHICH FORMS THE LOW-POINT AND GENERALLY BISECTS THE SITE BY FLOWING IN A NORTHWEST TO SOUTHEAST DIRECTION.

2.2.2. THE SLOPES IN THE WESTERN PORTION OF THE SITE DRAIN FROM THE HIGH-POINT ALONG KING STREET (ELEVATION +/- 942) TOWARD GLADE CREEK - TRIBUTARY "A" (ELEVATION +/- 930) AT GENERALLY A 3 TO 20-PERCENT SLOPE. THE EMBANKMENT SLOPE ALONG KING STREET IS SLOPING AT 20-PERCENT WHILE THE LOWER AREAS ALONG THE CREEK ARE SLOPING AT +/- 3-PERCENT.

2.2.3. THE SLOPES IN THE SOUTHEASTERN PORTION OF THE SITE DRAIN FROM ALONG BERKLEY ROAD (ELEVATION 932 TO 935) TOWARD THE CREEK (ELEVATION 927 TO 928) AT GENERALLY A 1 TO 2-PERCENT SLOPE. THE LOW-POINT OF THE SITE IS ALONG THE BOTTOM OF GLADE CREEK - TRIBUTARY "A" AT AN ELEVATION OF 927.

2.2.4. THE SLOPES IN THE NORTHEASTERN PORTION OF THE SITE DRAIN FROM A HIGH-POINT ALONG THE SOUTHERN SIDE OF A DETENTION BASIN (ELEVATION +/- 938) TOWARD A ROADSIDE CHANNEL ALONG THE NORTH SIDE OF BERKLEY ROAD. THE EXISTING ROADSIDE CHANNEL GENERALLY SLOPES WEST TO EAST AT 0.75 TO 1.50-PERCENT. THE LOW-POINT IN THIS QUADRANT OF THE SITE IS THE INVERT OF A STORM DRAINAGE PIPE (15-INCH) CROSSING UNDER BERKLEY ROAD - ELEVATION 937.80.

2.3. DRAINAGE FEATURES:

2.3.1. THE MOST PROMINENT DRAINAGE FEATURE IN THE PROJECT AREA IS GLADE CREEK - TRIBUTARY "A" - WHICH BISECTS THE SITE AND FLOWS IN A NORTHWESTERN TO SOUTHEASTERN DIRECTION. THERE ARE MINOR ROADSIDE CHANNELS ALONG BERKLEY ROAD THAT DISCHARGE DIRECTLY INTO GLADE CREEK - TRIBUTARY "A", OR INTO AN EXISTING STORM DRAINAGE PIPE (D9 TO D10) THAT DRAINS UNDER BERKLEY ROAD. THE PAVED AREA OF BERKLEY ROAD DRAINS BY SHEET-FLOW INTO THE ADJOINING ROADSIDE CHANNELS AND THEN INTO GLADE CREEK - TRIBUTARY "A".

2.3.2. OTHER THAN AS MENTIONED ABOVE, THERE IS ONE ENCLOSED / PIPED STORM DRAINAGE SYSTEM THAT LIES WITHIN OR DISCHARGES INTO THE PROJECT SITE. THIS PIPED SYSTEM INCLUDES: STRUCTURE D4 (OUTLET PIPE); STRUCTURE D3 (DROP INLET NEAR INTERSECTION OF KING STREET AND BERKLEY ROAD); AND STRUCTURE D2 (DROP INLET LOCATED ALONG THE WESTERN SHOULDER OF KING STREET). THIS DRAINAGE SYSTEM COLLECTS STORMWATER RUNOFF FROM THE AREAS WEST OF KING STREET AND THE WESTERN HALF OF KINGS STREET WHERE IT DRAINS TO THE ROADSIDE CHANNEL.

2.4 JURISDICTIONAL WATERS / WETLANDS: TRIBUTARY - A TO GLADE CREEK RUNS THROUGH THE PROJECT SITE, FLOWING IN A NORTHWEST TO SOUTHEAST DIRECTION. THE TRIBUTARY TO GLADE CREEK HAS BEEN DETERMINED TO BE A JURISDICTIONAL WATER / WATER OF THE UNITES STATES (WOTUS). WOTUS ARE REGULATED BY SECTIONS 401 AND 404 OF THE CLEAN WATER ACT. STATE AND FEDERAL LAW DICTATES THAT ANY DISTURBANCE TO WOTUS MUST BE PERMITTED THROUGH THE APPROPRIATE AGENCIES. SINCE JURISDICTIONAL WETLANDS AND STREAMS ARE PRESENT AT THE SITE, PLANNED LAND DISTURBANCE IN THESE AREAS WILL REQUIRE A PERMIT FROM THE U.S. ARMY CORPS OF ENGINEERS (USACE) AND/OR THE VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY (VDEQ). THE OWNER HAS APPLIED FOR THE REQUIRED PERMITS AND THE CONTRACTOR AND RESPONSIBLE LAND DISTURBER (RLD) SHALL PERFORM THE WORK IN AND ADJACENT TO THE JURISDICTIONAL WATERS IN STRICT ACCORDANCE WITH THE GENERAL CONDITIONS OF THE PERMIT.

3. ADJACENT PROPERTY:

3.1. THE PROJECT SITE IS BORDER ALONG THE NORTH AND NORTHWEST BY A TRACT OF LAND THAT IS GENERALLY UNDEVELOPED. THE AREAS LOCATED IMMEDIATELY ALONG GLADE CREEK - TRIBUTARY "A" ARE MODERATELY WOODED WITH WOODY UNDERSTORY VEGETATION, WHILE THE AREA WEST OF THE CREEK IS CLEARED AND USED AS A PLOWED / CULTIVATED GARDEN. THERE IS AN EXISTING ASPHALT DRIVEWAY THAT CONNECTS TO BERKLEY ROAD JUST EAST OF THE EXISTING BRIDGE THAT SERVES PROPERTY TO THE NORTH. STORMWATER RUNOFF FROM THE PROJECT SITE GENERALLY DRAINS INTO THE EXISTING ROADSIDE CHANNEL THAT RUNS ALONG THE NORTHERN PERIMETER OF THE PROJECT SITE SO THERE IS LITTLE CONCERN OF FLOODING, EROSION, AND SEDIMENTATION FROM THE PROJECT SITE ONTO THE ADJOINING NORTHWESTERN AND NORTHERN PERIMETER PROPERTIES. STORMWATER RUN-OFF FROM THE ADJOINING AREAS NORTHWESTERN AND NORTHERN PERIMETER GENERALLY DRAINS DIRECTLY TOWARD GLADE CREEK - TRIBUTARY "A" AND SHOULD NOT PRESENT ANY SPECIAL CONCERNS FOR EROSION OR SEDIMENTATION. AREAS TO RECEIVE SPECIAL ATTENTION DURING CONSTRUCTION INCLUDE THE POINT WHERE THE ROADSIDE CHANNEL AND STORM DRAINAGE STRUCTURE D4 DISCHARGE INTO THE CREEK.

3.2. THE PROJECT SITE IS BORDER ALONG THE NORTH AND NORTHEAST PERIMETER BY A TRACT OF LAND THAT IS DEVELOPED AND USED FOR COMMERCIAL / MANUFACTURING PURPOSES (N/F VIRGINIA TRANSFORMER CORP). THE DEVELOPED AREAS OF THIS ADJOINING SITE DRAINS TO A STORMWATER (SWM) DETENTION BASIN THAT IS LOCATED DIRECTLY ADJACENT TO THE NORTHERN PERIMETER OF THE PROJECT SITE. DISCHARGE FROM THIS BASIN OCCURS NEAR THE NORTHEASTERN PERIMETER OF THE PROJECT SITE AND IS COLLECTED AND CONVEYED THROUGH THE PROJECT SITE AND UNDER BERKLEY ROAD BY AN EXISTING STORM DRAINAGE PIPE (D9 TO D10). STORMWATER RUN-OFF FROM THE SOUTHERN SIDE-SLOPES OF THE SWM BASIN AND THE NORTHERN HALF OF PAVED BERKLEY ROAD IS COLLECTED IN THE ROAD-SIDE CHANNEL AND CONVEYED TO STORM DRAINAGE PIPE D9. OTHER AREAS OF THIS PERIMETER DRAIN DIRECTLY IN TO THE CREEK. SINCE THE ADJOINING SITE IS CONSIDERABLE UPSLOPE FROM THE PROJECT SITE THERE IS LITTLE CONCERN OF FLOODING, EROSION, AND SEDIMENTATION FROM THE PROJECT SITE ONTO THE ADJOINING NORTHEASTERN AND NORTHERN PERIMETER PROPERTIES. AREAS TO RECEIVE SPECIAL ATTENTION DURING CONSTRUCTION INCLUDE THE POINT WHERE THE ROADSIDE CHANNEL AND EXISTING SWM BASIN OUTFALL RECEIVE CONCENTRATED FLOW INTO D9.

3.3. THE PROJECT SITE IS BORDER ON THE SOUTHEAST BY UNDEVELOPED LAND THAT IS MODERATELY FORESTED WITH MODERATE UNDER-STORY VEGETATION. STORMWATER RUN-OFF FROM THIS ADJOINING SITE AREA PRIMARILY SHEET FLOWS TOWARD GLADE CREEK - TRIBUTARY "A". SINCE THIS ADJOINING AREA IS DOWNSLOPE / DOWNGRADE FROM THE PROJECT SITE AREA STORMWATER RUNOFF FROM THE PROJECT SITE WILL DRAIN ONTO THIS ADJOINING SITE AND SHOULD BE CONTROLLED DURING CONSTRUCTION TO PREVENT FLOODING, EROSION, AND SEDIMENTATION. THERE IS LITTLE POTENTIAL FOR THE ADJOINING AREA TO IMPACT THE CONSTRUCTION SITE. AREAS TO RECEIVE SPECIAL ATTENTION DURING CONSTRUCTION INCLUDE THE POINT WHERE STORM DRAINAGE STRUCTURE D10 DISCHARGES INTO THE ADJOINING SITE AREA. IT IS ALSO NOTED THAT THE TEMPORARY DETOUR ROADWAY WILL TRAVERSE THIS AREA AND THAT ADDITIONAL LAND DISTURBANCES AND GRADING (ALL SHOWN ON THE PLANS) WILL BE REQUIRED FOR THIS WORK OF THE PROJECT. STORMWATER RUN-OFF FROM THE DETOUR WILL BE CONTROLLED WITH TOE AND / OR SHOULDER CHANNELS THAT WILL DISCHARGE IN TO THE EXISTING CREEK.

3.4. THE PROJECT SITE IS BORDER ON THE SOUTHWEST BY A TRACT OF LAND THAT IS DEVELOPED AS A SINGLE FAMILY DWELLING. THE LAND ADJACENT TO THE PROJECT SITE IS GENERALLY OPEN SPACE AND LAWN WITH AN AREA OF CULTIVATED EVERGREEN TREES WHICH ARE SOLD AS CHRISTMAS TREES. STORMWATER RUN-OFF FROM THIS ADJOINING AREA PRIMARILY SHEET FLOWS TO THE SOUTH AND EAST AWAY FROM THE PROJECT SITE TO TOWARD GLADE CREEK - TRIBUTARY "A". STORMWATER RUNOFF FROM THE PROJECT SITE MAY DRAIN ONTO THIS ADJOINING SITE IF THE ROADSIDE CHANNEL ALONG BERKLEY ROAD IS OVERTOPPED THUS RESULTING IN THE POSSIBILITY OF FLOODING, EROSION, AND SEDIMENTATION ON THE ADJOINING PROPERTY. THERE IS LITTLE POTENTIAL FOR THE ADJOINING AREA TO IMPACT THE CONSTRUCTION SITE. IT IS NOTED THAT THE TEMPORARY DETOUR ROADWAY WILL TRAVERSE THIS AREA AND THAT ADDITIONAL LAND DISTURBANCES AND GRADING (ALL SHOWN ON THE PLAN) WILL BE REQUIRED FOR THIS WORK OF THE PROJECT. STORMWATER RUN-OFF FROM THE DETOUR WILL BE CONTROLLED WITH TOE AND / OR SHOULDER CHANNELS THAT WILL DISCHARGE IN TO THE EXISTING CREEK.

3.5 OFF-SITE DISPOSAL/BORROW AREAS:

3.5.1 TOPSOIL STRIPPED FROM THE PROJECT SITE SHALL BE STOCKPILED AT THE LOCATION DESIGNATED ON THE PLANS AND RE-USED TO THE MAXIMUM EXTENT PRACTICABLE.

3.5.2 THE EARTHWORK ANALYSIS FOR THIS PROJECT GENERALLY INDICATES THAT THE PROJECT DOES NOT BALANCE AND THAT A NET IMPORT OF MATERIAL (THAT IS THE AMOUNT OF FILL EXCEEDS THE AMOUNT OF CUT) WILL BE REQUIRED. IT IS ANTICIPATED THAT SOILS WILL BE IMPORTED INTO THE PROJECT SITE FROM AN APPROVED AND PERMITTED SITE WITHIN THE CITY OF ROANOKE. PRIOR TO IMPORTING SOIL MATERIALS TO THE PROJECT SITE THE CONTRACTOR SHALL PROVIDE THE LOCATION OF THE BORROW SITE AND EVIDENCE OF A VALID LAND-DISTURBING PERMIT FOR THE BORROW SITE.

3.5.3 SHOULD IT BECOME NECESSARY TO REMOVE SOIL MATERIAL FROM THE PROJECT SITE AND DISPOSE OF IT AT AN OFF-SITE LOCATION, THE CONTRACTOR SHALL PROVIDE DOCUMENTATION THAT THE DISPOSAL SITE IS CURRENTLY PERMITTED WITH A VALID LAND DISTURBANCE PERMIT AND ANY OTHER PERMIT REQUIRED TO LEGALLY DISPOSE OF SOIL MATERIALS AND/OR PERFORM LAND DISTURBANCES. PRIOR TO REMOVAL OF SOIL MATERIALS FROM THE PROJECT SITE THE CONTRACTOR SHALL PROVIDE THE LOCATION OF THE DISPOSAL SITE AND EVIDENCE OF A VALID LAND-DISTURBING PERMIT FOR THE DISPOSAL SITE.

4. SOILS:

4.1. SOIL BORINGS WERE PERFORMED AT EACH BRIDGE ABUTMENT TO GENERALLY CHARACTERIZE THE NATIVE SOIL MATERIALS AND THE DEPTH OF ROCK. A DETAILED SUBSURFACE EXPLORATION AND GEOTECHNICAL ENGINEERING EVALUATION WAS NOT PERFORMED FOR THE PURPOSE OF DETERMINING EROSION POTENTIAL OF THE SOILS.

4.2. THE SUBSURFACE INVESTIGATION GENERALLY DESCRIBED THE SOILS WITHIN THE PROJECT AREA AS FOLLOWS:

4.2.1. THE SITE IS UNDERLAIN BY THE ROME FORMATION FROM THE CAMBRIAN AGE. THIS FORMATION IS EXTREMELY HETEROGENEOUS, CONSISTING OF SHALE, LIMESTONE AND DOLOMITE. THE BEDROCK REPORTEDLY STRIKES OR TRENDS NEARLY EAST-WEST AND DIPS STEEPLY TO THE SOUTH. THE SHALES, WHICH PREDOMINATE THE FORMATION, ARE VARI-COLORED, INCLUDING MAROON, REDDISH-BROWN, GRAY-GREEN, GREEN, DARK GRAY AND TAN TO YELLOW. THEY ARE FINE-GRAINED, CLOSE-JOINTED AND BREAK WITH A SPLINTERY OR HACKLY FRACTURE. THE LIMESTONES AND DOLOMITES ARE GENERALLY THIN TO MEDIUM BEDDED, HIGHLY FRACTURED (USUALLY CALCITE-HEALED) AND RANGE IN COLOR FROM LIGHT GRAY TO DARK BLUE- GRAY

4.2.2. OBSERVATIONS FROM THE DRILLING LOGS: MAN- MADE FILL WAS IDENTIFIED BENEATH THE EXISTING PAVING MATERIALS TO DEPTHS OF 5.5-FEET TO 7.0-FEET IN BORINGS NO. 1 AND 2 RESPECTIVELY. THE FILL WAS DESCRIBED AS BROWN AND TAN SANDY SILT WITH SOME ROCK FRAGMENTS AND CINDERS. RESIDUUM (SOIL DERIVED FROM THE IN-PLACE WEATHERING OR DECOMPOSITION OF BEDROCK) WAS IDENTIFIED BENEATH THE FILL IN BOTH BORINGS. THE THICKNESS OF RESIDUUM PENETRATED RANGED FROM 19.5-FEET AT BORING NO. 1 TO 21.0-FEET AT BORING NO. 2. RESIDUUM WAS DESCRIBED AS REDDISH-TAN, ORANGE-TAN, TAN, YELLOW-TAN AND/OR MAROON SILTY SAND, CLAYEY SAND, SILTY CLAY OR CLAY WITH VARYING AMOUNTS OF SHALE FRAGMENTS. WATER WAS ENCOUNTERED IN THE BORINGS AT A DEPTH OF +/- 26-FEET.

4.3. PER THE USDA WEB SOIL SURVEY (WSS), THE SOIL TYPE WITHIN THE PROJECT LIMITS IS: CHISWELL-LITZ COMPLEX (MAPPING UNIT 5D) ON 15 TO 25 PERCENT SLOPES. A GENERAL DESCRIPTION OF THE CHARACTERIZES ARE PRESENTED BELOW.

4.3.1. CHISWELL-LITZ COMPLEX: CONSISTS OF MODERATELY STEEP, WELL-DRAINED SOILS ON UPLAND SIDE SLOPES AND SUMMITS. THE CHISWELL SOIL IS SHALLOW, AND THE LITZ SOIL IS MODERATELY DEEP. INDIVIDUAL AREAS ARE IRREGULAR IN SHAPE. THEY RANGE FROM 6 TO 40 ACRES IN SIZE. THE SOILS OCCUR AS AREAS SO INTERMINGLED THAT IT WAS NOT PRACTICAL TO MAP THEM SEPARATELY. THIS MAP UNIT IS ABOUT 45 PERCENT CHISWELL SOIL, 30 PERCENT LITZ SOIL, AND 25 PERCENT OTHER SOILS. THIS SOIL IS WELL-DRAINED WITH RAPID SURFACE RUNOFF CHARACTERISTICS, MODERATE PERMEABILITY, LOW ORGANIC CONTENT, AND LOW SHRINK-SWELL PERMEABILITY. EROSION POTENTIAL IS HIGH. REFER TO THE "SOIL DATA TABULATION" SCHEDULE ON SHEET ES-3 FOR ADDITIONAL INFORMATION.

5. CRITICAL EROSION AREAS:

5.1. STEEP SLOPES - DENUDED SLOPES AND PROPOSED FILL SLOPES POSE A HIGH POTENTIAL FOR EROSION AND ACCORDINGLY, ALL NEWLY DENUDED SLOPES BETWEEN 2H:1V AND 3H:1V ON THE PROJECT SITE ARE CONSIDERED "HIGH EROSION AREAS." THESE SLOPES SHOULD BE GRADED TO THEIR FINAL CONDITION AS QUICKLY AS POSSIBLE AND IMMEDIATELY STABILIZED IN ACCORDANCE WITH THE PROVISIONS OF THE PLANS AND NARRATIVES. ALL SLOPES IN EXCESS OF 3H:1V ARE TO BE FURTHER STABILIZED WITH SOIL STABILIZATION BLANKET AND MATTINGS.

5.2. STREAM BANKS - DENUDED AREA OF CHANNELS, ROADSIDE DITCHES, AND GLADE CREEK - TRIBUTARY "A" POSE A HIGH POTENTIAL FOR EROSION AND ACCORDINGLY ARE CONSIDERED "HIGH EROSION AREAS." THESE SIDE SLOPES AND CHANNEL BOTTOMS SHOULD BE GRADED TO THEIR FINAL CONDITION AS QUICKLY AS POSSIBLE AND IMMEDIATELY STABILIZED IN ACCORDANCE WITH THE PROVISIONS OF THE PLANS AND NARRATIVES. IN SOME AREAS, THE SIDE-SLOPES OF GLADE CREEK - TRIBUTARY "A" SHALL BE STABILIZED WITH RIP-RAP. ALL MINOR CHANNEL SIDE-SLOPES IN EXCESS OF 3H:1V ARE TO BE FURTHER STABILIZED WITH SOIL STABILIZATION BLANKET AND MATTINGS IN ACCORDANCE WITH THE CHANNEL DESIGN TABLES.

5.3 STORM DRAINAGE OUTFALLS - NEW AND EXISTING STORM DRAINAGE OUTFALLS (PIPES, FLUMES, OR CONVEYANCE CHANNELS) THAT DISCHARGE CONCENTRATED FLOWS INTO A NEW OR EXISTING CONVEYANCE OR RECEIVING CHANNELS POSE A HIGH POTENTIAL FOR EROSION AND ACCORDINGLY ARE CONSIDERED "HIGH EROSION AREAS." THESE POINTS OF DISCHARGE SHALL BE GRADED TO THEIR FINAL CONDITION AS QUICKLY AS POSSIBLE AND IMMEDIATELY STABILIZED IN ACCORDANCE WITH THE PROVISIONS OF THE PLANS AND NARRATIVES. THIS INCLUDES THE PLACEMENT OF PERMANENT RIPRAP ARMOR AND CHECK DAMS WHERE SHOWN. THIS WORK SHOULD GENERALLY BE PERFORMED PRIOR TO SIGNIFICANT UPSLOPE WORK AND DISCHARGES OF STORMWATER.

6. EROSION AND SEDIMENT CONTROL MEASURES:

6.1. UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL MEASURES WILL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MINIMUM STANDARDS AND SPECIFICATIONS (STD. AND SPEC.) OF THE LATEST EDITION OF THE "VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK." MEASURES SPECIFICALLY IDENTIFIED ON THESE PLANS ARE LISTED BELOW.

6.2. CONSTRUCTION ENTRANCE (CE) AND CONSTRUCTION ROAD STABILIZATION (RCS): A CONSTRUCTION ENTRANCE IS PROVIDED AS SHOWN ON THE E&SC PLAN. THE CONTRACTOR SHALL ENSURE VEHICLES LEAVING THE WORK AREA ARE FREE OF EXCESS MUD, DIRT, AND DUST. VEHICLE WASH-DOWN PROVISIONS SHALL BE ADDED IF REQUIRED BY E&SC INSPECTOR. THE CONSTRUCTION ROAD STABILIZATION (CRS) CONSISTS OF THE TEMPORARY STABILIZATION OF ACCESS ROADS, AND ON-SITE PARKING AREAS WITH STONE IMMEDIATELY AFTER GRADING. THE PURPOSE OF THE CRS IS TO REDUCE THE EROSION OF TEMPORARY ROADBEDS BY CONSTRUCTION TRAFFIC DURING WET WEATHER AND REDUCE THE EROSION AND SUBSEQUENT RE-GRADING OF PERMANENT ROADBEDS BETWEEN THE TIME OF INITIAL GRADING AND FINAL STABILIZATION. FOR THIS PROJECT THE EXISTING ASPHALT AND STONE BASE OF BERKLEY ROAD SHALL REMAIN IN-PLACE AS LONG AS POSSIBLE AND SERVE AS CRS.

6.3. SILT FENCE (SF/SSF): SILT FENCE SHALL BE INSTALLED AS SHOWN ON THE EROSION AND SEDIMENT CONTROL PLAN AND IN CONFORMANCE WITH STD. AND SPEC. 3.05 - IT WILL INTERCEPT SILT LADEN RUNOFF BEFORE IT EXITS THE SITE. SILT FENCE INSTALLATION SHALL BE COORDINATED WITH AND INSPECTED BY THE EROSION AND SEDIMENT CONTROL INSPECTOR OR REPRESENTATIVE. IN SOME STEEPER AREAS OF THE PROJECT SITE "SUPER SILT FENCE" (SSF), WHICH USES WIRE BACKING TO HANDLE HIGHER VELOCITIES AND FLOWS, MAY BE SPECIFIED.

6.4. INLET PROTECTION (IP) / CULVERT INLET PROTECTION (CIP): SHALL BE INSTALLED AS SHOWN ON THE EROSION AND SEDIMENT CONTROL PLAN AND IN CONFORMANCE WITH STD. AND SPEC. 3.07 AND 3.08. INLET PROTECTIONS ARE PROVIDED IN ORDER TO FILTER RUNOFF BEFORE IT ENTERS THE STORM DRAINAGE SYSTEM.

6.5. TEMPORARY DIVERSION DIKE / DIVERSION (DD/DV): DIVERSION DIKES / DIVERSIONS SHALL BE INSTALLED AS SHOWN ON THE EROSION AND SEDIMENT CONTROL PLAN AND IN CONFORMANCE WITH STD. AND SPEC. 3.09 AND 3.12. THE DIVERSIONS WILL INTERCEPT AND DIVERT STORMWATER RUNOFF AT NON-EROSIVE VELOCITIES TO THE NEW STORM DRAIN SYSTEM, TO TEMPORARY SEDIMENT TRAPS, OR OTHER APPROVED CONTROL MEASURES.

6.6 TEMPORARY SEDIMENT TRAP (ST): TEMPORARY SEDIMENT TRAPS SHALL BE INSTALLED IN THE LOCATION SHOWN ON THE EROSION AND SEDIMENT CONTROL PLAN AND IN CONFORMANCE WITH STD. AND SPEC. 3.13. TEMPORARY SEDIMENT TRAPS DETAINS SEDIMENT LADEN RUNOFF FROM SMALL DISTURBED AREAS LONG ENOUGH TO ALLOW THE MAJORITY OF THE SEDIMENT TO SETTLE OUT.

6.7. TEMPORARY SLOPE DRAIN (TSD) PIPES: SHALL BE USED TO CONVEY CONCENTRATED RUNOFF DOWN FRESHLY CUT OR FILLED EMBANKMENT SLOPES AND SHALL BE INSTALLED IN ACCORDANCE WITH STD. AND SPEC. 3.15. TSD'S SHALL BE USED WHERE SHOWN ON THE PLAN OR WHERE DIRECTED BY THE E&SC INSPECTOR. TSD MAY BE REMOVED DURING WORK DAY TO ALLOW CONSTRUCTION VEHICLE TO TRAVERSE THE SITE, BUT THE TSD'S SHALL BE RECONNECTED AT THE END OF THE WORK DAY OR WHENEVER A RAIN EVENT IS EMINENT.

6.8. PAVED FLUME (PF): IS A PERMANENT MEASURE THAT SHALL BE USED TO CONVEY CONCENTRATED STORMWATER RUNOFF DOWN A SLOPE OR EMBANKMENT AND SHALL BE INSTALLED IN ACCORDANCE WITH THE GENERAL REQUIREMENTS OF STD. AND SPEC. 3.16 AND THE APPLICABLE VDOT STANDARD DETAIL AND SPECIFICATION.

6.9. STORMWATER CONVEYANCE CHANNEL (SCC): CONSISTS OF A PERMANENT, DESIGNED WATERWAY CHANNEL, SHAPED, SIZED, AND LINED WITH APPROPRIATE VEGETATION OR STRUCTURAL MATERIAL USED TO SAFELY CONVEY STORMWATER RUNOFF WITHIN OR AWAY FROM A DEVELOPING AREA OR CONVEYANCE OF CONCENTRATED SURFACE RUNOFF WATER TO A RECEIVING CHANNEL OR SYSTEM WITHOUT DAMAGE FROM EROSION. THE (SCC) SHALL BE INSTALLED IN ACCORDANCE WITH THE GENERAL REQUIREMENTS OF STD. AND SPEC. 3.17 AND THE APPLICABLE DETAIL AND SPECIFICATION ON THESE PLANS.

CONTINUED ON NEXT SHEET

COMMONWEALTH OF VIRGINIA
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City of Roanoke
Planning, Building, & Development
COMPREHENSIVE DEVELOPMENT PLAN
APPROVED
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BERKLEY ROAD OVER GLADE CREEK TRIBUTARY A
# E&SC NARRATIVE
CITY OF ROANOKE, VIRGINIA

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