

MINIMUM STANDARDS (PER DCR VIRGINIA EROSION AND SEDIMENT CONTROL LAW AND REGULATIONS AND EROSION AND SEDIMENT CONTROL AND STORMWATER MANAGEMENT CERTIFICATION REGULATIONS, FY 2013)			PROJECT NARRATIVE: PROJECT DESCRIPTION: SUMMIT HELICOPTERS, INC. PLANS TO CONSTRUCT ONE NEW FREE-STANDING AIRCRAFT HANGAR (TO BE KNOWN AS HANGAR #12). UPON COMPLETION, SUMMIT WILL RETAIN OWNERSHIP OF THE HANGAR #12 BUILDING ON A GROUND LEASE AND USE IT FOR STORAGE OF THEIR AIRCRAFT.		DATE 02/25/2020 03/18/2020 03/27/2020
MS-1	PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN (7) DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN (7) DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 14 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR.	TEMPORARY SEEDING SHALL BE INSTALLED AS REQUIRED UNTIL BUILDING IS NEARLY COMPLETE AND TOPSOIL CAN BE BROUGHT TO SITE AND PLACED WITHOUT BEING OVER-COMPACTED BY CONSTRUCTION TRAFFIC. PERMANENT SEEDING WITH 7 DAYS OF TOPSOIL.	MS-2	DURING CONSTRUCTION OF THE PROJECT, SOIL STOCK PILES AND BORROW AREAS SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE APPLICANT IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS WELL AS BORROW AREAS AND SOIL INTENTIONALLY TRANSPORTED FROM THE SITE.	NO ONSITE STOCKPILES OR BORROW AREAS ARE PLANNED. UNSUITABLE MATERIALS SUCH AS ASPHALT WASTE SHALL BE IMMEDIATELY REMOVED FROM SITE. TOPSOIL WILL BE IMPORTED IMMEDIATELY BEFORE PERMANENT SEEDING.
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 IS UNIFORM, MATURE ENOUGH TO SURVIVE AND WILL INHIBIT EROSION.	PERMANENT VEGETATION SHALL BE ESTABLISHED UPON COMPLETION OF ACHIEVING FINAL GRADES.	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 UPSLOPE LAND DISTURBANCE TAKES PLACE.	SEDIMENT FENCE AND GRAVEL CURB INLET SEDIMENT FILTER SHALL BE INSTALLED BEFORE ANY SITE GRADING COMMENCES.
5	STABILIZATION MEASURES SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.	NO SUCH EARTHEN STRUCTURES ARE PLANNED.	MS-6	SEDIMENT TRAPS AND SEDIMENT BASINS SHALL BE DESIGNED AND CONSTRUCTED BASED UPON THE TOTAL DRAINAGE AREA TO BE SERVED BY THE TRAP OR BASIN. A) THE MINIMUM STORAGE CAPACITY OF A SEDIMENT TRAP SHALL BE 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA AND THE TRAP SHALL ONLY CONTROL DRAINAGE AREAS LESS THAN ONE ACRE. B) SURFACE RUNOFF FROM DISTURBED AREAS THAT IS COMPRISED OF FLOW FROM DRAINAGE AREAS GREATER THAN OR EQUAL TO THREE ACRES SHALL BE CONTROLLED BY A SEDIMENT BASIN. THE MINIMUM STORAGE CAPACITY OF A SEDIMENT BASIN SHALL BE 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA. THE OUTFALL SYSTEM SHALL, AT A MINIMUM, MAINTAIN THE STRUCTURAL INTEGRITY OF THE BASIN DURING A 25-YEAR STORM OF 24-HOUR DURATION. RUNOFF COEFFICIENTS USED IN RUNOFF CALCULATIONS SHALL CORRESPOND TO A BARE EARTH CONDITION OR THOSE CONDITIONS EXPECTED TO EXIST WHILE THE SEDIMENT BASIN IS UTILIZED.	SEDIMENT TRAPS ARE NOT PLANNED. DISTURBED AREA IS SMALL ENOUGH THAT SEDIMENT FENCING AND GRAVEL CURB INLET SEDIMENT FILTER PROVIDE ADEQUATE SEDIMENT STORAGE. CONTRACTOR SHALL INSPECT AND MAINTAIN THESE MEASURES PROPERLY.
7	CUT AND FILL SLOPES SHALL BE DESIGNED AND CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SLOPES THAT ARE FOUND TO BE ERODING EXCESSIVELY WITHIN ONE YEAR OF PERMANENT STABILIZATION SHALL BE PROVIDED WITH ADDITIONAL SLOPE STABILIZING MEASURES UNTIL THE PROBLEM IS CORRECTED.	PROPOSED SLOPES ARE RELATIVELY FLAT AND SHOULD NOT EXPERIENCE HEAVY EROSION. OWNER WILL MAKE ANY NECESSARY REPAIRS AFTER ONE YEAR	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.	SITE GRADES ARE RELATIVELY FLAT. NO SUCH DRAINAGEWAYS RUNNING DOWN CUT OR FILL SLOPES ARE PLANNED.
9	WHENEVER WATER SEEPS FROM A SLOPE FACE, ADEQUATE DRAINAGE OR OTHER PROTECTION SHALL BE PROVIDED.	NO SUCH WATER SEEPS ARE EVIDENT.	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.	NO NEW STORM INLETS WILL BE INSTALLED OR IMPACTED BY CONSTRUCTION ACTIVITY.
11	BEFORE NEWLY CONSTRUCTED STORMWATER CONVEYANCE CHANNELS OR PIPES 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.	NO NEW STORMWATER CONVEYANCE CHANNELS OR PIPES ARE PLANNED.	12	WHEN WORK IN A LIVE WATERCOURSE IS PERFORMED, PRECAUTIONS SHALL BE TAKEN TO MINIMIZE ENCROACHMENTS, 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.	NO PROPOSED WORK IN LIVE WATERCOURSE.
13	WHEN A LIVE WATERCOURSE MUST BE CROSSED BY CONSTRUCTION VEHICLES MORE THAN TWICE IN ANY SIX-MONTH PERIOD, A TEMPORARY VEHICULAR STREAM CROSSING CONSTRUCTED OF NONERODIBLE MATERIAL SHALL BE PROVIDED.	NO PROPOSED CROSSINGS OF LIVE WATERCOURSE.	15	ALL APPLICABLE FEDERAL, STATE AND LOCAL CHAPTERS PERTAINING TO WORKING IN OR CROSSING LIVE WATERCOURSES SHALL BE MET.	NO PROPOSED WORK IN LIVE WATERCOURSE.
16	THE BED AND BANKS OF A WATERCOURSE SHALL BE STABILIZED IMMEDIATELY AFTER WORK IN THE WATERCOURSE IS COMPLETED.	NO PROPOSED WORK IN LIVE WATERCOURSE.	MS-16	UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS IN ADDITION TO OTHER APPLICABLE CRITERIA: A) NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPEN AT ANY ONE TIME. B) EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES. C) 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 ADVERSLEY AFFECT FLOWING STREAMS OR OFF-SITE PROPERTY. D) MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION. E) RESTABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THIS CHAPTER F) APPLICABLE SAFETY CHAPTERS SHALL BE COMPLIED WITH.	NO PROPOSED UNDERGROUND UTILITY MAINS OR TRENCHING ACTIVITIES PLANNED OTHER THAN THE INSTALLATION OF SERVICE LATERALS AS SHOWN ON PLANS..
MS-17	WHERE CONSTRUCTION VEHICLES 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. THIS PROVISION SHALL APPLY TO INDIVIDUAL DEVELOPMENT LOTS AS WELL AS TO LARGER LAND-DISTURBING ACTIVITIES.	THE DISTURBED AREAS ARE WELL WITHIN THE SUBJECT PROPERTY. ACCESS TO THE PLANNED DISTURBED AREA IS PROVIDED BY EXISTING PAVED ROADWAYS. A TEMPORARY GRAVEL CONSTRUCTION ENTRANCE OVER THE CURB AND INTO THE DISTURBED AREA MAY BE CONSTRUCTED AND MAINTAINED TO PREVENT TRACKING OF MUD ONTO ROADS.	18	ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED, UNLESS OTHERWISE AUTHORIZED BY THE VESCP AUTHORITY. TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION.	EROSION CONTROL MEASURES WILL BE REMOVED ONCE PERMANENT VEGETATION IS ESTABLISHED. SEDIMENT CAPTURED IN THE SEDIMENT FENCE SHALL BE DISPOSED OF PROPERLY.
MS-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 FOLLOWING STANDARDS AND CRITERIA. STREAM RESTORATION AND RELOCATION PROJECTS THAT INCORPORATE NATURAL CHANNEL DESIGN CONCEPTS ARE NOT MAN-MADE CHANNELS AND SHALL BE EXEMPT FROM ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS: A) CONCENTRATED STORMWATER RUNOFF LEAVING A DEVELOPMENT SITE SHALL BE DISCHARGED DIRECTLY INTO AN ADEQUATE NATURAL OR MAN-MADE RECEIVING CHANNEL, PIPE OR STORM SEWER SYSTEM. FOR THOSE SITES WHERE RUNOFF IS DISCHARGED IN A PIPE OR PIPE SYSTEM, DOWNSTREAM STABILITY ANALYSES AT THE OUTFALL OF THE PIPE OR PIPE SYSTEM SHALL BE PERFORMED. B) ADEQUACY OF ALL CHANNELS AND PIPES SHALL BE VERIFIED IN THE FOLLOWING MANNER: 1) THE APPLICANT SHALL DEMONSTRATE THAT THE TOTAL DRAINAGE AREA TO THE POINT OF ANALYSIS WITHIN THE CHANNEL IS ONE HUNDRED TIMES GREATER THAN CONTRIBUTING DRAINAGE AREA OF THE PROJECT IN QUESTION; OR 2) A) NATURAL CHANNELS SHALL BE ANALYZED BY THE USE OF A TWO-YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP CHANNEL BANKS NOR CAUSE EROSION OF CHANNEL BED OR BANKS. B) ALL PREVIOUSLY CONSTRUCTED MAN-MADE CHANNELS SHALL BE ANALYZED BY THE USE OF A TEN-YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP ITS BANKS AND BY THE USE OF A TWO-YEAR STORM TO DEMONSTRATE THAT STORMWATER WILL NOT CAUSE EROSION OF CHANNEL BED OR BANKS; AND C) PIPES AND STORM SEWER SYSTEMS SHALL BE ANALYZED BY THE USE OF A TEN-YEAR STORM TO VERIFY THAT STORMWATER WILL BE CONTAINED WITHIN THE PIPE OR SYSTEM. C) IF EXISTING NATURAL RECEIVING CHANNELS OR PREVIOUSLY CONSTRUCTED MAN-MADE CHANNELS OR PIPES ARE NOT ADEQUATE, THE APPLICANT SHALL: 1) IMPROVE THE CHANNELS TO A CONDITION WHERE A TEN-YEAR STORM WILL NOT OVERTOP THE BANKS AND A TWO-YEAR STORM WILL NOT CAUSE EROSION TO CHANNEL THE BED OR BANKS; OR 2) IMPROVE THE PIPE OR PIPE SYSTEM TO A CONDITION WHERE THE TEN-YEAR STORM IS CONTAINED WITHIN THE APPURTENANCES; 3) DEVELOP A SITE DESIGN THAT WILL NOT CAUSE THE PRE-DEVELOPED PEAK RUNOFF RATE FROM A TWO-YEAR STORM TO INCREASE WHEN RUNOFF OUTFALLS INTO A NATURAL CHANNEL OR WILL NOT CAUSE THE PRE-DEVELOPMENT PEAK RUNOFF RATE FROM A TEN-YEAR STORM TO INCREASE WHEN RUNOFF OUTFALLS INTO A MAN-MADE CHANNEL; OR 4) PROVIDE A COMBINATION OF CHANNEL IMPROVEMENT, STORMWATER DETENTION, OR OTHER MEASURES WHICH IS SATISFACTORY TO THE VESCP AUTHORITY TO PREVENT DOWNSTREAM EROSION. D) THE APPLICANT SHALL PROVIDE EVIDENCE OF PERMISSION TO MAKE THE IMPROVEMENTS. E) ALL HYDROLOGIC ANALYSES SHALL BE BASED ON THE EXISTING WATERSHED CHARACTERISTICS AND THE ULTIMATE DEVELOPMENT CONDITION OF THE SUBJECT PROJECT. F) IF THE APPLICANT CHOOSES AN OPTION THAT INCLUDES STORMWATER DETENTION, HE SHALL OBTAIN APPROVAL FROM THE VESCP OF A PLAN FOR MAINTENANCE OF THE DETENTION FACILITIES. THE PLAN SHALL SET FORTH THE MAINTENANCE REQUIREMENTS OF THE FACILITY AND THE PERSON RESPONSIBLE FOR PERFORMING THE MAINTENANCE. G) OUTFALL FROM A DETENTION FACILITY SHALL BE DISCHARGED TO A RECEIVING CHANNEL, AND ENERGY DISSIPATORS SHALL BE PLACED AT THE OUTFALL OF ALL DETENTION FACILITIES AS NECESSARY TO PROVIDE A STABILIZED TRANSITION FROM THE FACILITY TO THE RECEIVING CHANNEL. H) ALL ON-SITE CHANNELS MUST BE VERIFIED TO BE ADEQUATE. I) INCREASED VOLUMES OF SHEET FLOWS THAT MAY CAUSE EROSION OR SEDIMENTATION ON ADJACENT PROPERTY SHALL BE DIVERTED TO A STABLE OUTLET, ADEQUATE CHANNEL, PIPE OR PIPE SYSTEM, OR TO A DETENTION FACILITY. J) IN APPLYING THESE STORMWATER MANAGEMENT CRITERIA, INDIVIDUAL LOTS OR PARCELS IN A RESIDENTIAL, COMMERCIAL OR INDUSTRIAL DEVELOPMENT SHALL NOT BE CONSIDERED TO BE SEPARATE DEVELOPMENT PROJECTS. INSTEAD, THE DEVELOPMENT AS A WHOLE SHALL BE CONSIDERED TO BE A SINGLE DEVELOPMENT PROJECT. HYDROLOGIC PARAMETERS THAT REFLECT THE ULTIMATE DEVELOPMENT CONDITION SHALL BE USED IN ALL ENGINEERING CALCULATIONS. K) ALL MEASURES USED TO PROTECT PROPERTIES AND WATERWAYS SHALL BE EMPLOYED IN A MANNER WHICH MINIMIZES IMPACTS ON THE PHYSICAL, CHEMICAL AND BIOLOGICAL INTEGRITY OF RIVERS, STREAMS AND OTHER WATERS OF THE STATE. L) ANY PLAN APPROVED PRIOR TO JULY 1, 2014, THAT PROVIDES FOR STORMWATER MANAGEMENT THAT ADDRESSES ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS SHALL SATISFY THE FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS IF THE PRACTICES ARE DESIGNED TO (I) DETAIN THE WATER QUALITY VOLUME AND RELEASE IT OVER 48 HOURS; (II) DETAIN AND RELEASE OVER A 24-HOUR PERIOD THE EXPECTED RAINFALL RESULTING FROM THE ONE-YEAR, 24-HOUR STORM; AND (III) REDUCE THE ALLOWABLE PEAK FLOW RATE RESULTING FROM THE 1.5, 2, AND 10-YEAR, 24-HOUR STORMS TO A LEVEL THAT IS LESS THAN OR EQUAL TO THE PEAK FLOW RATE FROM THE SITE ASSUMING IT WAS IN GOOD FORESTED CONDITION, ACHIEVED THROUGH MULTIPLICATION OF THE FORESTED PEAK FLOW RATE BY A REDUCTION FACTOR THAT IS EQUAL TO THE RUNOFF VOLUME FROM THE SITE IN ITS PROPOSED CONDITION, AND SHALL BE EXEMPT FROM ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL AND MAN-MADE CHANNELS AS DEFINED IN ANY REGULATIONS PROMULGATED PURSUANT TO SS10.1-562 OR SS10.1-570 OF THE ACT. M) FOR PLANS APPROVED ON AND AFTER JULY 1, 2014, THE FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS OF SS10.1-561 A OF THE ACT AND THIS SUBSECTION SHALL BE SATISFIED BY COMPLIANCE WITH WATER QUANTITY REQUIREMENTS IN THE STORMWATER MANAGEMENT ACT (SS10.1-603.2 ET SEQ. OF THE CODE OF VIRGINIA) AND ATTENDANT REGULATIONS, UNLESS SUCH LAND-DISTURBING ACTIVITIES ARE IN ACCORDANCE WITH 4VAC50-60-48 OF THE VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSMP) PERMIT REGULATIONS. N) COMPLIANCE WITH WATER QUANTITY MINIMUM STANDARDS SET OUT IN 4VAC50-60-66 OF THE VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSMP) PERMIT REGULATIONS SHALL BE DEEMED TO SATISFY THE REQUIREMENTS OF MINIMUM STANDARD 19.	MS19 NOT APPLICABLE ON THIS PROJECT			
<div>City of Roanoke Planning, Building, & Development COMPREHENSIVE DEVELOPMENT PLAN</div> <div>APPROVED by Aaron Cypher 04/02/2020</div>			PROJECT DESCRIPTION: SUMMIT HELICOPTERS, INC. PLANS TO CONSTRUCT ONE NEW FREE-STANDING AIRCRAFT HANGAR (TO BE KNOWN AS HANGAR #12). UPON COMPLETION, SUMMIT WILL RETAIN OWNERSHIP OF THE HANGAR #12 BUILDING ON A GROUND LEASE AND USE IT FOR STORAGE OF THEIR AIRCRAFT.		DATE 02/25/2020 03/18/2020 03/27/2020
EXISTING SITE CONDITIONS: THE SITE OF THE PROPOSED HANGAR WAS PREVIOUSLY GRADED NEARLY FLAT AND SEEDED. IMMEDIATELY TO THE EAST OF THE SITE IS THE RECENTLY CONSTRUCTED COMBINED HANGAR BUILDING FOR HANGARS #14 & #15. THE AIRPORT ALREADY MAINTAINS LARGE REGIONAL DETENTION FACILITIES TO ADDRESS RUNOFF FROM THE LARGE IMPERVIOUS AREAS. THERE IS ADEQUATE CAPACITY IN THESE EXISTING FACILITIES AND STORM SEWER CONVEYANCE SYSTEM TO HANDLE THE SLIGHT INCREASE IN IMPERVIOUS AREAS CREATED BY THIS PROJECT.			ADJACENT AREAS: THE DISTURBANCE LIMITS FOR THIS PROJECT ARE LIMITED TO A VERY SMALL ENVELOPE OUTSIDE OF THE PROPOSED BUILDING PAD. THERE ARE NO NEW DRIVES OR PARKING AREAS PROPOSED. THE EXISTING TAXILANE PAVEMENT THAT IS REMOVED WILL BE SAWCUT AND REPLACED WITH CONCRETE APRON INTO THE BUILDING. ANY SPOILS MATERIALS SUCH AS ASPHALT WASTE AND TOPSOIL SHALL BE REMOVED FROM THE AIRPORT PROPERTY AND DISPOSED OF BY THE CONTRACTOR AT AN APPROVED DISPOSAL LOCATION.		REVISIONS 1ST CITY SUBMITTAL 2ND CITY SUBMITTAL 3RD CITY SUBMITTAL - MOVE BLDG WEST 4 FT
OFF-SITE AREAS: THERE ARE NO PLANS FOR DISTURBANCES AT OFFSITE LOCATIONS SUCH AS BORROW PITS OR IMPROVEMENTS TO DOWNSTREAM STORM SEWER OR DETENTION STRUCTURES. HOWEVER, IF SUCH A NEED ARISES THE CONTRACTOR SHALL NOTIFY THE CITY, THE AIRPORT, AND BRUSHY MOUNTAIN ENGINEERING IMMEDIATELY AND SUBMIT A SUPPLEMENTAL EROSION AND SEDIMENT CONTROL PLAN FOR ANY SUCH AREA.			SOILS: BASED ON THE USDA SOILS DATA AVAILABLE ONLINE THE DISTURBANCE AREAS SIMPLY CLASSIFIED AS "URBAN LAND". THE SOILS IN THIS AREA HAVE LIKELY BEEN PREVIOUSLY REGRADED AND COMPACTED SO THAT THEY MORE RESEMBLE TYPE "D" SOILS.		# 1 2 3
CRITICAL AREAS: THE CONTRACTOR SHALL PROPERLY PROTECT THE SURROUNDING AREAS AND RECEIVING STORM SEWER FROM ANY SEDIMENT FROM THE SITE. THE CONTRACTOR SHALL PROPERLY INSTALL THE EROSION AND SEDIMENT CONTROL MEASURES DESCRIBED ON THESE PLANS AND CONTINUE TO MONITOR AND MAINTAIN THEM UNTIL THE PROJECT IS COMPLETE AND ADEQUATE VEGETATIVE SOIL STABILIZATION IS ESTABLISHED.			EROSION AND SEDIMENT CONTROL MEASURES: UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE VESCP HANDBOOK. THE MINIMUM STANDARDS OF THE VESCP HANDBOOK SHALL BE ADHERED TO UNLESS OTHERWISE WAIVED OR APPROVED BY A VARIANCE. NO SUCH WAIVER OR VARIANCE IS BEING SOUGHT AT THIS TIME.		
STRUCTURAL PRACTICES: 1. TEMPORARY CONSTRUCTION ENTRANCE - 3.02 - THERE ARE EXISTING PAVED ROADWAYS WHICH PROVIDE ADEQUATE ACCESS RIGHT TO THE SITE DISTURBANCE LIMITS. THERE IS PAVED PARKING AVAILABLE IMMEDIATELY NORTH OF THE SITE FOR WORKERS. IF NEEDED, A TEMPORARY GRAVEL CONSTRUCTION ENTRANCE SHALL BE CREATED OVER THE EXISTING CURB AND INTO THE DISTURBANCE AREA. ALL CONSTRUCTION TRAFFIC INTO AND OUT OF THE DISTURBANCE AREA SHALL USE THIS ENTRANCE. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING AND ENHANCING THIS ENTRANCE AS NECESSARY TO PREVENT TRACKING OF MUD ONTO SURROUNDING PAVED AREAS.. 2. SILT FENCE BARRIER - 3.05 - SILT FENCE SEDIMENT BARRIER WILL BE INSTALLED AROUND THE PERIMETER OF THE DISTURBED AREA AS SHOWN ON THE ATTACHED PLANS. THIS SILT FENCE BARRIER WILL SERVE AS THE PRIMARY MEANS TO PREVENT SEDIMENT FROM LEAVING THE SITE. 3. BLOCK & GRAVEL CURB INLET SEDIMENT FILTER - 3.07.8 - THE MAJORITY OF THE DISTURBED AREA DRAINS TO THE NORTH WHERE IT IS CAPTURED IN THE CONCRETE CURB AND GUTTER AND DIRECTED TO A CURB INLET NEAR THE NORTHWEST CORNER OF SITE. CONTRACTOR SHALL INSTALL A BLOCK AND GRAVEL CURB INLET SEDIMENT FILTER AT THIS LOCATION TO PREVENT SEDIMENT FROM ENTERING THE EXISTING STORM SEWER SYSTEM.			VEGETATIVE PRACTICES: 1. TOPSOILING (STOCKPILE) - 3.30 - THERE APPEARS TO BE LITTLE TOPSOIL ON THE SITE. CONTRACTOR SHALL STRIP ANY TOPSOIL FROM THE SITE AND REPLACE WITH PROPER FILL MATERIAL AS NECESSARY TO ACHIEVE SUBGRADE ELEVATION FOR BUILDING PAD AND CONCRETE AREAS. AFTER BUILDING CONSTRUCTION IS COMPLETE CONTRACTOR SHALL IMPORT FERTILE TOPSOIL AND FERTILIZE AS NEEDED TO ESTABLISH VEGETATION. THIS TOPSOIL SHALL NOT BE PLACED UNTIL THE BUILDINGS ARE NEARLY COMPLETE TO PREVENT TOPSOIL COMPACTION BY CONSTRUCTION TRAFFIC. 2. TEMPORARY SEEDING - 3.31 - AREAS THAT SHALL REMAIN UNCHANGED FOR MORE THAN 14 DAYS SHALL BE TEMPORARILY SEEDDED. 3. PERMANENT SEEDING - 3.32 - AS SOON AS THE CONSTRUCTION TRAFFIC OUTSIDE OF BUILDING PAD IS DONE, TOPSOIL SHALL BE PLACED AND THE AREAS SHALL BE PERMANENTLY SEEDED. 4. MULCH - 3.35 - ALL AREAS OF THIS SITE HAVE SLOPES FLATTER THAN 3H:1V. THEREFORE, USE MULCH (STRAW OR FIBER) AS A SECOND STEP IN THE SEEDING OPERATION.		
MANAGEMENT STRATEGIES: 1. CONSTRUCTION ACTIVITIES WILL BE SEQUENCED SO THAT GRADING OPERATIONS CAN BEGIN AND END AS QUICKLY AS POSSIBLE. 2. SEDIMENT TRAPPING MEASURES (I.E. SILT FENCE BARRIER) WILL BE INSTALLED AS A FIRST STEP IN GRADING AND MUST BE FULLY FUNCTIONAL BEFORE ANY GRADING ACTIVITY COMMENCES. 3. PERMANENT SEEDING OR OTHER STABILIZATION WILL FOLLOW IMMEDIATELY AFTER TOPSOIL IS PLACED. 4. THERE ARE NO TREES OR PLANTS TO AVOID. BUT AREAS NOT TO BE DISTURBED (SUCH AS EXISTING GRASS SWALE) WILL BE CLEARLY MARKED BY FLAGS, SIGNS, ETC. 5. THE CONTRACTOR'S JOB SUPERINTENDENT SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL PRACTICES. 6. AFTER ACHIEVING ADEQUATE STABILIZATION AND SECURING APPROVAL OF ROANOKE CITY AND THE AIRPORT, THE TEMPORARY E&S CONTROLS WILL BE CLEANED UP AND REMOVED BY THE CONTRACTOR.			PERMANENT STABILIZATION: THE SMALL AREA OUTSIDE OF THE PROPOSED BUILDING AND CONCRETE AREAS SHALL BE SEEDED. PERMANENT SEEDING SHALL BE IN ACCORDANCE WITH STANDARD AND SPECIFICATION 3.32 OF THE VESCP HANDBOOK. SOIL AMENDMENT (FERTILIZER, LIME, ETC.) SHALL BE APPLIED IMMEDIATELY AFTER SEEDING AND MULCHED AS DISCUSSED ABOVE.		
STORMWATER MANAGEMENT: THE PLANNED DEVELOPMENT INCLUDES ONE NEW BUILDING AND A NEW CONCRETE APRON INTO THE BUILDING. THIS NEW IMPERVIOUS AREA IS PARTIALLY OFFSET BY THE REMOVAL OF AN ASPHALT AREA CURRENTLY USED AS OVERFLOW AIRCRAFT TIE-DOWN SPACES. THE NET INCREASE IN STORMWATER RUNOFF WILL CAUSE A NEGLIGIBLE INCREASE IN RUNOFF REACHING THE DOWNSTREAM REGIONAL DETENTION FACILITY MAINTAINED BY THE AIRPORT. THEREFORE, NO ADDITIONAL STORMWATER MANAGEMENT MEASURES ARE REQUIRED OTHER THAN CONTINUED PROPER MAINTENANCE ON THE EXISTING FACILITIES.			MAINTENANCE: IN GENERAL, ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE CHECKED DAILY AND AFTER EACH SIGNIFICANT RAINFALL. THE FOLLOWING ITEMS WILL BE CHECKED IN PARTICULAR: 1. THE SILT FENCE BARRIER WILL BE CHECKED REGULARLY FOR UNDERMINING OR DETERIORATION OF THE FABRIC. SEDIMENT SHALL BE REMOVED WHEN THE LEVEL OF SEDIMENT DEPOSITION REACHES HALF WAY TO THE TOP OF THE BARRIER. 2. THE GRAVEL CURB INLET SEDIMENT FILTER SHALL BE CHECKED REGULARLY FOR SIGNS OF SEDIMENT ENTERING THE INLET. ANY SUCH SEDIMENT SHALL BE REMOVED AND THE FILTER REPAIRED OR REPLACED AS NECESSARY. 3. THE SEEDED AREAS WILL BE CHECKED REGULARLY TO ENSURE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED AND RESEEDDED AS NEEDED.		
* NOTE: IF ANY IMPORT OR EXPORT OF FILL MATERIALS (INCLUDING TOPSOIL) IS NEEDED, THE MATERIAL MUST ORIGINATE FROM ANOTHER SITE PROPERLY PERMITTED BY ROANOKE CITY. THE LOCATION OF ANY SUCH OFF-SITE FILL OR BORROW MATERIAL MUST BE PROVIDED TO ROANOKE CITY AND THE AIRPORT.			STEEP SLOPE DEVELOPMENT: REFER TO VIRGINIA'S EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION, AND ROANOKE COUNTY EROSION AND SEDIMENT CONTROL AND STEEP SLOPE DEVELOPMENT ORDINANCE, CHAPTER 8.1		
1) CUT SLOPES OR FILL SLOPES SHALL NOT BE GREATER THAN 2:1 (HORIZONTAL:VERTICAL), UNLESS A GEOTECHNICAL REPORT IS PROVIDED FOR THE PROPOSED SLOPES. NOT APPLICABLE. ALL PROPOSED SLOPES ARE CONSIDERABLY MORE FLAT THAN THE 2:1 THRESHOLD.			2) CUT SLOPES OR FILL SLOPES SHALL NOT BE GREATER THAN 25 FEET VERTICAL FEET IN HEIGHT, UNLESS A GEOTECHNICAL REPORT IS PROVIDED FOR THE PROPOSED SLOPES. CUT SLOPES OR FILL SLOPES LESS THAN OR EQUAL TO 3:1 (HORIZONTAL:VERTICAL) MAY EXCEED 25 VERTICAL FEET IN HEIGHT AND SHALL NOT REQUIRE A GEOTECHNICAL REPORT. NOT APPLICABLE. NO SUCH SLOPES OR FILLS.		
3) FOR ANY CUT SLOPES OR FILL SLOPES GREATER THAN OR EQUAL TO 2:1 (HORIZONTAL:VERTICAL) AND GREATER THAN OR EQUAL TO 25 VERTICAL FEET IN HEIGHT, AS-BUILT PLANS SHOWING THAT THE FINISHED GEOMETRY IS IN SUBSTANTIAL CONFORMITY WITH THE DESIGN SHALL BE PROVIDED TO THE PLAN-APPROVING AUTHORITY. NOT APPLICABLE. ALL PROPOSED SLOPES ARE CONSIDERABLY MORE FLAT THAN THE 2:1 THRESHOLD.			4) FILL MATERIALS, COMPACTION METHODS AND DENSITY SPECIFICATIONS SHALL BE INDICATED ON THE SITE DEVELOPMENT PLANS. FILL AREAS INTENDED TO SUPPORT STRUCTURES SHALL ALSO BE INDICATED ON THE SITE DEVELOPMENT PLANS. COMPACTION TEST RESULTS (PER VDOT STANDARDS) SHALL BE SUBMITTED TO THE PLAN-APPROVING AUTHORITY. FOR THE PURPOSES OF THIS PLAN THE CONTRACTOR WILL AS A MINIMAL REQUIREMENT PLACE ANY FILL IN LIFTS OF 6" OR LESS AND ACHIEVE 95% STANDARD PROCTOR DENSITY.		
5) DEVELOPMENT PLANS FOR ALL NEW SUBDIVISIONS SHALL SHOW PROPOSED LOT GRADES TO ENSURE POSITIVE DRAINAGE. N/A. THIS IS NOT A NEW SUBDIVISION.					
CONSTRUCTION / FIELD CHANGES: 1) NOTE: NO FIELD CHANGES PERMITTED WITHOUT PRIOR APPROVAL OF THE CONSULTING ENGINEER, THE AIRPORT, AND ROANOKE CITY.			2) ANY EXPANSION OF DISTURBANCE AREAS, CHANGES IN GRADES, ALTERNATIVE EROSION AND SEDIMENT CONTROL MEASURES WILL REQUIRE A NEW SET OF PLANS STAMPED BY THE CONSULTING ENGINEER. PLAN SHEETS CAN BE 8.5 X 11 IF THE INFORMATION IS LEGIBLE.		
BME JOB # 19-024 SHEET NAME ESCP NARRATIVE SHEET NUMBER 8 OF 8			OWNER = ROANOKE REGIONAL AIRPORT COMMISSION BUILDER = SUMMIT HELICOPTERS, INC. TAX PARCEL ID: 650101 CITY OF ROANOKE, VIRGINIA		
BRUSHY MOUNTAIN ENGINEERING, PLLC (540) 526-6800 3553 Carvins Cove Road Salem, VA 24153 www.brushymtnengr.com			Barney T. Horrell Prof. Eng. No. 44654 03-27-20 PROFESSIONAL ENGINEER		