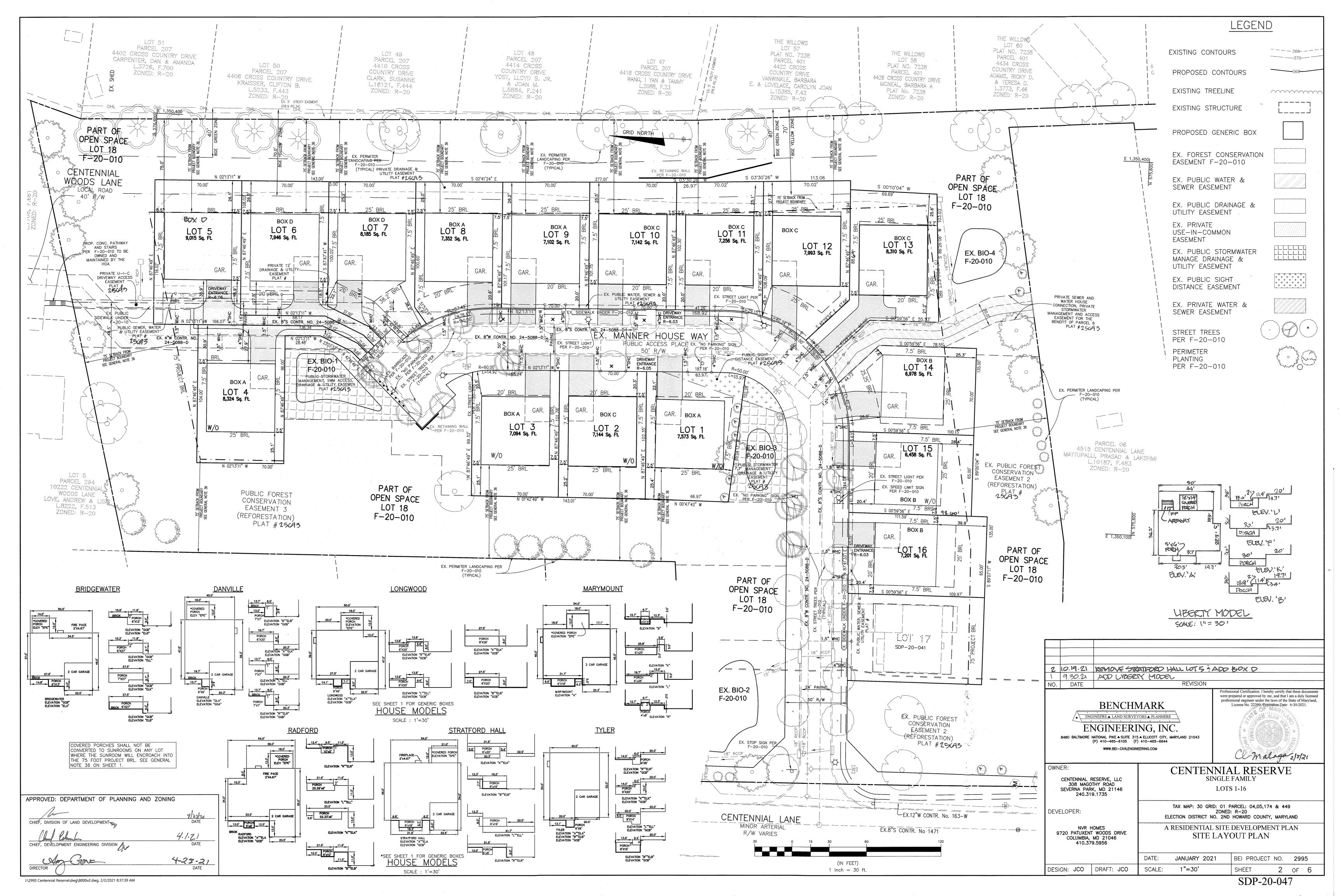
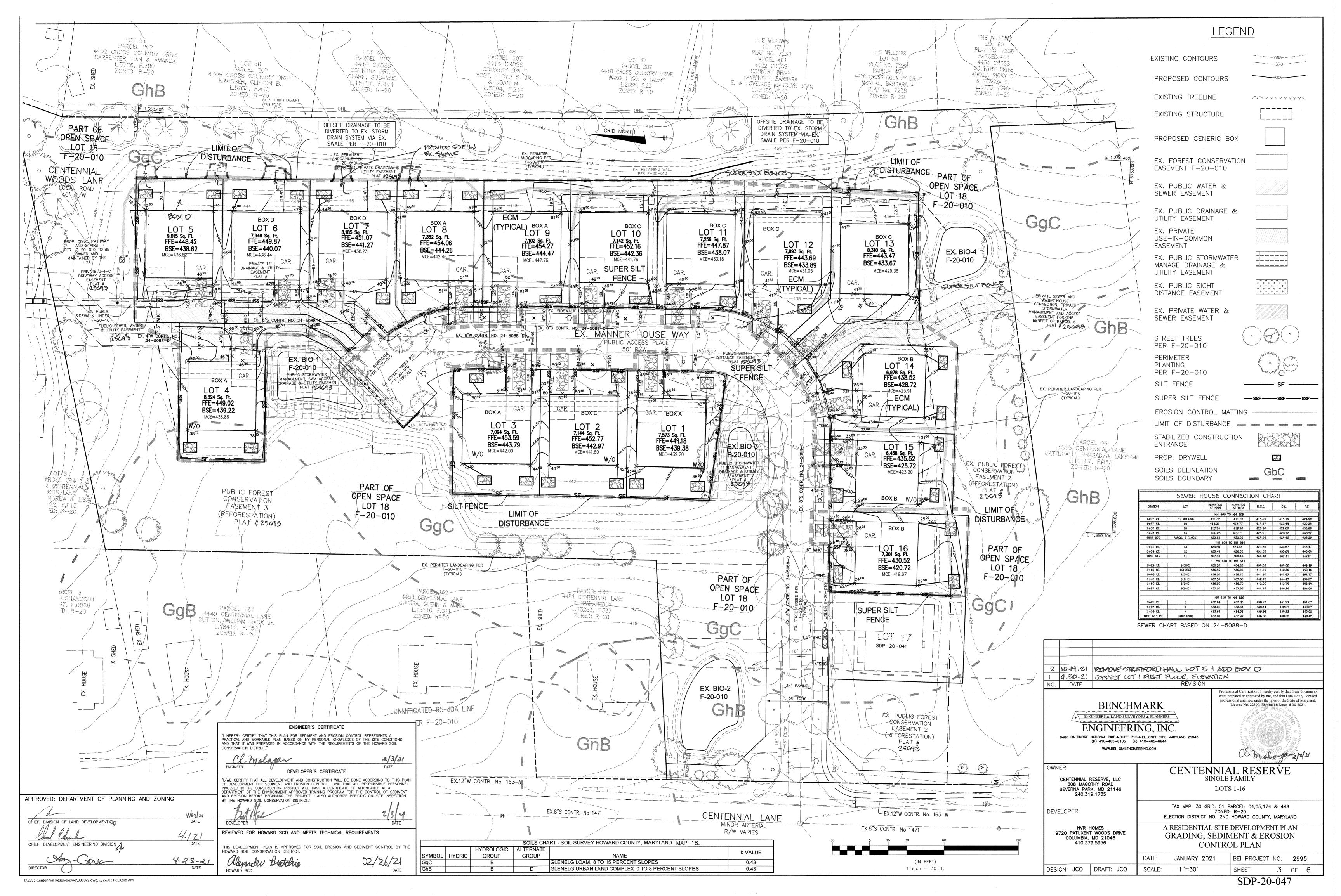
GENERAL NOTES PROJECT BACKGROUND INFORMATION RESIDENTIAL SITE DEVELOPMENT PLAN 1. SUBJECT PROPERTY ZONED R-20 PER THE 10-6-13 COMPREHENSIVE ZONING PLAN AND BEING DEVELOPED UNDER THE R-ED PRESENT ZONING: R-20 APPLICABLE DPZ FILE REFERENCES: ECP-19-022, WP-19-047, 2. THIS PROJECT IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS. F-20-010, SP-19-001, PB CASE # 444, SDP-20-041 CENTENNIAL RESERVE 3. BOUNDARY AND TOPOGRAPHY SHOWN HEREON IS BASED ON A PLAN PREPARED BY FISHER COLLINS & CARTER, INC. DEED REFERENCES: L. 18832 / F. 0115, L. 16372 / F. 0097 L. 1393 / F. 0455, L. 18832 / F. 0172 4. THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE PROPOSED USE OF SITE: SINGLE FAMILY DETACHED MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 0023 AND 30AB WERE USED FOR THIS Control Sta PROPOSED WATER AND SEWER SYSTEMS: PUBLIC WATER & SEWER LOTS 1-16 5. NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE SITE DATA TABULATION STREAMS, OR THEIR REQUIRED BUFFERS AND FLOODPLAIN AND FOREST CONSERVATION EASEMENT AREAS, IF APPLICABLE. 1) TOTAL PROJECT AREA. ...8.13 AC.(F-20-10) 6. THERE ARE NO ONSITE STEEP SLOPES GREATER THAN 25%. 2) AREA OF 100-YR. FLOODPLAIN. ...0.00 AC. 2ND ELECTION DISTRICT 3) AREA OF STEEP SLOPES: 7. PER F-20-010 THERE IS NO FLOODPLAIN, STREAMS, WETLANDS OR THEIR BUFFERS LOCATED WITHIN THE LIMIT OF MODERATE STEEP SLOPES: 15-25.9%...... 0.00 AC. STEEP SLOPES: 25% OR GREATER..... ...0.00 AC HOWARD COUNTY, MARYLAND 8. PER F-20-010 THERE ARE NO CEMETERIES LOCATED ON THIS SITE. 5) AREA OF ERODIBLE SOILS0.00 AC. 9. THIS SITE IS LOCATED WITHIN THE METROPOLITAN DISTRICT. 6) AREA OF WETLANDS (INCLUDING BUFFER) .. 0.00 AC. 7) AREA OF STREAM BUFFER (OUTSIDE WETLANDS & BUFFER)... 0.00 AC. 10. ON MAY 16, 2019 THE PLANNING BOARD OF HOWARD COUNTY, MARYLAND APPROVED PB NO. 444 FOR SP-19-001. . 2.76 SF± CENTENNIAL RESERVE DUE TO THE DEVELOPMENT UTILIZING THE R-ED ZONING REGULATIONS. . 2.96 AC.± 11. THE FOREST CONSERVATION REQUIREMENTS FOR F-20-010 CENTENNIAL RESERVE SUBDIVISION HAVE BEEN MET THROUGH THE 10) PRESENT ZONING DESIGNATION.. ..R-20(USING R-ED REQUIREMENTS) ON-SITE REFORESTATION OF 2.02 ACRES OF ON-SITE PLANTING. .RESIDENTIAL-SFD 11) PROPOSED USES FOR THE SITE & STRUCTURES.. 12) NUMBER OF PARKING SPACES REQUIRED 12. PREVIOUS DPZ FILES: ECP-19-022, WP-19-047, SP-19-001, PB CASE NO. 444, F-20-010, SDP-20-041 13) NUMBER OF PARKING SPACES PROVIDED ..48(TWO IN GARAGE ONE IN DRIVEWAY) ADC MAP 26 GRID E-3 13. WATER WILL BE FROM PUBLIC WATER MAIN CONTRACT NUMBERS: 24-5088-D. 14) TOTAL IMPERVIOUS AREA.. 1.24 AC± 1'=2000' 15) TOTAL UNITS ALLOWED (F-20-10). . 17 UNITS 14. SEWER WILL BE FROM PUBLIC SEWER MAIN CONTRACT NUMBERS: 24-5088-D PARCEL 207 4326 CROSS COUNTRY DRIV ZHANG YUEXING & ALPANA L13589, F.154 ZONED: R-20 16) TOTAL UNITS PROVIDED (F-20-10). 17 UNITS 17) TOTAL UNITS PER THIS PLAN. 15. DRIVEWAYS SHALL BE PROVIDED PRIOR TO RESIDENTIAL OCCUPANCY TO INSURE SAFE ACCESS FOR FIRE AND EMERGENCY .. 16 UNITS ELEV. 479.248 VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS E 1349751.273 a) WIDTH - 12' (16' SERVING MORE THAN ONE RESIDENCE). ELEV. 361.90 b) SURFACE - 6" OF COMPACT CRUSHER RUN BASE WITH TAR AND CHIP COATING (1-1/2" MIN.) N 573239.385 E 1349547.846 c) GEOMETRY — MAXIMUM 15% GRADE, MAXIMUM 10% GRADE CHANGE AND MINIMUM 45' TURNING RADIUS d) STRUCTURES (CULVERTS/BRIDGES) - CAPABLE OF SUPPORTING 25 GROSS TONS (H25 LOADING). e) DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100 YEAR FLOODPLAIN WITH NO MORE THAN 1 FOOT DEPTH **ON-LOT STORMWATER** f) STRUCTURE CLEARANCES — MINIMUM 12 FEET. g) MAINTENANCE - SUFFICIENT TO INSURE ALL WEATHER USE. PLAT NO. 7238 PARCEL 401 4434 CROSS COUNTRY DRIVE ADAMS, RICKY [& TERMS 2773, F.46 ZONED: R-20 MANAGEMENT PRACTICES 4410 CRCSS COUNTRY DRIVE CLARK, SUSANNE L16121, F.444 NON-ROOFTOP DRYWELLS MICRO-PARCEL 207 4418 CROSS COUNTRY DRIVE 16. THIS PLAN IS SUBJECT TO SECTION 128.0 OF THE HOWARD COUNTY ZONING REGULATIONS DISCONNECT M-5 **ADDRESS** VANWINKLE, BARBARA E. & LOVELACE, CAROLYN JOAN L15385, F.43 ZOARS (NUMBER) RETENTION M-8 NUMBER 17. F-20-010 HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE (NUMBER) (NUMBER) AND LANDSCAPE MANUAL. FINANCIAL SURETY IN THE AMOUNT OF \$12,450.00 HAS BEEN POSTED AS PART OF THE DPW DEVELOPER'S AGREEMENT UNDER F-20-010. THERE IS NOT PROPOSED LANDSCAPING SHOWN UNDER THIS SDP. LANDSCAPING IS 5027 MANNER HOUSE WAY PROVIDED UNDER F-20-010. 2 5031 MANNER HOUSE WAY 18. A PRE-SUBMISSION COMMUNITY MEETING FOR CENTENNIAL RESERVE WAS HELD ON SEPTEMBER 17, 2018. 3 5035 MANNER HOUSE WAY OPEN SPACE 0 19. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION 4 5049 MANNER HOUSE WAY 2 F-20-010 DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK. 5 5052 MANNER HOUSE WAY 0 CENTENNIA 20. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK 6 5048 MANNER HOUSE WAY PART OF WOODS OPEN SPACE 7 5044 MANNER HOUSE WAY 3 0 LANE 8 5040 MANNER HOUSE WAY 0 F-20-010 LOCAL ROAD 9 5036 MANNER HOUSE WAY 40' R/W 23. THIS SUBDIVISION IS SUBJECT TO SECTION 104.0.F OF THE ZONING REGULATIONS. AT LEAST 10% OF THE SUBDIVISION IS 10 5032 MANNER HOUSE WAY 1 0 SUBJECT TO SECTION 104.0.F OF THE ZONING REGULATIONS, AT LEAST 10% OF THE DWELLING UNITS SHALL BE MODERATE 11 5028 MANNER HOUSE WAY 1 0 INCOME HOUSING UNITS (M.I.H.U.) OR AN ALTERNATIVE COMPLIANCE WILL BE PROVIDED. THE DEVELOPER SHALL EXECUTE A M.I.H.U. AGREEMENT WITH THE DÉPARTMENT OF HOUSING TO INDICATE HOW THE M.I.H.U. REQUIREMENT WILL BE MET. THE 12 5024 MANNER HOUSE WAY 0 M.I.H.U. AGREEMENT AND COVENANTS WILL BE RECORDED SIMULTANEOUSLY WITH THE PLAT IN THE LAND RECORDS OFFICE OF PRIVATE U-I-C DRIVEWAY ACCES EASEMENT -PLAT # 13 5020 MANNER HOUSE WAY HOWARD COUNTY, MARYLAND. THIS DEVELOPMENT WILL MEET M.I.H.U. ALTERNATIVE COMPLIANCE BY A PAYMENT OF FEE-IN-LIEU 0 0 25693 TO THE DEPARTMENT OF HOUSING FOR EACH REQUIRED UNIT. a. M.I.H.U. REQUIRED(17 LOTS X 10% = 2 M.I.H.U. b. M.I.H.U. 14 5012 MANNER HOUSE WAY 3 0 PROPOSED = DEVELOPER WILL PURSUE ALTERNATIVE COMPLIANCE BY PAYING A FEE-IN-LIEU TO THE HOWARD COUNTY HOUSING DEPARTMENT FOR THE UNITS REQUIRED BY THE DEVELOPMENT. c. AN EXECUTED M.I.H.U. AGREEMENT WITH THE HOWARD COUNTY 15 5008 MANNER HOUSE WAY 3 0 HOUSING DEPARTMENT HAS BEEN COMPLETED AND RECORDED SIMULTANEOUSLY WITH THE PLAT UNDER F-20-010. 16 5004 MANNER HOUSE WAY 24. THIS SUBDIVISION IS SUBJECT TO WP-19-047 (REVISED), WITH APPROVAL ON JUNE 12, 2019. THE PLANNING DIRECTOR EX. MANNER HOUSE WAY APPROVED THESE REQUESTS FOR AN ALTERNATIVE COMPLIANCE OF SECTION 16.1205(A)(7) - ONSITE FOREST RETENTION AND SECTION 16.119(F)(1) - SECTION 16.1205(A)(7) - ONSITE FOREST RETENTION AND SECTION 16.119(F)(1) - ACCESS **ADDRESS CHART** RESTRICTIONS. APPROVAL IS SUBJECT TO THE FOLLOWING CONDITIONS: a) PER DED COMMENTS: DIRECT ACCESS ONTO CENTENNIAL LANE WILL ONLY BE PERMITTED IF THE PROPOSED ACCESS MEETS ALL CURRENT DESIGN STANDARDS REGARDING LAYOUT, SLOPES AND SIGHT DISTANCES. ANY DEFICIENCY MUST BE REMEDIATED OR THE DIRECT ACCESS TO CENTENNIAL LANE WILL NOT BE PERMITTED. REMOVAL OF SPECIMEN TREE #15 SHALL BE MITIGATED 2:1 BY PLANTING 2 NATIVE TREES OF 2.5" CALIPER, PREFERABLY WITH IN THE FOREST CONSERVATION EASEMENT. PLEASE ADD THE TREES FOR MITIGATION TO THE LANDSCAPE PLANS WITH A NOTE IDENTIFYING WHICH TREES SATISFY THIS CONDITION OF APPROVAL. 5027 MANNER HOUSE WAY 5036 MANNER HOUSE WAY c) FOR RELIEF OF SECTION 16.119(f)(1) ACCESS RESTRICTIONS - AS AN ALTERNATIVE COMPLIANCE, THE DEVELOPER SHALL PROVIDE THE PAVED WALKING PATH AS PROPOSED IN THE EXHIBITS AND PLANS THAT CONNECTS CENTENNIAL RESERVE WITH 5031 MANNER HOUSE WAY 5032 MANNER HOUSE WAY d) UPDATE ANY NOTES ON THE PLAN THAT WERE REQUIRED UNDER THE PREVIOUS APPROVAL DATED JANUARY 24, 2019 AND 5035 MANNER HOUSE WA 5028 MANNER HOUSE WAY PERTAIN TO THE ADJOINER DEED FOR LOT 6 TO INDICATE THAT SINCE LOT 6 IS NO LONGER PART OF THE SUBDIVISION, THE APPROVAL FOR RELIEF OF SECTION 16.147 IS VOID. 5049 MANNER HOUSE WAY 5024 MANNER HOUSE WAY APPROVAL IS SUBJECT TO COMPLIANCE WITH ALL SRC COMMENTS REGARDING APPROVAL OF SP-19-001 CENTENNIAL RESERVE THE PREVIOUS APPROVAL OF SECTION 16.147 FINAL SUBDIVISION PLAN AND FINAL PLAT IS VOID SINCE PARCEL 6 HAS BEEN 5052 MANNER HOUSE WAY 5020 MANNER HOUSE WAY CONSERVATION EASEMENT 2 250A3 REMOVED FROM THE SUBDIVISION. PUBLIC FOREST 5048 MANNER HOUSE WAY 5012 MANNER HOUSE WAY OPEN SPACE 25. FOR FLAG OR PIPESTEM LOTS, REFUSE COLLECTION, SNOW REMOVAL, AND ROAD MAINTENANCE ARE PROVIDED TO THE JUNCTION OF THE FLAG OR PIPESTEM AND RIGHT-OF-WAY AND NOT ONTO THE PIPESTEM LOT DRIVEWAY. CONSERVATION EASEMENT 3 LOT 18 5044 MANNER HOUSE WAY 5008 MANNER HOUSE WAY (REFORESTATION) F-20-010 5040 MANNER HOUSE WAY 5004 MANNER HOUSE WAY 26. DRIVEWAY APRON TO BE PER STANDARD DETAIL R-6.03, R-6.05 AND R-6.06. 27. A PRIVATE RANGE OF ADDRESS SIGN ASSEMBLY SHALL BE FABRICATED AND INSTALLED BY HOWARD COUNTY BUREAU OF E 1,350,100 HIGHWAYS AT THE DEVELOPERS/OWNERS EXPENSE. CONTACT HOWARD COUNTY TRAFFIC DIVISION AT 410-313-2430 FOR DETAILS M.I.H.U. NOTE PER F-20-010: PLEASE NOTE THAT LOTS PART OF OPEN SPACE 1-16 IN THIS SUBDIVISION ARE SUBJECT TO SECTION 28. STORM WATER MANAGEMENT FOR THESE LOTS WILL UTILIZE DRYWELLS (M-5) AS PREVIOUSLY APPROVED UNDER F-20-010. THESE FACILITIES ARE PRIVATELY OWNED AND MAINTAINED BY THE LOT OWNER. ALL STORMWATER MANAGEMENT IN OPEN SPACE LOTS SHALL BE PRIVATELY OWNED AND MAINTAINED BY THE HOA. HOWARD COUNTY WILL MAINTAIN THE PIPES AND THE HOA WILL 13.402(c)(e) OF THE HOWARD COUNTY SUBDIVISION AND F-20-010 OPEN SPACE LAND DEVELOPMENT REGULATIONS FOR THE MODERATE 4455 CENTENNIAL LANE GUERRA, GLENN & MARIA INCOME HOUSING UNITS (M.I.H.U.) FEE-IN-LIEU 29. A NOISE STUDY WAS APPROVED FOR THIS DEVELOPMENT UNDER F-20-010. F-20-010 REQUIREMENT THAT IS TO BE CALCULATED AND PAID TO 30. THE 65dBA NOISE LINE ESTABLISHED BY HOWARD COUNTY TO ALERT DEVELOPERS, BUILDERS AND FUTURE RESIDENTS THAT AREA BEYOND THIS THRESHOLD MAY EXCEED GENERALLY ACCEPTED NOISE LEVELS ESTABLISHED BY THE U.S. DEPT. OF HOUSING AND THE DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS AT THE TIME OF BUILDING PERMIT ISSUANCE BY THE 31. TRASH PAD MAINTENANCE AND LANDSCAPE SCREENING SHALL BE THE RESPONSIBILITY OF THE LOT OWNERS WHO ACCESS ONTO THE APPLICABLE SHARED DRIVEWAYS AND SHALL BE MADE PART OF THE USE—IN—COMMON MAINTENANCE AGREEMENTS. HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS WILL NOT BE RESPONSIBLE FOR UPKEEP. PERMIT APPLICANT. UNMITIGATED 65 BA LINE 32. THERE ARE NO HISTORIC HOUSES LOCATED ON-SITE PER F-20-010. 꿃 PER F-20-010 33. OPEN SPACE DEDICATION TO A HOMEOWNER'S ASSOCIATION SHALL BE ON THE PLAT IN ACCORDANCE WITH SECTION 16.121(C) OF UNMITIGATED 65 dBA LINE 34. A DESIGN MANUAL WAIVER HAS BEEN APPROVED ALLOWING A ROADWAY RADIUS LESS THAN 210-FEET AND IS SUBJECT TO THE EX. PUBLIC FOREST PER F-20-010 FOLLOWING DPW COMMENTS: - THE PAVEMENT WIDTH MUST BE WIDENED ALONG THE INSUFFICIENT CURVE. - NO PARKING CONSERVATION EASEMENT 2 SIGNS MUST BE PLACED ALONG THE INSUFFICIENT CURVE. 9.30.21 AND LIBERTY MODEL 35. PER F-20-010 NO DECKS, PATIOS, SHEDS, OR OTHER IMPERVIOUS STRUCTURES OR SURFACES SHALL EXTEND INTO THE DATE REVISION DRAINAGE EASEMENT AT THE REAR OF LOTS 9 THRU 17. ofessional Certification. I hereby certify that these document were prepared or approved by me, and that I am a duly licensed 36. PER SECTION 128.0.A.1.e. OF THE ZONING REGULATIONS, DECKS AND ENCLOSED PORCHES ARE PERMITTED IN THE SETBACKS. professional engineer under the laws of the State of Maryland BENCHMARK PLEASE NOTE THAT CENTENNIAL RESERVE DEVELOPMENT IS SUBJECT TO A 75' PROJECT BRL MEASURED FROM THE PROJECT License No. 22390, Expiration Date: 6-30-2021 BOUNDARY AND A 25' REAR BRL MEASURED FROM THE LOT LINES. PER SECTION 108.0.G.3.b. OF THE ZONING REGULATIONS ALL STRUCTURES, INCLUDING ROOM EXTENSIONS, SHED AND PLAYSETS CANNOT BE WITHIN THE 75' PROJECT BRL. ● ENGINEERS ▲ LAND SURVEYORS ▲ PLANNERS CENTENNIAL LANE ENGINEERING, INC 37. THE PROPOSED DWELLINGS WILL HAVE AN AUTOMATIC FIRE PROTECTION SPRINKLER SYSTEM. 8480 BALTIMORE NATIONAL PIKE ▲ SUITE 315 ▲ ELLICOTT CITY, MARYLAND 21043 (P) 410-465-6105 (F) 410-465-6644 WWW.BEI-CIVILENGINEERING.COM (1 molara 2/3/21 SINGLE FAMILY CENTENNIAL RESERVE, LLC 308 MAGOTHY ROAD SHEET INDEX BOX C LOTS 1-16 SEVERNA PARK, MD 21146 BRIDGEWATER 240.319.1735 (IN FEET) APPROVED: DEPARTMENT OF PLANNING AND ZONING SHEET TITLE BRIDGEWATER BOX B 1 inch = 50 ft. BRIDGEWATER LONGWOOD MARYMOUN^{*} TAX MAP: 30 GRID: 01 PARCEL: 04,05,174 & 449 BRIDGEWATER COVER SHEET MARYMOUN DEVELOPER: LONGWOOD ZONED: R-20 STRATFORD HALL ELECTION DISTRICT NO. 2ND HOWARD COUNTY, MARYLAND LIBERTY PERMIT INFORMATION CHART SITE LAYOUT PLAN STRATFORD HALL CHIEF, DIVISION OF LAND DEVELOPMENT & UBGETY TYLER LIBERTY SUBDIVISION NAME: GRADING, SEDIMENT & EROSION CONTROL PLAN LOT/PARCEL NVR HOMES A RESIDENTIAL SITE DEVELOPMENT PLAN SECTION/AREA: 9720 PATUXENT WOODS DRIVE FLEVATIO 55.00' 50.00' COVER SHEET CENTENNIAL RESERVE SEDIMENT CONTROL NOTES AND DETAILS 449 COLUMBIA, MD 21046 CHIEF, DEVELOPMENT ENGINEERING DIVISION A, STORMWATER MANAGEMENT DRAINAGE AREA MAP *SEE SHEET 2 FOR HOUSE MODELS GENERIC BOX STORMWATER MANAGEMENT NOTES, DETAILS AND BORING LOGS GRID No. ZONE TAX MAP | ELECTION BEI PROJECT NO. 2995 DATE: JANUARY 2021 DISTRICT 25693-25696 TBD SCALE : 1'=30' R-20 30 2 ND 6023.04 DESIGN: JCO | DRAFT: JCO SCALE: AS SHOWN of 6 J:\2995 Centennial Reserve\dwg\8000v2.dwg, 2/2/2021 8:36:12 AM





B-4 STANDARDS AND SPECIFICATION VEGETATIVE STABILIZATION sing vegetation as cover to protect exposed soil from erosion promote the establishment of vegetation on exposed soil. Conditions Where Practice Applie On all disturbed areas not stabilized by other methods. This specification is divided into sections on tabilization; soil preparation, soil amendments and topsoiling; seeding and mulching; temporary and permanent stabilization Effects on Water Quality and Quantity Stabilization practices are used to promote the establishment of vegetation on exposed soil. When soil is tabilized with vegetation, the soil is less likely to erode and more likely to allow infiltration of rainfall, anting vegetation in disturbed areas will have an effect on the water budget, especially on volumes and unoff, infiltration, evaporation, transpiration, percolation, and groundwater recharge. Over time, vegetation crease organic matter content and improve the water holding capacity of the soil and subsequent pla

eceiving waters. Plants will also help protect groundwater supplies by assimilating those substances within the root zone. Sediment control practices must remain in place during grading, seedbed preparation, seeding, mulching, Adequate Vegetative Establishme

eseedings within the . Adequate vegetative stabilization requires 95 percent groundcover If an area has less than 40 percent groundcover, restabilize following the original recommendations or lime, fertilizer, seedbed preparation, and seeding. If an area has between 40 and 94 percent groundcover, over-seed and fertilize using half of the rates originally specified.

4. Maintenance fertilizer rates for permanent seeding are shown in Table B.6

nspect seeded areas for vegetative establishment and make necessary repairs, replacements, and

B-4-1 STANDARDS AND SPECIFICATIONS INCREMENTAL STABILIZATION stablishment of vegetative cover on cut and fill slopes

provide timely vegetative cover on cut and fill slopes as work progress Conditions Where Practice Applies ny cut or fill slope greater than 15 feet in height. This practice also applies to stockpiles. 1. Excavate and stabilize cut slopes in increments not to exceed 15 feet in height. Prepare seedbe-

and apply seed and mulch on all cut slopes as the work progresses. 2. Construction sequence example (Refer to Figure B.1): a. Construct and stabilize all temporary swales or dikes that will be used to convey runof around the excavation b, Perform Phase 1 excavation, prepare seedbed, and stabilize. c. Perform Phase 2 excavation, prepare seedbed, and stabilize. Overseed Phase 1 areas as

d. Perform final phase excavation, prepare seedbed, and stabilize. Overseed previously seeded areas as necessary ote: Once excavation has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any nterruptions in the operation or completing the operation out of the seeding season will necessitate

3. Incremental Stabilization - Fill Slopes

1. Construct and stabilize fill slopes in increments not to exceed 15 feet in height. Prepare seedbed and apply seed and mulch on all slopes as the work progresses 2. Stabilize slopes immediately when the vertical height of a lift reaches 15 feet, or when the grading operation ceases as prescribed in the plans. 3. At the end of each day, install temporary water conveyance practice(s), as necessary, to intercept surface runoff and convey it down the slope in a non-erosive manner. 4. Construction sequence example (Refer to Figure B.2): a. Construct and stabilize all temporary swales or dikes that will be used to divert runoff around

the fill. Construct silt fence on low side of fill unless other methods shown on the plans b. At the end of each day, install temporary water conveyance practice(s), as necessary, to intercept surface runoff and convey it down the slope in a non-erosive manner. c. Place Phase 1 fill, prepare seedbed, and stabilize. d. Place Phase 2 fill, prepare seedbed, and stabilize

e. Place final phase fill, prepare seedbed, and stabilize. Overseed previously seeded areas as Note: Once the placement of fill has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any terruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization.

B-4-5 STANDARDS AND SPECIFICATIONS PERMANENT STABILIZATION stabilize disturbed soils with permanent vegetation

<u>Purpose</u>

o use long-lived perennial grasses and legumes to establish permanent ground cover on disturbed soils. Conditions Where Practice Applies
Exposed soils where ground cover is needed for 6 months or more.

Seed Mixtures General Use

a Select one or more of the species or mixtures listed in Table B.3 for the appropriate Plant Hardiness Zone (from Figure B.3) and based on the site condition or purpose found on Table B.2. Enter selected mixture(s), b Additional planting specifications for exceptional sites such as shorelines, stream banks, or dunes or for special purposes such as wildlife or aesthetic treatment may be found in USDA-NRCS Technical Field Office

c For sites having disturbed areas over 5 acres, use and show the rates recommended by the soil testing d For areas receiving low maintenance, apply urea form fertilizer (46-0-0) at 3 ½ pounds per 1000 square fee

Turfgrass Mixtures a. Areas where turfgrass may be desired include lawns, parks, playgrounds, and commercial sites which will receive a medium to high level of maintenance. b. Select one or more of the species or mixtures listed below based on the site conditions or purpose. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The summary i. Kentucky Bluegrass: Full sun Mixture: For use in areas that receive intensive management, Irrigation required in the areas of central Maryland and Eastern Shore. Recommended Certified Kentucky Bluegrass

Cultivars Seeding Rate: 1.5 to 2.0 pounds per 1000 square feet. Choose a minimum of three Kentucky Bluegrass Cultivars with each ranging from 10 to 35 percent of the total mixture by weight. ii. Kentucky Bluegrass/Perennial Rye: Full Sun Mixture: For use in full sun areas where rapid establishment is necessary and when turf will receive medium to intensive management. Certified Perennial Ryegrass Cultivars/Certified Kentucky Bluegrass Seeding Rate: 2 pounds mixture per 1000 square feet. Choose a minimum of three Kentucky Bluegrass Cultivars with each ranging from 10 to 35 percent of the total mixture by iii. Tall Fescue/Kentucky Bluegrass: Full Sun Mixture: For use in drought prone areas and/or for areas receiving

low to medium management in full sun to medium shade. Recommended mixture includes; Certified Tall Fescue Cultivars 95 to 100 percent. Certified Kentucky Bluegrass Cultivars 0 to 5 percent. Seeding Rate: 5 to pounds per 1000 square feet. One or more cultivars may be blended. by Kentucky Bluegrass/Fine Fescuer. Shade Mixture: For use in areas with shade in Bluegrass lawns. For establishment in high quality, intensively managed turf area. Mixture includes Certified Kentucky Bluegrass Cultivars 30 to 40 percent and Certified Fine Fescue and 60 to 70 percent. Seeding Rate: 1 ½ to 3 pounds per 1000 square feet. Notes: Select turfgrass varieties from those listed in the most current University of Maryland

Publication, Agronomy Memo #77, "Turfgrass Cultivar Recommendations for Maryland" Choose certified material, Certified material is the best guarantee of cultivar purity. The certification program of the Maryland Department of Agriculture, Turf and Seed Section, provides a reliable means of c. Ideal Times of Seeding for Turf Grass Mixtures

Western MD: March 15 to June 1, August 1 to October 1 (Hardiness Zones: 5b, 6a) Central MD:March 1 to May 15, August 15 to October 15 (Hardiness Zone: 6b) Southern MD, Eastern Shore: March 1 to May 15, August 15 to October 15 Hardiness Zones: 7a. 7b)

d. Till areas to receive seed by disking or other approved methods to a depth of 2 to 4 inches, level and rake the sedimentation, and changes to drainage patterns. areas to prepare a proper seedbed. Remove stones and debris over 1 ½ inches in diameter. The resulting seedbed must be in such condition that future mowing of grasses will pose no difficulty. e. If soil moisture is deficient, supply new seedings with adequate water for plant growth (1/2 to 1 inch 3 to 4 days depending on soil texture) until they are firmly established. This is not when seedings are made late in the planting season, in abnormally dry or hot seasons, Or

Sod: to provide quick cover on disturbed areas (2:1 grade or flatter) a. Class of turfgrass must be Maryland State Certified. Sod labels must be made available to the job foreman and b. Sod must be machine cut at a uniform soil thickness of % inch, plus or minus % inch, at the time of cutting Measurement for thickness must exclude top growth and thatch. Broken pads and torn or uneven ends will not be

c. Standard size sections of sod must be strong enough to support their own weight and retain their size and shape when suspended vertically with a firm grasp on the upper 10 percent of the section. d. Sod must not be harvested or transplanted when moisture content (excessively dry or wet) may adversely affect its e. Sod must be harvested, delivered, and installed within a period of 36 hours. Sod not transplanted within this period

must be approved by an agronomist or soil scientist prior to its installation. a. During periods of excessively high temperature or in areas having dry subsoil, lightly imgate the subsoil immediately prior to laying the sod. b. Lay the first row of sod in a straight line with subsequent rows placed parallel to it and tightly wedged against each other. Stagger lateral joints to promote more uniform growth and strength. Ensure that sod is not stretched or overlapped and that all joints are butted tight in order to prevent voids which would cause air drying of the roots. . Wherever possible, lay sod with the long edges parallel to the contour and with staggering joints. Roll and tamp,

peg or otherwise secure the sod to prevent slippage on slopes. Ensure solid contact exists between sod roots and d. Water the sod immediately following rolling and tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet. Complete the operations of laying, tamping and imgating for any piece of sod within eight hours.

a. In the absence of adequate rainfall, water daily during the first week or as often and sufficiently as necessary to maintain moist soil to a depth of 4 inches. Water sod during the heat of the day to prevent wilting. b. After the first week, sod watering is required as necessary to maintain adequate moisture content c. Do not mow until the sod is firmly rooted. No more than 1/3 of the grass leaf must be removed by the initial cutting or subsequent cuttings. Maintain a grass height of at least 3 inches unless otherwise specified

APPROVED: DEPARTMENT OF PLANNING AND ZONING

4/22/21 . DIVISION OF LAND DEVELOPMENT CHIEF, DEVELOPMENT ENGINEERING DIVISION A

<u>B-4-2 STANDARDS AND SPECIFICATIONS</u>
<u>FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS</u>
The process of preparing the soils to sustain adequate vegetative stabilization. To provide a suitable soil medium for vegetative growth. Conditions Where Practice Applies: Where vegetative stabilization is to be established

suitable means.

Temporary Stabilization Seedbed preparation consists of loosening soil to a depth of 3 to 5 inches by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows of rippers mounted on construction equipment. After the soil is loosened, it must not be be tracked with ridges running parallel to the contour of the slope. Apply fertilizer and lime as prescribed on the plans. Incorporate lime and fertilizer into the top 3 to 5 inches of soil by disking or other

2. Permanent Stabilization a. A soil test is required for any earth disturbance of 5 acres or more. The minimum soil i. Soil pH between 6.0 and 7.0. i. Soluble salts less than 500 parts per million (ppm) iii. Soil contains less than 40 percent clay but enough fine grained material (greater than 30 percent silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception: if lovegrass will be planted, then a sandy soil (less than 30 percent silt plus clay) would be acceptable.

iv. Soil contains 1.5 percent minimum organic matter by weight. v. Soil contains sufficient pore space to permit adequate root penetration Application of amendments or topsoil is required if on-site soils do not meet the above Graded areas must be maintained in a true and even grade as specified on the

approved plan, then scarified or otherwise loosened to a depth of 3 to 5 inches.

Apply soil amendments as specified on the approved plan or as indicated by the results of a soil test. e. Mix soil amendments into the top 3 to 5 inches of soil by disking or other suitable means. Rake lawn areas to smooth the surface, remove large objects like stones and branches, and ready the area for seed application. Loosen surface soil by dragging will a heavy chain or other equipment to roughen the surface where site conditions will not permit normal seedbed preparation. Track slopes 3:1 or flatter with tracked equipment leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. Leave the top 1 to 3 inches of soil loose and friable. Seedbed loosening may be

Topsoil is placed over prepared subsoil prior to establishment of permanent vegetation. The purpose is to provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil Topsoil salvaged from an existing site may be used provided it meets the standards as set

forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by Topsoiling is limited to areas having 2:1 or flatter slopes where: The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.

The soil material is so shallow that the rooting zone is not deep enough to suppor plants or furnish continuing supplies of moisture and plant nutrients. ne original soil to be vegetated contains material toxic to plant growth. The soil is so acidic that treatment with limestone is not feasible. Areas having slopes steeper than 2:1 require special consideration and design Topsoil Specifications: Soil to be used as topsoil must meet the following criteria Topsoil must be a loam, sandy loam, clay loam, silt loam, sandy clay loam, or loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and

approved by the appropriate approval authority. Topsoil must not be a mixture of trasting textured subsoils and must contain less than 5 percent by volume of cinder stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1½ inches in diameter.

Topsoil must be free of noxious plants or plant parts such as Bermuda grass, quaci grass, Johnson grass, nut sedge, poison by, thistle, or others as specified.

Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil

scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil. Erosion and sediment control practices must be maintained when applying topsoi Uniformly distribute topsoil in a 5 to 8 inch layer and lightly compact to a minim thickness of 4 inches. Spreading is to be performed in such a manner that sodding o seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations must be corrected in order to prevent the formation of depressions or water pockets.

Topsoil must not be placed if the topsoil or subsoil is in a frozen or muddy condition when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation C. Soil Amendments (Fertilizer and Lime Specifications) Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more. Soil analysis may be

performed by a recognized private or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses. Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers must all be delivered to the site fully labeled according to the applicable laws and must bear the name, trade name or trademark and warranty of the producer. 3. Lime materials must be ground limestone (hydrated or burnt lime may be substituted except

when hydroseeding) which contains at least 50 percent total oxides (calcium oxide plus nesium oxide). Limestone must be ground to such fineness that at least 50 percent will pass through a #100 mesh sieve and 98 to 100 percent will pass through a #20 mesh sieve. Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by disking or other suitable means. Where the subsoil is either highly acidic or composed of heavy clays, spread ground limestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of

B-4-4 STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABLIZATION

To stabilize disturbed soils with vegetation for up to 6 month To use fast growing vegetation that provides cover on disturbed soils <u>Conditions Where Practice Applies</u>
Exposed soils where ground cover is needed for a period of 6 months or less. For longer duration of time, permanent stabilization practices are required.

<u>Criteria</u>

Select one or more of the species or seed mixtures listed in Table B.1 for the appropriate Plant Hardiness Zone (from Figure B.3), and enter them in the Temporary Seeding Summary below along with application rates, seeding dates and seeding depths. If this Summary is not put on the plan and completed, then Table B.1 plus fertilizer and lime rates must be put on the plan. 2. For sites having soil tests performed, use and show the recommended rates by the testing agency. Soil tests are not required for Temporary Seeding. When stabilization is required outside of a seeding season, apply seed and mulch or straw mulch

alone as prescribed in Section B-4-3.A.1.b and maintain until the next seeding season. H-5 STANDARDS AND SPECIFICATIONS FOR DUST CONTROL <u>Definition</u>

Controlling the suspension of dust particles from construction activities.

<u>Purpose</u>

To prevent blowing and movement of dust from exposed soil surfaces to reduce on and off-site damage including Conditions Where Practice Applies

Areas subject to dust blowing and movement where on and off-site damage is likely without treatment

Specifications

<u>Mulches:</u> See Section B-4-2 Soil Preparation, Topsoiling, and Soil Amendments, Section B-4-3
Seeding and Mulching, and Section B-4-4 Temporary Stabilization. Mulch must be anchored to Vegetative Cover: See Section B-4-4 Temporary Stabilization. ill to roughen surface and bring clods to the surface. Begin plowing on windward side of site. Chisel-type plows spaced about 12 inches apart, spring-toothed harrows, and

similar plows are examples of equipment that may produce the desired effect.

Inigation: Sprinkle site with water until the surface is moist. Repeat as needed. The site must not be irrigated to the point that runoff occurs.

Barriers: Solid board fences, silt fences, snow fences, burlap fences, straw bales, and similar

can be used to control air currents and soil blowing. Chemical Treatment: Use of chemical treatment requires approval by the appropriate plan B-4-8 STANDARDS AND SPECIFICATIONS

FOR STOCKPILE AREA Definition A mound or pile of soil protected by appropriately designed erosion and sediment control measures. To provide a designated location for the temporary storage of soil that controls the potential for erosion Conditions Where Practice Applies Stockpile areas are utilized when it is necessary to salvage and store soil for later use.

1. The stockpile location and all related sediment control practices must be clearly indicated on the erosion and sediment control plan. 2 The footprint of the stocknile must be sized to accommodate the anticipated volume of material and based on a side slope ratio no steeper than 2:1. Benching must be provided in accordance with Section B-3 Land Grading.

3. Runoff from the stockpile area must drain to a suitable sediment control practice.

 A. Access the stockpile area from the upgrade side.
 Clear water runoff into the stockpile area must be minimized by use of a diversion device such as an earth dike, temporary swale or diversion fence. Provisions must be made for discharging concentrated flow in a non-erosive manner 6. Where runoff concentrates along the toe of the stockpile fill, an appropriate erosion/sediment

control practice must be used to intercept the discharge.

7. Stockpiles must be stabilized in accordance with the 3/7 day stabilization requirement as well as Standard B-4-1 Incremental Stabilization and Standard B-4-4 Temporary Stabilization 8. If the stockpile is located on an impervious surface, a liner should be provided below the stockpile to facilitate cleanup. Stockpiles containing contaminated material must be covered with impermeable sheeting.

Maintenance
The stockpile area must continuously meet the requirements for Adequate Vegetative Establishment in 2:1 ratio. The stockpile area must be kept free of erosion. If the vertical height of a stockpile exceeds 20 feet for 2:1 slopes, 30 feet for 3:1 slopes, or 40 feet for 4:1 slopes, benching must be provided in accordance with Section B-3 Land Grading

ENGINEER'S CERTIFICATE I HEREBY CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

BY THE HOWARD SOIL CONSERVATION DISTRICT.'

DEVELOPER'S CERTIFICATE LAWE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION

DATE

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT 02/26/21

B-4-3 STANDARDS AND SPECIFICATIONS

Definition To protect disturbed soils from erosion during and at the end of construction Conditions Where Practice Applies To the surface of all perimeter controls, slopes, and any disturbed area not under active grading

SEEDING AND MULCHING

a. All seed must meet the requirements of the Maryland State Seed Law. All seed must be subject to re-testing by a recognized seed laboratory. All seed used must have been tested within the 6 months immediately preceding the date of sowing such material or any project. Refer to Table B.4 regarding the quality of seed. Seed tags must be available upon request to the inspector to verify type of seed and seeding rate. b. Mulch alone may be applied between the fall and spring seeding dates only if the ground it frozen. The appropriate seeding mixture must be applied when the ground thaws c. Inoculants: The inoculant for treating legume seed in the seed mixtures must be a pure

culture of nitrogen fixing bacteria prepared specifically for the species. Inoculants mus not be used later than the date indicated on the container. Add fresh inoculants as firected on the package. Use four times the recommended rate when hydroseeding. Note: It is very important to keep inoculant as cool as possible until used. Temperatures d. Sod or seed must not be placed on soil which has been treated with soil sterilants or

permit dissipation of phyto-toxic materials. a. Dry Seeding: This includes use of conventional drop or broadcast spreaders i. Incorporate seed into the subsoil at the rates prescribed on Temporary Seeding Table B.1, Permanent Seeding Table B.3, or site-specific seeding summaries. ii. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction. Roll the seeded area with a weighted roller to provide good

chemicals used for weed control until sufficient time has elapsed (14 days min.) to

b. Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil. i. Cultipacking seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seedbed must be firm after ii. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction c. Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and i. If fertilizer is being applied at the time of seeding, the application rates should

not exceed the following: nitrogen, 100 pounds per acre total of soluble nitrogen; P2O5 (phosphorous), 200 pounds per acre; K2O (potassium), ii. Lime: Use only ground agricultural limestone (up to 3 tons per acre may be applied by hydroseeding). Normally, not more than 2 tons are applied by hydroseeding at any one time. Do not use burnt or hydrated lime when

iii Mix seed and fertilizer on site and seed immediately and without interruption iv. When hydroseeding do not incorporate seed into the soil. 1. Mulch Materials (in order of preference) a. Straw consisting of thoroughly threshed wheat, rye, oat, or barley and reasonably bright in color. Straw is to be free of noxious weed seeds as specified in the

laryland Seed Law and not musty, moldy, caked, decayed, or excessively dusty Note: Use only sterile straw mulch in areas where one species of grass is desired. b. Wood Cellulose Fiber Mulch (WCFM) consisting of specially prepared wood cellulose processed into a uniform fibrous physical state. i. WCFM is to be dyed green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformly spread slurry.

ii. WCFM, including dye, must contain no germination or growth inhibiting iii. WCFM materials are to be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed fertilizer and other additives to form a homogeneous slurry. The mulch material must form a blotter-like ground cover, on application having moisture absorption and percolation properties and must cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings. iv. WCFM material must not contain elements or compounds a concentration levels that will be phyto-toxic. v. WCFM must conform to the following physical requirements: fiber length

of approximately 10 millimeters, diameter approximately 1 millimeter pH range of 4.0 to 8.5, ash content of 1.6 percent maximum and b. When straw mulch is used, spread it over all seeded areas at the rate of 2 tons per acre to a uniform loose depth of 1 to 2 inches. Apply mulch to achieve a uniform distribution and depth

so that the soil surface is not exposed. When using a mulch anchoring tool, increase the application rate to 2.5 tons per acre. c. Wood cellulose fiber used as mulch must be applied at a net dry weight of 1500 pounds per acre. Mix the wood cellulose fiber with water to attain a mixture with a maximum of 50 pounds a. Perform mulch anchoring immediately following application of mulch to minimize loss by wind

or water. This may be done by one of the following methods (listed by preference), depending i. A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of 2 inches. This practice is most effective on large areas, but is limited to flatter slopes where equipment can operate safel If used on sloping land, this practice should follow the contour. ii. Wood cellulose fiber may be used for anchoring straw. Apply the fiber binder at a net dry weight of 750 pounds per acre. Mix the wood cellulose fiber with water at a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water. iii. Synthetic binders such as Acrylic DLR (Agro-Tack), DCA-70, Petroset, Terra Tax II Terra Tack AR or other approved equal may be used. Follow application rates as specified by the manufacturer. Application of liquid binders needs to be heavier at he edges where wind catches mulch, such as in valleys and on crests of banks.

Use of asphalt binders is strictly prohibited. iv. Lightweight plastic netting may be stapled over the mulch according to manufacturer recommendations. Netting is usually available in rolls 4 to 15 feet wide and 300 to

> SEQUENCE OF CONSTRUCTION NOTIFY SEDIMENT CONTROL DIVISION 48 HOUR PRIOR TO START OF CONSTRUCTION

1.) OBTAIN GRADING PERMIT. DAY 1 2.) VERIFY REMAINING SEDIMENT CONTROLS FOR F-20-010 AND/OF INSTALL SEDIMENT CONTROLS THAT ARE INCLUDED UNDER THIS 3.) EXCAVATE FOR FOUNDATION, ROUGH GRADE AND STABILIZE IN DAY 7-10* ACCORDANCE WITH TEMPORARY SEEDBED NOTES.

4.) CONSTRUCT HOUSE BACKFILL AND CONSTRUCT DRIVEWAY. DAY 11-80*

5.) FINAL GRADE AND STABILIZE IN ACCORDANCE WITH PERMANENT SEEDBED DAY 81-86 NOTES AND CONSTRUCT ON-LOT STORMWATER MANAGEMENT.

6.) WITH THE APPROVAL OF THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROL DEVICES AND STABILIZE ANY REMAINING DISTURBED AREAS. * - INDICATES SINGLE HOUSE CONSTRUCTION.

EROSION CONTROL MATTING SHALL BE PLACED IN SWALES WHERE DEEMED NECESSARY UNTIL VEGETATION IS ESTABLISHED OR SOLID SOD SHOULD Protect all existing sum features from sediment in step #2

> Table B.1: Temporary Seeding for Site Stabilization Recommended Seeding Dates by Plant Hardiness Zone 3/ Seeding Rate 1/ lb/ac lb/1000 ft2 (inches) 5b and 6a 7a and 7b Annual Ryegrass (Lolium pereni Mar 1 to May 15; Aug 1 to Oct 3 Multiflorum Barley (Hordeum vulgare) 96 2.2 1.0 Mar 1 to May 15: Aug 1 to Oct 3 Oats (Avena sativa) 72 1.7 1.0 Mar 1 to May 15: Aug 1 to Oct 3 Mar 1 to May 15; Aug 1 to Oct 31 heat (Triticum aestivum 120 2.8 1.0 Cereal Rye (Secale cereale) 112 2.8 1.0 Mar 1 to May 15; Aug 1 to Nov 15 Warm-Season Grasses oxtail Millet (Serataria italica) May 16 to Jul 31 May 16 to Jul 31

Seeding rates for the warm season grasses are in pounds of Pure Live Seed (PLS). Actual planting rates shall be adjusted to reflect percent seed germination and purity, as tested. Adjustments are usually not needed for the cool-season grasses. Seeding rates listed above are for temporary seedings, when planted alone. When planted as a nurse crop with permanent seed mixes, use 1/3 of the seeding rate listed above for barley, oats, and wheat. For smaller-seeded grasses (annual ryegrass, pearl millet, foxtall millet), do not exceed more than 5% (by weight) of the overall permanent seeding mix. Cereal rye generally should not be used as a nurse crop, unless planting will occur very late fall beyond the seeding dates for other temporary seedings. Cereal rye has allelopathic properties that inhibit the germination and growth of other plants. If it must be used as a nuise crop, seed at 1/3 of the rate listed above.

Oats are the recommended nurse crop for warm-season grasses. 2/ For sandy soils, plant seeds at twice the depth listed above.

The planting dates listed are averages for each Zone and may require adjustment to reflect local conditions, especially near the boundaries of the zone. **Permanent Seeding Summary**

	Hardiness Zone (from Figure B.3): Seed Misture (from Table B.3):		6b Tall Fescue/Kentucky Bluegrass		Fertilizer Rate (10-20-20)			Lime Ra
No.	Species	Application Rate (lb/ac.)	Seeding Dates	Seeding Depths	N	P205	K20	
9	Fescue, Tall	60	Mar 1 to May 15 Aug 1 to Oct 15	1/4 - 1/2 in	45 pounds per acre (1.0 lb/ 100 sf)	90 lb/ac (2 lb/ 1000 sf)	90 lb/ac 2 lb/ 1000 sf)	2 tons/a (90lb/ 1000 sf
	Bluegrass, Kentucky	40	Mar 1 to May 15 Aug 1 to Oct 15	1/4 - 1/2 in				
				1/4 - 1/2 in				

DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE MATTING CHANNEL APPLICATION | PSSMC - 0.32 lb/ft² - EXISTING PAVEMEN NONWOVEN GEOTEXTILE — -PIPE (SEE NOTE 6 PROFILE USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS. USE PERMANENT SOIL STABILIZATION MATTING MADE OF OPEN WEAVE SYNTHETIC, NON-DEGRADABLE FIBER OR ELEMENTS OF UNIFORM THICKNESS AND DISTRIBUTION THROUGHOUT. CHEMICALS USED IN THE MAT MUBE NON-LEACHING AND NON-TOXIC TO VECETATION AND SEC GERMINATION AND NON-HAURIOUS TO THE SKIN, IF PRESENT, NETTING MUST BE EXTRUDED PLASTIC WITH A MAXIMUM MESH OPENING OF 2x2 INCHES AND SUFFICIENTLY BONDED OR SEWN ON 2 INCH CENTERS ALONG LONGTUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL PLAN VIEW SECURE MATTING USING STEEL STAPLES OR WOOD STAKES. STAPLES MUST BE "U" OR "T" SHAPED STEE WIRE HAVING A MINIMUM GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES MUST CONSTRUCTION SPECIFICATIONS AYERAGE
1 TO 1 % INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. "T" SHAPED STAPLES MUST HAVE A
MINIMUM 8 INCH MAIN LEG, A MINIMUM 1 INCH SECONDARY LEG, AND MINIMUM 4 INCH HEAD. WOOD STAKES
MUST BE ROUGH-SAWN HARDWOOD, 12 TO 24 INCHES IN LENGTH, 1x3 INCH IN CROSS SECTION, AND WEDGE
SHAPE AT THE BOTTOM.

ETAIL B-4-6-C PERMANENT SOIL STABILIZATION

UNROLL MATTING IN DIRECTION OF WATER FLOW, CENTERING THE FIRST ROLL ON THE CHANNEL CENTER LI WORK FROM CENTER OF CHANNEL OUTWARD WHEN PLACING ROLLS, LAY MATTING SMOOTHLY AND FIRMLY UPON THE SEEDED SURFACE. AVOID STRETCHING THE MATTING.

OVERLAP OR ABUT EDGES OF MATTING ROLLS PER MANUFACTURER RECOMMENDATIONS, OVERLAP ROLL ENI BY 6 INCHES (MINIMUM), WITH THE UPSTREAM MAT OVERLAPPING ON TOP OF THE NEXT DOWNSTREAM MAT

KEY IN THE TOP OF SLOPE END OF MAT 6 INCHES (MINIMUM) BY DIGGING A TRENCH, PLACING THE MATTIN ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END IN THE KEY.

STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.

ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT
ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

JOINING TWO ADJACENT SILT

FENCE SECTIONS (TOP VIEW)

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL FROSION AND SEDIMENT CONTROL

2011

2011 MARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

CONSTRUCTION SPECIFICATIONS

PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (*30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS. PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 6:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN, WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE. AS SPECIFIED IN SECTION H-1 MATERIALS. PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONC (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE

MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MA OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTABLE BERM, AND

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

2011

PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS. MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL MARYLAND DEPARTMENT OF ENVIRONMENT

U.S. DEPARTMENT OF AGRICULTURE

WATER MANAGEMENT ADMINISTRATION

NATURAL RESOURCES CONSERVATION SERVICE

DETAIL E-3

2% IN DIAMETER GALVANIZED STEEL OR ALUMINUM POSTS

CONSTRUCTION SPECIFICATIONS

CHAIN LINK FENCING -

CROSS SECTION

INSTALL 2% INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.

FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2% INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS.

FASTEN WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.

EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE.

WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.

WOVEN SLIT FILM GEOTEXTILE-

FLOW

SUPER SILT

GALVANIZED CHAIN LINK FENCE WITH WOVEN SLIT FILM GEOTEXTILE

FENCE

10 FT MAX.

----SSF----

SILT FENCE DETAIL E-1 SILT FENCE DETAIL E-1 ├──SF──1 ----SF----CENTER TO CENTER CONSTRUCTION SPECIFICATIONS USE WOOD POSTS 13/4 \pm 1/6 inch (Minimum) square cut of sound quality hardwood. As an alternative to wooden post use standard "t" or "u" section steel posts weighin not less than 1 pound per linear foot. USE 36 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART. 16 IN MIN. HEIGHT OF WOVEN SLIT FILM GEOTEXTILE USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS AND FASTEN GEOTEXTILE SECURELY TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION. PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS. **ELEVATION** EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND. BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF FABRIC. WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL. EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN, IF UNDERMINING OCCURS, REINSTALL FENCE. EMBED GEOTEXTILE/ MIN. OF 8 IN VERTICALLY INTO THE GROUND. BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF GEOTEXTILE. CROSS SECTION STEP 1 STEP 2 STAPI F STAPLE -STAPLE STEP 3 STAPLE-

STANDARD SEDIMENT CONTROL NOTES

1. A PRE-CONSTRUCTION MEETING MUST OCCUR WITH THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS, CONSTRUCTION INSPECTION DIVISION (CID), 410-313-1855 AFTER THE FUTURE LOD AND PROTECTED AREAS ARE MARKED CLEARLY IN THE FIELD. A MINIMUM OF 48 HOUR NOTICE TO CID MUST BE GIVEN AT THE FOLLOWING STAGES:

A. PRIOR TO THE START OF EARTH DISTURBANCE, 3. UPON COMPLETION OF THE INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING, C. PRIOR TO THE START OF ANOTHER PHASE OF CONSTRUCTION OR OPENING OF ANOTHER GRADING

D. PRIOR TO THE REMOVAL OR MODIFICATION OF SEDIMENT CONTROL PRACTICES. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE. OTHER RELATED STATE AND FEDERAL PERMITS SHALL BE REFERENCED, TO ENSURE COORDINATION AND TO AVOID CONFLICTS WITH THIS PLAN. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND REVISIONS THERETO 3. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION

IS REQUIRED WITHIN THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS,

DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1

VERTICAL (3:1); AND SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED AREAS ON THE PROJECT SITE EXCEPT FOR THOSE AREAS UNDER ACTIVE GRADING. 4. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR TOPSOIL (SEC. B-4-2). PERMANENT SEEDING (SEC. B-4-5), TEMPORARY SEEDING (SEC. B-4-4) AND MULCHING (SEC. B-4-3). TEMPORARY STABILIZATION WITH MULCH ALONG CAN ONLY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES IF THE GROUND IS FROZEN INCREMENTAL STABILIZATION (SEC. B-4-1) SPECIFICATIONS SHALL BE ENFORCED IN AREAS WITH >15 OF CUT AND/OR FILL. STOCKPILES (SEC. B-4-8) IN EXCESS OF 20 FT. MUST BE BENCHED WITH STABLE OUTLET. ALL CONCENTRATED FLOW, STEEP SLOPE, AND HIGHLY ERODIBLE AREAS SHALL

RECEIVE SOIL STABILIZATION MATTING (SEC. B-4-6). 5. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE, AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE CID. TOTAL AREA OF SITE: AREA DISTURBED: *CUT/FILL NUMBERS ARE FOR SEDIMENT AREA TO BE ROOFED OR PAVED:

CONTROL PURPOSES AREA TO BE VEGETATIVELY STABILIZED: ONLY. CONTRACTOR TO VERIFY OFFSITE WASTE/BORROW AREA LOCATION: . ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE 3. ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE CID. THE SITE AND ALL CONTROLS SHALL BE INSPECTED BY THE CONTRACTOR WEEKLY: AND THE NEXT DAY AFTER EACH RAIN EVENT. A WRITTEN REPORT BY THE CONTRACTOR, MADE AVAILABLE UPON REQUEST, IS

 INSPECTION DATE · INSPECTION TYPE (ROUTINE, PRE-STORM EVENT, DURING RAIN EVENT) NAME AND TITLE OF INSPECTOR

PART OF EVERY INSPECTION AND SHOULD INCLUDE:

· WEATHER INFORMATION (CURRENT CONDITIONS AS WELL AS TIME AND AMOUNT OF LAST RECORDED PRECIPITATION) BRIEF DESCRIPTION OF PROJECT'S STATUS (E.G., PERCENT COMPLETE) AND/OR CURRENT ACTIVITIES EVIDENCE OF SEDIMENT DISCHARGES IDENTIFICATION OF PLAN DEFICIENCIES

IDENTIFICATION OF SEDIMENT CONTROLS THAT REQUIRE MAINTENANCE IDENTIFICATION OF MISSING OR IMPROPERLY INSTALLED SEDIMENT CONTROLS COMPLIANCE STATUS REGARDING THE SEQUENCE OF CONSTRUCTION AND STABILIZATION REQUIREMENTS PHOTOGRAPHS MONITORING/SAMPLING

· MAINTENANCE AND/OR CORRECTIVE ACTION PERFORMED · OTHER INSPECTION ITEMS AS REQUIRED BY THE GENERAL PERMIT FOR STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES (NPDES, MDE).

9. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN AND SHALL BE BACK-FILLED AND STABILIZED BY THE END OF EACH WORKDAY, WHICHEVER IS SHORTER.

10. ANY MAJOR CHANGES OR REVISIONS TO THE PLAN OR SEQUENCE OF CONSTRUCTION MUST BE REVIEWED AND APPROVED BY THE HSCD PRIOR TO PROCEEDING WITH CONSTRUCTION. MINOR REVISIONS MAY ALLOWED BY THE CID PER THE LIST OF HSCD-APPROVED FIELD CHANGES. 11. DISTURBANCE SHALL NOT OCCUR OUTSIDE THE L.O.D. A PROJECT IS TO BE SEQUENCED SO THA GRADING ACTIVITIES BEGIN ON ONE GRADING UNIT (MAXIMUM ACREAGE OF 20 AC. PER GRADING UNIT) AT A TIME. WORK MAY PROCEED TO A SUBSEQUENT GRADING UNIT WHEN AT LEAST 50 PERCENT OF THE DISTURBED AREA IN THE PRECEDING GRADING UNIT HAS BEEN STABILIZED AND APPROVED BY THE CID. UNLESS OTHERWISE SPECIFIED AND APPROVED BY THE HSCD. NO MORE THAN 30 ACRES CUMULATIVELY MAY BE DISTURBED AT A GIVEN TIME. 12. WASH WATER FROM ANY EQUIPMENT, VEHICLES, WHEELS, PAVEMENT, AND OTHER SOURCES MUST BE

TREATED IN A SEDIMENT BASIN OR OTHER APPROVED WASHOUT STRUCTURE: 13. TOPSOIL SHALL BE STOCKPILED AND PRESERVED ON-SITE FOR REDISTRIBUTION ONTO FINAL GRADE 14. ALL SILT FENCE AND SUPER SILT FENCE SHALL BE PLACED ON-THE-CONTOUR, AND BE IMBRICATED AT 25' MINIMUM INTERVALS, WITH LOWER ENDS CURLED UPHILL BY 2' IN ELEVATION. (INCLUSIVE):

· USE I AND IP MARCH 1 - JUNE 15 • USE III AND IIIP OCTOBER 1 - APRIL 30 LISE IV MARCH 1 - MAY 31

16. A COPY OF THIS PLAN, THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND ASSOCIATED PERMITS SHALL BE ON-SITE AND AVAILABLE WHEN THE SITE IS ACTIVE.

REVISION DATE BENCHMARK

● ENGINEERS ▲ LAND SURVEYORS ▲ PLANNERS ENGINEERING, INC. 8480 BALTIMORE NATIONAL PIKE & SUITE 315 & ELLICOTT CITY, MARYLAND 21043 (P) 410-465-6105 (F) 410-465-6644

OWNER:

WWW.BEI-CIVILENGINEERING.COM

were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland License No. 22390 Expiration Date: 6-30-2021

CENTENNIAL RESERVE SINGLE FAMILY CENTENNIAL RESERVE. LLC 308 MAGOTHY ROAD LOTS 1-16 SEVERNA PARK, MD 21146 240.319.1735 TAX MAP: 30 GRID: 01 PARCEL: 04,05,174 & 449 DEVELOPER: ZONED: R-20 ELECTION DISTRICT NO. 2ND HOWARD COUNTY, MARYLAND A RESIDENTIAL SITE DEVELOPMENT PLAN NVR HOMES 9720 PATUXENT WOODS DRIVE SEDIMENT CONTROL & SWM COLUMBIA, MD 21046 410.379.5956 NOTES AND DETAILS DATE: JANUARY 2021 BEI PROJECT NO. 2995 DESIGN: JCO | DRAFT: JCO SCALE: AS SHOWN SHEET 4 of 6

SDP-20-047

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