

SHEET INDEX	
NO.	DESCRIPTION
1	TITLE SHEET
2	SITE DEVELOPMENT PLAN (GRADING AND SEDIMENT CONTROL)
3	DIMENSION PLAN
4	SEDIMENT CONTROL NOTES AND DETAILS
5	PRIVATE ROAD PROFILES
6	SOILS AND STORMDRAIN PROFILES
7	STORMDRAIN DRAINAGE AREA MAP
8	LANDSCAPE PLAN

GENERAL NOTES:

- THIS PLAN IS SUBJECT TO COUNTY COUNCIL BILL 45-2003, THE AMENDED 5th EDITION SUBDIVISION REGULATIONS, EFFECTIVE OCTOBER 2, 2003.
- THE SUBJECT PROPERTY IS ZONED CAC-CLU PER THE 2/2/04 COMPREHENSIVE ZONING PLAN AND THE "COMP LITE" ZONING AMENDMENTS EFFECTIVE 7/28/06.
- STORM DRAIN REPORT AND STORMWATER MANAGEMENT REPORTS PROVIDED BY MILDBERG, BOENDER & ASSOC., INC. APPROVED AS PART OF THIS PLAN SUBMISSION AND F-08-013 (12/22/2008) RESPECTIVELY.
- NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE LIMITS OF WETLANDS, STREAM(S) OR THEIR REQUIRED BUFFERS, FLOOD PLAIN AND FOREST CONSERVATION EASEMENT AREAS.
- TOPOGRAPHIC INFORMATION IS BASED ON AERIAL RUN TOPOGRAPHY PERFORMED BY WINGS TOPOGRAPHY, INC. ON OR ABOUT APRIL 2006, COMPLEMENTED WITH FIELD RUN TOPOGRAPHY PERFORMED BY MILDBERG, BOENDER & ASSOC., INC. ON OR ABOUT JUNE 2007 AND BENCHMARK ENGINEERING ON OR ABOUT SEPTEMBER 2013. EXISTING CONTOURS SHOWN PER APPROVED GP-08-24, F-08-013, SDP-08-046, SDP-08-078.
- COORDINATES BASED ON NAD83 MARYLAND COORDINATES SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 3700, 4341, AND 438C.
STA. 3700 N 563237.2140 E 1372353.6900 EL 290.85
STA. 438C N 549292.0910 E 1374650.6000 EL 214.87
- BOUNDARY INFORMATION IS BASED ON A FIELD RUN MONUMENTED BOUNDARY SURVEY PERFORMED ON OR ABOUT FEBRUARY 2002 BY MILDBERG, BOENDER & ASSOCIATES, INC.
- THE NOISE STUDY WAS PREPARED BY MILDBERG, BOENDER & ASSOCIATES ON OR ABOUT FEBRUARY 2008.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL.
- THE FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING SHALL BE POSTED AS PART OF THE GRADING PERMIT IN THE AMOUNT OF \$55,950.00 FOR 144 SHADE TREES & 85 EVERGREEN/ORNAMENTAL TREES AND IN THE AMOUNT OF \$9,300.00 FOR 31 PRIVATE TREE TREES, FOR A TOTAL AMOUNT OF \$65,250.00.
- BASED ON AVAILABLE COUNTY DATA, NO HISTORIC STRUCTURES OR BURIAL GROUNDS EXIST ON SITE.
- SOILS DATA BASED ON HOWARD COUNTY SOIL SURVEY DATED 1988, SHEET 20.
- PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT, PUBLIC WATER AND SEWER WILL BE UTILIZED. PUBLIC WATER AND SEWER CONTRACT NO. 14-4564-1, 14-4564-2, 14-470-1 AND 14-470-2.
- THERE ARE NO STRUCTURES WITHIN THE LOD OF PHASE 6 TO BE REMOVED.
- NO STEEP SLOPES EXIST ON SITE.
- THE FOREST CONSERVATION REQUIREMENTS WERE SATISFIED UNDER SDP-08-046 AND F-09-007.
- STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SHALL BE IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL (VOLUME II (2006), SECTION 5.5.A.) AND AS MODIFIED BY "GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS (JUNE 1993)". A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.
- TRAFFIC CONTROL DEVICES:
 - THE R1-1 ("STOP") SIGN AND THE STREET NAME SIGN(S) ASSEMBLY FRO THIS DEVELOPMENT MUST BE INSTALLED BEFORE THE BASE PAVING IS COMPLETED.
 - THE TRAFFIC CONTROL DEVICES LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE AND MUST BE FIELD APPROVED BY HOWARD COUNTY TRAFFIC DIVISION (410-313-2430) PRIOR TO THE INSTALLATION OF ANY OF THE TRAFFIC CONTROL DEVICES.
 - ALL TRAFFIC CONTROL DEVICES AND THEIR LOCATIONS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)".
 - ALL SIGN POSTS USED FOR TRAFFIC CONTROL, SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL PERFORATED (QUICK PUNCH) SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL PERFORATED SQUARE TUBE SLEEVE (12 GAUGE) - 3" LONG. THE ANCHOR SHALL NOT EXTEND MORE THAN TWO "QUICK PUNCH" HOLES ABOVE GROUND LEVEL. A GALVANIZED STEEL POLL CAP SHALL BE MOUNTED ON TOP OF EACH POST.

- 19-06-114 WAS APPROVED ON AUGUST 28, 2006 WAIVING SECTION 16.116(i) OF THE SUBDIVISION REGULATIONS. THE APPROVAL WAS SUBJECT TO THE FOLLOWING CONDITIONS:
 - THE PROPOSED ROAD AND ACCESS IMPROVEMENTS WILL REQUIRE AN ACCESS PERMIT ISSUED BY THE STATE ENGINEERING ACCESS PERMIT DIVISION. THE DEVELOPER MUST MEET ALL TERMS AND CONDITIONS OF THE ACCESS PERMIT.
 - 19-07-052 WAS APPROVED ON MAY 8, 2007 WAIVING SECTION 16.116(i)(1) AND 16.116(i)(2)(iv) OF THE SUBDIVISION REGULATIONS. THE APPROVAL IS SUBJECT TO THE FOLLOWING:
 - UNDERGROUND SIGNS IN THE CURRENT LOCATION OF THE EXISTING SIGN WILL BE INSTALLED AS NECESSARY. THE UNDERGROUND FACILITY WILL BE DESIGNED AND SUBMITTED FOR REVIEW AT THE PRELIMINARY, FINAL AND SITE DEVELOPMENT PLAN STAGES.
 - LIMITS OF DISTURBANCE WILL BE THE MINIMUM NECESSARY TO INSTALL THE IMPROVEMENTS AND SHALL NOT EXCEED THE DISTURBANCE SHOWN ON THE WAIVER PETITION EXHIBIT SUBMITTED ON 4/4/07. DISTURBANCE IS LIMITED AS FOLLOWS: AREA 1 - 1800 SQ.FT. OF WETLAND DISTURBANCE AND 7500 SQ.FT. OF WETLAND BUFFER DISTURBANCE. AREA 2 - 18750 SQ.FT. OF WETLAND DISTURBANCE AND 19500 SQ.FT. OF WETLAND BUFFER DISTURBANCE. AREA 3 - 30000 SQ.FT. OF WETLAND DISTURBANCE, 32520 SQ.FT. OF WETLAND BUFFER DISTURBANCE AND 62250 SQ.FT. OF STREAM BUFFER DISTURBANCE.
 - ALL NECESSARY STATE AND LOCAL PERMITS WILL BE OBTAINED PRIOR TO ANY GRADING AND/OR CONSTRUCTION ACTIVITY.
 - SUPER SET FENCING SHALL BE INSTALLED ALONG THE ENTIRE LOD FOR THE SIDEWALK IMPROVEMENTS FOR AREA 1 PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION OR GRADING ACTIVITY AND SHALL REMAIN IN PLACE FOR THE DURATION OF CONSTRUCTION.
 - THE GREENSPACE/OPEN AREA IN THE NORTHEASTERN PORTION OF THE SITE SHALL BE INCREASED BY A MINIMUM OF 20150 SQUARE FEET (THE AREA OF WETLAND AND WETLAND BUFFER DISTURBANCE ALONG U.S. ROUTE 1 THAT IS ABOVE AND BEYOND THE NECESSARY DISTURBANCE FOR ROUTE 1 ROAD IMPROVEMENTS), BUILDING #43, ITS ACCESS AND OTHER IMPROVEMENT AREAS INCLUDING SIDEWALKS SHALL BE RELOCATED AND/OR REDESIGNED TO ALLOW FOR THIS ADDITIONAL GREENSPACE. THIS AREA SHALL BE USED TO ADDRESS A PORTION OF THE SITES FOREST CONSERVATION OBLIGATION.

- 21-07-129 WAS APPROVED ON JULY 24, 2007, WAIVING SECTION 16.144(i) REQUIRING PRELIMINARY PLAN SUBMISSION. THE APPROVAL IS SUBJECT TO THE FOLLOWING:
 - THE ENTIRE PUBLIC ROAD SYSTEM MUST BE DESIGNED WITH THE NEXT SUBMITTED FINAL PLAN AND PLAN FOR THE PROPERTY.
 - STORMWATER MANAGEMENT MUST BE DESIGNED FOR ALL PUBLIC IMPROVEMENTS WITH THE NEXT SUBMITTED FINAL PLAN AND PLAN FOR THE PROPERTY.
 - PRELIMINARY WATER AND SEWER PLANS MUST BE SUBMITTED PRIOR TO OR CONCURRENTLY WITH THE NEXT SUBMITTED FINAL PLAN AND PLAN FOR THE PROPERTY.
22. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSIA STANDARDS AND SPECIFICATIONS AS APPLICABLE.
23. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1800 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF THE EXCAVATION WORK BEING DONE.
24. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
25. ALL PLAN DIMENSIONS ARE TO FACE OF CURBS UNLESS OTHERWISE NOTED.
26. MIHUs WILL BE PROVIDED IN ACCORDANCE WITH THE ZONING REGULATIONS. MIHUs REQUIRED 23.6%/REDUCED AS A RESULT OF A PORTION OF THE PROPERTY INITIALLY ZONED COMMERCIAL/101 UNITS = 24 MIHUs.
27. TRASH REMOVAL WILL BE PUBLIC STREET PICK UP.
28. OVERLAP PARKING WILL BE ON-STREET PARKING IN ACCORDANCE WITH DESIGN MANUAL VOLUME 3, SECTION 2.8.B, TABLE 2.11.
29. THE 658BA NOISE CONTOUR LINE DRAWN ON THIS DEVELOPMENT PLAN IS ADVISORY AS REQUIRED BY THE HOWARD COUNTY DESIGN MANUAL CHAPTER 5, REVISED FEBRUARY 1992, AND CANNOT BE CONSIDERED TO EXACTLY LOCATE THE 658BA NOISE EXPOSURE. THE 658BA NOISE LINE WAS ESTABLISHED BY HOWARD COUNTY TO ALERT DEVELOPERS, BUILDERS AND FUTURE RESIDENTS THAT AREAS BEYOND THIS THRESHOLD MAY EXCEED GENERALLY ACCEPTED NOISE LEVELS ESTABLISHED BY THE U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT.
30. LIGHT TRESPASS ONTO ANY PROPERTY ZONED OR USED FOR RESIDENTIAL PURPOSES SHALL NOT EXCEED 0.5 FOOT CANDLES.

31. 19-08-020 WAS APPROVED ON OCTOBER 3, 2007, WAIVING SECTION 16.155 (APPLICABILITY) WHICH REQUIRED THE SUBMISSION OF SITE DEVELOPMENT PLAN FOR NEW OR EXPANDED RESIDENTIAL DEVELOPMENT AND NEW RESIDENTIAL DEVELOPMENT INCLUDING SINGLE-FAMILY ATTACHED, APARTMENT AND MOBILE HOME RESIDENTIAL DEVELOPMENT. APPROVAL IS SUBJECT TO THE FOLLOWING:
 - HSDO MUST APPROVE THE ASSOCIATED GRADING PERMIT.
 - THE APPLICANT AND HIS CONSULTANT MUST SCHEDULE A MEETING WITH ALL APPLICABLE COUNTY AND STATE AGENCIES TO ADDRESS THE COMMENTS FOR F-08-013 ISSUED IN THE DEPARTMENT OF PLANNING AND ZONING'S LETTER DATED SEPTEMBER 27, 2007.
32. EXISTING UTILITIES BASED ON FIELD RUN SURVEY PERFORMED BY MILDBERG, BOENDER & ASSOC., ON OR ABOUT JUNE 2007.
33. THERE IS NO FLOOD PLAIN WITHIN THE LOD OF THIS PLAN.
34. PER SECTION 127.5.0.4 OF THE 2006 ZONING REGULATIONS THE FOLLOWING SETBACKS ARE REQUIRED AND ABIDED BY:
 - MINIMUM SETBACK FROM THE FRONT RIGHT-OF-WAY:
 1. PRINCIPAL STRUCTURES AND AMENITY AREAS 0 FEET
 2. ALL OTHER STRUCTURES AND USES 10 FEET
 3. MINIMUM SETBACKS FROM VICINAL PROPERTIES
 - FROM RESIDENTIAL DISTRICTS:
 - NON RESIDENTIAL STRUCTURES AND ASSOCIATED USES 30 FEET
 - STRUCTURES CONTAINING RESIDENCES AND ASSOCIATED USES 20 FEET
 - FROM OTHER ZONING DISTRICTS:
 - ALL STRUCTURES AND USES 0 FEET
 - IF A RESIDENTIAL DISTRICT IS SEPARATED FROM THE CAC DISTRICT BY A PUBLIC STREET RIGHT OF WAY, ONLY THE SETBACKS FROM THE PUBLIC STREET SHALL APPLY.
 - MAXIMUM STRUCTURE SETBACK FROM PUBLIC STREET RIGHT OF WAY:
 - AS PROVIDED IN THE ROUTE 1 MANUAL, THE BUILDING FACADE CLOSEST TO A PUBLIC STREET SHOULD BE LOCATED NO MORE THAN 10 FEET FROM THE EDGE OF THE PUBLIC STREET RIGHT OF WAY UNLESS TOPOGRAPHY, UTILITIES OR OTHER PHYSICAL CONSTRAINTS MAKE A GREATER SETBACK NECESSARY. THIS 10-FOOT SETBACK MAY BE INCREASED WITHOUT A VARIANCE IN ACCORDANCE WITH THE ROUTE 1 MANUAL.

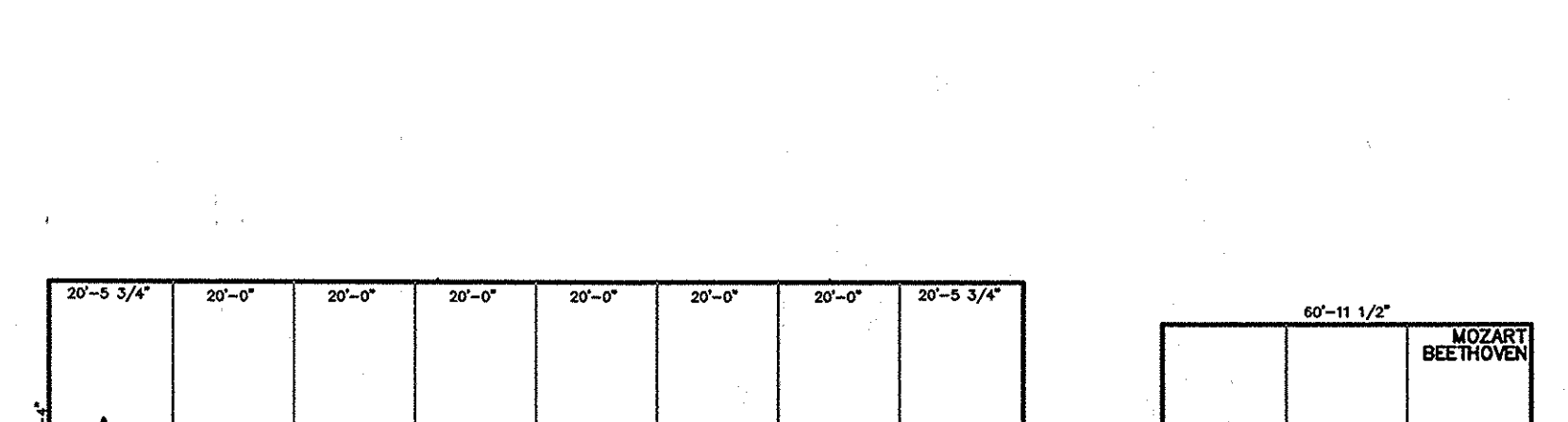
35. STORMWATER MANAGEMENT REQUIREMENTS WERE SATISFIED UNDER F-08-013, IN ACCORDANCE WITH THE 2000 MARYLAND SSM DESIGN MANUAL. SSM IS BEING PROVIDED VIA PRIVATELY OWNED & MAINTAINED UNDERGROUND STORMWATER MANAGEMENT FACILITY.
36. THE WETLAND DELINEATION STUDY FOR THIS PROJECT WAS PREPARED BY ECO-SCIENCE PROFESSIONAL, INC. DATED MAY 15, 2007. THERE ARE NO WETLANDS WITHIN THE LOD OF THIS PLAN.
37. THE AFPO STUDY FOR THIS PROJECT WAS PREPARED BY THE TRAFFIC GROUP DATED NOVEMBER 2006. APPROVED UNDER S-08-010 ON JUNE 2007. NO AFPO STUDY IS REQUIRED FOR THIS PROJECT.
38. PROPOSED BUILDINGS WILL HAVE AN AUTOMATIC FIRE PROTECTION SPRINKLER SYSTEM.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

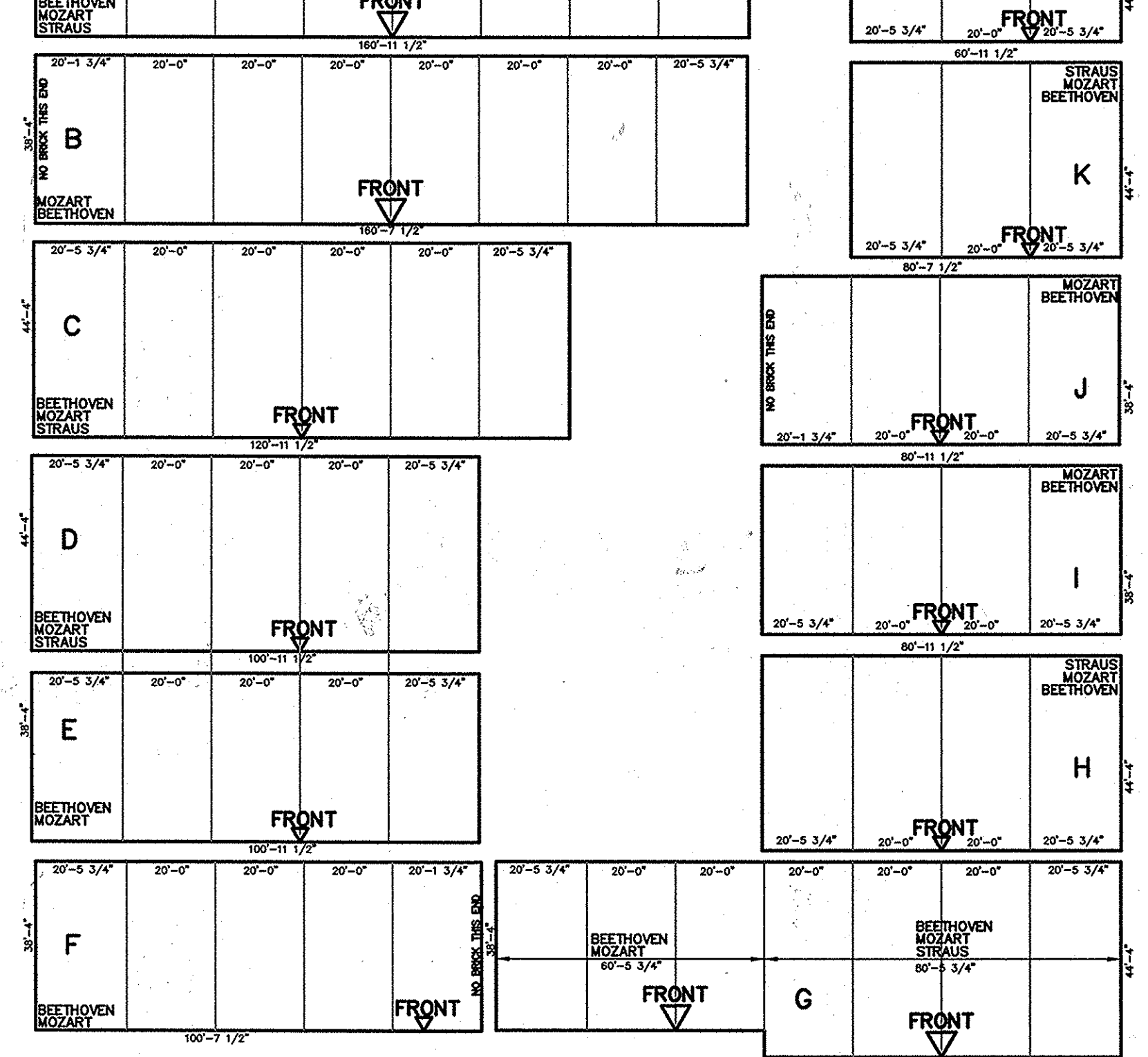
Chris Edman 9-11-14 DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION

Kevin DeWane 9-24-14 DATE
CHIEF, DIVISION OF LAND DEVELOPMENT

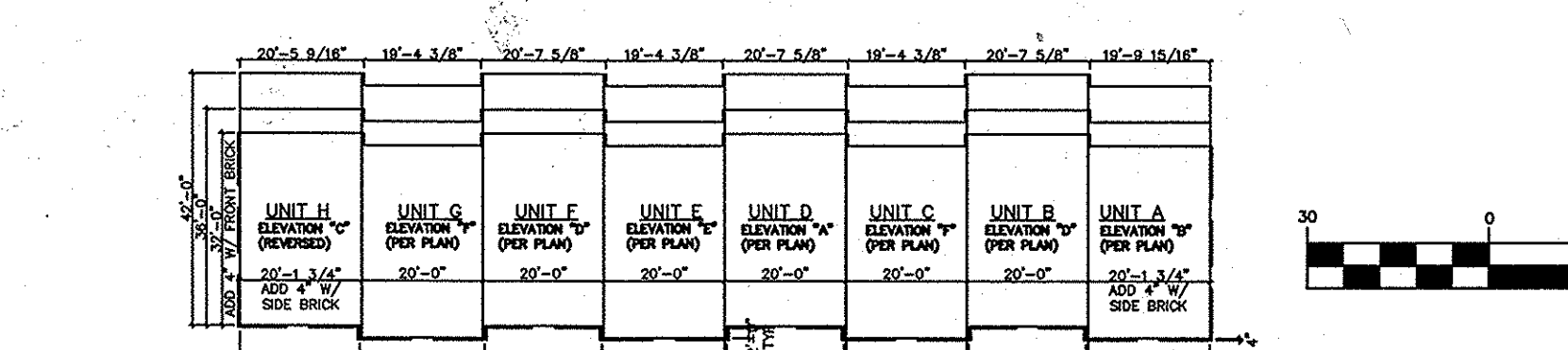
David M. Coughlin 9/25/14 DATE
DIRECTOR



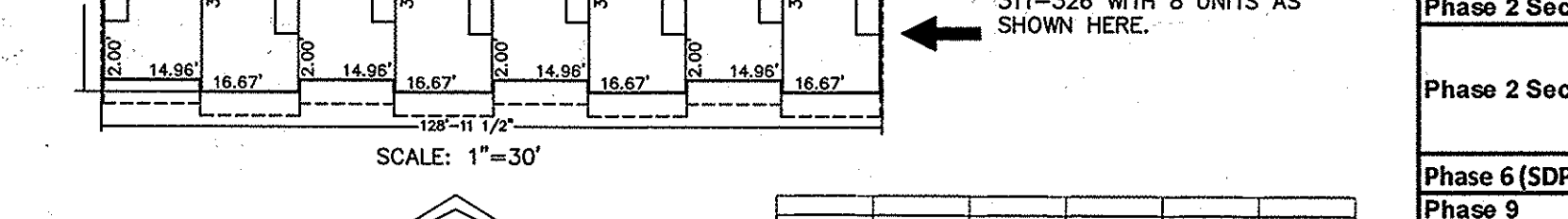
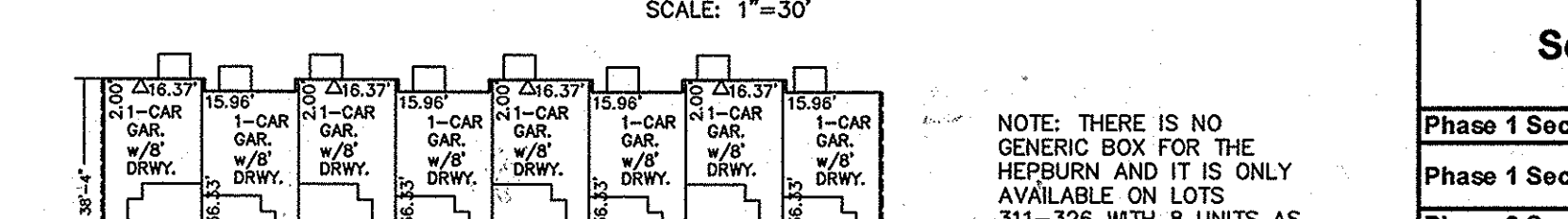
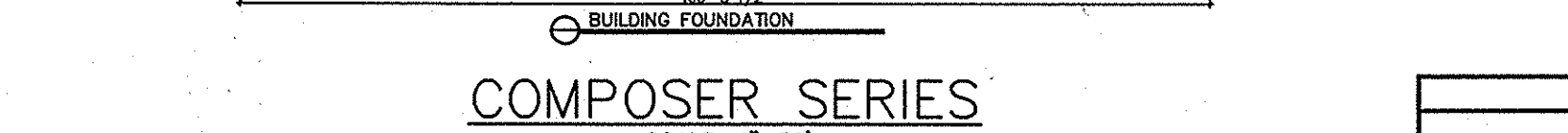
COMPOSER TOWNHOME MATRIX
SCALE: 1"=30'

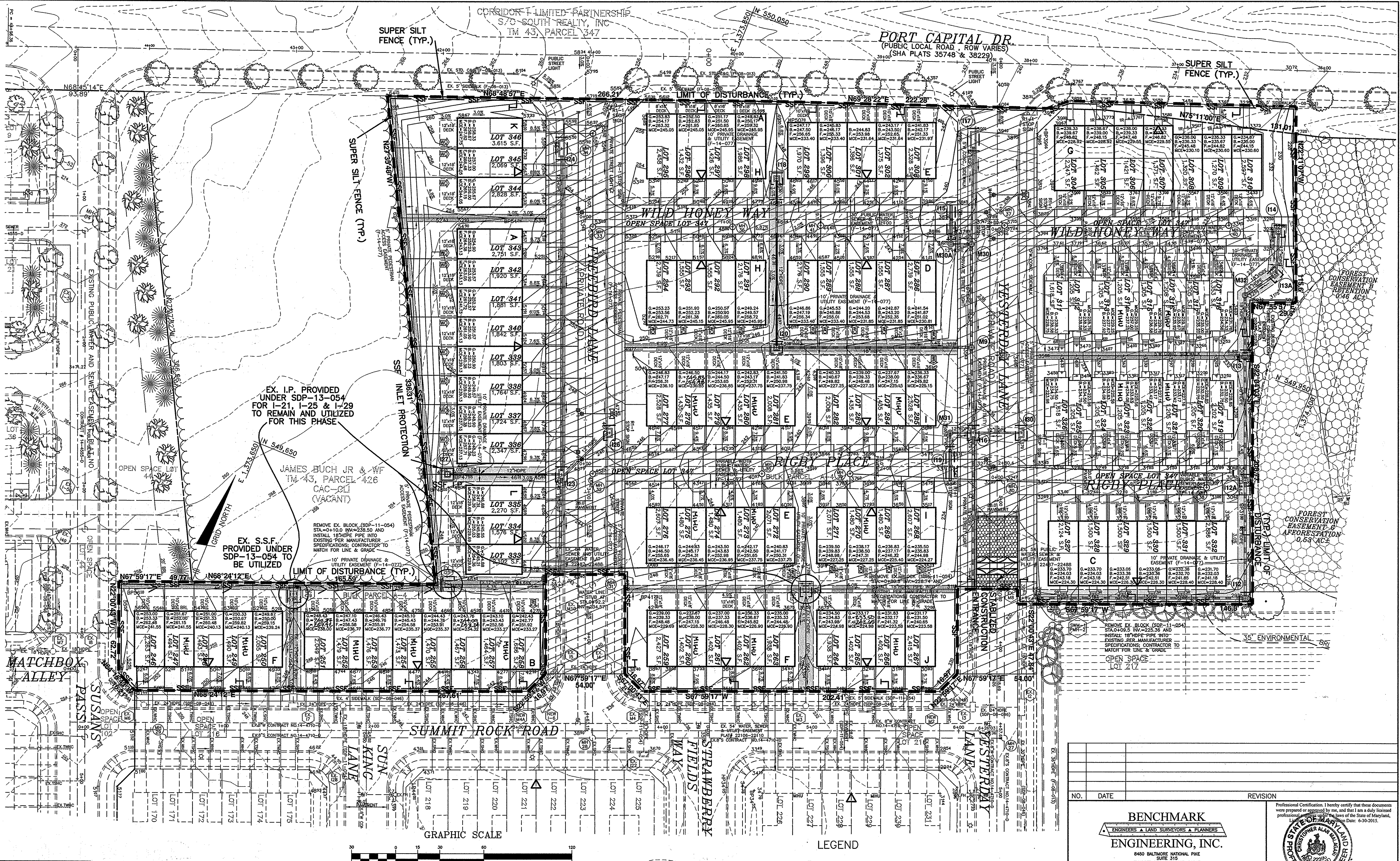


COMPOSER SERIES
SCALE: 1"=30'



HEPBURN ELEVATION
SCALE: 1"=30'





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.
Cl. Malagari 9-2-14
 ENGINEER - CHRISTOPHER A. MALAGARI DATE

OWNER'S CERTIFICATE
 I/WE 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 BY THE HOWARD SOIL CONSERVATION DISTRICT.
John P. McConville 8-26-2014
 ATAPCO HOWARD SQUARE II STATUTORY TRUST DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
John R. Rhoads 9/19/14
 HOWARD SCD DATE
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

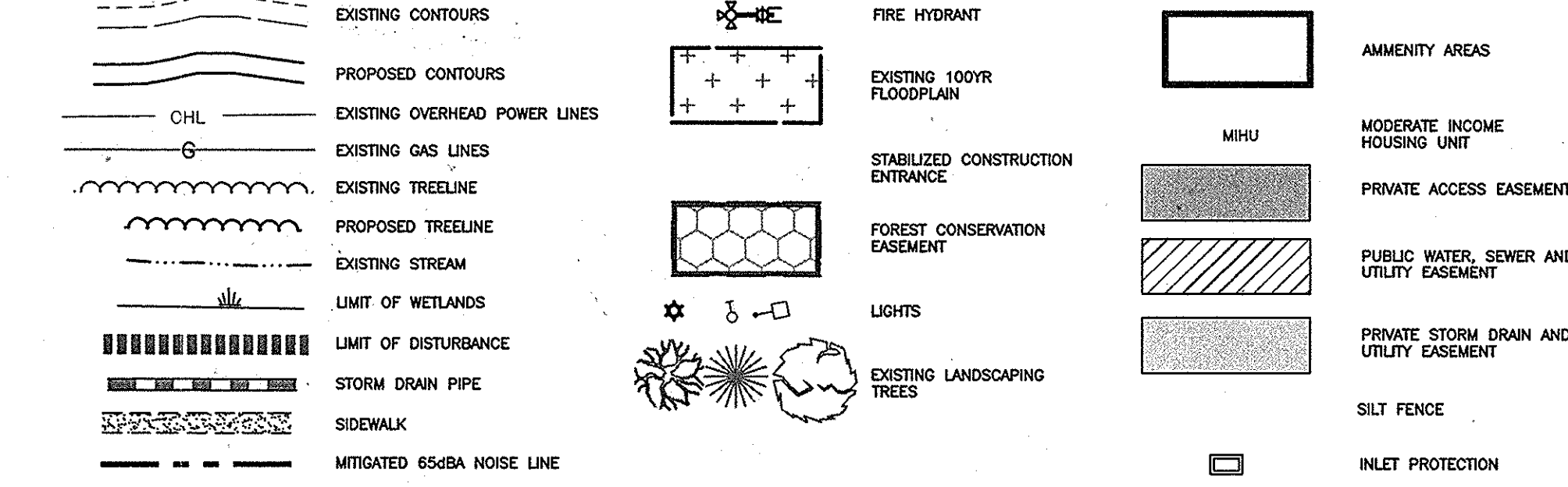
Old Egan 9-11-14
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

V. Schellinger 9-24-14
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

David A. Coyle 9/24/14
 DIRECTOR DATE

NOTES:

- FOR DIMENSION AND ELEVATIONS NOT SHOWN SEE SHEET 3.
- SSF EMBRICATIONS SHALL BE PROVIDED WHERE NECESSARY IN CONFORMANCE WITH REQUIREMENTS.
- REFER TO SHEET 6 FOR DETAILS OF THE SIGNAGE AND STREET LIGHTING.



NO. DATE REVISION

BENCHMARK ENGINEERING, INC.
 ENGINEERS • LAND SURVEYORS • PLANNERS
 8480 BALTIMORE NATIONAL PIKE SUITE 315
 ELICOTT CITY, MARYLAND 21043
 (P) 410-465-6106 (F) 410-465-8644
 WWW.BE-CVLENGINEERING.COM

STATE OF MARYLAND
 PROFESSIONAL LAND SURVEYOR
 9-2-14

DEVELOPER/OWNER:
 ATAPCO HOWARD SQUARE II STATUTORY TRUST
 10 E. Baltimore St. Suite 1600
 Baltimore, MD 21202
 (410) 347-7189

HOWARD SQUARE PHASE 6
 LOTS 246 THRU 346, AND OPEN SPACE LOT 347 (A RESUBDIVISION OF BULK PARCEL 657(A-4) PER F-11-084) 101 TOWNHOUSE UNITS ON FEE-SIMPLE LOTS
 TAX MAP: 43 / GRIDS 3 & 9 / PARCEL: 657 (A-4) (F-11-084)
 ZONED: CAC-CU
 ELECTION DISTRICT NO. 1 - HOWARD COUNTY, MARYLAND

SITE DEVELOPMENT AND GRADING PLAN

DATE: DECEMBER, 2013
 REVISED: AUGUST, 2014
 SCALE: AS SHOWN

BEI PROJECT NO. 2337
 SHEET 2 OF 8

DRAFT:MCR/BFC CHECK:CAM/BFC

SDP-14-043

B-4 STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION

Definition: The application of seed and mulch to establish vegetation cover.

Purpose: To protect disturbed soils from erosion during and at the end of construction.

Conditions Where Practice Applies: To the surface of all perimeter contours, slopes, and any disturbed area not under active grading.

Criteria:

- Seeding:**
 - All seed must meet the requirements of the Maryland State Seed Law. All seed must be subject to pre-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 on 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.
 - Mulch must be applied between the fall and spring seeding dates only if the ground is frozen. The appropriate seeding mixture must be applied when the ground thaws.
 - Inoculants: The inoculant for treating legume seeds in the container must be a pure culture of nitrogen fixing bacteria prepared specifically for the species. Inoculants must not be used later than the date indicated on the container. Add fresh inoculants as directed on the package. Use the lowest recommended rate when hydroseeding. Note: It is very important to keep inoculant as cool as possible until used. Temperatures above 75 to 80 degrees Fahrenheit can weaken bacteria and make the inoculant less effective.
 - Soil or seed must not be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phytotoxic materials.
- Application:**
 - Dry Seeding:** This includes use of conventional drop or broadcast spreaders. Incorporate seed into the subsoil at the rates prescribed on Temporary Seeding Table B.1, Permanent Seeding Table B.3, or site-specific seeding Summary.
 - 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 seed to soil contact.
 - Drill or Outdragger Seeding: Mechanized seeders that apply and cover seed with soil.
 - Cultipacker seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seeded must be firm after planting.
 - Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction.
 - Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer). 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 (phosphorus), 200 pounds per acre; K2O (potassium), 200 pounds per acre.
 - 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 hydroseeding.
 - Mix seed and fertilizer on site and seed immediately and without interruption.
 - When hydroseeding do not incorporate seed into the soil.
 - Mulch Materials (in order of preference):**
 - Straw consisting of thoroughly dried wheat, rye, oat, or barley and reasonably bright in color. Straw to be free of noxious weed seeds as specified in the Maryland 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.
 - Wood Cellulose Fiber Mulch (WCFFM) consisting of specially prepared wood cellulose processed into a uniform fibrous physical state.
 - WCFFM to be used green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformly spread slurry.
 - WCFFM, including dry, must contain no germination or growth inhibiting factors.
 - WCFFM 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.
 - Application rates and other additives to form a homogeneous slurry. The mulch material must form a better-like ground cover, on application, having moisture retention and penetration properties and must hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.
 - WCFFM materials must not contain elements or compounds at concentration levels that will be phytotoxic.
 - WCFFM 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 water holding capacity of 90 percent minimum.

B-4-1 STANDARDS AND SPECIFICATIONS FOR INCREMENTAL STABILIZATION

Definition: Establishment of vegetative cover on cut and fill slopes.

Purpose: To provide timely vegetative cover on cut and fill slopes as work progresses.

Conditions Where Practice Applies: Any cut or fill slope greater than 15 feet in height. This practice also applies to stockpiles.

Criteria:

- Incremental Stabilization - Cut Slopes:**
 - Excavate and stabilize cut slopes in increments not to exceed 15 feet in height. Prepare seedbed and apply seed and mulch on all cut slopes as the work progresses.
 - Construction sequence example (Refer to Figure B.1):
 - Construct and stabilize all temporary swales or dikes that will be used to convey runoff around the excavation, prepare seedbed, and stabilize.
 - Perform Phase 1 excavation, prepare seedbed, and stabilize. Overseed Phase 1 areas as necessary.
 - Perform final phase excavation, prepare seedbed, and stabilize. Overseed previously seeded areas as necessary.
- Incremental Stabilization - Fill Slopes:**
 - Construct and stabilize fill slopes in increments not to exceed 15 feet in height. Prepare seedbeds and apply seed and mulch on all slopes as the work progresses.
 - Stabilize slopes immediately when the vertical height of a lift reaches 15 feet, or when the grading operation ceases as prescribed in the plans.
 - At the end of each day, install temporary water conveyance practices, as necessary, to intercept runoff and convey it down the slope in a non-erosive manner.
 - Construction sequence example (Refer to Figure B.2):
 - Construct and stabilize all temporary swales or dikes that will be used to divert runoff around the fill. Construct a lift fence on low side of fill unless other methods shown on the plans address this area.
 - At the end of each day, install temporary water conveyance practices, as necessary, to intercept surface runoff and convey it down the slope in a non-erosive manner.
 - Place Phase 1 fill, prepare seedbed, and stabilize.
 - Place Phase 2 fill, prepare seedbed, and stabilize.
 - Place final phase fill, prepare seedbed, and stabilize. Overseed previously seeded areas as necessary.

Note: 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 interruptions in the operation or completing the operation of the seeding season will necessitate the application of temporary stabilization.

B-4-2 STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING AND SOIL AMENDMENTS

Definition: The process of preparing the soil to sustain adequate vegetative stabilization.

Purpose: To provide a suitable soil medium for vegetative growth.

Conditions Where Practice Applies: Where vegetative stabilization is to be established.

Criteria:

- Soil Preparation:**
 - Seeded 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 or ripper mounted on construction equipment. After the soil is loosened, it must not be rolled or dragged smooth but left in the roughened condition. Slopes 3:1 or flatter are to be treated 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 suitable means.
- Permanent Stabilization:**
 - A soil test is required for any earth disturbance of 5 acres or more. The minimum soil conditions required for permanent vegetation establishment are:
 - Soil pH between 6.0 and 7.0.
 - Soil salinity less than 500 parts per million (ppm).
 - Soil contains less than 40 percent clay but enough fine granular material (greater than 30 percent silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception: if lower salinity will be planned, then a sandy soil (less than 30 percent silt plus clay) would be acceptable.
 - Soil contains 1.5 percent minimum organic matter by weight.
 - 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 conditions.
 - 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.
 - 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 with 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 1 1/2 inches of soil loose and friable. Seeded loosening may be unnecessary on newly disturbed areas.
- Topsoiling:**
 - Topsoil to be 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, matrix soils, and/or unacceptable soil gradation.
 - 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 USDA-NRCS.
 - Topsoiling is limited to areas having 2:1 or flatter slopes where:
 - The texture of the exposed subsoil material is not adequate to produce vegetative growth.
 - The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
 - The 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 contrasting textured subsoils and must contain less than 5 percent by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1/4 inch in diameter.
 - Toxic substances or noxious plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nut sedge, poison ivy, bladder, or others as specified.
 - Topsoil subsoils 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.
 - Topsoil Application:
 - Erosion and sediment control practices must be maintained when applying topsoil.
 - Uniformly distribute topsoil in a 2 to 8 inch layer and lightly compact to a minimum thickness of 4 inches. Spreading is to be performed in such a manner that sodding or 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 seeded preparation.
- 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 analysis.
 - Fertilizers must be uniform in composition, free flowing and capable 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.
 - 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 magnesium 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 #60 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 10 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.

B-4-3 STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING

Definition: The application of seed and mulch to establish vegetation cover.

Purpose: To stabilize disturbed soils with vegetation for up to 6 months.

Conditions Where Practice Applies: To use fast growing vegetation that provides cover on disturbed soils.

Criteria:

- Select one or more of the species or seed mixtures listed in Table B.1 for the appropriate Plant Hardness 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.
- 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 and maintain until the next seeding season.

PERMANENT STABILIZATION

Definition: To stabilize disturbed soils with permanent vegetation.

Purpose: To 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 a period of 6 months or less.

Criteria:

- Seed Mixtures:**
 - General Use:
 - Select one or more of the species or mixtures listed in Table B.3 for the appropriate Plant Hardness Zone (from Figure B.3) and based on the site condition or purpose found on Table B.2. Enter selected mixtures, application rates, and seeding dates in the Permanent Seeding Summary. The Summary is to be placed on the plan.
 - 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 Guide, Section 542 - Critical Area Planting.
 - For sites having disturbed areas over 5 acres, use and show the rates recommended by the soil testing agency.
 - For areas receiving low maintenance, apply urea form fertilizer (48-0-0) at 3 1/2 pounds per 1000 square feet (150 pounds per acre) at the time of seeding in addition to the soil amendments shown in the Permanent Seeding Summary.
 - Turfgrass Mixtures:
 - Areas where turfgrass may be desired include lawns, parks, playgrounds, and commercial sites which require a medium to high level of maintenance.
 - Select one or more of the species or mixtures listed below based on the site conditions or purpose. Enter selected mixtures, application rates, and seeding dates in the Permanent Seeding Summary. The Summary is to be placed on the plan.
 - 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.
 - Kentucky Bluegrass/Perennial Rye: Full Sun Mixture: For use in all sun areas where rapid establishment is necessary and when turf will receive medium to intensive management. Certified Parental Kentucky Bluegrass/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 weight.
 - 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 Certified Parental 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.
 - Kentucky Bluegrass/Fine Fescue: Shade Mixture: For use in areas with shade in Bluegrass lawns.
 - Local Turfgrass Mixtures:
 - Local Turfgrass materials must not contain elements or compounds at concentration levels that will be phytotoxic.
 - WCFFM 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 water holding capacity of 90 percent minimum.
- Soil:**
 - Soil to be prepared to a 2:1 grade or flatter.
 - General Specifications:
 - Chisel furrows must be Maryland State Certified. Sod labels must be made available to the job foreman and inspector.
 - Sod must be machine cut at a uniform soil thickness of 1 1/2 inch, plus or minus 1/8 inch, at the time of cutting. Measurement from the top surface of the sod to the bottom of the furrow. Sod of uneven ends will not be acceptable.
 - 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.
 - Sod must not be harvested or transported when moisture content (excessively dry or wet) may adversely affect its survival.
 - Sod must be harvested, delivered, and installed within a period of 36 hours. Sod not transported within this period must be approved by an agronomist or soil scientist prior to its installation.
 - Soil Installation:
 - During periods of excessively high temperature or in areas having dry subsoil, lightly irrigate the subsoil immediately prior to laying the sod.
 - Law 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 sod.
 - Wherever possible, lay sod with the long edges parallel to the contour and with staggering joints. Roll and tamp, and/or otherwise secure the sod to prevent slippage on slopes. Ensure solid contact exists between sod roots and the underlying soil surface.
 - 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, rolling and tamping for any piece of sod within eight hours.
 - Sod Maintenance:
 - 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 to maintain the degree of the day to prevent wilting.
 - After the first week, soil watering is required as necessary to maintain adequate moisture content. 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.

H-5 STANDARDS AND SPECIFICATIONS FOR DUST CONTROL

Definition: Controlling the suspension of dust particles from construction activities.

Purpose: To prevent blowing and movement of dust from exposed soil surfaces to reduce on and off-site damage including health and traffic hazards.

Conditions Where Practice Applies: Areas subject to dust blowing and movement where on and off-site damage is likely without the use of dust control measures.

Criteria:

- Mulches:** 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 prevent blowing.
- Vegetative Cover:** See Section B-4-4 Temporary Stabilization.
- Tillage:** Till 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.
- Irrigation:** 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, tall fences, snow fences, burlap fences, straw bales, and similar material can be used to control air currents and soil blowing.
- Chemical Treatment:** Use of chemical treatment requires approval by the appropriate plan review authority.

SEEDING AND MULCHING

Definition: The application of seed and mulch to establish vegetation cover.

Purpose: To stabilize disturbed soils with vegetation for up to 6 months.

Conditions Where Practice Applies: To use fast growing vegetation that provides cover on disturbed soils.

Criteria:

- Select one or more of the species or seed mixtures listed in Table B.1 for the appropriate Plant Hardness 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.
- 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 and maintain until the next seeding season.

PERMANENT STABILIZATION

Definition: To stabilize disturbed soils with permanent vegetation.

Purpose: To 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 a period of 6 months or less.

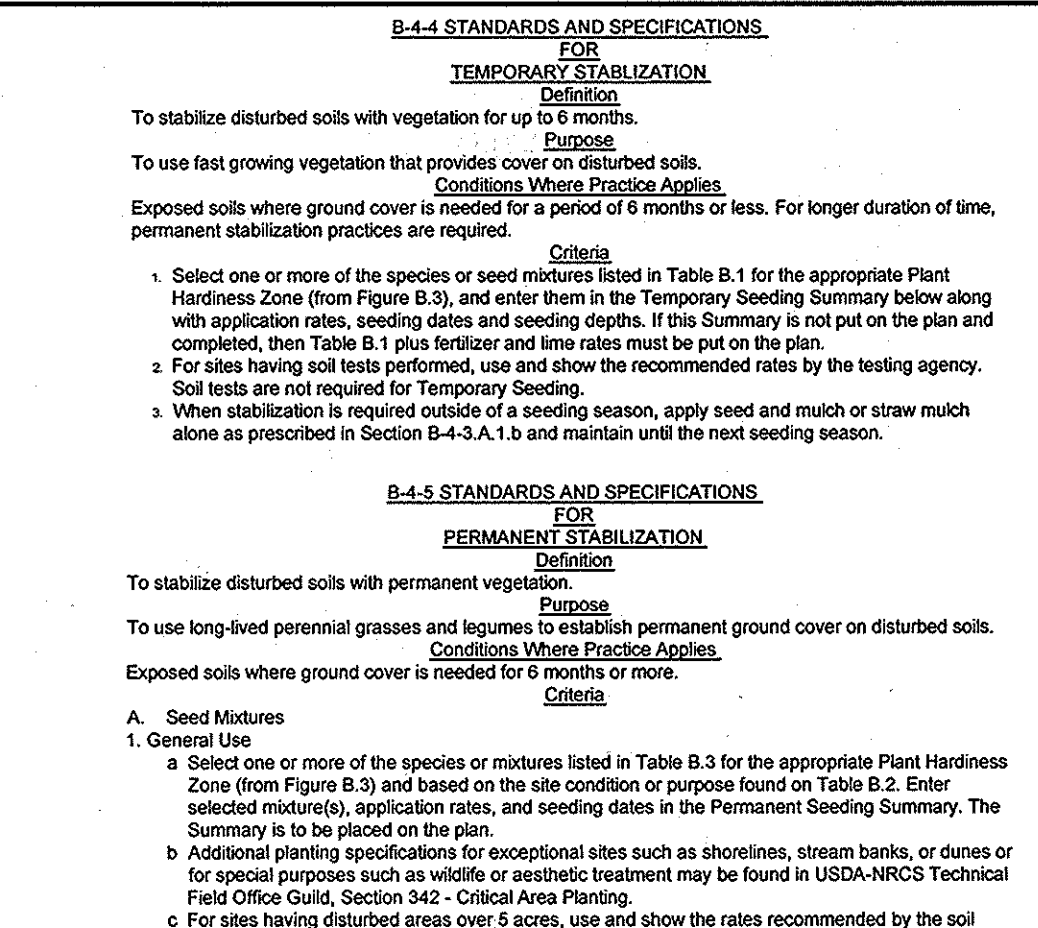
Criteria:

- Seed Mixtures:**
 - General Use:
 - Select one or more of the species or mixtures listed in Table B.3 for the appropriate Plant Hardness Zone (from Figure B.3) and based on the site condition or purpose found on Table B.2. Enter selected mixtures, application rates, and seeding dates in the Permanent Seeding Summary. The Summary is to be placed on the plan.
 - 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 Guide, Section 542 - Critical Area Planting.
 - For sites having disturbed areas over 5 acres, use and show the rates recommended by the soil testing agency.
 - For areas receiving low maintenance, apply urea form fertilizer (48-0-0) at 3 1/2 pounds per 1000 square feet (150 pounds per acre) at the time of seeding in addition to the soil amendments shown in the Permanent Seeding Summary.
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 - Areas where turfgrass may be desired include lawns, parks, playgrounds, and commercial sites which require a medium to high level of maintenance.
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 - 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 Certified Parental 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.
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 - Local Turfgrass Mixtures:
 - Local Turfgrass materials must not contain elements or compounds at concentration levels that will be phytotoxic.
 - WCFFM 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 water holding capacity of 90 percent minimum.
- Soil:**
 - Soil to be prepared to a 2:1 grade or flatter.
 - General Specifications:
 - Chisel furrows must be Maryland State Certified. Sod labels must be made available to the job foreman and inspector.
 - Sod must be machine cut at a uniform soil thickness of 1 1/2 inch, plus or minus 1/8 inch, at the time of cutting. Measurement from the top surface of the sod to the bottom of the furrow. Sod of uneven ends will not be acceptable.
 - 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.
 - Sod must not be harvested or transported when moisture content (excessively dry or wet) may adversely affect its survival.
 - Sod must be harvested, delivered, and installed within a period of 36 hours. Sod not transported within this period must be approved by an agronomist or soil scientist prior to its installation.
 - Soil Installation:
 - During periods of excessively high temperature or in areas having dry subsoil, lightly irrigate the subsoil immediately prior to laying the sod.
 - Law 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 sod.
 - Wherever possible, lay sod with the long edges parallel to the contour and with staggering joints. Roll and tamp, and/or otherwise secure the sod to prevent slippage on slopes. Ensure solid contact exists between sod roots and the underlying soil surface.
 - 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, rolling and tamping for any piece of sod within eight hours.
 - Sod Maintenance:
 - 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 to maintain the degree of the day to prevent wilting.
 - After the first week, soil watering is required as necessary to maintain adequate moisture content. 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.

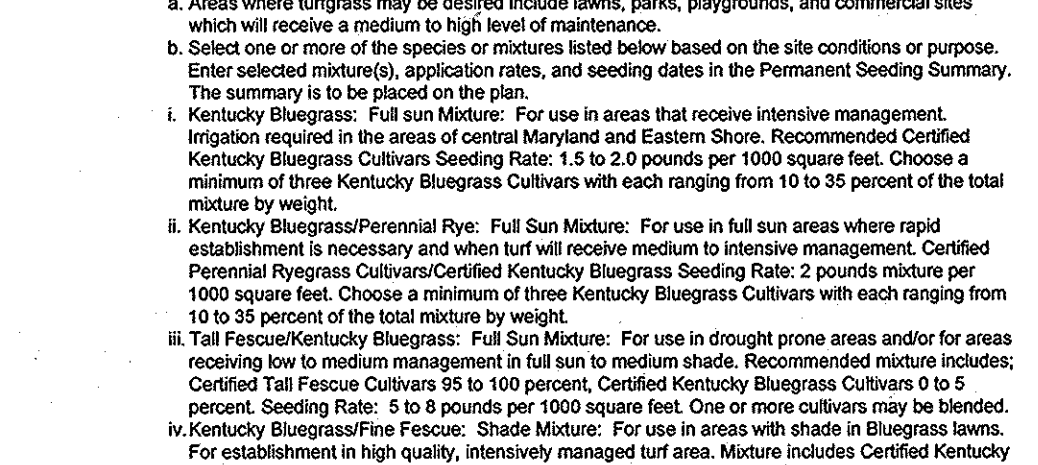
SEQUENCE OF CONSTRUCTION

NOTE: SEDIMENT CONTROL MEASURES UNDER SDP-11-054 AND PD-09-013 WILL BE UTILIZED.

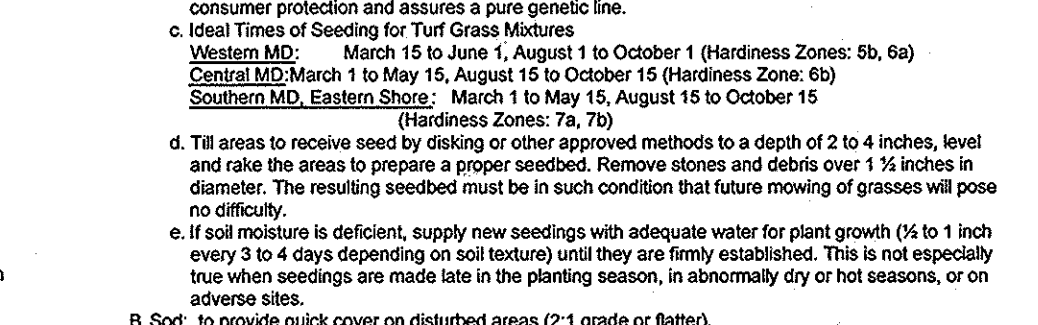
- OBTAIN GRADING PERMIT. (1 DAY)
- CONSTRUCT STABILIZED CONSTRUCTION ENTRANCES AT LOCATIONS SHOWN. (1 DAY)
- PROVIDE SSF ALONG THE LOD AS SHOWN. UPON APPROVAL BY THE S&E CONTROL INSPECTOR BRING SITE TO GRADE (30 DAYS)
- CONSTRUCT STORM DRAIN AND UTILITIES. PROPOSED STORM DRAINS & STRUCTURES TO BE CONSTRUCTED AND TIED INTO THE EX. STORM DRAIN INFRASTRUCTURE AS SHOWN ON THESE PLANS. ALL INLETS TO BE BLOCKED UNTIL FINAL CONSTRUCTION (60 DAYS).
- BASE PAVE ROADS AS SHOWN AND THEN UNBLOCK AND INSTALL TYPE "B" INLET PROTECTION ON ALL INLETS AS SHOWN WITHIN THE LIMITS OF THIS SDP. (15 DAYS INLET PROTECTION TO BE INSTALLED IN SUPER SALT FENCE WHERE INDICATED ON THE PLANS.)
- CONSTRUCT PROPOSED DWELLINGS/STRUCTURES. (90 DAYS - PER UNIT BLOCK)
- SEED AND MULCH ALL REMAINING DISTURBED AREAS (2 DAYS)
- UPON APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROL DEVICES, FINALIZE GRADING AND STABILIZE REMAINING DISTURBED AREAS (3 DAYS).



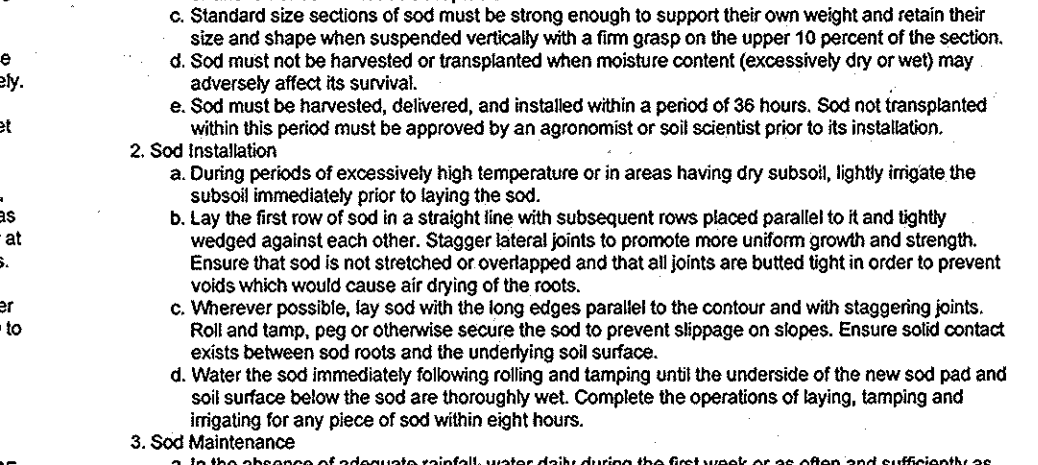
DETAIL E-9-1 STANDARD INLET PROTECTION



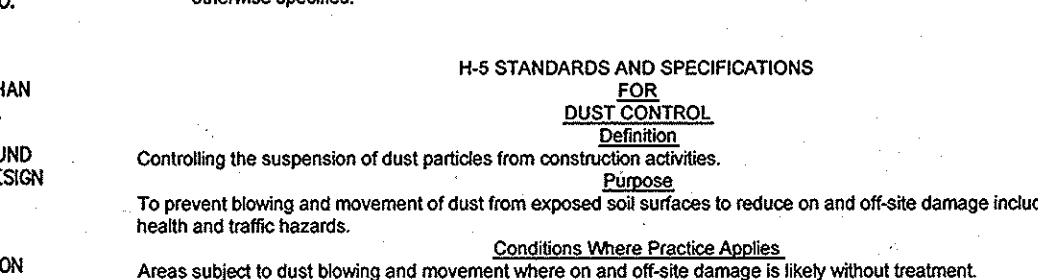
DETAIL E-9-2 AT-GRADE INLET PROTECTION



DETAIL E-9-3 CURB INLET PROTECTION



DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE



DETAIL E-3 SUPER SILT FENCE

STANDARD SEDIMENT CONTROL NOTES

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION. (13-1855).
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND REVISIONS THERETO.
- FOLLOWING INITIAL SOIL DISTURBANCE OR RESTABILIZATION, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: (A) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DYES, PERMETER SLOPES AND ALL SLOPES GREATER THAN 3:1, (B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL SEDIMENT TRAPS/BASINS SHOW MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1991 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING (SEC.51), SOE (SEC.54-5), TEMPORARY SEEDING (SEC.50) AND MULCHING (SEC.53). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- SITE ANALYSIS:

TOTAL AREA OF SITE:	5.47 ACRES
AREA DISTURBED:	5.47 ACRES
AREA TO BE REGRADED OR PAVED:	4.1 ACRES
AREA TO BE VEGETATIVELY STABILIZED:	1.4 ACRES
TOTAL FILL:	2.050 CU. YDS.
TOTAL WASTE/BORROW AREA LOCATION:	STOCKPILING NOT PERMITTED WITHIN THE LIMITS OF THIS SDP
- THESE QUANTITIES ARE FOR PERMIT PURPOSES ONLY. CONTRACTOR IS REQUIRED TO PROVIDE HIS OWN QUANTITY MEASUREMENTS.
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED FOR INSTALLATION OF PERMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING, OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
- TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN BE BACK FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

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.

Christopher A. Malagari 9-2-14
ENGINEER - CHRISTOPHER A. MALAGARI DATE

OWNER'S CERTIFICATE

I/WE 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 BY THE HOWARD SOIL CONSERVATION DISTRICT.

John K. Roberts 8-26-2014
ATAPCO HOWARD SQUARE II STATUTORY TRUST DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

John K. Roberts 9/2/14
HOWARD SCD DATE

John K. Roberts 9-11-14
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

John K. Roberts 9-24-14
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

John K. Roberts 9/28/14
DIRECTOR DATE

DEVELOPER/OWNER:

HOWARD SQUARE PHASE 6

LOTS 246 THRU 346, AND OPEN SPACE LOT 347 (A RESUBDIVISION OF BULK PARCEL 657A-4 PER F-11-084) 101 TOWNHOUSE UNITS ON FEE-SIMPLE LOTS

TAX MAP: 43 / GRIDS 3 or 9 / PARCEL: 657 (A-4) (F-11-084)

ZONED: CAC-CL1

ELECTION DISTRICT NO. 1 - HOWARD COUNTY, MARYLAND

SEDIMENT CONTROL NOTES AND DETAILS

DATE: DECEMBER, 2013
REVISION: AUGUST, 2014
BEI PROJECT NO. 2337

SCALE: AS SHOWN SHEET 4 OF 8

HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

100 BAYVIEW CHASE, SUITE 600
Baltimore, MD 21202
(410) 331-2189

SDP-14-043

DETAIL E-9-1 STANDARD INLET PROTECTION

CONSTRUCTION SPECIFICATIONS:

- USE WHICH SLIT FENCE GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
- EGGCRATE COMPLETELY AROUND THE INLET TO A DEPTH OF 18 INCHES BEHIND THE NOTCH OF THE INLET.
- FOR TYPE A, USE NORMAL 2 INCH X 4 INCH CONSTRUCTION GRADE LAMER WITH 1/2 INCH SPACING. FOR TYPE B, USE 2 INCH X 4 INCH CONSTRUCTION GRADE LAMER WITH 1/2 INCH SPACING. FOR TYPE C, USE 2 INCH X 4 INCH CONSTRUCTION GRADE LAMER WITH 1/2 INCH SPACING. FOR TYPE D, USE 2 INCH X 4 INCH CONSTRUCTION GRADE LAMER WITH 1/2 INCH SPACING. FOR TYPE E, USE 2 INCH X 4 INCH CONSTRUCTION GRADE LAMER WITH 1/2 INCH SPACING. FOR TYPE F, USE 2 INCH X 4 INCH CONSTRUCTION GRADE LAMER WITH 1/2 INCH SPACING. FOR TYPE G, USE 2 INCH X 4 INCH CONSTRUCTION GRADE LAMER WITH 1/2 INCH SPACING. FOR TYPE H, USE 2 INCH X 4 INCH CONSTRUCTION GRADE LAMER WITH 1/2 INCH SPACING. FOR TYPE I, USE 2 INCH X 4 INCH CONSTRUCTION GRADE LAMER WITH 1/2 INCH SPACING. FOR TYPE J, USE 2 INCH X 4 INCH CONSTRUCTION GRADE LAMER WITH 1/2 INCH SPACING. FOR TYPE K, USE 2 INCH X 4 INCH CONSTRUCTION GRADE LAMER WITH 1/2 INCH SPACING. FOR TYPE L, USE 2 INCH X 4 INCH CONSTRUCTION GRADE LAMER WITH 1/2 INCH SPACING. FOR TYPE M, USE 2 INCH X 4 INCH CONSTRUCTION GRADE LAMER WITH 1/2 INCH SPACING. FOR TYPE N, USE 2 INCH X 4 INCH CONSTRUCTION GRADE LAMER WITH 1/2 INCH SPACING. FOR TYPE O, USE 2 INCH X 4 INCH CONSTRUCTION GRADE LAMER WITH 1/2 INCH SPACING. FOR TYPE P, USE 2 INCH X 4 INCH CONSTRUCTION GRADE LAMER WITH 1/2 INCH SPACING. FOR TYPE Q, USE 2 INCH X 4 INCH CONSTRUCTION GRADE LAMER WITH 1/2 INCH SPACING. FOR TYPE R, USE 2 INCH X 4 INCH CONSTRUCTION GRADE LAMER WITH 1/2 INCH SPACING. FOR TYPE S, USE 2 INCH X 4 INCH CONSTRUCTION GRADE LAMER WITH 1/2 INCH SPACING. FOR TYPE T, USE 2 INCH X 4 INCH CONSTRUCTION GRADE LAMER WITH 1/2 INCH SPACING. FOR TYPE U, USE 2 INCH X 4 INCH CONSTRUCTION GRADE LAMER WITH 1/2 INCH SPACING. FOR TYPE V, USE 2 INCH X 4 INCH CONSTRUCTION GRADE LAMER WITH 1/2 INCH SPACING. FOR TYPE W, USE 2 INCH X 4 INCH CONSTRUCTION GRADE LAMER WITH 1/2 INCH SPACING. FOR TYPE X, USE 2 INCH X 4 INCH CONSTRUCTION GRADE LAMER WITH 1/2 INCH SPACING. FOR TYPE Y, USE 2 INCH X 4 INCH CONSTRUCTION GRADE LAMER WITH 1/2 INCH SPACING. FOR TYPE Z, USE 2 INCH X 4 INCH CONSTRUCTION GRADE LAMER WITH 1/2 INCH SPACING.

DETAIL E-9-2 AT-GRADE INLET PROTECTION

CONSTRUCTION SPECIFICATIONS:

- USE WHICH SLIT FENCE GEOTEXTILE AS SPECIFIED

SCHEDULE A - PERIMETER LANDSCAPE EDGE

CATEGORY	ADJ. TO APO (A)	ADJ. TO APO (B)	ADJ. TO APO (C)	ADJ. TO ROAD (D)	ADJ. TO ROAD (E)	ADJ. TO ROAD (F)	ADJ. TO ROAD (G)	ADJ. TO ROAD (H)
LANDSCAPE TYPE	C	C	C	C	C	C	C	C
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	502'	639'	352'	323'	378'	382'	61'	63'
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	YES	YES	NO	NO	NO	NO	NO
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO	NO	NO	NO	NO	NO	NO
NUMBER OF PLANTS REQUIRED	TOTAL 502'	N/A	N/A	323'	378'	382'	61'	63'
SHADE TREES	43	13	1	7	9	10	2	2
EVERGREEN TREES	85	25	1	16	19	19	3	3
OTHER TREES (2:1 SUBSTITUTE)	-	-	-	-	-	-	-	-
SHRUBS	-	-	-	-	-	-	-	-
NUMBER OF PLANTS PROVIDED	TOTAL 10(3*)	*	**	7	9	9(1**)	2	2
SHADE TREES	43	10(3*)	*	7	9	9(1**)	2	2
EVERGREEN TREES	85	22(3*)	*	14(2**)	17(2**)	17(2**)	3	3
OTHER TREES (2:1 SUBSTITUTE)	-	-	-	-	-	-	-	-
SHRUBS	-	-	-	-	-	-	-	-

NOTE: DUE TO MULTIPLE SITE CONSTRAINTS & PLANTING SETBACK REQUIREMENTS, THE PERIMETER PLANTINGS HAVE BEEN PLACED ALONG THE ENTIRE SITE WHERE FEASIBLE TO PROVIDE AND MEET THE TOTAL OBLIGATIONS.

* - 3 EVERGREENS AND 3 SHADE TREES HAVE BEEN RELOCATED TO THE AREA NORTH OF LOT 346
 ** - 6 EVERGREENS AND 1 SHADE TREE HAVE BEEN RELOCATED TO THE AREA ON THE EAST OF LOTS 310 & 318
 *** - EXISTING STREET TREES & PLANTINGS PROVIDED UNDER F-08-013
 **** - EXISTING FOREST CONSERVATION/ENVIRONMENTAL BUFFERS PER F-08-013, SDP-11-054

STREET TREE SCHEDULE

ROAD NAME	PERIMETER TREES REQ.	TREES PROV.
YESTERDAY LANE	625	16
FREEBIRD LANE	616	15
TOTAL	31	31

NOTE: PORTIONS OF YESTERDAY AND FREEBIRD LANES HAVE BEEN ADDRESSED FOR STREET TREE REQUIREMENTS UNDER A REVISION TO SDP-11-054 DATED 5/1/13

STREET TREES

SYMBOL	QUANTITY	NAME	REMARKS
	31	PRUNUS ARGENTIFOLIA / SARGENT CHERRY	2-1/2" - 3" CAL.

LANDSCAPING NOTES

- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL.
- THE FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING SHALL BE POSTED AS PART OF THE GRADING PERMIT IN THE AMOUNT OF \$55,050.00 FOR 144 SHADE TREES & 85 EVERGREEN/DORNAMENTAL TREES AND IN THE AMOUNT OF \$9,300.00 FOR 31 PRIVATE STREET TREES FOR A TOTAL AMOUNT OF \$64,350.00.

THE OWNER, TENANT AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING, INCLUDING BOTH PLANT MATERIALS AND BERMS, FENCES AND WALLS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION, AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL OTHER REQUIREMENTS FOR LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION AND WHEN NECESSARY, REPAIRED OR REPLACED.

AT THE TIME OF INSTALLMENT, ALL SHRUBS AND OTHER PLANTINGS HERETHIN LISTED AND APPROVED FOR THIS SITE, SHALL BE OF THE PROPER HEIGHT REQUIREMENTS IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATION OF REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THIS APPROVED LANDSCAPE PLAN WILL RESULT IN DENIAL OR DELAY IN THE RELEASE OF LANDSCAPE SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO APPLICABLE PLANS AND CERTIFICATES.

RESIDENTIAL/INTERNAL LANDSCAPE PLANTING LIST

SYMBOL	QUANTITY	NAME	REMARKS
	95	QUERCUS RUBRA (Red Oak)	2-1/2" - 3" cal.

SCHEDULE B RESIDENTIAL INTERNAL LANDSCAPING

NUMBER OF LOTS	TREES REQ.	TREES PROV.
101	****101	****101

NOTE: 6 OF THE REQUIRED TREES PER LOT ARE BEING MET WITH EX. O.S. LANDSCAPING PER SDP-11-054, 1 AMELANCHIER CANADENSIS / 3 CERCIUS CANADENSIS / (2) 4 CEDRUS DEODORA

PERIMETER LANDSCAPE PLANTING LIST

SYMBOL	QUANTITY	NAME	REMARKS
	40	TELA CORDATA (Creeping Nettleleaf Linden)	2-1/2" - 3" cal.
	79	CEDRUS DEODORA (Deodar Cedar)	6" - 8" H.L.
	6	PRINUS STROBUS (Eastern White Pine)	6" - 8" H.L.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chad E. Ehrlich 8-11-14
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

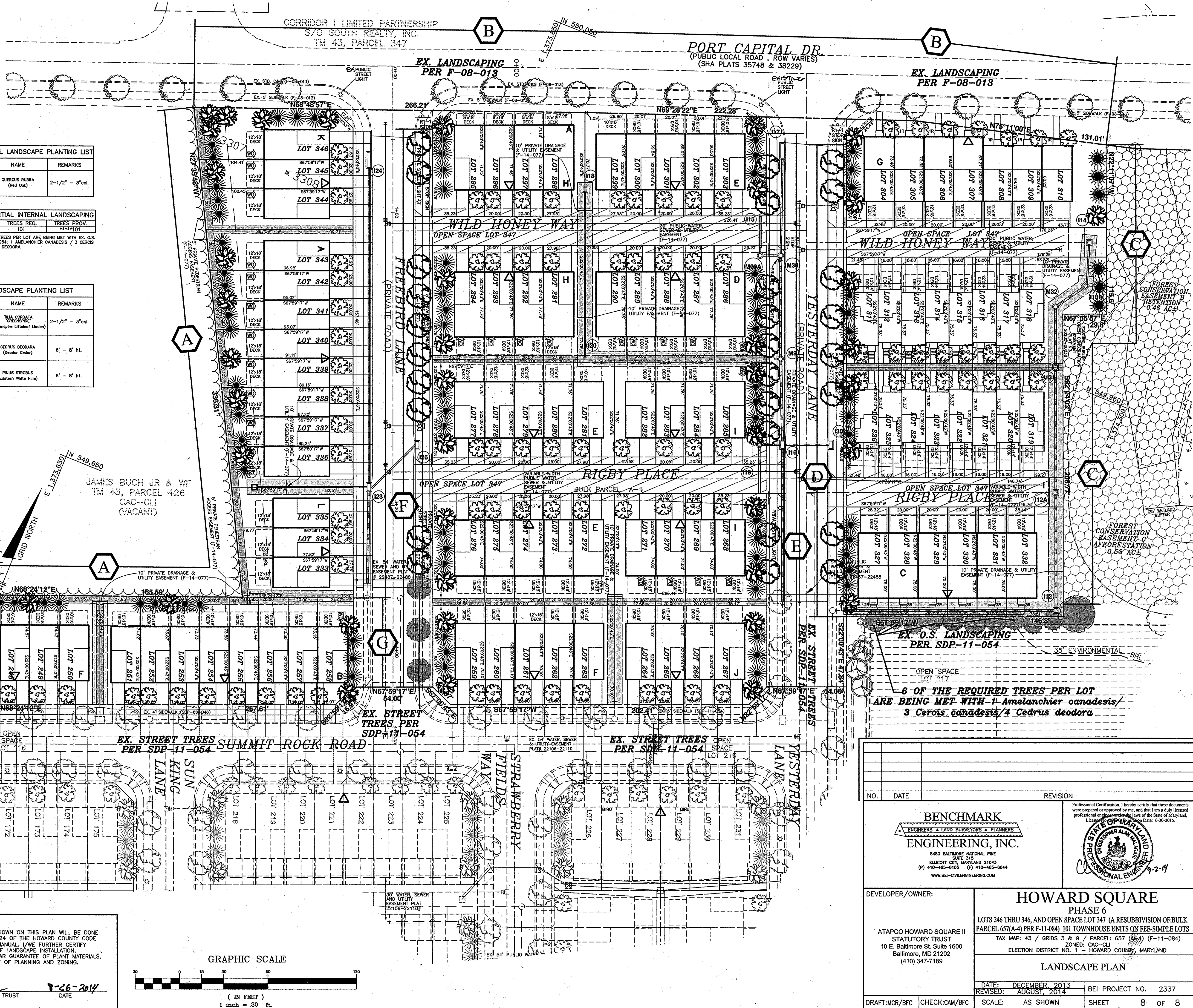
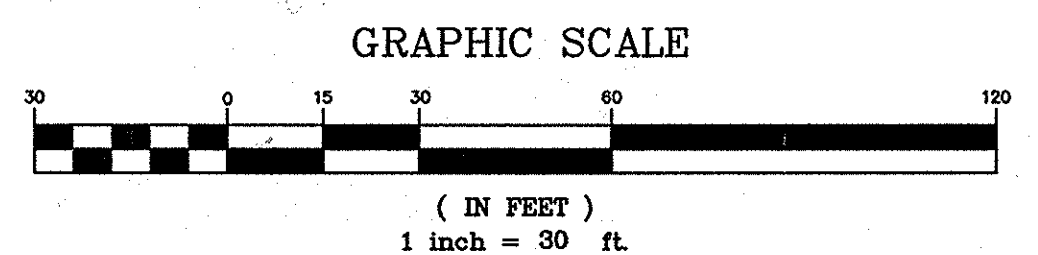
Kate Stelander 9-24-14
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Mark A. Uryga 9-24-14
 DIRECTOR DATE

OWNER'S CERTIFICATE

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION OF A LETTER OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE-YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

Matthew P. McInerney 8-26-2014
 OWNER, HOWARD SQUARE II STATUTORY TRUST DATE



NO.	DATE	REVISION

BENCHMARK ENGINEERING, INC.
 ENGINEERS & LAND SURVEYORS & PLANNERS
 8480 BALTIMORE NATIONAL PIKE
 SUITE 315
 ELLICOTT CITY, MARYLAND 21043
 (P) 410-465-8105 (F) 410-465-8644
 WWW.BE-ENGINEERING.COM

HOWARD SQUARE PHASE 6
 LOTS 246 THRU 346, AND OPEN SPACE LOT 347 (A RESUBDIVISION OF BULK PARCEL 657(A-4) PER F-11-084) 101 TOWNHOUSE UNITS ON FEE-SIMPLE LOTS
 TAX MAP: 43 / GRIDS 3 & 8 / PARCEL: 657 (B)(1) (F-11-084)
 ELECTION DISTRICT NO. 1 - HOWARD COUNTY, MARYLAND

DEVELOPER/OWNER: ATAPCO HOWARD SQUARE II STATUTORY TRUST
 10 E. Baltimore St. Suite 1600
 Baltimore, MD 21202
 (410) 347-7189

DATE: DECEMBER, 2013
 REVISED: AUGUST, 2014
 SCALE: AS SHOWN

LANDSCAPE PLAN
 BEI PROJECT NO. 2337
 SHEET 8 OF 8

