

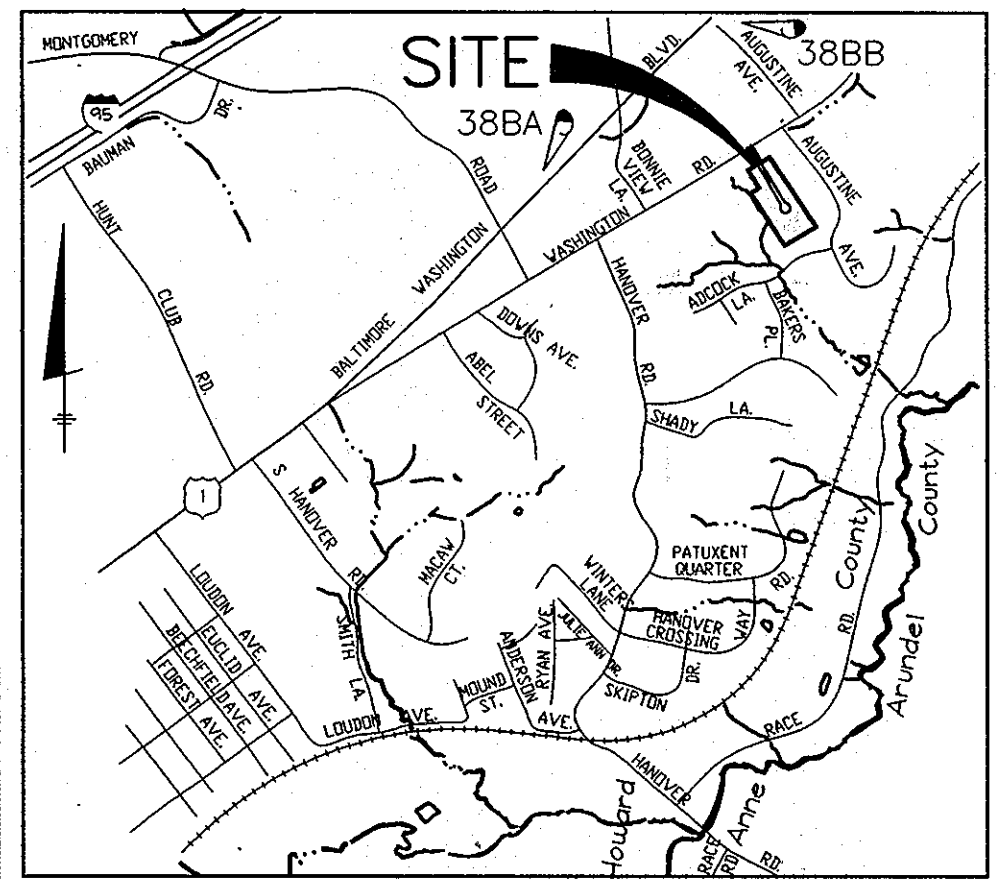
GENERAL NOTES

- THIS PROJECT IS IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE BEEN APPROVED.
- THE SUBJECT PROPERTY IS ZONED R-12 PER THE 2-2-2004 COMPREHENSIVE ZONING PLAN AND THE "COMP LITE" ZONING AMENDMENTS EFFECTIVE 7-28-2006.
- COORDINATES BASED ON NAD '83, MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS 388A AND 388B.
- TRACT BOUNDARY IS BASED ON A RECORD PLAT FOR CANNERY WOODS, LOTS 137-170, SECTION 2 AREA 2, PLAT NO. 8086 AND A PLAT PREPARED BY ROBERT H. VOGEL ENGINEERING, INC.
- THE EXISTING TOPOGRAPHY SHOWN IS BASED ON A FIELD RUN SURVEY BY ROBERT H. VOGEL ENGINEERING, INC. DATED AUGUST 2004 WITH 2-FOOT CONTOUR INTERVALS.
- A NOISE STUDY IS NOT REQUIRED FOR THIS PROJECT.
- AN APFO TRAFFIC STUDY WAS PREPARED BY MARS GROUP DATED JUNE 2004 AND WAS APPROVED ON MAY 2005 UNDER F-10-032.
- THIS PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT.
- WATER IS PUBLIC. THE CONTRACT NUMBER IS 14-4606-D.
- SEWER IS PUBLIC. THE CONTRACT NUMBER IS 14-4606-D.
- WATER AND SEWER SERVICE TO THESE LOTS WILL BE GRANTED UNDER THE PROVISIONS OF SECTION 18.122.B OF THE HOWARD COUNTY CODE.
- PUBLIC WATER AND SEWAGE ALLOCATIONS WILL BE GRANTED AT THE TIME OF ISSUANCE OF THE BUILDING PERMIT IF CAPACITY IS AVAILABLE AT THAT TIME.
- THERE IS NO WETLANDS, STREAMS, THEIR BUFFERS, 100-YEAR FLOODPLAIN OR STEEP SLOPES LOCATED ON THESE LOTS.
- TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO CEMETERY LOCATIONS ON THESE LOTS.
- THIS PROPERTY IS LOCATED IN HISTORIC DISTRICT #803 - OLD WASHINGTON ROAD SURVEY DISTRICT. SINCE THERE ARE NO STRUCTURES LOCATED ON SITE IT HAS BEEN DETERMINED BY THE HDC THAT THIS DEVELOPMENT WILL NOT REQUIRE ADVISORY COMMENTS BY THE HISTORIC DISTRICT COMMISSION.
- STORMWATER MANAGEMENT IS PROVIDED IN ACCORDANCE WITH THE 2000 MARYLAND STORMWATER DESIGN MANUAL AND APPROVED UNDER F-10-032. STORMWATER MANAGEMENT IS PROVIDED BY A MICROPOOL EXTENDED DETENTION FACILITY LOCATED ON OPEN SPACE LOT 4. THE FACILITY IS TO BE PRIVATELY OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION. ON LOT STORMWATER MANAGEMENT IS REQUIRED FOR LOTS 13-15. LOT 13 TO HAVE ONE RAINGARDEN AND LOTS 14, 15 AND 16 TO HAVE LEVEL SPREADERS AS APPROVED UNDER F-10-032.
- THIS DEVELOPMENT IS IN COMPLIANCE WITH THE REQUIREMENTS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING IN THE AMOUNT OF \$19,510.00 WAS POSTED AS PART OF THE DPW DEVELOPER'S AGREEMENT, F-10-032.
- THIS SUBDIVISION IS IN COMPLIANCE WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION ACT THROUGH THE ESTABLISHMENT ON-SITE (0.83 AC.) AND OFF-SITE (1.92 AC.) FOREST CONSERVATION EASEMENT AT THE TIME OF SUBDIVISION. FINANCIAL SURETY IN THE AMOUNT OF \$51,009.00 FOR THE REQUIRED FOREST CONSERVATION OBLIGATION WAS POSTED AS PART OF THE DPW DEVELOPER'S AGREEMENT, F-10-032, UNDER F-10-032.
- FOR FLAG OR PIPESTEM LOTS, REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE ARE PROVIDED TO THE JUNCTION OF THE FLAG OR PIPESTEM AND ROAD RIGHT OF WAY LINE AND NOT THE FLAG OR PIPESTEM LOT DRIVEWAY.
- DRIVEWAYS SHALL BE PROVIDED PRIOR TO RESIDENTIAL OCCUPANCY TO INSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:
 - WIDTH - 12' (16' SERVING MORE THAN ONE RESIDENCE).
 - SURFACE - 6" OF COMPACT CRUSHER RUN BASE WITH TAR AND CHIP COATING (1-1/2" MIN.).
 - GEOMETRY - MAXIMUM 15% GRADE, MAXIMUM 10% GRADE CHANGE AND MINIMUM 45' TURNING RADIUS.
 - STRUCTURES (CULVERTS/BRIDGES) - CAPABLE OF SUPPORTING 25 GROSS TONS (H25 LOADING).
 - DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100 YEAR FLOODPLAIN WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY.
 - STRUCTURE CLEARANCES - MINIMUM 12 FEET.
 - MAINTENANCE - SUFFICIENT TO INSURE ALL WEATHER USE.
- 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 ANY WORK.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION BEING DONE.
- A PRIVATE RANGE OF ADDRESS SIGN ASSEMBLY FOR THE FLAG LOT DRIVEWAY IN THE CUL-DE-SAC SHALL BE FABRICATED AND INSTALLED BY HOWARD COUNTY BUREAU OF HIGHWAYS AT THE DEVELOPERS/OWNERS EXPENSE WHERE NEEDED. CONTACT HOWARD COUNTY TRAFFIC DIVISION AT 410-313-5752 FOR DETAILS AND COST ESTIMATES.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.

SITE DEVELOPMENT PLAN PECORARO PROPERTY LOTS 1-3 AND 5-21 1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND (AUGUSTINE VALLEY)

BENCH MARKS NAD'83	
HO. CO. #388A N 562553.353 E 139097.866 HO. CO. #388B N 564007.678 E 1393649.835	ELEV. 166.124 ELEV. 63.607

ADDRESS CHART	
LOT	STREET ADDRESS
1	5911 LEBANON LANE
2	5915 LEBANON LANE
3	5919 LEBANON LANE
4	5923 LEBANON LANE
5	5927 LEBANON LANE
6	5931 LEBANON LANE
7	5935 LEBANON LANE
8	5939 LEBANON LANE
9	5943 LEBANON LANE
10	5947 LEBANON LANE
11	5951 LEBANON LANE
12	5955 LEBANON LANE
13	5959 LEBANON LANE
14	5963 LEBANON LANE
15	5967 LEBANON LANE
16	5971 LEBANON LANE
17	5975 LEBANON LANE
18	5979 LEBANON LANE
19	5983 LEBANON LANE
20	5987 LEBANON LANE
21	5991 LEBANON LANE



VICINITY MAP
SCALE: 1"=2000'
ADC MAP COORDINATE= 4937, E7 & F7

LEGEND

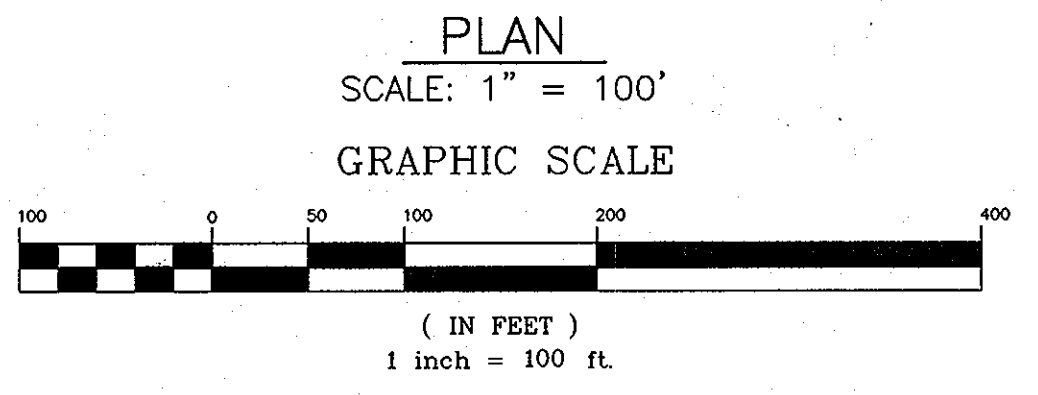
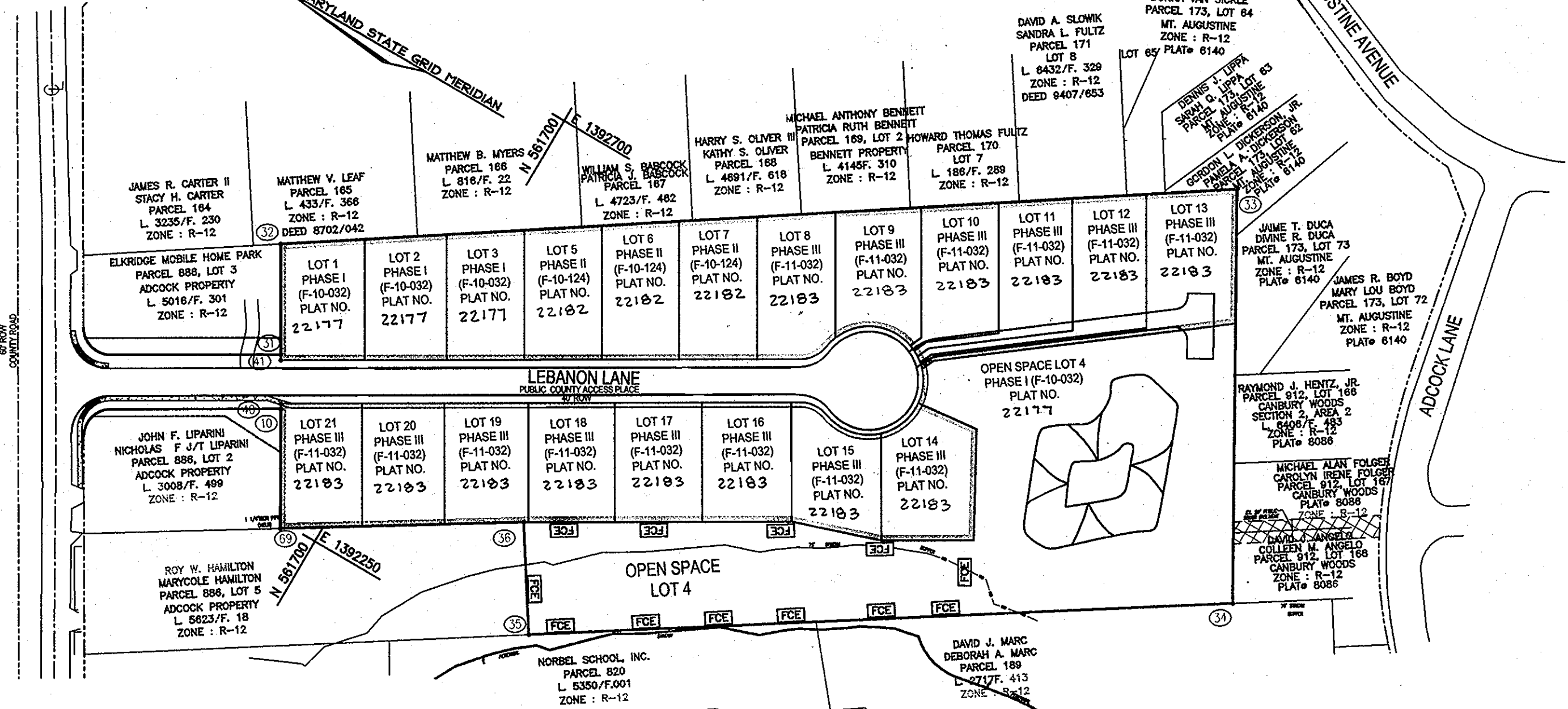
- EXISTING CONTOURS: 110, 108, 106, 104, 102, 100
- PROPOSED CONTOURS: 110, 108, 106, 104, 102, 100
- EXISTING WOODS LINE: [Symbol]
- EXISTING STRUCTURE: [Symbol]
- PROPOSED STRUCTURE: [Symbol]
- FOREST CONSERVATION EASEMENT: [Symbol]
- PUBLIC SEWER, WATER AND UTILITY EASEMENT: [Symbol]
- PRIVATE STORMDRAIN AND UTILITY EASEMENT: [Symbol]
- PRIVATE DRAINAGE, UTILITY AND RETAINING WALL EASEMENT: [Symbol]
- PUBLIC 6' SIDEWALK AND UTILITY EASEMENT: [Symbol]
- PRIVATE USE-IN-COMMON EASEMENT: [Symbol]
- EROSION CONTROL MATTING: [Symbol]
- RECREATIONAL OPEN SPACE: [Symbol]
- STABILIZED CONSTRUCTION ENTRANCE: [Symbol]
- SUPER SILT FENCE: [Symbol]
- SILT FENCE: [Symbol]
- EARTH DIKE: [Symbol]
- LIMIT OF DISTURBANCE: [Symbol]
- PERIMETER LANDSCAPING PER F-10-032: [Symbol]
- STREET TREES PER F-10-032: [Symbol]
- SOIL BOUNDARY: BcC2, ScE
- FOREST CONSERVATION EASEMENT SIGNAGE: FCE

COORDINATE LIST		
NO.	NORTH	EAST
10	561788.9416	1392339.2768
31	561814.3329	1392382.3381
32	561866.3687	1392470.577
33	561136.1074	1392958.0765
34	560945.7944	1392626.5017
35	561487.5476	1392275.1912
36	561543.8877	1392362.0728
40	561791.4542	1392343.5881
41	561811.7926	1392378.0315
69	561733.3538	1392244.1241

MINIMUM LOT SIZE CHART			
LOT #	GROSS AREA	PIPESTEM AREA	MINIMUM LOT SIZE
10	8,781 SF	77 SF	8,704 SF
11	8,889 SF	473 SF	8,416 SF
12	9,377 SF	865 SF	8,512 SF
13	11,759 SF	1,261 SF	10,498 SF

SITE ANALYSIS DATA CHART

- A) TOTAL PROJECT AREA: 7.22 AC.
- B) AREA OF THIS PLAN SUBMISSION: 4.12 AC.
- C) APPROXIMATE LIMIT OF DISTURBANCE: 3.66 AC.
- D) PRESENT ZONING: R-12 RESIDENTIAL SINGLE FAMILY DETACHED UNITS
- E) PROPOSED USE OF SITE: N/A
- F) FLOOR SPACE PER LOT: N/A
- G) TOTAL NUMBER OF UNITS ALLOWED AS SHOWN ON FINAL PLAT(S): 20
- H) TOTAL NUMBER OF UNITS PROPOSED: 20
- I) NUMBER OF PARKING SPACES REQUIRED BY HO. CO. ZONING REGULATIONS: N/A
- J) NUMBER OF PARKING SPACES PROVIDED: 40*
* TWO (2) PARKING SPACES ARE REQUIRED FOR EACH OF THE TWENTY (20) RESIDENTIAL DWELLING UNITS. THE PARKING REQUIREMENT HAS BEEN MET THROUGH THE USE OF GARAGE AND DRIVEWAY AREAS.
- K) OPEN SPACE ON-SITE: 2.25AC±
PERCENTAGE OF GROSS AREA: N/A
- L) AREA OF RECREATIONAL OPEN SPACE REQUIRED: 4,000 SF±
AREA OF RECREATIONAL OPEN SPACE PROVIDED: 4,700 SF± (F-10-032)
- M) APPLICABLE DPZ FILE REFERENCES: S-05-005, F-88-99, F-84-191, WP-05-75, GP-05-66, P-09-001, GP-11-041, F-10-032, CONTRACT NO. 14-4806-D, F-73-152, F-10-124, F-11-032, WP-10-168, WP-12-053, WP-12-150, WP-10-156.
- N) PROPOSED WATER AND SEWER SYSTEMS: PUBLIC PRIVATE



- THIS PLAN IS SUBJECT TO WP-10-056 TO WAIVE SECTION 16.144(g) OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS WHICH STATES THAT IF A SKETCH PLAN IS APPROVED, THE DEVELOPER SHALL SUBMIT TO THE DEPARTMENT OF PLANNING AND ZONING A PRELIMINARY PLAN IN ACCORDANCE WITH THE APPROVED SKETCH PLAN AND THE REQUIREMENTS OF SECTION 16.146 WITHIN THE SPECIFIC TIME PERIOD; AND SECTION 16.146, WHICH OUTLINES THE PRELIMINARY PLAN REQUIREMENTS SUBJECT TO THE FOLLOWING:
 - THE FINAL PLAN FOR PHASE II SUBMISSION SHALL OCCUR BETWEEN JANUARY 4, 2010 AND JULY 30, 2010.
 - THE FINAL PLAN FOR PHASE III SHALL MEET THE SUBDIVISION SCHEDULE OUTLINED UNDER S-05-005, WITH THE PHASE III FINAL PLAN SUBMISSION OCCURRING BETWEEN JULY 1, 2010 AND NOVEMBER 1, 2010.
- OPEN SPACE LOT 4 HAS BEEN DEDICATED TO THE HOMEOWNERS ASSOCIATION FOR THE RESIDENCE OF THIS SUBDIVISION.
- HOMEOWNERS ASSOCIATION ARTICLES OF INCORPORATION AND RESTRICTIONS ARE RECORDED AMONG THE LAND RECORDS OF HOWARD COUNTY, MARYLAND AS DEPT. ID# 01401901.
- PROTECTIVE COVENANTS INCLUDING COVENANTS GOVERNING THE MAINTENANCE OF COMMUNITY OWNED OPEN SPACE AND FOREST CONSERVATION AREAS ARE RECORDED AMONG THE LAND RECORDS OF HOWARD COUNTY, MARYLAND IN LIBER 14537 FOLIO 413.
- AS OF JULY 9, 2010 THIS PLAN IS SUBJECT TO WP-10-168 TO WAIVE SECTION 16.144(c) OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS WHICH STATES THAT WITHIN 60 DAYS OF RECEIVING APPROVAL OF THE FINAL PLAN THE DEVELOPER SHALL SUBMIT THE FINAL CONSTRUCTION DRAWING ORIGINALS TO THE DEPARTMENT OF PLANNING AND ZONING FOR SIGNATURE. IF A SUBDIVISION HAS A FOREST CONSERVATION OBLIGATION, THE FINAL FOREST CONSERVATION PLAN SHALL BE SUBMITTED WITHIN 60 DAYS; AND SECTION 16.144(d), WHICH STATES THAT WITHIN 120 DAYS OF RECEIVING APPROVAL OF THE FINAL PLAN THE DEVELOPER SHALL PAY ALL REQUIRED FEES TO THE COUNTY, AND, IF SUBJECT TO A DEVELOPERS AGREEMENT OR MAJOR FACILITY AGREEMENT, SHALL POST ALL MONIES AND FILE APPROPRIATE SURETY COVERING THE DEVELOPER'S FINANCIAL OBLIGATIONS FOR THE REQUIRED PUBLIC OR PRIVATE IMPROVEMENTS, AND SECTION 16.144(g) WHICH STATES THAT WITHIN 180 DAYS OF FINAL PLAN APPROVAL THE DEVELOPER SHALL SUBMIT THE FINAL SUBDIVISION PLAN TO THE DEPARTMENT OF PLANNING AND ZONING FOR SIGNATURES AND RECORDATION. APPROVAL IS SUBJECT TO THE FOLLOWING:
 - THE ROAD CONSTRUCTION PLAN ORIGINALS MUST BE SUBMITTED FOR SIGNATURE WITHIN 60 DAYS OF THE JUNE 30, 2010 EXPIRATION OF STATE HOUSE BILL 921 (ON AUGUST 29, 2010).
 - THE DEVELOPER'S AGREEMENT MUST BE SUBMITTED FOR PROCESSING, ALL MONIES POSTED, AND ALL SURETIES POSTED WITHIN 120 DAYS OF THE EXPIRATION OF STATE HOUSE BILL 921 (ON OR BEFORE OCTOBER 28, 2010).
 - THE FINAL PLAN MUST BE SUBMITTED FOR RECORDATION WITHIN 180 DAYS OF JUNE 30, 2010 EXPIRATION OF STATE HOUSE BILL 921 (ON OR BEFORE DECEMBER 27, 2010).
 - THE DIRECT CURRENTLY REQUESTED PLAN APPROVAL APPLICATION TO DPZ FOR PROCESSING F-10-032 MUST BE SUBMITTED WITHIN 2 WEEKS OF APPROVAL OF THIS WAIVER PETITION (ON OR BEFORE JULY 23, 2010).
 - ALL SRC COMMENTS BASED ON THE DIRECT SUBMISSIONS TO DIVISION OF LAND DEVELOPMENT MUST BE ADDRESSED.
 - STATE BILL HB-921, WHICH HAS BEEN IN EFFECT FOR "TOLLING" THE DEADLINE FOR DEVELOPMENT PLANS IN THE APPROVAL PROCESS EXPIRED ON JUNE 30, 2010. BE ADVISED THAT ANY ADDITIONAL REQUESTS FOR PLAN APPROVAL EXTENSIONS WILL REQUIRE THE SUBMISSION OF A NEW WAIVER PETITION APPLICATION TO DPZ FOR PROCESSING.
- AS OF NOVEMBER 8, 2011 THIS PLAN IS SUBJECT TO WP-12-053 SECTION 16.144(g) OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS WHICH STATES THAT WITHIN 180 DAYS OF FINAL PLAN APPROVAL, THE DEVELOPER SHALL SUBMIT THE FINAL FINAL SUBDIVISION PLAN TO THE DEPARTMENT OF PLANNING AND ZONING FOR SIGNATURES AND RECORDATION. APPROVAL IS SUBJECT TO THE FOLLOWING:
 - THE FINAL PLAT FOR PHASE I, F-10-032, MUST BE SUBMITTED FOR RECORDATION WITHIN 6 MONTHS OF THE CURRENT DEADLINE (ON OR BEFORE APRIL 8, 2012)
 - ALL SRC COMMENTS FOR THE PLAT MUST BE ADDRESSED.
- AS OF MAY 14, 2012 THIS PLAN IS SUBJECT TO WP-12-150 TO WAIVE SECTION 16.144(g) WHICH STATES THAT WITHIN 180 DAYS OF FINAL PLAN APPROVAL, THE DEVELOPER SHALL SUBMIT THE FINAL FINAL SUBDIVISION PLAN TO THE DEPARTMENT OF PLANNING AND ZONING FOR SIGNATURES AND RECORDATION. APPROVAL IS SUBJECT TO THE FOLLOWING:
 - THE FINAL PLAT FOR PHASE I, F-10-032, MUST BE SUBMITTED FOR RECORDATION WITHIN 6 MONTHS OF THE CURRENT DEADLINE (ON OR BEFORE OCTOBER 5, 2012).
 - THE FINAL PLAT FOR PHASE II, F-10-124, MUST BE SUBMITTED FOR RECORDATION WITHIN 1 YEAR OF THE CURRENT DEADLINE (ON OR BEFORE MARCH 26, 2013).
 - THE FINAL PLAT FOR PHASE III, F-11-032, MUST BE SUBMITTED FOR RECORDATION WITHIN 1 YEAR OF THE CURRENT DEADLINE (ON OR BEFORE OCTOBER 4, 2013).
 - ALL SRC COMMENTS FOR THE PLATS MUST BE ADDRESSED.
 - F-10-032, F-10-124 AND F-11-032 ARE SUBJECT TO THE ATTACHED COMMENTS FROM DEED.
- THE STAKING OF FOUNDATIONS PRIOR TO CONSTRUCTION TO ENSURE COMPLIANCE WITH REGULATORY BUILDING RESTRICTIONS IS RECOMMENDED.

SHEET INDEX	
NO.	DESCRIPTION
1	TITLE SHEET
2	LAYOUT PLAN
3	GRADING, SEDIMENT AND EROSION CONTROL PLAN
4	SEDIMENT AND EROSION CONTROL NOTES AND DETAILS
5	HCS/CD/MAA SEDIMENT AND EROSION CONTROL NOTES AND DETAILS

PERMIT INFORMATION CHART				
SUBDIVISION NAME:	SECTION/AREA:	LOT/PARCEL #	TAX MAP	ELECTION DISTRICT
PECORARO PROPERTY	SECTIONS 1-3	LOTS 1-3 AND 5-21	38	1st
PLAT No. 22176-22178				
22182-PH2				
22183-PH3				
				CENSUS TRACT 801201

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 10/2/12
CHIEF, DIVISION OF LAND DEVELOPMENT

[Signature] 10/2/12
CHIEF, DEVELOPMENT ENGINEERING DIVISION

[Signature] 10/2/12
DIRECTOR

2 9-30-13 ADD GENERAL NOTE # 39 REFERRING SECTION 128 OF HO. CO. ZONING REGULATIONS

1 4-29-13 REVISE OWNER/BUILDER

NO.	DATE	REVISION

BENCHMARK ENGINEERING, INC.
ENGINEERS & LAND SURVEYORS & PLANNERS
8400 BALTIMORE NATIONAL PIKE & SUITE 418 & ELLICOTT CITY, MARYLAND 21043
(P) 410-465-6105 (F) 410-465-6644
60 THOMAS JOHNSON DRIVE & FREDERICK, MARYLAND 21702
(P) 301-371-3206 (F) 301-371-3209
WWW.BE1-CIVILENGINEERING.COM

Professional Certification: I hereby certify that these documents 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. 28858 Expiration Date: 7/25/2012

[Signature] 11/27/2012

PROJECT: PECORARO PROPERTY (AUGUSTINE VALLEY) PHASES 1-11 LOTS 1-3 AND 5-21

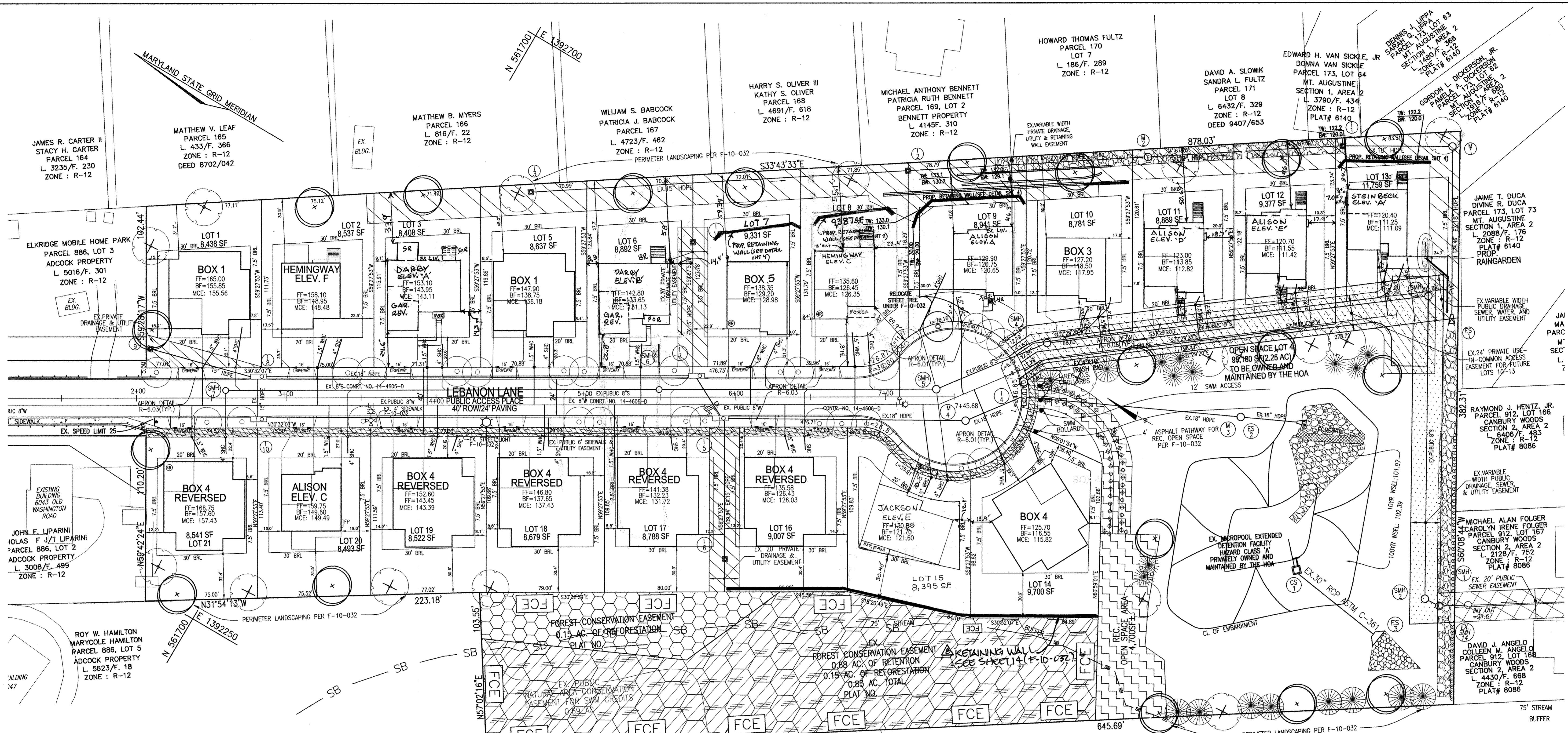
LOCATION: TAX MAP 38 - GRID 9 PARCEL P/O 886 1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND

OWNER/BUILDER: RICHMOND AMERICAN HOMES 6210 OLD DOBBIN LANE SUITE 190 COLUMBIA, MARYLAND 21045 410-312-2827

TITLE: SITE DEVELOPMENT PLAN SINGLE FAMILY DWELLINGS TITLE SHEET

DATE: JULY 2012 PROJECT NO. 24-18
NOVEMBER 2012

SCALE: AS SHOWN DRAWING 1 OF 5



Note:
 PER HOWARD COUNTY ZONING REGULATION 133.C.4 INDIVIDUAL HOUSE SITES SHALL PROVIDE THAT DRIVEWAYS HAVE A MINIMUM 18 FOOT DEPTH FROM THE FACE OF GARAGE TO THE EDGE OF THE SIDEWALK OR EDGE OF THE ROADWAY PAVEMENT SO A CAR, IF PARKED IN THE DRIVEWAY, WILL NOT OVERHANG INTO THE SIDEWALK OR ROADWAY. THE SHARED USE-IN-COMMON DRIVEWAY SHALL PROVIDE ADEQUATE UNOBSTRUCTED ACCESS TO ALL DWELLINGS AT ALL TIMES.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 [Signature] 5/14/13
 CHIEF, DIVISION OF LAND DEVELOPMENT
 [Signature] 5/14/13
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 [Signature] 5/14/13
 DIRECTOR

NO.	DATE	REVISION
1	5.24.12	ADD RETAINING WALL LOTS 14-16; LEVEL SPREADER
2	5.28.12	ADD HEMINGWAY MOBILE HOME TO LOT 8
3	6.13.12	REVISE BOX 2 ON LOTS 17 & 18 TO SHOW ALISON ELEV. D; LOT 12 TO SHOW ALISON ELEV. E; AND LOT 13 TO SHOW STEIN BECK ELEV. A
4	7.16.12	REVISE LOT 15 TO SHOW JACKSON ELEV. E; & REVISE GRADES & F.C. ELEV.
5	7.16.12	REVISE LOT 3 TO SHOW DARYBY ELEV. A; & LOT 4 TO SHOW DARYBY ELEV. B; & REVISE GRADES
6	8.13.12	REVISE LOT 3 TO SHOW ALISON ELEV. C

THE PURPOSE OF THIS SHEET IS TO REPLACE APPROVED SHEET 2 OF THE SET.

NO.	DATE	REVISION
2	4.27.13	REVISE HOUSE TYPES, LOCATIONS AND GRADING
1	3.7.13	ADD HEMINGWAY TO LOT 2 AND ALISON TO LOT 20.

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
 75 THOMAS JOHNSON DRIVE SUITE E • FREDERICK, MARYLAND 21702
 301-710-5686
 WWW.BE-CVLENGINEERING.COM

OWNER/BUILDER: RICHMOND AMERICAN HOMES
 6210 OLD DOBBIN LANE, STE. 190
 COLUMBIA, MARYLAND 21045
 PHONE: 410-312-2837

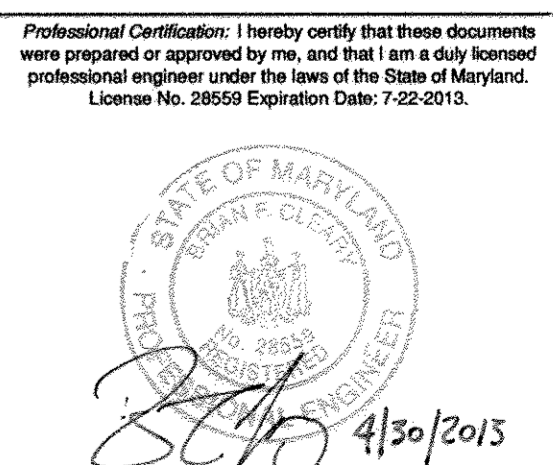
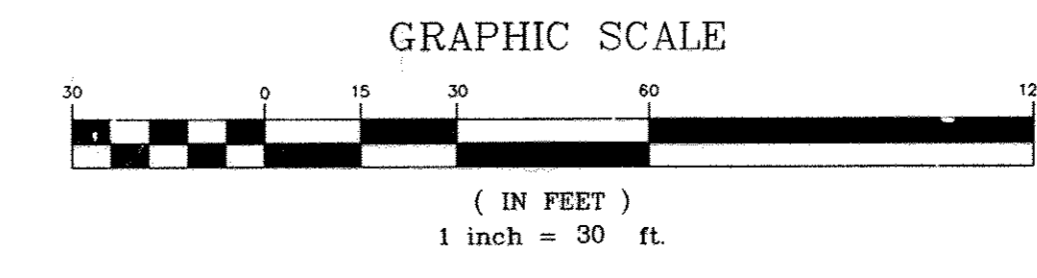
PROJECT: PECORARO PROPERTY (AUGUSTINE VALLEY)
 PHASES I - III
 LOTS 1-3 AND 5-21

LOCATION: TAX MAP 38 - GRID 9
 PARCEL P/O 886
 14th ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

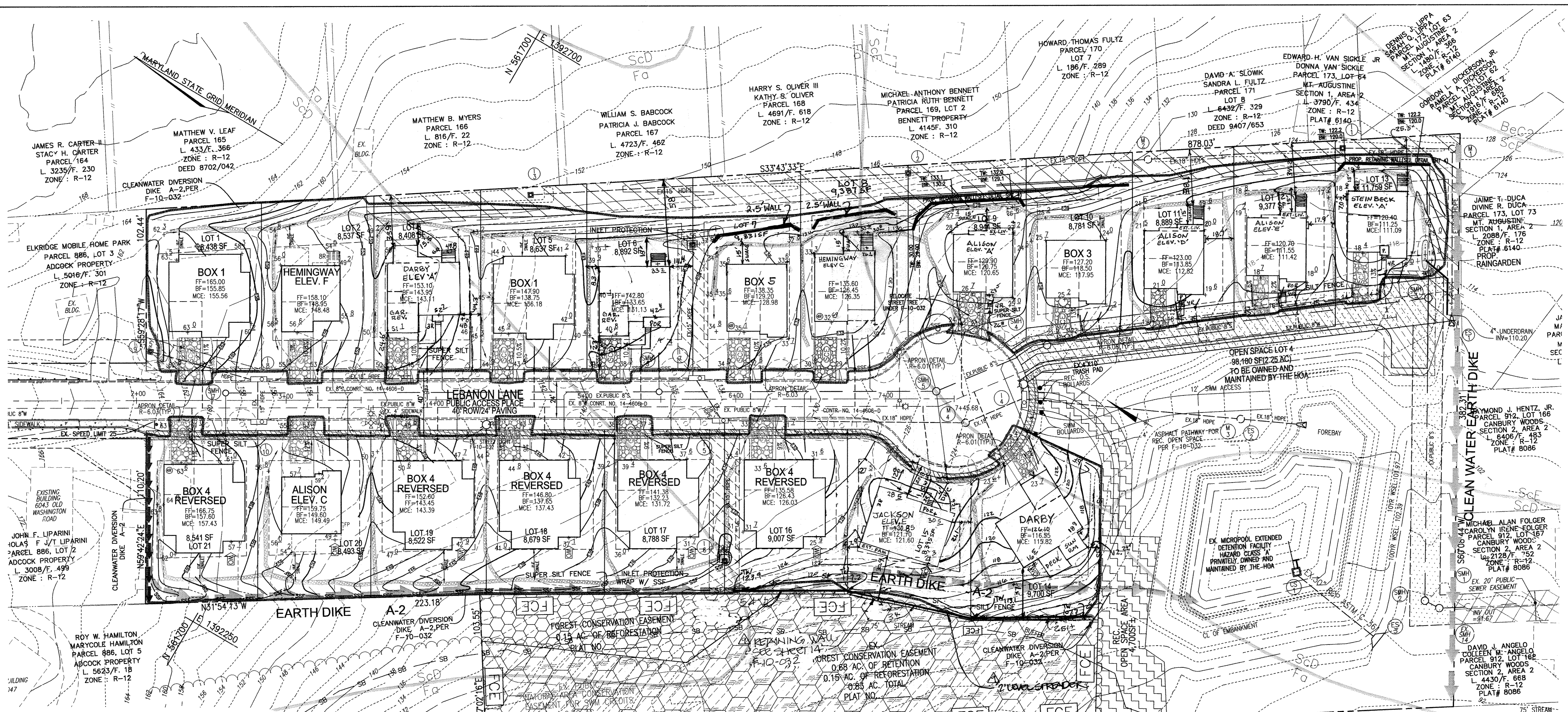
TITLE: REVISED SITE DEVELOPMENT PLAN SINGLE FAMILY DWELLINGS LAYOUT PLAN

DATE: JUNE 2012 PROJECT NO. 2418
 APRIL 2013

SCALE: 1"=30' DRAWING 2 OF 5



DAVID J. MARC
 DEBORAH A. MARC
 PARCEL 189
 L. 2717F. 413
 ZONE : R-12



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.
 ENGINEER: *[Signature]* DATE: 4/30/2013

DEVELOPER'S CERTIFICATE
 I HEREBY 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.
 DEVELOPER: *[Signature]* DATE: 5/13/13

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS
 HOWARD SCD: *[Signature]* DATE: 5/2/13

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DIVISION OF LAND DEVELOPMENT: *[Signature]* DATE: 5/14/13

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DEVELOPMENT ENGINEERING DIVISION: *[Signature]* DATE: 5/16/13

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 DIRECTOR: *[Signature]* DATE: 5/18/13

NOTES:

- STOCKPILING IS ONLY PERMITTED ON EACH LOT UNDER CONSTRUCTION.
- THE CONTRACTOR IS RESPONSIBLE FOR PUMPING ALL STANDING WATER FROM EXCAVATED AREAS THAT REMAIN FOR 24 HOURS AFTER A 1 OR 2 YEAR STORM EVENT OR 48 HOURS AFTER A 10 YEAR STORM EVENT.

SOILS LEGEND

SYMBOL	NAME/DESCRIPTION	GROUP
Bc2	BELTSVILLE SILT LOAM, 5 TO 10 PERCENT SLOPES, MODERATELY ERODED	C
Fa	FALLSINGTON LOAM	C
Md	MADE LAND	C
ScD	SANDY AND CLAYEY LAND, MODERATELY SLOPING	C
ScE	SANDY AND CLAYEY LAND, MODERATELY STEEP	C

REVISIONS

NO.	DATE	REVISION
1	5-24-13	ADD RETAINING WALL & LEVEL STRENGTH LOTS 14-16
2	3-28-14	ADD HEMINGWAY MODEL TO LOT 8
3	4/12/13	SHOW LOT 14 AS-BUILT GRADES
4	9-30-13	REVISE BOX 2 ON LOTS 17 & 18 TO BOX 5. REVISE LOT 17 TO SHOW ALISON ELEV. 'A' & HEMINGWAY ELEV. 'C'. REVISE LOT 18 TO SHOW DARBY ELEV. 'A' & HEMINGWAY ELEV. 'C'.
5	8-2-13	REVISE LOT 15 TO SHOW JACKSON ELEV. 'E' & REVISE GRADES & FF ELEV.
6	7-16-13	REVISE LOT 3 TO SHOW DARBY ELEV. 'A' & REVISE LOT 10 TO SHOW DARBY ELEV. 'C'.
7	6-13-13	REVISE LOT 9 TO SHOW ALISON ELEV. 'A'
8	DATE	REVISION

H-5 STANDARDS AND SPECIFICATIONS FOR DUST CONTROL

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 treatment.

Specifications:

- Mulches: See Section B-4-2 Soil Preparation, Topping, 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, silt fences, snow fences, brush 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.

GRAPHIC SCALE
 (IN FEET)
 1 inch = 30 ft

THE PURPOSE OF THIS SHEET IS TO REPLACE APPROVED SHEET 3 OF THE SET.

NO.	DATE	REVISION
1	4.29.13	REVISE HOUSE TYPES, LOCATIONS AND GRADING.
2	3.7.13	ADD HEMINGWAY TO LOT 2 AND ALISON TO LOT 20.

BENCHMARK ENGINEERING, INC.
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 75 THOMAS JOHNSON DRIVE & SUITE E FREDERICK, MARYLAND 21702
 301-710-5688
 WWW.BE-CIVILENGINEERING.COM

OWNER/BUILDER:
 RICHMOND AMERICAN HOMES
 6210 OLD DOBBIN LANE, STE. 190
 COLUMBIA, MARYLAND 21045
 PHONE: 410-312-2837

PROJECT:
 PECORARO PROPERTY (AUGUSTINE VALLEY)
 PHASES I - III
 LOTS 1-3 AND 5-21

LOCATION:
 TAX MAP 38 - GRID 9
 PARCEL P/O 886
 1st ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE:
 REVISED SITE DEVELOPMENT PLAN
 SINGLE FAMILY DWELLINGS GRADING
 SEDIMENT AND EROSION CONTROL PLAN

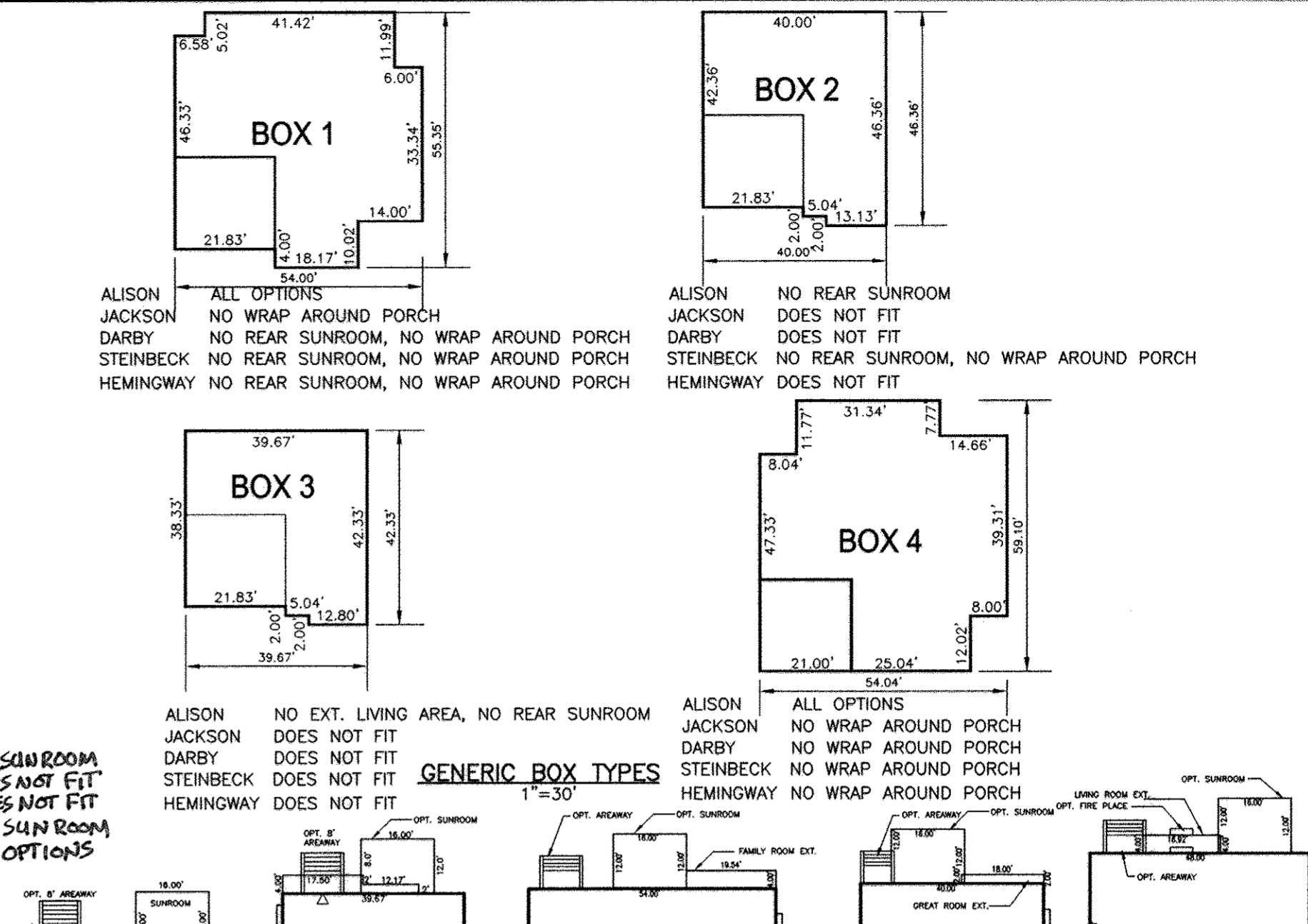
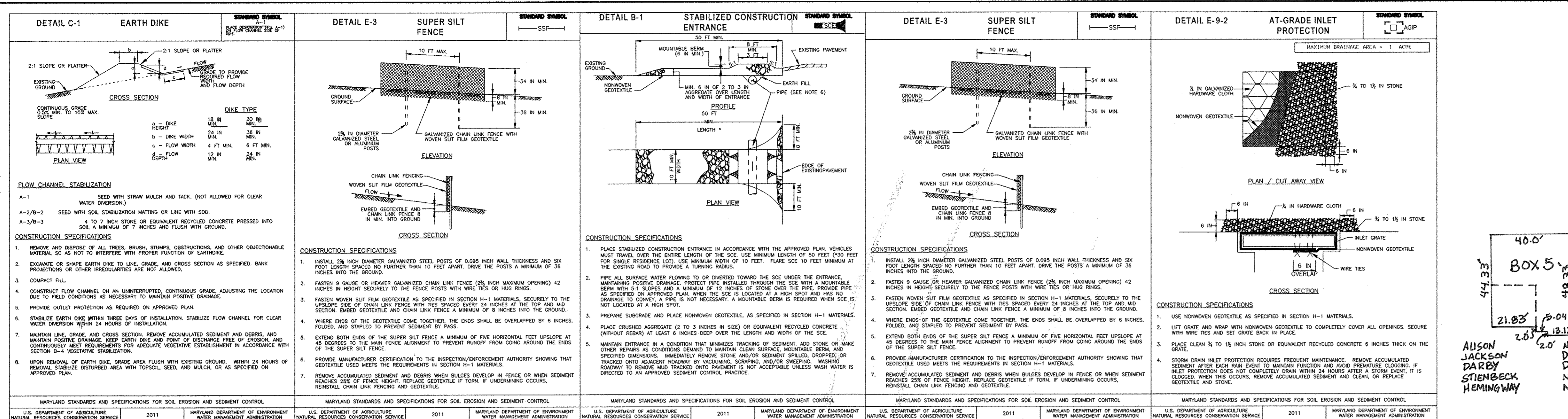
DATE: JUNE 2012
 APRIL 2013

PROJECT NO.: 2418

SCALE: 1"=30'
 DRAWING 3 OF 5

Professional Certification: I hereby certify that these documents 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. 28659 Expiration Date: 7-22-2015.

[Signature] 4/30/2013



SEDIMENT CONTROL NOTES

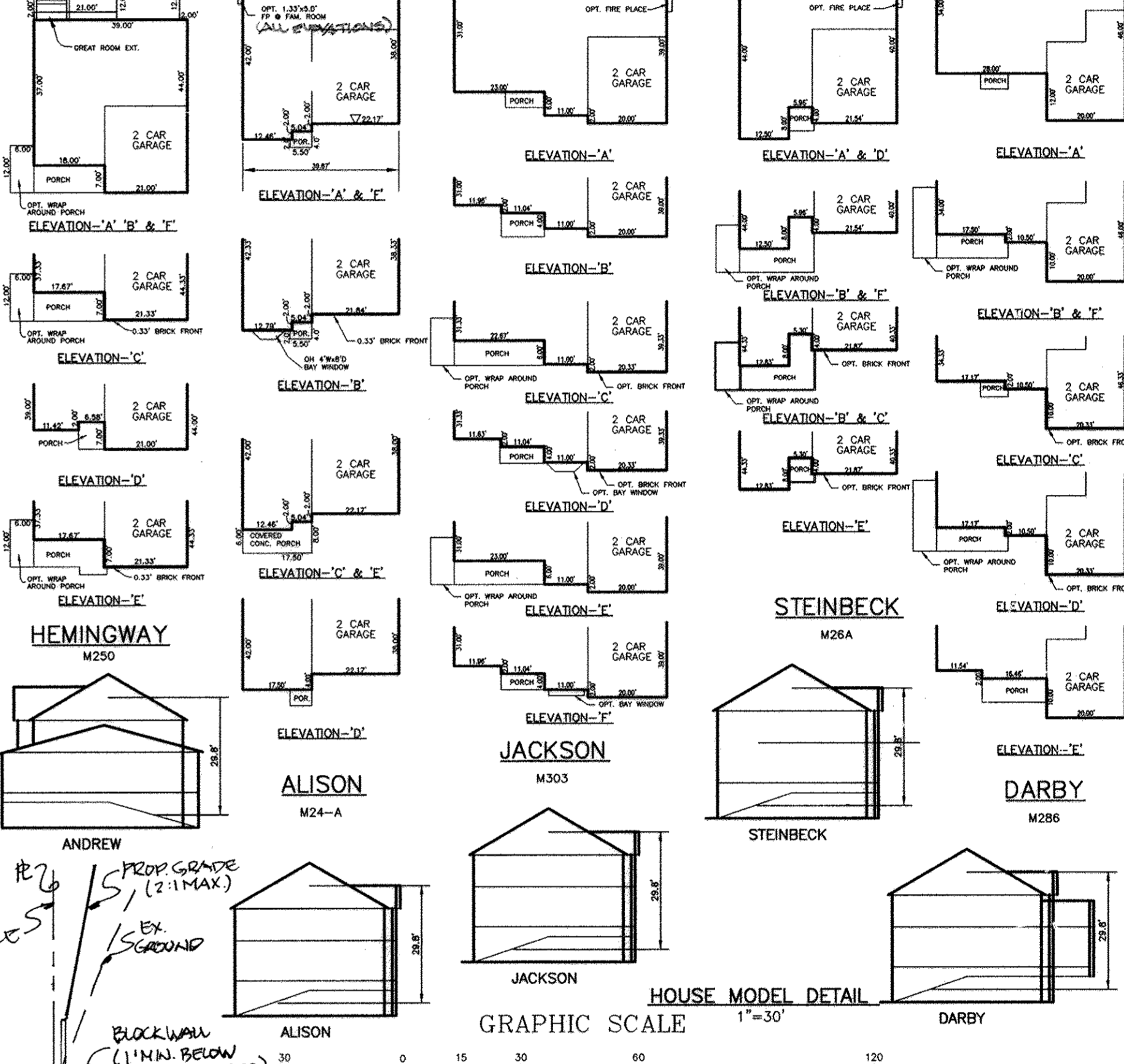
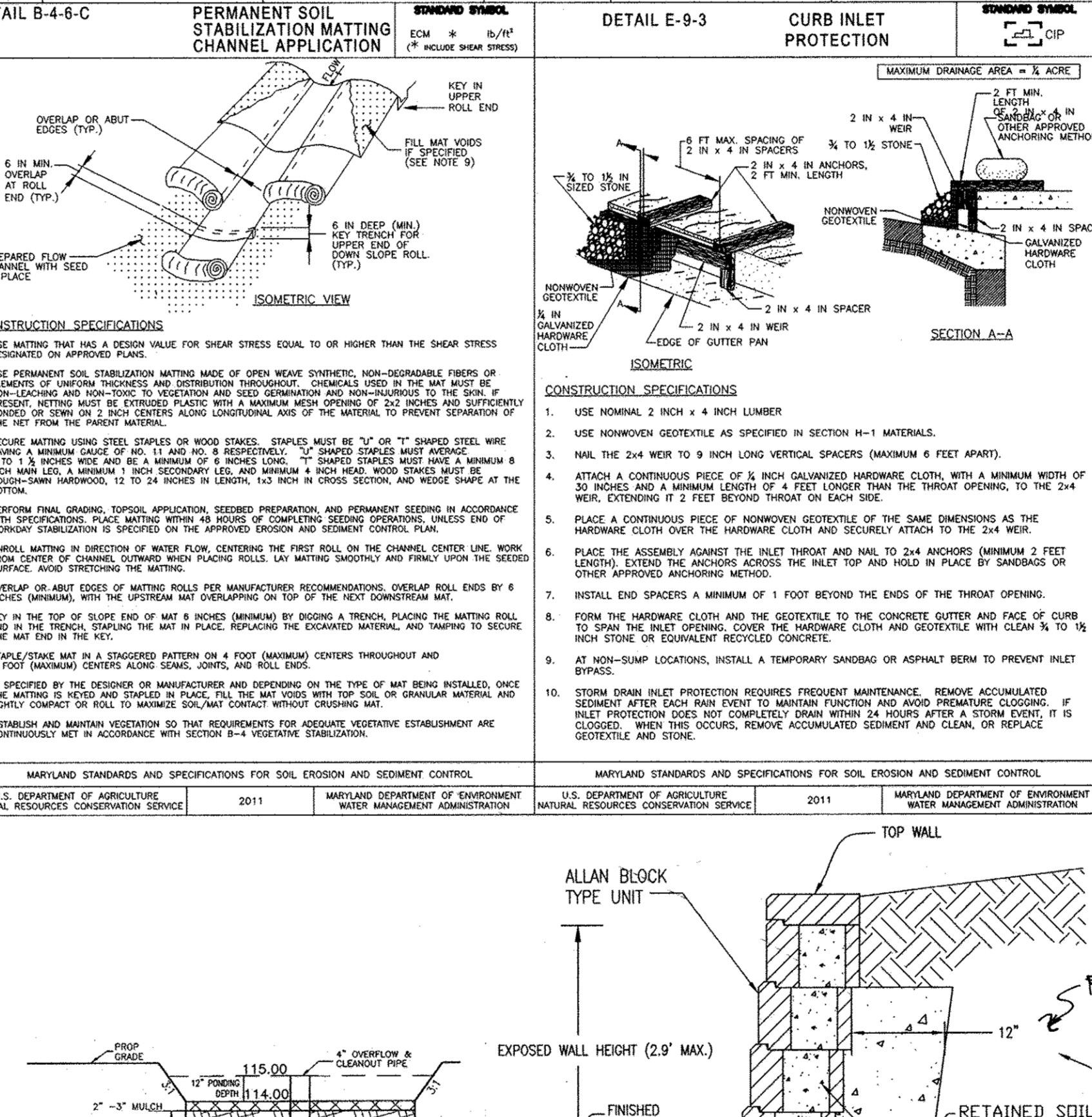
- A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTION, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION, (1313-1850).
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATION FOR SOIL EROSION AND SEDIMENT CONTROL, REVISIONS THERETO.
- FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN A 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1, BY 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL SEDIMENT TRAPS/BASINS SHOWN 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 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDINGS (SEC. 51) SOD (SEC. 54), TEMPORARY SEEDING (SEC. 50) AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMITS FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS:

TOTAL AREA OF SITE (THIS SUBMISSION)	4.12 ACRES
AREA DISTURBED	3.66 ACRES
AREA TO BE ROOFED OR PAVED	1.39 ACRES
AREA TO BE VEGETATIVELY STABILIZED	2.27 ACRES
TOTAL CUT	3272 CY
TOTAL FILL	5302 CY
- 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 UPON COMPLETION OF INSTALLATION OF PERIMETER 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.

B-4-3 STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING
 Definition: To stabilize disturbed soils with vegetation for up to 6 months.
 Purpose: 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.

B-4-4 STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION
 Definition: To stabilize disturbed soils with vegetation for up to 6 months.
 Purpose: To use fast growing vegetation that provides cover on disturbed soils.
 Conditions Where Practice Applies: 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.

B-4-5 STANDARDS AND SPECIFICATIONS FOR 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 6 months or more.



ENGINEER'S CERTIFICATE
 I HEREBY CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A TECHNICAL 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.
 ENGINEER: [Signature] DATE: 4/30/2013

DEVELOPER'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.
 DEVELOPER: [Signature] DATE: 5/13/13

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS
 HOWARD SCD: [Signature] DATE: 5/21/13

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DIVISION OF LAND DEVELOPMENT: [Signature] DATE: 5/14/13
 CHIEF, DEVELOPMENT ENGINEERING DIVISION: [Signature] DATE: 5/10/13
 DIRECTOR: [Signature] DATE: 5/14/13

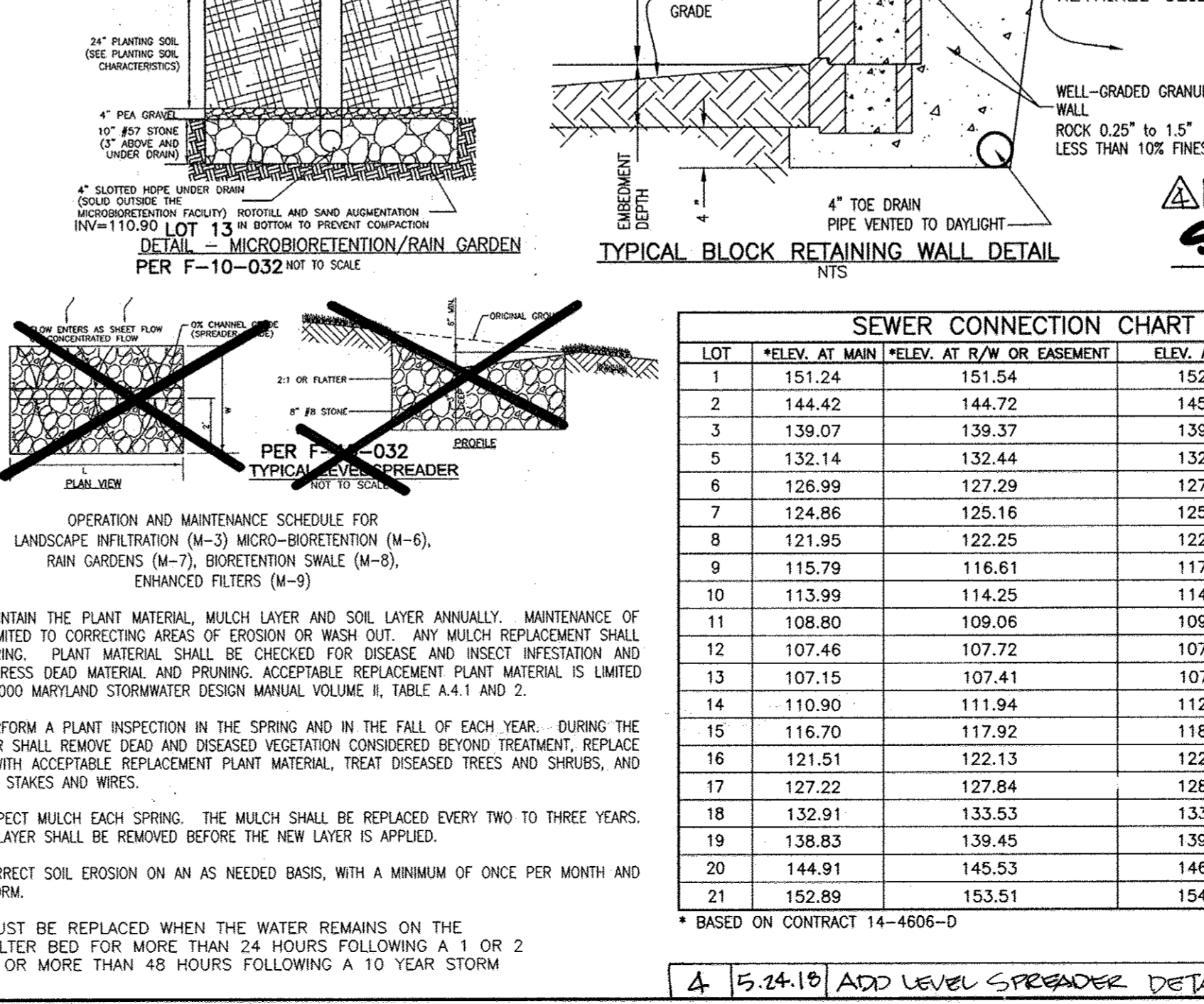
SEQUENCE OF CONSTRUCTION
 NOTIFY SEDIMENT CONTROL DIVISION 48 HOUR PRIOR TO START OF CONSTRUCTION

- 0.1 OBTAIN GRADING PERMIT. DAY 1
- 0.2 INSTALL SEDIMENT CONTROLS THAT ARE INCLUDED UNDER THIS SDP. DAY 2-6
- 0.3 EXCAVATE FOR FOUNDATIONS, ROUGH GRADE AND STABILIZE IN ACCORDANCE WITH TEMPORARY SEEDBED NOTES. DAY 7-10*
- 0.4 CONSTRUCT HOUSES, BACKFILL AND CONSTRUCT DRIVEWAYS. DAY 11-80*
- 0.5 FINAL GRADE AND STABILIZE IN ACCORDANCE WITH PERMANENT SEEDBED DAY 81-86 NOTES. CONSTRUCT ON LOT STORMWATER MANAGEMENT FACILITIES AND STABILIZE DISTURBED AREAS. DAY 87-90
- 0.6 WITH THE APPROVAL OF THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROL DEVICES AND STABILIZE ANY REMAINING DISTURBED AREAS.
 - * INDICATES SINGLE HOUSE CONSTRUCTION.

PER F-10-032
 OPERATION AND MAINTENANCE SCHEDULES FOR LANDSCAPE INFILTRATION (M-3), MICROBIOTENTATION RAIN GARDENS (M-7), BIOTENTATION SWALE (M-8), ENHANCED FILTERS (M-5)

PER F-10-032
 OPERATION AND MAINTENANCE SCHEDULES FOR LANDSCAPE INFILTRATION (M-3), MICROBIOTENTATION RAIN GARDENS (M-7), BIOTENTATION SWALE (M-8), ENHANCED FILTERS (M-5)

PER F-10-032
 OPERATION AND MAINTENANCE SCHEDULES FOR LANDSCAPE INFILTRATION (M-3), MICROBIOTENTATION RAIN GARDENS (M-7), BIOTENTATION SWALE (M-8), ENHANCED FILTERS (M-5)



THE PURPOSE OF THIS SHEET IS TO REPLACE APPROVED SHEET 4 OF THE SET.

3	4-30-13	ADD BOX 5 TO PLAN SHEET	
2	4.29.13	REVISE HOUSE TYPES, LOCATIONS AND GRADING	
NO.	DATE	REVISION	

BENCHMARK ENGINEERING, INC.
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 301-710-5686
 WWW.BEI-CIVLENGINEERS.COM

RICHMOND AMERICAN HOMES
 6210 OLD DOBBIN LANE, STE. 190
 COLUMBIA, MARYLAND 21045
 PHONE: 410-312-2837

OWNER/BUILDER: RICHMOND AMERICAN HOMES
PROJECT: PECORARO PROPERTY (AUGUSTINE VALLEY) PHASES I - III
LOCATIONS: TAX MAP 38 - GRID 9 PARCEL P/O 886 1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND
TITLE: REVISED SITE DEVELOPMENT PLAN SINGLE FAMILY DWELLINGS SEDIMENT CONTROL NOTES AND DETAILS
DATE: JUNE 2013 PROJECT NO. 2418
SCALE: AS SHOWN DRAWING 4 OF 5

HCSO/MAA VEGETATIVE ESTABLISHMENT DETAILS AND SPECIFICATIONS FOR PROJECTS WITHIN 4 MILES OF THE BWI AIRPORT July 1, 2004

References to ITEM #s noted below are found in Maryland Aviation Administration's manual entitled Specifications for Performing Landscaping Activities for the Maryland Aviation Administration dated May 2001.

- SOIL TESTS**
- Following initial soil disturbances or re-disturbance, permanent or temporary stabilization shall be completed within seven calendar days for the surface of all perimeter controls, ditches, swales, ditches, perimeter slopes, and all slopes greater than 3:1 horizontal to 1 vertical (3:1) and fourteen days for all other disturbed or graded areas on the project site.
 - Occurrence of acid sulfate soils (grayish black color) will require covering with a minimum of 12 inches of clean soil with 6 inches minimum capping of top soil. No stockpiling of material is allowed. If needed, soil tests should be done before and after a 6-week incubation period to allow oxidation of sulfates.
 - The minimum soil conditions required for permanent vegetative establishment are:
 - Soil pH shall be between 6.0 and 7.0.
 - Soil soluble salts shall be less than 500 parts per million (ppm).
 - The soil shall contain less than 40% clay but enough fine grained material (> 30% silt plus clay) to provide the capacity to hold a moderate amount of moisture.
 - Soil shall contain 1.5% minimum organic matter by weight.
 - Soil must contain sufficient pore space to permit adequate root penetration.
- If these conditions cannot be met by soils on site, adding topsoil is required in accordance ITEM 901 or amendments made as recommended by a certified agronomist.

SEEDING ITEM 903 SEEDING DESCRIPTION

903-1.1 GENERAL. This item provides specifications for seeding of areas as designated on plans or as directed by the MAA Engineer. The species, mixtures, and methods of application provided in this item have been designed to reduce the attractiveness of airport grounds to wildlife. Only MAA-approved species, mixtures, and rates of application provided in this item may be used to establish vegetation. All activities associated with seeding including soil preparation, seed application, fertilization, and maintenance shall also conform to these approved standards.

MATERIALS

903-2.1 SEED. All seed shall comply with the Maryland Seed Law (Agricultural Article of the Annotated Code of Maryland). Only MAA-approved species, mixtures, and methods of application provided in this item may be used to establish vegetation. Seed will be sampled and tested by an inspector from the Turf and Seed Section, Maryland Department of Agriculture (MDA), Annapolis, Maryland. All lawn and turf seed and mixtures shall be free from the following state-listed restricted noxious weeds:

- corn cockle (*Agrostemma githago*),
- benzoin (*Agrostis sp.*),
- redtop (*Agrostis gigantea*),
- wild onion (*Allium canadense*),
- wild garlic (*Allium vineale*),
- birdweed (*Calystegia spp.*),
- dogbane (*Conium maculatum*),
- Bermuda grass (*Cynodon dactylon*),
- orchardgrass (*Dactylis glomerata*),
- tall fescue (*Festuca arundinacea*),
- meadow fescue (*Festuca pratensis*),
- velvetgrass (*Holcus lanatus*),
- annual bluegrass (*Poa annua*),
- rough bluegrass (*Poa trivialis*),
- timothy (*Phleum pratense*),
- Johnson grass (*Sorghum halepense*).

Restricted noxious-weed seed may not exceed 0.5 percent by weight of any seed mixture. In addition, all seeds sold in Maryland shall be free from the following listed prohibited noxious weeds: balloonvine (*Cardiospermum halicacabum*), quackgrass (*Elytrigia repens*), sicklepod (*Senna obtusifolia*), sorghum (*Sorghum spp.*), Canada thistle (*Cirsium arvense*), plumeless thistle (*Carduus spp.*-includes musk thistle and curled thistle), and serrated tussock (*Nassella trichotoma*).

903-2.1.1 APPROVED SPECIES. The following table contains species that are approved by MAA for use in seed mixtures. Purity requirements and germination requirements are also provided.

1. These species may be included as a labeled component of a mixture when each is present in excess of five percent of the mixture by weight.

Approved Plant Species MAA Seed Mixtures	Purity*		Pure Live Seed Factor
	Not Less than %	Minimum % Germination ^a	
Certified Turf-Type Tall Fescue (<i>Festuca arundinacea</i>)	98	90	1.13
Certified Kentucky Bluegrass (<i>Poa pratensis</i>)	90	80	1.39
Hard Fescue (<i>Festuca ovina</i>)	98	90	1.13
Cheating Foot Fescue (<i>Festuca rubra commutata</i>)	98	90	1.13
Annual Ryegrass (<i>Lolium multiflorum</i>)	95	85	1.24
Perennial Ryegrass (<i>Lolium perenne</i>)	90	80	1.39
Fowl Meadow Grass (<i>Poa polystrum</i>)	90	80	1.39
Lilke Bluestem (<i>Lolium perenne</i>)	92	94	1.71

* The percentage weight of pure seed present shall be free of any agricultural weeds, inert matter, and other seeds distinguishable by their appearance.
^a The percentage of germination shall be actual germination and shall not include hard seeds unless specifically permitted by the MAA Engineer.

Seeding seasons are based on typical years and can be subject to variation, which may be modified by the MAA Engineer based on seasonal trends. If the time required to complete any of the operations necessary under this item, within the specified planting season or any authorized extensions thereof, extends beyond the Contract period, then such time will be charged against the Contract time, and liquidated damages will be enforced with respect to this portion of work.

903-2.2 LIME. Lime shall consist of ground limestone and contain at least 85 percent total carbonates. Lime shall be ground to a fineness so that at least 90 percent will pass through a No. 20 mesh sieve and 50 percent will pass through a No. 100 mesh sieve. Dolomitic lime or a high magnesium lime shall contain at least 10 percent magnesium oxide. Lime shall be applied by approved methods detailed in Section 903-3.3 of this item. The rate of application will be based on results of soil tests.

903-2.3 FERTILIZER. Fertilizer shall be standard commercial fertilizer (supplied separately or in mixtures) and meet the requirements of applicable state and federal laws (O-F-241) as well as standards of the Association of Official Agricultural Chemists. Nitrogen-Phosphorus-Potassium (N-P-K) concentrations shall be determined from analysis of soil samples. (Approved fertilizer rates: 21 pounds of N-19-10 per 1,000 square feet.) Methods of fertilizer application shall conform to standards described in Section 903-3.3 of this item. Fertilizer shall be furnished in standard containers that are clearly labeled with name, weight, and guaranteed analysis of the contents (percentage of total nitrogen, available phosphoric acid, and water-soluble potash). Mixed fertilizers shall not contain any hydrated lime or cyanamide compounds. Fertilizers failing to meet the specified analysis may be approved by the MAA Engineer, providing sufficient materials are applied to conform with the specified nutrients per unit of measure without additional cost to MAA.

The fertilizers may be supplied in the following forms:

- A dry, free-flowing fertilizer suitable for application by a common fertilizer spreader;
- A finely ground fertilizer soluble in water, suitable for application by power sprayers; or
- A granular or pellet form suitable for application by blower equipment.

The rate of application will be based on results of soil tests performed by the University of Maryland Soil Testing Laboratory. By law, persons applying fertilizer to State-owned land shall follow the recommendations of the University of Maryland as set forth in the "Plant Nutrient Recommendations Based on Soil Tests for Turf Maintenance" and the "Plant Nutrient Recommendations Based on Soil Tests for Sod Production" (see Appendix B). Application of the fertilizer shall be in a manner that is consistent with the recommendations of the University of Maryland Cooperative Extension.

CONSTRUCTION METHODS AND EQUIPMENT

903-3.1 GENERAL. This section provides approved methods for the application of and includes standards for seedbed preparation, methods of application, and equipment to be used during the process. Lime and fertilizer shall be applied to seedbeds before the seed is spread. The mixture of seed will be determined for sites based on environmental conditions as described in Paragraph 903-2.1.3.

903-3.2 ADVANCE PREPARATION. Areas designated for seeding shall be properly prepared in advance of seed application. The area shall be tilled and graded prior to application of lime and fertilizer, and the surface area shall be cleared of any stones larger than 1 inch in diameter, sticks, stumps, and other debris that might interfere with sowing of seed, growth of grasses, or subsequent maintenance of grass-covered areas. Damage caused by erosion or other forces that occur after the completion of grading shall be repaired prior to the application of fertilizer and lime. The Contractor will repair such damage, which may include filling gullies, smoothing irregularities, and repairing other incidental damage before beginning the application of fertilizer and ground limestone.

Areas to be seeded is sparsely sodded, weedy, barren and unworked, or packed and hard, all grass and weeds shall first be cut or otherwise satisfactorily disposed of, and the soil then scarified or otherwise loosened to a depth not less than 5 inches (125 mm). Clods shall be broken and the top 3 inches (75 mm) of soil shall be worked into a satisfactory condition by discing or by use of cultipackers, rollers, drags, harrows, or other appropriate means.

An area to be seeded shall be considered a satisfactory seedbed (without requiring additional treatment) if it has recently been thoroughly loosened and worked to a depth of not less than 5 inches; the top 3 inches of soil is loose, friable, and is reasonably free from large clods, rocks, large roots, or other undesirable matter; appropriate amounts of fertilizer and lime have been added; and, if it has been shaped to the required grade immediately prior to seeding. For slope areas steeper than 3:1 (three horizontal to one vertical), the subsoil shall be loose to a depth of 1 inch.

After completion of tilling and grading, lime and fertilizer shall be applied within 48 hours according to the specified rate (Paragraphs 903-2.2 and 2.3) and methods (Paragraphs 903-3.3.1 and 903-3.3.2) approved by MAA. The seeding mixture shall be applied within 48 hours after application of lime and fertilizer. To firm the seeded areas, cultipacking shall occur immediately after seeding.

903-3.3 METHODS OF APPLICATION. Lime, fertilizer, and seed mixes shall be applied by either the dry or wet application methods that have been approved by MAA and are detailed below.

903-3.3.1 DRY APPLICATION METHOD

- Liming. If soil test results indicate that lime is needed, the following procedures will be used. Following advance preparation of the seedbed, lime shall be applied prior to the application of any fertilizer or seed and only on seedbeds that have been prepared as described in paragraph 903-3.2. The lime shall be uniformly spread and worked into the top 2 inches of soil, after which the seedbed shall be properly graded again.
- Fertilizing. Following advance preparations (and liming if necessary), fertilizer shall be spread uniformly at the specified rate to provide no less than the minimum quantity stated in Paragraph 903-2.3.
- Seeding. Seed mixtures shall be sown immediately after fertilization of the seedbed. The fertilizer and seed shall be lightly raked to a depth of 1 inch for newly graded and disturbed areas.
- Rolling. After the seed has been properly covered, the seedbed shall be immediately compacted using a cultipacker or an approved lamroller.

903-3.3.2 WET APPLICATION METHOD/HYDROSEEDING

- General. The Contractor may use wet seed and fertilizer as per Paragraphs c and d of this section in the form of an aqueous mixture by spraying over the previously prepared seedbed using methods and equipment approved by MAA. The rates of application shall be as specified in Paragraphs 903-2.1 through 903-2.3.
- Spraying Equipment. The spraying equipment shall have a container or water tank equipped with a liquid level gauge capable of reading increments of 50 gallons or less. The liquid level gauge shall be visible to the nozzle operator at all times. The container or tank shall also be equipped with a mechanical power-driven agitator capable of keeping all the solids in the mixture in complete suspension at all times until used.
- The spraying equipment shall also include a pressure pump capable of delivering 100 gallons per minute at a pressure of 100 pounds per square inch. The pressure pump assembly shall be configured to allow the mixture to flow through the tank when not being sprayed from the nozzle. All pump passages and pipelines shall be capable of providing clearance for 5/8-inch solids. The power unit for the pump and agitator shall have controls mounted so as to be accessible to the nozzle operator. A pressure gauge shall be connected to and mounted immediately behind the nozzle.
- The nozzle pipe shall be mounted on an elevated supporting stand in such a manner that it can be rotated through 360 degrees horizontally and inclined vertically from at least 20 degrees below to at least 60 degrees above the horizontal. There shall be a quick-closing, three-way control valve connecting the recirculating line to the nozzle pipe and mounted so that the nozzle operator can control and regulate the amount of flow of mixture to be supplied so that mixtures may be properly sprayed over a distance varying from 20 feet to 100 feet. One shall be a close-range ribbon nozzle, one a medium-range ribbon nozzle, and one a long-range jet nozzle. For ease of removal and cleaning, all nozzles shall be connected to the nozzle pipe by means of quick-release couplings. In order to reach areas inaccessible to the regular equipment, an extension hose at least 50 feet in length shall be provided to which the nozzles may be connected.
- Mixtures. Lime shall be applied separately in the quantity specified, prior to the fertilizing and seeding operations. Lime shall be added to and mixed with water at a concentration not to exceed 220 pounds of lime for every 100 gallons of water. After lime has been applied, the tank should be emptied and rinsed with fresh water. Seed and fertilizer shall be mixed together in the relative proportions specified, but the resulting concentration should not exceed 220 pounds of mixture per 100 gallons of water and should be applied within 30 minutes to prevent fertilizer burn of the seeds. All water used shall be obtained from fresh water sources and shall be free from injurious chemicals and other toxic substances harmful to plant life. Brackish water shall not be used at any time. The Contractor shall identify all sources of water to the MAA Engineer at least two weeks prior to use. The Engineer may take samples of the water at the source or from the tank at any time and have a laboratory test the samples for chemical and saline content. The Contractor shall not use any water from any source that is disapproved by the Engineer following such tests. All mixtures shall be constantly agitated from the time they are mixed until they are finally applied to the seedbed. All such mixtures shall be used within 30 minutes from the time they were mixed or they shall be wasted and disposed of at a location acceptable to the Engineer.
- Spraying. Lime shall be sprayed upon previously prepared seedbeds on which the lime, if required, shall have been worked in already. The mixtures shall be applied using a high-pressure spray which shall always be directed upward into the air so that the mixtures will fall to the ground in a uniform spray. Nozzles or sprays shall never be directed toward the ground in such a manner that might produce erosion or runoff. Particular care shall be exercised to ensure that the application is made uniformly at the prescribed rate, and to guard against misses and overlapped areas. Predetermined quantities of the mixture shall be used in accordance with specifications to cover specified sections of known areas. To check the rate and uniformity of application, the applicator will observe the degree of wetting of the ground or distribute test sheets of paper or pans over the area at intervals and observe the quantity of material deposited thereon.
- On surfaces that are to be mulched as indicated by the plans or designated by the MAA Engineer, seed and fertilizer applied by the spray method need not be raked into the soil or rolled. However, on surfaces on which mulch is not to be used, the raking and rolling operations will be required after the soil has dried.

903-3.4 MAINTENANCE OF SEEDING AREAS. The contractor shall protect seeded areas against traffic or other use by warning signs or barricades, as approved by the Engineer. Surfaces gullied or otherwise damaged following seeding shall be repaired by regrading and reseeding as directed. The Contractor shall mow, water as directed, and otherwise maintain seeded areas in a satisfactory condition until final inspection and acceptance of the work. When either the dry or wet application method outlined above is used for work performed out of season, the Contractor will be required to establish a good stand of grass of uniform color and density to the satisfaction of the Engineer. If at the time when the contract has been otherwise completed it is not possible to make an adequate determination of the color, density, and uniformity of such stand of grass, payment for the unaccepted portions of the area seeded out of season will be withheld until such time as these requirements have been met.

MULCHING

Mulch shall be applied to all seeded areas immediately after seeding. During the time periods when seeding is not permitted, mulch shall be applied immediately after grading.

Mulch shall be applied as per ITEM 905.

TEMPORARY SEEDING

Lime: 100 pounds of dolomitic limestone per 1,000 square feet.

Fertilizer: 15 pounds of 10-10-10 per 1,000 square feet.

Seed: Per ITEM 903

Mulch: Mulch shall be applied as per ITEM 905.

FILL

No fills may be placed on frozen ground. All fill to be placed in approximately horizontal layers, each layer having a loose thickness of not more than 8 inches. All fill in roadways and parking areas is to be classified Type 2 as per Anne Arundel County Code - Article 21, Section 2-308, and compacted to 90% density; compaction to be determined by ASTM D-1557-66T (Modified Proctor). Any fill within the building area is to be compacted to a minimum of 95% density as determined by methods previously mentioned. Fills for pond embankments shall be compacted as per MD-378 Construction Specifications. All other fills shall be compacted sufficiently so as to be stable and prevent erosion and slippage.

SOODING

Installation of sod should follow permanent seeding dates. Seedbed preparation for sod shall be as noted above. Seed and fertilizer shall be applied in accordance with specifications and lightly irrigate soil prior to laying sod. Sod is to be laid on the contour with all ends tightly abutting. Joints are to be staggered between rows. Water and roll or tamp sod to insure positive root contact with the soil. All slopes steeper than 3:1, as shown, are to be permanently sodded or protected with an approved erosion control netting. Additional watering for establishment may be required. Sod is not to be installed on frozen ground. Sod shall not be transplanted when moisture content (dry or wet) and/or extreme temperature may adversely affect its survival. In the absence of adequate rainfall, irrigation should be performed to ensure establishment of sod. Install sod as per ITEM 904.

MINING OPERATIONS

Sediment control plans for mining operations must include the following seeding dates and mixtures:
 For seeding dates of February 1 through April 30 and August 15 through October 31, use seed mixture of tall fescue at the rate of 2 pounds per 1,000 square feet and red top at the minimum rate of 0.5 pounds per 1,000 square feet.
 NOTE: Use of this information does not preclude meeting all of the requirements of the current Maryland Standards and Specifications for Soil Erosion and Sediment Control.

903-2.1.2 PURITY. All seed shall be free of all state-designated noxious weeds listed in Paragraph 2.1.1 and conform to MAA specifications. To ensure compliance, MAA requires sampling and testing of seed by the Turf and Seed Section, Maryland Department of Agriculture (MDA). The Contractor shall furnish the MAA Engineer with duplicate signed copies of a statement by the Turf and Seed Section certifying that each lot of seed has been laboratory tested within six months of date of delivery. This statement shall include the following information:

- name and address of laboratory,
- date of test,
- lot number,
- the results of tests as to name, percentages of purity and of germination,
- percentage of weed content for the seed furnished,
- and, in the case of a mixture, the proportions of each kind of seed.

Seed shall be furnished in standard containers with the seed name, lot number, net weight, percentages of purity, germination rate and hard seed, and percentage maximum weed seed content clearly marked. All seed containers shall be tagged with a MDA supervised mix program seed tag.

903-2.1.3 MIXTURES AND APPLICATION RATES. Only seed mixtures and application rates described in this item may be used unless otherwise approved by the MAA Engineer. Seed mixtures shall meet criteria detailed in Paragraph 903-2.1.2. Seed mixtures have been formulated to minimize the attractiveness of areas to wildlife of common landscape scenarios. The appropriate seed mixture for application will be designated based on environmental conditions and may vary from site to site. All planting rates listed are in pounds of Pure Live Seed (PLS) per acre.

Seed mixtures, application scenarios, and rates for permanent cool-season grasses are as follows:

- Seed Mixture No. 1 - relatively flat areas (grade less than 4:1) subject to normal conditions and regular mowing (Application rate = 234 lbs PLS/acre);
- Seed Mixture No. 2 - sloped areas (grade greater than 4:1) not subject to regular mowing (Application rate = 115 lbs PLS/acre); and
- Seed Mixture No. 3 - wetlands and their associated buffer zones (Application rate = 131 lbs PLS/acre).

Seed Mixture No. 1 - Relatively flat areas regularly mowed and exposed to normal conditions (Application rate = 234 lbs PLS/acre)

Seed	Rate of Application (lbs of PLS/acre)
85% Certified Turf-Type Tall Fescue	192
10% Certified Kentucky Bluegrass	28
5% Perennial Ryegrass	14
Supplemental Seed	25
Annual Ryegrass	25
Seed Mixture No. 2 - Sloped areas not subject to regular mowing (Application rate = 115 lbs PLS/acre)	
Seed	Rate of Application (lbs of PLS/acre)
75% Hard Fescue	85
20% Cheatings Fescue	23
5% Kentucky Bluegrass	7
Supplemental Seed	3
Redtop	3
Seed Mixture No. 3 - Wetland areas and their associated buffer zones (Application rate = 131 lbs PLS/acre)	
Seed	Rate of Application (lbs of PLS/acre)
60% Fowl Meadow Grass	83
30% Cheatings Fescue	34
10% Perennial Ryegrass	14
Supplemental Seed	3
Redtop	3

903-2.1.4 SEEDING SEASONS. Application of seed and seed mixtures shall occur within a specified seeding season unless otherwise approved by the MAA Engineer. No seed or seed mixtures are to be applied on frozen ground or when the temperature is at or below 35 degrees Fahrenheit (7.2 degrees Centigrade). Under these conditions, a layer of mulch should be applied in accordance with Item 905, Mulching, to stabilize the site, and permanent seeding should occur in the subsequent seeding season. Seed application may occur during the seeding season dates listed below. Seeding performed after October 20 should be a temporary cover of annual ryegrass and followed by over seeding of the appropriate seed mixture during the spring seeding season.

SEEDING SEASONS	
Permanent Cool-Season Grasses	March 1 to April 20 and August 1 to October 20, inclusive
Temporary Cover of Annual Rye/Redtop	March 1 to April 30 and August 1 to November 30, inclusive
Temporary Cover of Warm-Season Grasses (Little Bluestem only)	May 1 to July 31, inclusive. Rate of application should be 13.6 lbs. PLS per acre.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

1/07/13
 DATE
 J.P.
 12/13/12
 DATE
 1/6/13
 DATE

NO.	DATE	REVISION
1	4-29-13	REVISE OWNER/BUILDER

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Professional Certification: I hereby certify that these documents were prepared, approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License No. 28559 Expiration Date: 7-22-2013.

STATE OF MARYLAND PROFESSIONAL ENGINEER 4/27/2012

PROJECT: PECORARO PROPERTY (AUSTINE VALLEY) PHASES I - III LOTS 1-3 AND 5-21

LOCATION: TAX MAP 38 - GRID 9 PARCEL P/O 886 1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND

OWNER/BUILDER: RICHMOND AMERICAN HOMES 6210 OLD DOBSON BLVD, SUITE 190 COLUMBIA, MARYLAND 21045 410-312-2837

TITLE: SITE DEVELOPMENT PLAN SINGLE FAMILY DWELLINGS HCSO/MAA SEEDING AND EROSION CONTROL NOTES AND DETAILS

DATE: JUNE 2012 PROJECT NO. 2488
 NOVEMBER 2012

SCALE: AS SHOWN DRAWING 5 OF 5