

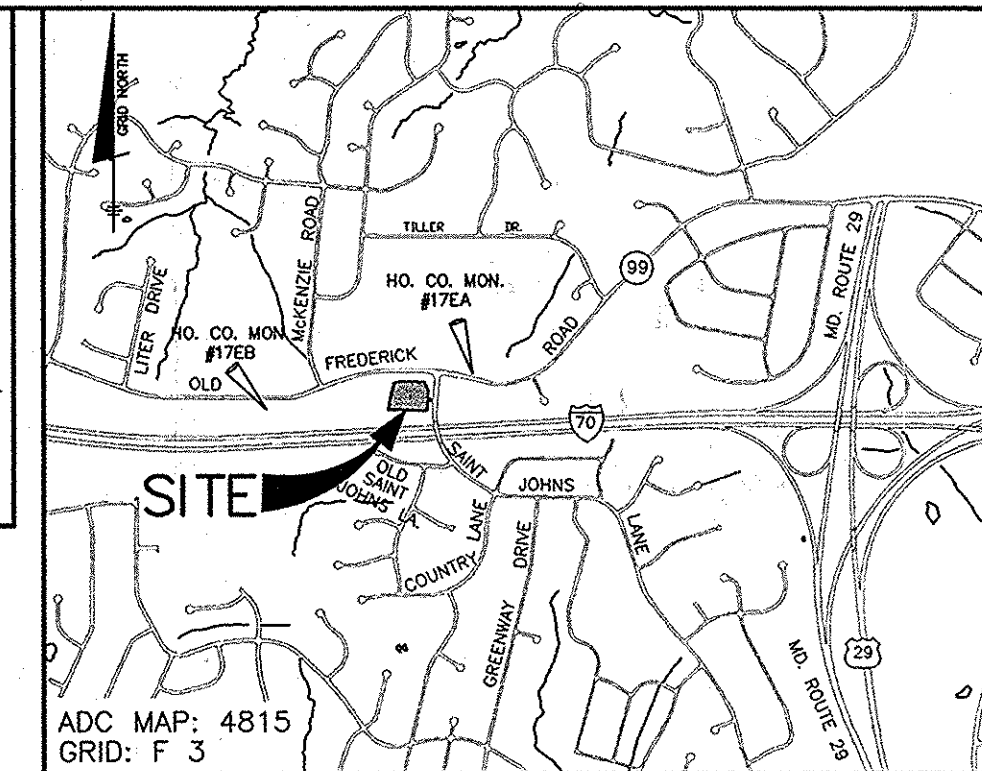
GENERAL NOTES

- THE SUBJECT PROPERTY IS ZONED R-20 PER THE 2/02/04 COMPREHENSIVE ZONING PLAN AND PER COMP. LITE ZONING AMENDMENTS EFFECTIVE 7/28/06.
- THE EXISTING TOPOGRAPHY AND BOUNDARY ARE TAKEN FROM FIELD RUN SURVEY BY BENCHMARK ENGINEERING, INC. IN APRIL, 2003 AND ROAD CONSTRUCTION PLANS F-08-087. ALL VERTICAL CONTROLS ARE BASED ON NAVD83.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENTS NOS. 17EA AND 17EB WERE USED FOR THIS PROJECT.
- WATER AND SEWER ARE PUBLIC AND EXISTING UTILITIES ARE BASED ON CONTRACT 24-4453-D.
- STORMWATER MANAGEMENT DESIGNED BASED ON THE 2000 MARYLAND STORMWATER DESIGN MANUAL, VOLUMES I AND II. QUALITY TREATMENT SHALL BE PROVIDED BY DRY SWALES LOCATED IN HOMEOWNERS ASSOCIATION OPEN SPACE LOTS 10 AND 11 AS SHOWN ON P-08-087 AND ON-LOT RAIN GARDENS AS DETAILED ON THIS PLAN. DRY SWALES SHALL BE OWNED AND MAINTAINED BY THE HOMEOWNER'S ASSOCIATION. ON-LOT RAIN GARDENS SHALL BE OWNED AND MAINTAINED BY THE HOME OWNER AND SHALL BE SUBJECT TO DECLARATIONS OF COVENANTS.
- EXISTING UTILITIES SHOWN WERE TAKEN FROM RECORD DRAWINGS PER F-08-087. IF NECESSARY, CONTRACTOR SHALL ADJUST STRUCTURE TOPS TO MEET SDP GRADES.
- WETLAND DELINEATION COMPILED BY ECO-SCIENCE PROFESSIONALS, INC. DATED JANUARY, 2003 AND APPROVED AS A PART OF P-07-013. THERE ARE NO WETLANDS OR WETLAND BUFFERS, STREAMS OR FLOODPLAINS LOCATED ON THIS SITE.
- A TRAFFIC AND SPEED STUDY WAS PREPARED BY MARS IN JUNE, 2003 AND REVISED IN AUGUST, 2003 AND APPROVED UNDER S-03-20.
- LANDSCAPING FOR THIS DEVELOPMENT HAS BEEN PROVIDED IN ACCORDANCE WITH A CERTIFIED LANDSCAPE PLAN INCLUDED WITH THE ROAD CONSTRUCTION PLAN AND IS IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. SURETY IN THE AMOUNT OF \$28,990 FOR 28 SHADE TREES, 29 EVERGREEN TREES, 21 PRIVATE ACCESS TREES, 6 SHRUBS FOR TRASH SCREENING AND 418' OF WALL WAS POSTED AS PART OF THE DPW DEVELOPER'S AGREEMENT, F-08-087.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS, BUREAU OF ENGINEERING, CONSTRUCTION INSPECTION DIVISION AT 410-313-1880 AT LEAST FIVE(5) WORKING DAYS PRIOR TO THE START OF WORK.
- THE FOREST CONSERVATION OBLIGATION FOR THIS DEVELOPMENT HAS BEEN SATISFIED AT THE TIME OF SUBDIVISION IN ACCORDANCE WITH SECTION 16.120 OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION MANUAL BY MEETING THE 0.7 ACRE AFFORESTATION OBLIGATION WITH AN ON-SITE AFFORESTATION AREA. SURETY IN THE AMOUNT OF \$15,246.00 (30,492 SF x \$0.50) WAS POSTED WITH THE DPW DEVELOPER'S AGREEMENT UNDER F-08-087.
- UNLESS NOTED AS "PRIVATE", ALL EASEMENTS ARE PUBLIC.
- BRL INDICATES ZONING BUILDING RESTRICTION LINE, OTHER RESTRICTIONS MAY APPLY.
- IN ACCORDANCE WITH SECTION 128 OF THE HOWARD COUNTY ZONING REGULATIONS; BAY WINDOWS, CHIMNEYS OR EXTERIOR STAIRWAYS NOT MORE THAN 15 FEET IN WIDTH MAY PROJECT NO MORE THAN 4 FEET INTO ANY SETBACKS; PORCHES OR DECKS, OPEN OR ENCLOSED MAY PROJECT NOT MORE THAN 10 FEET INTO THE FRONT OR REAR YARD SETBACK.
- ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED AT THE BUILDERS EXPENSE.
- FOR FLAG OR PIPE STEM LOTS, REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE ARE PROVIDED TO THE JUNCTION OF THE FLAG OR PIPE STEM AND ROAD RIGHT OF WAY LINE ONLY AND NOT ONTO THE FLAG OR PIPE STEM LOT DRIVEWAY.
- DRIVEWAYS SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS TO INSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:
(a) WIDTH - 12' (16' SERVING MORE THAN ONE RESIDENCE)
(b) SURFACE - 6" OF COMPACT CRUSHER RUN BASE WITH TAR AND CHIP COATING (1-1/2" MIN.)
(c) GEOMETRY - MAXIMUM 15% GRADE, MAXIMUM 10% GRADE CHANGE AND MINIMUM 45° TURNING RADIUS.
(d) STRUCTURES (CULVERTS/BRIDGES) - CAPABLE OF SUPPORTING 25 GROSS TONS (H25 LOADING)
(e) DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100 YEAR FLOODPLAIN WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY.
(f) STRUCTURE CLEARANCES - MINIMUM 12 FEET.
(g) MAINTENANCE - SUFFICIENT TO INSURE ALL WEATHER USE.
- OPEN SPACE LOTS 10 AND 11 HAVE BEEN DEDICATED TO THE HOMEOWNER'S ASSOCIATION (HOA) FOR THE RESIDENTS OF THIS SUBDIVISION. THE ARTICLES OF INCORPORATION FOR THE HOA HAVE BEEN ACCEPTED BY THE STATE DEPARTMENT OF ASSESSMENTS AND TAXATION ON 2/22/08. RECEIPT #012381853. PROTECTIVE COVENANTS HAVE BEEN RECORDED IN THE LAND RECORDS OF HOWARD COUNTY AS LIBER 2862 AND FOLIO 253.
- THERE ARE NO CEMETERIES ON THIS PROPERTY TO THE BEST OF OUR KNOWLEDGE.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY.
- ALL WATER METERS SHALL BE SET INSIDE.
- THE CONTRACTOR SHALL NOTIFY "MGS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
- SHC ELEVATIONS SHOWN ARE AT THE PROPERTY LINE OR EASEMENT LINE.
- THE STAKING OF FOUNDATIONS PRIOR TO CONSTRUCTION WITH REGULATORY BUILDING RESTRICTION LINES IS RECOMMENDED.
- DRIVEWAY SLOPES SHOWN ARE AVERAGE. THE SLOPE AT THE OUTSIDE EDGES COULD BE FLATTER OR STEEPER DEPENDING ON GRADE OF ROADWAY.
- THE BUILDER SHALL APPLY FOR BUILDING PERMITS FOR ALL LOTS AS SHOWN ON THIS SITE DEVELOPMENT PLAN WITHIN FIVE YEARS OF SIGNATURE APPROVAL OF THIS PLAN.
- NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE REQUIRED WETLANDS, STREAMS OR PIPE STEM BUFFERS, FOREST PRESERVATION EASEMENT AREAS AND 100 YEAR FLOODPLAIN.
- WP-04-46 A REQUEST TO WAIVE SECTION 16.102(h)(1) WHICH ALLOWS PLANS THAT HAVE REACHED THE PRELIMINARY PLAN OR PRELIMINARY-EQUIVALENT SKETCH PLAN ORIGINAL SIGNATURE APPROVAL STAGE TO BE GRANDFATHERED FOR CONTINUED PROCESSING IN ACCORDANCE WITH THE REGULATIONS WHICH WERE IN EFFECT AT THE TIME OF PLAN APPROVAL WAS APPROVED ON 10-6-2003.
- WP-07-08 A REQUEST TO WAIVE SECTION 16.120(b)(5)(i) OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS WAS APPROVED ON MARCH 23, 2007. THIS WAIVER WAS SUPERCEDED BY A NEW WAIVER REQUEST, WP-08-80. SEE NOTES #32 BELOW.
- THE 65dBA 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 65 dBA NOISE EXPOSURE. THE 65 dBA NOISE LINE WAS ESTABLISHED BY HOWARD COUNTY TO ALERT DEVELOPERS 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.
- THIS SITE CONTAINED NOISE LEVELS GREATER THAN 65dBA. NOISE REDUCTION WILL BE ACCOMPLISHED THROUGH THE USE OF METHODS DESCRIBED IN AN ALTERNATE COMPLIANCE REQUEST PERTAINING TO HOWARD COUNTY DESIGN MANUAL VOLUME III, SECTION 5.2(7) WHICH REQUIRES NOISE LEVELS IN THE REAR YARD OF RESIDENTIAL LOTS NOT TO EXCEED A 65 DECIBEL NOISE STANDARD. THE ALTERNATE COMPLIANCE WAS APPROVED ON AUGUST 18, 2008 SUBJECT TO THE FOLLOWING CONDITIONS:
(a) ALL NOISE WALLS SHALL BE LOCATED WITHIN HOA OWNED OPEN SPACE AND MAINTAINED BY THE HOA.
(b) THE DWELLINGS ON LOTS 1 & 4 SHALL NOT TOUCH OR OVERLAP ANY PORTIONS OF THE 65 dBA NOISE CONTOUR.
(c) A WAIVER PETITION (WP-08-80) REQUEST FROM SECTION 16.120(b)(5)(i) WHICH REQUIRES THAT RESIDENTIAL SUBDIVISIONS OR SITE DEVELOPMENT PLANS MITIGATE NOISE LEVELS TO ENSURE THAT THE STANDARD 65 dBA NOISE LEVEL AS ESTABLISHED BY THE DESIGN MANUAL IS NOT EXCEEDED IN THE REAR YARD OF RESIDENTIAL LOTS, AND FROM SECTION 16.120(b)(5)(ii) WHICH REQUIRES THAT IF RESIDENTIAL LOTS ARE IMPACTED BY EXCESSIVE NOISE LEVELS THAT A WALL OR FENCE BE REQUIRED FOR NOISE MITIGATION AND THAT IT SHALL BE LOCATED IN OPEN SPACE MAINTAINED BY THE HOMEOWNER'S ASSOCIATION. THE WAIVER PETITION WAS APPROVED SEPTEMBER 2, 2008 SUBJECT TO THE FOLLOWING CONDITIONS:
(a) SUBJECT TO COMPLIANCE WITH SRC COMMENTS ISSUED FOR F-08-87.
(b) SUBJECT TO COMPLIANCE WITH SRC COMMENTS DATED AUGUST 18, 2008.
(c) THE DEVELOPER SHALL PROVIDE THE 8' HIGH MINIMUM NOISE WALL ATOP OF THE PROPOSED BERM WITHIN OPEN SPACE LOT 10 ALONG THE 1-70 RIGHT-OF-WAY FOR THIS PROJECT AS SHOWN ON REVISED PLANS FOR F-08-87 ROAD CONSTRUCTION DRAWINGS DATED JULY 2008.
(d) SUBJECT TO PROVIDING A LANDSCAPE TYPE "C" HEAVY BUFFER (1 SHADE TREE PER 40 FEET AND 1 EVERGREEN PER 20 FEET) FOR THE SITE PERIMETER ALONG THE OLD FREDERICK ROAD (MD. RT. 99) RIGHT-OF-WAY BETWEEN COORDINATE POINTS 100 AND 102. THIS WAS PROVIDED UNDER F-08-087.
(e) THE MARYLAND STATE HIGHWAY ADMINISTRATION WILL NOT BE RESPONSIBLE FOR NOISE MITIGATION NOW OR IN THE FUTURE.
(f) THE DEVELOPER SHALL MAINTAIN A USABLE REAR YARD AREA FOR LOTS 1, 4 AND 5 THROUGH 9 OUTSIDE OF THE 65 DECIBEL NOISE LINE ON ALL FUTURE PLAN SUBMISSIONS INCLUDING THE SITE DEVELOPMENT PLAN FOR NEW HOUSE CONSTRUCTION ON THOSE LOTS. THE PROPOSED HOUSES ON THOSE LOTS MUST BE LOCATED AS FAR AS FEASIBLE FROM THE 1-70 R/W AND THE OLD FREDERICK ROAD R/W.
(g) THE PROPOSED HOUSES TO BE LOCATED ON ALL OF THE LOTS WITHIN THIS SUBDIVISION SHALL BE CONSTRUCTED WITH SPECIAL CONSIDERATION GIVEN TO ACoustical INSULATION AND OTHER NOISE ATTENUATION MATERIALS FOR THE SIDING, ROOFING, WINDOWS AND DOORS, ETC. TO LESSEN EXCESSIVE NOISE LEVELS.
- OPEN SPACE HAS BEEN PROVIDED FOR THIS DEVELOPMENT IN ACCORDANCE WITH OPTIONAL LOT SIZE PROVISIONS OF SECTION 16.121 OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS WHICH REQUIRE 40% OPEN SPACE FOR MINIMUM LOT SIZES OF 12,000 SQ. FT.
- THE 4'x10' CONCRETE PAD FOR A REFUSE AND RECYCLING COLLECTION PAD LOCATED WITHIN THE PIPESTEM AREA WILL BE MAINTAINED BY THE OWNERS OF LOTS 1 THROUGH 9 PURSUANT TO THE DECLARATION OF RIGHT OF ACCESS AND MAINTENANCE OBLIGATION WHICH HAS BEEN RECORDED IN THE HOWARD COUNTY LAND RECORDS OFFICE ON 2-14-12 AS LIBER 2862 / FOLIO 253.
- THE USE-IN-COMMON PRIVATE ACCESS PLACE MAINTENANCE AGREEMENT FOR LOTS 1-9 HAS BEEN RECORDED IN THE HOWARD COUNTY LAND RECORDS OFFICE ON 2-14-12 AS LIBER 2862 / FOLIO 253.
- NO STRUCTURE SHALL BE BUILT WITHIN 10 FEET OF A PUBLIC UTILITY EASEMENT.
- DEVELOPMENT OF CONSTRUCTION ON THESE LOTS MUST COMPLY WITH SETBACK OR BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF THE SITED DEVELOPMENT PLAN, WAIVER PETITION APPLICATION OR BUILDING/GRADING PERMIT APPLICATIONS.
- THIS PROPERTY RECEIVES CONCENTRATED STORMWATER FLOW FROM OLD FREDERICK ROAD (MD. 99) NEAR THE NORTHWESTERN PROPERTY BOUNDARY, AND FROM ST. JOHNS LANE NEAR THE SOUTHERN PROPERTY BOUNDARY. FINAL PLAN F-08-087 GRANTS RIGHT TO DISCHARGE FOR BOTH RELEASE AREAS, AS DESIGNED ON F-08-087. ANY MODIFICATIONS TO THE METHOD OF DISCHARGE SHOULD BE JOINTLY APPROVED BY THE HOMEOWNER'S ASSOCIATION, THE STATE HIGHWAY ADMINISTRATION AND HOWARD COUNTY.
- A PRIVATE RANGE OF ADDRESS SIGN ASSEMBLY FOR THE FLAG LOT DRIVEWAY SHALL BE FABRICATED AND INSTALLED BY HOWARD COUNTY BUREAU OF HIGHWAYS AT THE DEVELOPERS/OWNERS EXPENSE. CONTACT HOWARD COUNTY TRAFFIC DIVISION AT 410-313-2430 FOR DETAILS AND COST ESTIMATES.
- STORMWATER MANAGEMENT IS PROVIDED IN ACCORDANCE WITH THE 2000 MARYLAND STORMWATER DESIGN MANUAL VOLUMES I AND II. IT WAS DETERMINED THAT THIS PROJECT MET THE CRITERIA OUTLINED IN THE MDE STORMWATER MANAGEMENT REGULATIONS GUIDANCE FOR IMPLEMENTATION FOR ACCEPTANCE OF THE 2000 DESIGN CRITERIA AND PRELIMINARY APPROVAL (P-07-013) ON MAY 25, 2007 AND FINAL APPROVAL (F-08-087) ON MAY 20, 2008. THIS PLAN IS ALSO SUBJECT TO THE EXPIRATION OF THIS WAIVER UNLESS ALL STORMWATER MANAGEMENT IS CONSTRUCTED BY NOVEMBER 4, 2017.

SITE DEVELOPMENT PLAN HEBRON MANOR LOTS 1 THRU 9 2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND

BENCH MARKS - NAD '83

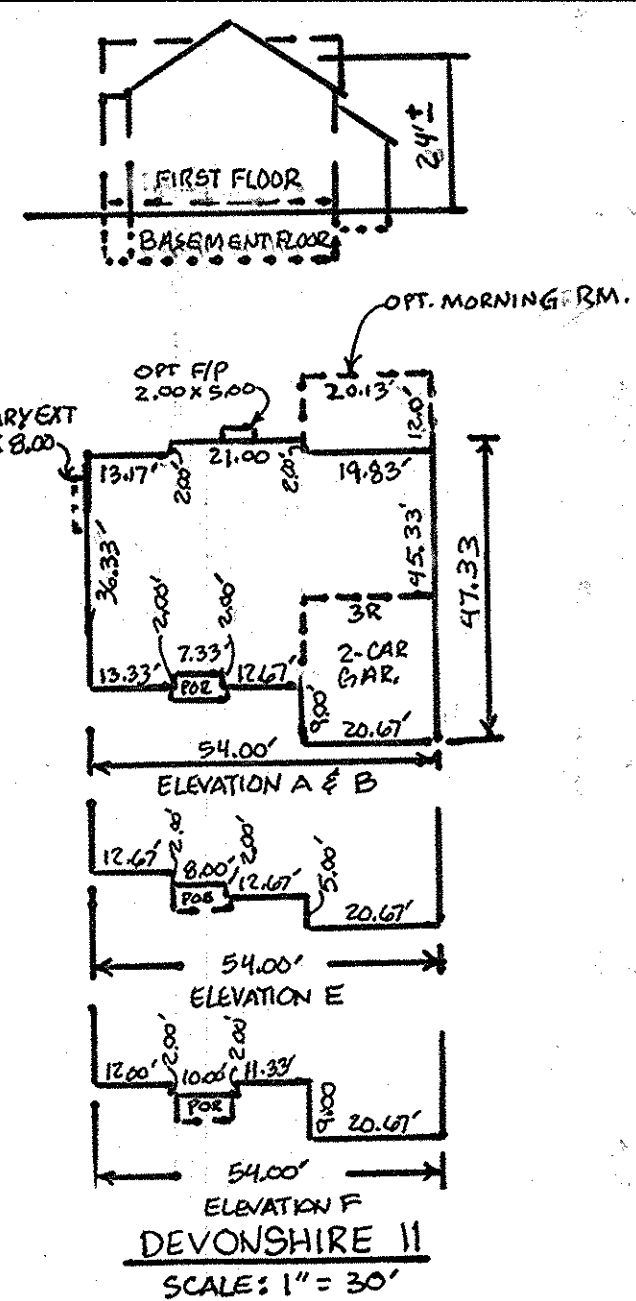
HO. CO. #17EA ELEV. 479.48
STAMPED BRASS DISK SET ON TOP OF CONC. (3" DEEP) COLUMN LOCATED IN THE ISLAND IN FRONT OF MOUNT HEBRON HIGH SCHOOL. 33.7' SOUTH OF THE FLAG POLE AND 21.0' NORTH OF THE CURB AND 49.7' WEST OF A 15" WHITE POLE.
N 594,357.7264' E 1,357,510.3741'
HO. CO. #17EB ELEV. 454.18
STAMPED BRASS DISK SET ON TOP OF CONC. (3" DEEP) CYLINDRICAL BASE LOCATED 22.4' WEST OF THE ENTRANCE TO BETHANY FIRE STATION. 19' SOUTH OF THE CL OF OLD FREDERICK ROAD AND 38.6' EAST OF G&E POLE #474631
N 595,814.0053' E 1,355,731.8846'



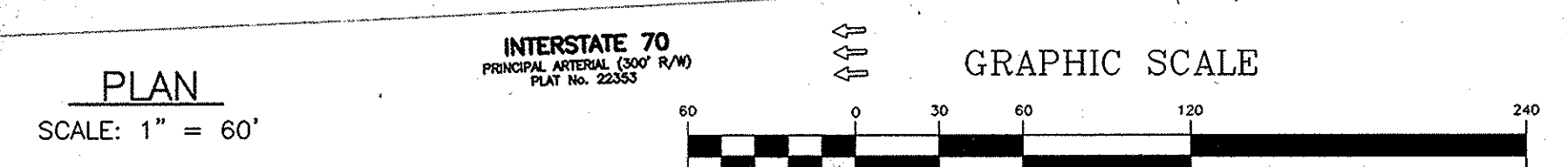
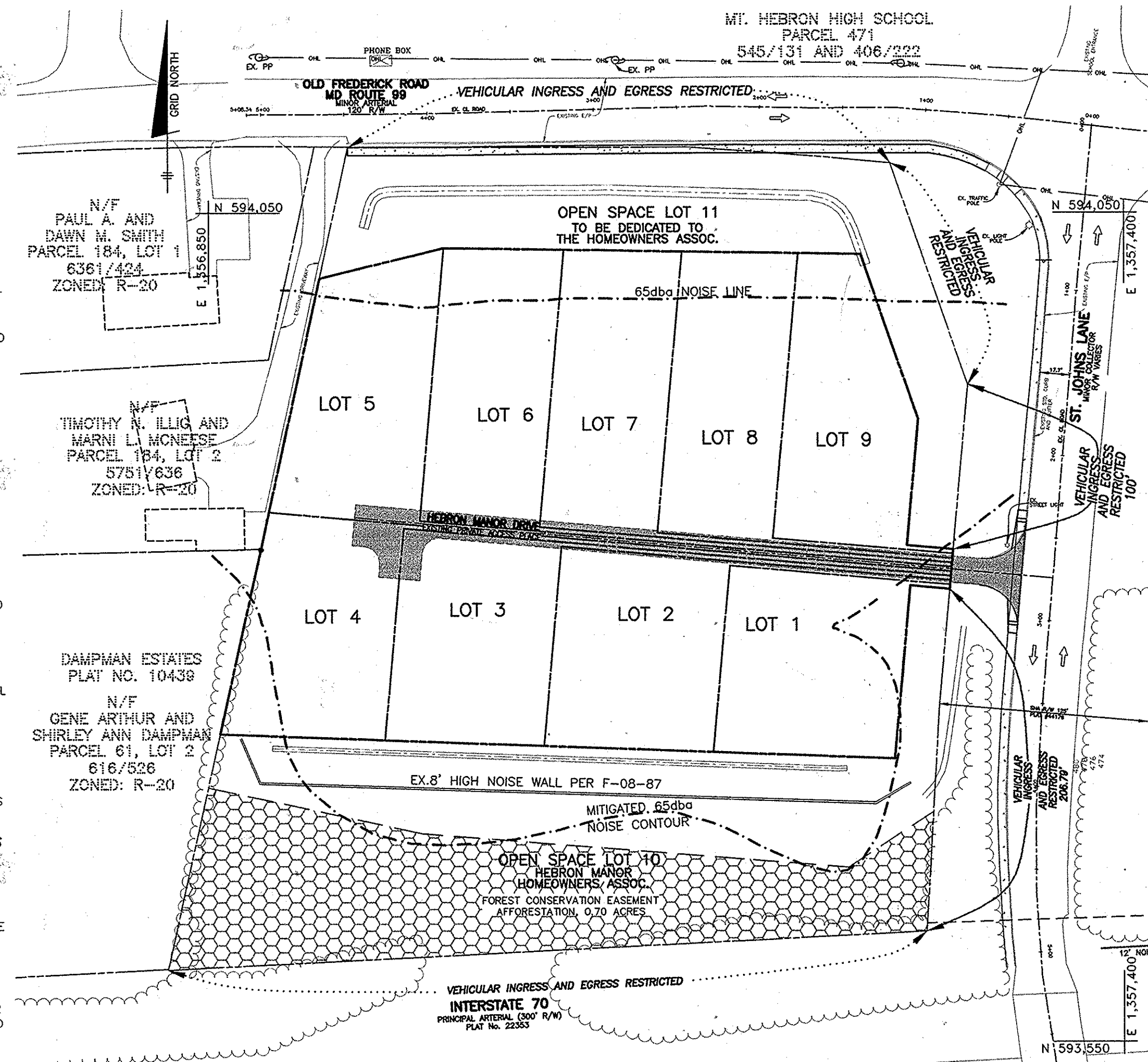
SHEET INDEX	
NO.	DESCRIPTION
1	COVER SHEET
2	SITE DEVELOPMENT AND GRADING PLAN, DETAILS AND MATERIAL SPECIFICATIONS
3	SEDIMENT & EROSION CONTROL PLAN, NOTES AND DETAILS AND ON-LOT SWM DETAILS

LEGEND

- EXISTING CONTOURS
- SOIL DELINEATION
- EXISTING TREE LINE
- PROPOSED TREE LINE
- PRIVATE SWM ACCESS, WALL MAINTENANCE, DRAINAGE & UTILITY EASEMENT
- PRIVATE ACCESS PLACE EASEMENT
- FOREST CONSERVATION EASEMENT
- PUBLIC SEWER, STORM DRAIN, WATER, SEWER, DRAINAGE & UTILITY EASEMENTS
- PUBLIC SIDEWALK & UTILITY EASEMENT
- PRIVATE USE IN COMMON EASEMENT
- PRIVATE DRAINAGE EASEMENT
- SHARED ACCESS PLACE PAVEMENT
- EXISTING BUILDING
- PROPOSED HOUSE
- BUILDING RESTRICTION LINE
- EROSION CONTROL MATTING
- RAIN SPOUT DRAINAGE DIRECTION
- EXISTING PERIMETER PLANTING
- EXISTING STREET TREES



STORMWATER MANAGEMENT PRACTICES				
LOT NUMBER	ADDRESS	DISCONNECTION OF ROOFTOP RUNOFF (NUMBER)	DISCONNECTION OF NON-ROOFTOP RUNOFF (NUMBER)	RAIN GARDENS (NUMBER)
1	9503 HEBRON MANOR DRIVE	4	1	1
2	9507 HEBRON MANOR DRIVE	4	1	1
3	9511 HEBRON MANOR DRIVE	4	1	1
4	9515 HEBRON MANOR DRIVE	4	1	1
5	9518 HEBRON MANOR DRIVE	2	1	1
6	9514 HEBRON MANOR DRIVE	2	1	1
7	9510 HEBRON MANOR DRIVE	2	1	1
8	9506 HEBRON MANOR DRIVE	2	1	1
9	9502 HEBRON MANOR DRIVE	2	1	1



ADDRESS CHART	
LOT	STREET ADDRESS
1	9503 HEBRON MANOR DRIVE
2	9507 HEBRON MANOR DRIVE
3	9511 HEBRON MANOR DRIVE
4	9515 HEBRON MANOR DRIVE
5	9518 HEBRON MANOR DRIVE
6	9514 HEBRON MANOR DRIVE
7	9510 HEBRON MANOR DRIVE
8	9506 HEBRON MANOR DRIVE
9	9502 HEBRON MANOR DRIVE

MINIMUM LOT SIZE CHART			
LOT NO.	GROSS AREA	PIPESTEM AREA	MINIMUM LOT SIZE
1	12,064 SF	64 SF	12,000 SF
2	12,355 SF	354 SF	12,001 SF
3	12,627 SF	628 SF	12,001 SF
4	12,881 SF	881 SF	12,000 SF
5	13,429 SF	856 SF	12,573 SF
6	12,749 SF	663 SF	12,086 SF
7	12,512 SF	474 SF	12,038 SF
8	12,291 SF	290 SF	12,001 SF
9	12,078 SF	74 SF	12,004 SF

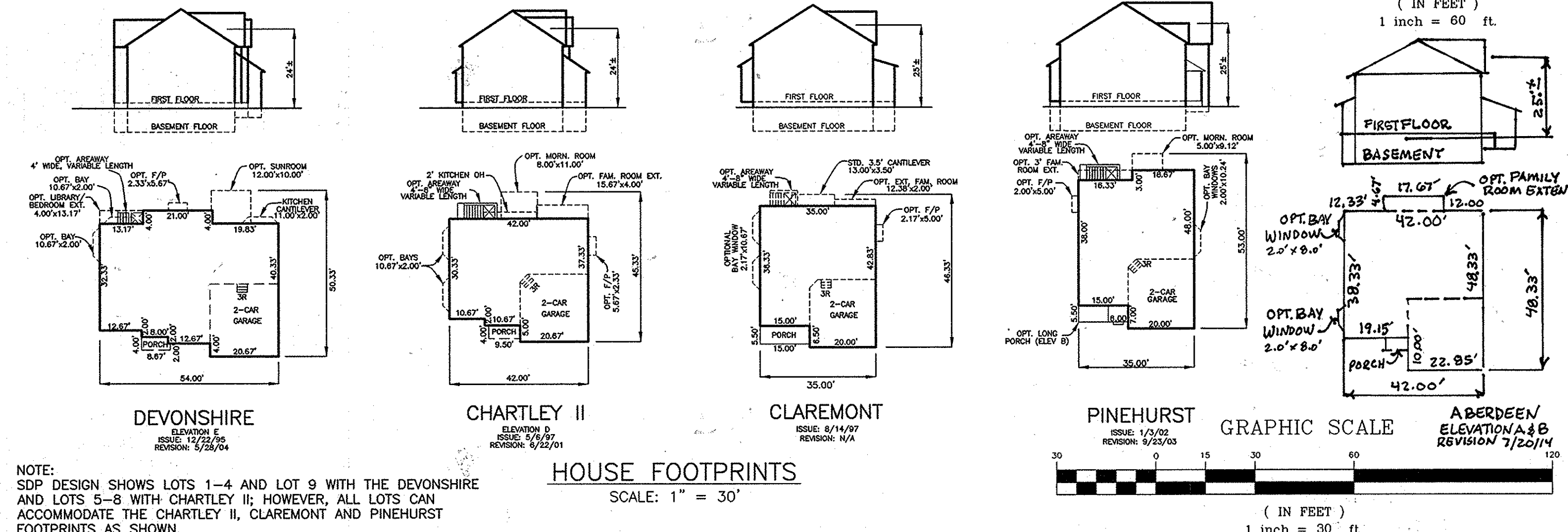
PERMIT INFORMATION CHART					
SUBDIVISION NAME:	SECTION/AREA:	LOT/PARCEL #	TAX MAP:	ELECTION DISTRICT:	CENSUS TRACT:
HEBRON MANOR	N/A	LOTS 1-9	17	2nd	6021.00
PLAT No. 21849-21849	GRID No. 15	ZONE R-20	TAX MAP 17	ELECTION DISTRICT 2nd	CENSUS TRACT 6021.00

SITE ANALYSIS DATA CHART

- A) TOTAL PROJECT AREA: 2.59 AC.
- B) AREA OF THIS PLAN SUBMISSION: 2.59 AC.
- C) APPROXIMATE LIMIT OF DISTURBANCE: 2.46 AC.
- D) PRESENT ZONING: R-20
- E) PROPOSED USE OF SITE: RESIDENTIAL SINGLE FAMILY DETACHED UNITS
- F) TOTAL NUMBER OF UNITS ALLOWED AS SHOWN ON FINAL PLAN(S): 9
- G) TOTAL NUMBER OF UNITS PROPOSED: 9
- H) APPLICABLE DPZ FILE REFERENCES: S-03-13 S-03-20 P-07-013, F-08-087, WP-08-80
- I) PROPOSED WATER AND SEWER SYSTEMS: PUBLIC PRIVATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief of Land Development 4/12/12
Chief, Development Engineering Division 4/12/12
Director 4/12/12



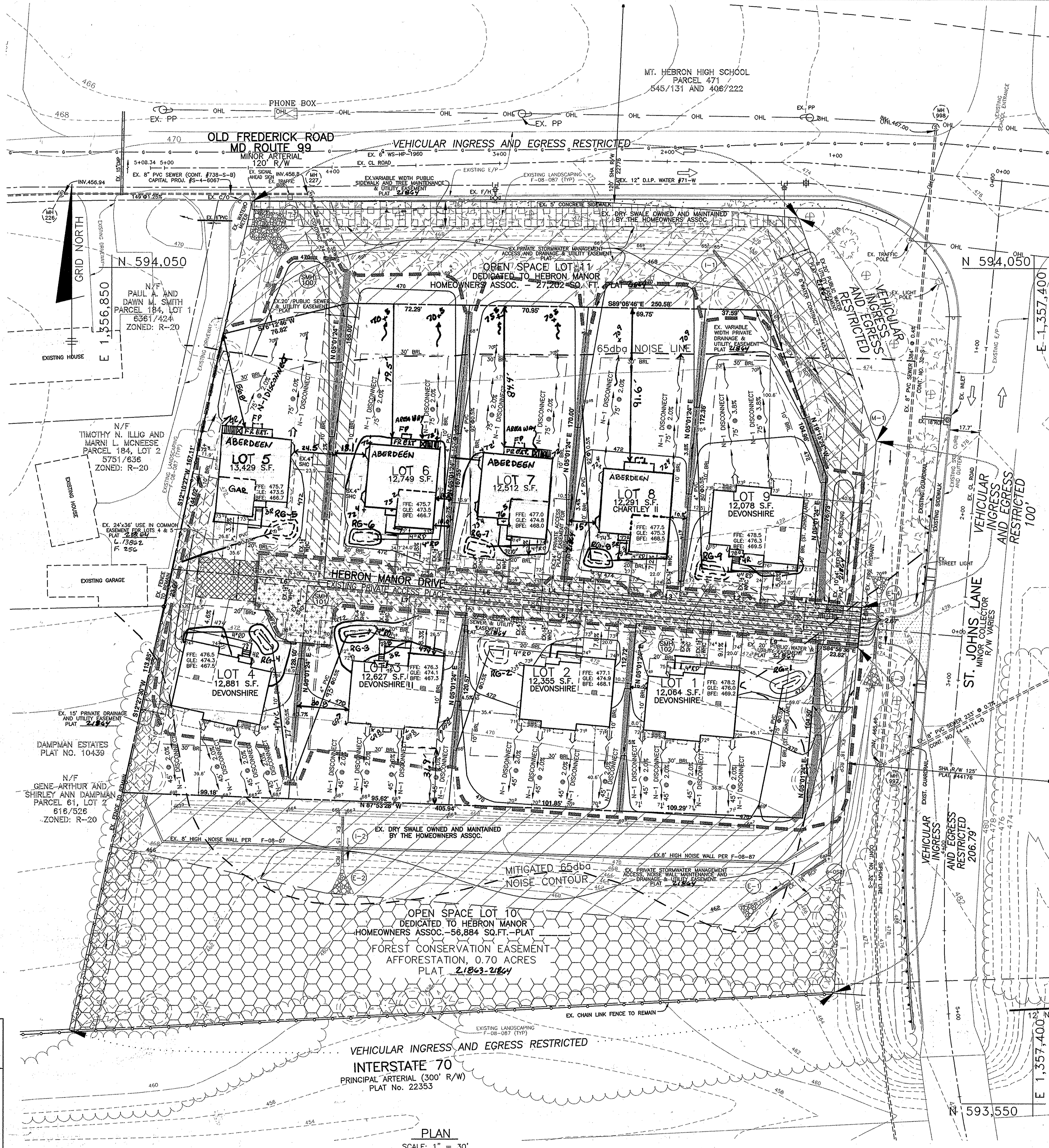
NOTE: SDP DESIGN SHOWS LOTS 1-4 AND LOT 9 WITH THE DEVONSHIRE AND LOTS 5-8 WITH CHARTLEY II. HOWEVER, ALL LOTS CAN ACCOMMODATE THE CHARTLEY II, CLAREMONT AND PINEHURST FOOTPRINTS AS SHOWN.

LEGEND

- EXISTING CONTOURS
- SOIL DELINEATION
- EXISTING TREE LINE
- PROPOSED TREE LINE
- PRIVATE SWM ACCESS, WALL MAINTENANCE, DRAINAGE & UTILITY EASEMENT
- PRIVATE ACCESS PLACE EASEMENT
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- PUBLIC SIDEWALK & UTILITY EASEMENT
- PRIVATE USE IN COMMON EASEMENT
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- SHARED ACCESS PLACE PAVEMENT
- EXISTING BUILDING
- PROPOSED HOUSE
- BUILDING RESTRICTION LINE
- EROSION CONTROL MATTING
- RAIN SPOUT DISCHARGE DIRECTION
- EXISTING PERIMETER PLANTING F-08-087
- EXISTING STREET TREES F-08-087

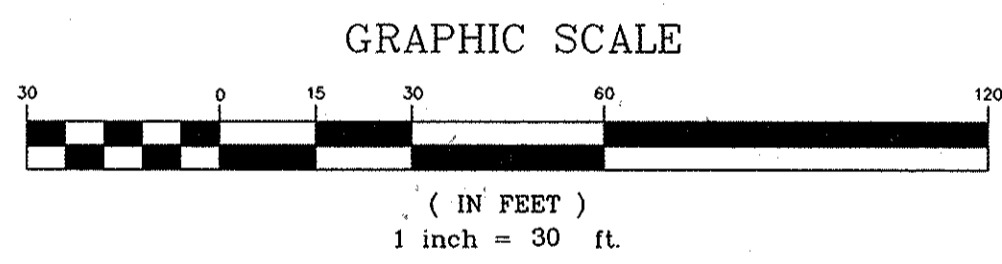
SEWER HOUSE CONNECTION CHART		
LOT	INV. @ PL/ESMT	MCE
1	466.7	469.2
2	465.6	468.1
3	464.9	467.3
4	464.2	467.5
5	464.2	466.7
6	464.3	466.7
7	465.5	468.0
8	466.0	468.5
9	466.8	469.4

NOTE: ALL SEWER HOUSE CONNECTIONS ARE 1% SLOPES.
 CONTRACTOR TO CHECK SEWER HOUSE CONNECTION ELEVATION AT PROPERTY/EASEMENT LINE PRIOR TO CONSTRUCTION OF HOUSE TO ENSURE PROPER SHC SLOPES CAN BE MAINTAINED.



THE PROPOSED HOUSES TO BE LOCATED ON ALL OF THE LOTS WITHIN THIS DEVELOPMENT SHALL BE CONSTRUCTED WITH SPECIAL CONSIDERATION GIVEN TO ACOUSTICAL INSULATION AND OTHER NOISE ATTENUATION MATERIALS FOR THE SIDING, ROOFING, WINDOWS AND DOORS, ETC. TO LESSEN EXCESSIVE NOISE LEVELS.

MATERIALS & SPECIFICATIONS FOR ON-LOT RAINGARDENS				
MATERIAL	SPECIFICATION	SIZE	NOTES:	
PLANTINGS	SEE APPENDIX A; TABLE A.4	N/A	PLANTINGS ARE SITE SPECIFIC	
PLANTING SOIL (2.0' TO 4.0' DEEP)	SAND: 30-60% SILT: 30-55% CLAY: 0-25%	N/A	USDA SOIL TYPES: LOAMY SAND, SANDY LOAM OR LOAM	
MULCH	SHREDDED HARDWOOD	N/A	AGED 6 MONTHS, MINIMUM	
GEOTEXTILE (CLASS 'C')	APPARENT OPENING SIZE: (ASTM D-4751) GRASS TENSILE STRENGTH: (ASTM D-4632) PUNCTURE RESISTANCE: (ASTM D-4633)	N/A	FOR USE FOR SEPARATION BETWEEN NATURAL GROUND AND SOIL AND STONE OF RAIN GARDEN. TO BE USED ON SIDES ONLY.	
GEOTEXTILE (1/4" WIRE MESH)	-	1/4" WIRE MESH	1/4" WIRE MESH	
DRAIN STONE	-	#8 STONE	#8 STONE	
UNDERDRAIN GRAVEL	ASHTO M-43	0.375" TO 0.750"	3/8" PERFT. @ 6" O/C, 4 HOLES PER ROW; MINIMUM OF 3" OF GRAVEL OVER PIPES, NOT NECESSARY UNDERNEATH PIPES	
UNDERDRAIN PIPING	F758, TYPE PS28 OR ASHITO M-278	4" TO 6" RIGID SCH40 PVC, SDR35 OR HDPE	3/8" PERFT. @ 6" O/C, 4 HOLES PER ROW; MINIMUM OF 3" OF GRAVEL OVER PIPES, NOT NECESSARY UNDERNEATH PIPES	



NO.	DATE	REVISION
4	6-23-16	ADD DEVONSHIRE II TO LOT 3
3	4-25-16	ADD ABERDEEN HOUSE MODEL TO LOTS 6 & 7
2	4-9-16	ADD ABERDEEN HOUSE MODEL TO LOTS 5, REVERSE MBR GEOMETRY & ADD SIDEWALKS
1	7-30-15	ADD ABERDEEN HOUSE MODEL TO LOT 8

BENCHMARK
 ENGINEERS & LAND SURVEYORS & PLANNERS
ENGINEERING, INC.
 8480 BALTIMORE NATIONAL PIKE & SUITE 418.4 ELICOTT CITY, MARYLAND 21043
 (P) 410-465-8105 (F) 410-465-6644
 60 THOMAS JOHNSON DRIVE & FREDERICK, MARYLAND 21702
 (P) 301-371-3505 (F) 301-371-3508
 WWW.BE-CIVILANDENGINEERING.COM

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

 DIRECTOR
 DATE: 4/22/12

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 4/12/12

OWNER: HEBRON MANOR LLC
 11807 WOLLINGFORD COURT
 CLARKSVILLE, MARYLAND 21029
 410-792-2565

DEVELOPER: CORNERSTONE HOLDINGS, L.L.C.
 9695 NORFOLK AVENUE
 LAUREL, MARYLAND 20723
 410-792-2565

PROJECT: HEBRON MANOR
 LOTS 1-9

LOCATION: TAX MAP: 17
 GRID: 15
 2nd ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE: SITE DEVELOPMENT AND GRADING PLAN, DETAILS, AND MATERIALS SPECIFICATIONS

DATE: MARCH 2012 PROJECT NO. 1596

DESIGN: AAM DRAFT: AAM CHECK: BFC SCALE: AS SHOWN SHEET 2 OF 3

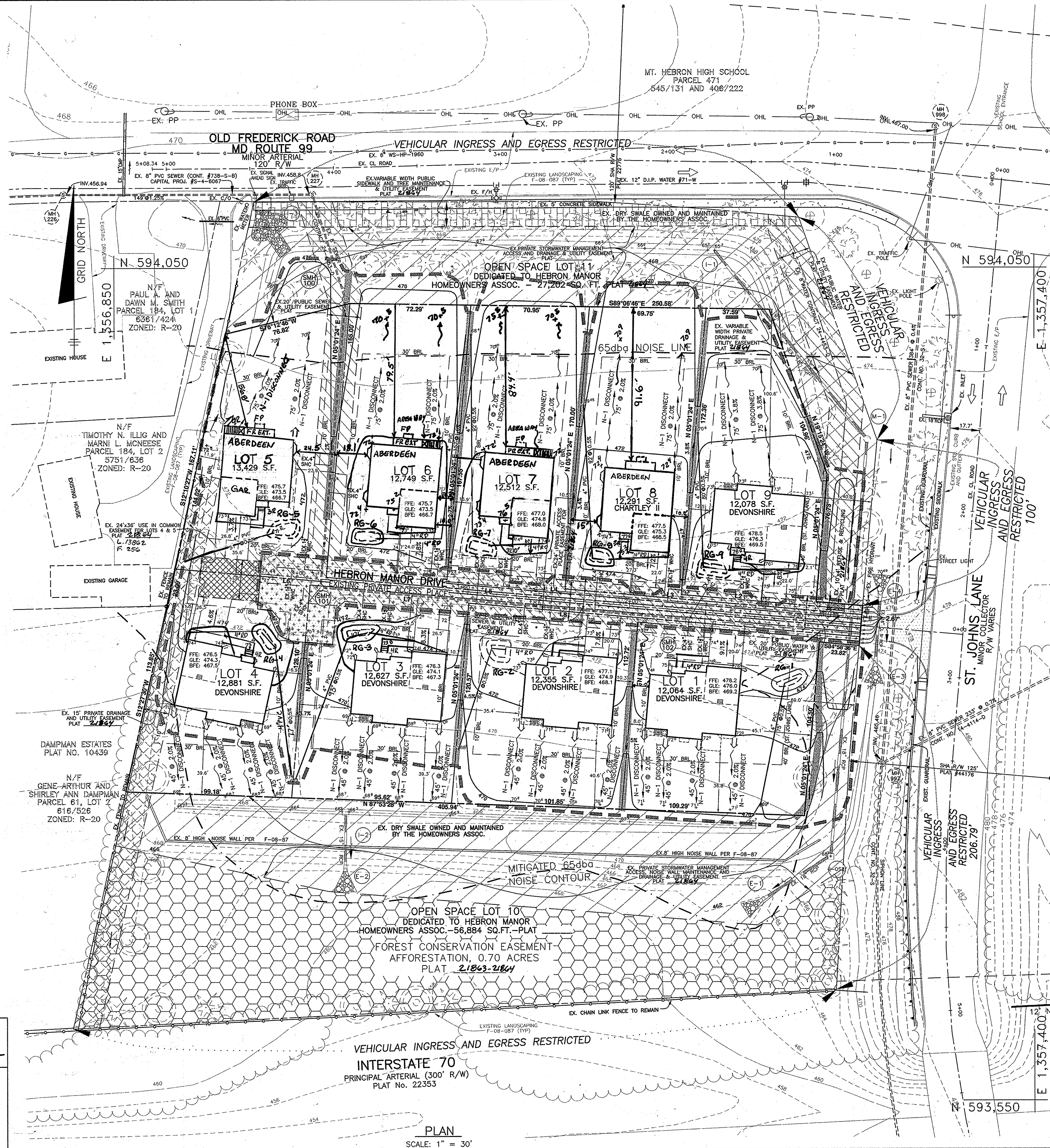
LEGEND

- EXISTING CONTOURS
- SOIL DELINEATION MIC3
EKb2
- EXISTING TREE LINE
- PROPOSED TREE LINE
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- PRIVATE ACCESS PLACE EASEMENT
- FOREST CONSERVATION EASEMENT
- PUBLIC SEWER, STORM DRAIN, WATER, SEWER, DRAINAGE & UTILITY EASEMENTS
- PUBLIC SIDEWALK & UTILITY EASEMENT
- PRIVATE USE IN COMMON EASEMENT
- PRIVATE DRAINAGE EASEMENT
- SHARED ACCESS PLACE PAVEMENT
- EXISTING BUILDING
- PROPOSED HOUSE
- BUILDING RESTRICTION LINE 10' BRL
- EROSION CONTROL MATING
- RAIN SPOUT DISCHARGE DIRECTION
- EXISTING PERIMETER PLANTING F-08-087
- EXISTING STREET TREES F-08-087

LOT	INV. @ PL/ESMT	MCE
1	466.7	469.2
2	465.6	468.1
3	464.9	467.3
4	464.7	467.5
5	464.2	466.7
6	464.3	466.7
7	465.5	468.0
8	466.0	468.5
9	466.8	469.4

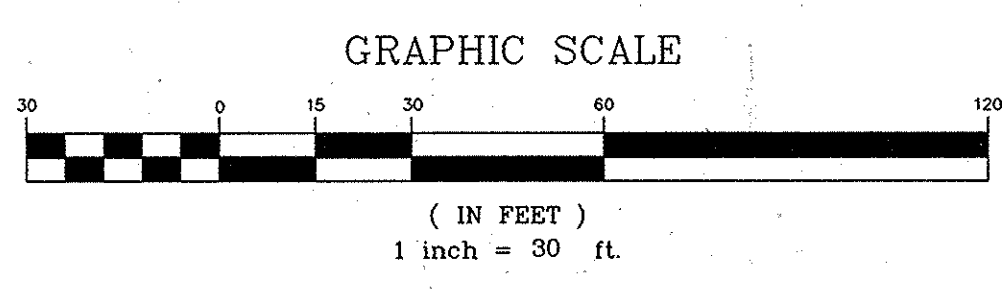
NOTE: ALL SEWER HOUSE CONNECTIONS ARE 1% SLOPES.

CONTRACTOR TO CHECK SEWER HOUSE CONNECTION ELEVATION AT PROPERTY/EASEMENT LINE PRIOR TO CONSTRUCTION OF HOUSE TO ENSURE PROPER SHC SLOPES CAN BE MAINTAINED.



THE PROPOSED HOUSES TO BE LOCATED ON ALL OF THE LOTS WITHIN THIS DEVELOPMENT SHALL BE CONSTRUCTED WITH SPECIAL CONSIDERATION GIVEN TO ACOUSTICAL INSULATION AND OTHER NOISE ATTENUATION MATERIALS FOR THE SIDING, ROOFING, WINDOWS AND DOORS, ETC. TO LESSEN EXCESSIVE NOISE LEVELS.

MATERIALS & SPECIFICATIONS FOR ON-LOT RAINGARDENS			
MATERIAL	SPECIFICATION	SIZE	NOTES:
PLANTINGS	SEE APPENDIX A; TABLE A.4	N/A	PLANTINGS ARE SITE SPECIFIC
PLANTING SOIL (2.0' TO 4.0' DEEP)	SAND: 30-60% SILT: 30-50% CLAY: 0-20%	N/A	USDA SOIL TYPES: LOAMY SAND, SANDY LOAM OR LOAM
MULCH	SHREDED HARDWOOD	N/A	AGED 6 MONTHS, MINIMUM
GEOTEXTILE (CLASS "C")	APPROPRIATE OPENING SIZE: (ASTM D-4751) GRAB TENSILE STRENGTH: (ASTM D-4632) PUNCTURE RESISTANCE: (ASTM D-4833)	N/A	FOR USE FOR SEPARATION BETWEEN NATURAL GROUND AND SOIL AND STONE OF RAIN GARDEN. TO BE USED ON SIDES ONLY.
GEOTEXTILE (1/4" WIRE MESH)		1/4" WIRE MESH	1/4" WIRE MESH
DRAIN STONE		#8 STONE	#8 STONE
UNDERDRAIN GRAVEL	ASHTO M-43	0.375" TO 0.750"	
UNDERDRAIN PIPING	FRS5 TYPE PS28 OR ASHTO M-278	4" TO 6" RIGID SCH.40 PVC, SDR35 OR HDPE	3/8" PERF. @ 6" O/C, 4 HOLES PER ROW; MINIMUM OF 3" OF GRAVEL OVER PIPES, NOT NECESSARY UNDERNEATH PIPES



3	4-25-16	ADD ABERDEEN HOUSE MODEL TO LOTS 6 & 7
2	4-11-16	ADD ABERDEEN HOUSE MODEL TO LOTS 5, REVERSE MOB GEOMETRY & ADD SIDEWALKS
1	7-30-15	ADD ABERDEEN HOUSE MODEL TO LOT 8
NO.	DATE	REVISION

BENCHMARK ENGINEERING, INC.
ENGINEERS • LAND SURVEYORS • PLANNERS

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60 THOMAS JOHNSON DRIVE & FREDERICK, MARYLAND 21702
(P) 301-371-3509 (F) 301-371-3508
WWW.BE-CIVILENGINEERING.COM

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Howard A. Leger 4/22/12
DIRECTOR

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Victor S. ... 4-19-12
CHIEF, DIVISION OF LAND DEVELOPMENT

... 4/17/12
CHIEF, DEVELOPMENT ENGINEERING DIVISION

OWNER: HEBRON MANOR LLC
11807 WOLLINGFORD COURT
CLARKSVILLE, MARYLAND 21029
410-792-2565

DEVELOPER: CORNERSTONE HOLDINGS, L.L.C.
9695 NORFOLK AVENUE
LAUREL, MARYLAND 20723
410-792-2565

PROJECT: HEBRON MANOR LOTS 1-9

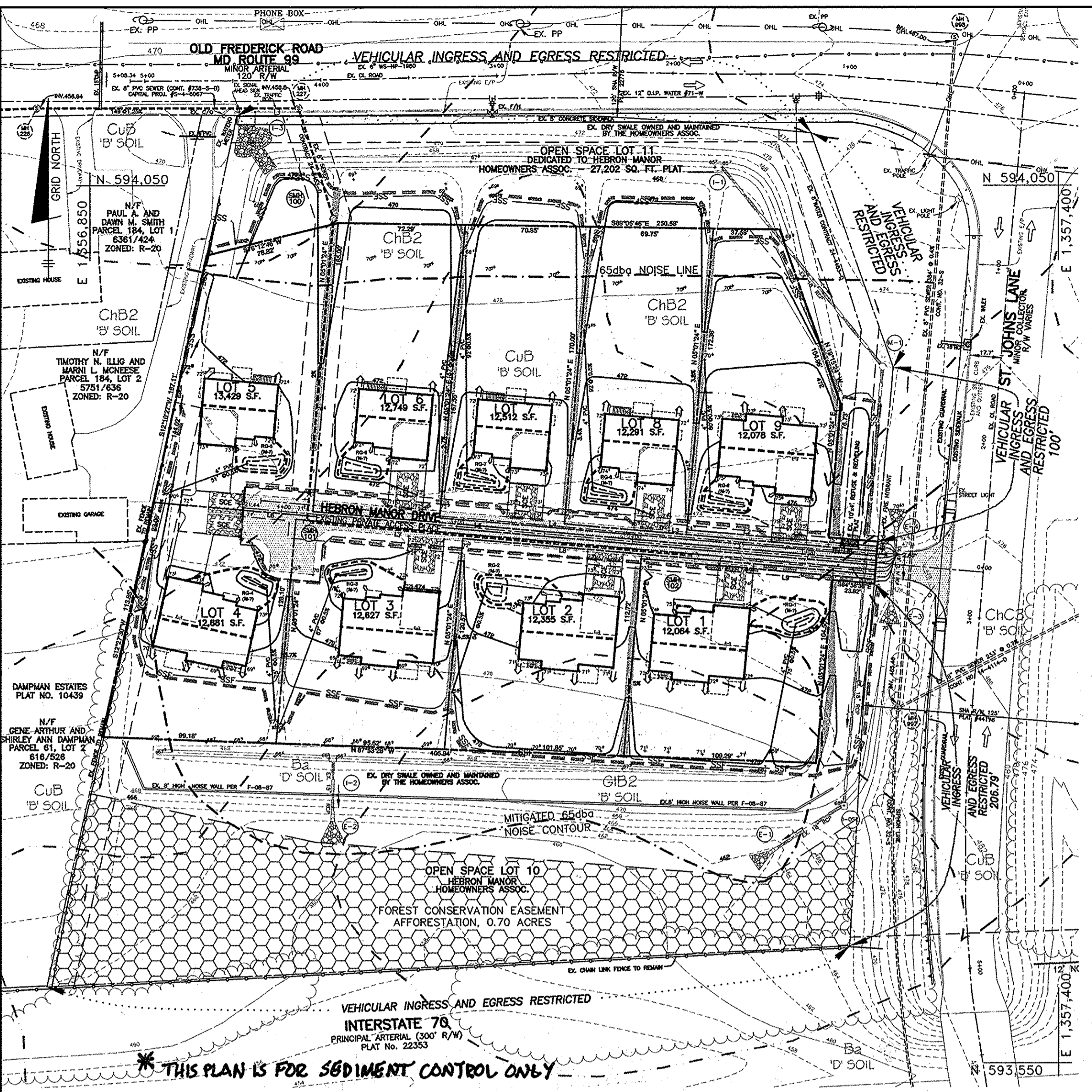
LOCATION: TAX MAP: 17 GRID: 15 PARCEL: 518
2nd ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: SITE DEVELOPMENT AND GRADING PLAN, DETAILS, AND MATERIALS SPECIFICATIONS

DATE: MARCH 2012 PROJECT NO. 1596

DESIGN: AAM DRAFT: AAM CHECK: BFC SCALE: AS SHOWN SHEET 2 OF 3

PLAN
SCALE: 1" = 30'



SOILS LEGEND

MAP SYMBOL	SOIL GROUP	SOIL TYPE
ChB2	D*	BAILE SILT LOAM
ChB2	B	CHESTER SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
ChC3	B	CHESTER SILT LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED
CuB	B	COMUS SILT LOAM, LOCAL ALLOUVIUM, 3 TO 8 PERCENT SLOPES
ChE2	B	CLENELG LOAM, 3 TO 6 PERCENT SLOPES, MODERATELY ERODED
MIB2	B	MANOR LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED

* INDICATES HYDRIC SOILS
TAKEN FROM SOIL SURVEY, HOWARD COUNTY, MARYLAND (ISSUED JULY 1968) MAP NO. 9 AND 15

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.

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.

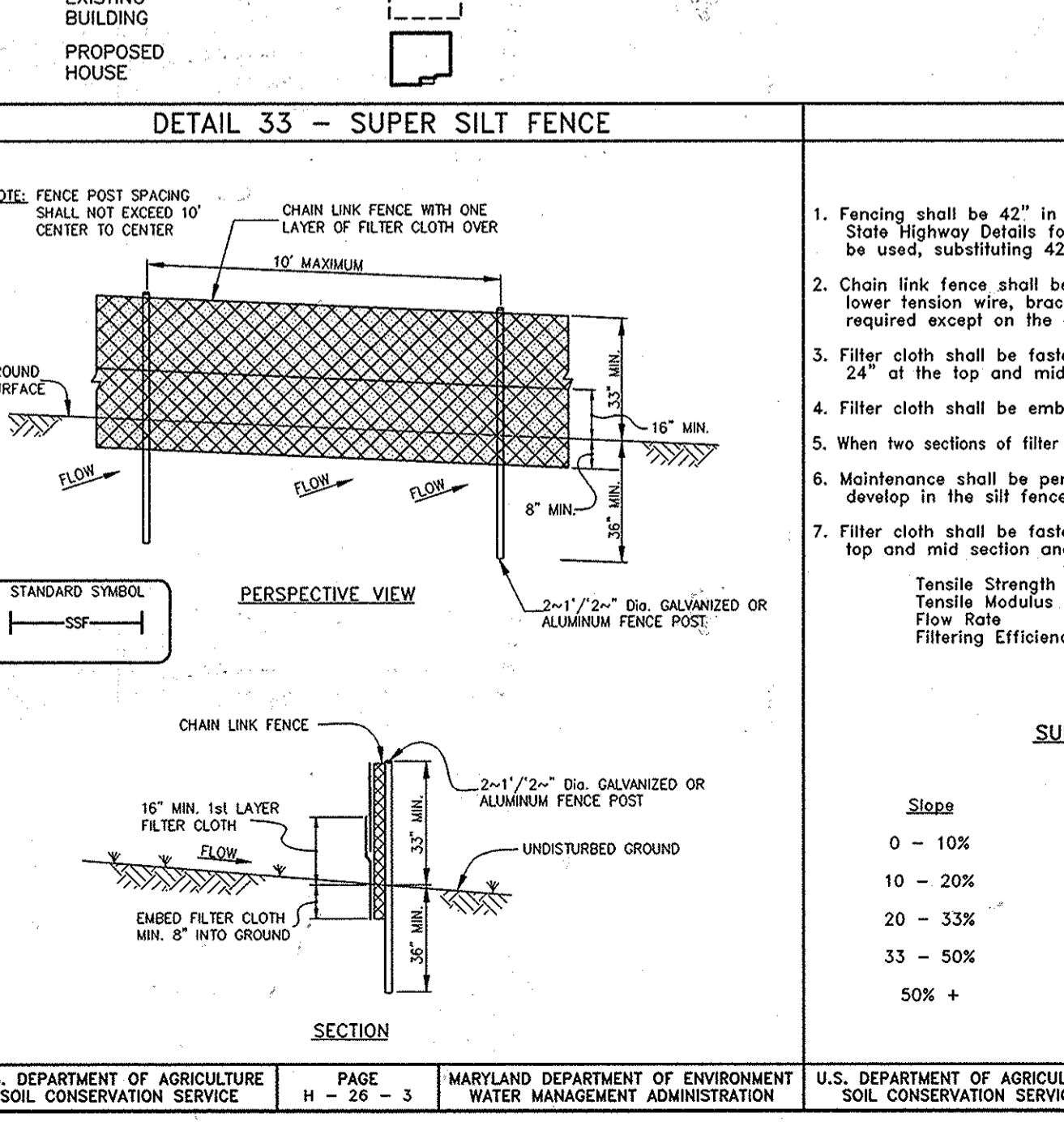
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

RAINGARDEN PLANTING SCHEDULE

NO.	PLANTING
1	IRIS VERSICOLOR (IRIS)
4	NYPHOIDES PELTATA FLOATING-HEART YELLOW
2	LOBELIA CARDINALIS CARDINAL FLOWER
2	ILEX VERTICILLATA - WINTERBERRY

RAINGARDEN PLANTING DATA

- PLANTINGS WITHIN THE PONDING AREA OF THE RAINGARDEN ARE TO BE OF A MEDIUM TO HIGH WATER TOLERANCE
- PLANTINGS ALONG THE PERIMETER (BERM) AREA OF THE RAINGARDEN ARE TO BE OF A LOW TO MEDIUM WATER TOLERANCE
- AVOID PLANTINGS WITH EXCESSIVE ROOT MASS IN POND AREA OF THE RAINGARDEN NEAR O.B. PIPE AND UNDERDRAIN.



SEDIMENT CONTROL NOTES

- A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTION, UTILITIES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION, (313-1850).
- 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 SPECIFICATIONS 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 PERMANENT SEDIMENT CONTROL STRUCTURES, DICES, GERMEN SLOPES AND ALL SLOPES GREATER THAN 3%; B) 14 DAYS 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 PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE SPECIFICATIONS:

TOTAL AREA OF SITE (THIS SUBMISSION)	2.59	ACRES
AREA DISTURBED	2.46	ACRES
AREA TO BE ROOFED OR PAVED	0.51	ACRES
AREA TO BE VEGETATIVELY STABILIZED	1.94	ACRES
TOTAL CUT	2442	CY
TOTAL FILL	3962	CY
OFFSITE WASTE/BORROW AREA LOCATION	*	

* IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO IDENTIFY THE SOIL/BORROW SITE AND NOTIFY AND GAIN APPROVAL FROM THE SEDIMENT CONTROL DIVISION OF THE SITE AND ITS GRADING PERMIT NUMBER AT THE TIME OF CONSTRUCTION.
- 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 PERMANENT 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.

CONSTRUCTION SPECIFICATIONS

- Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6" fence shall be used, substituting 42" fabric and 6" length posts.
- Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence.
- Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
- Filter cloth shall be embedded a minimum of 8" into the ground.
- When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.
- Maintenance shall be performed as needed and silt buildups removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height.
- Filter cloth shall be fastened securely to each fence post with wire ties or staples of top and mid section and shall meet the following requirements for Geotextile Class F:

Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal/ft (min) (max.)	Test: MSMT 522
Filtering Efficiency	75% (min.)	Test: MSMT 522

SUPER SILT FENCE DESIGN CRITERIA

Slope	Slope Steepness	Slope Length (maximum)	Silt Fence Length (maximum)
0 - 10%	0 - 10:1	Unlimited	Unlimited
10 - 20%	10:1 - 5:1	200 feet	1,500 feet
20 - 33%	5:1 - 3:1	100 feet	1,000 feet
33 - 50%	3:1 - 2:1	100 feet	500 feet
50% +	2:1 +	50 feet	250 feet

PERMANENT SEEDBED PREPARATIONS

SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES:

- PREFERRED - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ FT) AND 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ FT) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS PER ACRE 30-0-0 UREAFORM FERTILIZER (9 LBS/1000 SQ FT).
- ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ FT) AND 1000 LBS PER ACRE 10-10-10 FERTILIZER (23 LBS/1000 SQ FT) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL.

SEEDING: FOR THE PERIODS MARCH 1 THROUGH APRIL 30 AND AUGUST 1 THROUGH OCTOBER 15, SEED WITH 20 LBS PER ACRE (1.4 LBS/1000 SQ FT) OF KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS PER ACRE (0.5 LBS/1000 SQ FT) OF WEEPING LOVEGRASS DURING THE PERIOD OF OCTOBER 16 THROUGH FEBRUARY 28. PROTECT SITE BY OPTION (1) 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) USE SOD. OPTION (3) SEED WITH 60 LBS PER ACRE OF KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS PER ACRE OF WELL ANCHORED STRAW.

MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ FT) OF UNROTTED SMALL GRASS STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ FT) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES, 8 FT. OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ FT) FOR ANCHORING.

MAINTENANCE: INSPECT ALL SEEDBED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

TEMPORARY SEEDBED PREPARATIONS

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED.

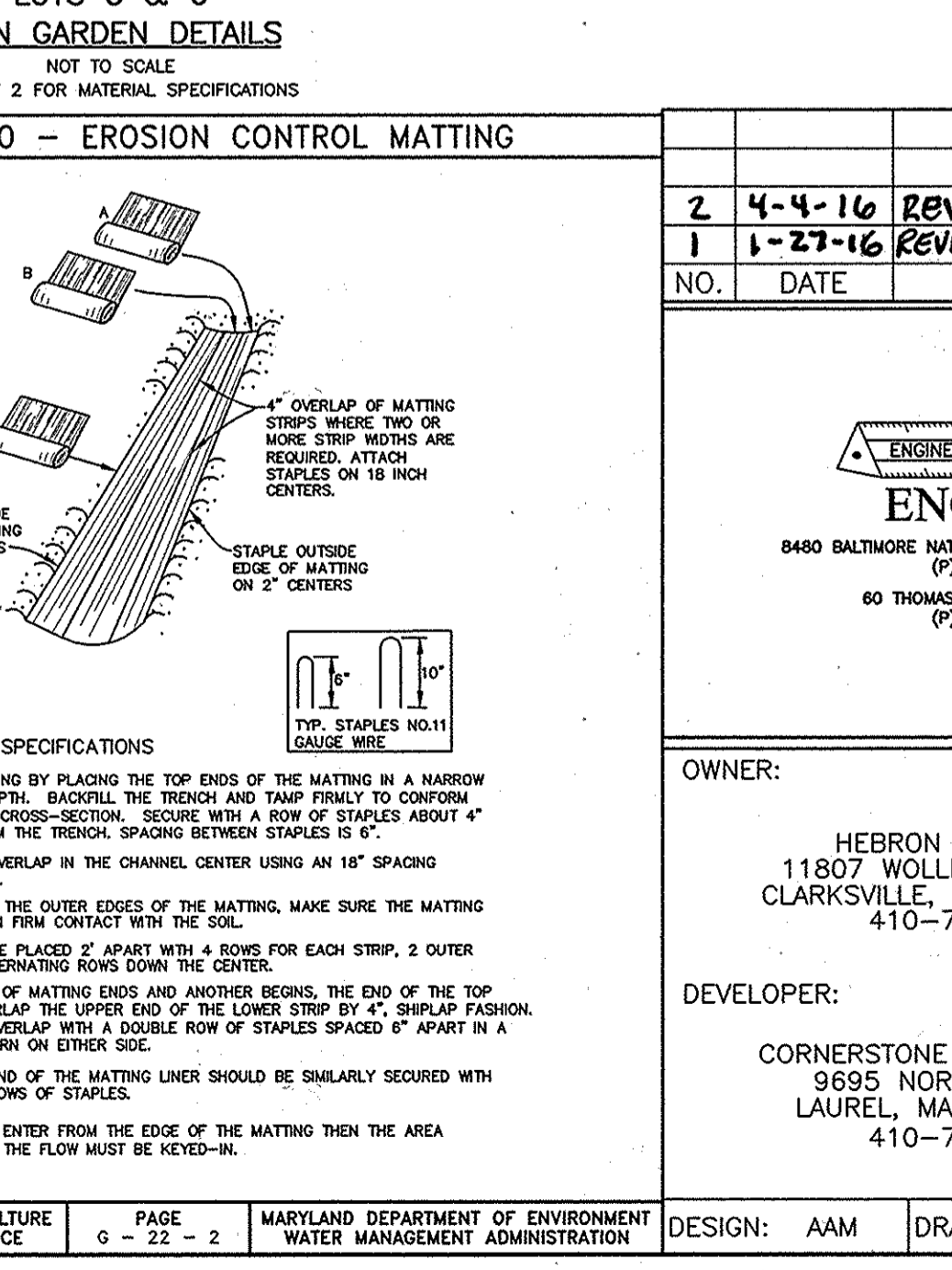
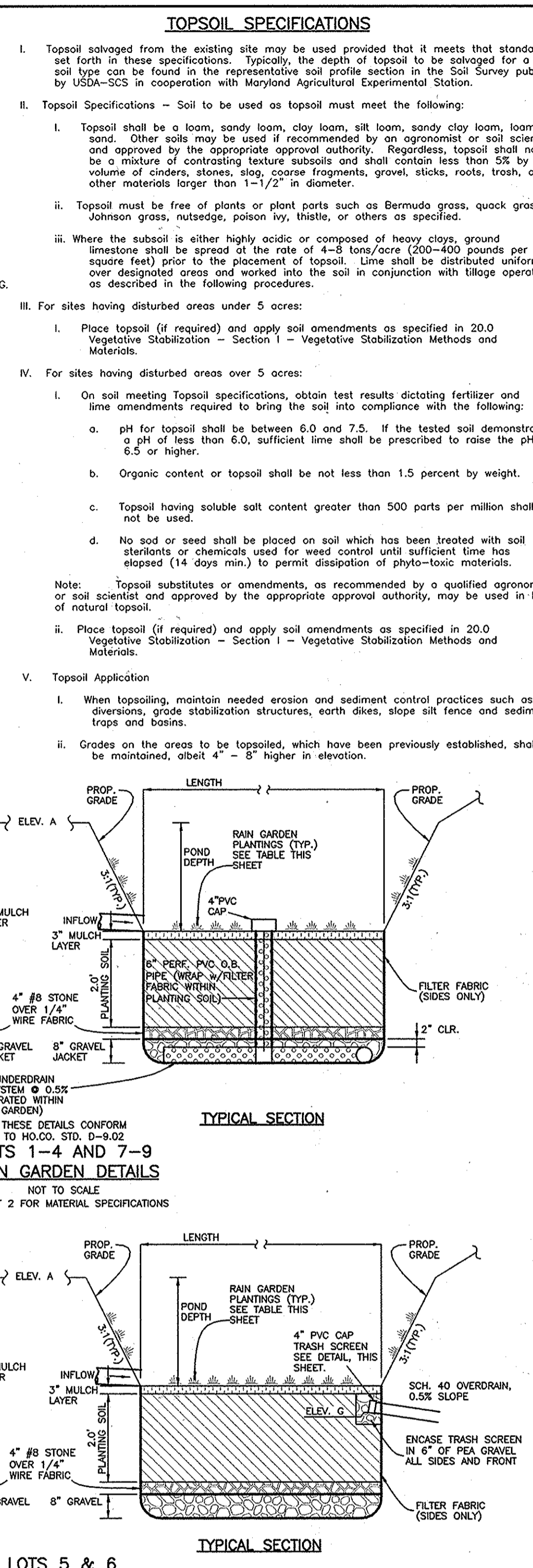
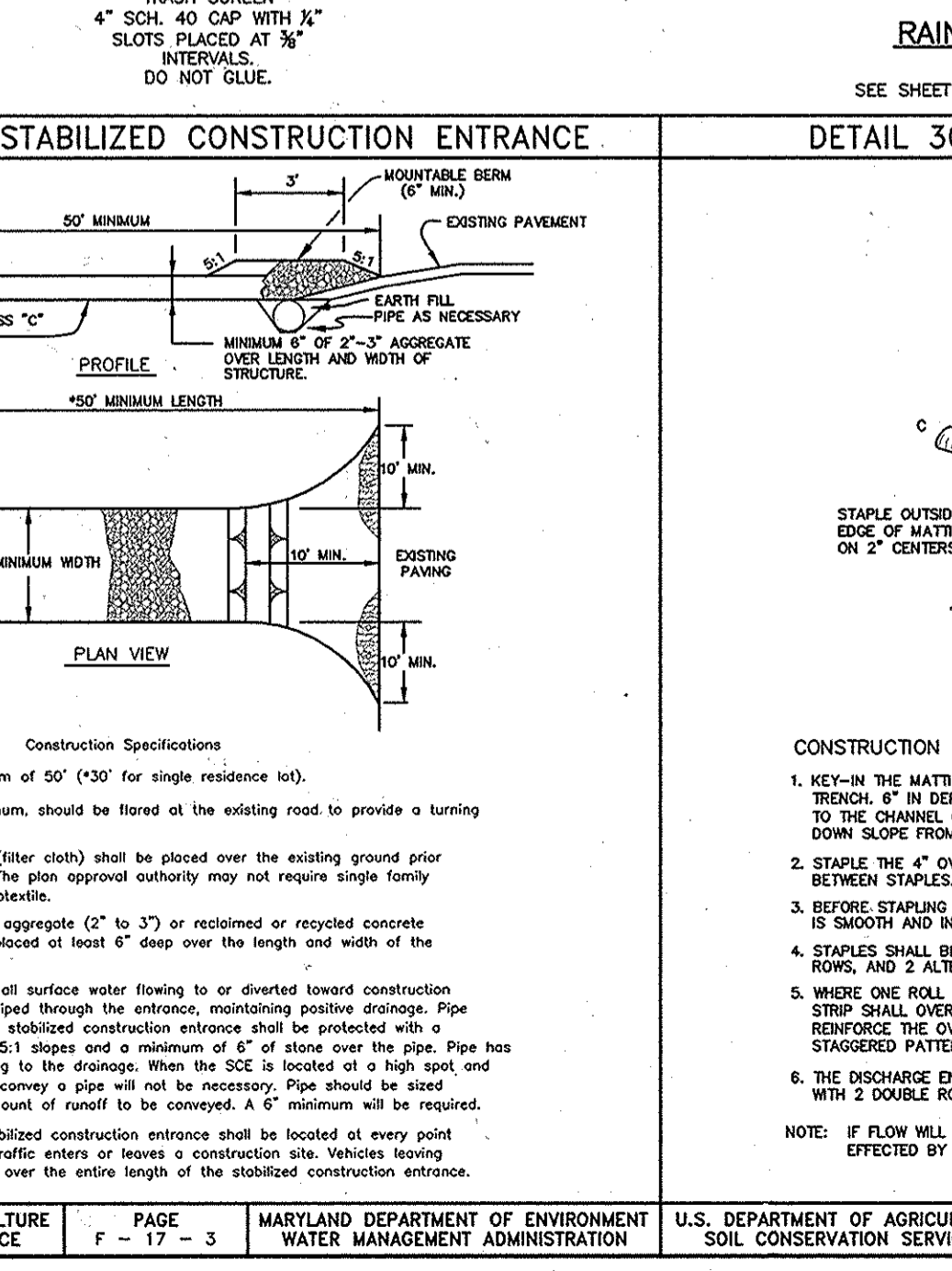
SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: APPLY 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ FT).

SEEDING: FOR PERIOD MARCH 1 THROUGH APRIL 30 AND FROM AUGUST 15 THROUGH NOV. 15, SEED WITH 2-1/2 BUSHELS PER ACRE OF ANNUAL RYE (3.2 LBS/1000 SQ FT). FOR THE PERIOD MAY 1 THROUGH AUGUST 14, SEED WITH 3 LBS PER ACRE OF WEEPING LOVEGRASS (0.7 LBS/1000 SQ FT). FOR THE PERIOD NOVEMBER 16 THROUGH FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOD.

MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ FT) OF UNROTTED SMALL GRASS STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ FT) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES, 8 FT. OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ FT) FOR ANCHORING.

REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.



TOPSOIL SPECIFICATIONS (CONT.)

- Topsoil salvaged from the existing site may be provided provided that it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given site shall be found in the representative soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experimental Station.
- Topsoil Specifications - Soil to be used as topsoil must meet the following:
 - Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting texture subsoils and shall contain less than 2% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials longer than 1-1/2" in diameter.
 - Topsoil must be free of plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nutgrass, poison ivy, thistle, or others as specified.
 - Where the subsoil is either highly acidic or composed of heavy clays, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.
- For sites having disturbed areas under 5 acres:
 - Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.
- For sites having disturbed areas over 5 acres:
 - On soil meeting Topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:
 - pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.
 - Organic content or topsoil shall be not less than 1.5 percent by weight.
 - Topsoil having soluble salt content greater than 500 parts per million shall not be used.
 - No sod or seed shall 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.
 - Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.
 - Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.
- Topsoil Application
 - When topsoiling, maintain needed erosion and sediment control practices such as diversions, grade stabilization structures, earth dikes, slope silt fence and sediment traps and basins.
 - Grades on the areas to be topsoiled, which have been previously established, shall be maintained, about 4" - 8" higher in elevation.

SEQUENCE OF CONSTRUCTION

NOTIFY SEDIMENT CONTROL DIVISION 48 HOUR PRIOR TO START OF CONSTRUCTION

- OBTAIN GRADING PERMIT.
- INSTALL SEDIMENT CONTROLS THAT ARE INCLUDED UNDER THIS SDP.
- EXCAVATE FOR FOUNDATIONS AND ROUGH GRADE, TAKING CARE TO PROTECT DRAIN SWALES FROM SEDIMENT INTRUSION.
- CONSTRUCT HOUSES, BACKFILL AND CONSTRUCT DRIVEWAYS.
- FINAL GRADE AND STABILIZE IN ACCORDANCE WITH PERMANENT SEEDBED NOTES. FLUSH STORM DRAIN SYSTEMS.
- WHEN CONTRIBUTING AREAS ARE STABILIZED, INSTALL ON-LOT RAIN GARDENS AND PLANT MATERIALS.
- WITH THE APPROVAL OF THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROL DEVICES AND STABILIZE ANY REMAINING DISTURBED AREAS.

NOTE: EROSION CONTROL MATTING SHALL BE PLACED IN SWALES WHERE DEEMED NECESSARY UNTIL VEGETATION IS ESTABLISHED OR SOLID SOD SHOULD BE USED.

RAINGARDEN GEOMETRY

LOT	LENGTH	WIDTH	DEPTH	A	B	C	D	E	F	G
RG-1	16'	4'	1.0'	474.0	473.0	472.75	470.75	470.42	469.75	N/A
RG-2	4'	7'	1.0'	473.3	472.3	472.05	470.05	469.72	469.05	N/A
RG-3	14'	3.5'	1.0'	472.0	471.0	470.75	468.75	468.42	467.75	N/A
RG-4	14'	4'	1.0'	472.0	471.0	470.75	468.75	468.42	467.75	N/A
RG-5	1.5'	6.5'	0.75'	472.5	471.75	471.5	469.5	469.17	468.5	470.95
RG-6	14.5'	4'	0.75'	472.0	471.25	471.0	469.0	468.67	468.0	469.18
RG-7	18.5'	4'	0.75'	473.0	472.25	472.0	470.0	469.67	469.0	N/A
RG-8	11'	5.5'	0.75'	474.0	473.25	473.0	471.0	470.67	470.0	N/A
RG-9	15'	4.5'	0.75'	475.0	474.25	474.0	472.0	471.67	471.0	N/A

NOTE: FACILITY SHAPES ARE IRREGULAR. SEE PLAN VIEW FOR LAYOUT. MEASUREMENTS ARE "CENTERED" ON SIDES, EXCEPT RG-2, WHICH ARE ALONG "LONG" SIDES.

OPERATION & MAINTENANCE SCHEDULE FOR RAINGARDENS

- ANNUAL MAINTENANCE OF PLANT MATERIAL AND MULCH LAYER IS REQUIRED. MAINTENANCE OF MULCH IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH-OUT. ANY REPLACEMENT OF MULCH SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE & INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL & PRUNING.
- SCHEDULE OF PLANT INSPECTION WILL BE TWICE A YEAR IN THE SPRING AND FALL. THIS INSPECTION WILL INCLUDE REMOVAL OF DEAD & DISEASED VEGETATION CONSIDERED BEYOND TREATMENT. TREATMENT OF ALL DISEASED TREES.
- MULCH SHALL BE INSPECTED EACH SPRING. REMOVE THE PREVIOUS MULCH LAYER BEFORE APPLYING NEW LAYER EVERY 2 TO 3 YEARS.
- SOIL EROSION TO BE ADDRESSED ON AN AS-NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER HEAVY STORM EVENTS.

ENGINEERING, INC.
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60 THOMAS JOHNSON DRIVE & FREDERICK, MARYLAND 21702
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WWW.BD-CADLENDER.COM

BENCHMARK ENGINEERING, INC.
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. 28376, Expiration Date: 1-1-13

OWNER: HEBRON MANOR LLC
11807 WOLLINGFORD COURT
CLARKSVILLE, MARYLAND 21029
410-792-2565

DEVELOPER: CORNERSTONE HOLDINGS, L.L.C.
9695 NORFOLK AVENUE
LAUREL, MARYLAND 20723
410-792-2565

PROJECT: HEBRON MANOR LOTS 1-9

LOCATION: TAX MAP: 17 PARCEL: 518
GRID: 15 ZONED: R-20
2ND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: SEDIMENT AND EROSION CONTROL PLAN, NOTES AND DETAILS, AND ON-LOT SWM DETAILS

DATE: MARCH 2012 **PROJECT NO.:** 1596

DESIGN: AAM **DRAFT:** AAM **CHECK:** BFC **SCALE:** AS SHOWN **SHEET:** 3 OF 3