12" NO. 2---

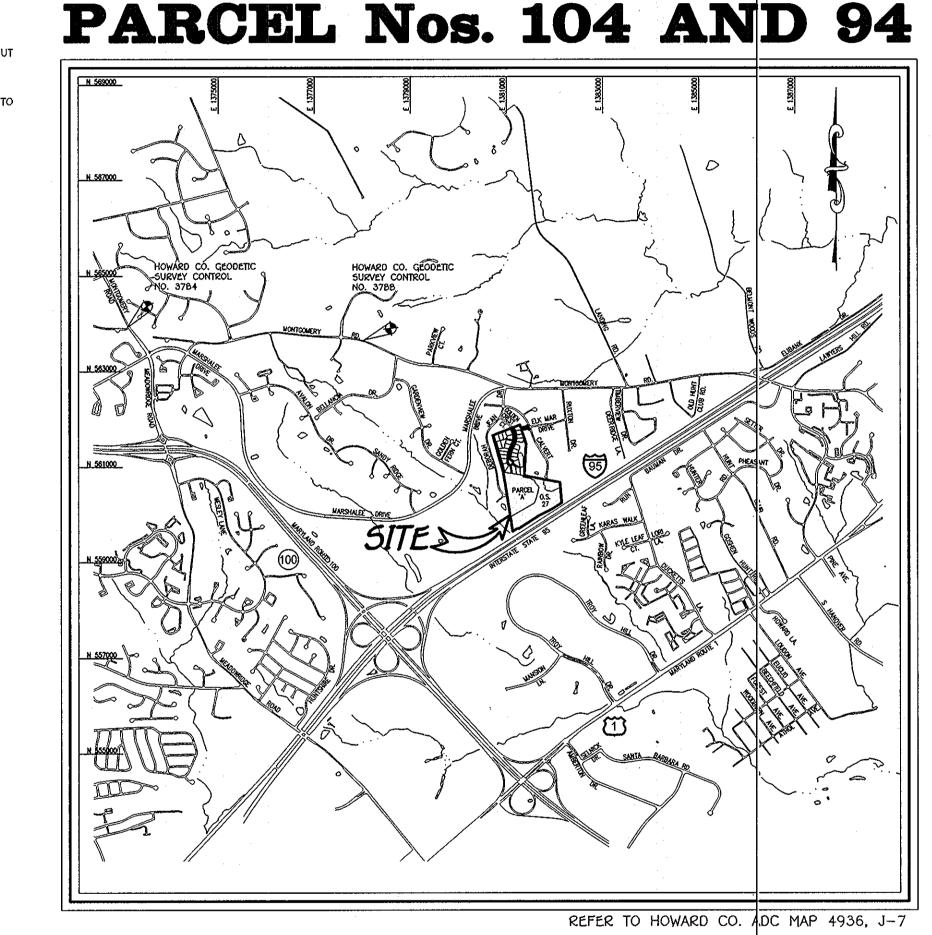
PROVIDE GEOTEXTIL ON ALL SIDES,

ENVIRONMENTAL CONCEPT PLAN

SAMUEL'S GRANT

LOTS 1 - 25, OPEN SPACE LOTS 26 - 29, BUILDABLE BULK PARCEL 'A' AND NON-BUILDABLE BULK PARCELS 'B' & ZONING: R-20

TAX MAP No. 37, GRID No. 5, 11 & 12



5CALE: 1" = 2000

TYPICAL SECTION - BIO-RETENTION FACILITY (M-6) RIQUIRED AND THE LENGTH AND WIDTH SCREEN - TO KEEP MOSQUITOS OU OVERFLOW HOSE DIRECTED TO STABLE DISCHARGE POINT CINDER BLOCKS OR BRICKS RAIN BARREL (M-1) DETAIL 3:1 MAX (TYP.) 4" DIA. PVC 5CH. 40 DRY WELL (N-5) DETAIL NOT TO SCALE ~4" PVC CAP (TYP) - PAVERS/PERMEABLE SURFACE PERFORATIONS - 2 HOLES PER 1 FT (1/2" DIA. HOLES) PERFORATED OR SLCTTED -PROFILE ALONG 4" PVC UNDERDRAIN WITHIN SUB-BASE NO SCALE 3/4" TO 2" (A5TM C33)

ON ALL SIDES, TOP & BOTTOM OF STONE

PERFORATED PIPE/GRAVEL UNDERDRAIN SYSTEM

LEGEND --492---| EXISTING CONTOUR 2' INTERVAL --490----- EXISTING CONTOUR 10' INTERVAL --492----- | PROPOSED CONTOUR 2' INTERVAL ---490----- PROPOSED CONTOUR 1()' INTERVAL RECREATIONAL OPEN SFACE SLOPES (15% TO 24.9%) TREELINE TREELINE PROPOSED TREELINE --- W8----- | WETLANDS BUFFER WETLANDS LIMITS FLOODPLAIN LIMITS

PISHER, COLLINS & CARTER, INC.

THICKNESS VARIES

(12" MIN.)

RAINGARDEN (M-7) DETAIL

PROFILE ALONG 4" PVC OUTLET

--- PROPOSED GRADE

4" DIA PVC SCH 40 (PERFORATED) @ 0%

TO BE WRAPPED IN FILTER CLOTH

F DIA PVC 5CH. 40 (50LID)

UNDERDRAIN 3" MIN

SLOPED TO OUTLET

WITHIN SUB-BASE

ESD NARRATIVE:

TYPICAL DRIVEWAY SECTION -- PERMEABLE PAVEMENT (A-2)

PERFORATED OR SLOTTED

. THE EXISTING NATURAL RESOURCES ON—SITE CONSIST OF WETLANDS AND ASSOCIATED STREAM VALLEY IN ADDITION TO EXISTING WOODS. THESE RESOURCES ARE BEING PROTECTED BY UTILIZING THE REQUIRED WETLAND BUFFERS AND STREAM BUFFERS FOR THESE FEATURES. THE EXISTING WOODS ARE BEING PROTECTED IN ACCORDANCE WITH THE FOREST CONSERVATION MANUAL.

EXISTING GROUND -

2. THE SITE IMPROVEMENTS AND DEVELOPED AREA WILL MAINTAIN THE EXISTING DRAINAGE PATTERNS AS CLOSE AS POSSIBLE. NO STREAM IMPACTS ARE PROPOSED THAT WOULD ALTER ANY

3. THE REDUCTION OF IMPERVIOUS AREA TYPICALLY EXPERIENCED IN R-20 ZONING WILL BE ACHIEVED THRU THE USE OF ALTERNATIVE SURFACES OR PERMEABLE PAVEMENT FOR THE PRIVATE DRIVEWAYS (LOTS 1-10 & 24-25). THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS WILL NOT ALLOW PERMEABLE PAVEMENT FOR PUBLIC ROADS AT THIS TIME.

4. THE REQUIRED EROSION AND SEDIMENT CONTROL MEASURES WILL BE IN ACCORDANCE WITH THE LATEST MDE STANDARDS AND SPECIFICATIONS UTILIZING SEVERAL SEDIMENT TRAPS, EACH WITH SMALLER DRAINAGE AREAS TO AVOID THE USE OF ONE LARGE BASIN.

5. THE PROPOSED ESD MEASURES SHOWN ON THIS PLAN HAVE MET THE REQUIRED PE FOR THIS SITE. NO ADDITIONAL CHAPTER 3 DEVICES ARE PROPOSED AS ALTERNATIVES TO THE CHAPTER 5

FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

DEVELOPER Carman Associates Mr. David Paplauckas C/o Mr. Ron Carter 6532 Montgomery Road 1750 Daisy Road Elkridge, Maryland 21075-5920 Woodbine, Maryland 21797



1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MS

AT 410-313-1880 AT LEAST (5) WORKING DAYS PRIOR TO THE START OF WORK. CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM

NAD THE COMP LITE ZONING REGULATION AMENDMENTS EFFECTIVE 7/28/06. DEVELOPMENT OR CONSTRUCTION ON THESE LOTS OR PARCELS

HOWARD COUNTY MONUMENT NO. 3788 - N 563663.415, E 1378040.471 SUBJECT PROPERTY ZONED R-20 PER 02/02/04 COMPREHENSIVE ZONING PLAN.

a. SUBDIVISION NAME: SAMUEL'S

b. TAX MAP NO. 37 c. PARCELS NOS. 104 AND

d. ZONING R-20

e. ELECTION DISTRICT: FIRST $E_{\rm c}$ GROSS AREA OF TRACT = 34.02 ACRES

NUMBER OF BUILDABLE LOTS: 25 . NUMBER OF OPEN SPACE LOTS: 4

. NUMBER OF BUILDABLE BULK PARCELS NUMBER OF NON-BUILDABLE BULK PARCELS: 2

. AREA OF BUILDABLE LOTS: 7.599 ACRES I. AREA OF OPEN SPACE LOTS: 13.712 ACRES

n. AREA OF NON-BUILDABLE BULK PARCELS: 1.441 ACRES

D. AREA OF ROADWAY TO BE DEDICATED: 1.054 ACRES

AREA OF 25% OR GREATER SLOPES = 0.298 ACRES

s. NET AREA OF TRACT = 31.882 AC. ±

a. AREA OF OPEN SPACE REQUIRED = (34.02 x 0.40) = 13.600 ACRES b. AREA OF OPEN SPACE PROVIDED = 13.712 ACRES (13.608 ACRES CREDITED)

e. RECREATIONAL OPEN SPACE PROVIDED = 5,000 SQ.FT.

AS REQUIRED BY THE HOWARD COUNTY DESIGN MANUAL. CHAPTER 5, REVISED FEBRUARY, 1992, AND CANNOT BE CONSIDERED

SEWER IS PUBLIC (CONTRACT NO. 14-3517-D AND 14-3120-D

15. BOUNDARY OUTLINE BASED ON FIELD RUN SURVEY PERFORMED BY FISHER COLLINS AND CARTER, INC. DATED MARCH, 2008.

16, TOPOGRAPHIC CONTOURS BASED ON AERIAL SURVEY PERFORMED BY HARFORD AERIAL SURVEYS, INC. DATED JANUARY, 2008.

DEVELOPMENT REGULATIONS, SECTION 16.116.b., (0.298 Ac.) 18. STORMWATER MANAGEMENT WILL BE PROVIDED IN ACCORDANCE WITH THE 2007 MDE, CHAPTER 5 REGULATIONS AND THE LATEST HOWARD

COUNTY DESIGN MANUAL, VOL. I, CHAPTER 5 ADOPTED ON OR AROUND MAY 4, 2010. RECHARGE VOLUME WILL BE PROVIDED THROUGH THE USE OF STONE RESERVOIRS UNDER THE PROPOSED RAIN CARDENS. WATER QUALITY AND CHANNEL PROTECTION VOLUME WILL BE PROVIDED BY ROOFTOP DISCONNECTION AREAS, DRYWELLS, RAINGARDENS, PERMEABLE PAVEMENT, BIO-RETENTION FACILITIES ALONG THE ROADWAY AND AN ON-LINE ENHANCED FILTER IN THE FORM OF AN MICRO-POOL EXTENDED DETENTION POND. OVERBANK FLOOD PROTECTION VOLUME AND EXTREME FLOOD VOLUMES ARE NOT REQUIRED FOR THIS SITE. THE STORMWATER MANAGEMENT FACILITY WILL BE PRIVATELY OWNED BY H.O.A. AND JOINTLY MAINTAINED BY H.O.A. AND HOWARD COUNTY.

19. SPECIMEN TREES ARE LOCATED WITHIN THE SITE BUT ARE LOCATED ON THE FUTURE LOT AREA. THEREFORE WE ARE NOT DISTURBING ANY SPECIMEN TREES WITH THIS CURRENT DEVELOPMENT PLAN. 20. FLOODPLAIN STUDY SHOWN HEREON IS BASED ON DELINEATION PROVIDED BY FISHER, COLLINS & CARTER, INC UTILIZING FLOWN AERIAL

21. THE TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY MARS GROUP DATED SEPTEMBER, 2009.

22. THE FOREST CONSERVATION ACT REQUIREMENTS FOR THIS PROJECT WILL BE MET THROUGH THE RETENTION OF 1.60 ACRES OF ON-SITE

FOREST AND THE PLANTING OF 10.19 ACRES OF FOREST ON-SITE. SURETY REQUIREMENT = (1.60 AC. X 43,560 SF. X 0.20 PER SF) = \$13,940.00 + (10.19 X 43,560 X 0.50 PER 5F) = \$221,939.00. TOTAL SURETY = \$235,879.00

No Clearing, Grading Or Construction is Permitted Within The Forest Conservation Easement; However, Forest Management Practices As Defined in The Deed Of Forest Conservation Easement Are Allowed."

23. THE GEOTECHNICAL REPORT FOR THIS PROJECT WAS PREPARED BY HILLIS CARNES ENGINEERING ASSOCIATES, INC. DATED MARCH 1, 2010. 24. THE FOREST STAND DELINEATION AND WETLAND DELINEATION FOR THIS PROJECT WAS PREPARED BY ECO-SCIENCE PROFESSIONALS, INC.

25. THIS PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT. 26. FOR FLAG OR PIPESTEM LOTS, REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE ARE PROVIDED TO THE JUNCTION OF THE FLAG OR PIRESTEM AND THE ROAD R/W LINE AND NOT THE PIPESTEM LOT DRIVEWAY. 27. NO CEMETERIES OR HISTORIC STRUCTURES EXIST WITHIN THIS SUBDIVISION.

20. THE LANDSCAPE SURETY IN THE AMOUNT OF \$ 15,600.00 FOR PERIMETER LANDSCAPE REQUIREMENTS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL WILL BE POSTED WITH THE DEVELOPER'S AGREEMENT FOR THIS SUBDIVISION. FINANCIAL SURETY FOR THE REQUIRED STREET TREES WILL BE POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$12,000.00.

29. STREET LIGHTS WILL BE REQUIRED IN THIS DEVELOPMENT IN ACCORDANCE WITH THE DESIGN MANUAL STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SELECTED SHALL BE IN ACCORDANCE WITH THE LATEST HOWARD COUNTY DESIGN MANUAL, VOLUME III (1993) AND AS MODIFIED BY "GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS (JUNE 1993)." THE JUNE 1993 POLICY INCLUDES GUIDELINES FOR LATERAL AND LONGITUDINAL PLACEMENT. A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT

30. SIGN POSTS: ALL SIGN POST USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT OF WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE) - 3" LONG. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.

31. DRIVEWAYS SHALL BE PROVIDED PRIOR TO RESIDENTIAL OCCUPANCY TO ENSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING (MINIMUM) REQUIREMENTS:

a. WIDTH + 12 FEET (16 FEET SERVING MORE THAN ONE RESIDENCE) b. SURFACE - SIX (6") INCHES OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATING.

. GEOMETRY — MAXIMUM 15% GRADE, MAXIMUM 10% GRADE CHANGE AND MINIMUM OF 45 TURNING RADIUS. d. STRUCTURES (CULVERTS/BRIDGES) CAPABLE OF SUPPORTING 25 GROSS TONS (H 25 LOADING).

2. DRAINAGE ELEMENTS – CAPABLE OF SAFELY PASSING 100 YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE. . STRUCTURE CLEARANCES - MINIMUM 12 FEET.

MAINTENANCE - SUFFICIENT TO INSURE ALL WEATHER USE. 32. ALL EXISTING ON-SITE WELLS AND SEPTIC SYSTEMS WILL BE ABANDONED BY A LICENSED WELL DRILLER AND STATE FORMS SUBMITTED AS

DOCUMENTATION PRIOR TO FINAL PLAT SIGNATURE.

33. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE WETLANDS, STREAM OR THEIR REQUIRED BUFFERS. 34. THIS PLAN IS SUBJECT TO A DESIGN MANUAL WAIVER FROM SECTION 2.4.D. OF HOWARD COUNTY DESIGN MANUAL VOLUME III AND DETAIL

R-1.02 OF DESIGN MANUAL VOLUME IV. THE PROPOSED WAIVER WAS DENIED ON MAY 20, 2010. THEREFORE WE ARE INDICATING A CLOSED SECTION ROADWAY DESIGN. 35. BUILDABLE BULK PARCEL 'A' RESERVES THE RIGHT TO BE FURTHER SUBDIVIDED AND ACCESS WILL BE FROM GOLDEN CREST COURT, CALVERT DRIVE OR DEBORAH JEAN DRIVE

ENVIRONMENTAL INFORMATION: 1. GROSS AREA OF TRACT = 34.02 ACRES 2. LIMIT OF DISTURBANCE AREA = 8.9 ACRES * 3. IMPERVIOUS AREA = 2.4 ACRES± 4. GREEN OPEN AREA = 31.426 ACRES± 5. PROPOSED SITE USE: MEDIUM DENSITY RESIDENTIAL

6. AREA OF FLOODPLAIN = 1.84 ACRES 7. AREA OF 15% OR GREATER SLOPES = 2.0 ACRES* 8. FOREST AREA = 8.5 ACRES *

9. WETLAND/WETLAND BUFFER AREA = 4.25 ACRES

signature of Engineer (CHARLES) J. CROVO SR., P.E.) "Professional certification. I hereby certify that these documents were prepared by me, and that I am a duly

Licensed Professional Engineer under the laws of the State of Maryland, License No. <u>13204</u>, Expiration Date <u>11-3-12</u>."

ENVIRONMENTAL CONCEPT PLAN SAMUEL'S GRANT LOTS 1 - 25, OPEN SPACE LOTS 26 - 29, BUILDABLE BULK PARCEL 'A' AND NON-BUILDABLE BULK PARCELS 'B' & 'C'

ZONING: R-20 TAX MAP No. 37, GRID No. 5, 11, & 12 PARCEL No. 104 AND P/O PARCEL No. 94 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

DATE: NOVEMBER 29, 2010 SHEET 1 OF 4

