



Building Permit Application

Howard County Maryland
Department of Inspections, Licenses and Permits
3430 Court House Drive
Permits: 410-313-2455
www.howardcountymd.gov

Date Received: _____

Permit No.: 18005585

Building Address: 1038 Thundersburg Dr
City: Landover State: MD Zip Code: 21797
Suite/Apt. #: _____ SDP/WP/BA #: _____
Subdivision: Fairlane Farm
Lot: 33 Tax Map: 8 Parcel: 8

Existing Use: SD
Proposed Use: SD w/ proposed Tank
Estimated Construction Cost: \$ 5000

Description of Work:
Install 1000 gallon underground propane tank

Occupant/Tenant Name: _____
Was tenant space previously occupied? ☐ Yes ☐ No
Contact Name: _____
Address: _____
City: _____ State: _____ Zip Code: _____
Phone: _____ Fax: _____
Email: _____

Property Owner's Name: Thundersburg LLC
Address: 2215 Thundersburg Dr
City: Landover State: MD Zip Code: 21797
Phone: 410-532-1217 Fax: _____
Email: _____

Applicant's Name & Mailing Address, (If other than stated herein)
Applicant's Name: Marcia Clark
Address: PO Box 310
City: Danville State: MD Zip Code: 21528
Phone: 410-610-7511 Fax: _____
Email: marcia@applied.com

Contractor Company: TEC A
Contact Person: Dennis Long
Address: 1500 4th St SE
City: Washington State: DC Zip Code: 20007
License No.: 181215
Phone: 202-745-5631 Fax: _____
Email: _____

Engineer/Architect Company: _____
Responsible Design Prof.: _____
Address: _____
City: _____ State: _____ Zip Code: _____
Phone: _____ Fax: _____
Email: _____

Commercial Building Characteristics	Residential Building Characteristics
Height:	<input type="checkbox"/> SF Dwelling <input type="checkbox"/> SF Townhouse
No. of stories:	Depth Width
Gross area, sq. ft./floor:	1 st floor:
	2 nd floor:
Area of construction (sq. ft.):	Basement:
	<input type="checkbox"/> Finished Basement
Use group:	<input type="checkbox"/> Unfinished Basement
	<input type="checkbox"/> Crawl Space
Construction type:	<input type="checkbox"/> Slab on Grade
<input type="checkbox"/> Reinforced Concrete	No. of Bedrooms:
<input type="checkbox"/> Structural Steel	Multi-family Dwelling
<input type="checkbox"/> Masonry	No. of efficiency units:
<input type="checkbox"/> Wood Frame	No. of 1 BR units:
<input type="checkbox"/> State Certified Modular	No. of 2 BR units:
	No. of 3 BR units:
	Other Structure:
	Dimensions:
> Roadside Tree Project Permit	Footings:
<input type="checkbox"/> Yes <input type="checkbox"/> No	Roof:
Roadside Tree Project Permit #	<input type="checkbox"/> State Certified Modular
	<input type="checkbox"/> Manufactured Home

Utilities
Electric: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Gas: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Water Supply
<input type="checkbox"/> Public
<input type="checkbox"/> Private
Sewage Disposal
<input type="checkbox"/> Public
<input type="checkbox"/> Private
Heating System
<input type="checkbox"/> Electric <input type="checkbox"/> Oil
<input type="checkbox"/> Natural Gas <input type="checkbox"/> Propane Gas
<input type="checkbox"/> Other:
Sprinkler System:
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Grading Permit Number:
Building Shell Permit Number:

THE UNDERSIGNED HEREBY CERTIFIES AND AGREES AS FOLLOWS: (1) THAT HE/SHE IS AUTHORIZED TO MAKE THIS APPLICATION; (2) THAT THE INFORMATION IS CORRECT; (3) THAT HE/SHE WILL COMPLY WITH ALL REGULATIONS OF HOWARD COUNTY WHICH ARE APPLICABLE THERETO; (4) THAT HE/SHE WILL PERFORM NO WORK ON THE ABOVE REFERENCED PROPERTY NOT SPECIFICALLY DESCRIBED IN THIS APPLICATION; (5) THAT HE/SHE GRANTS COUNTY OFFICIALS THE RIGHT TO ENTER ONTO THIS PROPERTY FOR THE PURPOSE OF INSPECTING THE WORK PERMITTED AND POSTING NOTICES.

Applicant's Signature

Print Name

Email Address

Date

Title/Company

Checks Payable to: DIRECTOR OF FINANCE OF HOWARD COUNTY

PLEASE WRITE NEATLY & LEGIBLY

-FOR OFFICE USE ONLY-

AGENCY	DATE	SIGNATURE OF APPROVAL
State Highways		
Building Officials		
PSZA (Zoning)		
PSZA (Engineering)		
Health	10/24/18	

Is Sediment Control approval required for issuance? ☐ Yes ☐ No
☐ CONTINGENCY CONSTRUCTION START

DPZ SETBACK INFORMATION
Front:
Rear:
Side:
Side St.:
All minimum setbacks met? <input type="checkbox"/> Yes <input type="checkbox"/> No
Is Entrance Permit Required? <input type="checkbox"/> Yes <input type="checkbox"/> No
Historic District? <input type="checkbox"/> Yes <input type="checkbox"/> No
Lot Coverage for New Town Zone:
SDP/Red-line approval date:

Filing Fee	\$
Permit Fee	\$
Tech Fee	\$
Excise Tax	\$
PSFS	\$
Guaranty Fund	\$
Add'l per Fee	\$
Total Fees	\$
Sub- Total Paid	\$
Balance Due	\$
Check	#

Distribution of Copies: White: Building Officials Green: PSZA,Zoning Yellow: PSZA,Engineering Pink: Health Gold: SHA



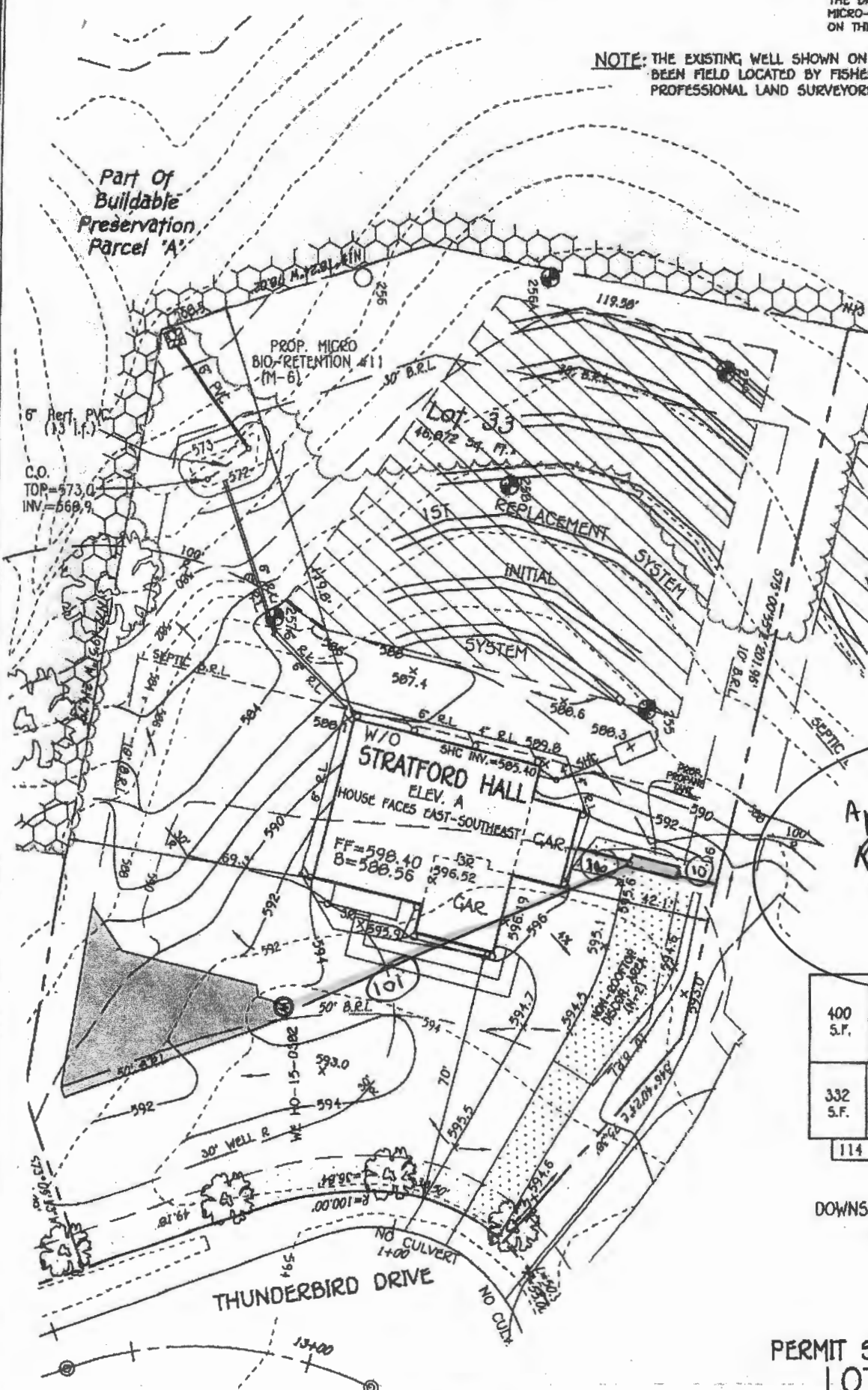
STORMWATER MANAGEMENT NOTES:

STORMWATER MANAGEMENT FOR LOT 33 IS BEING PROVIDED BY A COMBINATION OF NON-ROOFTOP DISCONNECTION (N-2) FOR THE DRIVEWAY AREA AND A MICRO-BIORETENTION FACILITY, AS SHOWN ON THIS PLAN.

NOTE: THE EXISTING WELL SHOWN ON THIS PLAN, HO-15-0382, HAS BEEN FIELD LOCATED BY FISHER, COLLINS & CARTER, INC., PROFESSIONAL LAND SURVEYORS AND IS ACCURATELY SHOWN.

OWNER/DEVELOPER

BY HOMES
9720 PATRICK WOODS DRIVE
COLUMBIA, MD 21046
410-379-5996



Approved for OPT
R-10 10/24/18
B18003585

400 S.F.	400 S.F.	255 S.F.	255 S.F.	153 S.F.
332 S.F.	332 S.F.	327 S.F.	327 S.F.	153 S.F.
114 S.F.				

DOWNSPOUT DRAINAGE AREAS

SCALE: 1" = 30'

PLAN
SCALE: 1" = 40'

PERMIT SITE PLAN
LOT 33

1039 THUNDERBIRD DRIVE
FAIRLANE FARMS

PHASE TWO

ZONED: RC-OEO

TAX MAP NO.: 8 GRID NO.: 2 PARCEL NO.: 8
5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: 1" = 40' DATE: AUG. 23, 2018
SHEET 1 OF 1

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CONTINENTAL SQUARE OFFICE PARK - 10672 BALTIMORE NATIONAL PIKE
ELLSWORTH CITY, MARYLAND 21040
(410) 661-1800

1000 Gals Under Ground.

Oswald, Hank

From: Dave Harward, III <DaveH@fcc-eng.com>
Sent: Tuesday, September 18, 2018 8:15 AM
To: Oswald, Hank
Cc: Tony Fertitta; Cagle, Clint (ccagle@nvrinc.com)
Subject: RE: Fairlane Farms Lots 28 & 33

That's great. We will make sure (on Lot 28) that the discharge pipe is installed at least 25 ft. away from the SDA. And I'll let NV Homes know about the basement room issue (and have them pass along that information to the homebuyer's).

Thanks Hank !

From: Oswald, Hank [mailto:hoswald@howardcountymd.gov]
Sent: Tuesday, September 18, 2018 8:08 AM
To: Dave Harward, III
Cc: Tony Fertitta; Cagle, Clint (ccagle@nvrinc.com)
Subject: RE: Fairlane Farms Lots 28 & 33

Hello Dave:

Lot 28 – the building permit has been approved but please make sure the **invert out/discharge from the bio-retention pond is installed at least 25 feet from the SDA.**

Lot 33 - the building permit has been approved but I must mention that if the future homeowners should want to install a wall adjacent the full bathroom in the basement (making it bedroom # 6 with a window), they will have to make **upgrades to the system** first (since the septic system only sized for 5 bedrooms).

Have a good day.

Hank

From: Dave Harward, III [mailto:DaveH@fcc-eng.com]
Sent: Tuesday, September 18, 2018 7:43 AM
To: Oswald, Hank
Cc: Tony Fertitta
Subject: RE: Fairlane Farms Lots 28 & 33

OK, Thank You.

From: Oswald, Hank [mailto:hoswald@howardcountymd.gov]
Sent: Tuesday, September 18, 2018 7:42 AM
To: Dave Harward, III
Cc: Tony Fertitta
Subject: RE: Fairlane Farms Lots 28 & 33

Hi Dave:

Good morning. These two files were in my inbox this morning. I plan to review them this morning. I will keep you posted.

Thanks,

Hank

From: Dave Harward, III [mailto:DaveH@fcc-eng.com]

Sent: Tuesday, September 18, 2018 7:13 AM

To: Oswald, Hank

Cc: Tony Fertitta

Subject: Fairlane Farms Lots 28 & 33

Good
Morning
Hank,

Re:
15212 Torino Way **B18003159 Lot 28**

1039 Thunderbird Dr **B18003160 Lot 33**

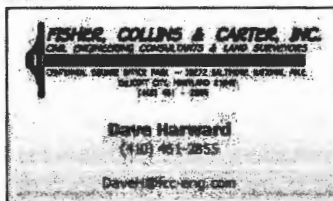
We need your help on these. These have not been signed off on yet. You had emailed Tony with a question about some angled lines showing outside of the septic area on Lot 33 (which he mentioned to you were structural fill lines, that we normally don't show on the OSDS plans). You suggested to Tony that he label them next time (we'll leave them off from now on). But it sounded like you were going to approve the plan as it was.

Lot 28 we submitted on Aug. 13, and mentioned in the transmittal that we had adjusted the septic tank location and were able to get gravity sewer service for the basement.

Please check on these, since NV is needing this sign-off for their permit.

Thanks Hank,

Dave.





Health

Building Permit Application

Howard County Maryland
Department of Inspections, Licenses and Permits
3430 Court House Drive
Permits: 410-313-2455
www.howardcountymd.gov

Date Received: _____

Permit No.: B18003160

Building Address: 1039 Thunderbird Drive
City: Woodbine State: MD Zip Code: 21797
Suite/Apt. #: _____ SDP/WP/BA #: GP-18-35
Census Tract: _____ Subdivision: Fairlane Farm
Section: _____ Area: _____ Lot: 33
Tax Map: _____ Parcel: _____ Grid: _____
Zoning: Re Map Coordinates: _____ Lot Size: _____

Existing Use: Vacant lot
Proposed Use: Single family house
Estimated Construction Cost: \$ 230,000
Description of Work: new 2 story "Stratford Hall"
with ELV 'A', 2 car side garage, 1 car
side attached garage, finished lower level
(rec rm + bath rm)
Occupant or Tenant: _____

Was tenant space previously occupied? ☐ Yes ☐ No
Contact Name: _____
Address: _____
City: _____ State: _____ Zip Code: _____
Phone: _____ Fax: _____
Email: _____

Commercial Building Characteristics	Residential Building Characteristics
Height:	<input checked="" type="checkbox"/> SF Dwelling <input type="checkbox"/> SF Townhouse
No. of stories:	Depth Width
Gross area, sq. ft./floor:	1 st floor: <u>54</u> x <u>54</u>
Area of construction (sq. ft.):	2 nd floor: <u>48</u> x <u>54</u>
	Basement: <u>54</u> x <u>54</u>
Use group:	<input checked="" type="checkbox"/> Finished Basement
	<input type="checkbox"/> Unfinished Basement
	<input type="checkbox"/> Crawl Space
Construction type:	<input type="checkbox"/> Slab on Grade
<input type="checkbox"/> Reinforced Concrete	No. of Bedrooms: <u>5</u>
<input type="checkbox"/> Structural Steel	<u>Multi-family Dwelling</u>
<input type="checkbox"/> Masonry	No. of efficiency units:
<input type="checkbox"/> Wood Frame	No. of 1 BR units:
<input type="checkbox"/> State Certified Modular	No. of 2 BR units:
	No. of 3 BR units:
	Other Structure:
	Dimensions:
➤ Roadside Tree Project Permit	Footings:
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Roof:
Roadside Tree Project Permit #	<input type="checkbox"/> State Certified Modular
	<input type="checkbox"/> Manufactured Home

Property Owner's Name: NVR Inc
Address: 9720 Patuxent Woods Drive
City: Columbia State: MD Zip Code: 2106
Phone: 410-379-5956 Fax: _____
Email: _____

Applicant's Name & Mailing Address, (If other than stated herein)
Applicant's Name: Decatur Building Services
Address: PO Box 552
City: Woodbine State: MD Zip Code: 217
Phone: 443-309-7792 Fax: _____
Email: Jim@DecaturbuildingServices.com

Contractor Company: NV Homes
Contact Person: Spit Gagle
Address: 9720 Patuxent Woods Drive
City: Columbia State: MD Zip Code: 21046
License No.: 56
Phone: 410-379-5956 Fax: _____
Email: CCagle@NVRInc.com

Engineer/Architect Company: _____
Responsible Design: _____
Address: _____
City: _____ State: _____ Zip Code: _____
Phone: _____
Email: _____

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SEP 04 2018
LICENSES & PERMITS
DIVISION

Utilities	
<u>Water Supply</u>	
<input type="checkbox"/> Public	
<input checked="" type="checkbox"/> Private	
<u>Sewage Disposal</u>	
<input type="checkbox"/> Public	
<input checked="" type="checkbox"/> Private	
Electric: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Gas: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<u>Heating System</u>	
<input checked="" type="checkbox"/> Electric <input type="checkbox"/> Oil	
<input type="checkbox"/> Natural Gas <input checked="" type="checkbox"/> Propane Gas	
<input type="checkbox"/> Other:	
<u>Sprinkler System:</u>	
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Grading Permit Number:	<u>G1800025</u>
Building Shell Permit Number:	

THE UNDERSIGNED HEREBY CERTIFIES AND AGREES AS FOLLOWS: (1) THAT HE/SHE IS AUTHORIZED TO MAKE THIS APPLICATION; (2) THAT THE INFORMATION IS CORRECT; (3) THAT HE/SHE WILL WITH ALL REGULATIONS OF HOWARD COUNTY WHICH ARE APPLICABLE THERETO; (4) THAT HE/SHE WILL PERFORM NO WORK ON THE ABOVE REFERENCED PROPERTY NOT SPECIFICALLY DESCRIBED IN THIS APPLICATION; (5) THAT HE/SHE GRANTS COUNTY OFFICIALS THE RIGHT TO ENTER ONTO THIS PROPERTY FOR THE PURPOSE OF INSPECTING THE WORK PERMITTED AND POSTING NOTICES.

Applicant's Signature: Jim Kerwin
Email Address: Jim@DecaturbuildingServices.com
Title/Company: AGENT NV Homes

Print Name: Jim Kerwin
Date: 9/4/2018

Checks Payable to: DIRECTOR OF FINANCE OF HOWARD COUNTY
PLEASE WRITE NEATLY & LEGIBLY
-FOR OFFICE USE ONLY-

AGENCY	DATE	SIGNATURE OF APPROVAL
State Highways		
Building Officials		
PSZA (Zoning)		
PSZA (Engineering)		
	9/18/18	H. Oswald

Is Sediment Control approval required for issuance? ☒ Yes ☐ No
☐ CONTINGENCY CONSTRUCTION START

DPZ SETBACK INFORMATION
Front:
Rear:
Side:
Side St.:
All minimum setbacks met? <input type="checkbox"/> Yes <input type="checkbox"/> No
Is Entrance Permit Required? <input type="checkbox"/> Yes <input type="checkbox"/> No
Historic District? <input type="checkbox"/> Yes <input type="checkbox"/> No
Lot Coverage for New Town Zone:
SDP/Red-line approval date:

Filing Fee	\$ 100
Permit Fee	\$
Tech Fee	\$
Excise Tax	\$
PSFS	\$
Guaranty Fund	\$ 50
Add'l per Fee	\$
Total Fees	\$
Sub-Total Paid	\$
Balance Due	\$ 240271
Check	#

Distribution of Copies: White: Building Officials Green: PSZA,Zoning Yellow: PSZA,Engineering Pink: Health Gold: SHA

B18003160

**FINAL
STORMWATER MANAGEMENT
REPORT**

Fairlane Farms, Lot 33

GP-18-35

*Zoned: RC-DEO
Howard County, Maryland
Sixth Election District
Tax Map #8 Grid 2 & 3 Parcel 8 & 17*

Friday, August 10, 2018

Builder:

NV Homes
9720 Patuxent Woods Drive
Columbia, MD 21046
410-379-5956

Prepared By:

Fisher, Collins and Carter, Inc.
Centennial Square Office Park
10272 Baltimore National Pike
Ellicott City, Maryland 21042
410-461-2855
w.o. #12036

**Professional Certification: I hereby certify that these documents were prepared by me and that I am a duly Licensed Professional Surveyor under the laws of the State of Maryland.
License No. 20748, Expiration Date: 2/22/19.**

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SEP 13 2018

**HOWARD COUNTY HEALTH DEPT
FOOD PROTECTION PROGRAM**



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**HOWARD COUNTY HEALTH DEPT.
FOOD PROTECTION PROGRAM**

I. NARRATIVE

Introduction:

This report will demonstrate how the criteria set forth in the Maryland Stormwater Design Manual, Volumes I and II (effective October 2000, revised May 2009) will be satisfied on this project. The goal of creating hydrology similar to that of "Woods in Good Condition" will be accomplished through the use of the practices contained within Chapter 5 of said manual. The achievement of this goal will remove the requirement of providing Channel Protection Volume.

General Site Conditions:

"This Property is zoned RC-DEO and consist of Parcels 8 & 17 located on both Tax Map 3 & Tax Map 8 of the Howard County, Maryland Tax Map Database System. Parcel 8 which is 69.2 acres in size borders Morgan Station Road and Old Frederick Road. Parcel 17 consist of three separate portions of land. One portion which is 28.0 acres in size is adjacent to the aforementioned Parcel 8 and also borders Old Frederick Road. Located to the northeast of this portion is another area of Parcel 17 that is 4.83 in size. The final piece is 36.71 acres and borders the South Branch of the Patapsco River. These three portions of Parcel 17 total 69.4 acres in size. Parcel 8 and the portion of Parcel 17 that border Old Frederick Road create the developable area where improvements have been proposed. The other portions of Parcel 17 (totaling 41.5) along with a proposed contiguous parcel that meanders through the developable area created by Parcels 8 & 17 (totaling 36.7) are planned to be in presentation by the design of this project. The total area of preservation that is currently proposed by this development is approximately 78.2 acres.

The developable area mostly contains 'B' Soils with some 'C' soils located in the area of the wetland, which no disturbance is proposed. Several existing drainage swales travel from the south to the north and develop into two streams, which discharge into the South Branch of the Patapsco River. "

I. Natural Resource Protection:

To ensure the protection of natural resources located on this site, all buffers will be honored by locating improvements away from environmentally sensitive areas.

II. Maintenance of Natural Flow Patterns:

It is the intent of the proposed design to discharge runoff similar to the characteristics and direction of this site prior to any of the proposed improvements.

III. Reduction of impervious areas through better site design, alternative surfaces and Nonstructural Practices

This project maintains the original design provided by F-15-054.

- IV. **Integration of Erosion and Sediment Controls into Stormwater Strategy:**
Erosion Control Matting is being used in the proposed swale and super silt fence as shown on the approved GP plans.
- V. **Implementation of ESD Planning Techniques and practices to the Maximum Extent Practicable (MEP)**
The full required ESD volume is being provided.
- VI. **Request for Design Manual Waiver:**
No waivers are expected to be required on this project.

**II. CHAPTER 5 TABLE 5.2
SUMMARY OF
SITE STRATEGIES**

Table 5.2 Summary of Site Development Strategies

Better Site Design Technique	MDE Recommendations	Proposed Strategies
Using narrower, shorter streets, rights of ways and sidewalks	Streets may be as narrow as 22-feet in neighborhoods serving low traffic volumes; open space designs and clustering will reduce street lengths; rights-of-ways can be reduced by minimizing sidewalk width, providing sidewalks on one side of the road, and reducing the border width between the street and sidewalk	N/A
Cul-de-sacs	Allow for smaller radii for turn around as low as 35-feet; use a landscaped island in the center of the Cul-de-sac and design these areas to treat stormwater runoff.	N/A
Open vegetated channels	Allow grass channels or biofilters for residential street drainage and stormwater treatment.	N/A
Parking ratios, parking codes, parking lots, and structured parking	Parking ratios should be interpreted as maximum number of spaces; use shared parking arrangements; minimum parking stall width should be less than 9-feet and stall length less than 18-feet; parking garages are encouraged rather than surface lots.	N/A
Roadway Runoff	Runoff from proposed roadways will be Open Section with offset filter areas located on Open Space Lots.	N/A
Open Space	Flexible design criteria should be provided to developers who wish to use cluster development and open space designs	N/A
Setbacks and frontages	Relax setbacks and allow narrower frontages to reduce total road length; eliminate driveways	N/A
Driveways	Allow for shared driveways and alternative impervious surfaces	Disconnection
Rooftop runoff	Direct to pervious surfaces	Micro-bioretenention Facility
Buffer systems	Designate a minimum buffer width and provide mechanisms for long-term protection	N/A
Clearing and grading	Clearing, grading, and earth disturbance should be limited to that required to develop lot.	Smaller LOD
Tree conservation	Provide long-term protection of large tracts of contiguous forested areas; promote the use of native plantings.	Forest Conservation addressed by F-01-191.
Conservation incentives	Provide incentives for conserving natural areas through density compensation, property tax reduction, and flexibility in the design process.	N/A

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FOOD PROTECTION PROGRAM

III. SITE DATA FOR PROJECT

LOT 19, STORMWATER MANAGEMENT CONCEPT SUMMARY**Site Data:**

Total Site Area: 1.08 acres

LOD (Limit of Disturbance): 34,302 SqFt. or .79 Acres.

Soil Condition: 0% "A", 100% "B", 0% "C", 0% "D"

Measured Impervious Area: 4,612 SqFt. or 0.11 Acres+/-



**IV. CHAPTER 5
SWM
COMPUTATIONS**

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**OWARD COUNTY HEALTH DEPT.
FOOD PROTECTION PROGRAM**

Stormwater Management Requirements

Initial Site Assessment (Site Data):

1. Existing Conditions

Total L.O.D: 34,302sq.ft. or 0.79acres +/-
Soil Types: 100% B Soil
Land Use: Residential
Lot Size 46,872 sq.ft.

2. Proposed Conditions

Impervious Cover: 4,612 sq.ft. or 0.11 acres +/-.
(1,676 sq.ft. Paving + 2,936 sq.ft. Rooftop = 4,612 sq.ft. = 0.11 acre)

RCN's for Wooded Conditions: Target Pe Using Table 5.3

% Impervious: 0.11 acres/0.79 acres (LOD) = "I" = 0.134 USE 14%

Using Table 5.3 and applying 14% Impervious

Pe Target for ESD Practices: 1.0 inches

ESD Targets

Impervious Area 14%

$$\begin{aligned} R_v &= 0.05 + 0.009 (I) \\ &= 0.05 + 0.009 (14) \\ &= 0.18 \end{aligned}$$

$$\begin{aligned} ESD_v &= \frac{(P_e)(R_v)(A)}{12} \\ &= \frac{(1.0)(0.18)(34,302)}{12} \end{aligned}$$

Minimum Required $ESD_v = 503.10$

Use 504 cu.ft.

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OWARD COUNTY HEALTH DEPT.
FOOD PROTECTION PROGRAM

ESDv Provided - Disconnection of Non-Rooftop Runoff

ESDv provided by N-2 (33) Non-Rooftop Runoff Lot : 147 cu.ft.

Determine Treatment for the proposed driveway: 1,680 SqFt. of Driveway

A non-rooftop disconnect area has been proposed along the driveway, The following calculations reflect the most extream of the the disconnectuin area.

Impervious Ratio = 100.0%

Disconnection Length / Impervious Length = 15.0/14.0

Using Table 5.7(page 5.62) the PE treatment provided based on a 1:1 ratio is 1.0"

Pervious ratio = Disconnection Length / Contribution Length = N/A

Using Table 5.7 (page 5.62) the PE treatment provided based one a 1:1 ratio is 1.0" Using a treated Pe of 1.0" Environmental Site Design has been provided.

$$ESDv = \frac{(Pe)(Rv)(A)}{12}$$

ESDv Required: $(1.0)(0.95)(1,680)/12 = 133.00$ cu.ft.

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**HOWARD COUNTY HEALTH DEPT.
FOOD PROTECTION PROGRAM**

ESDv Provided - Micro Bio retention

ESDv provided by Micro-Bioretenction M-6 (1): 229 cu.ft.

Drainage Area: 4898 sq.ft.

Impervious Area: 3300 sq.ft. or 67% Impervious

$$\begin{aligned} R_v &= 0.05 + 0.009 (I) \\ &= 0.05 + 0.009 (67) \\ &= .66 \end{aligned}$$

$$ESDv = \frac{(P_e)(R_v)(A)}{12}$$

$$ESDv \text{ Required: } (1.0)(0.66)(4898)/12 = 267.91 \text{ cu.ft.}$$

This Bio Retention Facility has the total storage potential of 229 CuFt. Provided by a surface area of 151 SqFt having a perimeter of 52' and a depth of 1'. This is beyond the required 200.93 CuFt (267.91 CuFt x 0.75) needed to store at least 75% of overall ESDv within the surface area. The remaining 25% of ESDv is accounted for within the stone reservoir at the bottom of the facility. In summary 100% of the required ESDv is being provided within the proposed facility.

Total ESDv required: 504 CuFt.

-ESDv credit provided by N-2 Disconnection of Non-Rooftop Runoff: 147 CuFt.

Total ESDv remaining: 357 Cu.Ft.

Required ESDv storage (357 Cu.Ft. x .75) = 268 Cu.Ft.

-ESDv storage provided by M-6 Micro-Bioretentation: 229 CuFt.

Total ESDv storage provided 376 CuFt.

VI. Conclusion:

Contained within this SWM report, we have attempted to demonstrated the ability to mimic the runoff characteristics of "woods in good condition" through approved MDE Chapter V practices. It is this firms opinion that Environmental Site Design (ESD) to the Maximum Extent Practicable (MEP) has been achieved through the use of 3 drywells & non-rooftop disconnection, to meet and exceed the required ESD volume.

Fairlane Farm
LOT 33
1039 Thunderbird Drive

STRATFORD HALL

Health Dept.



NVR, Inc.
Architectural Services
Architects
5285 Westview Drive, Suite 100
Frederick, MD 21703

	FULL BASEMENT												STANDARD DETAILS
	STD. DIMS.												
OPTIONS	OP-1												AD-1
SPEC SHEET	SS-1												AD-1b
ELEVATIONS	4												FD-1
FOUNDATIONS	14												FD-2
FOUNDATION HOLD DOWNS	22, 23, 24, 25												FD-2b
PLUMBING	26												FD-3
BASEMENT FLOOR PLAN	27												GB-1
FIRST FLOOR PLAN	29												JT-1
SECOND FLOOR PLAN	32.1												JT-3
BUILDING SECTIONS	34, 36												JT-3b
STAIR SECTIONS	38												RF-1
KITCHEN - BATHS	41, 42, 43, 44												RF-1b
BASEMENT ELECTRICAL	45												ET-1
FIRST FLOOR ELECTRICAL	47												ET-1b
SECOND FLOOR ELECTRICAL	50												ET-1c
FIRST FLOOR FRAMING	52												ET-1e
SECOND FLOOR FRAMING	54												ET-1f
ROOF FRAMING	55, 56												ET-2
TRUSS BRACING	61												ET-3b
WALL BRACING LAYOUT	63												MD-1
HVAC LAYOUT	67												MD-2
HVAC LAYOUT	68												MD-3
HVAC LAYOUT	69												DR-1
HVAC LAYOUT	70												DR-2
HVAC LAYOUT	71												DR-3
HVAC LAYOUT	72												FP-1
HVAC LAYOUT	73												IT-1
HVAC LAYOUT	74												IT-1b
													IT-1c
													IT-2
													ST-1
													ST-2
													MB-1
													KT-1
													SP-1
													SP-2
													SP-3
													SEP-1
													SEP-2
													SEP-3
													SEP-4
													F-1
													FA-1
													FC-1
													FC-2
													FC-4
													MB-1
													MB-2
													DM-2

FIRST FLOOR SQUARE FOOTAGE

DESCRIPTION	TOTAL SQ. FT.
1ST FLOOR (BASE SF)	2151 SF
	2151 SF

SECOND FLOOR SQUARE FOOTAGE

DESCRIPTION	TOTAL SQ. FT.
2ND FLOOR (BASE SF)	2133 SF
	2133 SF

GARAGE SQUARE FOOTAGE

DESCRIPTION	TOTAL SQ. FT.
TWO CAR GARAGE ELEV. 'A' OR 'K' OR 'R'	507 SF
ONE CAR SIDE ATTACHED GARAGE (ADD. SF)	314 SF
	821 SF

BASEMENT SQUARE FOOTAGE

DESCRIPTION	TOTAL SQ. FT.
FINISHED BASEMENT	1431 SF
	1431 SF

UNFINISHED SQUARE FOOTAGE

DESCRIPTION	TOTAL SQ. FT.
UNFINISHED STORAGE	424 SF
MECHANICAL ROOM	245 SF
	724 SF

TOTAL FINISHED SQUARE FOOTAGE

DESCRIPTION	TOTAL SQ. FT.
1ST FLOOR (BASE SF)	2151 SF
2ND FLOOR (BASE SF)	2133 SF
FINISHED BASEMENT	1431 SF
	5715 SF

SET - VERSION

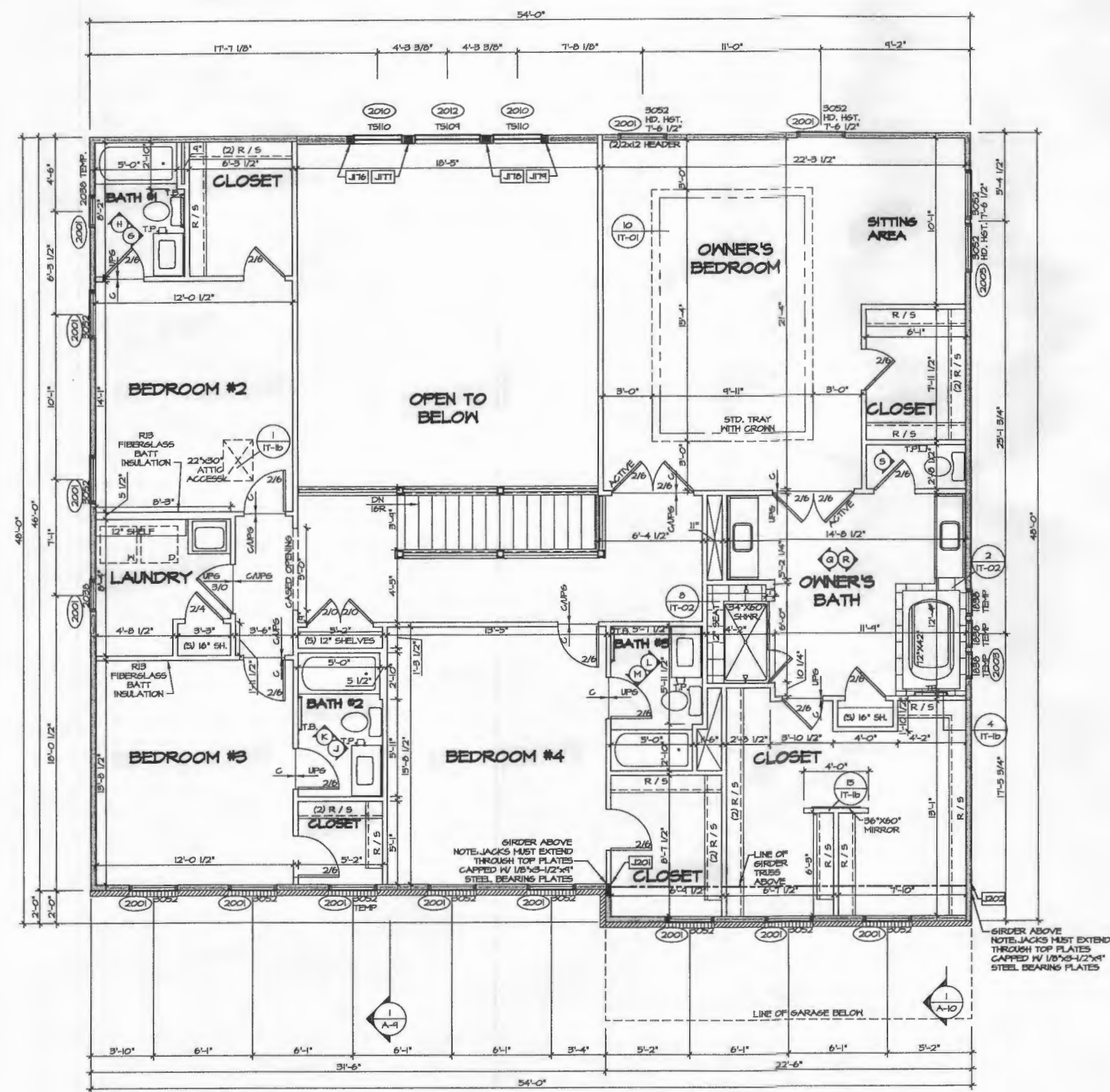
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CS-1

C:\NVR\Solves\STRATFORD HALL_11800_01\MODE-FF-0033\819799\Sheets\Lot Specific\CS-1 COVER SHEET.dwg 08/29/18 - 2:50 am



SHEET NO.	MODEL	SET NO.	DATE	REV. NO.	DATE	REMARKS
A-7	STRATFORD HALL	VERSION 01	1/24/71	1	1/24/71	TM - STANDARD DETAILS 9.0
	DRAWING TITLE	DRAWN BY ZDM				
	FIRST FLOOR PLAN	DATE: 9/16/16				
	OPTION DESCRIPTION	OPTION				
29						



1 SECOND FLOOR PLAN
SCALE: 1/4" = 1'-0"

- FLOOR PLAN NOTES**
1. ALL HEADERS ARE (2) 2x6 W/ 2x4 WALLS OR (3) 2x6 W/ 2x6 WALLS, UNLESS OTHERWISE NOTED.
 2. ALL HEADERS TO HAVE (1) 2x4 OR 2x6 JACK EACH END, UNLESS OTHERWISE NOTED.
 3. ALL EXTERIOR WALLS TO BE 4" AND ALL INTERIOR WALLS TO BE 3 1/2", UNLESS OTHERWISE NOTED.
 4. HATCHED AREAS INDICATE DROPPED CEILING. ALL DROPPED CEILING ARE 12" UNLESS OTHERWISE NOTED.
 5. SEE "BRACED WALL PANEL DETAIL SHEET" FOR SPECIAL WALL FRAMING LOCATIONS AND HEADER SIZES, IF APPLICABLE.
 6. SEE STANDARD DETAIL CATEGORY "T1" SHEETS FOR INTERIOR TRIM DETAILS.
 7. SEE ARCHITECTURAL DETAIL SHEET "AD" FOR HOUSE SPECIFIC INTERIOR TRIM OPTION TABLE.
 8. ALL WINDOWS HAVE T-0 1/2" HEADER HEIGHT UNLESS OTHERWISE NOTED.
 9. ALL CASED OPENINGS AT T-11", UNLESS OTHERWISE NOTED.

LEGEND

- BEARING WALL
- NON BEARING WALL
- INDICATES BEARINGS FROM POINT-LOAD ABOVE
- JACKS
- BEAM/HEADER
- PAD FOOTING
- STEEL COLUMN
- PORTAL FRAME
- JOIST/TRUSS
- LVL
- ENGINEERING PAGE NUMBER

SEE FC DETAILS FOR FRAMING CONNECTORS

SECOND FLOOR JACK SCHEDULE				
IDENTIFIER	DESCRIPTION	OPTIONS	ENG. NUM.	REMARKS
J176	JACK - (3) 2x6 SFF #2		2014	FULL HEIGHT STUDS
J177	JACK - (4) 2x6 SFF #2		2015	FULL HEIGHT STUDS
J178	JACK - (4) 2x6 SFF #2		2015	FULL HEIGHT STUDS
J179	JACK - (3) 2x6 SFF #2		2014	FULL HEIGHT STUDS
J201	JACK - (6) 2x4 SFF #2		2008	
J202	JACK - (6) 2x4 SFF #2		2008	

REVISIONS

REV.	NO.	DATE	DESCRIPTION
1	01/24/17	17	STANDARD DETAILS 9.0

NOTES

NVR, Inc., owner, expressly represents and warrants that the information contained herein is true and correct to the best of its knowledge and belief. NVR, Inc. shall not be responsible for any errors or omissions in this drawing or any other documents prepared by or for NVR, Inc. or its affiliates, consultants, or subcontractors. NVR, Inc. shall not be responsible for any consequences arising from the use of this drawing or any other documents prepared by or for NVR, Inc. or its affiliates, consultants, or subcontractors.

NVR

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SET NO. 11400
VERSION 01
DRAWN BY BIM
DATE:
OPTION

MODEL
STRATFORD HALL
DRAWING TITLE
SECOND FLOOR PLAN
OPTION DESCRIPTION

SHEET NO.
A-8
32.1