#### SHEET INDEX DESCRIPTION SHEET NO. 1 TITLE SHEET 2 ENVIRONMENTAL CONCEPT PLAN 3 PRELIMINARY SEDIMENT AND EROSION CONTROL PLAN

#### SWM NARRATIVE

This report serves as an addendum to the previously approved F-17-003 SWM report. The computations provided by this report will support the on-lot SWM practices (Drywells) proposed under this Environmental Concept Plan (ECP-18-025). The original F-plans (F-15-110 and F-17-003) analyzed the developable area of the site and demonstrated how storm water on this project could be managed to mimic the drainage characteristics of "woods in good condition". This SWM Report for ECP-18-025 provides the treatment for rooftop and driveway areas for 161-168 that were not previously covered under F-17-003. Techniques used to create the effect of "woods in good condition" have been taken from Chapter 5 of the Maryland Department of the Environment SWM regulations. In achieving these results it becomes unnecessary to provide

## Channel Protection Volume.

The Enclave at River Hill project is zoned R-ED and located on Tax Map 34, Parcel Nos. 88 & 97 of the Howard County, Maryland Tax Map Database System. This portion of the property (Lots 161-168) consists of 2.27 acres disturbance, of which no acres are encumbered with a Preservation Easement dedicated to Howard County Maryland Agricultural Land Preservation Program. The overall Enclave at River Hill project is adjacent to and bordered by Clarksville Pike (Maryland Route 108) to the West and adjacent to and bordered by Guilford Road to the East with the intersection of Clarksville Pike and Guilford Road located approximately 500 feet north of the property. A portion of this Environmental Concept Plan's impervious area will receive treatment through bio-retention facilities provided under F-17-003 and F-15-110.

#### I.Natural Resource Protection:

During the design phase of both F-15-110 and F-17-003 all buffers were honored and all improvements were designed to be located outside of environmentally sensitive areas. The design of lots 161-168 maintains the intent of the approved design.

#### II.Maintenance of Natural Flow Patterns:

During the design phase of both F-15-110 and F-17-003 this project's road and residential lots were designed to run along the ridge lines in an effort to avoid the existing swales, wetlands and streams and maintain the natural flow patterns of the project area. The design of lots 161-168 maintains this intent of the original approved design.

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

Only the minimum impervious areas have been proposed to allow the lots to maintain the design of the approved F-15-110 and F-17-003 SWM. All proposed impervious surfaces on this submission will be receiving treatment through the use of ESD stormwater management facilities either provided by this ECP or previously provided on F-15-110 and F-17-003.

#### IV.Integration of Erosion and Sediment Controls into Stormwater Strategy:

Though this submission only proposes on-lot sediment controls, the sediment and erosion control devices previously approved under F-15-110 and F-17-003 worked in concert with the proposed drainage divides that were created when planning the Stormwater Strategy.

V.Implementation of ESD Planning Techniques and practices to the Maximum

### Extent Practicable (MEP)

This submission will propose drywells to meet and exceed Environmental Site Design to the Maximum Extent Practicable (ESD to the MEP).

#### VI.Request for Design Manual Waiver:

No design manual waivers are anticipated at this time.

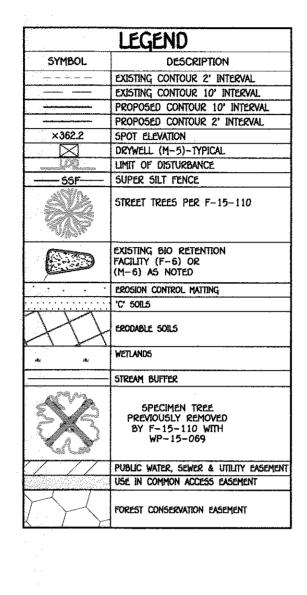
#### SITE ANALYSIS DATA CHART

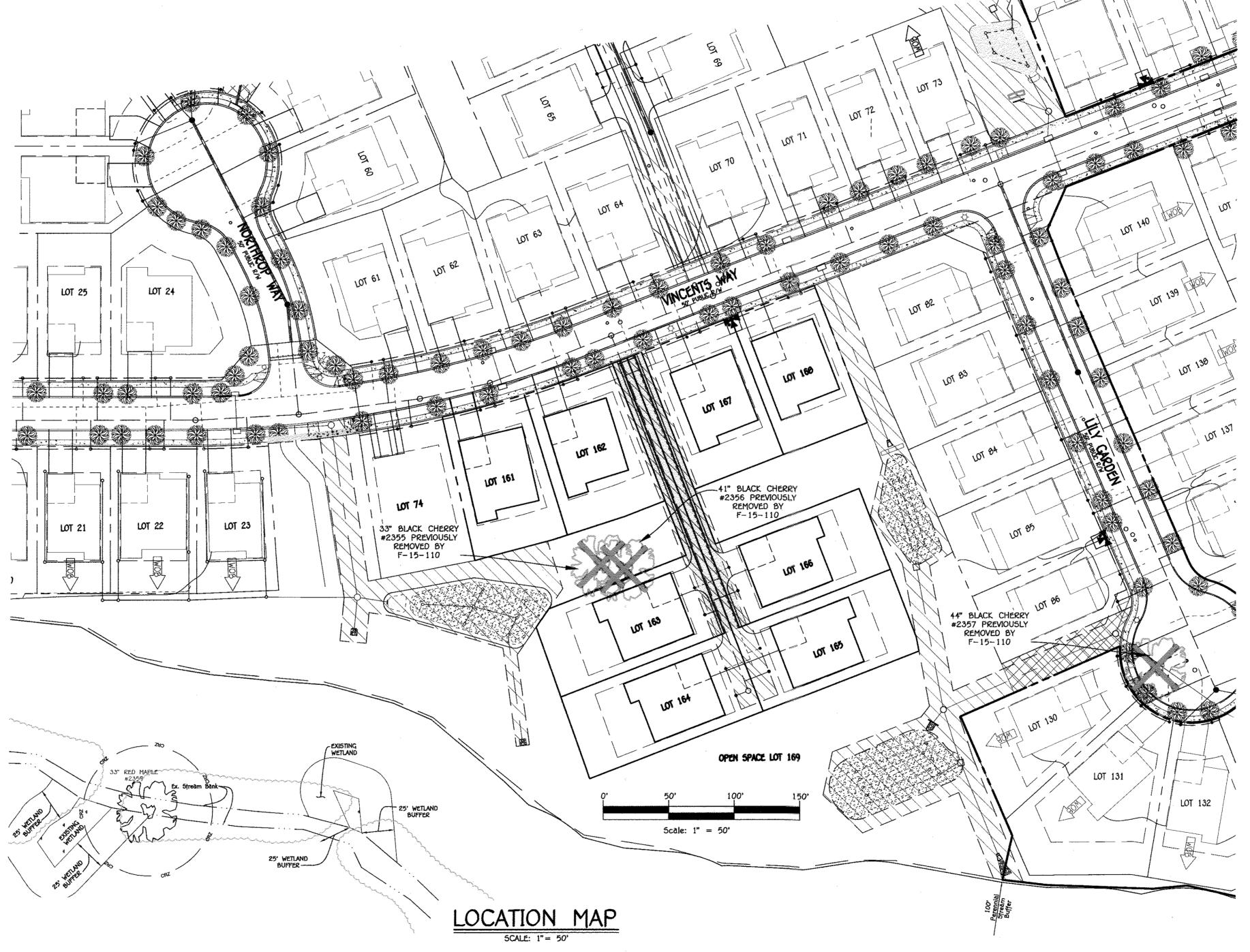
- A. TOTAL AREA OF THIS SUBMISSION = 4.33 AC. ±. LIMIT OF DISTURBED AREA = 2.27 Ac. +
- PRESENT ZONING DESIGNATION R-ED. PROPOSED USE: SINGLE FAMILY DETACHED HOUSING
- TOTAL NUMBER OF UNITS PROPOSED: 8 UNITS OPEN SPACE TABULATION SEE TABULATION SUMMARY THIS SHEET. RECREATIONAL OPEN SPACE SEE TABULATION SUMMARY THIS SHEET.
- BUILDING COVERAGE OF SITE: 0.55 AC± OR 24% PREVIOUS HOWARD COUNTY FILES: ECP 15-005, PB CASE 409, 5P-15-006, WP-15-069,
- WP-16-152, F-15-110, F-17-003 AND F-18-024 TOTAL AREA OF FLOODPLAIN LOCATED ON SITE O AC+
- K. TOTAL AREA OF SLOPES IN EXCESS OF 25% = 0.0 AC+ L. TOTAL AREA OF WETLANDS (INCLUDING BUFFER) LOCATED ON SITE = 0.00 AC.± M. TOTAL FOREST 8.25 Ac. ±
- N. TOTAL GREEN OPEN AREA = 1.46 Ac. ± O. TOTAL IMPERVIOUS AREA = 0.81 Ac. ±
- P. AREA OF ERODIBLE SOILS = 0 Ac. ±

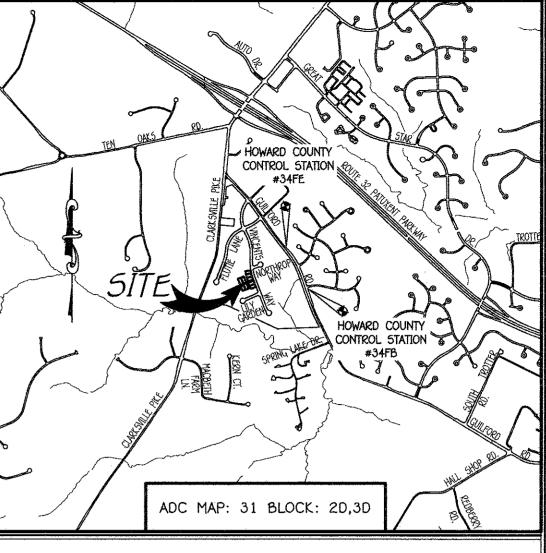
## ENVIRONMENTAL CONCEPT PLAN

# ENCLAVE AT RIVER HILL, PHASE 2

LOTS 161 THRU 168 AND OPEN SPACE LOT 169 R-ED (RESIDENTIAL: ENVIRONMENTAL DEVELOPMENT) TAX MAP No. 34 GRID No. 18 **PARCEL NOS. 88 & 97** 







#### GENERAL NOTES

- SUBJECT PROPERTY ZONED R-ED PER 10/06/2013 COMPREHENSIVE ZONING PLAN COORDINATES BASED ON NAD '83, MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NOS
- EAST 1,330,191,3224 FE CONTROL STATION NO. 34FE NORTH 558,339,6005 FEET
- BOUNDARY INFORMATION IS BASED ON A SURVEY PERFORMED ON OR ABOUT FEBRUARY 7, 2014 BY FISHER TOPOGRAPHY INFORMATION SHOWN IS TAKEN FROM HARFORD AERIAL CONTOUR MAPPING FLOWN ON DECEMBER ! 2013 AND SUPPLEMENTED WITH A FIELD RUN TOPOGRAPHIC SURVEY PERFORMED ON OR ABOUT APRIL 2014 FISHER, COLLINS & CARTER, INC.
- EXISTING USE: RESIDENTIAL PROPOSED USE: RESIDENTIAL STORM WATER MANAGEMENT IS IN ACCORDANCE WITH THE M.D.E. STORM WATER DESIGN MANUAL, VOLUMES I & II, REVISED 2009. WE ARE PROVIDING STORM WATER MANAGEMENT BY THE USE OF 6 AREAS OF (N-2) NON-ROOFTOP DISCONNECTION CREDIT, 222 AREAS OF (M-5) DRYWELLS, 13 (M-6) MICRO-BIORETENTION FACILITIES AND 18 (F-6) BIO-RETENTION FACILITIES TO MEET AND EXCEED THE REQUIRED ESD VOLUME. THIS PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT. PUBLIC WATER AND PUBLIC SEWER WILL BE
- LANDSCAPING WILL BE PROVIDED AT THE FINAL PLAN STAGE OF THIS PROJECT. REVIEW OF THIS PROJECT FOR COMPLIANCE WITH THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE HOWARD COUNTY ZONING REGULATIONS SHALL OCCUR AT THE FINAL PLAN STAGE.
- THEREFORE. THE APPLICANT AND CONSULTANT SHOULD EXPECT ADDITIONAL AND MORE DETAILED COMMENTS (INCLUDING THOSE THAT MAY ALTER OVERALL SITE DESIGN) AS THIS PROJECT PROGRESSES. 10. SOIL BORING INFORMATION WILL BE PROVIDED AT THE FINAL PLAN STAGES OF THIS PROJECT.

  11. APPROVAL OF THIS ECP DOES NOT CONSTITUTE APPROVAL OF SUBSEQUENT OR ASSOCIATED SUBDIVISION OR SITE
- THE 100 YEAR FLOODPLAIN SHOWN ON THIS PLAN WAS PREPARED BY FISHER, COLLINS AND CARTER, INC AND
- THE 100 YEAR FLOODPLAIN STUDY AND COMPUTATIONS REPORT. DATED NOVEMBER 20, 2014 HAS BEEN
- WERE PREPARED BY ECOTONE INC. AND HAVE BEEN PROVIDED ON MARCH 24, 2015 FOR FLAG OR PIPE STEM LOTS, REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE ARE PROVIDED to the junction of flag or pipe stem and road right—of—way line only and not onto the flag of

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.
- C. GEOMETRY MAXIMUM 15% GRADE, MAXIMUM 10% GRADE CHANGE AND 45-FOOT TURNING RADIUS;
  D. STRUCTURES (CULVERTS/BRIDGES) CAPABLE OF SUPPORTING 25 GROSS TONS (H25-LOADING);
  E. DRAINAGE ELEMENTS CAPABLE OF SAFELY PASSING 100 YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER SURFACE; F. STRUCTURE CLEARANCES - MINIMUM 12 FEET;
- G. MAINTENANCE SUFFICIENT TO ENSURE ALL WEATHER USE. THERE ARE NO EXISTING STRUCTURES LOCATED WITHIN THIS FINAL PLAT SUBMISSION.
- THE PRIVATE USE-IN-COMMON DRIVEWAY ACCESS EASEMENT AND MAINTENANCE AGREEMENT FOR SHARED DRIVEWAY FOR LOTS 163 THRU 166 IS RECORDED SIMULTANEOUSLY WITH THIS PLAT. THE FOREST OBLIGATION FOR THE ENCLAVE AT RIVER HILL, PHASE 2 (FORMERLY ENCLAVE AT TIERNEY FARM) WERE PROVIDED WITH THE ENCLAVE AT TIERNEY FARM, PHASE 1 (F-15-110).
- THE STORMWATER MANAGEMENT FACILITIES LOCATED ON H.O.A. OPEN SPACE LOT MAINTAINED BY THE ENCLAVE AT RIVER HILL HOMEOWNERS ASSOCIATION, INC. 20, OPEN SPACE LOT 169 WILL BE OWNED AND MAINTAINED BY THE ENCLAVE AT RIVER HILL HOMEOWNERS
- STREET TREES ALONG PUBLIC ROADS HAVE BEEN REVIEWED AND APPROVED. SURETY FOR INSTALLATION OF THESE TREES HAS BEEN POSTED WITH THE DEVELOPERS AGREEMENT, F-17-003.
  22. RECREATIONAL AREA TABULATION
- A. RECREATIONAL OPEN SPACE REQUIRED = 45,300 SQUARE FEET (151 LOT5 x 300 SQ. FT./ LOT)

  B. RECREATIONAL OPEN SPACE PROVIDED = 40,602 SQUARE FEET (OPEN SPACE LOT 51) 23. OPEN SPACE TABULATION CHART PROVIDED THIS SHEET A. PROJECT OPEN SPACE REQUIRED = 44.45 AC.

B. PROJECT CREDITED OPEN SPACE PROVIDED = 52.059 AC.

| Total Open Space Tabulation |                  |                      |                          |
|-----------------------------|------------------|----------------------|--------------------------|
| Open Space<br>Lot No.       | Credițed<br>Area | Non-Credited<br>Area | Toţāl Open<br>5pāce Areā |
| 51                          | 4.063 Ac.±       | 0.007 Ac. ±          | 4.070 Ac.±               |
| 52                          | 1.014 Ac.±       | 0.000 Ac.±           | 1.014 Ac.±               |
| 53                          | 7.469 Ac.±       | 0.000 Ac.±           | 7.469 Ac. ±              |
| 54                          | 24.223 Ac. ±     | 0.000 Ac.±           | 24.223 Ac. ±             |
| 125                         | 0.000 Ac. *      | 0.076 Ac.±           | 0.076 Ac.±               |
| 126                         | 5.396 Ac.±       | 0.125 Ac.±           | 5.521 Ac.±               |
| 127 (*)                     |                  |                      |                          |
| 128                         | 4.215 Ac.±       | 0.144 Ac.±           | 4.359 Ac.±               |
| 129                         | 0.031 Ac.±       | 0.006 Ac.±           | 0.037 Ac.±               |
| 160                         | 3.857 Ac.±       | 0.055 Ac.±           | 3.912 Ac.±               |
| 169                         | 2.591 Ac.±       | 0.105 Ac.±           | 2.696 Ac.±               |

Totals 52.859 Ac. ± 0.518 Ac. ± 53.377 Ac. ± \* See Resubdivision Plats-Lots 161 Thru 168 And Open Space Lot 169

|       | FISHER, COLLINS & CARTER, INC.  CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  ELLICOTT CITY, MARYLAND 21042  (410) 461 - 2055 | #21476   |
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PROFESSIONAL CERTIFICATION I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE

OWNER TIERNEY FARMS ~ CLARKSVILLE, L.P. 24151 VENTURA BOULEVARD CALABASAS, CA, 91302 3.29.18 818-385-3697 PARCEL NO. PROJECT ENCLAVE AT RIVER HILL, PHASE 2 *8*8 & 97 DEVELOPER BLOCK NO. ZONE TAX/ZONE | ELEC. DIST. CENSUS TR. BEAZER HOMES 8965 GUILFORD ROAD, SUITE 290 R-ED COLUMBIA, MD 21046 765-894-0182

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

HO.CO. FILE NO.5: ECP 15-005, PB CASE 409, SP-15-006, WP-15-069, WP-16-152,

F-15-110, F-17-003 AND F-18-024

## TITLE SHEET

ENCLAVE AT RIVER HILL, PHASE 2 LOTS 161 THRU 168, OPEN SPACE LOT 169 PREVIOUS HOWARD COUNTY FILES: ECP-15-005, PB CASE 409, 5P-15-006, WP-15-069, WP-16-152, F-15-110, F-17-003, F-18-024 AND SDP-18-032 TAX MAP NO.: 34 GRID NO.: 18 PARCEL NO.: 88, 97 ZONED R-ED

FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: MARCH. 2018

SHEET 1 OF 3

ECP-18-025

