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Memorandum

To: Thomas A. Sahol, Township Administrator

From: Yosef Portnoy, Senior Project Manager
Anthony Calvano, Senior Project Engineer

Date: July 13, 2022

Subject: Offsite Stormwater & Flooding Impacts Narrative
Active Acquisitions Chesterfield (fka Old York Country Club)
Block 701, Lots 1.02 & 2.01, Township of Chesterfield, NJ

Project No.: 19000778A

The subject property presently contains the defunct Old York Country Club (OYCC) on Lot 2.01 and a single-family residence on Lot 1.02. Proposed redevelopment of Lot 2.01 includes a 1,134,000 square foot warehouse building with typical appurtenant site improvements. Lot 1.02 is to remain in existing condition, including maintaining an existing road providing access to Lot 2.01.

Blacks Creek and a Tributary to Blacks Creek traverse the site. Blacks Creek runs along the southerly boundary of Lot 2.01 in an east to west direction. The Tributary runs through a portion of Lot 2.01 in an east to west direction before turning south, running through Lot 1.02, re-entering Lot 2.01, and converging with the Blacks Creek immediately upstream of Old York Road. Both streams are regulated waters under the Flood Hazard Area Control Act Rules of N.J.A.C. 7:13 (FHA regulations).

Existing Conditions

Flood hazard areas are subject to flooding from the flood hazard area design flood, as defined by the Department under the Flood Hazard Area Control Act. Flood hazard areas include those areas mapped as such by the Department, areas defined or delineated as an A or a V zone by the Federal Emergency Management Agency (FEMA), and any unmapped areas subject to flooding by the flood hazard area design flood. Due to the lack of sufficient NJDEP and FEMA mapping of Blacks Creek and the Tributary to Blacks Creek, the applicant delineated the flood hazard area in accordance with N.J.A.C. 7:13-3.6, Method 6 (Calculation Method). This method is based on hydrologic and hydraulic calculations provided by the applicant. NJDEP File Nos. 0300-20-0002.1 (Lots 2.01 and 5.02) & 0307-21-0003.1 (Lot 1.02) verified the flood hazard area elevations of Blacks Creek and the Tributary to Blacks Creek (see Figures 6 & 7). These prior verifications are the basis for the current FHA Individual Permit application pending for the redevelopment project.

The watershed to the Blacks Creek at Old York Road is approximately 20 square miles in size. The 100-yr peak flow at the downstream limit of the study area is calculated as approximately 9,286 cfs. Pursuant to the FHA regulations, Blacks Creek and the Tributary to Blacks Creek are analyzed using the HEC-RAS River Analysis System v. 5.0.3 from the US Army Corps of Engineers. In accordance with

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Method 6 of the FHA regulations (N.J.A.C. 7:13-3.6), the HEC-RAS model must be run utilizing 125% of the 100-yr peak flow, which is approximately 11,608 cfs at the downstream limit of the study area. The resulting flood hazard area design flood water surface elevation of Blacks Creek ranges from 28.6' NAVD to 30.5' NAVD along the project site. The flood hazard area water surface elevation along the Tributary to Blacks Creek affecting Lot 2.01 ranges from 45.6' NAVD to 58.9' NAVD and affecting Lot 1.02 ranges from 28.8' NAVD to 34.7' NAVD.

As would be expected from the results of the flood hazard area modeling and mapping, the OYCC does have a history of flooding within the flood hazard area of the Blacks Creek as evidenced in the photographs below (see Figures 1 & 2 below). The FEMA Flood Insurance Rate Map Effective December 21, 2017 also indicates a floodplain along the Blacks Creek as it traverses the site (see Figure 3).

Figure 1 - OYCC Green at Hole 6 on November 25, 2018

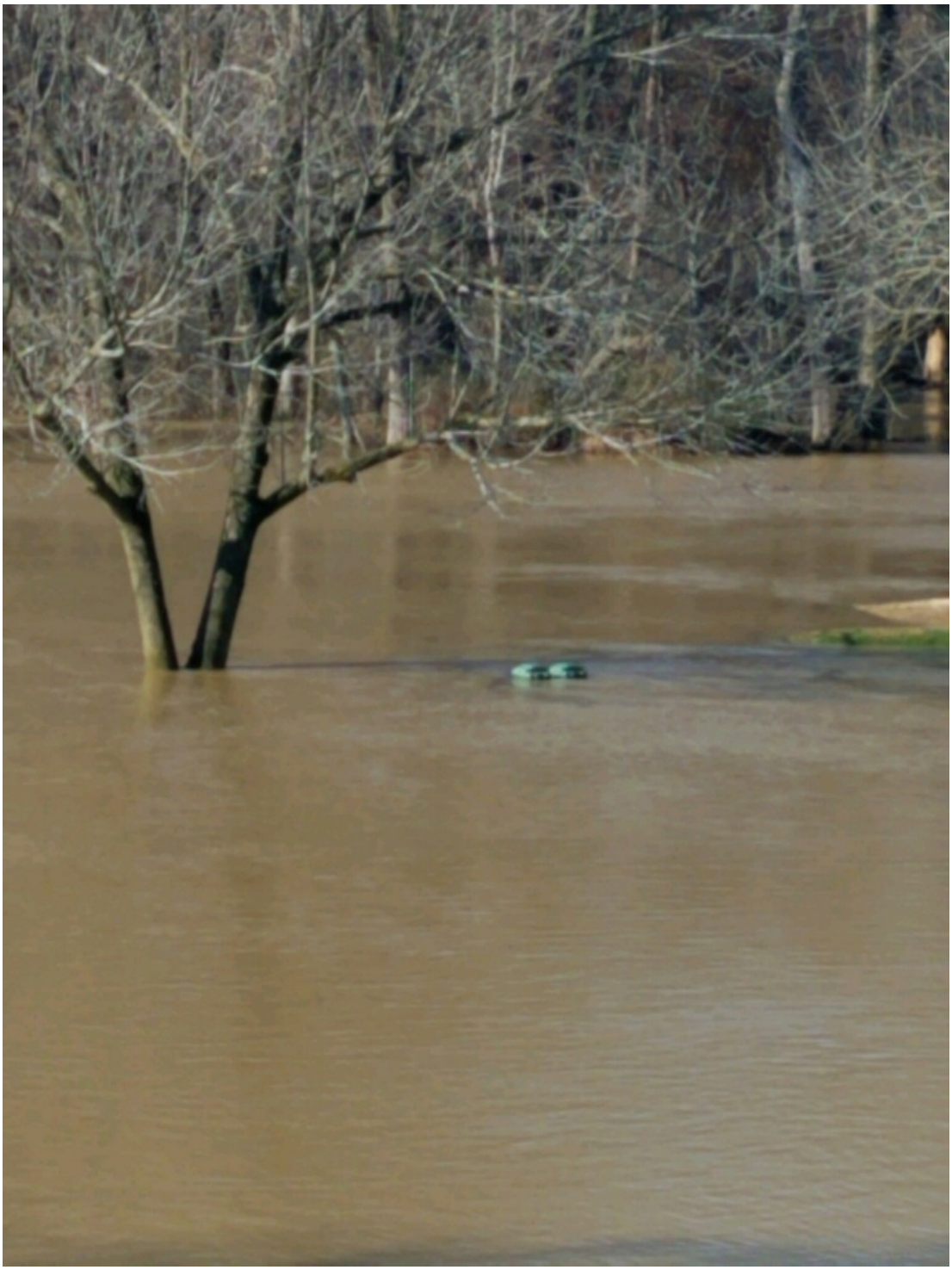

Figure 2 - OYCC Irrigation Satellites on Holes 7 & 9 on November 25, 2018

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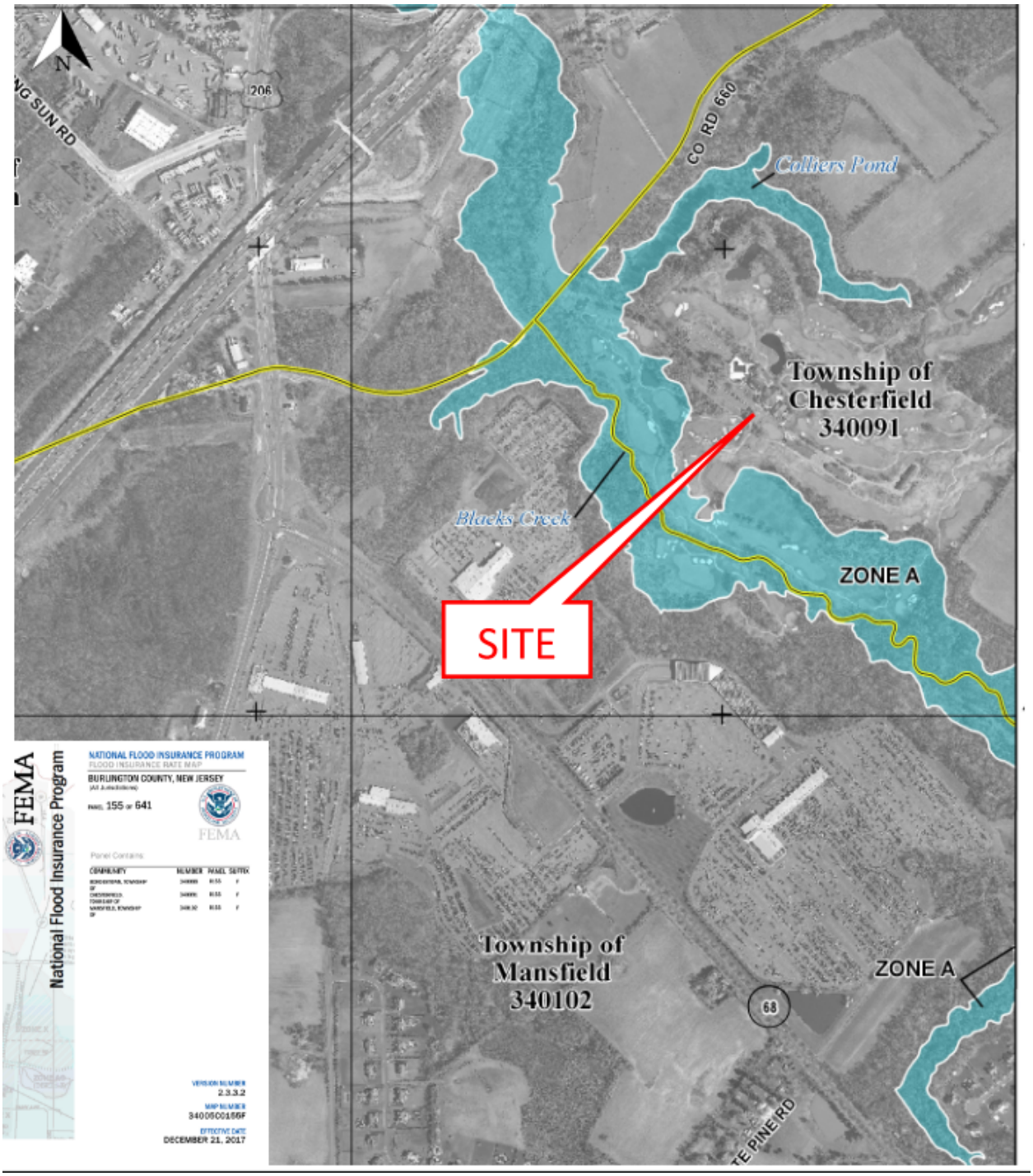

Figure 3 - FEMA Flood Insurance Rate Map Effective December 21, 2017

The redevelopment project has been designed in full recognition of the existing flood hazard areas located on the subject site and the proposed project is in full compliance with the Flood Hazard Area Control Act Rules of N.J.A.C. 7:13.

Proposed Conditions

The proposed development includes construction of two (2) arch culvert crossings of the Tributary to Blacks Creek. To model the effects of the two (2) proposed culvert crossings, the Method 6 analysis subject of the prior verifications was utilized along with necessary model updates to reflect proposed conditions. The following is an outline of the regulated activities proposed and hydrologic and hydraulic analyses performed.

Regulated Activities

The Applicant proposes the following activities within areas regulated under N.J.A.C. 7:13:

- Two (2) culvert crossings across a Tributary to Blacks Creek to facilitate vehicular access into and within the site;
- Removal of an existing golf cart bridge across a Tributary to Blacks Creek to facilitate construction of one (1) of the two (2) proposed vehicular crossings;
- A site access driveway, onsite circulation driveways, and loading / parking areas;
- Three (3) stormwater outfalls;
- Excavation, fill, and grading to accommodate the development, including retaining walls; and
- Utility crossings across a Tributary to Blacks Creek.

Hydrology

Hydrology utilized in the proposed conditions stream model is unchanged from the hydrology utilized for the Method 6 verifications under NJDEP File Nos. 0300-20-0002.1 & 0307-21-0003.1. The full Hydrology calculations are presented in reports entitled “Flood Hazard Area Verification Report for Active Acquisitions Chesterfield”, dated October 2020, revised through March 2021, prepared by Maser Consulting (fka Colliers Engineering & Design), and “Flood Hazard Area Verification Report for Old York Country Club”, dated October 2021, prepared by Colliers Engineering & Design.

Hydraulics

The effects of the proposed stream crossings on Blacks Creek and the Tributary to Blacks Creek are analyzed using the HEC-RAS River Analysis System v. 5.0.3 from the US Army Corps of Engineers. The basis for the proposed conditions analysis is the HEC-RAS model previously verified under NJDEP File Nos. 0300-20-0002.1 & 0307-21-0003.1 (see Figures 6 & 7). The previously verified model is modified to account for the two (2) proposed arch culvert crossings of the Tributary to Blacks Creek and associated proposed grading. Results of the proposed conditions model, including a water surface comparison between verified flood elevations and proposed flood elevations resulting from the proposed conditions model, verify that the project will not have an adverse impact on the flood hazard elevation and area (see Figure 4).

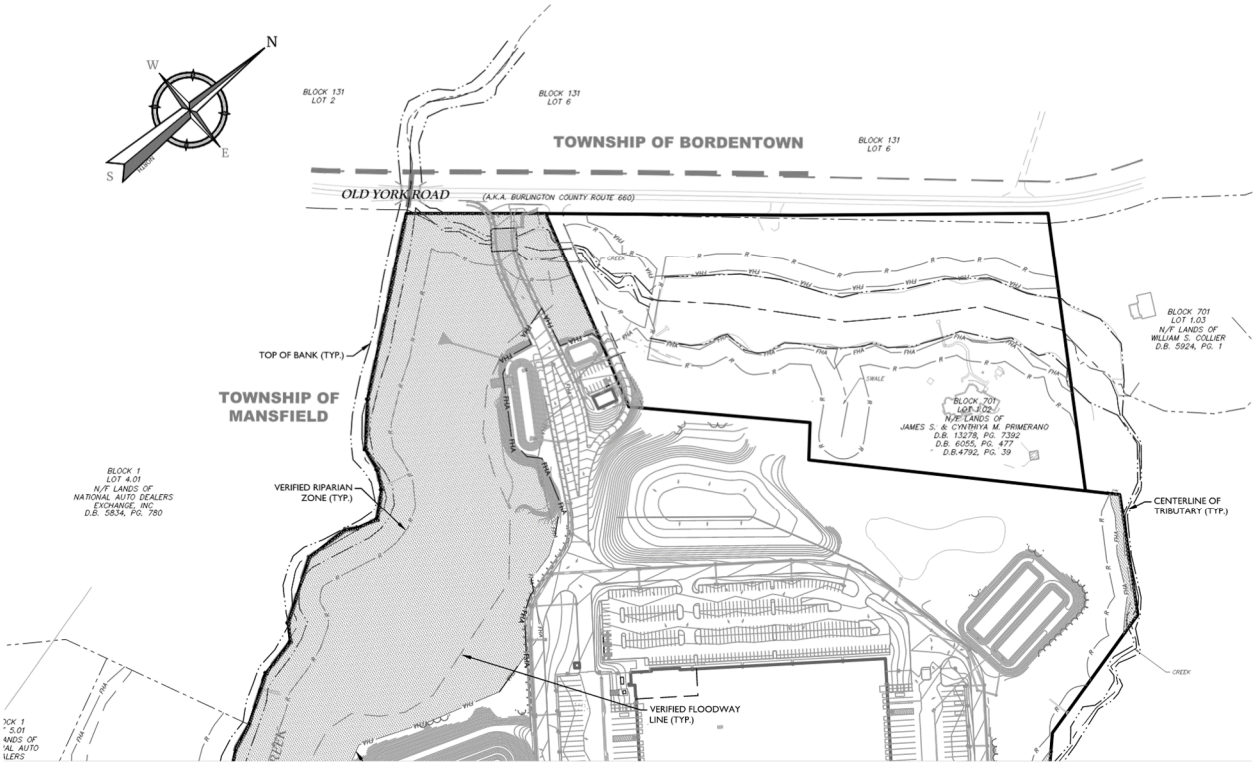

Figure 4 - Excerpt from "Overall Proposed NJFHA Plan", sheet 1 of 6, dated 6/9/22, prepare by Colliers Engineering & Design

Stormwater Compliance

This project is designed in accordance with N.J.A.C. 7:8. The proposed stormwater measures have been designed to meet the NJDEP, Township of Chesterfield, Township of Mansfield, and Burlington County standards. The site complies with the requirements for water quantity, water quality, groundwater recharge and SCD requirements. The project's compliance with N.J.A.C. 7:8 and the Standards for Soil Erosion and Sediment Control in New Jersey is demonstrated in the Stormwater Management Report, dated June 2022, prepared by Colliers Engineering & Design. The stormwater management points of analysis are as follows:

POA-1. Point of analysis 1 is located at the confluence of Blacks Creek and the Blacks Creek Tributary at the existing bridge crossing within Old York Road (C.R. 660).

POA-2. Point of analysis 2 is the discharge location of an existing outfall pipe currently draining the three (3) existing onsite ponds.

POA-3. Point of analysis 3 is located at the Blacks Creek Tributary prior to the Tributary leaving the site toward adjacent Block 701, Lot 1.01. Runoff from areas south of the Tributary are analyzed at this location.

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POA-4. Point of analysis 4 is located at the Blacks Creek Tributary prior to the Tributary leaving the site toward adjacent Block 701, Lot 1.01. Runoff from areas north of the Tributary are analyzed at this location.

The proposed development is required to manage stormwater runoff to the flood hazard area of Blacks Creek and the Tributary in accordance with the Stormwater Management Rules at N.J.A.C. 7:8 and the Flood Hazard Area Control Act Rules at N.J.A.C. 7:13. The New Jersey Department of Environmental Protection (NJDEP) is reviewing the development's compliance with both N.J.A.C. 7:8 and N.J.A.C. 7:13 under a pending Flood Hazard Area Individual Permit.

Existing, Allowable and Proposed Peak Rates to Point of Analysis #1

Storm (Year)	EX. Runoff (cfs) (A)	Reductions (B)	Allowable (A*B=C)	PR. Runoff (cfs)
2	6.56	50%	3.28	2.77
10	14.06	75%	10.55	7.30
25	19.77	-	19.77	11.83
100	30.81	80%	24.65	22.50

Existing, Allowable and Proposed Peak Rates to Point of Analysis #2

Storm (Year)	Ex. Runoff (cfs) (A)	Reductions (B)	Allowable (A*B=C)	PR. Runoff (cfs)
2	5.12	50%	2.56	2.18
10	13.99	75%	10.49	5.54
25	22.44	-	22.44	9.63
100	30.79	80%	29.67	26.21

Existing, Allowable and Proposed Peak Rates to Point of Analysis #3

Storm (Year)	EX. Runoff (cfs) (A)	Reductions (B)	Offsite Flow (C)	Allowable (A*B+C=D)	PR. Runoff (cfs)
2	4.54	50%	2.03	4.30	3.15
10	10.31	75%	4.06	11.79	6.29
25	14.80	-	5.54	20.34	8.59
100	23.55	80%	8.35	27.19	12.94

Existing, Allowable and Proposed Peak Rates to Point of Analysis #4

Storm (Year)	EX. Runoff (cfs) (A)	Reductions (B)	Allowable (A*B=D)	PR. Runoff (cfs)
2	5.49	50%	2.74	2.72
10	12.35	75%	9.26	7.90
25	17.55	-	17.55	11.41
100	27.65	80%	22.12	18.23

Figure 5 – Excerpt from the Stormwater Management Report, dated June 2022 and prepared by Colliers Engineering & Design

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As indicated in Figure 5 above and in the permit application submitted to NJDEP, the quantity of stormwater runoff from the proposed development is managed by reducing post-development peak runoff rates for the 2-year, 10-year and 100-year storm events to 50%, 75% and 80% respectively of the pre-development peak runoff rates. The site's compliance with these requirements will reduce the existing stormwater peak flows from the property to Blacks Creek and the associated Tributary. The stormwater management facilities are consistent with Green Infrastructure (GI) Best Management Practices (BMPs) in accordance with N.J.A.C. 7:8.

Beyond controlling the discharge of stormwater to Blacks Creek and its Tributary, the proposed development manages the onsite flood hazard areas associated with the streams by:

1. Displacing no flood volume storage within the onsite flood fringe, as calculated for both the volume between the flood hazard area design flood and the 10-year flood, and the volume between the 10-year flood and the ground; and
2. Not subjecting any offsite habitable building, railroad, roadway, or parking area to increased depth or frequency of flooding.

Through compliance with applicable standards of N.J.A.C. 7:8 and N.J.A.C. 7:13, the development is proposed without detrimental impacts to offsite stormwater or the flood hazard areas of Blacks Creek and the Tributary to Blacks Creek. There will be no increase in flooding resulting from the proposed development.

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State of New Jersey

PHILIP D. MURPHY
Governor

SHEILA Y. OLIVER
Lt. Governor

DEPARTMENT OF ENVIRONMENTAL PROTECTION

Division of Land Resource Protection
Mail Code 501-02A
P.O. Box 420
Trenton, New Jersey 08625-0420
www.nj.gov/dep/landuse

SHAWN M. LATOURETTE
Acting Commissioner

April 1, 2021

Active Acquisition OY, LLC
c/o Seth Gerszberg
5 Tenafly Road, Suite 416
Englewood, NJ 07631

Re: Flood Hazard Area Verification Approval
File No.: 0300-20-0002.1 LUP200001
Applicant: Active Acquisition OY, LLC
Project: Active Acquisitions Chesterfield
Block(s) and Lot(s): [701, 2.01] [1, 5.02]
Municipality: Chesterfield & Mansfield Township; County: Burlington

Dear Mr. Gerszberg:

This letter is in response to your request for a flood hazard area verification along Blacks Creek and an unnamed tributary to Blacks Creek at the above-referenced site. The Department has reviewed your application and hereby verifies the flood hazard area elevation and limits, floodway limits and riparian zone limits on this site, as depicted on the approved plans described below. The flood hazard area elevation(s) of Blacks Creek ranges from 28.6' NAVD to 30.5' NAVD along the project site. The flood hazard area elevation(s) of the unnamed tributary to Blacks Creek ranges from 28.8' NAVD to 58.9' NAVD, along the project site.

The flood hazard area and floodway was established using Method 6 (calculation method) as described at N.J.A.C. 7:13-3.6, which is based on hydrologic and hydraulic calculations provided by the applicant.

The riparian zone extends 50 feet from the top of bank along both sides of each regulated water on this site. If a discernible bank is not present along a regulated water, the riparian zone is measured in accordance with the definition of the top of bank at N.J.A.C. 7:13-1.2.

Please note that altering land cover or topography in a flood hazard area, as well as clearing, cutting and/or removing vegetation within a riparian zone, is regulated by the Flood Hazard Area Control Act rules, and may be prohibited or restricted in some cases. A flood hazard area permit is required prior to undertaking any regulated activity within a flood hazard area or riparian zone described at N.J.A.C. 7:13-2.4. Some projects may qualify for a permit-by-rule at N.J.A.C. 7:13-7, a general permit by certification at N.J.A.C. 7:13-8, a general permit at N.J.A.C. 7:13-9, or an individual permit at N.J.A.C. 7:13-10. Projects situated entirely outside both the flood hazard area and riparian zone do not require a flood hazard area approval.

Figure 6 – Excerpt from NJDEP verification under NJDEP File No. 0300-20-0002.1.

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State of New Jersey

PHILIP D. MURPHY
Governor

SHEILA Y. OLIVER
Lt. Governor

DEPARTMENT OF ENVIRONMENTAL PROTECTION
Watershed & Land Management
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P.O. Box 420
Trenton, New Jersey 08625-0420
www.nj.gov/dep/landuse

SHAWN M. LATOURETTE
Commissioner

January 19, 2022

Active Acquisitions OY, LLC
c/o Seth Gerszberg
250 West Nyack Road, Suite 104D
West Nyack, NY 10994

Re: Flood Hazard Area Verification Approval
File No.: 0307-21-0003.1 LUP210001
Applicant: Active Acquisitions OY, LLC
Block(s) and Lot(s): [701, 1.02]
Municipality: Chesterfield Township; County: Burlington

Dear Mr. Gerszberg:

This letter is in response to your request for a flood hazard area verification along an unnamed tributary to Blacks Creek at the above-referenced site. The Department has reviewed your application and hereby verifies the flood hazard area elevation and limits, floodway limits and riparian zone limits on this site, as depicted on the approved plans described below. The flood hazard area elevation on this Lot and Block ranges from 28.8' NAVD to 34.7' NAVD.

The flood hazard area and floodway were established using Method 6 (calculation method) as described at N.J.A.C. 7:13-3.6, which is based on hydrologic and hydraulic calculations provided by the applicant.

The riparian zone extends 50 feet from the top of bank along both sides of each regulated water on this site. If a discernible bank is not present along a regulated water, the riparian zone is measured in accordance with the definition of the top of bank at N.J.A.C. 7:13-1.2.

Please note that altering land cover or topography in a flood hazard area, as well as clearing, cutting and/or removing vegetation within a riparian zone, is regulated by the Flood Hazard Area Control Act rules, and may be prohibited or restricted in some cases. A flood hazard area permit is required prior to undertaking any regulated activity within a flood hazard area or riparian zone described at N.J.A.C. 7:13-2.4. Some projects may qualify for a permit-by-rule at N.J.A.C. 7:13-7, a general permit by certification at N.J.A.C. 7:13-8, a general permit at N.J.A.C. 7:13-9, or an individual permit at N.J.A.C. 7:13-10. Projects situated entirely outside both the flood hazard area and riparian zone do not require a flood hazard area approval.

This verification is based on the best information presently available to the Department, and is subject to change if this information is no longer accurate or if additional information is made available to the Department including, but not limited to, information supplied by the applicant.

Figure 7– Excerpt from NJDEP verification under NJDEP File No. 0307-21-0003.