REMINGTON & VERNICK ENGINEERS

9 Allen Street
Toms River, NJ 08753
O: (732) 286-9220
F: (732) 505-8416

April 3, 2020

Ms. Rosalind Miller, Planning/Zoning Board Secretary
City of Plainfield
515 Watchung Avenue
Room 202
Plainfield, NJ 07060

RE: **Atul Sethi (PB #2019-17)**
Floodplain Review #2
1052 East Second Street
Block: 410 Lot: 1
Our File: 2012-P-004

Dear Ms. Miller,

Our office recently received the following documents for a proposed mixed-use building and parking area:

- A set of Preliminary & Final Major Site plans entitled "Proposed Mixed Use Development" prepared by Jeffrey A. Martell, P.E. of Stonefield Engineering & Design, consisting of 13 sheets, last revised March 6, 2020.

According to the City of Plainfield Flood Damage Prevention Ordinances Chapter 17, Article IX, Section 3.2C, the data used in construction and development regulations for structures in flood zones shall either be FEMA's Preliminary Flood Insurance Rate Map released on January 30, 2015 or the NFIP Firm maps adopted September 29, 2006, whichever imposes the more stringent requirement.

The proposed plans are based on 1988 NVAD Datum. The Preliminary Maps in the City of Plainfield are based on the 1988 NVAD Datum.

As per the FEMA Preliminary Flood Insurance Rate maps, the above referenced structure will be within the AO + 3' Flood Zone. The Base Flood Elevation is the highest adjacent grade + 3' based on (NAVD88) and a Design Flood Elevation is the Base Flood Elevation + 1' of freeboard per the City's requirement. The highest adjacent grade is 115.50, therefore the BFE is 118.50 ft. (NAVD88) and the DFE is 119.50 ft (NAVD88).

As per the effective NFIP FIRM maps, the above referenced structure is currently within the AO + 3' Flood Zone.

Both FEMA's Current Flood Insurance Rate Map and Preliminary Flood Insurance Rate Map imposes the same requirement.

The following building requirements shall apply to your structure:

- **Per Section 60.3(c)(3) of the NFIP regulations all new construction and substantial improvements of non-residential structures within the AO Zone on the community's FIRM**

(i) have the lowest floor (including basement) elevated above the highest adjacent grade at least as high as the depth number specified in feet on the community's FIRM (at least two feet if no depth number is specified), or (ii together with attendant utility and sanitary facilities, be completely floodproofed to that (base flood) level that the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.

- **Per Section 60.3(c)(4) of the NFIP regulations states that where a non-residential structure is intended to be made watertight below the base flood level, a registered professional engineer or architect shall develop and/or review structural design, specifications, and plans for the construction, and shall certify that the design and methods of construction are in accordance with the accepted standards of practice for meeting the applicable provisions of paragraphs (c)(3)(ii) or (c)(8)(ii) of this section.**
- **The Applicant's professional shall prepare a Flood Emergency Operation Plan. This Plan is necessary for any floodproofed building to ensure that the floodproofing components will operate properly under all conditions, including power failures. A continuous source of electricity to operate any necessary floodproofing components, such as pumps, will be needed for any floodproofing design that includes such components. The design professional must produce the plan. An adequate plan must include the following:**
  1. **An established chain of command and responsibility with leadership responsibilities clearly defined for all aspects of the plan.**
  2. **A procedure for notification of necessary parties when flooding threatens and flood warnings are issued. Personnel required to be at the building should have a planned and safe means of ingress and should have no other emergency response duties during a flood event. Alternates should be assigned in the event that the primary persons responsible are unable to complete their assigned duties under the pla.n**
  3. **A list of specific duties assigned to ensure that all responsibilities are addressed expeditiously. The locations of materials necessary to properly install all floodproofing components must be included in the list.**
  4. **An evacuation plan for all personnel—those without duties for the flood emergency as well as those with duties for implementing the plan. All possible ingress and egress routes must be identified.**
  5. **A periodic training and exercise program to keep personnel aware of their duties and responsibilities. Training drills should be held at least once a year and should be coordinated with community officials. Flood safety precautions should be repeated during each training drill.**
- **The Applicant's professional shall prepare an Inspection and Maintenance Plan. Every floodproofing design requires some degree of periodic maintenance and inspection to ensure that all components will operate properly under flood conditions. The necessary inspection and maintenance activities, including inspection intervals and repair requirements, must be described in the Inspection and Maintenance Plan. Components that should be inspected as**

part of an annual (as a minimum) maintenance and inspection program include the following:

1. **Mechanical equipment such as sump pumps and generators.**
2. **Flood shields and closures, to ensure that they fit properly and that the gaskets and seals are in good working order, properly labeled, and stored as indicated in the Flood Emergency Operation Plan.**
3. **Walls and wall penetrations, for cracks and potential leaks.**

- **The Applicant is required to submit the Flood Emergency Plan, the Inspection and Maintenance Plan and the Non-Residential Floodproofing Certificate prior to being issued a building permit.**

The following are comments which shall be addressed by the Applicant's Professionals:

- **The site plans and architectural plans should reference the Highest Adjacent Grade of 115.5 ft (NAVD88) and the BFE (Base Flood Elevation) = 118.5 ft (NAVD88) and the DFE (Design Flood Elevation) = 119.5 ft (NAVD88).**
- **The Architect indicates on sheet Z01 that 7 residential apartments are proposed. It is unclear where all 7 residential apartments are located. The Architect shall confirm that all residential apartments are located on the 2nd and 3rd Floor.**
- **The exterior elevations shall include the basement and indicate the materials used for the construction of the basement to insure that the walls are watertight and substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.**
- **The exterior elevations should label the ground elevation at 115.5 ft, provide the BFE at 118.5 ft and the DFE at 119.5 ft. An elevation should also be provided for the basement, first floor and second floor.**
- **The Architect shall indicate how the doors accessing the building will meet the criteria for floodproofing.**
- **The Architect shall provide manufacturer's information for the windows and exterion building walls to indicate that they meet the criteria for floodproofing.**

Should you have any questions or require additional information, please do not hesitate to contact our Toms River office at 732-286-9220, or at margaret.groves@rve.com.

God Bless America
Remington &Vernick Engineers

Margaret Groves, CFM

Margaret Groves, C.F.M.
Certified Floodplain Manager

MMG:ag

cc: Ms. Cynthia Smith - City of Plainfield Clerk (Cynthia.smith@plainfieldnj.gov)
Ms. Valerie Jackson – Director of Economic Development (valerie.jackson@plainfieldnj.gov)
Mr. William Nierstedt, P.E. - City of Plainfield Engineer (William.nierstedt@plainfieldnj.gov)
Mr. Drew D-Sessa, P.E. – City Engineer (ddisessa@pennoni.com)
Mr. Wendell Bibbs, P.E. – RVE (Wendell.bibbs@rve.com)