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NEW YORK, NY

November 9, 2022

## Memo

**To:** Christopher Kok, PP, AICP, Township Planner  
Heather Vitz, PE, Township Engineer

**From:** Christopher P. Statile, P.E., Consultant

**Regarding:** Block 2604, Lots 1 & 2  
1591 Alps Road, LLC  
Wayne Township, NJ

As requested, we have reviewed the site plans entitled "Preliminary/Final Major Site Plan for 1591 Alps Road, LLC" dated July 15, 2022 revised to September 9, 2022 prepared by Bohler Engineering NJ, LLC. Our review is limited to stormwater management and the site plan design. The submitted plans include the following:

Sheet Number	Title	Date	Revision Date
Dwg. 1	ALTA/NSPS Land Title Survey	10/29/22	7/13/22
Dwg. 2	"	"	"
C-01	Cover Sheet	7/1/5/22	9/9/2022
C-02	Demolition	"	"
C-03	Site Plan	"	"
C-04	Grading Plan	"	"
C-05	Drainage Plan	"	"
C-06	Utilities Plan	"	"
C-07	Soil Erosion Control Plan	"	"
C-08	Soil Erosion Plan Details	"	"
C-09	Landscape Plan	"	"
C-10	Landscape Notes & Details	"	"
C-11	Lighting Plan	"	"
C-12	Detail Sheet	"	"
C-13	Detail Sheet	"	"
C-14	Detail Sheet	"	"

C-15	Detail Sheet	“	“
C-16	Detail Sheet	“	“
C-17	Environmental Protection Plan	“	“
C-18	Truck Turning Plan	“	“
C-19	Sight Triangle Plan	“	“

We also receive the following architectural drawings entitled “Proposed Retail Building, 1591-1593 Alps Road & 10 Grandview Drive prepared by The Dietz Partnership of Parsippany:

A-1	First Floor Plan	7/8/2022	None
A-2	Exterior Elevations & Monument Sign	“	“

Drainage reports were also submitted:

- “Stormwater Management Report” for 1591 Alps Road, LLC by Bohler Engineering, LLC dated July 2022.
- “Stormwater Management Facilities Operations & Maintenance Manual” for 1591 Alps Road, LLC by Bohler Engineering, LLC dated July 2022.

Application:

The application consists of a new 10,583 SF retail strip center (per architectural plans) for six tenant spaces with one drive thru window. Associated parking for 52 vehicles with three barrier-free spaces, and site improvements are also provided.

The site was previously improved with a funeral home, detached garage, and single-family dwelling. The proposed improvements will increase the impervious surfaces from 35,808 SF to 41,835 SF. The County is also implementing improvements to the intersection in the future.

Site parking/circulation changes to accommodate electric charging stations, trash enclosures, and pedestrian safety improvements. Developed by the New Jersey Department of Environmental Protection, the Department of Community Affairs and the Board of Public Utilities, P.L. 2021, c. 171 is now in effect for electric vehicles. The new law, signed by Governor Murphy in July 2021, requires Electric Vehicle Supply/Service Equipment (EVSE) and Make-Ready parking spaces to be designated as a permitted accessory use in all zoning or use districts in New Jersey. A Make-Ready parking space counts as two spaces when calculating compliance with the parking requirements, with up to a maximum 10% reduction.

We offer the following recommendations and comments on the site plans:

1. The sanitary sewer cannot be connected to the existing municipal manhole. It must be connected to the sewer line, and a 6" cleanout provided behind the curbline. The line should be relocated to move the cleanout out, out of the drive aisle as it may become damaged by snow plows. This is also true of the numerous roof drain cleanouts in the pavement areas.
2. Barrier-free curb ramps should be provided at the Sunrise Drive intersection from the new sidewalks.
3. Barrier-free tactile mats at the ramps at the driveways should be eliminated since it is not a public street crossing.
4. The sidewalk landings at the on-site barrier-free parking spaces is exactly 2%. Since there is potential for this grade to be constructed slightly incorrectly, we recommend that the slope be lessened to provide a margin of error.
5. The SU-30 delivery truck stencils shown on Sheet C-18 show vehicle movements with no margins of error, especially at the Paterson Hamburg Turnpike entrance/exit. While generally accepted, some curbline adjustments should be made to ensure wider turning movements. How do these stencils comport with triple axle refuse trucks which must head in or back into the dumpster pen? These trucks are up to 37 ft. long.
6. The 5 ft. interior curb radius approaching the drive-thru should be increased to 10 ft. Larger vehicles are common today such as pickup trucks and longer SUV's. Concrete curbs should be used in this area to prevent tire ruptures.
7. Is the Menu Board to be used as the Order Board?
8. The canopy may require advance 'tell tails' to prevent trucks from striking it
9. Bollards should be provided at the building corner (landlord room) and at the bump-out for the drive thru window to prevent damage.
10. A sign should be provide at the Grandview Drive entrance to inform drivers where the drive thus line is.
11. A sign should be provided at the Paterson Hamburg Turnpike entrance directing drivers to the drive thru line to reduce the potential of vehicles attempting to circulate down the one-way aisle.

12. Given the traffic islands at Paterson Hamburg Turnpike, if left turns are prohibited, a sign should be provided. Traffic islands under 150 ft. are considered a hazard and should be eliminated (unless the County Planning Board requests same).
13. The gate for the dumpster must be prevented from swinging into the drive aisle. A wind gust can create such a hazard.
14. The 13 parking spaces along Grandview Drive should be angled to ensure drivers exit properly. I also reduces the potential for parked vehicles from backing into vehicles queued on the drive thru lane. As shown the 20 ft. aisle is insufficient for backing vehicles.
15. The barrier-free parking spaces should be separated with one placed in front of the food retailer at the east end of the parking lot.
16. A beam guiderail should be provided along the top of the easterly retaining wall to prevent vehicles from vaulting over the curblines down the wall terraces
17. A barrier or railing should be provided at the northeast corner of the building sidewalk to prevent a pedestrian to inadvertently step into the drive thru lane which is a blind corner.
18. If the curbs on-site are composed of granite block, all depressed curbs and barrier-free curb ramps should be of concrete. Granite block is uneven and more difficult to cross for handicapped pedestrians using canes, walkers and wheelchairs.
19. We suggest placing bollards at the ends of dumpster walls where they may be subject to being struck by refuse trucks.
20. We highly discourage the use of recycled concrete aggregate under sidewalks and ramps. We have found the material highly expansive if exposed to moisture, floating concrete slabs to the point where doors cannot be opened and causing tripping hazards. We believe that the recycled materials such as brick or concrete block fragments swell when wet or moist, damaging the pavement.
21. Grandview Drive is generally curbed in concrete while the site has granite block. Does the Township wish there to be consistency?
22. The Municipal Land Use Law was amended in 2021 to require the installation of at least two "Make-Ready" parking spaces if there will be 51 to 75 off-street spaces. The law permits a parking space prepared with EVSE or Make-Ready equipment to count as at

least two parking spaces for the purposes of complying with a minimum parking space requirement.

### Site Lighting:

23. The site lighting includes internal house-side shields to prevent light spillage off-site.
24. The Lighting Plan on Sheet C-11 shows illumination levels at **2.6 foot-candles** where 1.0 foot-candle is permitted. Also, illumination levels at the property line are at a maximum of **1.9 foot-candles** where 0.1 foot-candle is permitted. These will **require waivers** due to exceeding permitted light intensities. This may be justified because they occur at high pedestrian & motor vehicle traffic areas (for retail strip center).
25. The light fixture near the dumpster should be relocated to avoid collision damage with refuse trucks.

### Drainage:

26. For the inlet being reset in the embankment along Alps Road, the storm drain head should be replaced with an “A” frame and grate.
27. The 15” storm drain which the applicant is tying into should be internally inspected from the inlet onsite to the manhole in Grandview Drive.
28. Permeable pavement is being proposed to address NJDEP water quality and groundwater recharge standards.

Pervious paving systems are designed to infiltrate rainwater into the subsoils and have very specific design and construction controls to perform as intended. It is a stormwater management method that filters stormwater runoff as it moves down through the pavement by infiltrating through the void spaces in the surface course to the stone below. The system consists of an asphalt surface course, a transition layer and a storage bed of open-graded aggregate (choker course), where runoff is temporarily stored. Discharge of this runoff from pervious paving systems is either collected via an underdrain or through infiltration into the subsoils as in this subject application.

The “Full Depth Asphalt Pavement Detail” on Sheet C-16 must comport with the NJBMP Manual for its composition i.e.:

- The porosity of the permeable asphalt surface course must be 15-25%. For a system designed for the Water Quality Design Storm, the minimum tested infiltration rate of the surface course is 6.4 inches per hour. Systems designed to address quantity

control must have a minimum tested infiltration rate of the surface course of 20 inches per hour.

- The binder used in the surface course must be performance graded for the type of use. Therefore the asphalt plant must also be advised of the type of surface course specified in order to use the correct binder for the installation. For parking lots, polymer modified binder PG 64E-22 must be specified.
- The porosity of any permeable asphalt base course must be  $\geq 25\%$ .
- Minimum air temperature for paving: 50 °F.
- Installation of permeable asphalt requires different temperature guidelines, as follows, than that those of impervious asphalt:
  - Asphalt base course: 200 - 245 °F,
  - Finish rolling base course: 140 – 150 °F,
  - Asphalt surface course: 200 – 220 °F and
  - Finish rolling surface course: 110 - 140 °F.

Vehicular use is prohibited for at least 48 hours once the pavement installation is complete.

- The minimum choker course thickness is 1 inch consisting of a clean single-size crushed stone smaller than the stone in the recharge bed to stabilize the surface for paving equipment. Storage bed aggregate must be clean, washed and open-graded AASHTO No. 2 broken stone.
- Vertical PVC observation/inspection ports are required to check on system performance.
- **Post-construction testing** of the permeable asphalt surface course is required and must conform to the methods of either ASTM C1701: “Standard Test Method for Infiltration Rate of In-Place Pervious Concrete” or ASTM C1781 “Standard Test Method for Surface Infiltration Rate of Permeable Unit Pavement Systems.”

At least three locations must be used for the test, and they should be spaced evenly across the pervious paving system. Failure to achieve the minimum design infiltration rate of the surface course at one or more location indicates the system cannot be put in service until the system is corrected to yield all passing values. Unlike the test methodology outlined in the ASTM standards, the test results cannot be averaged.

The Maintenance Plan (required but not provided) must include a log for recording each location and its test result for future reference.

- Groundwater mounding impacts must be assessed, as required by N.J.A.C. 7:8-5.4(a)2.iv. This includes an analysis of the reduction in permeability rate when groundwater mounding is present. Where the mounding analysis identifies adverse impacts, the pervious paving system must be redesigned or relocated, as appropriate. The mounding analysis must provide details and supporting documentation on the methods used and assumptions made, including values used in calculations.

29. A waiver is required from Section 134-72.4C2 Drainage, for the use of HDPE pipe. We take no exception to its use.
30. A waiver is required from Section 134-72.4C3 Drainage, for the use of pre-cast inlets and manholes versus concrete block. We take no exception to this.
31. A waiver is required from Section 134-72.4C7 Drainage, for the contributory drainage areas to inlets to exceed 5,000 SF. Either double inlets should be provided, or a waiver is required.

### **Post Approval:**

Should the Board consider granting Preliminary and Final Major Site Plan with Design Standard Exceptions approval, the following Engineering conditions should be attached:

1. Prior to issuance of a Building Permit or any work being done on the site, whichever occurs first, the applicant shall:
  - A. Submit revised plans for Engineering Division review and approval addressing all review comments, including any other special conditions and/or notes imposed by the Board.
  - B. Receive all required State and County approvals and Township permits including, but not limited to:
    - 1) HEPSCD Soil Erosion Control plan certification.
    - 2) NJDEP Flood Hazard Area Individual Permit (if required).
    - 3) NJDEP Flood Hazard Area Verification (if required).
    - 4) County of Passaic Planning Board or Waiver letter.
    - 5) NJDEP Wetlands Letter of Interpretation (LOI).

- 6) NJDEP Special Area Permits (if required).
  - 7) Township Industrial Wastewater Discharge Permit (if required).
  - 8) NJDEP Treatment Works Approval (TWA-1) (if required)
  - C. Have remitted payment for all outstanding fees and contributions, including but not limited to:
    - 1) Township wide off-tract drainage assessment (Chapter 134-10.3 of the Township Code). Applicant shall provide calculations of both the “Pre-Development” and the “Post-Development” C-factors based upon the rational Method for the calculation of this fee.
    - 2) Sewer Connection fee. (if required)
    - 3) Water Connection fee. (if required)
  - D. At least one (1) week prior to commencement of work, set up and attend a Pre-construction meeting between himself, his engineer, his contractor, representatives of the County, affected utility companies, Township Engineer, Township Inspector, Township Planner, Zoning Officer, representatives of the Building Department and the Parks Department to discuss the requirements and regulations for on-site construction. Six (6) sets of construction drawings reflecting all conditions as approved by the Board and the Engineering Division shall be submitted at least one (1) week in advance of the pre-construction meeting for stamping and distribution.
  - E. The applicant shall notify the HEPSCD at least forty-eight (48) hours prior to any land disturbance activity. Proof of notification shall be provided to the Engineering Division upon request.
  - F. Prior to the issuance of a Building Permit, the applicant shall submit a certified copy of the deed of record showing that the Maintenance Plan for the Stormwater Management Measures have been recorded upon the Deed of Record for the property in question, as required under NJAC 7.8-5.8(d).
2. Upon commencement of and during construction of the project, the applicant shall:
- A. Delineate on site the limits of disturbance as approved by the Board with soil erosion silt fence, or in the absence of silt fence requirements, snow fence. No clearing, tree cutting, or construction work shall occur on the site until the limits of disturbance and soil erosion control measures are in place and have been approved in the field by the Township Engineer.
  - B. Construct the soil erosion control measures and stormwater detention system as the first item of work. The stormwater detention system shall be made fully functional, and all runoff from the project while under construction shall be directed into it. In

addition, temporary fencing or the permanent fence and gate shall be installed around the basin. Clearing and tree cutting shall not occur until erosion control measures are in place and approved in the field by the Engineering Inspector.

- C. Should any dirt spill or tract onto the Township, County and/or State roads attributed to this project, the applicant and/or his contractor shall clean up same prior to the end of the work day and shall implement corrective measures to prevent same from re-occurring.
  - D. Should any soil and/or sediment deposition occur attributed to this project which adversely affects surrounding drainage courses and/or properties, the applicant and/or his contractor shall prior to the end of the work day abate same, clean up the sediment, and shall repair and/or reinforce the soil erosion control measures to eliminate such erosion.
  - E. Cover each temporary inoperative fire hydrant with a suitable bag for easy identification so as to prevent problems during required emergency use, and notify the Fire Official of such hydrant locations.
  - F. Request and obtain engineering inspection, as per Chapter 134-113 of the Township Code, of all improvements. Work shall not be covered until inspected and passed/approved. Installation of public improvements shall not be performed on Saturdays, Sundays and/or Township holidays unless authorized in advance by the Township Engineer.
3. Prior to the issuance of any Certificate of Occupancy, the applicant shall:
- A. Have completed all on-site and off-site improvements, including but not limited to pavement, drainage, storm water detention/water quality system, curbing, sidewalks, striping, permanent stabilization and lighting.
  - B. Have submitted a professional engineer's certification that the stormwater detention system including outlet control structure(s) and the water quality/system(s) have been constructed to the required volume and orifice sizes/elevations in accordance with the approved design.

The applicant is advised of the following:

- C. Any blasting of rock shall require a Township Blasting Operations Permit and full compliance with all the provisions of the Wayne Township Blasting Regulations in Chapter 52 of the Township Code.
- D. Performance Bonds may be returned upon satisfactory completion of the work and/or issuance of Final Certificate of Occupancy. A letter requesting the return of same shall be filed with the Township Clerk, with a copy to the Township Engineer.

- E. Should the proposed lighting as shown on the site plan cause any glare or annoyance to adjoining neighbors, roads and/or other properties after its installation, the owner shall correct same at his expense and at the direction of the Township Engineer.

We trust these comments assist you and the Board in their review of the application.

c: Robert Streker, P.E., Bohler Engineering, LLC

Chrales Dietz, R.A., Dietz Partnership

Louis March, Jr., March Associates, Inc.

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