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ENGINEER'S REVIEW #3

To: Kathy Lenahan, Land Use Administrator
From: Carl P. O'Brien, P.E., Township Engineer
Date: October 2, 2020
Re: Application ZBA-19-020
49 South Avenue West
Block 473, Lot 1
Minor Site Plan with C2 Variance
MC Project No. CDZ284B

Maser Consulting has reviewed the application prepared by NATC Donuts, Inc (Anthony D'Amore), for the demolition of all existing features within the subject property and the construction of a restaurant with drive-through along with fencing, signage, grading, drainage, utility, landscaping and lighting improvements. For ease of refence our updated comments are in **bold** lettering.

The following documents have been submitted by the Applicant in support of this application:

- **Supplemental Traffic Assessment, prepared by Dynamic Engineering, 1904 Main Street, Lake Como, NJ 07719 / 245 Main Street, Suite #110, Chester, NJ 07930, signed and sealed by Nick Verderese, PE and Kevin Savage, PE, dated September 21, 2020;**
- Architectural Plans, consisting of three (3) sheets, titled "Dunkin', 49 South Ave. West, Cranford, NJ," prepared by Frank Truilo Architect LLC, 8 Martin Place, Chatham, NJ 07928, signed by Frank Truilo, dated November 19, 2018, Township of Cranford Planning & Zoning Office dated 6/29/2020;
- Site Plan, consisting of ~~sixteen (16)~~ **seventeen (17)** sheets, titled "Preliminary and Final Minor Site Plan for NATC Donuts, Inc, Proposed Dunkin Drive-Thru Restaurant, Block 473, Lot 1; Tax Map Sheet #103 – Latest Rev. Dated 12-27-99, 49 South Avenue West (CR 610), Township of Cranford, Union County, New Jersey," prepared by Dynamic Engineering Consultants, P.C., 1904 Main Street, Lake Como, NJ 07719, signed and sealed by James E. Henry, P.E., dated November 14, 2019 **revised 9/14/2020;**



- Survey, consisting of one (1) sheet, titled “Boundary Survey w/ Topography, Tax Lot 1, Block-473, 49 South Avenue West, Township of Cranford, Union County, New Jersey,” prepared by DPK Consultants, 147 Union Avenue, Suite 1C, Middlesex, NJ 08846, signed by James J. Heiser, dated October 11, 2018, and revised November 30, 2018;
- Traffic Impact Study for Iselin Realty LLC, Proposed Fueling Station & Restaurant w/ Drive-Thru, prepared by Dynamic Engineering, 1904 Main Street, Lake Como, NJ 07719 245 Main Street, Suite #110, Chester, NJ 07930, signed and sealed by Nick Verderese, PE and Justin P. Taylor, PE, dated November 26, 2018, last revised **June 29, 2020**;
- Drainage Statement for NATC Donuts, Inc, Proposed Dunkin Drive-Thru Restaurant, prepared by Dynamic Engineering, 1904 Main Street, Lake Como, NJ 07719, signed and sealed by James E. Henry, PE, dated November 2019, **last revised June 2020**;
- Cranford Board Application.

The site is located within the ORC District (Office Residential Character District) in the Township of Cranford. The property is located at the intersection of South Avenue West and Lincoln Avenue West. The lot is currently improved with a single-story brick structure with two (2) auto repair garages. The property previously served as a gas station. The property featured two (2) ingress and egress locations along South Avenue West and Lincoln Avenue West. The Applicant is proposing to raze all existing improvements to the site.

The Applicant is seeking preliminary and final site plan approval, a C(1) ‘Hardship’ variance , a C(2) ‘flexible variance’, and a D1 ‘use variance’, for the proposed construction and use of the site. The Applicant is proposing to construct a ~~2,189~~ **1,423** SF Dunkin restaurant building with drive-through. The Applicant is also proposing improvements including parking, lighting, driveways, landscaping, and signage.

The property is located in the Zone X (Area of minimal flood hazard) as shown on the Flood Insurance Rate Map (FIRM) for the Township of Cranford, dated September 2006. According to Geoweb, it does not appear the site is encumbered with any regulated areas by NJDEP.

Based on our review of the submitted documents, we offer the following comments.

A. General:

Cover Sheet, (Sheet 1 of 17):

1. The Area Map is missing the tax map information from the adjacent tax map sheets.
Comment Satisfied.



Aerial Map (Sheet 2 of 17):

2. No Comment.

Demolition Plan (Sheet 3 of 17):

3. There are nine (9) active monitoring wells located on the property. The Applicant is proposing to relocate an existing monitoring well located near the southern entrance/egress location on Lincoln Avenue West. The Applicant shall provide information regarding the need for any NJDEP permit or requirements for the site. **The Applicant has indicated they will obtain the necessary NJDEP permits and will provide copies of the permits to the board. Comment Satisfied.**

Site Plan (Sheet 4 of 17):

4. The Applicant is showing a decorative wall located at the intersection of Lincoln Avenue and South Avenue. The wall is located within the right-of-way and is also located on the subject property. The Applicant shall provide additional information regarding the ownership and maintenance of the decorative wall. **The Applicant has relocated the wall to be located wholly on the subject property. Comment Satisfied.**
5. It appears that any vehicle making the right turn into the Dunkin Donuts from Lincoln Avenue West will need to perform close to a 180-degree turn to get into the drive through lane and may block the other drive through lane. The Applicant shall provide information regarding the potential vehicle queuing extending onto Lincoln Avenue, if this occurs. **The Applicant has redesigned the building and drive through area. Testimony shall be provided. Comment Satisfied.**

Grading Plan (Sheet 5 of 16):

6. No Comment.

Drainage & Utility Plan (Sheet 6 of 16):

7. The Applicant is proposing to install a sanitary sewer manhole in the middle of Lincoln Avenue West. The Applicant shall ensure the work is coordinated with Cranford DPW and the police department prior to beginning work in the right-of-way. **The Applicant has indicated they will coordinate and comply with the Township. Comment Satisfied.**



8. The Applicant is required to obtain a road opening permit for any work within the Cranford right-of-way. The Applicant is proposing driveway apron, right-of-way curbing, right-of-way sidewalk, and sanitary sewer connection. A note to this effect shall be added to the plans. **The Applicant has indicated they will coordinate and comply with the Township. Comment Satisfied.**
9. The Applicant is proposing a generator to be installed in the trash and recycling area. It is unclear how the generator will be powered. The Applicant may need to apply for an NJDEP air permit if the generator is diesel powered. The Applicant will need to verify if there is adequate pressure from the gas company if it is powered by natural gas. **The Applicant has indicated the generator will be natural gas. They will coordinate with the gas company. Comment Satisfied.**
10. The Applicant will need to relocate an existing utility pole near the proposed South Avenue entrance/egress location. The Applicant shall provide approval from utility company. **The Applicant has indicated they will provide approval from the utility company once it has been obtained. Comment Satisfied.**
11. The Applicant is proposing to relocate a bus stop bench belonging to New Jersey Transit. The Applicant shall provide approval from NJ Transit. **The Applicant has indicated they are working with NJ Transit. Approval will be provided. Comment Satisfied.**

Landscape Plan (Sheet 7 of 17):

12. No Comment.

Lighting Plan (Sheet 8 of 17):

13. The Applicant shall revise the plan to eliminate the light spillage onto adjacent lot #2. **Comment Satisfied.**

Soil Erosion & Sediment Control Plan (Sheet 9 of 17):

14. No Comment.

Construction Detail (Sheets 10-14 of 17):

15. The Applicant shall add the Cranford Township standard details for the right-of-way improvements. **The Applicant has addressed this comment. Comment satisfied.**



16. The Applicant shall provide a curb with a drainpipe detail for the underground stormwater management system. **The Applicant has addressed this comment. Comment satisfied.**

Vehicle Circulation Plan (Sheets 15-17 of 17):

17. The Applicant has provided a turning template for a passenger car and a single unit truck. It appears the delivery vehicles and the passenger vehicles will need to occupy a portion of the queueing lane. The single unit truck will have to perform a multi-point turn to get out of the delivery area. The Applicant shall provide testimony regarding potential impacts to the queueing areas. **The Applicant has provided the requested turning templates. Comment satisfied.**
18. The Applicant shall provide testimony regarding the proposed deliveries, and trash and recycling pickup. It appears these have the potential to create traffic circulation problems onsite. **Testimony will be provided. Comment satisfied.**

B. Stormwater Management Calculations:

The proposed development will decrease the impervious coverage of the site by approximately 840 SF, therefore, the Applicant does not need to comply with the Township stormwater management ordinance with respect to detention.

The Applicant is however, installing drainage improvements to capture the site runoff and convey it into the municipal system. The Applicant has demonstrated the post construction site will reduce the peak runoff for the 2, 10, and 100-year storm event.

Our office takes no exception to the stormwater management calculation provided.

C. Traffic Signal and Traffic Impact Study Review:

19. The Applicant's traffic engineer should provide testimony regarding the queuing at the signalized intersection of Lincoln Avenue West and South Avenue West, particularly the northbound approach of Lincoln Avenue West and the westbound approach of South Avenue West, in relation to the proximity of the exiting traffic movements from the site driveways on each street. For example, if a vehicle is exiting the site onto Lincoln Avenue West, will the queue on the northbound through/right turn lane block an existing vehicle's ability to access the northbound left turn lane? **Testimony will be provided.**
20. It is strongly recommended the daily truck deliveries for the proposed Dunkin' be made during the hours of 7PM-10PM to minimize conflict with the drive-through operation. It is recommended that all delivery vehicles enter and exit via the South Avenue West access.



The Applicant shall confirm the largest delivery vehicle that will be utilized for the site and provide a turning template. In addition, a turning template showing a fire truck circulating around the entire building should be provided for our review. **Testimony will be provided.**

21. The engineer should clarify if it is intended to utilize the by-pass lane adjacent to the drive-through lane as a queue area for drive-through vehicles. The site plan indicates four (4) additional vehicles can be accommodated within the by-pass lane. **The Applicant has removed the by-pass lane. This comment no longer applies.**
22. Based on the sight distance triangles on the plans, a sight triangle easement would be required from Block 473, Lot 2 located to the east of the project site at the South Avenue West access. **The Applicant has revised the plans to show the easement area. The Applicant shall provide a copy of the easement. Testimony will be provided.**
23. A “No Left Turn” sign should be installed on Lincoln Avenue West on the opposite side of the road from the project site to advise motorists that left turns into the Lincoln Avenue West site access are prohibited. **Comment satisfied.**
24. **Our office has reviewed the Supplemental Traffic Assessment dated September 21, 2020 prepared by Dynamic Traffic. The Supplemental Traffic Assessment was prepared to include the site traffic associated with four recently approved developments and one redevelopment plan in the adjacent borough of Garwood. Although some of the levels of service and delays have increased at the intersection of South Avenue West and Lincoln Avenue West when compared to the Traffic Impact Study dated June 29, 2020, prepared by Dynamic Traffic, the increase is due to the additional site traffic from the adjacent developments located in Garwood. The incremental difference between the No Build and Build analysis in both the June 29, 2020 Traffic Impact Study and the September 21, 2020 Supplemental Traffic Assessment is similar, showing the site traffic from the proposed Dunkin’ restaurant will not have a significant impact at the intersection of South Avenue West and Lincoln Avenue West. Both the June 29, 2020 Traffic Impact Study and the September 21, 2020 Supplemental Traffic Assessment were prepared utilizing accepted traffic engineering methodologies and standards to prepare the analysis. Accordingly, we take no exception with the findings and conclusions of the reports.**
25. **An alternate site plan has been submitted by the Applicant’s engineer. Based on our review of this plan, the site access along South Avenue West has now been shifted to the west to the location of the existing curb cut of the former service station. In**



addition, one parking space has been relocated to the east side of the site access. Our office has several concerns regarding this alternate layout:

- a. The previous site layout proposed the site access along South Avenue West at the eastern end of the lot frontage, thus maximizing the spacing distance between the site access and the signalized intersection of South Avenue West and Lincoln Avenue West. In addition, this location maximized the distance between this access and the access for the Walgreens on the opposite side of South Avenue West.**
- b. The NJ Transit bus stop would remain in its current location to the east of the site access with the alternate layout. However, when a bus is stopped, a portion of the bus will extend across the site access and block the ability for vehicles to exit the site onto South Avenue West.**
- c. The one parking space now located to the east of the site access will be in direct conflict with the drive-thru exit. Anyone parked in this space would be backing straight into the exit of the drive-through lane. This would also create an awkward turning maneuver for vehicles exiting the drive-through towards the South Avenue West exit as well as vehicles entering from South Avenue West accessing the drive-through entrance as both maneuvers would require vehicles to make a skewed 45-degree turn.**
- d. Moving the site access as shown on the alternate site plan will reduce the spacing between vehicles entering from South Avenue West and the entrance to the drive-through, thus reducing the stacking area for any overflow vehicles from the drive-through.**

Based on these reasons, it is strongly recommended that the South Avenue West site access remain as originally proposed at the eastern end of the lot frontage.

Miscellaneous:

26. The Applicant shall not direct any stormwater toward adjoining properties. The site grading and drainage should not adversely affect or burden the adjacent property owners or pose a negative impact as set forth by Subsection 351-4.



27. No changes in grading are permitted without the submission of a grading plan to the Engineering Department, for review and approval, as required by ordinance 351-4. A Professional Engineer or Professional Land Surveyor must prepare any such grading plan.
28. All the roof leaders from the proposed food store shall be connected to a stormwater management system as shown on the Plan. The Applicant shall ensure that the downspouts have cleanouts, as necessary, and that the overflow is directed away from the neighboring properties.
29. All excavated material shall be removed from the site. No material is to be stored on Township property, unless prior approval is obtained from the Township Engineer. Under no circumstances can the contractor place excavated material within Township-owned property. Any soil disturbance shall be done as set forth by Subsection 351.
30. The Applicant shall be aware of their responsibility to repair any damage to improvements within the Township right-of-way, including but not limited to, sidewalk, driveway aprons, curb, and asphalt pavement as required by Subsection 367.
31. The Applicant shall call to coordinate inspections with the Engineering Department 24-hours prior to start of construction as related to grading and drainage improvements on site.
32. The Applicant shall be aware that posting of engineering escrow for construction administration oversight, plan review, and project closeout will be required at the time building permits are issued. Please be aware that unused escrow money will be returned to the property owner upon the issuance of a Certificate of Occupancy (CO).
33. A signed and sealed "As-Built" site plan should be submitted as a requirement for this office to "sign off" on the issuance of the Certificate of Occupancy (CO). The "As-Built" should accurately show site features including grading, spot elevations, drainage, structures, etc.

If you have any questions or comments, please do not hesitate to contact our office.

CPO/tva