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**TO:** Planning Board, Plainsboro Township

**FROM:** Karl A. Pehnke, P.E.

**INFO:** Project Team

**DATE:** July 17, 2024  
Revised April 17, 2025  
Revised May 23, 2025  
Revised June 4, 2025

**RE:** **Parking Analyses**  
**Princeton Nurseries**  
**Plainsboro, NJ**  
**Langan Project No.: 130091505**

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The principals of smart growth serve to balance growth in communities by promoting development that provides a clustered mix of land uses in a compact environment. The proposed integrated mixed-use development envisioned for the Princeton Nurseries site incorporates these principals of smart growth to create a walkable, mixed-use development. Following the principals of smart growth, the integrated mixed-use neighborhood development proposed for the site includes a commercial-residential environment with the ability to leverage the benefits of shared parking. Shared parking as defined by the Urban Land Institute (ULI) is “the use of a parking space to serve two or more individual land uses without conflict or encroachment.” Further, ULI identifies that the ability to share parking results from several conditions as follows:

- “Variations in the accumulation of vehicles by hour, by day, or by season at the individual land uses, and
- Relationships among the land uses that result in visiting multiple land uses on the same auto trip.”

Shared parking design is applicable to those elements of a mixed-use project that are designed and managed as walkable environment that is supported by a general parking lot or strategically placed parking structures. Office, retail, restaurants, hotel and residential provide an optimum opportunity for shared parking design as the peak activity associated with use types differ significantly with retail typically requiring its peak parking supply on weekends and weekday evenings, office requiring a peak parking supply mid-morning and afternoon on weekdays and residential generally peaking during evening and overnight hours. The number of spaces required in a shared parking environment can be calculated utilizing the procedures documented in the Urban Land Institute (ULI) publication Shared Parking, 3<sup>rd</sup> Edition. Any part

# MEMO

Parking Analyses  
Princeton Nurseries  
Plainsboro, NJ  
Langan Project No.: 130091505  
Revised June 3, 2025- Page 2 of 5

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of the parking supply that is restricted or protected, such as a designated number of reserved spaces for residents, is not included in the shared parking pool and must be accounted for in the parking supply.

While the development plan provides sufficient parking meeting the PMUD Zoning Ordinance for individual land uses, the Princeton Nurseries plan also provides several areas where shared parking will be successful. Those areas include Block A mixed use area of residential and retail space supported by a parking deck and adjoining surface lot and street parking and Block B with building B providing a mixed use building of residential and retail space supported by a parking deck.

Block C and D are designed to meet the parking requirements as defined in the ordinance, but certainly will benefit from interaction with the adjoining residential communities and mixed-use office/ commercial areas.

The Eastern and Western residential areas are designed to provide parking in accordance with the Residential Site Improvement Standards. These residential areas are supported by a system of sidewalks that link the residents to the commercial areas and will further reduce the parking demand in the commercial areas due to walkability of patrons of the commercial establishments by residents of Princeton Nurseries.

The following analyses has been prepared of proposed parking as required by ordinance and also evaluates the commercial mixed-use areas utilizing the methodology Shared Parking, Third Edition, published by The Urban Land Institute, International Council of Shopping Centers, and National Parking Association. We note that in preparing the analyses, we have not included the added benefit of the immediately adjoining residential communities within Princeton Nurseries which have the option to walk to the commercial establishments in lieu of using a vehicle.

# MEMO

## **BLOCK A**

Blocks A is proposed to be developed with a total of 22,135 n.s.f. (which excludes common areas) of commercial retail space and 136 residential units. Building A will contain 136 residential units divided into 62 single bedroom/ studio apartments, 67 two-bedroom apartments and 7 three-bedroom apartments. Parking provided for this area includes approximately 211 garage parking spaces 102 surface lot and 65 adjoining on-street parking spaces for a total of 377 parking spaces supporting building A. The 211 parking spaces within the parking garage will be controlled and will be accessible for residents of the building and employees of the commercial tenants.

Use	Parking Required by Ordinance 101-143	Parking Required
Retail 22,135 n.s.f. (Up to 30% restaurant)	5.5 per 1,000 sf of gross floor area	122
62 one- bedroom units, 67 two-bedroom units, 7 three- bedroom units	1.8 per one-bedroom; 2.0 per two-bedroom; 2.1 per three-bedroom	261
Total Required Per Ordinance	(10% EV Adjustment)	<b>383 (345)</b>
<b>Required Per Shared Parking per 101-143 D. (4)</b>		<b>358 (211 reserved; 147 shared)</b>
<b>Provided</b>	<b>211 In Building A Garage 102 In Building A Surface Lot 65 On-Street</b>	<b>378(211 reserved; 167 shared)</b>

The total parking provided exceeds the parking spaces required by ordinance for the individual uses. In addition, per 101-143 D. (4) the applicant can provide alternative parking supply subject to demonstrating to the satisfaction of the Planning Board using a shared parking analyses that an adequate amount of parking will be provided on the site for all proposed uses. The methodology used by the applicant to calculate the number of parking spaces may consider the methods recommended in "Shared Parking," published by the Urban Land Institute, or other recognized standards acceptable to the Planning Board.

Accordingly, Langan has calculated the number of spaces required in a shared parking environment utilizing the procedures documented in the Urban Land Institute (ULI) publication Shared Parking, 3<sup>rd</sup> Edition. Based on Shared Parking the mix of residential, retail, and restaurant space would require a parking supply of 358 parking spaces to accommodate peak demands projected during weekend periods in December while 378 are provided (211 residential/ employee spaces in the Building A Parking Garage, 167 surface lot/ on-street parking spaces shared). The shared parking analyses affirms the EV adjusted parking supply requirement and affirms that adequate parking will be provided. We also note that many of the patrons of the retail area are likely to be drawn from the surrounding residents that can walk to the restaurant, further reducing the actual parking demand that will be experienced.

# MEMO

## **BLOCK B**

Blocks B is proposed to be developed with a total of 26,485 n.s.f. (which excludes common areas) of commercial retail space and 198 residential units. Building B contains 198 residential units divided into 87 single bedroom/ studio apartments, 97 two-bedroom apartments and 14 three- bedroom apartments. Parking provided for this area includes 272 garage spaces, 103 surface lot for building B, and adjoining 102 on-street parking spaces for a total of 477 parking spaces supporting Building B. The 272 parking spaces within the parking garage will be controlled and will be accessible for residents of the building and employees of the commercial tenants.

Use	Parking Required by Ordinance 101-143	Parking Required
Retail 26,485 n.s.f. (Up to 30% restaurant)	5.5 per 1,000 sf of gross floor area	146
87 one- bedroom units, 97 two-bedroom units, 14 three- bedroom units	1.8 per one-bedroom; 2.0 per two-bedroom; 2.1 per three-bedroom	380
<b>Total Required</b>	(10% EV Adjustment)	<b>526 (474)</b>
<b><i>Required Per Shared Parking per 101-143 D. (4)</i></b>		<b><i>449 (272 reserved; 177 shared)</i></b>
<b>Provided</b>	<b>272 In Building B Garage 103 In B Surface Lot 102 On Street</b>	<b>477 (272 reserved; 205 shared)</b>

The total parking provided meets the sum of the parking spaces required by ordinance for the individual uses. In addition, per 101-143 D. (4) the applicant can provide alternative parking supply subject to demonstrating to the satisfaction of the Planning Board using a shared parking analyses that an adequate amount of parking will be provided on the site for all proposed uses. The methodology used by the applicant to calculate the number of parking spaces may take into account the methods recommended in "Shared Parking," published by the Urban Land Institute, or other recognized standards acceptable to the Planning Board.

Accordingly, Langan has calculated the number of spaces required in a shared parking environment utilizing the procedures documented in the Urban Land Institute (ULI) publication Shared Parking, 3<sup>rd</sup> Edition. Based on Shared Parking, 3<sup>rd</sup> Edition methodology and recommended parking the mix of residential, retail and restaurant uses will require a parking supply of 449 parking spaces to accommodate peak demands projected during weekend periods in December while 477 are provided (272 residential and employee in Building B garage, 103 Building B parking lot, 102 On-Street).

The proposed parking supply meets the ordinance required supply and further, based on the shared parking analyses, more than adequate parking spaces will be available to support the residential and commercial uses located within Block B. We also note that many of the patrons of the retail area are likely to be drawn from the surrounding residents that can walk to the restaurant, further reducing the actual parking demand that will be experienced.

# MEMO

## **BLOCK C**

Block C provides a defined area of parking and adjoining hotel and restaurant space that share into the parking field and adjoining street parking. Block C is supported by 190 parking spaces in the parking field and 23 parking spaces on the adjacent street. Block C will be developed with a 125-room hotel and a 264-seat restaurant.

Use	Parking Required by Ordinance 101-143	Parking Required
Hotel, 125 Rooms	1 per guest unit	125
Restaurant, 264 seats	1 per 3 seats	88
Total Required per 101-143	(10% EV Adjustment)	<b>213 (192)</b>
<b>Provided</b>	<b>190 In Parking Lot 23 On Street</b>	<b>213</b>

The total parking provided is 213 parking spaces.

Adequate parking is provided within Block C. The parking for Block C meets and exceeds the township ordinance requirement. We also note that many of the patrons of the restaurant are likely to be drawn from the surrounding residents that can walk to the restaurant, reducing the actual parking demand that will be experienced.

## **BLOCK D**

Block D provides a defined area of parking and adjoining commercial uses that can share into the supporting parking fields and street parking. Buildings D 1 thru D3 are supported by 591 parking spaces and will be developed with three buildings providing 69,240 s.f. of retail space (inclusive of a 30,000 s.f. Grocer) and 80,080 s.f of office space.

Use	Parking Required by Ordinance 101-143	Parking Required
Office 80,080 s.f.	1 per 400 sf of gross floor area	201
Retail 39,240 s.f.	5.5 per 1,000 sf of gross floor area	216
Grocer 30,000 s.f.	5.5 per 1,000 sf of gross floor area	165
Total Required	(10% EV Adjustment)	<b>582 (524)</b>
<b>Provided</b>	<b>565 In Parking Lot 26 On Street</b>	<b>591</b>

Block D is supported by 565 parking spaces in the parking field. In addition, along Nursery Road and Road D there are an additional 26 on-street parking spaces providing a total supply of 591 parking spaces for Block D.

The parking for Block D meets and exceeds the township ordinance requirement for required parking supply. We also note that many of the patrons of the retail are likely to be drawn from the surrounding residents that can walk, reducing the actual parking demand that will be experienced.



Project:

Princeton Nurseries

Description:

Block B,199 Residential Units; 18,539nsf retail; 7,946 nsf restaurant

Shared Parking Demand Summary																				
Peak Month: DECEMBER -- Peak Period: 12 PM, WEEKEND																				
Land Use	Project Data		Weekday			Weekend			Weekday			Weekend								
			Base Ratio	Driving Adj	Non-Captive Ratio	Project Ratio	Unit For Ratio	Base Ratio	Driving Adj	Non-Captive Ratio	Project Ratio	Unit For Ratio								
	Quantity	Unit										Peak Hr Adj 1 PM	Peak Mo Adj December	Peak Hr Adj 12 PM	Peak Mo Adj December	Estimated Parking Demand	Estimated Parking Demand			
Retail																				
Retail (<400 ksf)	18,539	sf GLA	2.90	100%	99%	2.86	ksf GLA	3.20	100%	98%	3.14	ksf GLA	100%	100%	100%	53	100%	100%	59	
Employee			0.70	100%	98%	0.69		0.80	100%	97%	0.78		100%	100%	100%	13	100%	100%	15	
Food and Beverage																				
Fast Casual/Fast Food	7,946	sf GLA	12.40	100%	86%	10.69	ksf GLA	12.70	100%	82%	10.41	ksf GLA	100%	96%	100%	82	100%	96%	80	
Employee			2.00	100%	98%	1.96		2.00	100%	97%	1.94		100%	100%	100%	16	100%	100%	16	
Entertainment and Institutions																				
Hotel and Residential																				
Residential, Suburban	87	units	0.00	100%	100%	0.00	unit	0.00	100%	100%	0.00	unit	40%	100%	100%	-	68%	100%	-	
		units	0.00	100%	100%	0.00	unit	0.00	100%	100%	0.00	unit	40%	100%	100%	-	68%	100%	1	
		units	0.01	100%	100%	0.01	unit	0.01	unit	0.01	100%	100%	0.01	unit	40%	100%	-	68%	100%	1
		units	0.01	100%	100%	0.01	unit	0.01	unit	0.01	100%	100%	0.01	unit	40%	100%	-	68%	100%	1
		res spaces	1.37	100%	100%	1.37	unit	1.37	unit	1.37	100%	100%	1.37	unit	100%	100%	272	100%	100%	272
		units	0.10	100%	100%	0.10	unit	0.15	unit	0.15	100%	100%	0.15	unit	20%	100%	4	20%	100%	6
Office																				
Additional Land Uses																				
Customer/Visitor													139	Customer	144					
Employee/Resident													30	Employee/Resident	32					
Reserved													272	Reserved	272					
Total													441	Total	449					