



181 WEST HIGH STREET
SOMERVILLE, NJ 08876

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TRAFFIC IMPACT STATEMENT
FOR
DAVIDSON PROPERTIES, LLC

PROPOSED WAREHOUSE

BLOCK 468.01, LOT 20.01
230 DAVIDSON AVENUE
FRANKLIN TOWNSHIP
SOMERSET COUNTY, NEW JERSEY

JANUARY 17, 2023

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INTRODUCTION

Dolan & Dean Consulting Engineers, LLC (D&D) has prepared this Traffic Impact Statement to support the application for a proposed warehouse along Davidson Avenue in Franklin Township, Somerset County. The site is designated as Lot 20.01, Block 468.01 and is occupied by a building comprised of office and manufacturing space. A new 37,460 square foot warehouse is proposed behind the existing structures and a new driveway is proposed on Atrium Drive.

While the new warehouse will result in traffic changes, both the volume and characteristics of that traffic are of important consideration in the evaluation of this application. D&D has been commissioned by the applicant to prepare this study for the proposed warehouse. Accordingly, this analysis includes the following:

- A review of the existing roadway conditions within the site vicinity
- A projection of traffic volumes that could be generated by the warehouse, and trip generation comparison with the existing uses on site
- A site plan review focusing on the access design, interior circulation, and parking supply



EXISTING CONDITIONS

The subject property is designated Block 468.01, Lot 20.01, with frontage along Davidson Avenue and Atrium Drive. The site is currently occupied by a building containing 8,258 square feet of office space and 9,425 square feet of light manufacturing space, served by one driveway on Davidson Avenue. A 3,500 square foot ministry currently occupies the rear of the building within the manufacturing area.

EXISTING ROADWAY CONDITIONS

Davidson Avenue has a general northeast-southwest orientation between Easton Avenue and New Brunswick Road. Along the site frontage, the speed limit is 45 miles per hour and one lane is provided for each direction of travel.

Atrium Drive is a private roadway between Davidson Avenue and Pierce Street. The posted speed limit is 25 miles per hour and, although unstriped, one travel lane per direction is provided. The Atrium Drive approach to Davidson Avenue and Pierce Street is controlled by a STOP sign. The approach to Davidson Avenue provides separate right-turn and left-turn lanes. Atrium Drive provides access to Atrium Corporate Park and DoubleTree hotel.



TRIP GENERATION

The potential traffic generation from any use is directly related to the type, size, and characteristic of the use itself. Lacking specific site operational data, trip generation projections are customarily made using estimates compiled by the Institute of Transportation Engineers (ITE) in the Trip Generation Manual, 11th Edition, for uses that closely resemble the anticipated operation. For existing and proposed uses, the following ITE Land Use Categories were referenced to develop the trip estimates for existing and proposed uses:

- 712 – Small Office Building
- 140 – Manufacturing
- 150 – Warehousing

The ministry generates little activity during the week, with approximately 20 attendees on Thursdays between 12:00 and 1:00 p.m. One Friday per month, approximately 20 attendees visit the site at various times. Peak activity occurs on Sundays between 9:00 a.m. and 12:00 p.m., with a maximum of 115 attendees. Given the limited weekday peak hour activity experienced, the ministry building area was conservatively calculated as manufacturing space for traffic projection purposes.

Table I summarizes the weekday peak hour trip estimates for existing and proposed uses.

TABLE I
ITE TRIP GENERATION

LAND USE	MORNING PEAK HOUR			EVENING PEAK HOUR		
	ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL
EXISTING 8,258 SF OFFICE	11	3	14	6	12	18
EXISTING 9,425 SF MANUFACTURING	12	3	15	2	5	7
TOTAL EXISTING	23	6	29	8	17	25
PROPOSED 37,460 SF WAREHOUSE	22	6	28	9	22	31



The new warehouse building results in one additional movement approximately every two minutes which is considered insignificant, from a traffic engineering perspective.

Traffic impact studies are typically performed for new uses that generate 100 or more trips in an hour, based on the ITE Manual of Transportation Engineering Studies and as required by the NJDOT State Highway Access Management Code. This level of peak traffic may have impacts to offsite intersections. The trip generation associated with the proposed 37,460 square-foot warehouse will result in a negligible impact to the adjacent roadway network, as the proposal will generate less than half of the traffic level that is considered significant by NJDOT and the ITE.

Therefore, it is anticipated that the proposed warehouse will have minimal, if any, impact to the surrounding roads.



ACCESS & PARKING REVIEW

Access to the property will be provided via the existing driveway on Davidson Avenue and a new driveway on Atrium Drive. The Davidson Avenue driveway will be redesigned with larger radii to accommodate tractor trailers. The outbound radius at Atrium Drive has also been designed for tractor trailers. ITE data indicates that 3% of peak hour and 20% of daily warehouse trips are comprised of trucks.

Islands are proposed within the existing parking lot to control and channelize movements, particularly adjacent to the Davison Avenue driveway.

Parking requirements for the site uses has been calculated based on the ordinance. The existing 8,258 square feet of office space, and 9,425 square feet of manufacturing space require a total of 53 parking spaces, whereas 53 spaces exist on-site. Further, the ordinance requires one parking stall per 1,000 square feet of warehouse space up to 5,000 square feet, and one space per every 2,500 square feet, thereafter, equating to a requirement of 17 parking stalls for the proposed warehouse.

Therefore, 70 parking spaces are required on-site, whereas 73 standard parking spaces are proposed. In addition, 29 trailer parking spaces are proposed in the rear of the site near the Atrium Drive access. As such, the proposed parking supply will satisfy the ordinance parking requirement.

Lastly, Reference is made to the 5th Edition of the Parking Generation Manual by the Institute of Transportation Engineers (ITE) which indicates that weekend parking demands at offices are 12% of the weekday demand. Therefore, a demand of 8 to 9 spaces might be needed for the office, manufacturing, and warehousing space on Sunday while the ministry



holds its congregation. As noted, peak attendance for the ministry is 115 attendees on Sundays. At 1 space per 3 attendees, 39 spaces would be needed for the ministry, leaving 34 spaces for the office/manufacturing space. It is therefore anticipated that sufficient parking will be available for all site uses on the weekend as well.

