



181 WEST HIGH STREET
SOMERVILLE, NJ 08876

908 927 0100 p
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TRAFFIC AND PARKING STUDY FOR

102.5-166 AVENUE E

PROPOSED RESIDENTIAL BUILDING

BLOCK 467, LOTS 10-14
CITY OF BAYONNE
HUDSON COUNTY, NEW JERSEY

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ELIZABETH DOLAN, P.E.
NJ LICENSE NO. 37071



GARY W. DEAN, P.E., P.P.
NJ LICENSE NO. 33722

INTRODUCTION

This Traffic & Parking Study has been prepared to support the local site plan application for a residential building proposed on Block 467, Lots 10-14 in the City of Bayonne, Hudson County, NJ. The site is currently occupied by a multifamily residential building and a tires center. The proposal includes removal of all existing structures and construction a multifamily residential building with 105 residential units (87 1-bedroom/studio units and 18 2-bedroom units). Access is proposed via two full-movement driveways along Avenue E that lead into parking garages on the ground level of the building.

While any redevelopment could affect traffic conditions at the site or at off-tract locations, both the volume and characteristics of the new traffic are an important consideration in evaluating the projected impacts on the surrounding area. Dolan & Dean Consulting Engineers, LLC (D&D) has been commissioned by the applicant to prepare this Traffic & Parking Study for the proposed residential building. Accordingly, this analysis includes the following information:

- A review of the existing roadway and traffic conditions in the site vicinity including roadway configuration, traffic volumes and operations during morning and evening peak hour periods, roadway capacities and surrounding land uses.
- A projection of future traffic volumes based on the type and size of the proposed use.
- A review of the Site Plan focusing on access, parking supply and circulation.



EXISTING CONDITIONS

The subject property is designated as Block 467, Lots 10-14, and is also known as 102.5-116 Avenue E. The site is developed with a multifamily residential building and a tire center.

Avenue E is designated as an Urban Minor Arterial under municipal jurisdiction with a north-south orientation. One lane is provided per travel direction with a non-posted assumed statutory speed limit of 25 miles per hour. Parking is provided along both sides of the roadway along in the unless otherwise posted, and sidewalk is provided along both sides of the roadway.

Sisson Court is a local one-way roadway under municipal jurisdiction. The roadway operates in the eastbound direction with one lane. There is a non-posted assumed statutory speed limit of 25 miles per hour. Parking is provided along the north side of the roadway unless otherwise posted and sidewalk is provided along both sides of the roadway.

East 15th Street is a local one-way roadway under municipal jurisdiction. The roadway operates in the eastbound direction with one lane. There is a non-posted assumed statutory speed limit of 25 miles per hour. Parking is provided along both sides of the roadway unless otherwise posted and sidewalk is provided along both sides of the roadway.

East 16th Street is a local one-way roadway under municipal jurisdiction. The roadway operates in the westbound direction with one lane. There is a non-posted assumed statutory speed limit of 25 miles per hour. Parking is provided along both sides of the roadway unless otherwise posted and sidewalk is provided along both sides of the roadway.

Avenue E intersects Sisson Court and E. 15th Street to form two three-leg unsignalized intersections. The eastbound approaches of Sisson Court and E. 15th Street are controlled with a STOP sign. Crosswalks are provided across Sisson Court and E. 15th Street.



The 22nd Street Light Rail Station is located 0.3 miles to the north of the site.



TRAFFIC CHARACTERISTICS OF THE PROPOSED DEVELOPMENT

Data compiled by the Institute of Transportation Engineers (ITE) was used to estimate trip generation for the new development. Based on a review of the 12th Edition of the ITE Trip Generation Manual, Land Use Code 221: “Multi-family Housing (Mid-Rise)” is applicable for the proposed development. Table I provides the trip generation projections for the proposed development.

TABLE I
PROJECTED TRIP GENERATION
PROPOSED 105-UNIT RESIDENTIAL BUILDING

MORNING PEAK HOUR			EVENING PEAK HOUR			24-HOUR DAILY		
ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL
8	28	36	26	15	41	230	230	460

As shown, future traffic volumes generated by the residential will be minimal. The ITE Manual of Transportation Engineering Studies recommends traffic impact studies be performed for developments that will generate 100 or more peak hour trips. Site traffic falls below this threshold, and as a result, will not create a negative traffic impact on the adjacent roadway network.

The above estimates take no credit for the site’s urban setting, walkability, or proximity to the light rail station. When ITE rates for urban/close to rail are used, 26 vehicle trips are calculated for both morning and evening peak hours. Use of the volumes in Table I therefore provides a more conservative estimate of future volumes.



SITE ACCESS, CIRCULATION, AND PARKING

An evaluation was conducted on the site plan prepared by Chisvette Engineering. The following comments address access and parking as shown on the Site Plan:

- ▶ Access is proposed via two full-movement driveways along Avenue E which lead to ground level garages.
- ▶ The Ordinance requires 1 parking space per 1-bedroom/studio apartment and 1.25 spaces per 2-bedroom apartment. This equates to a parking requirement of 110 parking spaces for the 87 1-bedroom/studio units and 18 2-bedroom units.
- ▶ The proposal provides 110 parking spaces of which 107 will be stacked spaces and 3 will be handicap spaces.
- ▶ The parking spaces will be served by 23 feet wide drive aisles, to allow for safe and efficient circulation.

Based on this traffic engineering evaluation, the proposed mixed-use development will have no material impact on traffic conditions or intersection/roadway operations in the site vicinity. The site provides the required parking for residents and visitors. The site access will provide safe and efficient ingress and egress for the limited site traffic that is expected.



CONCLUSION

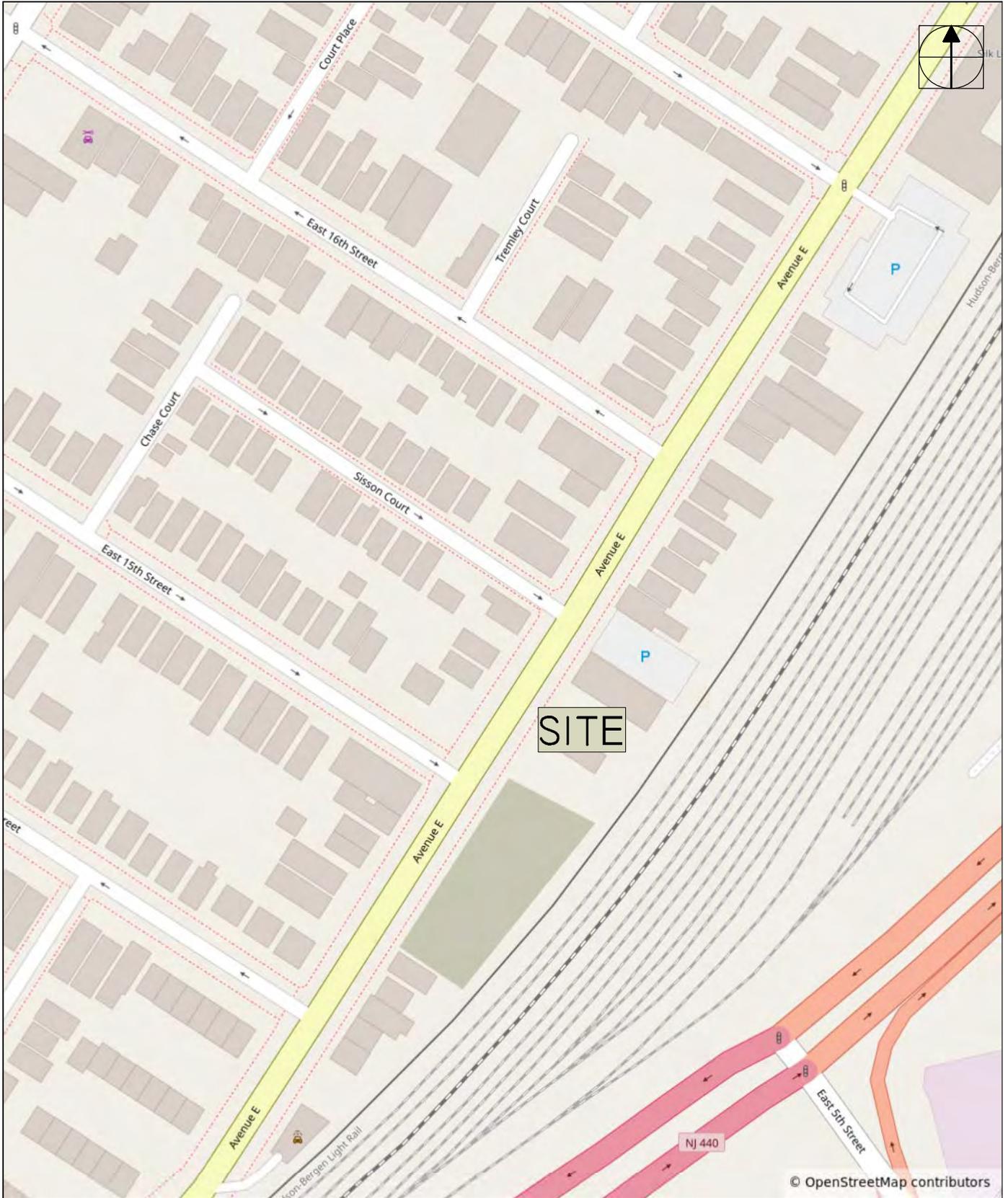
In summary, it is evident from this analysis of projected future traffic conditions, that the proposed residential development will generate minimal traffic increases, which will not create a negative impact on the local roadway network.

With the anticipated traffic generation, adequate roadway capacity will continue to exist to accommodate future site traffic and there will be no changes in the level of service. All movements to and from the site will operate safely and efficiently with reasonable and prudent driver behavior.

Based on these findings, it is concluded that the site is particularly well suited for the proposed development. Such an operation will not negatively impact the traffic in the surrounding area or along the adjacent streets as adequate roadway capacity exists to accommodate the increases. The traffic characteristics of the uses will be consistently minimal and will not result in any additional off tract congestion or unfavorable conditions.



TECHNICAL APPENDIX



102.5-116 AVENUE E
 CITY OF BAYONNE
 HUDSON COUNTY, NEW JERSEY

FIGURE I



Multifamily Housing (Mid-Rise) Not Close to Rail Transit (221)

Vehicle Trip Ends vs: Dwelling Units
 On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 7 and 9 a.m.

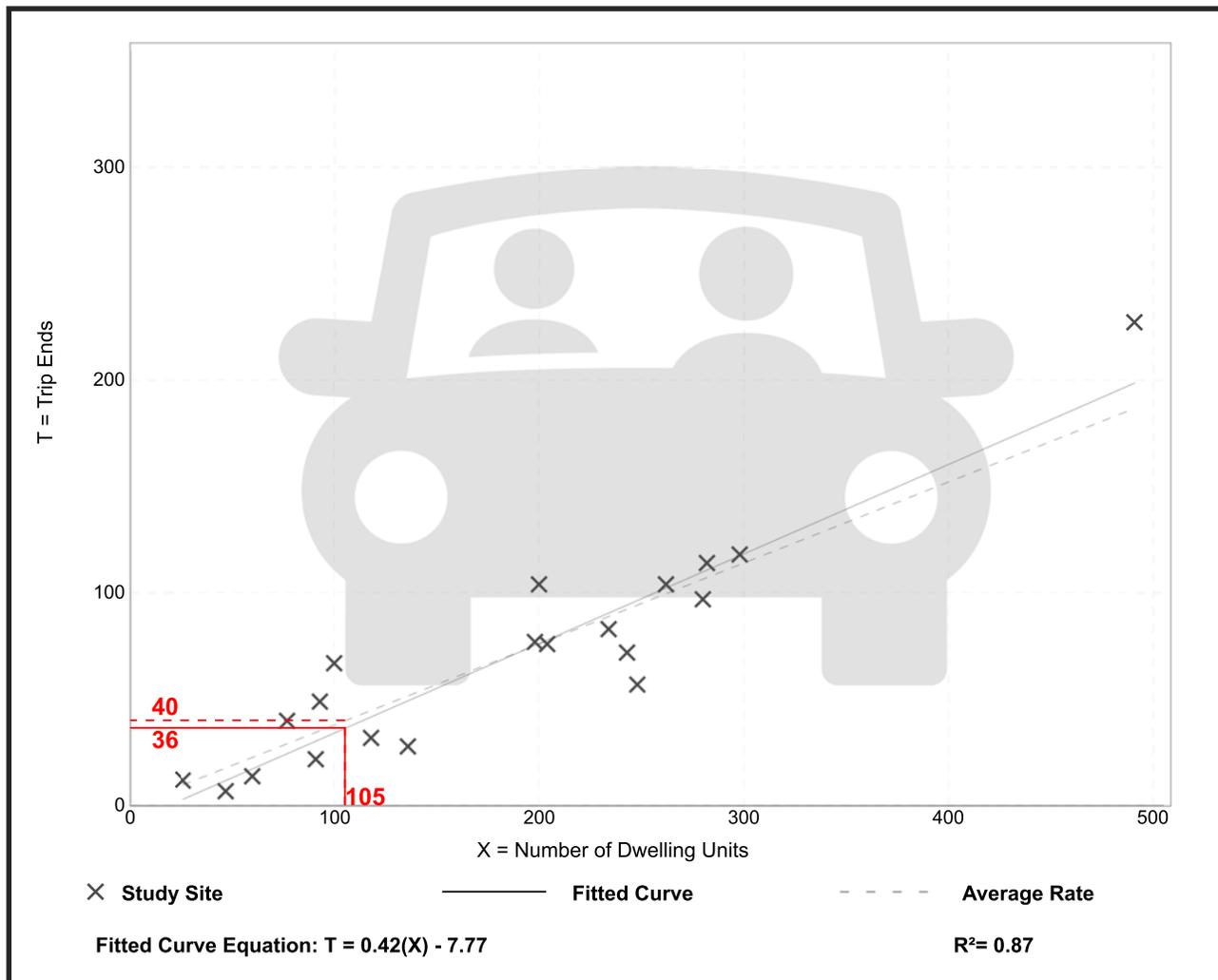
Setting/Location: General Urban/Suburban

Number of Studies: 20
 Avg. Num. of Dwelling Units: 184
 Directional Distribution: 23% entering, 77% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.38	0.15 - 0.67	0.10

Data Plot and Equation



Multifamily Housing (Mid-Rise) Not Close to Rail Transit (221)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 21

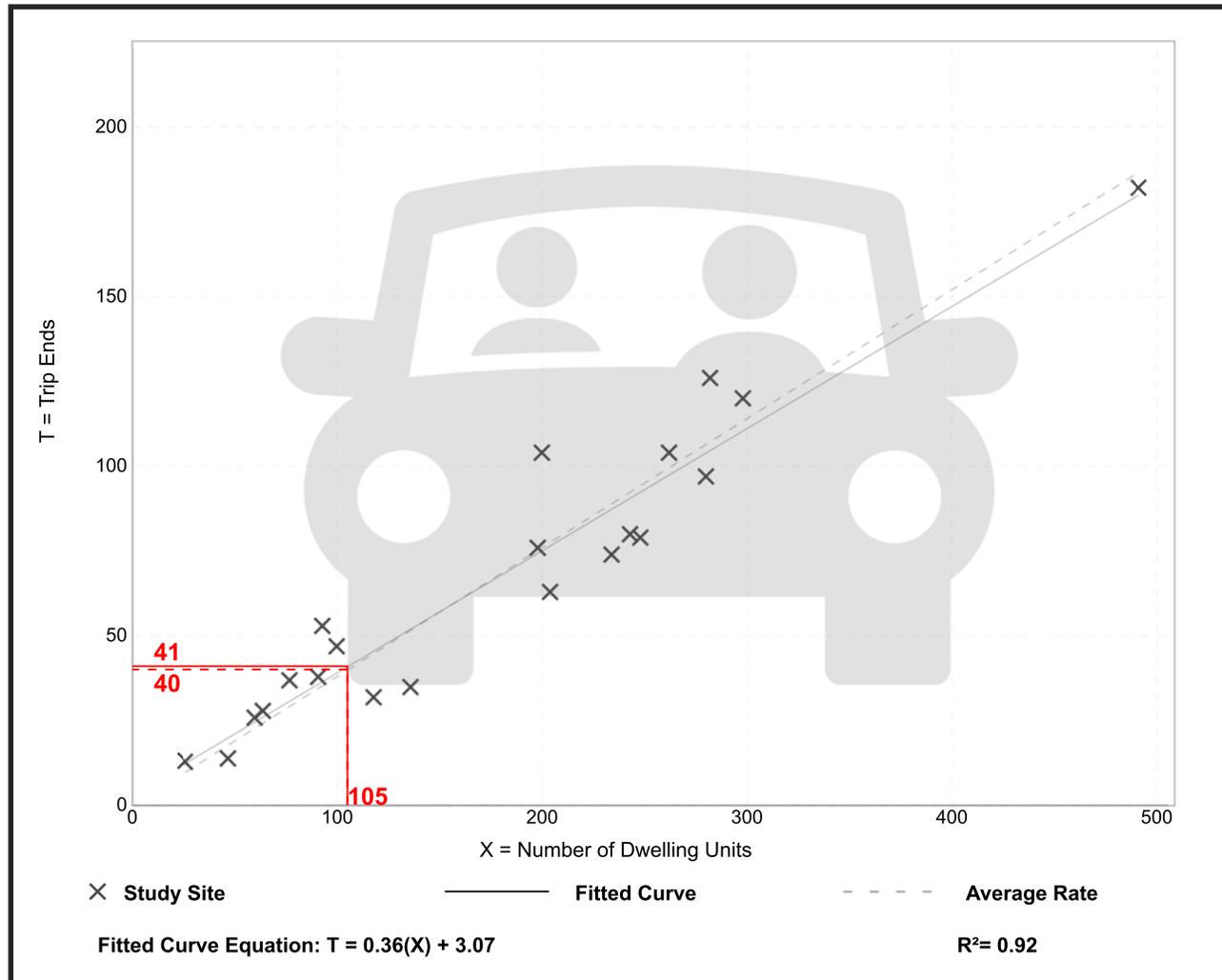
Avg. Num. of Dwelling Units: 179

Directional Distribution: 64% entering, 36% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.38	0.26 - 0.57	0.07

Data Plot and Equation



Multifamily Housing (Mid-Rise) Not Close to Rail Transit (221)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 7
Avg. Num. of Dwelling Units: 192
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
4.46	3.76 - 5.40	0.62

Data Plot and Equation

