# MEMORANDUM


**TO:** 592 Washington Street LLC
c/o Mr. Dean Behrend
Wellesley Realty Associates
869 Worcester St
Wellesley Hills, MA 02481

**FROM:** Mr. Jeffrey S. Dirk, P.E.*, PTOE, FITE
Managing Partner
Vanasse & Associates, Inc.
35 New England Business Center Drive
Suite 140
Andover, MA 01810-1066
(978) 269-6830
jdirk@rdva.com
**Professional Engineer in CT, MA, ME, NH, RI and VA*


**DATE:** November 24, 2025

**RE:** 10509

**SUBJECT:** Transportation Impact Evaluation
Proposed Multifamily Residential Development - 592 Washington Street (Route 16)
Wellesley, Massachusetts

---

Vanasse & Associates, Inc. (VAI) has prepared a Transportation Impact Evaluation (TIE) in order to determine the traffic characteristics and potential impacts on the transportation infrastructure associated with the proposed construction of a multifamily residential development to be located at 592 Washington Street (Route 16) in Wellesley, Massachusetts (hereafter referred to as the "Project"). This evaluation has been completed in advance of a formal Transportation Impact Assessment and: i) reviews the existing conditions of the transportation infrastructure serving the Project site; ii) defines the potential increase in traffic that the current project may represent; and iii) evaluates lines of sight at the Project site driveway intersection with Washington Street.

Based on this evaluation, we have concluded the following with respect to the Project:

- Using trip-generation statistics published by the Institute of Transportation Engineers (ITE)[1] and without adjustment to account for the use of alternative modes of transportation to Single-Occupant Vehicles (SOVs), the Project is expected to generate approximately 228 vehicle trips on an average weekday, with 20 vehicle trips expected during the weekday morning peak-hour and 16 vehicle trips expected during the weekday evening peak hour;

- The increase in peak-hour trips that is expected to be associated with the Project (one (1) additional vehicle every 3- to 4-minutes) would not be readily apparent when dispersed to the Washington Street corridor and would not result in a significant impact (increase) on motorist delays or vehicle queuing over existing conditions;

- A review of the Massachusetts Department of Transportation (MassDOT) high crash location database indicates that there are no (0) high crash locations at or in the vicinity of the Project site;

- The Project site is located within a 5-minute walking distance of Wellesley Square Sation on the Massachusetts Bay Transportation Authority (MBTA) Commuter Rail and is served by an

[1] *Trip Generation*, 12th Edition; Institute of Transportation Engineers; Washington, DC; August 2025.

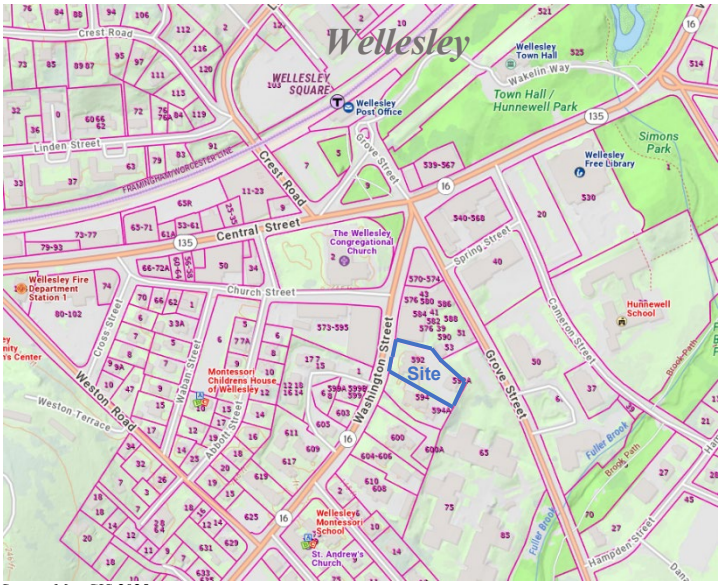
interconnected sidewalk network that connects the Project to Wellesley Square and the Commuter Rail station; and

- With consideration of the downtown within which the Project site is located, clear lines of sight are provided to the sidewalk area along Washington Steet to allow for a vehicle exiting the Project site driveway to complete an exiting maneuver in a staged process and observe approaching bicycles and motor vehicles.

In consideration of the findings above, we have concluded that the Project can be accommodated within the confines of the existing transportation infrastructure. Recommendations have been provided with regard to the access to the Project site, internal circulation and trip-reduction measures. The following details our evaluation of the Project.

## PROJECT DESCRIPTION

The Project will entail the renovation and expansion of the existing commercial building located at 592 Washington Street (Route 16) in Wellesley, Massachusetts, to accommodate 19 multifamily residential units. The Project site encompasses approximately 0.82± acres of land that is bounded by residential and commercial properties to the north; residential properties to the south and east; Washington Street to the west. The Project site is currently improved by two (2) commercial buildings with associated parking areas and appurtenances. The building that fronts along Washington Street will be renovated and expanded to the east and the existing building in the eastern portion of the Project site will be removed to accommodate the Project.



Source: MassGIS 2025.

Access to the Project will continue to be provided by way of the existing full access driveway that intersects the east side of Washington Street approximately 120 feet south of Church Street.

On-site parking will be provided for 36 vehicles in a parking garage located beneath the residential units, or a parking ratio of 1.89 parking spaces per unit. In addition, weather protected bicycle parking will be provided for 14 bicycles within the parking garage.

The Project site is located within the *Wellesley Square Commercial District*, within which multifamily residential uses are allowed and the parking requirements are defined in Section 5.17, Off-Street Parking, of the Wellesley Zoning Bylaw. For an "apartment building or group of buildings containing three or more dwelling units", the Zoning Bylaw requires that one (1) parking space per unit be provided, which would require 19 parking spaces for the Project. Given that 36 parking spaces will be provided to support the Project, the parking supply exceeds the requirements of the Zoning Bylaw for the proposed use. In addition, the parking ratio that is proposed (1.89 parking spaces per unit) also exceeds the number of parking spaces that are necessary to accommodate the peak parking demands for a multifamily residential developed in a similar setting as documented by the Institute of Transportation Engineers (ITE).[2]

## EXISTING CONDITIONS CONTEXT

A review of existing conditions within the study area was undertaken using available information in order to establish the context of the Project site with respect to the existing transportation infrastructure. The review included existing roadway geometrics; pedestrian and bicycle facilities; and public transportation services; as well as posted speed limits and land use information for the roadways in the vicinity of the Project site. The following provides a description of the transportation infrastructure serving the Project site.

### Roadways

#### *Washington Street (Route 16)*

Washington Street is a two lane urban principal arterial roadway under Town jurisdiction that traverses a general northeast-southwest alignment. In the vicinity of the Project site, Washington Street provides two 13± foot wide travel lanes separated by a double-yellow centerline with marked on-street parking provided along both sides of the roadway in the vicinity of the Project site. A posted speed limit is not provided and, as such, the statutory or "prima facie' speed limit pursuant to M.G.L. c. 90 § 17 is 30 miles per hour (mph).[3] Cement concrete sidewalks are provided along both sides of Washington Street in the vicinity of the Project site that include brick accent strips to the north and were observed to be in generally good condition. Illumination is provided by way of street lights mounted on ornamental steel poles. Land use in the vicinity of the Project site consists of residential and commercial properties.

### Pedestrian and Bicycle Facilities

Sidewalks are generally provided along one or both sides of the study area roadways, with marked crosswalks provided for crossing one or more legs of the study area intersections and the crossings at the Washington Street/Central Street/Grove Street intersection included as a part of the traffic signal system at the intersection (pedestrian pushbuttons, signal indications and phasing are provided for the crossings). A pedestrian actuated Rectangular Rapid Flashing Beacon (RRFB) is provided for crossing the Washington Street south leg of Washington Street/Church Street intersection.

An inventory of sidewalk conditions along Washington Street within 1,000 feet of the Project site indicates that the sidewalks are in generally good condition. Wheelchair ramps are provided for the crossings at the

---

[2] *Parking Generation*, 6th Edition; Institute of Transportation Engineers; Washington, D.C.; October 2023. The observed peak parking demand for a multifamily (low-rise) residential building not proximate to rail transit was identified to be 1.27 parking spaces per unit on average with an 85th percentile peak parking demand of 1.59 parking spaces per unit.

[3] The statutory of "prima facie" speed is defined in M.G.L Chapter 90, Section 17, as the speed which would be deemed reasonable and proper to operate a motor vehicle.

study area intersections; however, many do not include tactile matts as required under the Americans with Disabilities Act (ADA) and several crossings include apex-type ramps that serve more than one crossing, which are also not ADA compliant. The sidewalk along the Project frontage is in good condition and is flush across the driveway.

Formal bicycle lanes are not provided within the study area; however, the study area roadways generally provides sufficient width to accommodate bicycle travel in a shared traveled-way configuration (i.e., bicyclists and motor vehicles sharing the traveled-way).[4]

**Public Transportation Services**

Regularly scheduled public transportation services are not currently provided to the Project site. To the north of the Project site, the MBTA provides Commuter Rail service on the Worcester/Framingham Line between Union Station in Worcester and South Station in Boston, with a stop at Wellesley Square Sation, which is an approximate 5-minute walking distance of the Project site. In addition, the MWRTA operates the Catch Connect service within the Town of Wellesley, which is an on-demand, curb-to-curb, microtransit service. The service is booked through the MWRTA CATCH app or by phone. The MBTA also operates The Ride paratransit services for eligible persons who cannot use fixed-route transit all or some of the time due to a physical, cognitive, or mental disability in accordance with ADA requirements.

**Motor Vehicle Crash Data**

A review of the MassDOT statewide High Crash Location List indicates that there are no locations within the study area that are included on MassDOT's Highway Safety Improvement Program (HSIP) listing as a high crash cluster location. To the northwest of the study area, the Central Street/Weston Road intersection has been defined as a high crash location for the 2019-2021 reporting period and is HSIP eligible. A Road Safety Audit (RSA) has been completed for the intersection that included suggestions to enhance safety at the intersection.[5]

## PROJECT-GENERATED TRAFFIC

In order to develop the traffic characteristics of the Project, trip generation statistics published by the ITE[6] for a similar land use as that proposed was used. ITE Land Use Code 220, *Multifamily Housing (Low-Rise)*, was used to establish the base trip-generation calculations for the Project. Table 1 summarizes the trip characteristics of the Project without consideration of residents that may walk or bike to the Wellesley Square Commuter Rail Station or to a use within Wellesley Square. Consideration of such trips would reduce the overall volume of traffic produced by the Project from those shown in Table 1.

[4] A minimum combined travel lane and paved shoulder width of 14-feet is required to support bicycle travel in a shared traveled-way condition.

[5] *Road Safety Audit*, Weston Road from Linden Street to Central Street (Route 135) and Central Street (Route 135) from Weston Road to Cross Street, Town of Wellesley; Toole Design; August 8, 2023

[6] Institute of Transportation Engineer, op. cit. 1.

**Table 1**
**TRIP-GENERATION SUMMARY**

| Time Period | Vehicle Trips[a] | | |
|---|---|---|---|
| | Entering | Exiting | Total |
| *Average Weekday:* | 114 | 114 | 228 |
| *Weekday Morning Peak-Hour:* | 5 | 15 | 20 |
| *Weekday Evening Peak-Hour:* | 10 | 6 | 16 |

[a]Based on ITE LUC 220, *Multifamily Housing (Low-Rise)* (19 dwelling units).

**Project-Generated Traffic-Volume Summary**

As can be seen in Table 1, without adjustment to account for the use of alternative modes of transportation to Single-Occupant Vehicles (SOVs), the Project is expected to generate approximately 228 vehicle trips on an average weekday (two-way, 24-hour volume, or 114 vehicles entering and 114 exiting), with 20 vehicle trips expected during the weekday morning peak-hour (5 vehicles entering and 15 exiting) and 16 vehicle trips expected during the weekday evening peak-hour (10 vehicles entering and 6 exiting).

***The increase in peak-hour trips that is expected to be associated with the Project (one (1) additional vehicle every 3- to 4-minutes) would not be readily apparent when dispersed to the Washington Street corridor and would not result in a significant impact (increase) on motorist delays or vehicle queuing over existing conditions.***

## SIGHT DISTANCE EVALUATION

A sight distance evaluation was performed for the Project site driveway intersection with Washington Street using available imagery. In the vicinity of the Project site, Washington Street consists of two travel lanes separated by a double-yellow centerline with curbside parking along both sides of the roadway. The presence of on-street parking adjacent to the driveway limits the visibility of motorists exiting the driveway to an approaching motor vehicle traveling along Washington Street. As such, a motorist exits the driveway in the three-stage maneuver, which is common in downtown settings where on-street parking is provided. The three stages are as follows: Stage 1 – the exiting motorist stops before entering the sidewalk area to observe approaching pedestrians; Stage 2 – after verifying that the sidewalk is clear, the motorist positions their vehicle across the sidewalk and into the area that is defined by the parking lane to observe approaching bicyclists and motor vehicles; and Stage 3 – the motorist exits the driveway when there is an acceptable gap in traffic.

A review of the Project site driveway and the Site Plan for the Project indicates that there are clear sight lines provided to and from the sidewalk area along Washington Street to allow for an exiting motorist to complete the three-stage exit maneuver.

## SUMMARY

VAI has prepared a TIE in order to determine the traffic characteristics and potential impacts on the transportation infrastructure associated with the proposed construction of a multifamily residential development to be located at 592 Washington Street (Route 16) in Wellesley, Massachusetts. This evaluation has been completed in advance of a formal TIA and has: i) reviewed the existing conditions of the transportation infrastructure serving the Project site; ii) defined the potential increase in traffic that the current project may represent; and iii) evaluated lines of sight at the Project site driveway intersection with Washington Street.

Based on this evaluation, we have concluded the following with respect to the Project:

- Using trip-generation statistics published by the ITE[7] and without adjustment to account for the use of alternative modes of transportation to Single-Occupant Vehicles (SOVs), the Project is expected to generate approximately 228 vehicle trips on an average weekday, with 20 vehicle trips expected during the weekday morning peak-hour and 16 vehicle trips expected during the weekday evening peak hour;

- The increase in peak-hour trips that is expected to be associated with the Project (one (1) additional vehicle every 3- to 4-minutes) would not be readily apparent when dispersed to the Washington Street corridor and would not result in a significant impact (increase) on motorist delays or vehicle queuing over existing conditions;

- A review of the Massachusetts Department of Transportation (MassDOT) high crash location database indicates that there are no (0) high crash locations at or in the vicinity of the Project site;

- The Project site is located within a 5-minute walking distance of Wellesley Square Sation on the Massachusetts Bay Transportation Authority (MBTA) Commuter Rail and is served by an interconnected sidewalk network that connects the Project to Wellesley Square and the Commuter Rail station; and

- With consideration of the downtown within which the Project site is located, clear lines of sight are provided to the sidewalk area along Washington Steet to allow for a vehicle exiting the Project site driveway to complete an exiting maneuver in a staged process and observe approaching bicycles and motor vehicles.

In consideration of the findings above, we have concluded that the Project can be accommodated within the confines of the existing transportation infrastructure.

[7]Institute of Transportation Engineers, op. cit. 1.

## RECOMMENDATIONS

### Site Access

The following recommendations are offered with respect to the design and operation of the access to the Project site and internal circulation, many of which are reflected on the Site Plan:

- The Project site driveway will be a minimum of 24-feet in width and designed to accommodate the turning and maneuvering requirements of the largest anticipated responding emergency vehicle.
- Where perpendicular parking is proposed, the drive aisle behind the parking will be a minimum of 23 feet in order to facilitate parking maneuvers.
- Vehicles exiting the Project site to Washington Street will be placed under STOP-sign control with a marked STOP-line provided.
- All signs and pavement markings to be installed within the Project site will conform to the applicable standards of the *Manual on Uniform Traffic Control Devices* (MUTCD).[8]
- A sidewalk has been provided within the Project site that extends to the existing sidewalk along Washington Street. Crosswalks are provided to the north of the Project site at the Washington Street/Church Street intersection for crossing Washington Street and Church Street.
- The Project site driveway is and will continue to be a pan-type drive with the sidewalk flush across the driveway. Americans with Disabilities Act (ADA) compliant wheelchair ramps will be provided for any new crosswalks that are constructed as a part of the Project.
- Electric vehicle (EV) charging stations will be installed within the Project site, with a minimum of 20% of the parking spaces to be EV ready.
- Signs, landscaping and other features that are to be installed as a part of the Project within the intersection sight triangle areas will be designed and maintained so as not to restrict lines of sight.
- Snow accumulations (windrows) within the sight triangle areas will be promptly removed where such accumulations would impede sight lines.

### Transportation Demand Management Program

In and effort to encourage the use of alternative modes of transportation to automobiles, the following Transportation Demand Management (TDM) measures should be implemented as a part of the Project:

- A transportation coordinator will be assigned for the Project to coordinate the TDM program;
- Information regarding public transportation services, maps, schedules, and fare information will be posted in a central location and/or otherwise made available to residents;
- A "welcome packet" will be provided to new residents detailing available public transportation services, bicycle and walking alternatives, and other commuting options;

[8] *Manual on Uniform Traffic Control Devices (MUTCD)*; Federal Highway Administration; Washington, D.C.; 2009.

- Amenities will be provided to support telecommuting by residents of the Project that may include collaboration space or a business office;
- Pedestrian accommodations have been incorporated within the Project and consist of a walkway that connects to the existing sidewalk along Washington Street;
- A central maildrop and package delivery station will be provided within the building; and
- Secure bicycle parking will be provided for residents that will include weather protected bicycle parking within the parking garage and exterior bicycle parking proximate to the primary building entrance.

With implementation of the aforementioned recommendations, safe and efficient access will be provided to the Project site and the Project can be accommodated within the confines of the existing transportation system.

Attachments

## ATTACHMENTS

SITE PLAN
HIGH CRASH LOCATION MAPPING
TRIP-GENERATION CALCULATIONS

SITE PLAN


1 L-1.1 Architectural Site Plan
1" = 10'

0 40 80 120

## UNIT SUMMARY

| | | |
|---|---|---|
| UNIT 101 | 2BR | 1718 SF |
| UNIT 102 | 2BR | 1490 SF |
| UNIT 103 | 2BR | 1490 SF |
| UNIT 104 | 2BR | 1435 SF |
| UNIT 105 | 3BR | 1887 SF |
| UNIT 106 | 3BR | 1704 SF |
| UNIT 201 | 2BR | 1718 SF |
| UNIT 202 | 2BR | 1490 SF |
| UNIT 203 | 2BR | 1490 SF |
| UNIT 204 | 2BR | 1435 SF |
| UNIT 205 | 3BR | 1887 SF |
| UNIT 206 | 3BR | 1704 SF |
| UNIT 207 | 3BR | 2277 SF |
| UNIT 208 | 2BR | 1926 SF |
| UNIT 301 | 2BR | 1473 SF |
| UNIT 302 | 1BR | 977 SF |
| UNIT 303 | 2BR | 1365 SF |
| UNIT 304 | 2BR | 1376 SF |
| UNIT 305 | 3BR | 1687 SF |

## ZONING SUMMARY

| | | |
|---|---|---|
| LOT SIZE | 35861 SF | |
| ZONING DISTRICT | WELLESLEY SQUARE COMMERCIAL DISTRICT | |
| | REQUIRED | PROPOSED |
| MINIMUM AREA: | NA | |
| MINIMUM FRONTAGE: | NA | |
| FRONT SETBACK: | 5 FEET | 43 FEET |
| SIDE SETBACK: | NA | |
| REAR SETBACK | NA | |
| MAXIMUM HEIGHT : | 45 FEET / 3 STORIES | |
| PROPOSED HEIGHT: | 40 FEET / 3 STORIES | |
| ACCESSORY NON RESIDENTIAL FLOOR AREA: | 5,650 SF | |
| PARKING: | 19 SPACES | 36 SPACES |

4 INCLUSIONARY UNITS PROVIDED (21%)

## PROJECT SUMMARY

38,670 SQUARE FEET
PARKING 36 SPACES
BIKE PARKING 14 SPACES
19 RESIDENTIAL UNITS
01 ONE BEDROOM
12 TWO BEDROOM
06 THREE BEDROOM

## Parking Summary

| | |
|---|---|
| OFF-STREET CAR PARKING | |
| ACCESSIBLE SPACES | - 2 |
| RESIDENCE SPACES | - 34 |
| TOTAL PARKING SPACES | -36 |
| STRUCTURED BIKE PARKING | - 14 |

Proposed Multi Family Use

592 Washington St. Wellesley, MA

OWNER

mckay architects
35 Bryant Street
Dedham, MA 02026
ph:781.326.5400
www.mckayarchitects.net

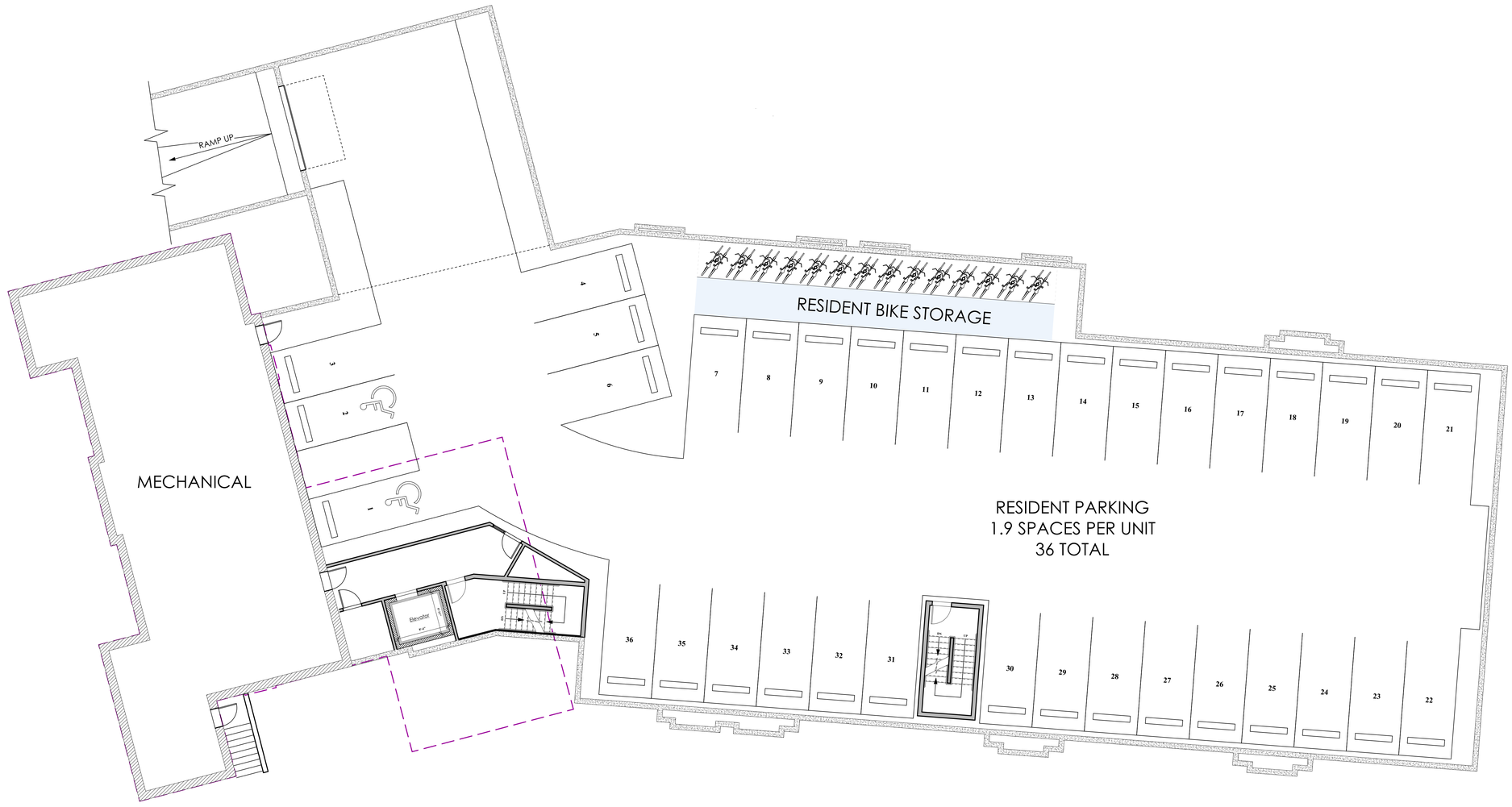
| REV # | DATE | ISSUANCE |
|---|---|---|



Architectural Site Plan

| | |
|---|---|
| JOB NO | |
| DATE | 09.19.2025 |
| DWG BY | RJM |
| CKD BY | MLM |
| SCALE | 1" = 10' |

L-1.1




1 A-1.1 Garage Floor Plan
1/8" = 1'-0"

Proposed
Multi Family
Use

592
Washington St.
Wellesley, MA

OWNER

mckay architects

35 Bryant Street
Dedham, MA 02026

ph:781.326.5400
www.mckayarchitects.net

| REV # | DATE | ISSUANCE |
|---|---|---|



Garage Floor Plan

| | |
|---|---|
| JOB NO | |
| DATE | 09.19.2025 |
| DWG BY | RJM |
| CKD BY | MLM |
| SCALE | 1/8" = 1'-0" |

A-1.1


1 A-1.2 Ground Floor Plan - 14,475 SF
1/8" = 1'-0"

Proposed Multi Family Use

592 Washington St. Wellesley, MA

OWNER


mckay architects

35 Bryant Street
Dedham, MA 02026

ph:781.326.5400
www.mckayarchitects.net


| REV # | DATE | ISSUANCE |
|---|---|---|



Ground Floor Plan

| | |
|---|---|
| JOB NO | |
| DATE | 09.19.2025 |
| DWG BY | RJM |
| CKD BY | MLM |
| SCALE | 1/8" = 1'-0" |

A-1.2


1 A-1.3 | Second Floor Plan - 13,835 SF
1/8" = 1'-0"

Proposed
Multi Family
Use

592
Washington St.
Wellesley, MA

OWNER


mckay architects

35 Bryant Street
Dedham, MA 02026

ph:781.326.5400
www.mckayarchitects.net

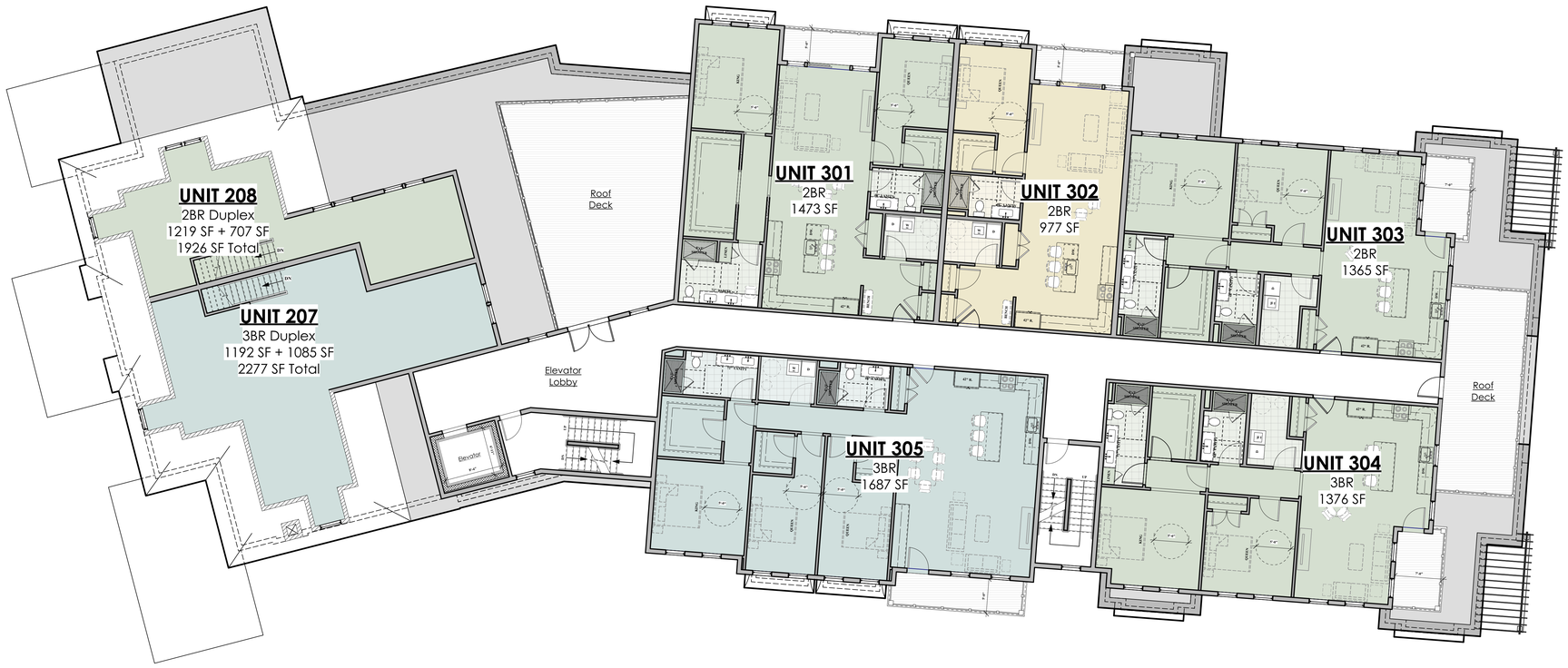

| REV # | DATE | ISSUANCE |
|---|---|---|



Second Floor Plan

| | |
|---|---|
| JOB NO | |
| DATE | 09.19.2025 |
| DWG BY | RJM |
| CKD BY | MLM |
| SCALE | 1/8" = 1'-0" |

A-1.3




1 A-1.4 Third Floor Plan - 10,360 SF
1/8" = 1'-0"

Proposed
Multi Family
Use

592
Washington St.
Wellesley, MA

OWNER


mckay architects

35 Bryant Street
Dedham, MA 02026

ph:781.326.5400
www.mckayarchitects.net


| REV # | DATE | ISSUANCE |
|---|---|---|



Third Floor
Plan

| | |
|---|---|
| JOB NO | |
| DATE | 09.19.2025 |
| DWG BY | RJM |
| CKD BY | MLM |
| SCALE | 1/8" = 1'-0" |

A-1.4

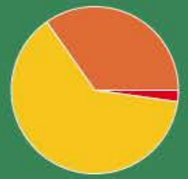
# HIGH CRASH LOCATION MAPPING

# Top Crash Locations Accessible Version

## Click and choose a City/Town to view

2019 Clusters | 2020 Clusters | 2021 Clusters

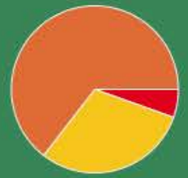
Intersection Crashes Contained Within Top 5% HSIP Clusters



Total Number of Intersection Crashes Contained Within Top 5% HSIP Clusters

**21,332**

Bicycle Crashes Contained Within Top 5% HSIP Clusters



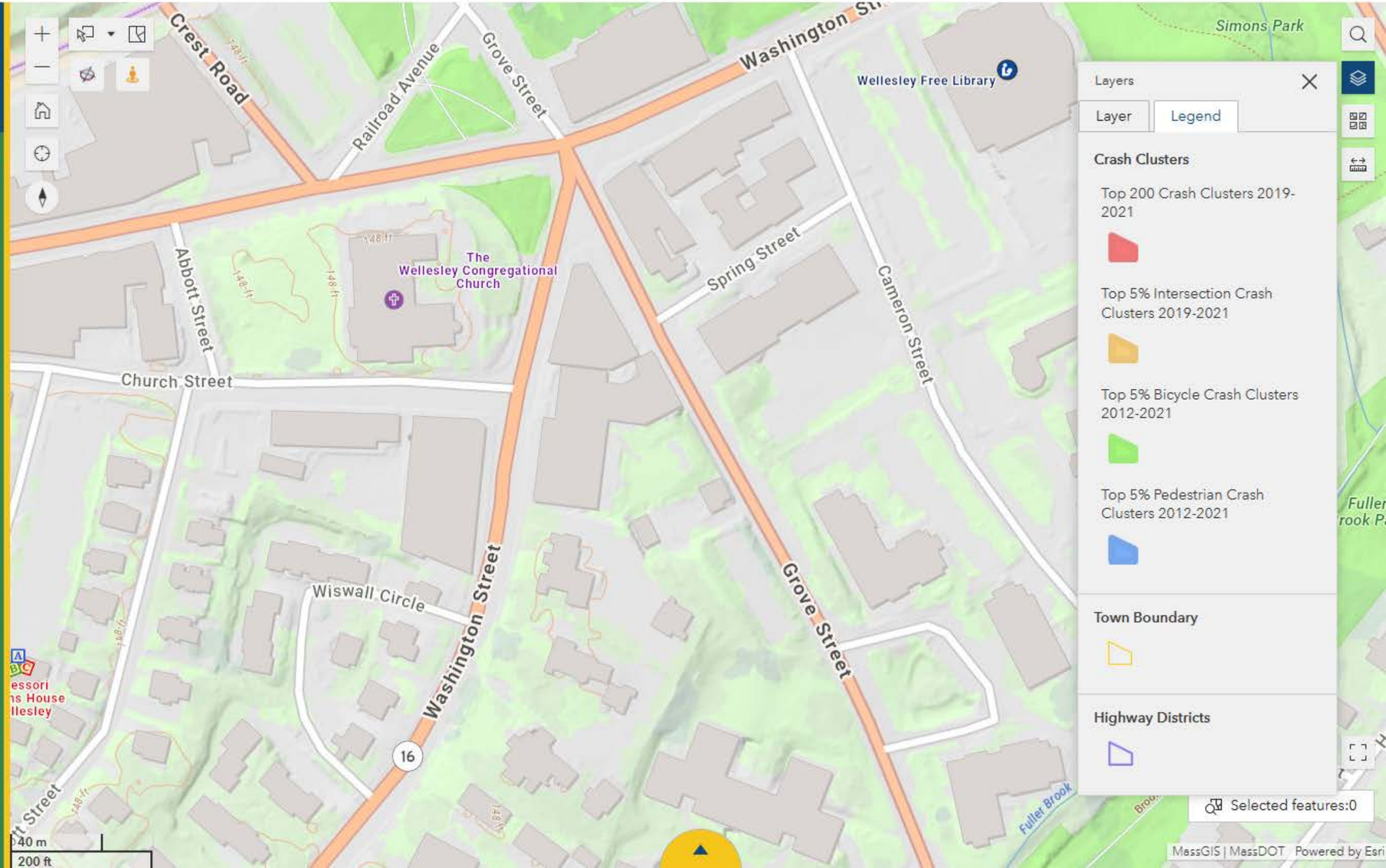
Total Number of Bicycle Crashes Contained Within Top 5% HSIP Clusters

**2,457**

Pedestrian Crashes Contained Within Top 5% HSIP Clusters

Total Number of Pedestrian Crashes Contained Within Top 5% HSIP Clusters

**5,612**



# TRIP-GENERATION CALCULATIONS

# Graph Look Up



Query | Filter

**DATA SOURCE:** Trip Generation Manual, 12th Ed

**SEARCH BY LAND USE CODE:** 220

**LAND USE GROUP:** (200-299) Residential

**LAND USE :** 220 - Multifamily Housing (Low-Rise)

**LAND USE SUBCATEGORY:** Not Close to Rail Transit

**SETTING/LOCATION:** General Urban/Suburban

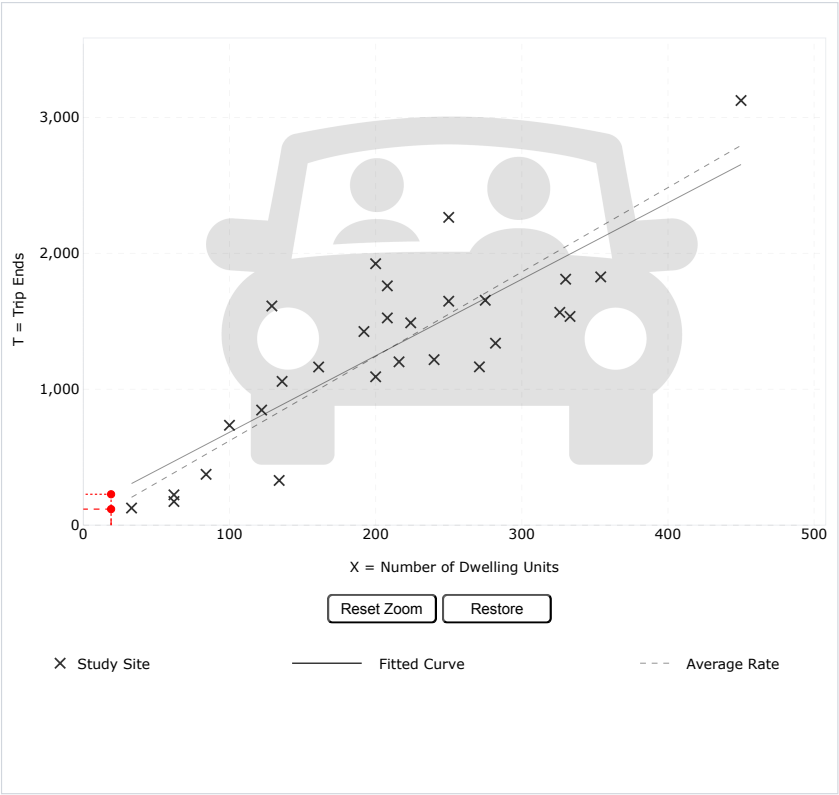
**INDEPENDENT VARIABLE (IV):** Dwelling Units

**TIME PERIOD:** Weekday

**TRIP TYPE:** Vehicle

**ENTER IV VALUE TO CALCULATE TRIPS:** 19 Calculate

## Data Plot and Equation




**Use the mouse wheel to Zoom Out or Zoom In.**
**Hover the mouse pointer on data points to view X and T values.**

**DATA STATISTICS**

**Land Use:**
Multifamily Housing (Low-Rise) - Not Close to Rail Transit (220) Click for Description and Data Plots

**Independent Variable:**
Dwelling Units

**Time Period:**
Weekday

**Setting/Location:**
General Urban/Suburban

**Trip Type:**
Vehicle

**Number of Studies:**
28

**Avg. Num. of Dwelling Units:**
208

**Average Rate:**
6.21

**Range of Rates:**
2.46 - 12.50

**Standard Deviation:**
1.87

**Fitted Curve Equation:**
T = 5.63(X) + 120.45

**$R^2$:**
0.70

**Directional Distribution:**
50% entering, 50% exiting

**Calculated Trip Ends:**
Average Rate: 118 (Total), 59 (Entry), 59 (Exit)
Fitted Curve: 227 (Total), 114 (Entry), 113 (Exit)

# Graph Look Up



Query | Filter

**DATA SOURCE:** Trip Generation Manual, 12th Ed

**SEARCH BY LAND USE CODE:** 220

**LAND USE GROUP:** (200-299) Residential

**LAND USE :** 220 - Multifamily Housing (Low-Rise)

**LAND USE SUBCATEGORY:** Not Close to Rail Transit

**SETTING/LOCATION:** General Urban/Suburban

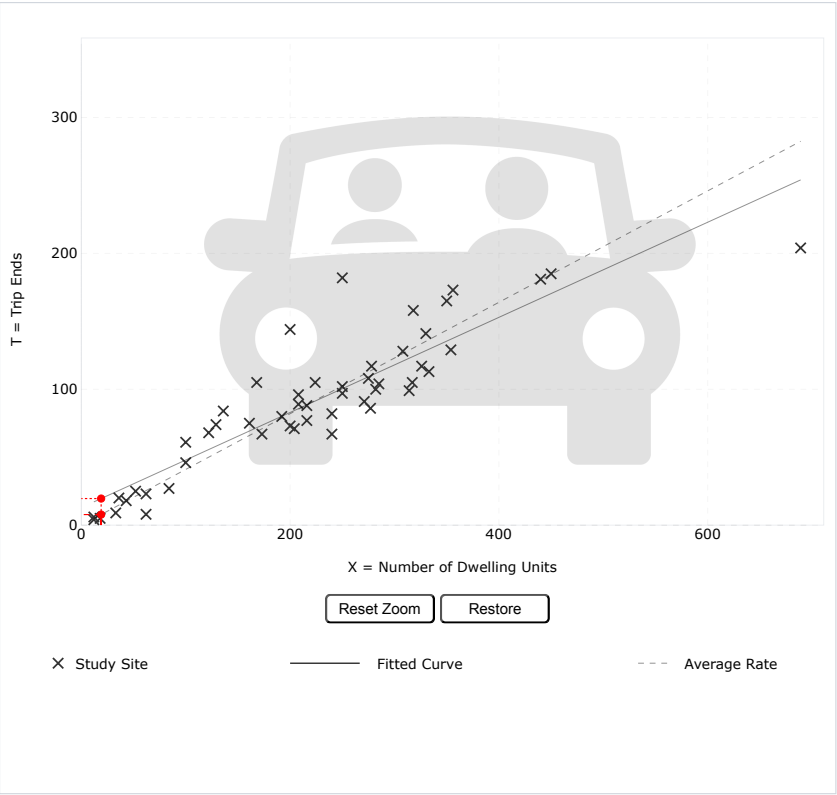
**INDEPENDENT VARIABLE (IV):** Dwelling Units

**TIME PERIOD:** Weekday, Peak Hour of Adjacent Stree

**TRIP TYPE:** Vehicle

**ENTER IV VALUE TO CALCULATE TRIPS:** 19 Calculate

## Data Plot and Equation




**Use the mouse wheel to Zoom Out or Zoom In.**
**Hover the mouse pointer on data points to view X and T values.**

**DATA STATISTICS**

**Land Use:**
Multifamily Housing (Low-Rise) - Not Close to Rail Transit (220) Click for Description and Data Plots

**Independent Variable:**
Dwelling Units

**Time Period:**
Weekday
Peak Hour of Adjacent Street Traffic
One Hour Between 7 and 9 a.m.

**Setting/Location:**
General Urban/Suburban

**Trip Type:**
Vehicle

**Number of Studies:**
51

**Avg. Num. of Dwelling Units:**
219

**Average Rate:**
0.41

**Range of Rates:**
0.13 - 0.73

**Standard Deviation:**
0.10

**Fitted Curve Equation:**
T = 0.35(X) + 12.93

**$R^2$:**
0.81

**Directional Distribution:**
24% entering, 76% exiting

**Calculated Trip Ends:**
Average Rate: 8 (Total), 2 (Entry), 6 (Exit)
Fitted Curve: 20 (Total), 5 (Entry), 15 (Exit)

# Graph Look Up



Query | Filter

**DATA SOURCE:** Trip Generation Manual, 12th Ed

**SEARCH BY LAND USE CODE:** 220

**LAND USE GROUP:** (200-299) Residential

**LAND USE :** 220 - Multifamily Housing (Low-Rise)

**LAND USE SUBCATEGORY:** Not Close to Rail Transit

**SETTING/LOCATION:** General Urban/Suburban

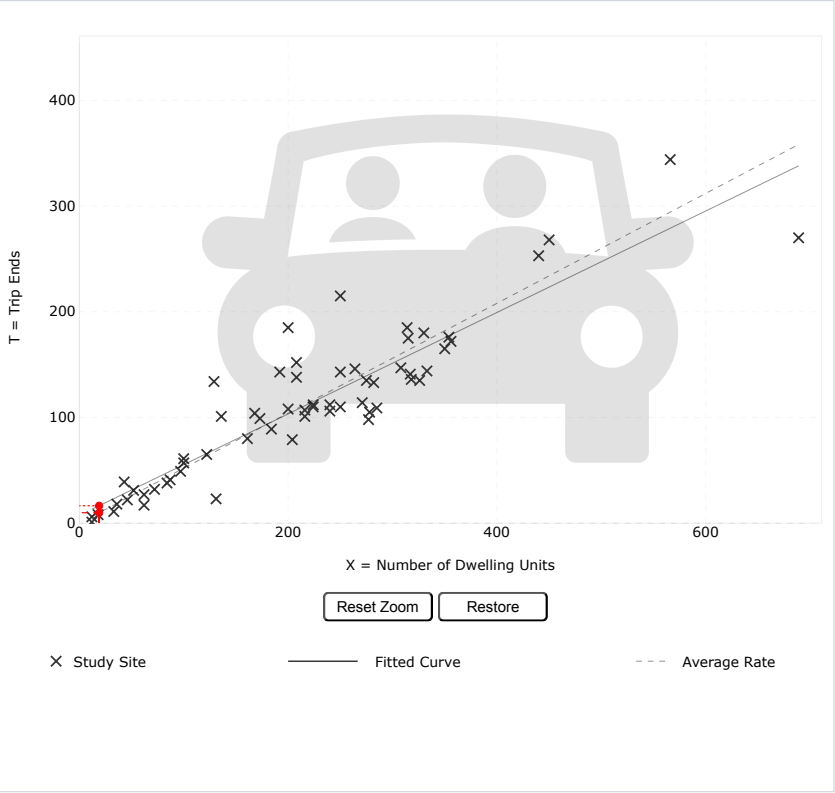
**INDEPENDENT VARIABLE (IV):** Dwelling Units

**TIME PERIOD:** Weekday, Peak Hour of Adjacent Stree

**TRIP TYPE:** Vehicle

**ENTER IV VALUE TO CALCULATE TRIPS:** 19 Calculate

## Data Plot and Equation




**Use the mouse wheel to Zoom Out or Zoom In.**
**Hover the mouse pointer on data points to view X and T values.**

**DATA STATISTICS**

**Land Use:**
Multifamily Housing (Low-Rise) - Not Close to Rail Transit (220) Click for Description and Data Plots

**Independent Variable:**
Dwelling Units

**Time Period:**
Weekday
Peak Hour of Adjacent Street Traffic
One Hour Between 4 and 6 p.m.

**Setting/Location:**
General Urban/Suburban

**Trip Type:**
Vehicle

**Number of Studies:**
61

**Avg. Num. of Dwelling Units:**
215

**Average Rate:**
0.52

**Range of Rates:**
0.08 - 1.04

**Standard Deviation:**
0.13

**Fitted Curve Equation:**
T = 0.48(X) + 7.35

**$R^2$:**
0.83

**Directional Distribution:**
62% entering, 38% exiting

**Calculated Trip Ends:**
Average Rate: 10 (Total), 6 (Entry), 4 (Exit)
Fitted Curve: 16 (Total), 10 (Entry), 6 (Exit)