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April 10, 2018

Mr. Masoud Shojaee Shoma Group President 3470 NW 82nd Avenue, Suite 988 Doral, Florida 33122 (786) 437-8658 mshojaee@shomagroup.com

RE: <u>Shoma Lenox Avenue Traffic Engineering Services</u> - #18135

Dear Masoud,

We have completed the trip generation analysis for the proposed Shoma Lenox Avenue Residential project. This evaluation was done in accordance with the City of Miami Beach requirements. The proposed project will be located on the south side of 15th Street between Lenox and Michigan Avenues in Miami Beach, Florida (see Exhibit 1). The project is proposing 44 residential units. Access to the site will be provided via one inbound driveway accessing Lenox Avenue and one outbound driveway accessing Michigan Avenue. The proposed site plan is included in Attachment A.

The proposed project trip generation was calculated based on the rates/equations published by the Institute of Transportation Engineers (ITE) <u>Trip Generation Manual</u>, 10th Edition. Trip generation calculations were performed for a typical weekday, as well as AM and PM peak hours (see Attachment B). ITE trips established below are based on gross trip generation rates and/or equations by land use type at free-standing driveways.



Shoma Lenox Avenue Residential







US census data for the project area (included in Attachment B) indicates that on the average other modes of transportation account for 34.1%. This area is serviced by Miami-Dade transit bus routes A, C, M and S, as well as two express routes: 120 Beach Max and 150 Miami Beach Airport Express. The nearest bus stops to the project are located along Alton Road north of 15th Street. The area is also served by the South Beach Loop trolley service updated to better serve transit needs of the South Beach community with average service frequency between 20 and 35 minutes depending on route. Hours of service are Monday through Saturday 6 a.m. to midnight and 8 a.m. to midnight on Sundays.

The area is well provided with pedestrian amenities including continuous sidewalks and crosswalks. Both intersections adjacent to the project site provide marked pedestrian crosswalks. Bicycle rentals are also a popular feature in the area. Services include CitiBike, the official City of Miami Beach Public Bicycle Rental & Sharing Program. This is a city-wide automated system allowing visitors and residents to rent a bike from any one of the 100⁺ stations in the City, and simply return the bike to any station when done.

For a conservative analysis, a 20% deduction was taken to account for other modes of transportation. The proposed project trip generation is summarized in Exhibit 2.

Proposed ITE Land Use	Number	Daily Vehicle	AM Peak Hour Vehicle Trips			PM Peak Hour Vehicle Trips		
Designation ¹	of Units	Trips	In	Out	Total	In	Out	Total
Multifamily Housing (Mid-rise) Land Use Code: 221	44 DU	238	4	11	15	12	8	20
Transit/ Pedestrian Trips	-20%	-48	-1	-2	-3	-2	-2	-4
Driveway Volumes	5	190	3	9	12	10	6	16

Exhibit 2 Proposed Use Trip Generation Summary

¹ Based on ITE <u>Trip Generation Manual</u>, Tenth Edition

The results of the analysis show that the proposed development will generate a total of 190 new vehicle trips per day (two-way), and 12 and 16 vehicle trips at the driveways during the AM and PM peak hours respectively.

According to the <u>ITE Transportation Impact Analyses for Site Development</u> the suggested threshold for determining the need of further traffic analysis is 100 trips during the adjacent roadways' peak hour. As the proposed project does not exceed 100 trips during the peak hours, we request a waiver against completing a full traffic study. We stand ready to provide any support needed for this proposed project. Should you have any questions or comments, please call me at (305) 447-0900.

Sincerely,

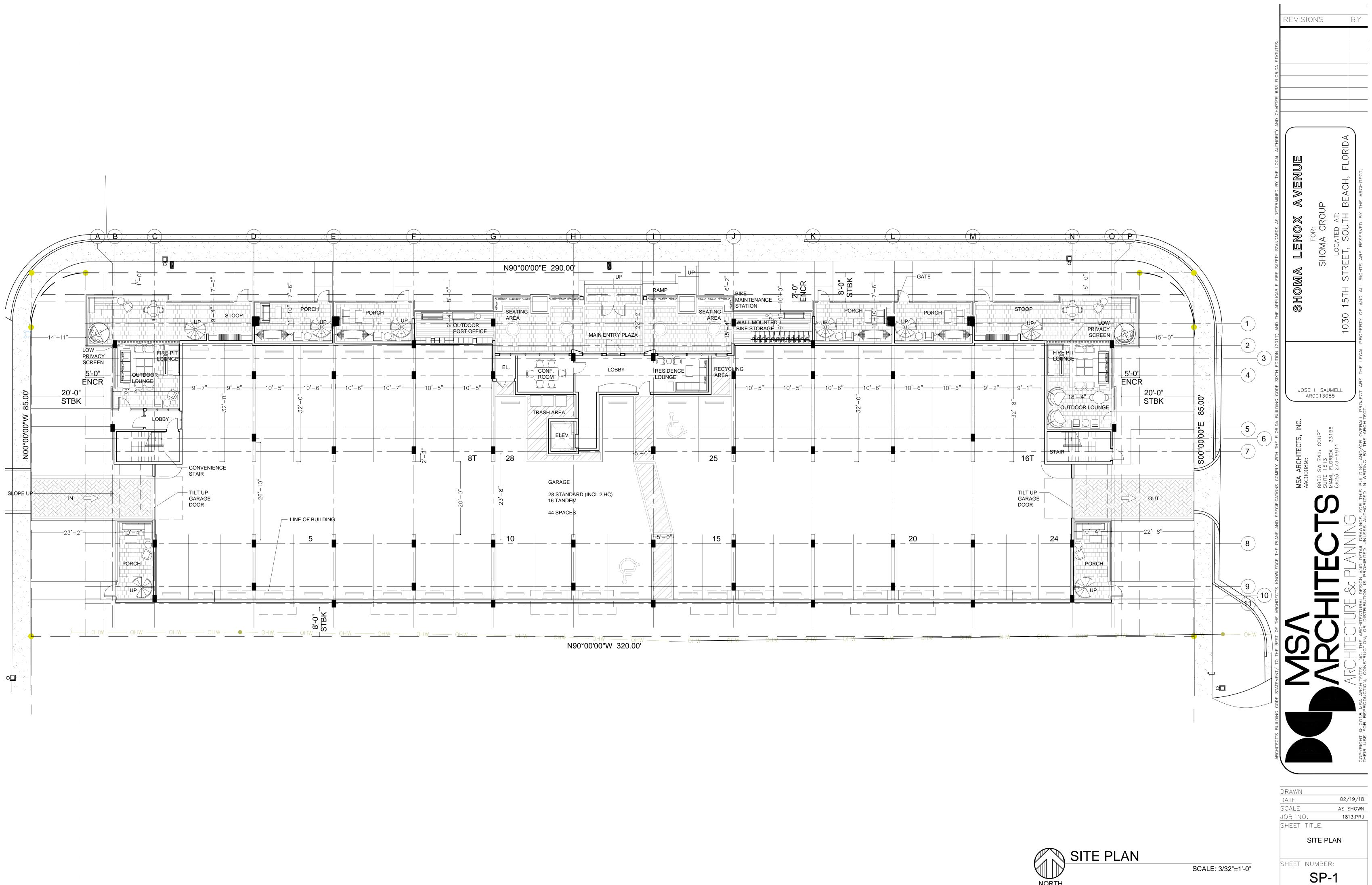
Juan Espinosa, PE Vice President – Transportation

cc: File Attachments



Attachment A

Site Plan



NORTH

Attachment B

Census Data



Multifamily Housing (Mid-Rise) (221)

Vehicle Trip Ends vs: Dwelling Units On a: Weekday

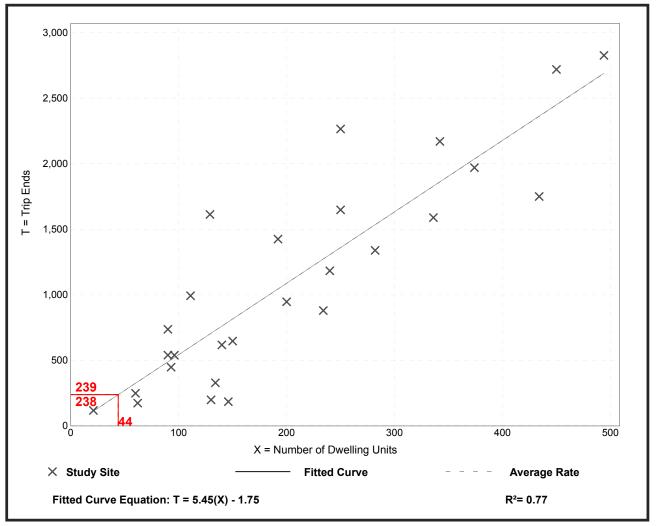
Setting/Location: General Urban/Suburban

Number of Studies:	27
Avg. Num. of Dwelling Units:	205
Directional Distribution:	50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
5.44	1.27 - 12.50	2.03

Data Plot and Equation



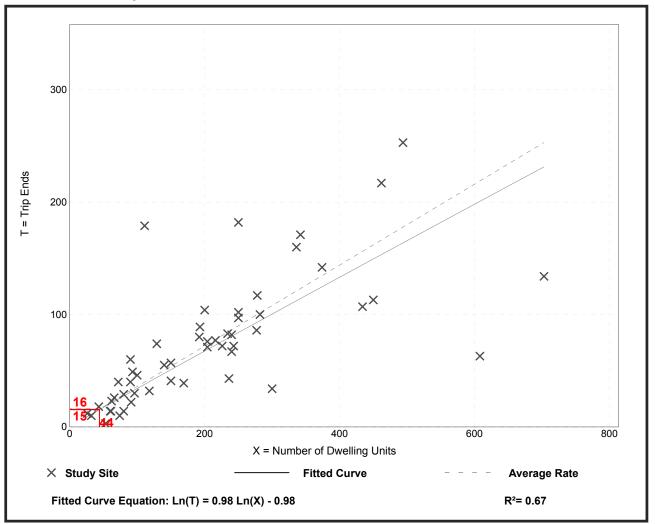
Trip Generation Manual, 10th Edition • Institute of Transportation Engineers

Multifamily Housing (Mid-Rise) (221)						
Vehicle Trip Ends vs: On a:	-					
	Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.					
Setting/Location:	General Urban/Suburban					
Number of Studies:	53					
Avg. Num. of Dwelling Units: Directional Distribution:	207 26% entering, 74% exiting					

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.36	0.06 - 1.61	0.19

Data Plot and Equation



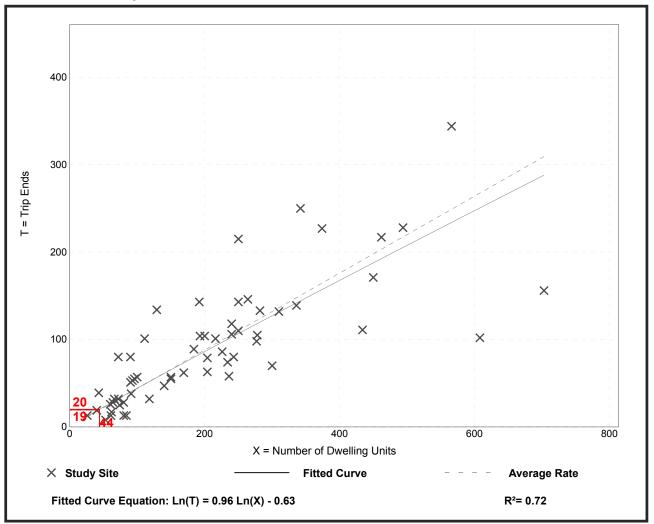
Trip Generation Manual, 10th Edition • Institute of Transportation Engineers

Multifamily Housing (Mid-Rise) (221)					
Vehicle Trip Ends vs: On a:	-				
	Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.				
Setting/Location:	General Urban/Suburban				
Number of Studies:	60				
Avg. Num. of Dwelling Units: Directional Distribution:	208 61% entering, 39% exiting				

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.44	0.15 - 1.11	0.19

Data Plot and Equation



Trip Generation Manual, 10th Edition • Institute of Transportation Engineers

S0801

COMMUTING CHARACTERISTICS BY SEX 2012-2016 American Community Survey 5-Year Estimates

Tell us what you think. Provide feedback to help make American Community Survey data more useful for you.

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities and towns and estimates of housing units for states and counties.

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Data and Documentation section.

Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.

				ZCTA5 3	33139		
		То	tal	Ma	le	Female	
	Subject	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margii of Error
	Workers 16 years and over	23,066	+/-1,123	13,941	+/-840	9,125	+/-650
	MEANS OF TRANSPORTATION TO WORK						
	Car, truck, or van	50.8%	+/-3.0	50.2%	+/-3.8	51.8%	+/-3.9
	Drove alone	45.8%	+/-2.9	45.2%	+/-3.6	46.7%	+/-3.
Γ	Carpooled	5.0%	+/-1.4	5.0%	+/-1.6	5.1%	+/-1.0
	In 2-person carpool	4.7%	+/-1.4	4.6%	+/-1.6	4.8%	+/-1.0
	In 3-person carpool	0.0%	+/-0.1	0.0%	+/-0.1	0.0%	+/-0.4
	In 4-or-more person carpool	0.3%	+/-0.2	0.3%	+/-0.3	0.4%	+/-0.3
	Workers per car, truck, or van	1.05	+/-0.01	1.05	+/-0.02	1.05	+/-0.0
	Public transportation (excluding taxicab)	<mark>7.6%</mark>	+/-1.6	6.9%	+/-2.0	8.7%	+/-2.
	Walked	<mark>19.4%</mark>	+/-2.6	19.2%	+/-4.0	19.6%	+/-2.
L	Bicycle	<mark>7.1%</mark>	+/-1.7	8.2%	+/-2.2	5.3%	+/-1.
	Taxicab, motorcycle, or other means	4.7%	+/-0.9	4.4%	+/-1.1	5.2%	+/-1.
	Worked at home	10.3%	+/-1.7	11.0%	+/-2.0	9.3%	+/-2.
-							
-	PLACE OF WORK						
	Worked in state of residence	97.8%	+/-0.6	97.5%	+/-0.7	98.3%	+/-0.
	Worked in county of residence	93.4%	+/-1.2	92.1%	+/-1.5	95.4%	+/-1.
	Worked outside county of residence	4.4%	+/-1.0	5.4%	+/-1.3	2.9%	+/-1.
	Worked outside state of residence	2.2%	+/-0.6	2.5%	+/-0.7	1.7%	+/-0.
-	Living in a place	100.0%	+/-0.2	100.0%	+/-0.3	100.0%	+/-0.4

Versions of this table are available for the following years: 2016 2015 2014 2013

> 2012 2011

	ZCTA5 33139						
	То	tal	Ma	le	Fem	ale	
				Margin		Margin	
Subject	Estimate	Margin of Error	Estimate	of Error	Estimate	of Error	
Subject Worked in place of	50.7%	+/-3.4	50.4%	+/-4.1	51.3%	+/-4.5	
residence	00.170	., 0.4	00.470	.,	01.070	., 4.0	
Worked outside place of residence	49.3%	+/-3.4	49.6%	+/-4.1	48.7%	+/-4.5	
Not living in a place	0.0%	+/-0.2	0.0%	+/-0.3	0.0%	+/-0.4	
Living in 12 selected states	0.0%	+/-0.2	0.0%	+/-0.3	0.0%	+/-0.4	
Worked in minor civil division of residence	0.0%	+/-0.2	0.0%	+/-0.3	0.0%	+/-0.4	
Worked outside minor civil division of residence	0.0%	+/-0.2	0.0%	+/-0.3	0.0%	+/-0.4	
Not living in 12 selected states	100.0%	+/-0.2	100.0%	+/-0.3	100.0%	+/-0.4	
Workers 16 years and over who did not work at home TIME LEAVING	20,680	+/-1,090	12,404	+/-822	8,276	+/-644	
HOME TO GO TO WORK							
12:00 a.m. to 4:59 a.m.	2.4%	+/-0.8	2.5%	+/-1.1	2.2%	+/-1.1	
5:00 a.m. to 5:29 a.m.	0.9%	+/-0.5	1.3%	+/-0.8	0.3%	+/-0.5	
5:30 a.m. to 5:59 a.m.	1.7%	+/-0.7	1.3%	+/-0.9	2.2%	+/-1.0	
6:00 a.m. to 6:29 a.m.	3.0%	+/-0.7	3.4%	+/-1.1	2.4%	+/-1.0	
6:30 a.m. to 6:59 a.m.	4.3%	+/-0.9	4.0%	+/-1.1	4.7%	+/-1.6	
7:00 a.m. to 7:29 a.m.	8.9%	+/-1.5	8.2%	+/-1.8	9.9%	+/-2.5	
7:30 a.m. to 7:59 a.m.	6.3%	+/-1.2	5.5%	+/-1.3	7.5%	+/-2.1	
8:00 a.m. to 8:29 a.m.	15.6%	+/-2.1	14.8%	+/-2.3	16.9%	+/-3.3	
8:30 a.m. to 8:59 a.m.	10.6%	+/-2.1	10.8%	+/-2.8	10.4%	+/-2.3	
9:00 a.m. to 11:59 p.m.	46.3%	+/-2.6	48.2%	+/-3.6	43.5%	+/-4.2	
TRAVEL TIME TO WORK							
Less than 10 minutes	14.0%	+/-2.5	15.1%	+/-3.9	12.5%	+/-2.5	
10 to 14 minutes	22.2%	+/-2.3	20.2%	+/-3.0	25.1%	+/-3.8	
15 to 19 minutes	15.3%	+/-2.2	14.7%	+/-2.7	16.2%	+/-3.0	
20 to 24 minutes	13.1%	+/-1.9	14.3%	+/-2.5	11.4%	+/-2.1	
25 to 29 minutes	4.1%	+/-1.0	4.4%	+/-1.3	3.6%	+/-1.5	
30 to 34 minutes	14.0%	+/-2.0	14.2%	+/-2.5	13.7%	+/-2.8	
35 to 44 minutes	5.7%	+/-1.2	5.4%	+/-1.5	6.2%	+/-1.8	
45 to 59 minutes	5.6%	+/-1.2	5.7%	+/-1.6	5.4%	+/-1.8	
60 or more minutes	5.9%	+/-1.3	5.9%	+/-1.8	5.8%	+/-1.9	

	ZCTA5 33139							
	Total		Ма	le	Female			
Subject	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error		
Mean travel time to work (minutes)	22.9	+/-1.1	22.9	+/-1.4	22.9	+/-1.5		
VEHICLES AVAILABLE								
Workers 16 years and over in households	22,988	+/-1,124	13,875	+/-842	9,113	+/-651		
No vehicle available	24.3%	+/-3.1	24.8%	+/-4.1	23.5%	+/-3.7		
1 vehicle available	46.1%	+/-3.1	47.0%	+/-3.8	44.7%	+/-4.1		
2 vehicles available	23.6%	+/-2.9	22.6%	+/-3.1	25.0%	+/-4.2		
3 or more vehicles available	6.1%	+/-1.9	5.6%	+/-1.8	6.8%	+/-2.6		
PERCENT ALLOCATED								
Means of transportation to work	7.2%	(X)	(X)	(X)	(X)	(X)		
Private vehicle occupancy	10.5%	(X)	(X)	(X)	(X)	(X)		
Place of work	8.6%	(X)	(X)	(X)	(X)	(X)		
Time leaving home to go to work	13.4%	(X)	(X)	(X)	(X)	(X)		
Travel time to work	9.3%	(X)	(X)	(X)	(X)	(X)		
Vehicles available	1.1%	(X)	(X)	(X)	(X)	(X)		

Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates

Explanation of Symbols:

An '**' entry in the margin of error column indicates that either no sample observations or too few sample observations were available to compute a standard error and thus the margin of error. A statistical test is not appropriate. An '-' entry in the estimate column indicates that either no sample observations or too few sample observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates falls in the lowest interval or upper interval of an open-ended distribution.

An '-' following a median estimate means the median falls in the lowest interval of an open-ended distribution. An '+' following a median estimate means the median falls in the upper interval of an open-ended distribution.

An '***' entry in the margin of error column indicates that the median falls in the lowest interval or upper interval of an open-ended distribution. A statistical test is not appropriate.

An '*****' entry in the margin of error column indicates that the estimate is controlled. A statistical test for sampling variability is not appropriate.

An 'N' entry in the estimate and margin of error columns indicates that data for this geographic area cannot be displayed because the number of sample cases is too small.

An '(X)' means that the estimate is not applicable or not available.

Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see Accuracy of the Data). The effect of nonsampling error is not represented in these tables.

The 12 selected states are Connecticut, Maine, Massachusetts, Michigan, Minnesota, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and Wisconsin.

Workers include members of the Armed Forces and civilians who were at work last week.

When information is missing or inconsistent, the Census Bureau logically assigns an acceptable value using the response to a related question or questions. If a logical assignment is not possible, data are filled using a statistical process called allocation, which uses a similar individual or household to provide a donor value. The "Allocated" section is the number of respondents who received an allocated value for a particular subject.

While the 2012-2016 American Community Survey (ACS) data generally reflect the February 2013 Office of Management and Budget (OMB) definitions of metropolitan and micropolitan statistical areas; in certain instances the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB definitions due to differences in the effective dates of the geographic entities.

Estimates of urban and rural population, housing units, and characteristics reflect boundaries of urban areas defined based on Census 2010 data. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization.