

Design Consultants, Inc.

120 Middlesex Avenue
Somerville, MA 02145
(617) 776-3350

MEMORANDUM

DCI JOB NO. 2015-077

TO: Jim Riley
745 Atlantic Avenue 8th Floor, Boston, MA 02111

FROM: Tom Bertulis, P.E., PTOE
Design Consultants, Inc.

SUBJECT: **Parking Study**
280 Elm Street
Somerville, MA

DATE: November 3, 2015, updated December 18, 2015

As per a request by the client, Design Consultants, Inc. (DCI) undertook a parking study for the project located at 280 Elm Street in Somerville, Massachusetts. Figure 1 shows the project site and surrounding area. The site is currently located in the same building as the fast-food restaurant Chipotle. The new pizza restaurant will accommodate 16 seats, and will be 1,100 square feet on the first floor, and 500 square feet in the basement, for a total of 1,600 square feet. The Somerville Zoning Ordinance requires 1 parking space per 110 gross square feet (GSF) or 0.75 spaces per employee plus 1 per 4 seats, whichever is greater. Based on 1 parking space per 110 GSF, a total of 15 parking spaces are required for this project. However, the zoning ordinance section 9.6.3 approves a 20% reduction in required parking if the project site is within one thousand (1,000) feet of a rapid transit station. The project is approximately 360 feet away from the MBTA Davis Station, therefore a reduction of three (3) spaces is allowed, for a total of 12 spaces. Zoning ordinance section 9.4.1 provides a further reduction allowance based on the change of land use of the building. Based on the previous use, retail, a reduction of 3 spaces (2 per 1,100 SF on the ground floor, one (1) per 500 SF on the basement floor) is allowed. As three (3) spots were required for previous use and none were provided, three (3) spots can be credited to this project. Zoning Ordinance 9.4.1.d.2 states that "if the new use is calculated to require two (2) or more additional parking spaces...then fifty percent (50%) of this additional requirement shall be provided..." Therefore, following the reduction of three (3) spaces, and multiplying by a factor of 50%, five spaces are required for this project. The client is seeking relief of four (4) of these parking spaces, as they are planning to provide one (1) parking spot behind the building for the store manager. This memorandum serves to demonstrate that the relief of these four (4) parking spaces will have a negligible impact on the local neighborhood parking supply.

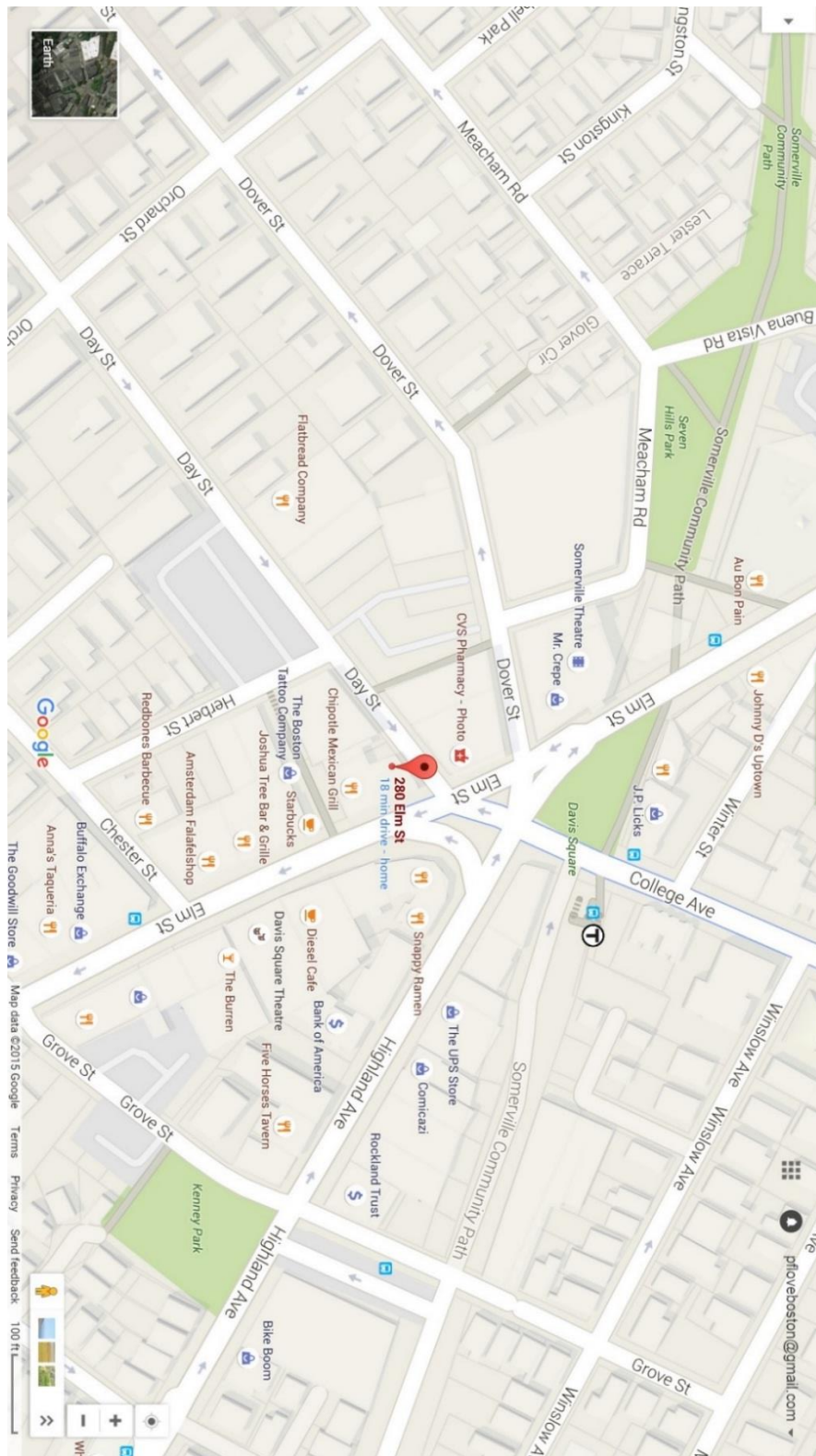


Figure 1: Project Study Area

Proximity to Public Transit

The MBTA serves the study area with bus routes 87, 88, 90, 94 and 96.

Bus route 87 runs between Arlington Center in Arlington and Lechmere Station in Cambridge. Bus route 88 runs between MBTA Lechmere Station in Cambridge and Clarendon Hill in Somerville. Bus route 90 runs between MBTA Wellington Station in Medford and Davis Square in Somerville. Bus route 94 runs between Medford Square in Medford and Davis Square in Somerville. Bus route 96 runs between Harvard Station in Cambridge and Medford Square in Medford.

The MBTA Davis Station is approximately 360 feet north of the project site. Davis Station serves the MBTA Red Line. From Davis Station, the Red Line travels south through Somerville, Cambridge, downtown Boston, south Boston, Dorchester and Quincy. It travels north to Alewife Station in Cambridge. The Red Line runs at 9 to 16 minute intervals.

The project site is approximately 300 feet south of the Somerville Community Path (SCP). The SCP is a paved shared-use bicycle-pedestrian path. The Community Path spans approximately 1 mile, connecting the Alewife Linear Park to Lowell Street in Somerville. It is an important commuter route for Somerville residents who commute between Davis Square and east Somerville. The MBTA and MassDOT have committed to extend the community path as part of the upcoming Green Line Extension project. The Community Path will be extended from the Lowell Street railroad tracks to North Point in Cambridge and will connect to the Charles River parks and Charles River paths which provide connections to Newton, Watertown to downtown Boston, if current plans continue as expected.

Given the project proximity to the MBTA Davis station and the Somerville Community Path, it is expected that a significant number of public transit and bicycle trips will be made to 280 Elm Street versus motor vehicle trips.

Proposed Off-Street Parking

There is one (1) off-street parking spot proposed for this project.

On-Street Parking Utilization

DCI performed a field parking survey of all available on-street metered parking to determine the existing parking utilization. The study area includes the following roadways:

- 1) Dover Street - from Orchard Street to Elm Street
- 2) Day Street – from Orchard Street to Elm Street
- 3) Elm Street/Holland Street - from 276 Elm Street to 7 Holland Street
- 4) Meacham Road – from Orchard Street to Dover Street
- 5) Herbert Street – from Day Street to Chester Street
- 6) Orchard Street – from Meacham Road to Day Street

DCI recorded the number of available parking spaces during a typical Tuesday. The parking data was collected during the following time periods:

Tuesday, December 1, 2015 (12-1 PM)

Tuesday, December 1, 2015 (7-8 PM)

The results of the parking surveys are summarized in Table 1.

Table 1 On-Street Parking Utilization

						Avg. Number of Cars Parked			
						Weekday			
	Street	Side	From	To	Parking Notes / Type	Total No. of Spaces	Afternoon	Evening	
1	Dover Street	Northside	Elm Street	Orchard Street	Meter Parking	10	3	9	
		Southside	Orchard Street	Elm Street	Meter Parking	9	3	8	
2	Elm Street	Eastside	276 Elm Street	7 Holland Street	No Parking	-	-	-	
		Westside	7 Holland Street	276 Elm Street	No Parking	-	-	-	
3	Meacham Road	Northside	Orchard Street	Dover Street	Meter Parking	10	3	6	
		Southside	Dover Street	Orchard Street	2 Hour Parking except by permit	3	3	1	
4	Orchard Street	Eastside	Day Street	Meacham Road	Meter Parking	13	10	11	
		Westside	Meacham Road	Day Street	Meter Parking	4	4	4	
5	Herbert Street	Eastside	Chesler Street	Day Street	Licensed Taxi Only	4	3	4	
		Westside	Chesler Street	Day Street	Reserved Parking	2	0	2	
6	Day Street	Northside	Orchard Street	Elm Street	Meter Parking	11	8	10	
		Southside	Elm Street	Orchard Street	Meter Parking	13	10	10	
						5 Min Parking	3	2	
						Reserved Parking	1	1	
						Gross Totals	83	51	68
						Meter Parking Totals	70	41	58
						Number of Meter Parking Spaces Available	29	12	12
						% of Meter Parking Spaces Available	41%	17%	

As indicated in Table 1, an average total of 29 metered parking spaces were available during the weekday afternoon period (12:00 to 1:00 PM). An average of 12 of metered parking spaces were available during the weekday evening period (6:00 PM to 7:00 PM). The results of this parking survey indicate that there is a substantial amount of under-utilized permit parking spaces spread across the study area.

Parking Survey

To assist in confirming the adequacy of the current plan with regards to the supply of on and off-street parking, a transportation mode split survey at a similar fast-food restaurant in the same building. Patrons of the fast-food restaurant were surveyed in October 2015 for mode split data. At least 135 samples were obtained at the site. The results are shown in Table 2. The parking survey was conducted during the following time periods:

Tuesday, October 27, 2015 (12-1 PM)
 Tuesday, October 27, 2015 (5-6 PM)
 Saturday, October 31, 2015 (12-1 PM)

The results of the parking surveys are summarized in Table 2.

Table 2: Empirical Mode Split Data

Mode Split	Urban Fast-Food Restaurant	Census Tract 3509
Single Occupant Vehicle (SOV)	28.1%	32.7%
Carpool	1.5%	1.7%
Transit	26.7%	47.9%
Bicycle	11.9%	4.8%
Walk	31.9%	8.2%
Other	0.0%	4.7%

As indicated in Table 2, the empirical data collected in October 2015 at a similar fast-food restaurant in the same building in Davis Square indicates that vehicle trips represent approximately 28% of the total trips to/from the site. The majority of the trips to these urban sites are via walking and transit, as 26.7% of patrons take public transportation and 31.9% of patrons walked to the restaurant.

Mode Split and Vehicle Ownership Comparison

The latest data (2009-2013) associated with US Census Tract 3509 (which encompasses 280 Elm Street) shows that 70.1% of the working residential population in the area travel to work via modes other than by a single occupant vehicle (SOV). Moreover, the Census Data indicates that 17.3% of the residents in Census Tract 3509 do not own a vehicle. Figures 2 and 3 in the following page clearly illustrate the differences in mode split and vehicle ownership between the study area in the vicinity of 280 Elm Street, the City of Somerville and the State of Massachusetts.

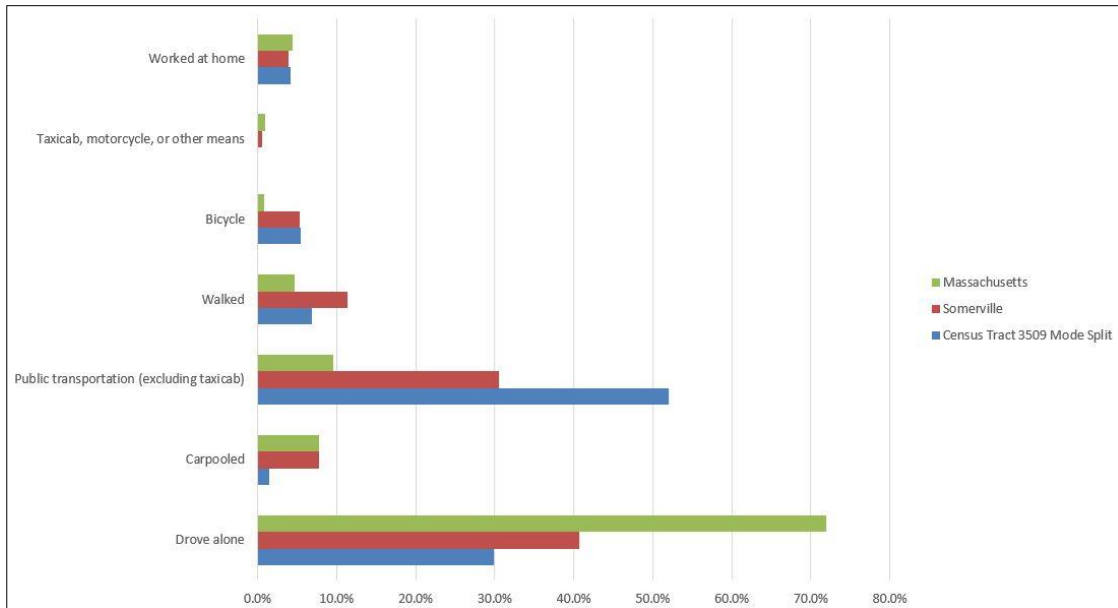


Figure 2: Mode Split Comparison

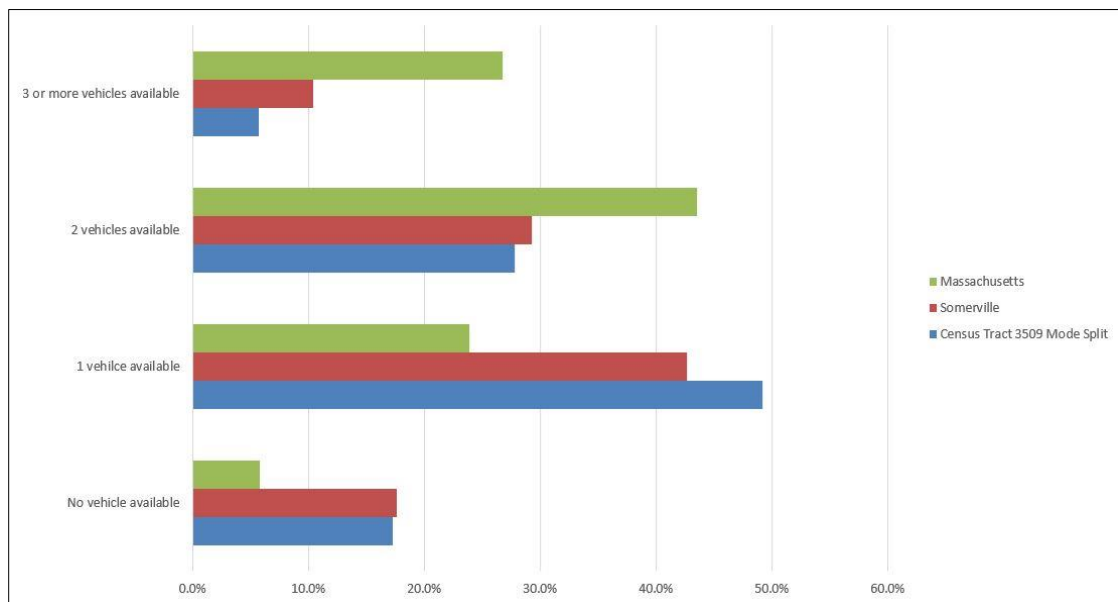


Figure 3: Vehicle Ownership Comparison

Conclusion

Based on the proposed 1,600 GSF of restaurant space, and according to the reduction allowances in the Somerville Ordinance Sections 9.4.1 and 9.6.3, 5 spaces are required for this project. The appendix shows a layout of the restaurant. The proponent is seeking relief of four (4) of these spaces, providing one (1) parking spot for the store manager. The study and analysis carried out for this memorandum serve to show that relief of four (4) spaces will not have a significant impact on the neighborhood parking supply. As mitigation for the relief of the four (4) parking spaces, it is recommended that the proponent purchase IPS units (“Smart” parking meters) to better manage parking supply.

The site is located in an area that will have a relatively high portion of non-vehicular travel to and from the establishment. The empirical data indicates that 31.9% of the customers will likely walk to the restaurant and 26.7% of customers will likely take public transportation to the restaurant.

The site is conveniently located close to public transportation. The site is approximately 360 feet from the Red Line at Davis Square Transit Station. The site is served by the following existing MBTA bus routes #87, #88, #90, #94, and #96 on Elm Street.

Only 28.1% of patrons of the fast-food restaurant will likely drive to the project site, the actual parking demand is expected to be significantly less than required. Given the nature of the restaurant (counter service pizza), and the dense urban location, the expected amount of vehicle trips is very low. The parking utilization study revealed that approximately 17% of nearby metered parking spaces were available during the evening peak hour, so it is shown that there is still an abundance of nearby metered parking available. The project proponent is committed to providing one (1) parking space. The recommendation of this study is that the parking demand will be met by on-street parking spots and that, as mitigation, the proponent should fund smart parking meters known as IPS units. Relief should be granted for the four (4) parking spaces the proponent is seeking.

APPENDIX

Pizza Restaurant Survey

City: Somerville, MA
Street: 278 Elm Street
Date: October 27 & October 31, 2015

Proj. No: 2015-077

Field by: Fei Peng

Weekday Midday Counts

Weather: Sunny, mid 46's

Mode of Transportation	Car	Carpool	Transit	Bicycle	Walk	Other	Total
Count	15	2	11	3	17	0	48

Weekday PM Counts

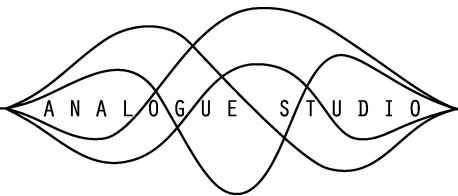
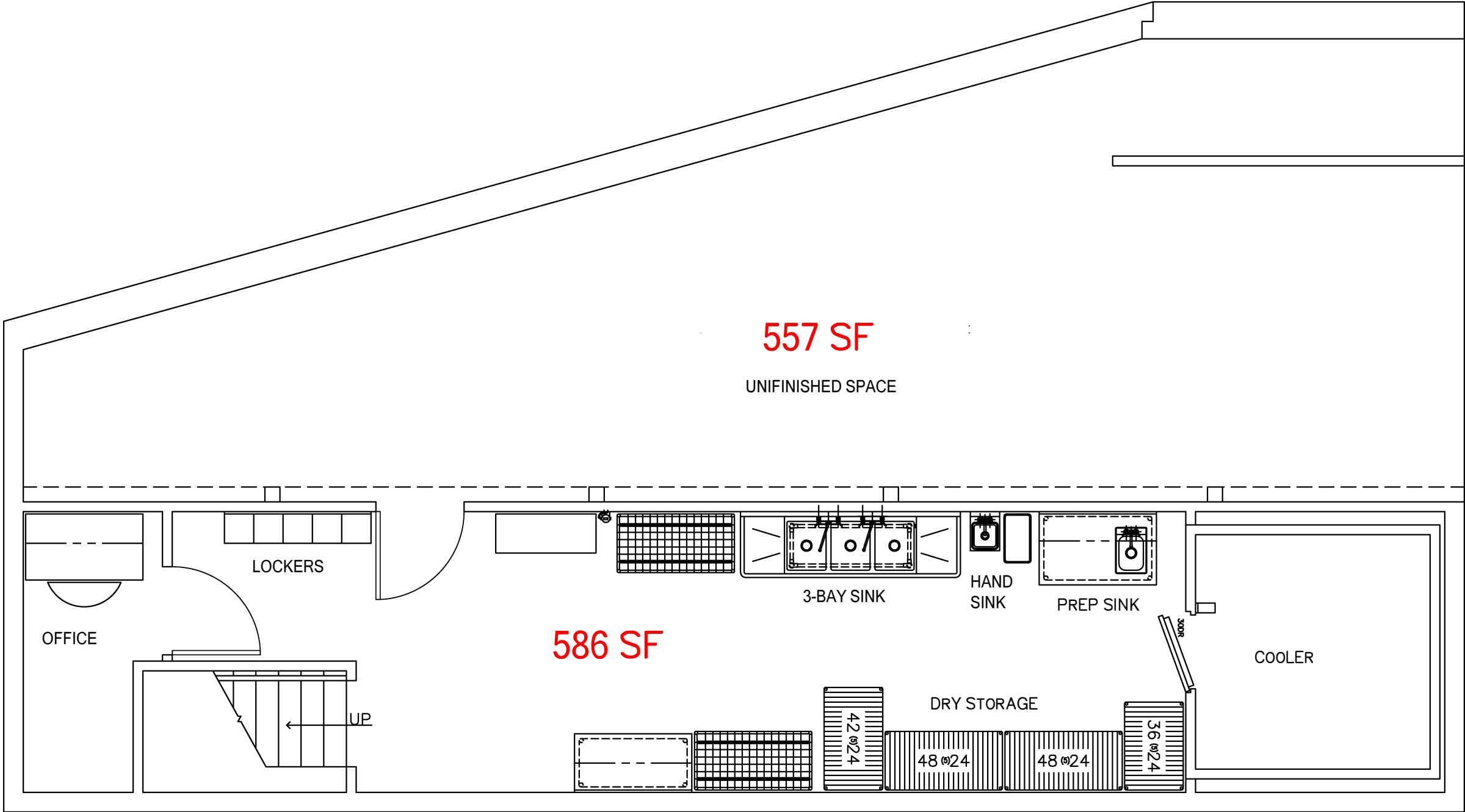
Weather: Sunny,

Mode of Transportation	Car	Carpool	Transit	Bicycle	Walk	Other	Total
Count	14	0	15	6	15	0	50

Saturday Counts

Mode of Transportation	Car	Carpool	Transit	Bicycle	Walk	Other	Total
Count	9	0	10	7	11		37

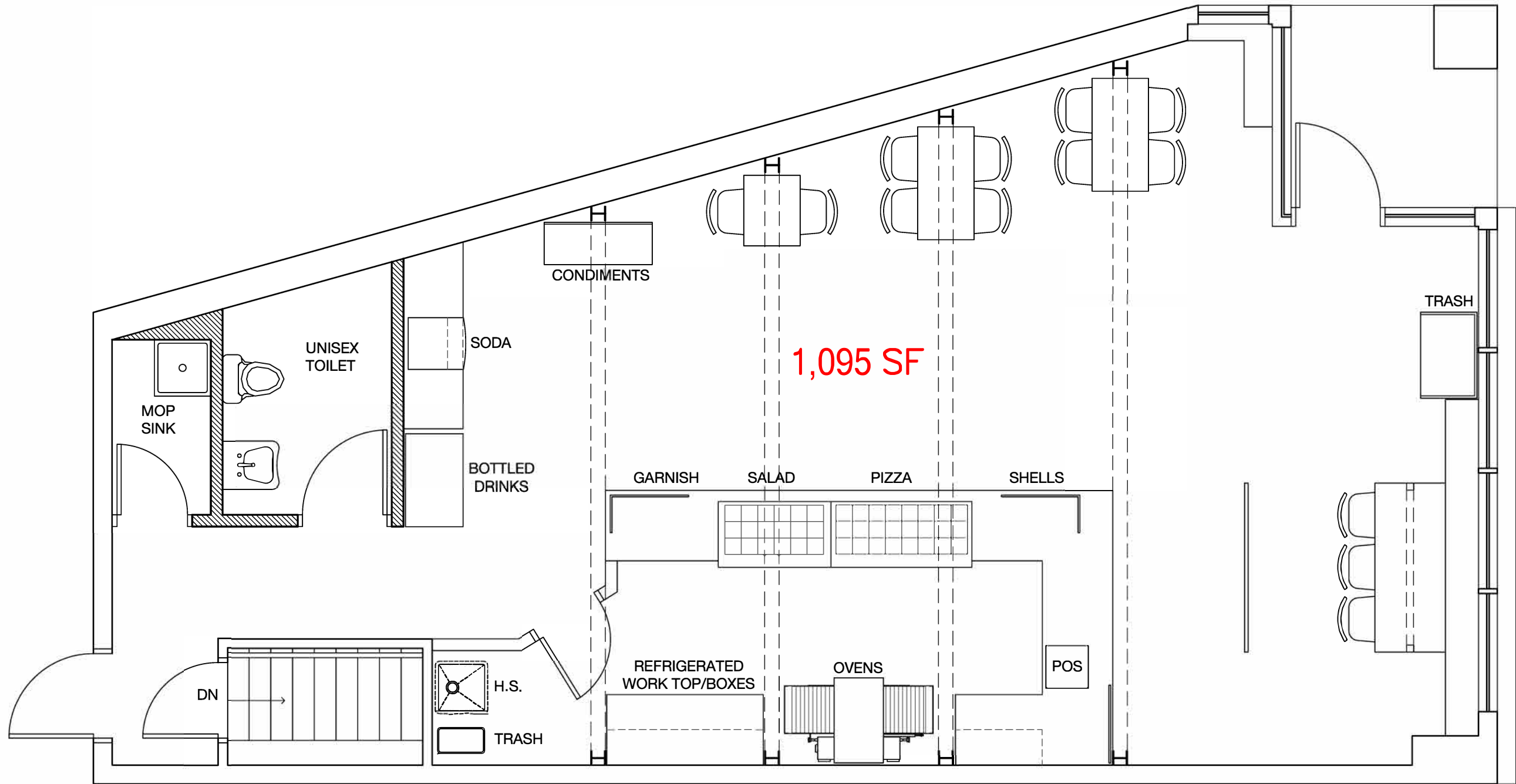
Total Counts	38	2	36	16	43	0	135
Mode Splits	28.1%	1.5%	26.7%	11.9%	31.9%	0.0%	100.0%



OATH PIZZA
280 ELM STREET, STORE 114

DATE: 2015-12-16
TITLE: BASEMENT
SCALE: 1/4"=1'-0"

ANALOGUE STUDIO, LLC
21 DRYDOCK AVENUE, 6TH FLOOR
BOSTON, MA 02210
T|F 617.440.7568
WWW.ANALOGUESTUDIO.COM



OATH PIZZA
280 ELM STREET, STORE 114

DATE: 2015-12-16
TITLE: **FIRST LEVEL**
SCALE: 1/4"=1'-0"

ANALOGUE STUDIO, LLC
21 DRYDOCK AVENUE, 6TH FLOOR
BOSTON, MA 02210
T|F 617.440.7568
WWW.ANALOGUESTUDIO.COM



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COMMUTING CHARACTERISTICS BY SEX

2009-2013 American Community Survey 5-Year Estimates

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.

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.

Subject	Census Tract 3509, Middlesex County, Massachusetts				
	Total		Male		Female
	Estimate	Margin of Error	Estimate	Margin of Error	Estimate
Workers 16 years and over	2,419	+/-232	1,326	+/-198	1,093
MEANS OF TRANSPORTATION TO WORK					
Car, truck, or van	34.4%	+/-6.2	37.0%	+/-8.7	31.1%
Drove alone	32.7%	+/-6.1	34.7%	+/-8.8	30.2%
Carpooled	1.7%	+/-1.1	2.3%	+/-1.6	0.9%
In 2-person carpool	1.3%	+/-0.9	2.3%	+/-1.6	0.0%
In 3-person carpool	0.0%	+/-1.4	0.0%	+/-2.6	0.0%
In 4-or-more person carpool	0.4%	+/-0.7	0.0%	+/-2.6	0.9%
Workers per car, truck, or van	1.03	+/-0.02	1.03	+/-0.03	1.01
Public transportation (excluding taxicab)	47.9%	+/-7.5	41.8%	+/-11.4	55.4%
Walked	8.2%	+/-4.1	9.5%	+/-5.8	6.7%
Bicycle	4.8%	+/-3.8	5.3%	+/-5.7	4.3%
Taxicab, motorcycle, or other means	0.0%	+/-1.4	0.0%	+/-2.6	0.0%
Worked at home	4.7%	+/-2.0	6.4%	+/-3.3	2.6%
PLACE OF WORK					
Worked in state of residence	99.6%	+/-0.7	100.0%	+/-2.6	99.1%
Worked in county of residence	57.9%	+/-6.4	65.8%	+/-9.4	48.3%
Worked outside county of residence	41.7%	+/-6.4	34.2%	+/-9.4	50.8%
Worked outside state of residence	0.4%	+/-0.7	0.0%	+/-2.6	0.9%
Living in a place					
Worked in place of residence	15.7%	+/-5.8	22.4%	+/-9.6	7.5%
Worked outside place of residence	84.3%	+/-5.8	77.6%	+/-9.6	92.5%
Not living in a place	0.0%	+/-1.4	0.0%	+/-2.6	0.0%
Living in 12 selected states					
Worked in minor civil division of residence	15.7%	+/-5.8	22.4%	+/-9.6	7.5%
Worked outside minor civil division of residence	84.3%	+/-5.8	77.6%	+/-9.6	92.5%
Not living in 12 selected states	0.0%	+/-1.4	0.0%	+/-2.6	0.0%
Workers 16 years and over who did not work at home	2,306	+/-239	1,241	+/-208	1,065
TIME LEAVING HOME TO GO TO WORK					
12:00 a.m. to 4:59 a.m.	0.5%	+/-0.8	0.9%	+/-1.5	0.0%
5:00 a.m. to 5:29 a.m.	0.0%	+/-1.5	0.0%	+/-2.8	0.0%

Subject	Census Tract 3509, Middlesex County, Massachusetts				
	Total		Male		Female
	Estimate	Margin of Error	Estimate	Margin of Error	Estimate
5:30 a.m. to 5:59 a.m.	2.1%	+/-1.4	1.0%	+/-1.2	3.5%
6:00 a.m. to 6:29 a.m.	1.4%	+/-1.0	2.7%	+/-1.8	0.0%
6:30 a.m. to 6:59 a.m.	1.6%	+/-1.4	3.0%	+/-2.6	0.0%
7:00 a.m. to 7:29 a.m.	11.4%	+/-3.9	9.8%	+/-6.1	13.2%
7:30 a.m. to 7:59 a.m.	14.8%	+/-4.7	11.9%	+/-6.4	18.1%
8:00 a.m. to 8:29 a.m.	25.7%	+/-6.7	27.2%	+/-8.2	24.0%
8:30 a.m. to 8:59 a.m.	11.0%	+/-3.8	9.5%	+/-4.2	12.8%
9:00 a.m. to 11:59 p.m.	31.4%	+/-7.1	34.1%	+/-8.8	28.4%
TRAVEL TIME TO WORK					
Less than 10 minutes	3.3%	+/-2.0	3.3%	+/-2.7	3.4%
10 to 14 minutes	6.9%	+/-2.9	6.2%	+/-3.5	7.8%
15 to 19 minutes	7.5%	+/-4.3	9.3%	+/-6.8	5.4%
20 to 24 minutes	14.5%	+/-4.7	18.6%	+/-7.0	9.8%
25 to 29 minutes	6.5%	+/-2.6	4.2%	+/-3.1	9.1%
30 to 34 minutes	27.6%	+/-6.9	27.2%	+/-9.5	28.1%
35 to 44 minutes	10.2%	+/-3.7	10.9%	+/-5.0	9.5%
45 to 59 minutes	14.7%	+/-4.8	13.5%	+/-7.3	16.1%
60 or more minutes	8.7%	+/-4.8	6.8%	+/-6.6	11.0%
Mean travel time to work (minutes)	32.4	+/-3.1	29.6	+/-3.0	35.7
VEHICLES AVAILABLE					
Workers 16 years and over in households	2,419	+/-232	1,326	+/-198	1,093
No vehicle available	21.0%	+/-6.5	17.3%	+/-8.0	25.3%
1 vehicle available	45.1%	+/-8.8	42.0%	+/-10.9	48.9%
2 vehicles available	28.3%	+/-8.9	35.6%	+/-12.1	19.4%
3 or more vehicles available	5.7%	+/-4.3	5.1%	+/-3.8	6.4%
PERCENT IMPUTED					
Means of transportation to work	7.9%	(X)	(X)	(X)	(X)
Private vehicle occupancy	10.3%	(X)	(X)	(X)	(X)
Place of work	5.6%	(X)	(X)	(X)	(X)
Time leaving home to go to work	13.1%	(X)	(X)	(X)	(X)
Travel time to work	11.6%	(X)	(X)	(X)	(X)
Vehicles available	3.0%	(X)	(X)	(X)	(X)

Subject	Census Tract 3509, Middlesex County, Massachusetts
	Female
	Margin of Error
Workers 16 years and over	+/-153
MEANS OF TRANSPORTATION TO WORK	
Car, truck, or van	+/-8.9
Drove alone	+/-8.4
Carpooled	+/-1.5
In 2-person carpool	+/-3.1
In 3-person carpool	+/-3.1
In 4-or-more person carpool	+/-1.5
Workers per car, truck, or van	+/-0.04
Public transportation (excluding taxicab)	+/-9.6
Walked	+/-4.7
Bicycle	+/-3.5
Taxicab, motorcycle, or other means	+/-3.1
Worked at home	+/-2.0
PLACE OF WORK	
Worked in state of residence	+/-1.5
Worked in county of residence	+/-9.5
Worked outside county of residence	+/-9.4
Worked outside state of residence	+/-1.5
Living in a place	
Worked in place of residence	+/-4.2
Worked outside place of residence	+/-4.2
Not living in a place	+/-3.1
Living in 12 selected states	
Worked in minor civil division of residence	+/-4.2
Worked outside minor civil division of residence	+/-4.2
Not living in 12 selected states	+/-3.1
Workers 16 years and over who did not work at home	
TIME LEAVING HOME TO GO TO WORK	
12:00 a.m. to 4:59 a.m.	+/-3.2
5:00 a.m. to 5:29 a.m.	+/-3.2
5:30 a.m. to 5:59 a.m.	+/-3.0
6:00 a.m. to 6:29 a.m.	+/-3.2
6:30 a.m. to 6:59 a.m.	+/-3.2
7:00 a.m. to 7:29 a.m.	+/-6.3
7:30 a.m. to 7:59 a.m.	+/-6.4
8:00 a.m. to 8:29 a.m.	+/-7.4
8:30 a.m. to 8:59 a.m.	+/-6.6
9:00 a.m. to 11:59 p.m.	+/-10.5
TRAVEL TIME TO WORK	
Less than 10 minutes	+/-3.0
10 to 14 minutes	+/-4.4
15 to 19 minutes	+/-4.3
20 to 24 minutes	+/-5.1
25 to 29 minutes	+/-4.6
30 to 34 minutes	+/-9.3
35 to 44 minutes	+/-5.7
45 to 59 minutes	+/-6.0
60 or more minutes	+/-6.9
Mean travel time to work (minutes)	+/-5.9

Subject	Census Tract 3509, Middlesex County, Massachusetts
	Female
	Margin of Error
VEHICLES AVAILABLE	
Workers 16 years and over in households	+/-153
No vehicle available	+/-7.8
1 vehicle available	+/-9.0
2 vehicles available	+/-7.2
3 or more vehicles available	+/-5.3
PERCENT IMPUTED	
Means of transportation to work	(X)
Private vehicle occupancy	(X)
Place of work	(X)
Time leaving home to go to work	(X)
Travel time to work	(X)
Vehicles available	(X)

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.

While the 2009-2013 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.

Source: U.S. Census Bureau, 2009-2013 5-Year American Community Survey

Explanation of Symbols:

1. 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.
2. 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.
3. An '-' following a median estimate means the median falls in the lowest interval of an open-ended distribution.
4. An '+' following a median estimate means the median falls in the upper interval of an open-ended distribution.
5. 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.
6. An '*****' entry in the margin of error column indicates that the estimate is controlled. A statistical test for sampling variability is not appropriate.
7. 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.
8. An '(X)' means that the estimate is not applicable or not available.