

MN CORE | **Parking Study**

Department of City Planning | Transportation Division | August 2011

POLICY BACKGROUND

- **1970:** The **Clean Air Act** becomes law, requiring all states to adopt a federally-enforceable **State Implementation Plan (SIP)** to indicate how they will comply with national air quality standards.
- **1973:** NYC adopts a Transportation Control Plan with several measures intended to reduce automobile use, including a goal of reducing off-street parking in the **Central Business District (CBD)** by 40%.
- **1977:** Federal court order instructs the City to implement a parking management strategy in the CBD.
- **1982:** Manhattan Core parking regulations (Article I, Chapter 3 in the ZR) are adopted, with the primary goal of reducing auto use by limiting **commuter parking**.
- **Since 1982:** Air quality in Manhattan has improved and the City has achieved compliance with carbon monoxide standards. This is mostly due to reformulated gasoline and improvements in vehicle pollution controls.

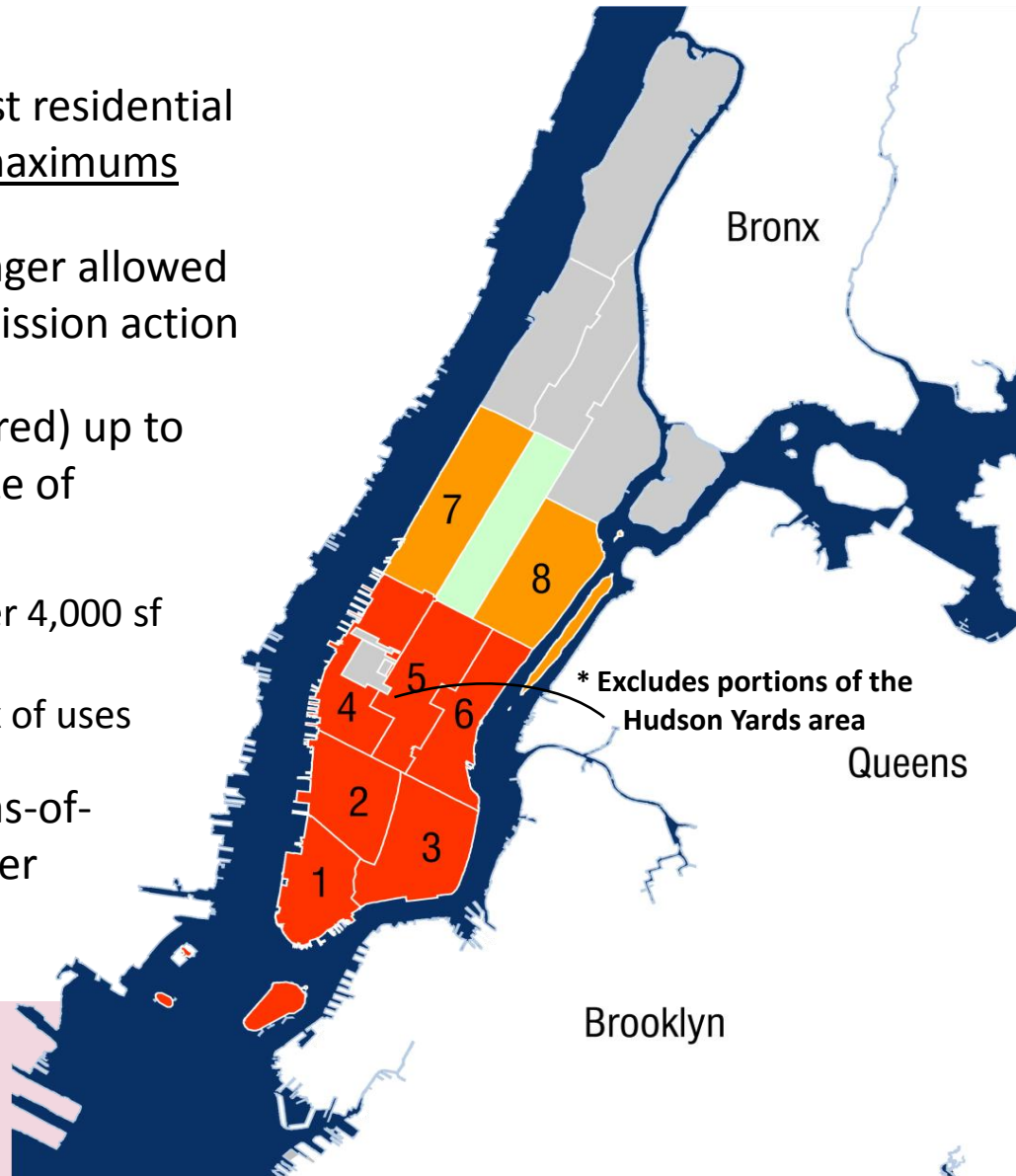


1982 MANHATTAN CORE PARKING REGULATIONS

- Removed parking requirements for most residential developments, replaced with parking maximums
- New parking in existing buildings no longer allowed as-of-right, only by City Planning Commission action
- Accessory parking permitted (not required) up to maximum amount based on use and size of development:
 - Office, retail, manufacturing: one space per 4,000 sf
 - Hotel: 15% of number of rooms
 - No more than 225 total spaces for any mix of uses
- Surface parking lots no longer allowed as-of-right in commuter areas: Midtown, Lower Manhattan, part of West Side

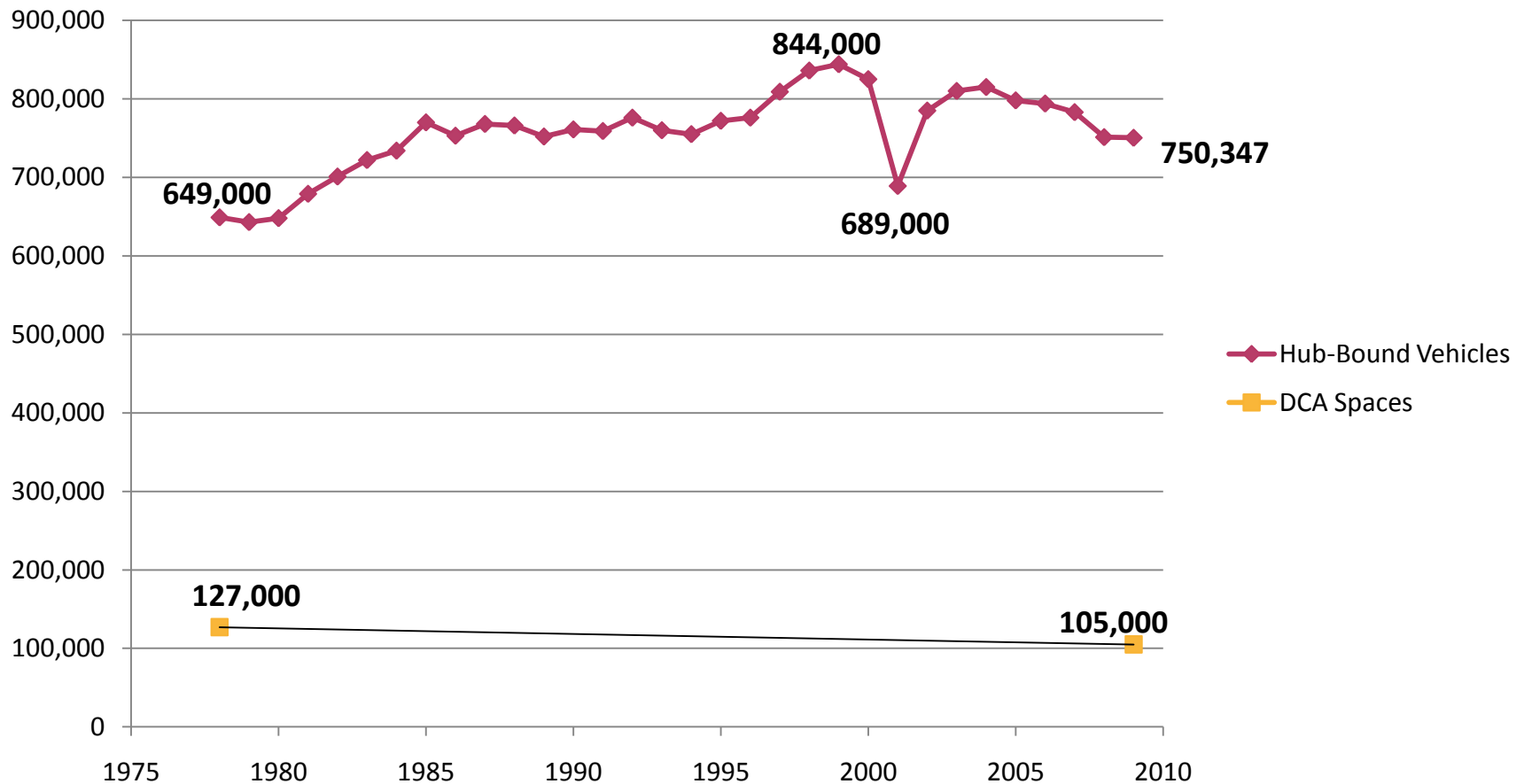
Maximum as-of-right residential parking spaces permitted, as a percentage of dwelling units

- 35% max
- 20% max



EFFECTS OF PARKING POLICIES: TRAFFIC AND PARKING

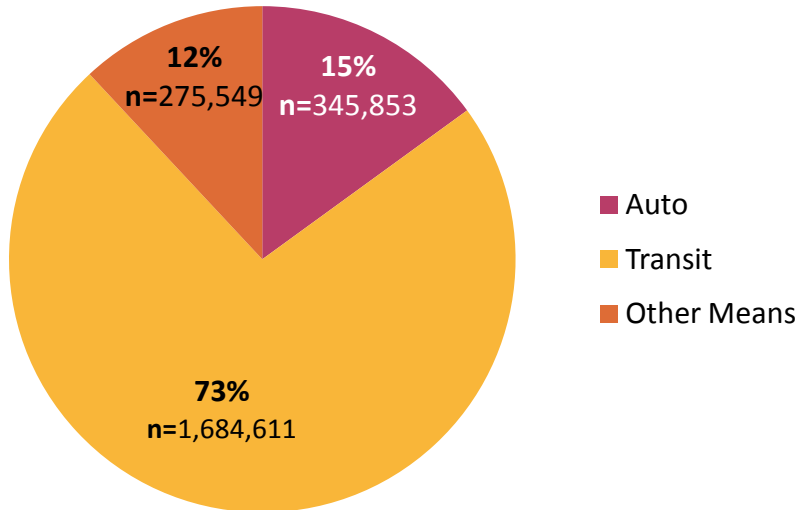
- Supply of public parking *decreased* steadily since 1978, with a 20 percent reduction between 1978 and 2009
- Number of vehicles entering the CBD *increased* by 20 percent between 1982 and 1999. Between 1999 and 2009, the number of hub-bound vehicles decreased by 11 percent but remains above the 1982 number.



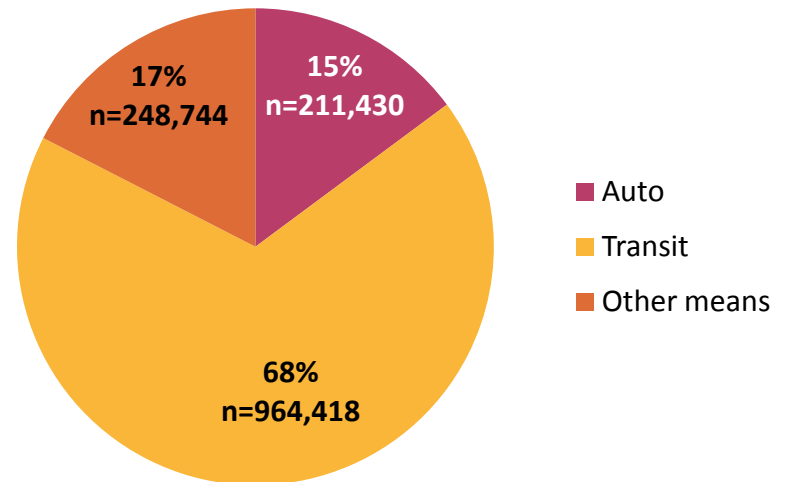
DEMOGRAPHICS: JOURNEY TO WORK

- ACS data indicates that in 2008, 15 percent of Manhattan workers commuted by car.
- Within Manhattan, 15 percent of residents commuted by car.
- The largest mode share for both groups was transit.

MODE OF TRANSPORTATION TO WORK: ALL WORKERS IN MANHATTAN
2006-2008 ACS
n=2,306,013



MODE OF TRANSPORTATION TO WORK: ALL MANHATTAN RESIDENT WORKERS
2006-2008 ACS
n=1,424,592

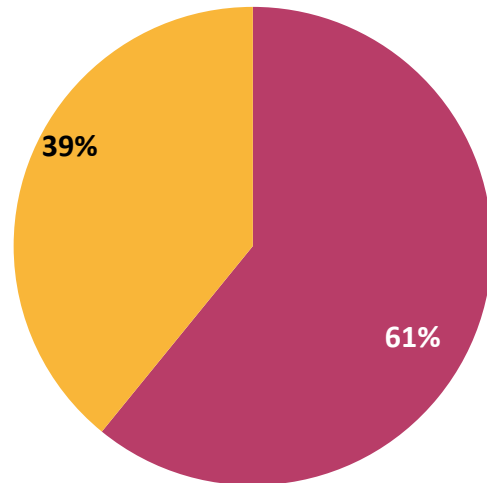




Source: ACS 2006-2008

DEMOGRAPHICS: POPULATION AND VEHICLE AVAILABILITY

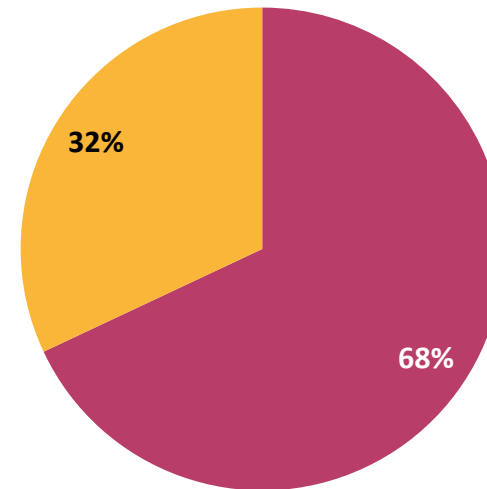
- Since 1980, residents of the Manhattan Core have had a higher increase in population and vehicle availability than Non-Core residents (61 percent of population increase, and 68 percent of vehicle availability increase occurred in Core).



**MANHATTAN POPULATION INCREASE,
1980 to 2006-2008**



-  MN Core study area
(Increase in population = 120,243)
-  Manhattan Non-Core
(Increase in population = 75,697)

**MANHATTAN VEHICLE AVAILABILITY INCREASE,
1980 to 2006-2008**



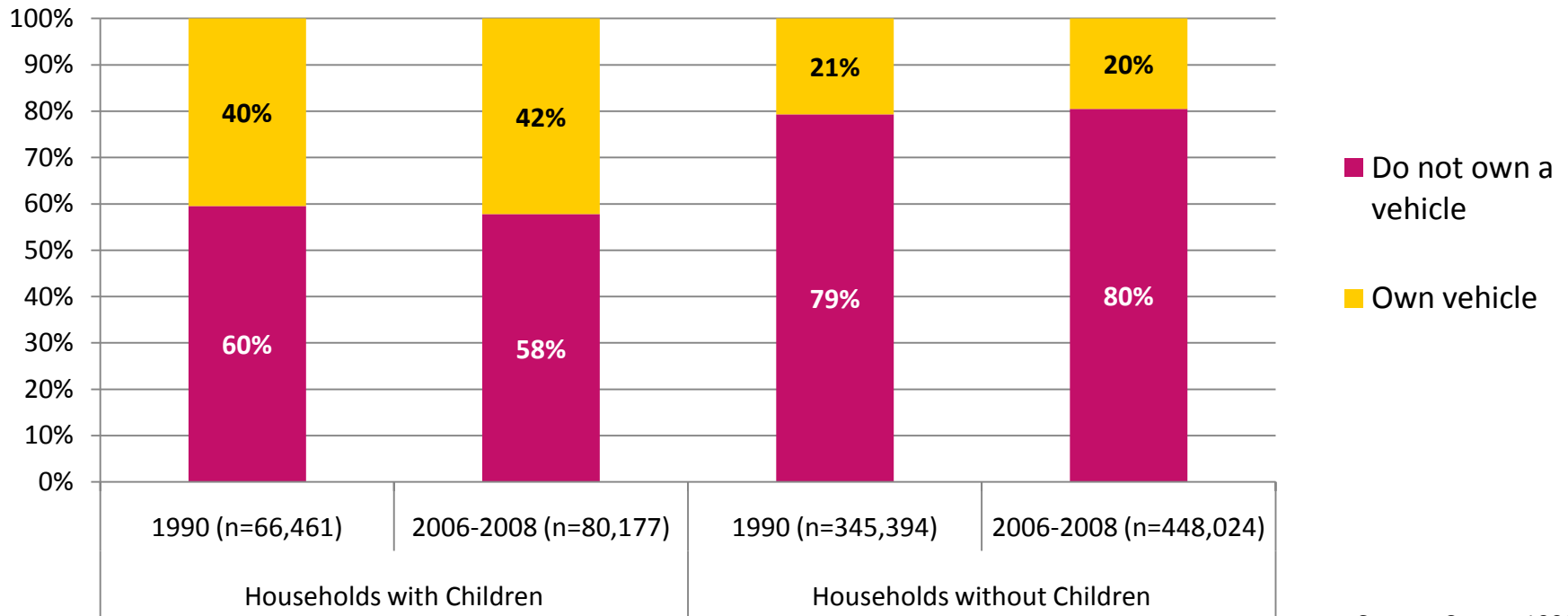
-  MN Core study area
(Increase in households with vehicles available = 26,059)
-  Manhattan Non-Core
(Increase in households with vehicles available = 12,258)

Source: NYC DCP *Socioeconomic Profiles of Population and Housing*: 1980 Census; ACS PUMS 2006-2008

DEMOGRAPHICS: MANHATTAN CORE HOUSEHOLD VEHICLE OWNERSHIP BY FAMILY STATUS (1990 & 2006-2008)

- The 2006-2008 ACS indicates families with children owned vehicles at more than twice the rate (42%) as families without children (20%).

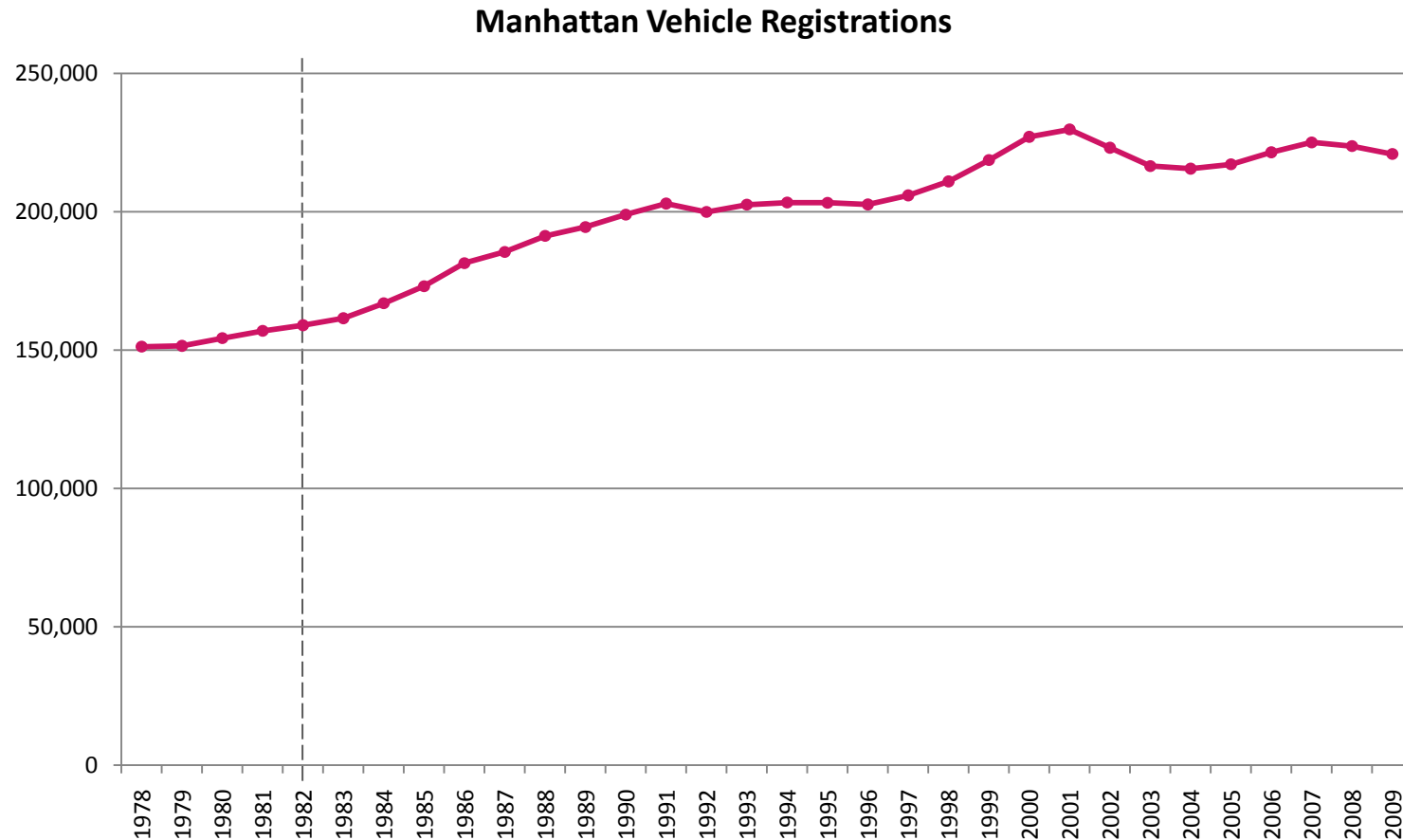
HOUSEHOLD VEHICLE OWNERSHIP BY FAMILY STATUS



Source: Census 1990 and ACS 2006-2008 Full Sample

DEMOGRAPHICS: VEHICLE REGISTRATIONS

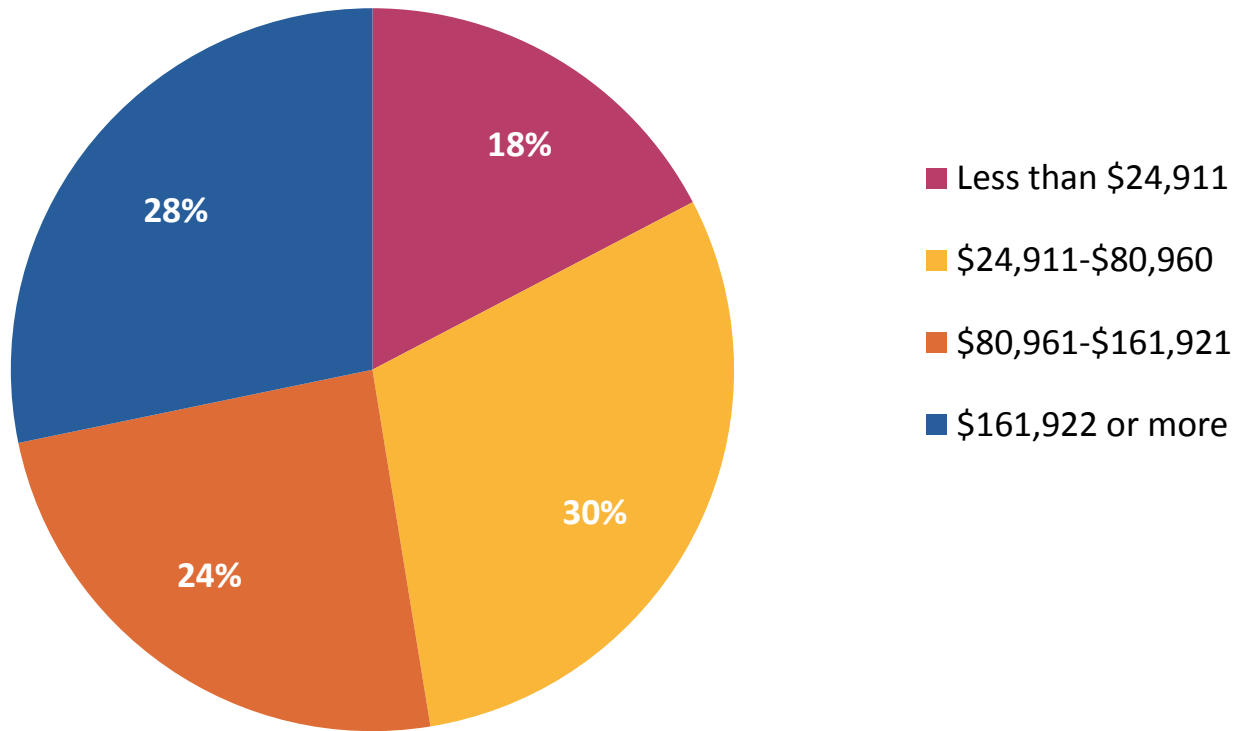
- Vehicle registrations in all of Manhattan increased 39 percent between 1982 and 2009, despite the 1982 policy to reduce parking.
- From 2001 to 2009, Manhattan vehicle registrations declined by nearly 4 percent.



DEMOGRAPHICS: INCOME

- In 2009, over one-third of households in the Manhattan Core earned \$161,922 or more.

Income Distribution of Households in Manhattan Core, 2009
(n=542,534)



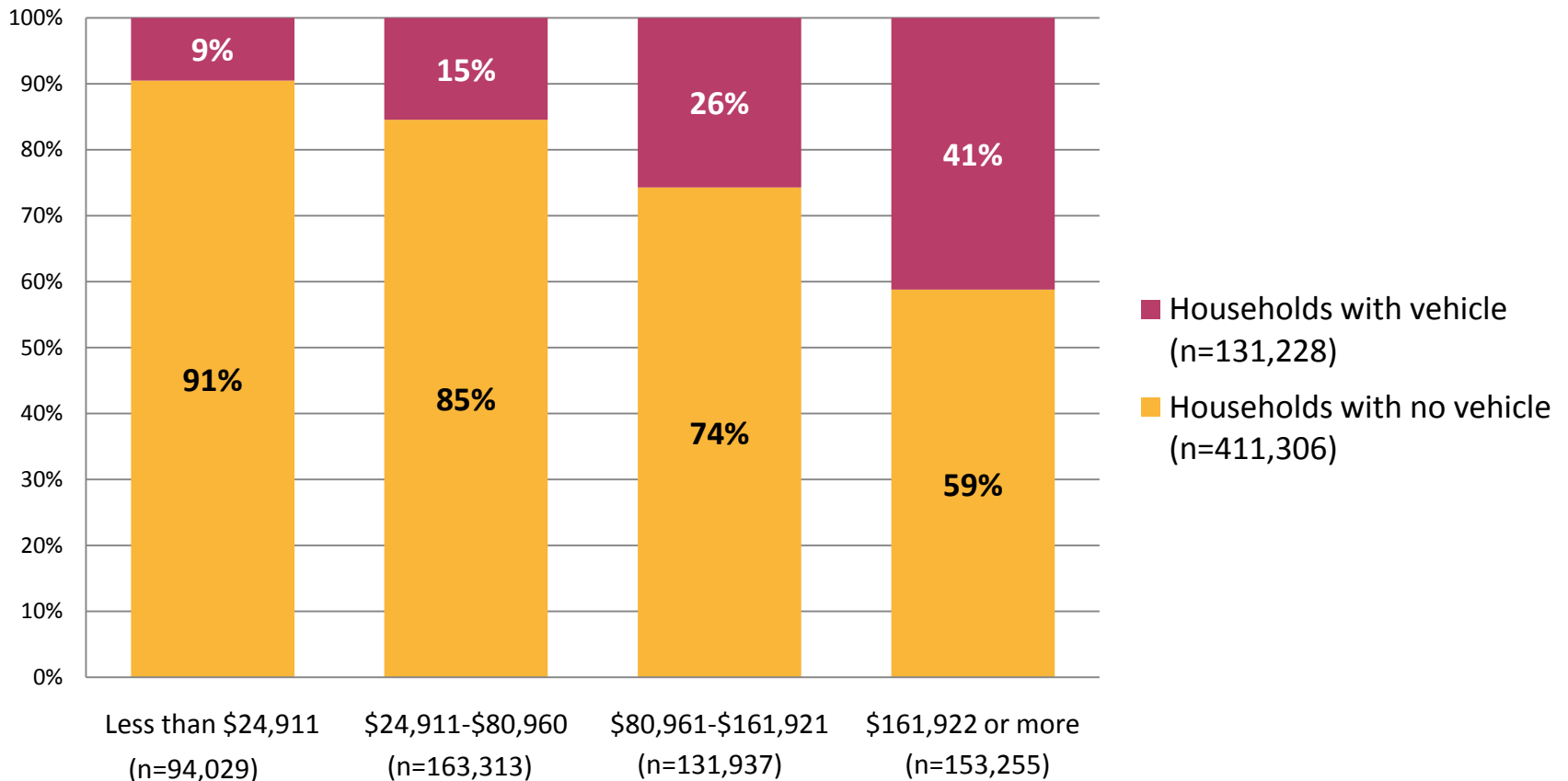
Source: ACS 2009



DEMOGRAPHICS: INCOME

- Overall, 24 percent of MN Core households owned a vehicle in 2009.
- As household income rises in the MN Core, a higher percentage of households own vehicles.

Percent of Households in the Manhattan Core with Vehicles by Household Income, 2009



Source: ACS 2009

OVERVIEW: 2009 MANHATTAN CORE PARKING SURVEY

- Purpose: To better understand how the existing supply of off-street public parking in the Manhattan Core is used, and by whom
- Intercept survey of individual users at 110 public parking garages in the Manhattan Core. Collected 2,871 surveys, approx. 16% of all DCA-licensed spaces in the Core
- Surveyed weekdays 1-3 pm and 4-6 pm and subset of facilities Friday nights 9-11 pm
- 12 questions: purpose of trip, where do you live, how long did you park for, why did you choose this location, why didn't you use transit
- Limitations:
 - Difficulty in capturing monthly parkers, incl. residential parkers
 - Conservative results due to economic downturn



CITY OF NEW YORK
DEPT. OF CITY PLANNING

Manhattan Public Parking Survey

1. Which of the following best describes why you are parking at this location today?

- a. Store car here
 - i. Live in the building
 - ii. Live elsewhere
- b. Work or work-related
 - i. Coming to work
 - ii. Here on business
- c. Entertainment (dining, museums, etc.)
- d. Shopping
- e. Visiting family or friends
- f. Pickup/Deliver Passengers
- g. Pickup/Deliver goods
- h. Medical/Dental appointment
- i. Other

2. What is your home zip code? _____

3. What are your reasons for not taking mass transit today? (Check all that apply)

- a. Timing/Scheduling
 - i. Transit schedule did not fit my needs
 - ii. Transit stops did not fit my needs
 - iii. My trip would require transfers
- b. I need my car for work
- c. I need my car for other reasons
 - i. I am making multiple stops
 - ii. I am carrying packages
 - iii. I am travelling with other people
- d. Cost
 - i. The cost of my trip is subsidized
 - ii. I carpool
- e. Comfort
- f. Other: _____

4. Who is paying for your parking today?

- a. I paid the cost
- b. My parking is subsidized or fully paid by one or more of the following (check all that apply):
 - i. Employer
 - ii. Client
 - iii. Merchant
 - iv. Other: _____

5. Are you a monthly parker? If not, how long were you parked at this location?

- a. I am a monthly parker
- b. Less than 1 hour
- c. 1-3 hours
- d. more than 3 hours- less than 12 hours
- e. more than 12 hours- less than 24 hours
- f. 24 hours or more, but not monthly

6. Including yourself, how many people were in your car on this trip? _____

7. Why did you park at this location? (Check all that apply)

- a. It is close to where I live
- b. It is close to where I was going
- c. Affordable price
- d. It was the first place I saw
- e. I am reimbursed for parking costs at this particular garage
- f. Other: _____

8. How did you return to this parking location from your destination?

- a. Walked
- b. Biked
- c. Subway/Bus
- d. Taxi
- e. I live/work in the building
- f. Other: _____

9. How long did this take?

- a. Less than 5 minutes
- b. 5 to 15 minutes
- c. More than 15 minutes

10. If you live in Manhattan, how many times did you use your car in the last month? _____

11. If you do not live in Manhattan, how many trips did you make into Manhattan in the last month? _____

- a. Of those trips, how many were by car? _____
- b. How many were by another form of transportation? _____

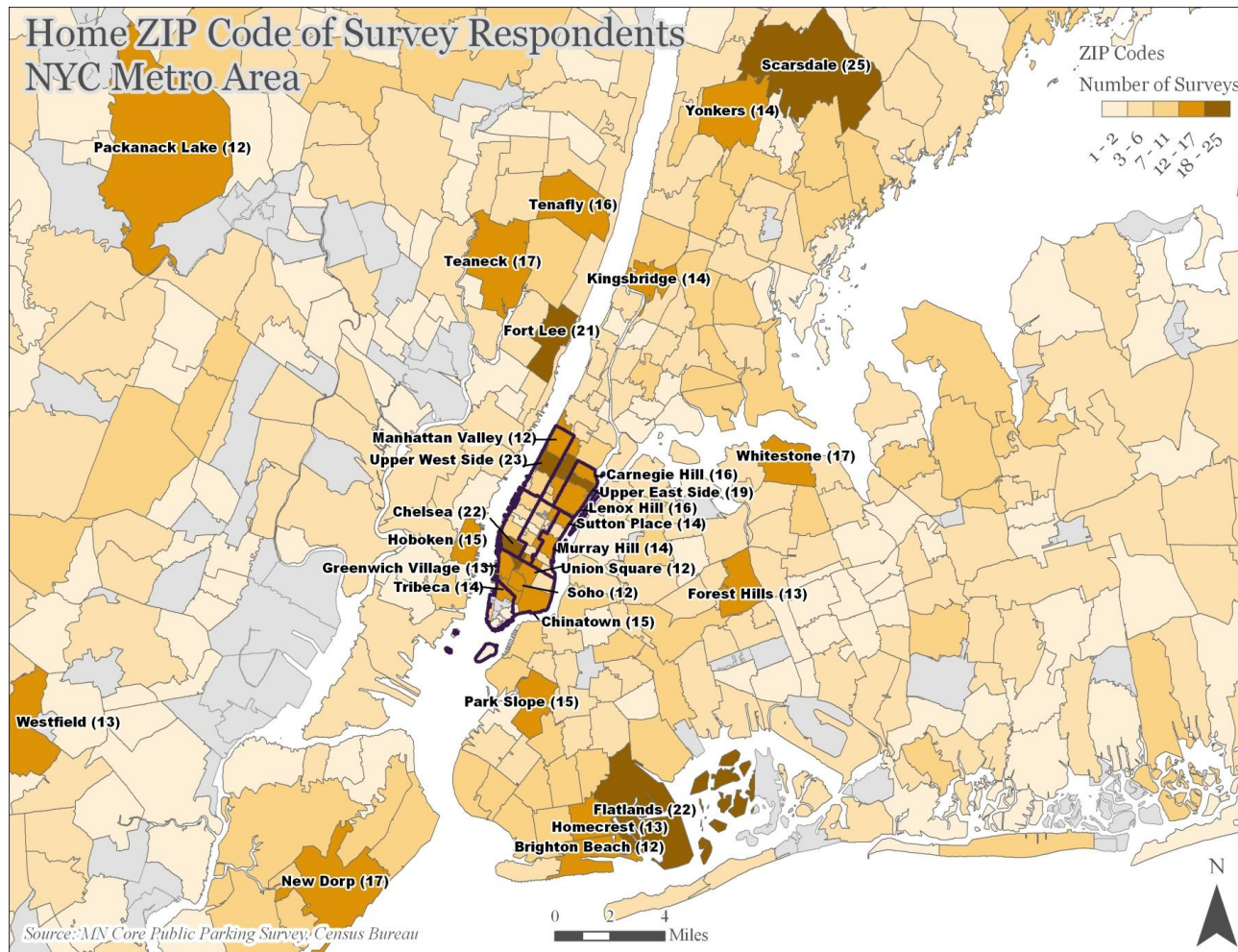
12. Which category best describes your occupation?

- a. Construction/Maintenance
- b. Management/Executive
- c. Professional/Technical
- d. Sales
- e. Secretarial/Clerical/Administrative
- f. Services
- g. Transportation/Materials Moving
- h. Student
- i. Other (including homemaker, not employed, or retired)



SURVEY FINDINGS: ORIGIN OF USERS

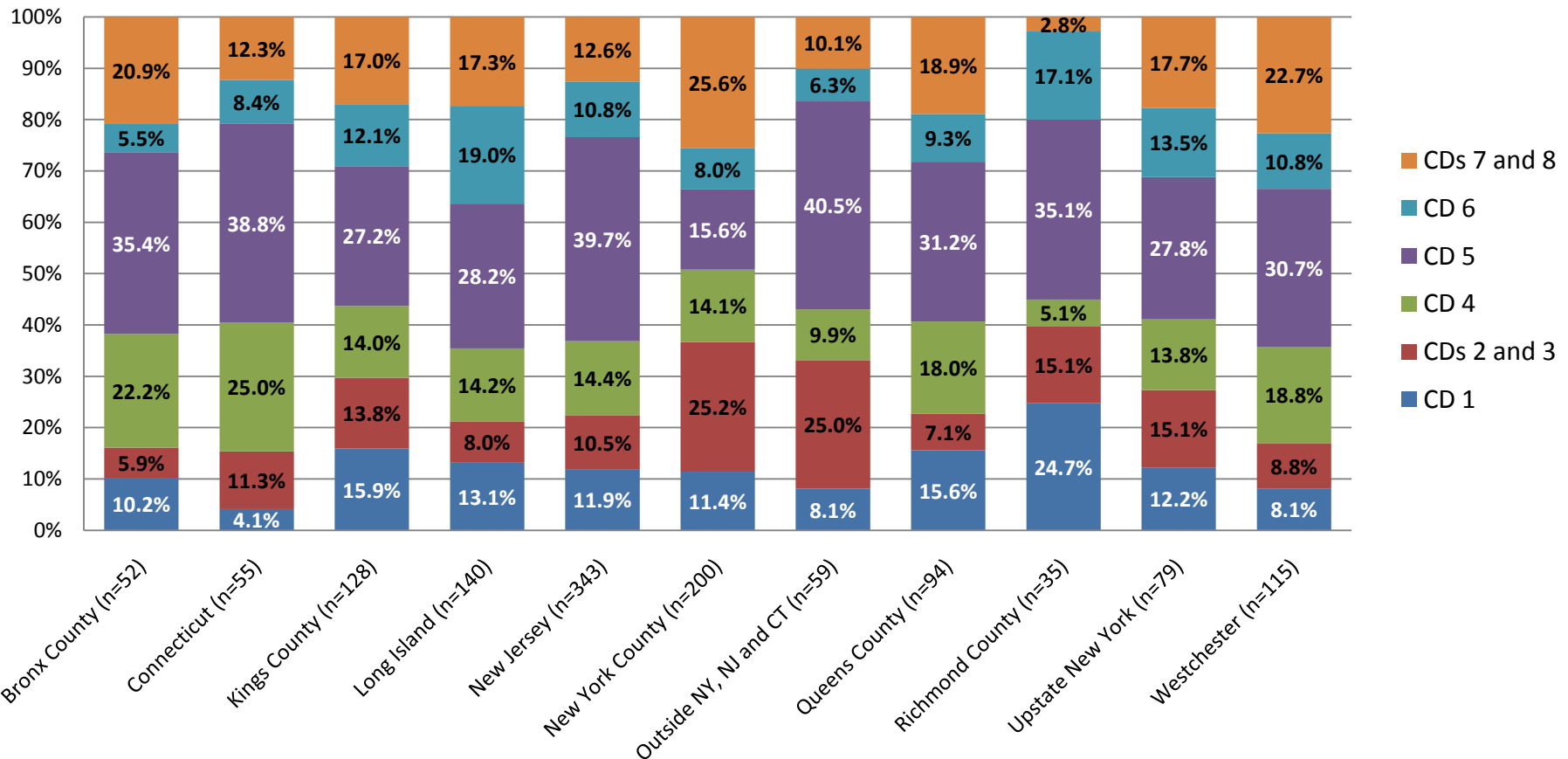
- Respondents' home ZIP codes were dispersed across the NYC region. No more than 25 respondents lived in the same ZIP code.
- Nearly 3/4 of the respondents lived in the other four boroughs, New Jersey, or in NYC suburbs.



SURVEY FINDINGS: ORIGIN OF USERS

- Respondents from Staten Island, Brooklyn and Queens used the greatest share of parking locations in CD1.
- Respondents from all geographies (except Manhattan) were most likely to park in CD5 facilities.

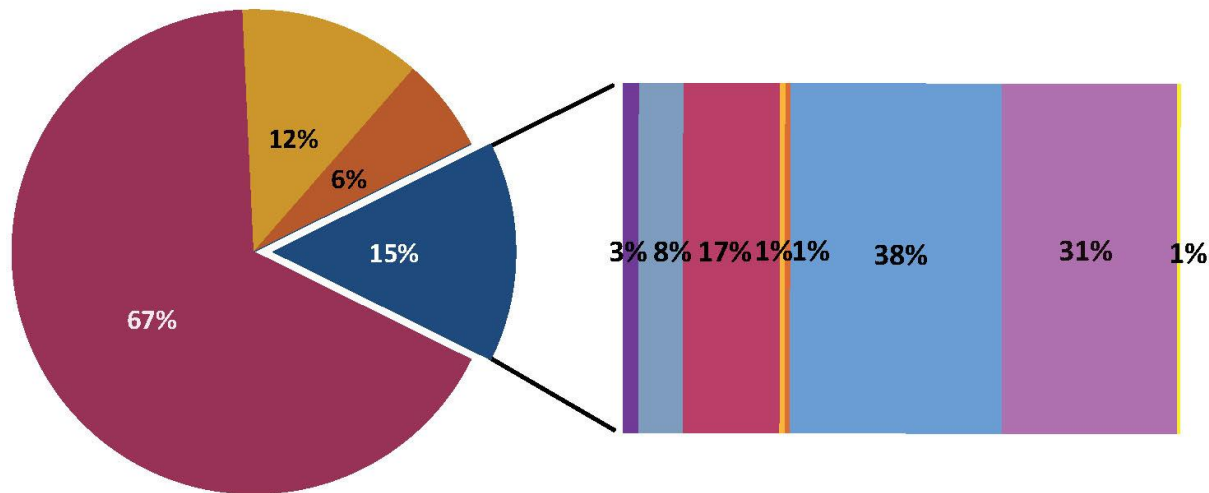
Parking Location by Place of Origin (n=1,300)



SURVEY FINDINGS: TRIP PURPOSE (USER GROUPS)

- Two-thirds of respondents used their vehicles for commuting or business-related reasons.
- Approximately one-eighth cited entertainment or shopping.
- Residential and monthly users were a relatively small proportion of respondents.
- Of respondents citing other reasons, a plurality (38%) had a medical or dental appointment.

TRIP PURPOSE (n=1,317)



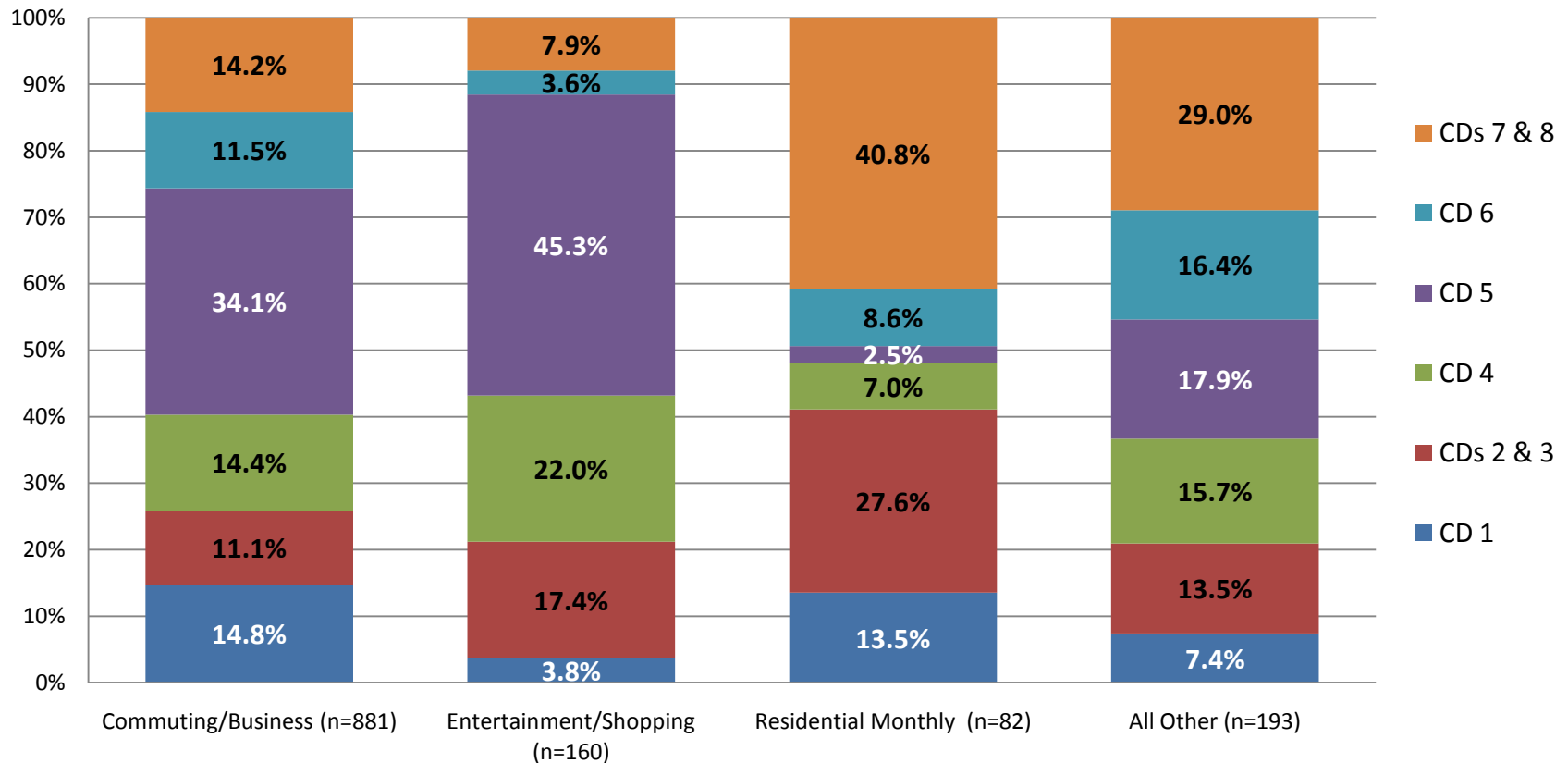
■ Commuting/Business (n=881)
■ Entertainment/Shopping (n=160)
■ Residential Monthly (n=82)
■ All Other (n=193)

■ Store car here-Live in the building (n=5)
■ Store car here-Live elsewhere (n=16)
■ Visiting family or friends (n=33)
■ Pickup/Deliver Passengers (n=2)
■ Pickup/Deliver Goods (n=2)
■ Medical/Dental appointment (n=74)
■ Other (n=60)
■ Missing Trip Reason (n=1)

SURVEY FINDINGS: Destination of Users

- Commuting and business users made up the largest share in all study areas.
- Most residents and “other users” parked in residential districts.
- A plurality of entertainment users parked in CD5.

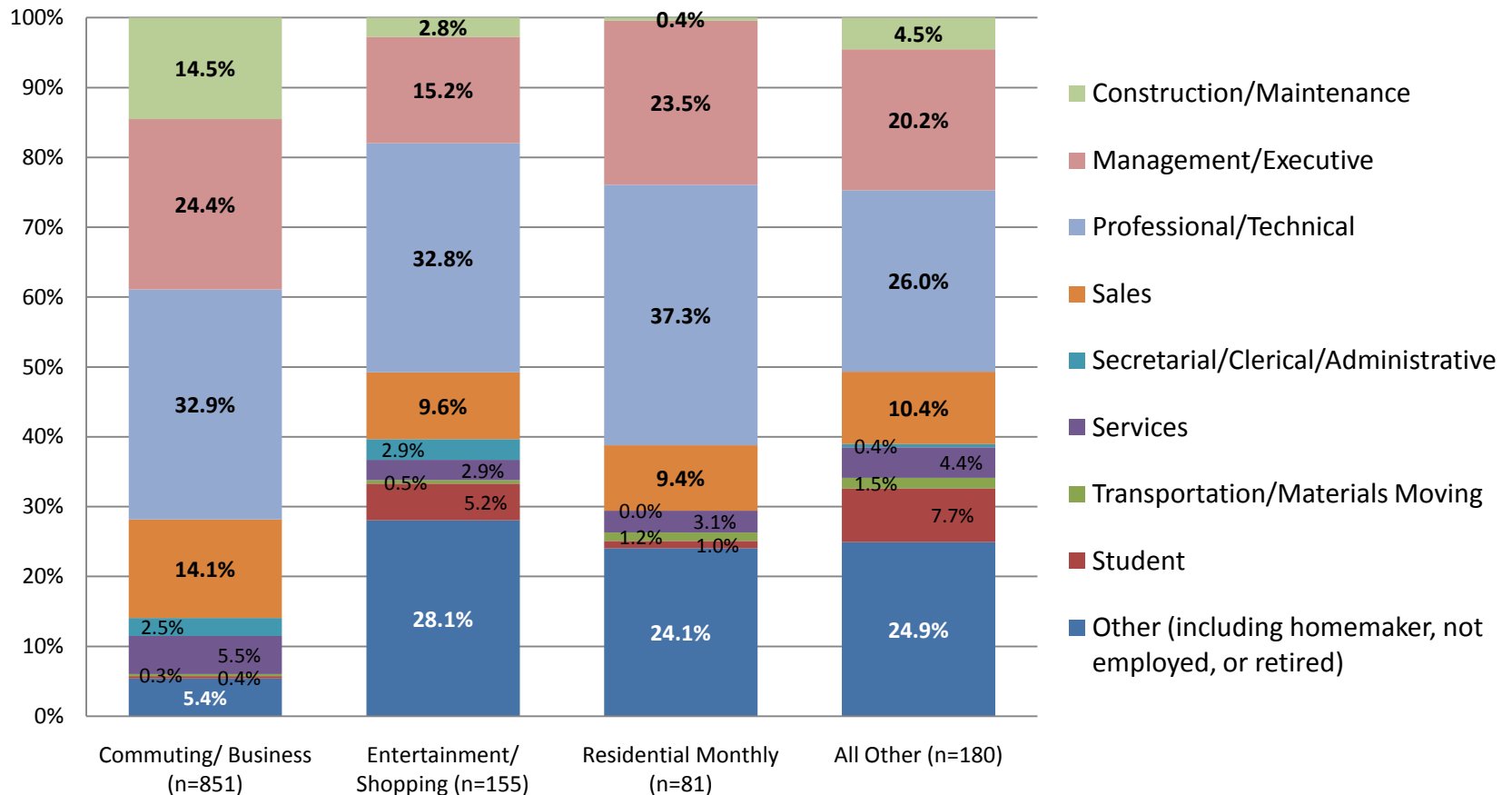
Garage Location by Trip Purpose (n=1,317)



SURVEY FINDINGS: Occupation of Users

- Most public parking users are employed in professional/technical or management occupations.
- Almost 1/3 of the commuting and business users are employed in the construction and sales occupations.

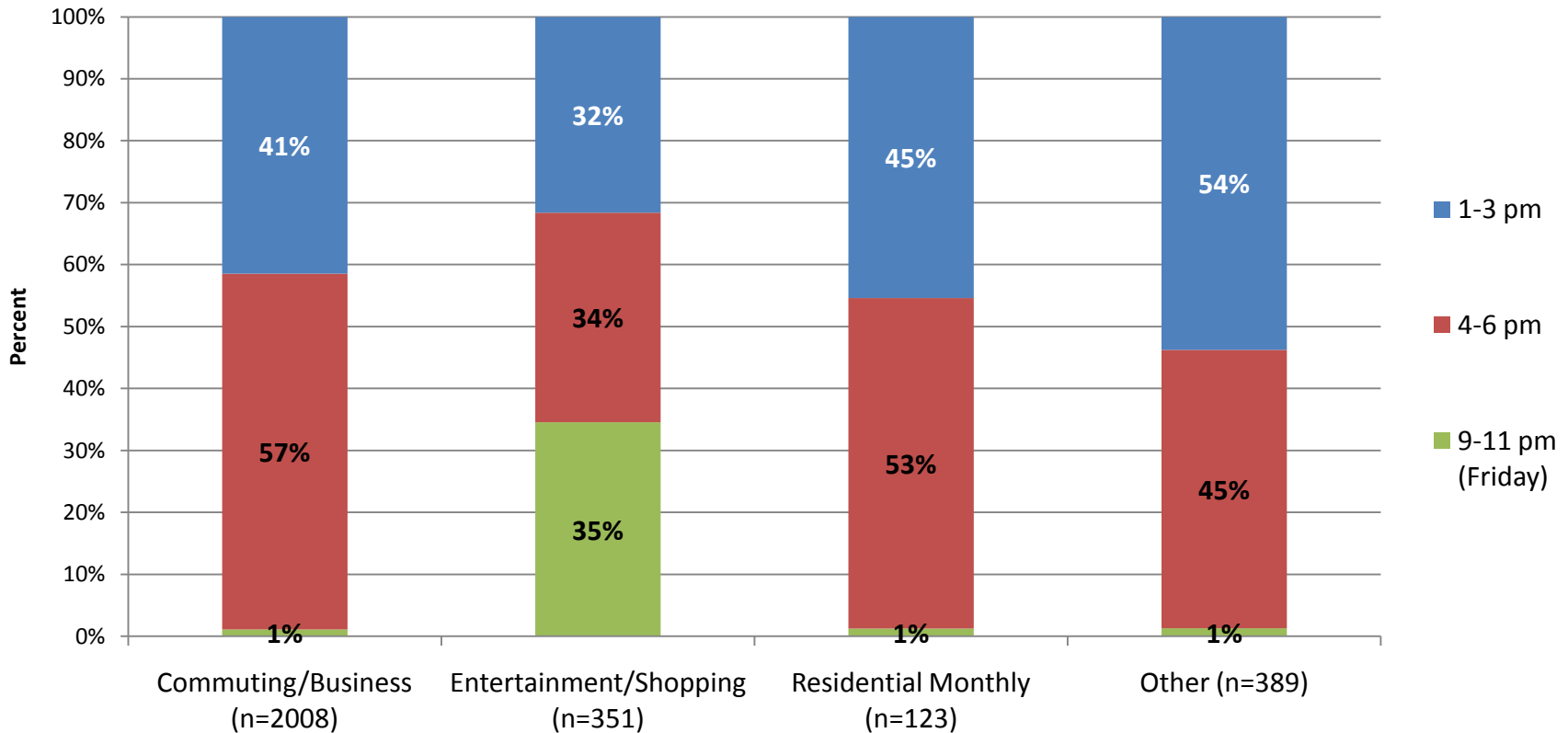
Occupation (n=1,267)



SURVEY FINDINGS: TIME OF DAY SURVEYED

- Time of day for garage usage varied most among entertainment and shopping users, with the largest percentage traveling on Friday evenings.
- Commuting and business users and residential monthly users were surveyed with the most frequency during peak hours.

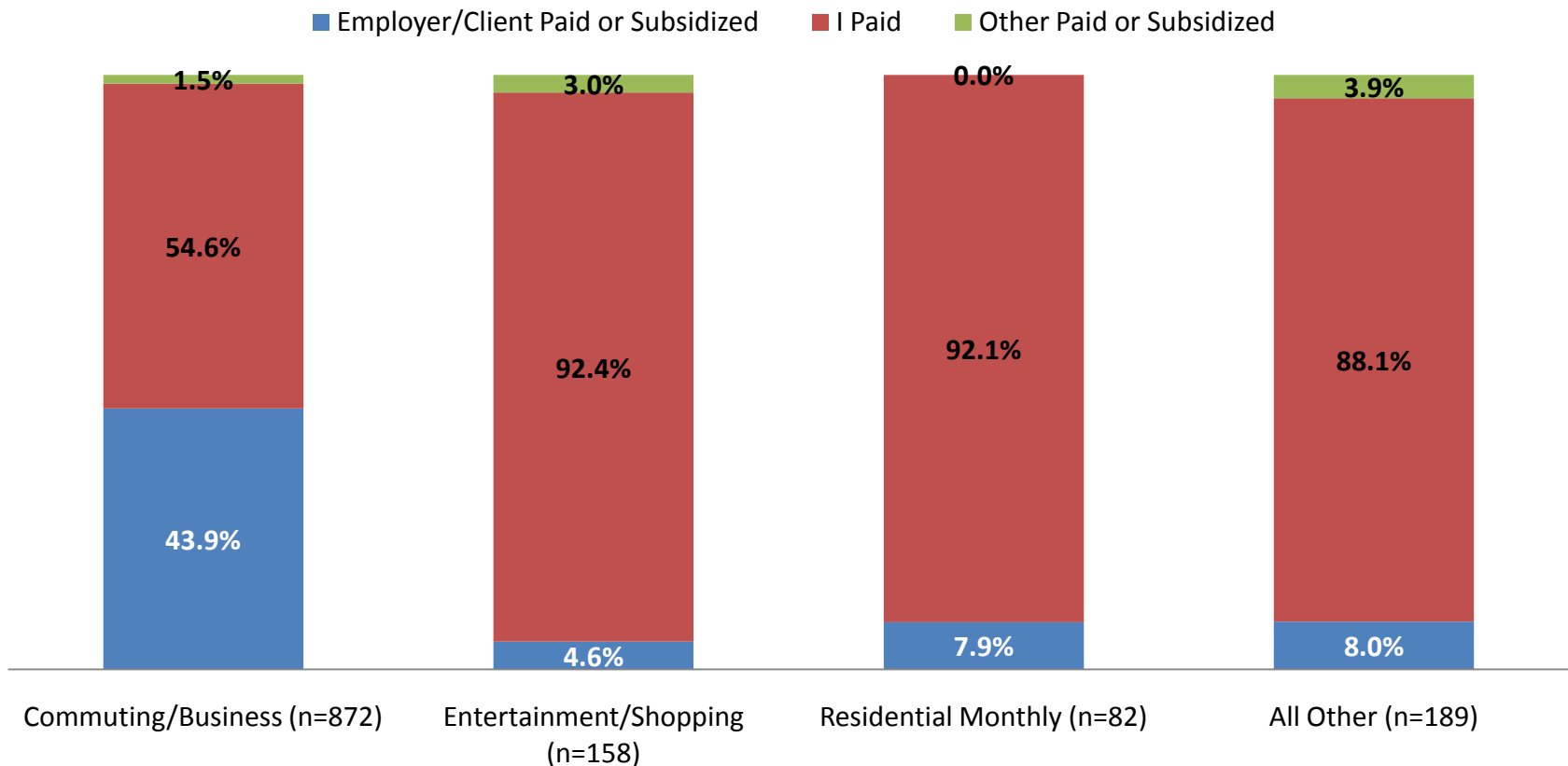
Time Surveyed (n=1,316)



SURVEY FINDINGS: WHO PAID FOR PARKING

- Commuting and business users had the highest percentage of trips paid for or subsidized by an employer or client.
- Sales made up the largest occupation group of commuting and business users that did not pay for their own parking.

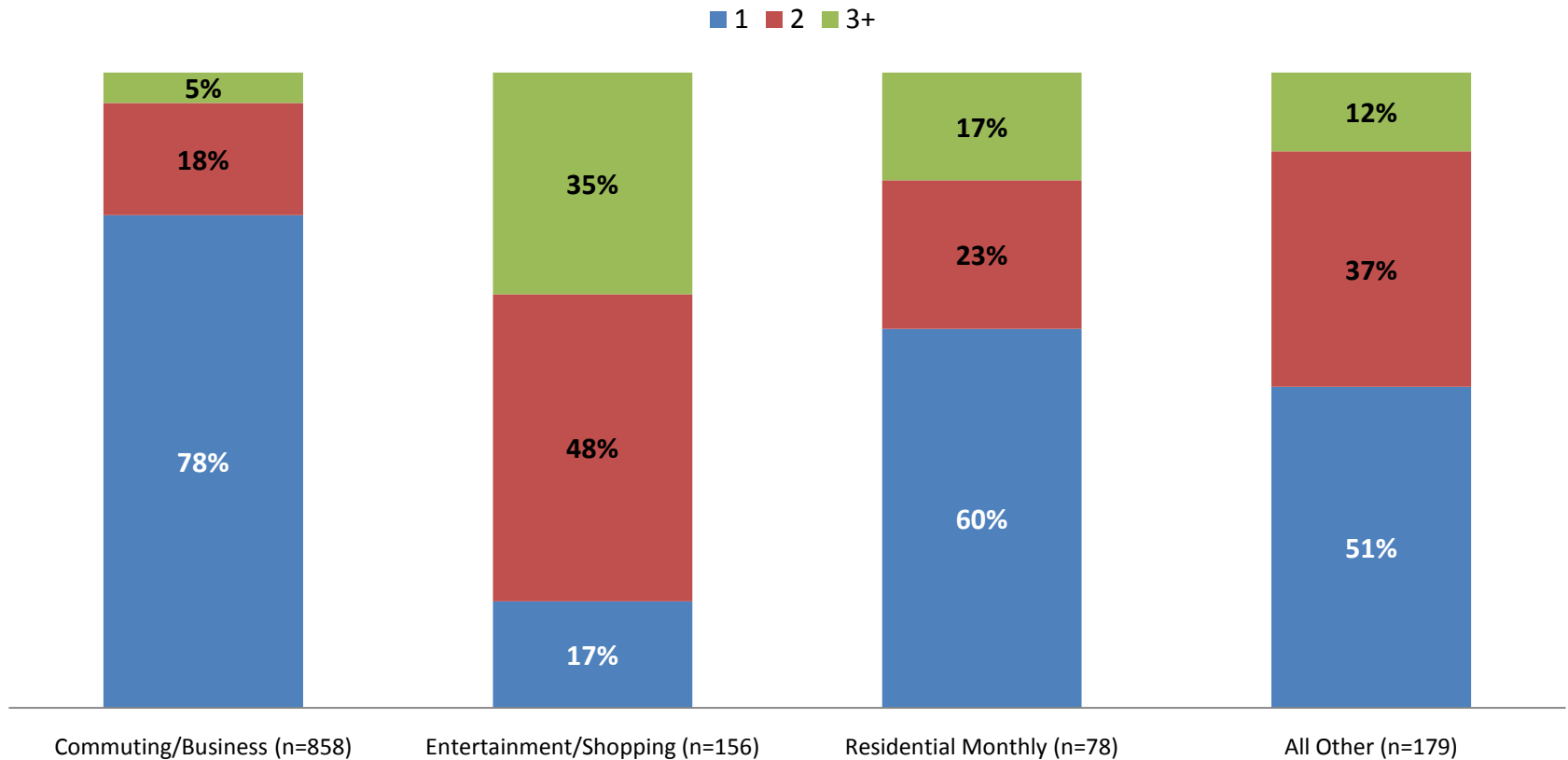
Who Paid for Parking (n=1,301)



SURVEY FINDINGS: VEHICLE OCCUPANCY

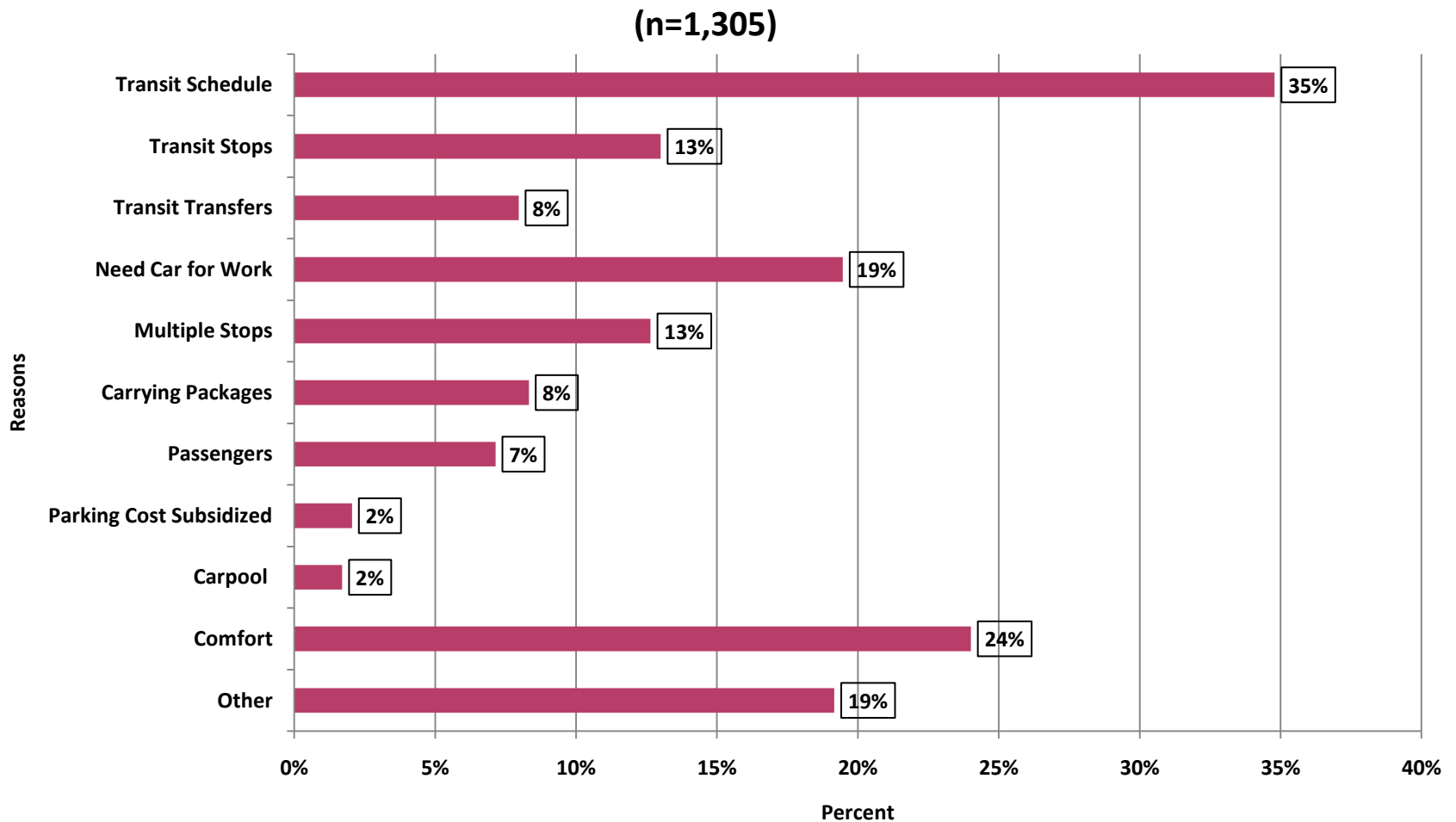
- Entertainment users had the lowest percentage of single occupied vehicles and were the most likely to travel in large groups.
- Over three-fourths (78%) of commuting/business users drove alone.

Vehicle Occupancy (n=1,271)



SURVEY FINDINGS: REASONS FOR NOT TAKING TRANSIT

- Over 1/3 of all respondents cited transit schedules not fitting their needs.
- Almost 1/4 of all respondents cited comfort as a reason for not taking transit.

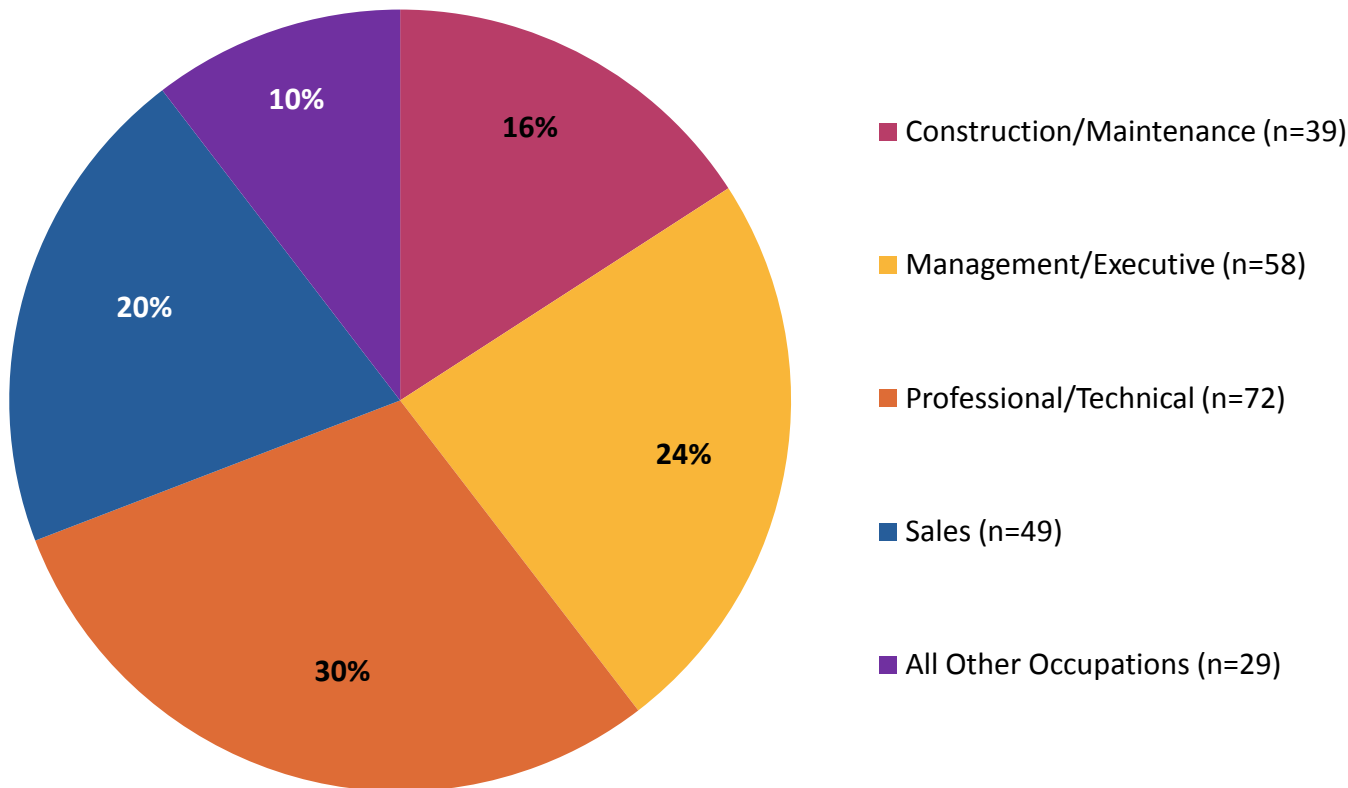


Note: This is a “check all that apply” question

SURVEY FINDINGS: REASONS FOR NOT TAKING TRANSIT

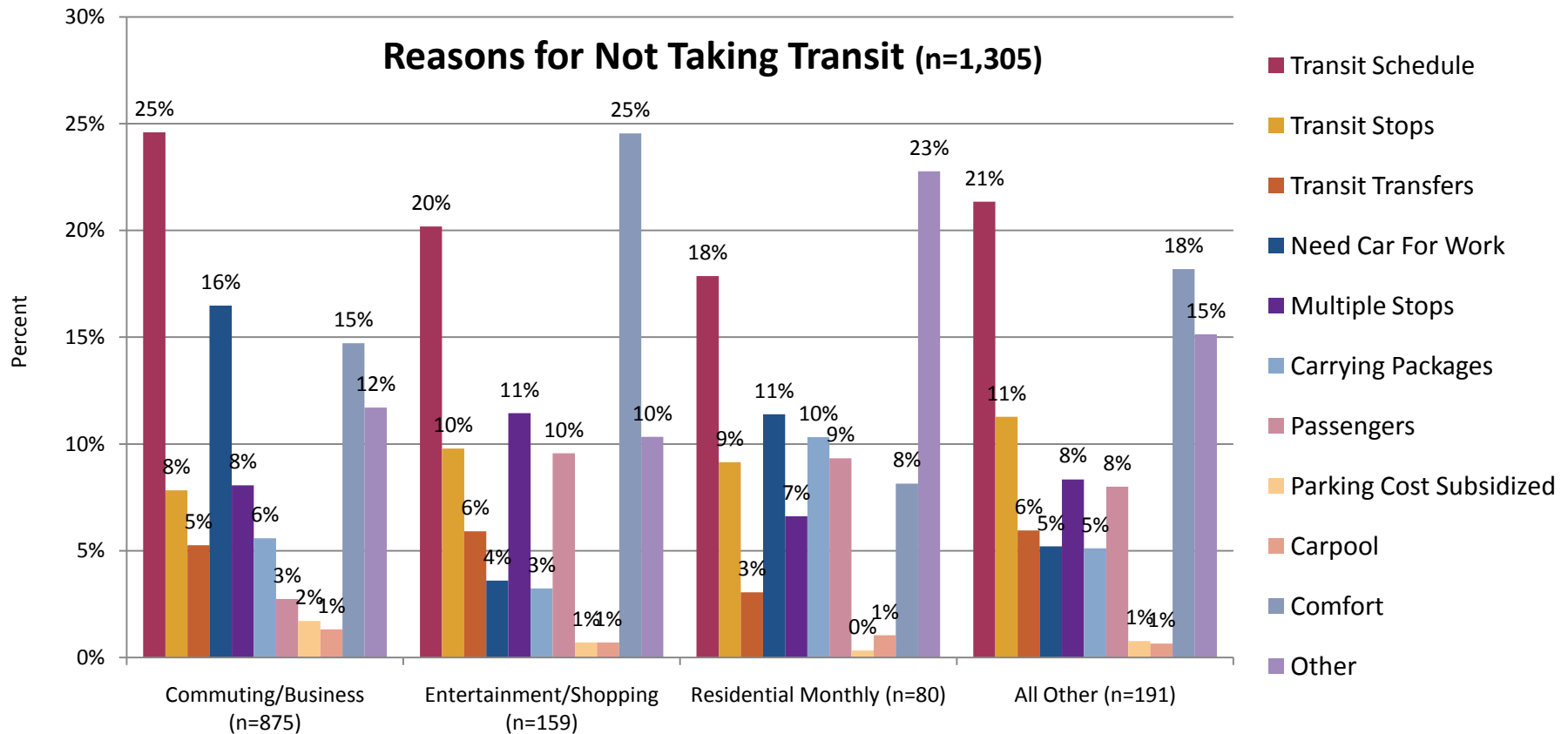
- In addition to users employed in professional/technical and management occupations, a large share of respondents who said they need their car for work were employed in construction and sales.
- These findings suggest that users employed in such occupations are less flexible in car usage.

Need Car For Work by Occupation (n=248)



SURVEY FINDINGS: REASONS FOR NOT TAKING TRANSIT

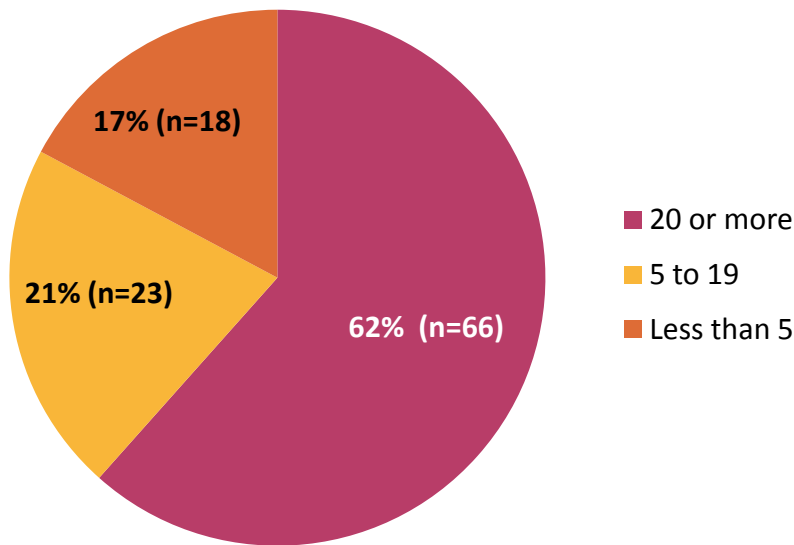
- Commuting and business users most frequently cited transit schedule and needing their car for work as reasons for not taking transit.
- A quarter of entertainment and shopping users cited carrying packages as a reason for not taking transit.
- Residential *monthly* users most frequently cited transit schedules and other as reasons for not taking transit.



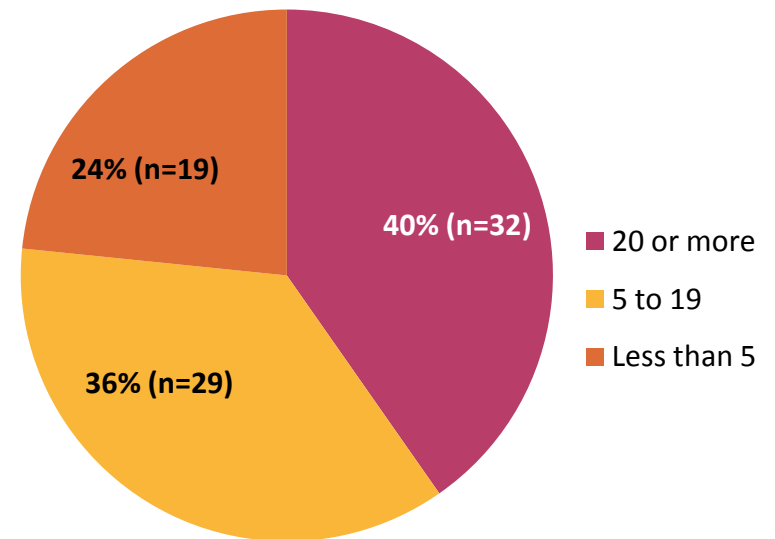
SURVEY FINDINGS: NUMBER OF VEHICLE TRIPS IN LAST MONTH FOR MANHATTAN RESIDENTS

- About 1/4 (24%) of *residential monthly parkers* indicated they used their car less than five times in the prior month.
- Manhattan residents who were not *residential monthly parkers* had a higher incidence of driving 20 times or more in the prior month.

**Manhattan Residents:
Number of Vehicle Trips in the Past Month
(n = 107)**



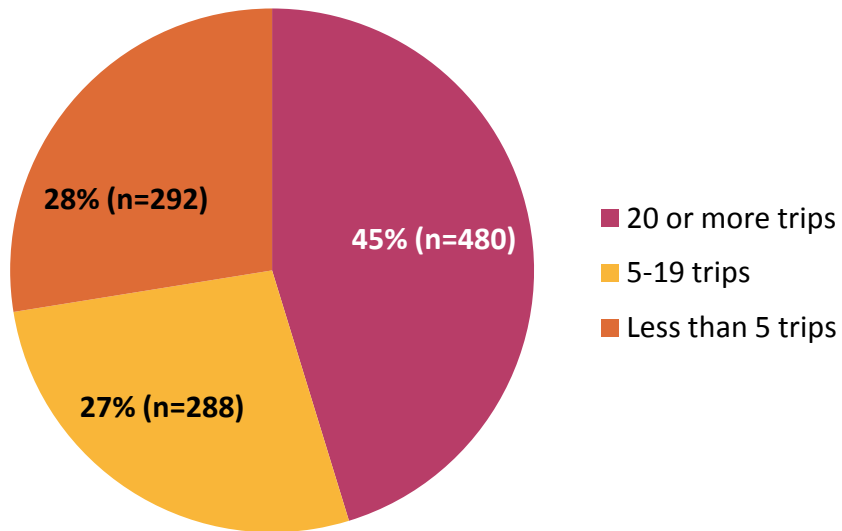
**Residential *Monthly Parkers*:
Number of Times Used Car in the Past Month
(n=80)**



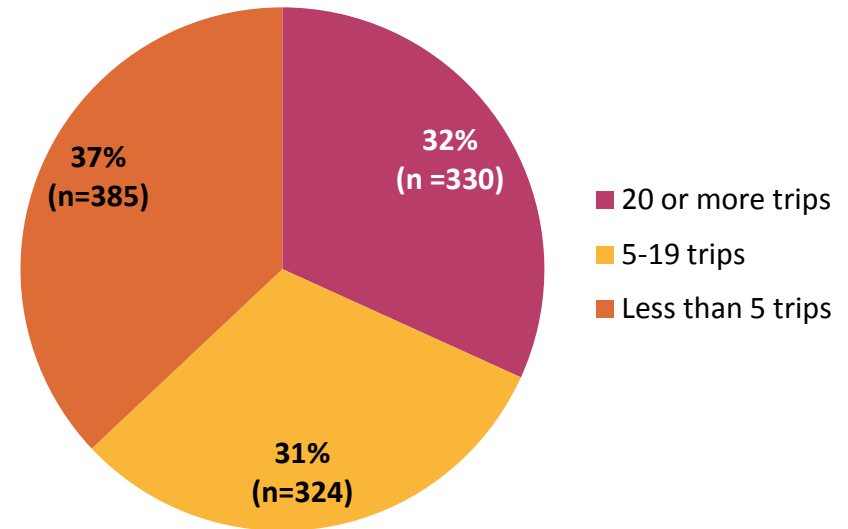
SURVEY FINDINGS: NUMBER OF VEHICLE TRIPS IN LAST MONTH FOR NON-MANHATTAN RESIDENTS

- Forty-five percent of non-residents indicated they traveled to Manhattan 20 times or more in the past month, but only 32 percent did so by motor vehicle.
- These findings indicate there may be some flexibility in car use among non-residential commuters.

**Non-Residents:
Number of Trips to Manhattan in the Past Month – Including All Modes (n=1,060)**



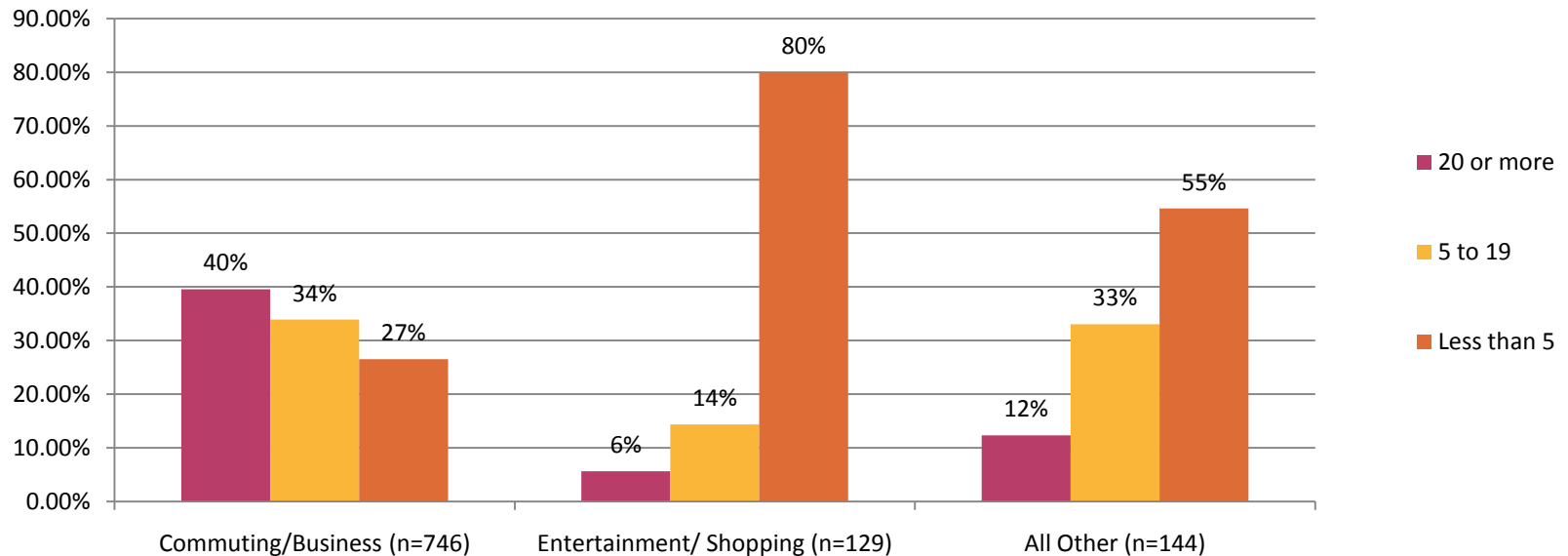
**Non-Residents:
Number of Vehicle Trips to Manhattan in the Past Month (n =1,039)**



SURVEY FINDINGS: NUMBER OF VEHICLE TRIPS IN LAST MONTH

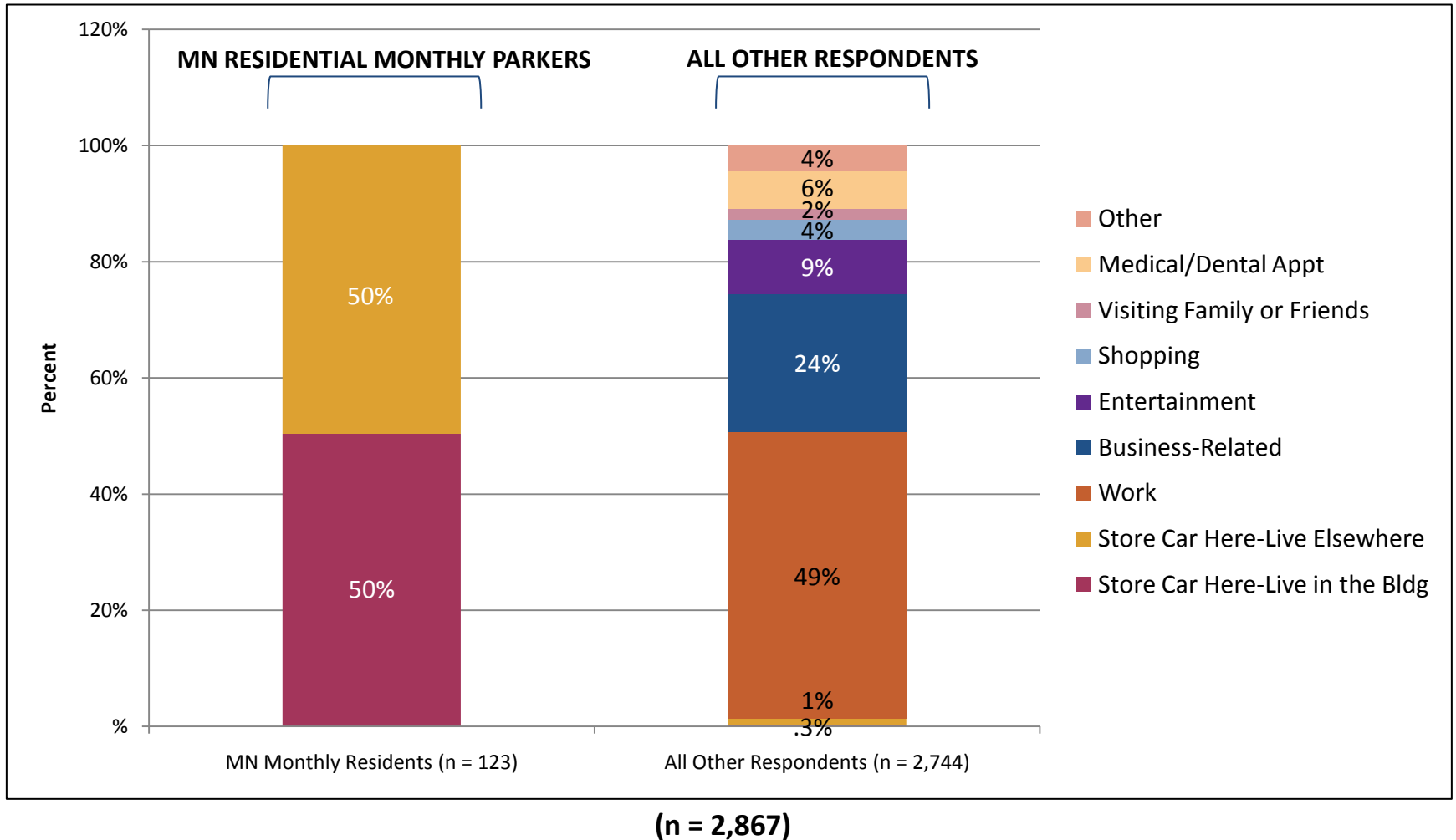
- Eighty percent of **entertainment and shopping** users indicated they drove into Manhattan less than five times in the prior month.
- **Commuting and business** users indicated varying frequencies of travel to Manhattan, with 40% making 20 or more trips.

**Non-Manhattan Residents:
Number of Vehicle Trips into Manhattan in the Past Month** (n=989)



MN CORE SURVEY DATA: REASON FOR PARKING IN A FACILITY

- Half of the MN residential monthly parkers stored their cars in surveyed facilities and lived in the building.



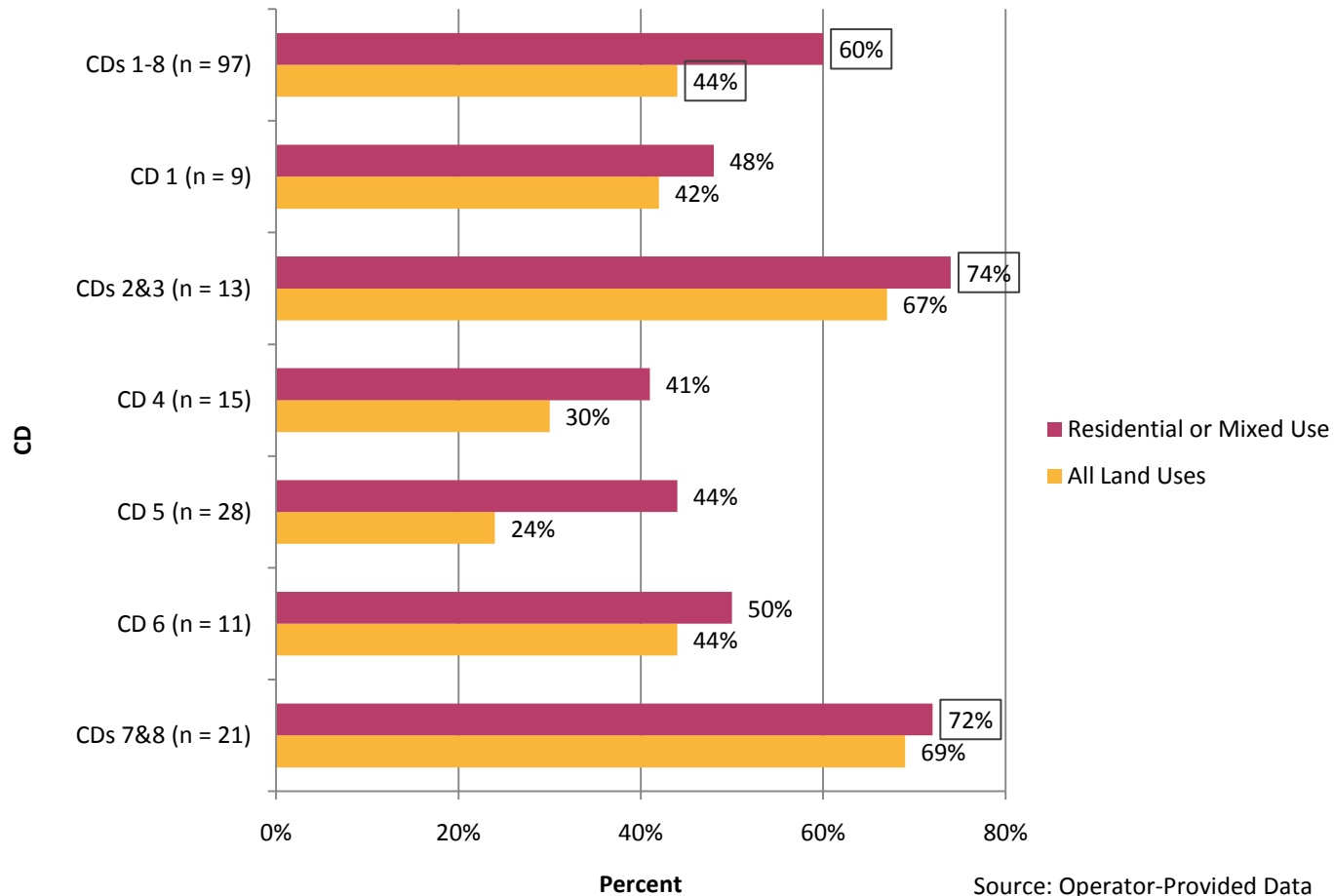
MN RESIDENTS: OPERATOR-PROVIDED DATA

- For 97 of the surveyed facilities where data was available, 44% of spaces were leased to MN residential monthly parkers in the Core.
- Sixty percent of spaces in residential or mixed-use buildings were leased to MN residential monthly parkers (over 70% in CDs 2&3 and CDs 7&8).



OPERATOR-PROVIDED DATA: PERCENT OF SPACES LEASED TO MN RESIDENTIAL MONTHLY PARKERS

- Within the MN Core, 60% of surveyed DCA spaces in residential or mixed-use buildings were leased to MN residential monthly parkers. The highest percentages were in CDs 2&3 and 7&8.



MN RESIDENTS: DOF MN RESIDENTIAL PARKING TAX EXEMPTION

- The MN Resident Parking Tax Exemption allows MN residents who own and register a motor vehicle to a MN address and store their vehicle in a long-term facility to receive a discounted parking tax rate.
- DOF data was obtained for the 110 facilities DCP surveyed.
(n = 3,907 DOF filers; 17% of surveyed DCA capacity)
- Suggests parking facilities in a neighborhood serve a larger group of residents than previously thought.
- About 10% live in the same building as their parking facility.
- About 63% live in the same building or within a quarter mile of their parking facility.



DOF MN RESIDENT PARKING TAX EXEMPTION

- On average, only 10% of DOF filers lived in the same building as where they parked their vehicles.

RESIDENTS WHO LIVE WHERE THEY PARK, BY RESIDENT CD				
CD	Number of Surveyed Facilities	Live Where they Park	Total	% Live Where Park
101	10	34	435	7.8%
102	14	61	646	9.4%
103	4	0	136	0.0%
104	18	24	351	6.8%
105	31	29	280	10.4%
106	11	26	372	7.0%
107	7	7	750	0.9%
108	15	216	928	23.3%
109-112	N/A	0	9	0.0%
<i>Total</i>	<i>110</i>	<i>397</i>	<i>3,907</i>	<i>10%</i>



DOF MN RESIDENT PARKING TAX EXEMPTION

➤ On average, 63% of DOF filers lived either in the same building or within a quarter mile of the facility where they parked their vehicles.

DISTANCE TRAVELED FROM RESIDENCE TO PARKING FACILITY, BY RESIDENT CD										
CD	Number of Surveyed Facilities	In same Building or Less than .25 Miles	%	.25 to .49 Miles	%	.5 to 2 Miles	%	More than 2 Miles	%	Total
101	10	250	57.50%	147	33.80%	28	6.40%	10	2.30%	435
102	14	502	77.70%	96	14.90%	34	5.30%	14	2.20%	646
103	4	57	41.90%	49	36.00%	20	14.70%	10	7.40%	136
104	18	249	70.90%	64	18.20%	34	9.70%	4	1.10%	351
105	31	203	72.50%	43	15.40%	29	10.40%	5	1.80%	280
106	11	278	74.70%	55	14.80%	31	8.30%	8	2.20%	372
107	7	256	34.10%	198	26.40%	233	31.10%	63	8.40%	750
108	15	677	73.00%	142	15.30%	71	7.70%	38	4.10%	928
109-112	N/A	0	0.00%	0	0.00%	1	11.11%	8	88.89%	9
<i>Total</i>		2,472	63%	794	20%	481	12%	160	4%	3,907



SUMMARY OF SURVEY RESULTS

- The share of public parking in the Manhattan Core **used by residents** has increased dramatically since 1982.
- Public parking in the Core frequently serves a large group of residents in the surrounding **neighborhood**, not just in the building.
- **Demographic changes** among Manhattan residents have led to an increase in the number of private vehicles in the Core (though this trend may have leveled off in the last decade). However, these vehicles are used relatively infrequently.
- Over the last decade, there has been a significant **shift from private vehicles to transit** among people traveling into the Manhattan CBD, especially among commuters.
- While parking plays an important role in supporting economic activity in the Core, some drivers may be flexible in their use of vehicles. **Moderate constraints on parking supply** may help induce some portion of this group to use transit instead.

