



Metro Transit On-Board Survey

Spring 2015

Project Background

- On-board surveys generally completed every five years
 - » Last survey was done in 2008
- To be used for updating mode choice component of travel demand model
 - » Needed for BRT planning
- Assists Metro with Title VI planning
- Data used for general planning purposes and information

Project Details

- Project led by Cambridge Systematics
 - » Dikita hired as sub-consultant
 - » Assistance from UW TOPS lab
- Conducted February through April 2015
 - » Avoided spring break and other holidays
- Routes 1-75
 - » Did not include UW circulator routes, supplemental school day service, or paratransit
- Weekdays 6:00 am to 9:00 pm
- Sample of trips distributed throughout the day

Improvements to 2008 Survey

- Span expanded to 9:00 pm
- Use of tablet personal interviews on select trips
- College/university question added
- Spreadsheet tool to easily filter and cross-tabulate results
- Web application to trouble-shoot records

Survey Methods

■ Tablet Personal Interview

» Individuals randomly approached

- + More accurate data, reduced bias

- Expensive and time consuming, problems on crowded buses, lack of paper trail makes for more difficult error checking

1,874 valid surveys

■ Paper Survey

» Pencil and paper handed to everyone onboard

- + More surveys for lower cost, better in crowded conditions

- Some sampling bias according to FTA, some incomplete or questionable data

4,028 valid surveys

Survey Methods

- On-to-off survey
 - » Card only, no questions
 - » Near 100% compliance
- Boarding/alighting counts
 - » Manual counts
- Used for survey expansion

Tablet Personal Interview

Back

Keyboard

Exit & Begin New Survey

Save & Continue

Where did you BOARD route 2-WT or 2-NT?

2-WT - E MIFFLIN & N PINCKNEY (WB)
2-WT - W MIFFLIN & N CARROLL (WB)
2-WT - STATE & W DAYTON (WB)
2-WT - STATE & W JOHNSON (WB)
2-WT - STATE & W GORHAM (WB)
2-WT - W GORHAM & N BASSETT (WB)
2-WT - UNIV AVE & N FRANCES (WB)
2-WT - UNIV AVE & N LAKE (WB)
2-WT - UNIV AVE & N PARK (WB)
2-WT - UNIV AVE & N MILLS (WB)
2-WT - UNIV AVE & N ORCHARD (WB)
2-WT - UNIV AVE & N RANDALL (WB)
2-WT - UNIV AVE & N BREESE (WB)
2-WT - UNIV AVE & PRINCETON (WB)
2-WT - UNIV AVE & FOREST (WB)

Interlined

Sort List

RunA -> ZZ -> A

Filter List

Clear

Wisconsin DMV - Hill Farms

4802 Sheboygan Avenue

City	St	Zip
Madison	WI	53705

The board location is not in this list. I want to enter it by:

Intersection

Landmark

Staff Comments

Passenger

Trip Frame

Origin

Board

Alight

Destination

Geocode

Map & Narrative

Demographics

Conclusion

BOARD

Passenger:

Vehicle No: 912

Event ID: 65_670455

SurveyID: 503

Status: Valid

Route

2NTP

T

Paper Survey



METRO TRANSIT PASSENGER SURVEY

Dear Metro Rider:

Thank you for taking time to answer questions about you, your bus service, and how you use it. The information you provide is very important and will be used to guide improvements to bus service in the future.

If possible, please complete this survey on the bus and return it to the surveyors. If you are unable to do so, please complete the survey as soon as possible, and fold it so the mailing label is visible and drop it into any mailbox.

You may also scan the QR code at the end of survey or go to the following website to complete the survey:
www.surveyyizmo.com/s3/1957304/madison

- ☐ Check here if you already filled out a survey on another trip. Please continue to complete this form.

ABOUT YOUR BUS RIDE

1. What is the ROUTE NUMBER?

Route: _____

2. What time did you get on THIS ROUTE?

Time: _____ ☐ AM ☐ PM

3. Where did you BEGIN this one-way trip? (✓ only one)

- ☐ Home/Residence ☐ Medical/Dental
☐ Place of Work ☐ Store/Shopping
☐ College/University ☐ Restaurant/Eat Out
☐ School (K-12) ☐ Social/Recreation
Other _____

Where was that located?

Place name and exact address: _____

Or nearest street intersection:

On street: _____

At street: _____

4. How did you arrive at the FIRST bus stop at the BEGINNING of this trip? (✓ only one)

- ☐ Walked _____ blocks
☐ Rode bike
☐ Was dropped off at bus stop
☐ Drove/rode in a vehicle and parked on the street
☐ Drove/rode in a vehicle and parked at park-and-ride or other lot
☐ Used wheelchair/scooter

5. Did you TRANSFER or CHANGE to THIS ROUTE? (✓ only one)

- ☐ No ☐ Yes

6. At what bus stop did you get ON THIS ROUTE?

Nearest street intersection: _____

On street: _____

At street: _____

Place Name: _____

7. At what bus stop will you get OFF THIS ROUTE?

Nearest street intersection: _____

On street: _____

At street: _____

Place Name: _____

8. Will you TRANSFER or CHANGE ROUTES to complete your trip? (✓ only one)

- ☐ No ☐ Yes

9. How will you get from your LAST bus stop to your FINAL destination for this trip? (✓ only one)

- ☐ Walk _____ blocks
☐ Ride bike
☐ Will be picked up at bus stop
☐ Drive/ride in a vehicle parked on the street
☐ Drive/ride in a vehicle parked at park-and-ride lot or other lot
☐ Will use wheelchair/scooter

10. What is your FINAL destination for this one-way trip? (✓ only one)

- ☐ Home/Residence ☐ Medical/Dental
☐ Place of Work ☐ Store/Shopping
☐ College/University ☐ Restaurant/Eat Out
☐ School (K-12) ☐ Social/Recreation
Other _____

Where is that located?

Place name and exact address: _____

Or nearest street intersection:

On street: _____

At street: _____

11. How many TRANSFERS or ROUTE CHANGES will you make in total on this trip?

Number of transfers: _____

12. What ROUTES (in order) will you take on this trip?

Route# _____ Route# _____ Route# _____

13. How did you PAY for this trip? (✓ only one)

- ☐ Cash
☐ Unlimited Ride Pass (student/employee)
☐ 10-Ride Card
☐ 31-Day Pass
☐ 31-Day Pass (low income)
☐ EZ Rider Youth Pass
☐ Other _____

14. Did you use a Senior/Disabled or Youth Fare? (✓ only one)

- ☐ Senior/Disabled ☐ Youth ☐ Neither

15. How many times per week do you make this same trip using Metro Transit? (✓ only one)

- ☐ Less than once a week ☐ 3-4 trips a week
☐ 1-2 trips a week ☐ 5 or more trips a week

ABOUT YOURSELF

16. What is YOUR age? _____ Years

17. What is YOUR gender? (✓ only one)

- ☐ Male ☐ Female ☐ Do not identify as either

18. Are YOU employed? (✓ only one)

- ☐ No ☐ Yes

19. Do YOU have a valid driver's license? (✓ only one)

- ☐ No ☐ Yes

continued

20. Are YOU a college/university student? (✓ only one)

- ☐ No ☐ Yes

21. Are YOU of Hispanic, Latino, or Spanish origin? (✓ only one)

- ☐ No ☐ Yes

22. Of what racial group(s) do YOU consider yourself a member? (✓ at that apply)

- ☐ Black/African-American
☐ American Indian/Alaska Native
☐ Asian
☐ Hawaiian Native/Pacific Islander
☐ White
☐ Two or more races
☐ Other _____

23. Do YOU speak English well? (✓ only one)

- ☐ No ☐ Yes

24. Which language(s) do YOU speak at home? (✓ at that apply)

- ☐ English ☐ Cantonese/Mandarin
☐ Spanish ☐ Korean
☐ Hmong/Miao ☐ Other _____

25. How long have YOU used Metro Transit? (✓ only one)

- ☐ Less than 6 mos. ☐ 3 years to 5 years
☐ 6 mos. to 2 years ☐ More than 5 years

ABOUT YOUR HOUSEHOLD

Note: If you are a college student living away from home, do NOT include your parents' household information. If you are currently staying with room-mates, PLEASE include information about your room-mates when describing your household.

26. Including yourself, how many people live in YOUR household?

Number of people in household: _____

27. Including yourself, how many people in YOUR household are employed?

Number of workers in household: _____

28. How many motor vehicles (cars, vans, motorcycles, or trucks) are available to people in YOUR household? (✓ only one)

- ☐ 0 ☐ 2
☐ 1 ☐ 3 or more



MADISON WI 53703-9923
1245 E. WASHINGTON AVENUE
SUITE 201
METRO TRANSIT
POSTAGE WILL BE PAID BY ADDRESSEE
BUSINESS REPLY MAIL
FIRST-CLASS MAIL PERMIT NO. 377001 MADISON, WI

29. Were any of these vehicles available today for YOU to make this trip? (✓ only one)

- ☐ No ☐ Yes

30. What category best describes the combined total income (before taxes) in 2014 for everyone in YOUR household? (✓ only one)

- ☐ Under \$15,000 ☐ \$50,000-\$74,999
☐ \$15,000-\$34,999 ☐ \$75,000-\$99,999
☐ \$35,000-\$49,999 ☐ \$100,000 and more

WHAT DO YOU THINK?

Circle HOW YOU RATE Metro service overall.

	N/A	Poor	Fair	Good	Very Good
a. Cleanliness of buses	N/A	1	2	3	4
b. Personal safety while riding	N/A	1	2	3	4
c. Personal safety at bus stops	N/A	1	2	3	4
d. Personal safety at transfer points	N/A	1	2	3	4
e. Convenience of routes	N/A	1	2	3	4
f. Driver courtesy	N/A	1	2	3	4
g. Time waiting for buses	N/A	1	2	3	4
h. Travel time on buses	N/A	1	2	3	4
i. Crowding on buses	N/A	1	2	3	4
j. Maps and schedules	N/A	1	2	3	4
k. On-line trip planning	N/A	1	2	3	4
l. Bus tracking	N/A	1	2	3	4
m. Overall satisfaction	N/A	1	2	3	4

Comments on Metro service:

Please provide your e-mail information if you would like to participate in future Metro Transit research studies. Your e-mail information will be strictly confidential.

Email contact: _____

Please refold with mailing panel out and tape securely.



Information Collected

- Origin, boarding and alighting locations, destination
- Mode of access (walk, bike, drive, etc.)
- Route, transfers, trip purpose, etc.
- Fare category (cash, pass, 10-ride card, etc.)
- Demographics (age, race, income, etc.)
- Opinions and comments on Metro Transit

Survey Expansion

- 5,914 surveys expanded to represent weekday ridership of about 45,000 unlinked trips (boardings)
- Weights for each survey based on:
 - » Flows between groups of bus stops
From on-to-off survey
 - » Bus stop boardings and alightings
From boarding/alighting counts
 - » Route/direction/time-of-day
From on-to-off survey and boarding/alighting counts

Survey Expansion

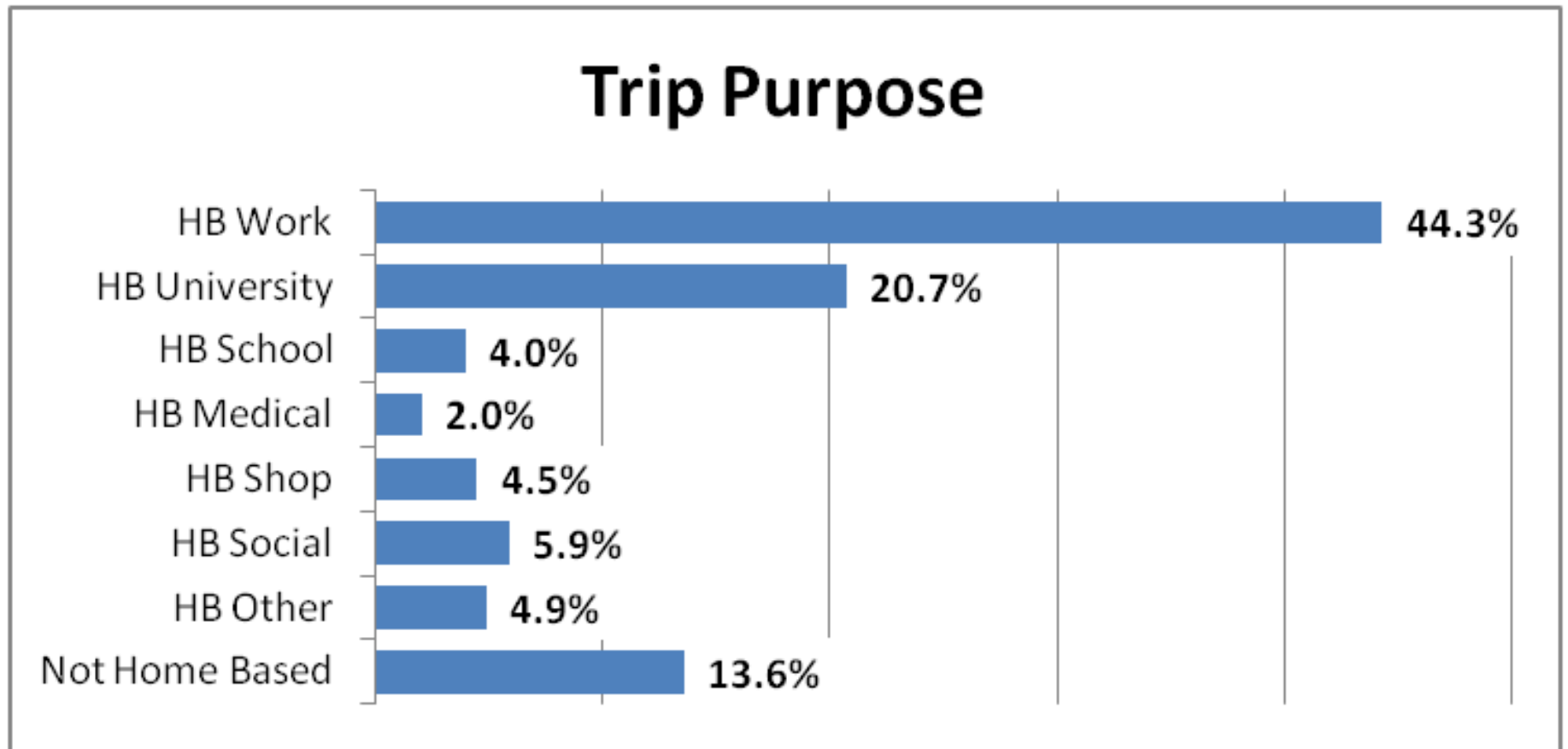
■ Boarding weights

- » Designed to reflect actual daily boardings, matching farebox records

■ Trip weights

- » Account for transfers
- » Take into account likely interline transfers
- » Rides with transfers in theory have a higher likelihood of being surveyed, but also a higher likelihood of being surveyed multiple times and refusing

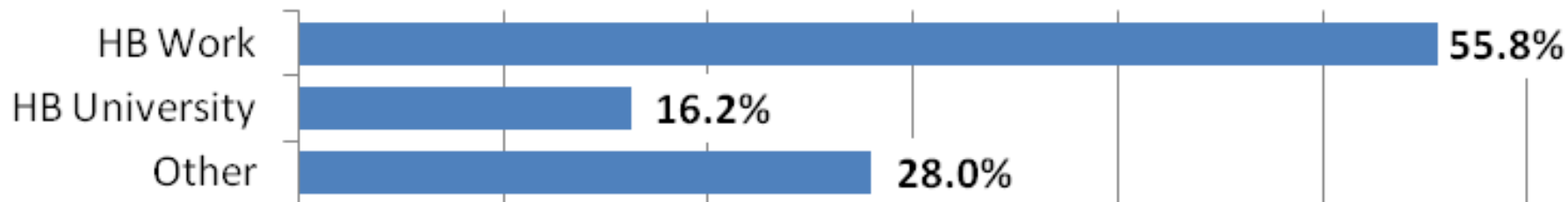
Draft Data



HB: Home Based
Boarding weighted estimates

Draft Data

Trip Purpose, Peak Periods



Trip Purpose, Off Peak

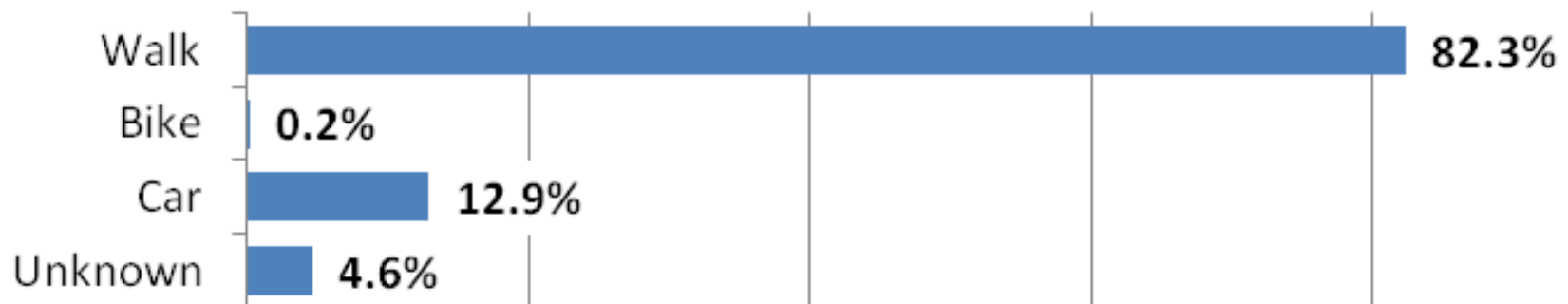


Transit Access

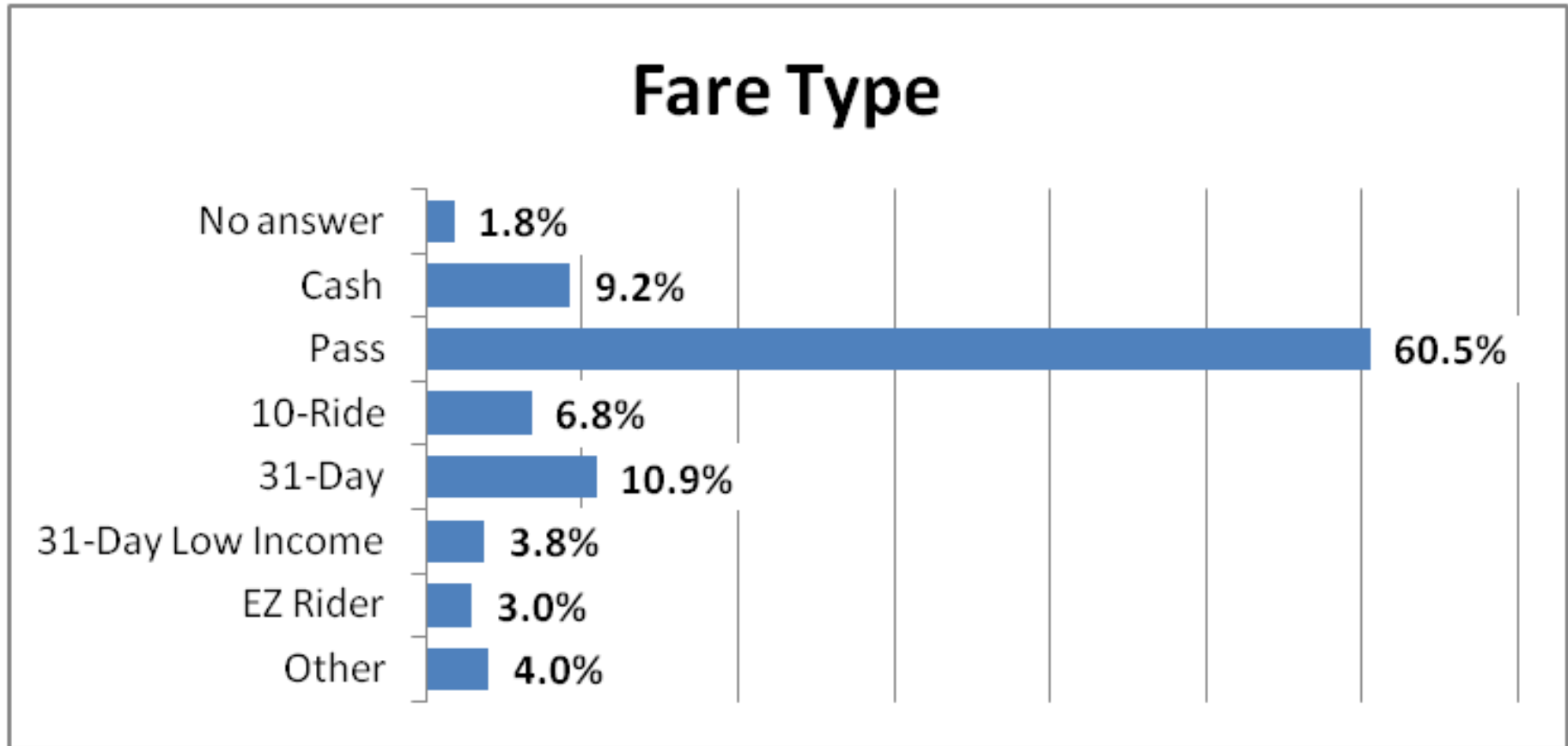
Draft Data



Transit Access, Car is Available

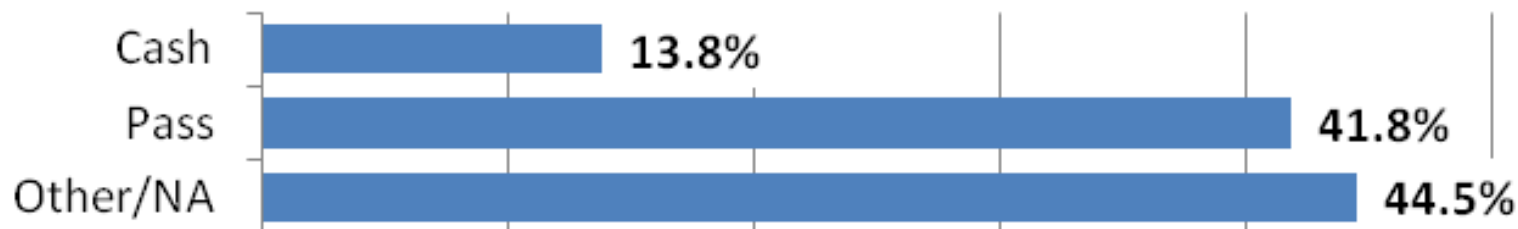


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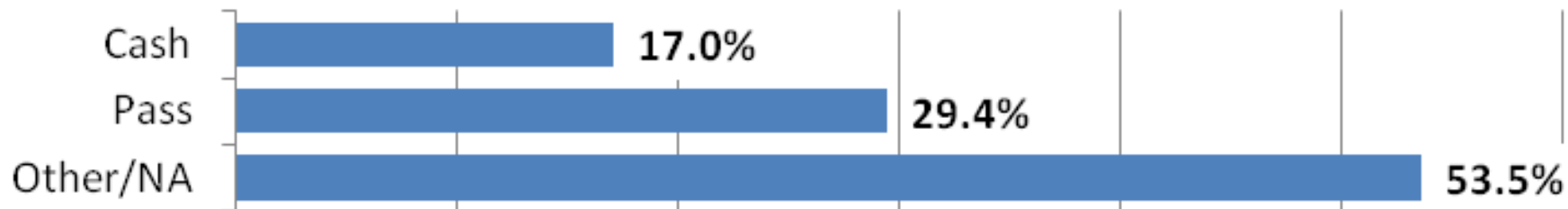


Draft Data

Fare Type *



Fare Type, HH Income < \$35K *



Boarding weighted estimates

*Not including college/university students

Draft Data

Number of Transfers



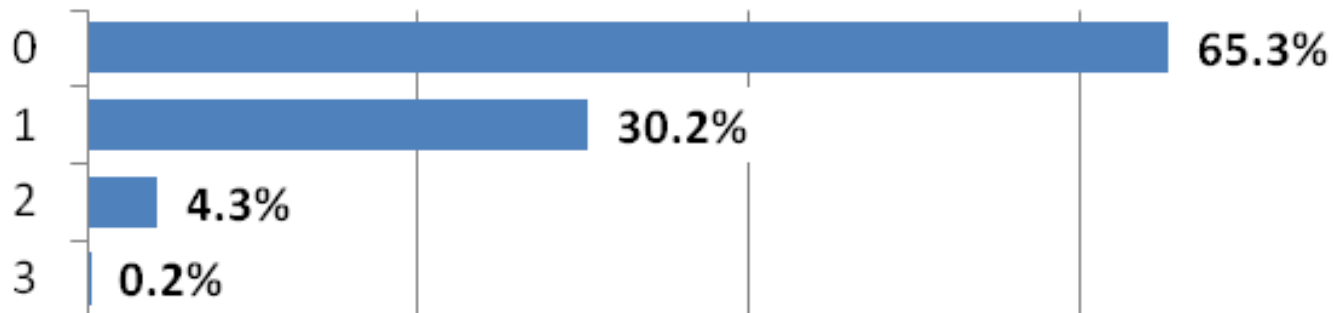
Trip weighted estimates

Number of Transfers *

Draft Data



Number of Transfers - Minorities *

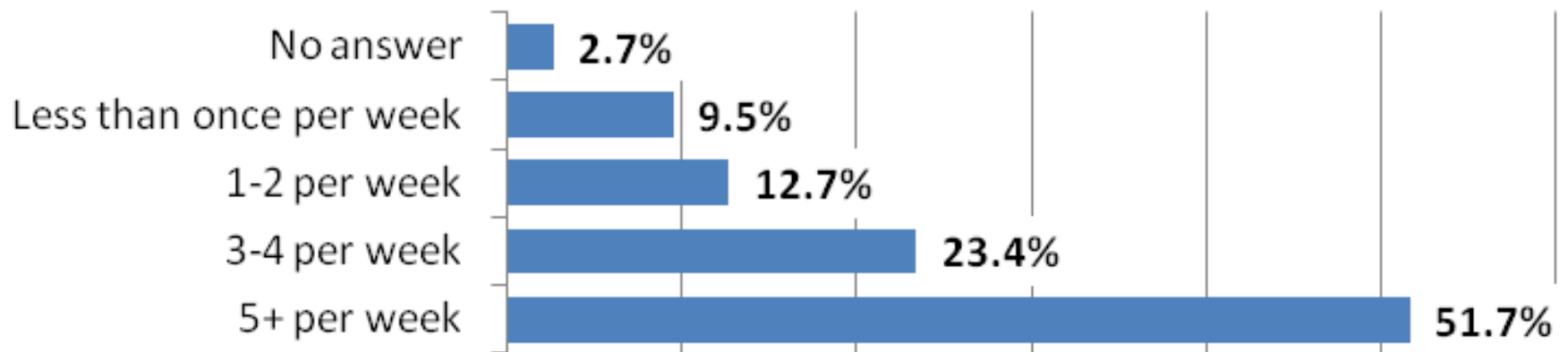


Trip weighted estimates

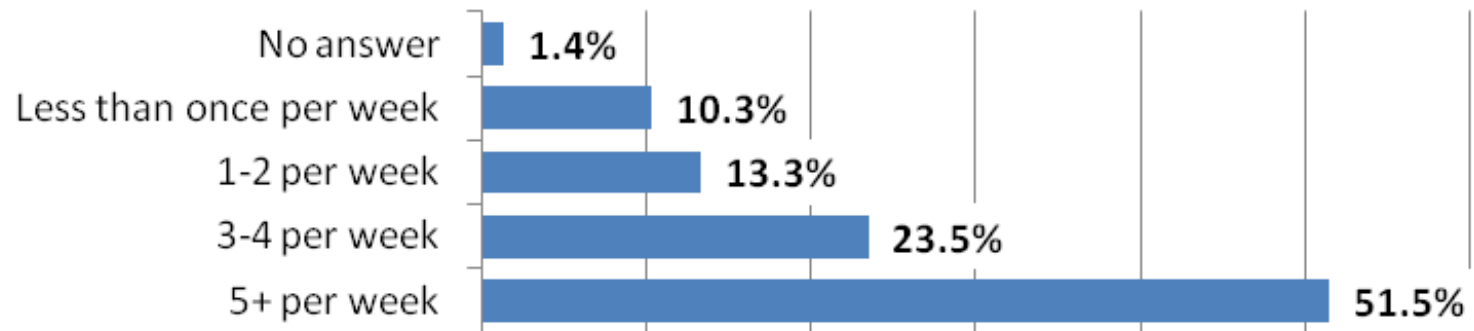
*Not including college/university students

Draft Data

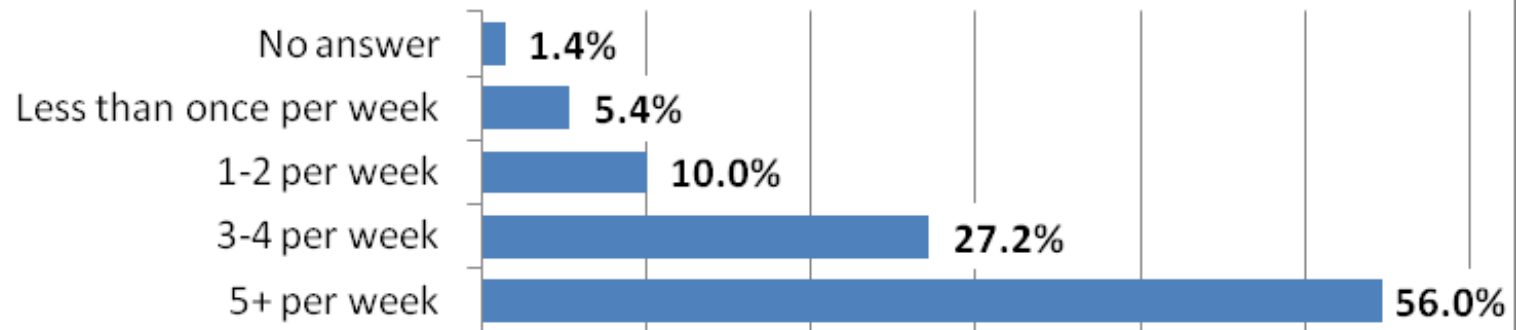
Frequency of Use



Frequency, Satisfaction \geq Good



Frequency, Satisfaction \leq Fair

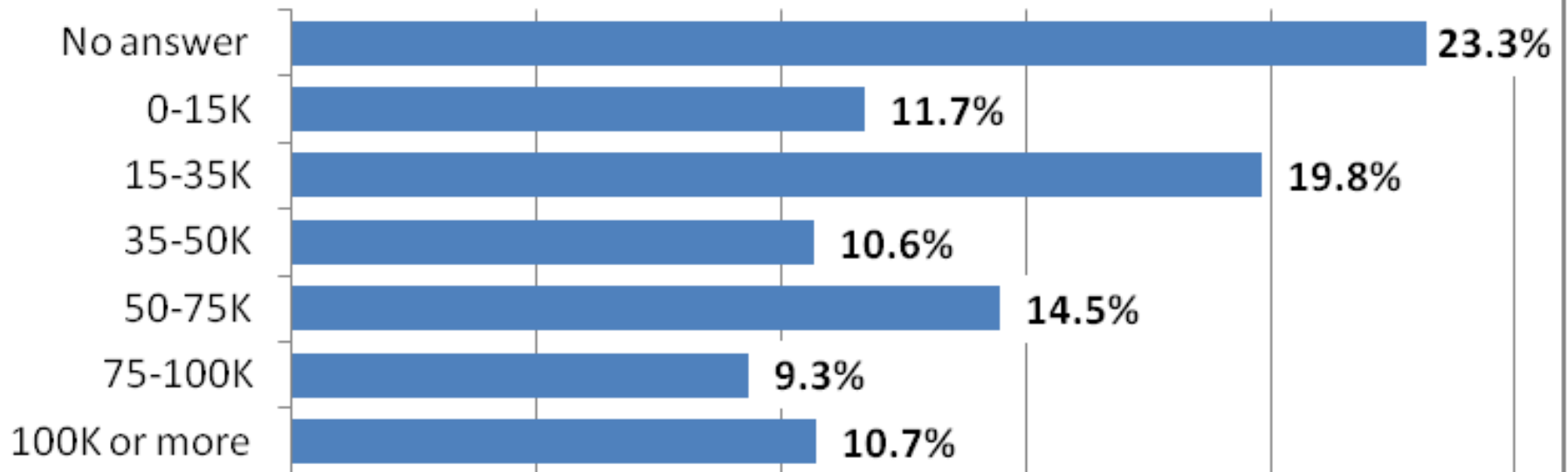


Draft Data

Boarding weighted estimates

Draft Data

Household Income *

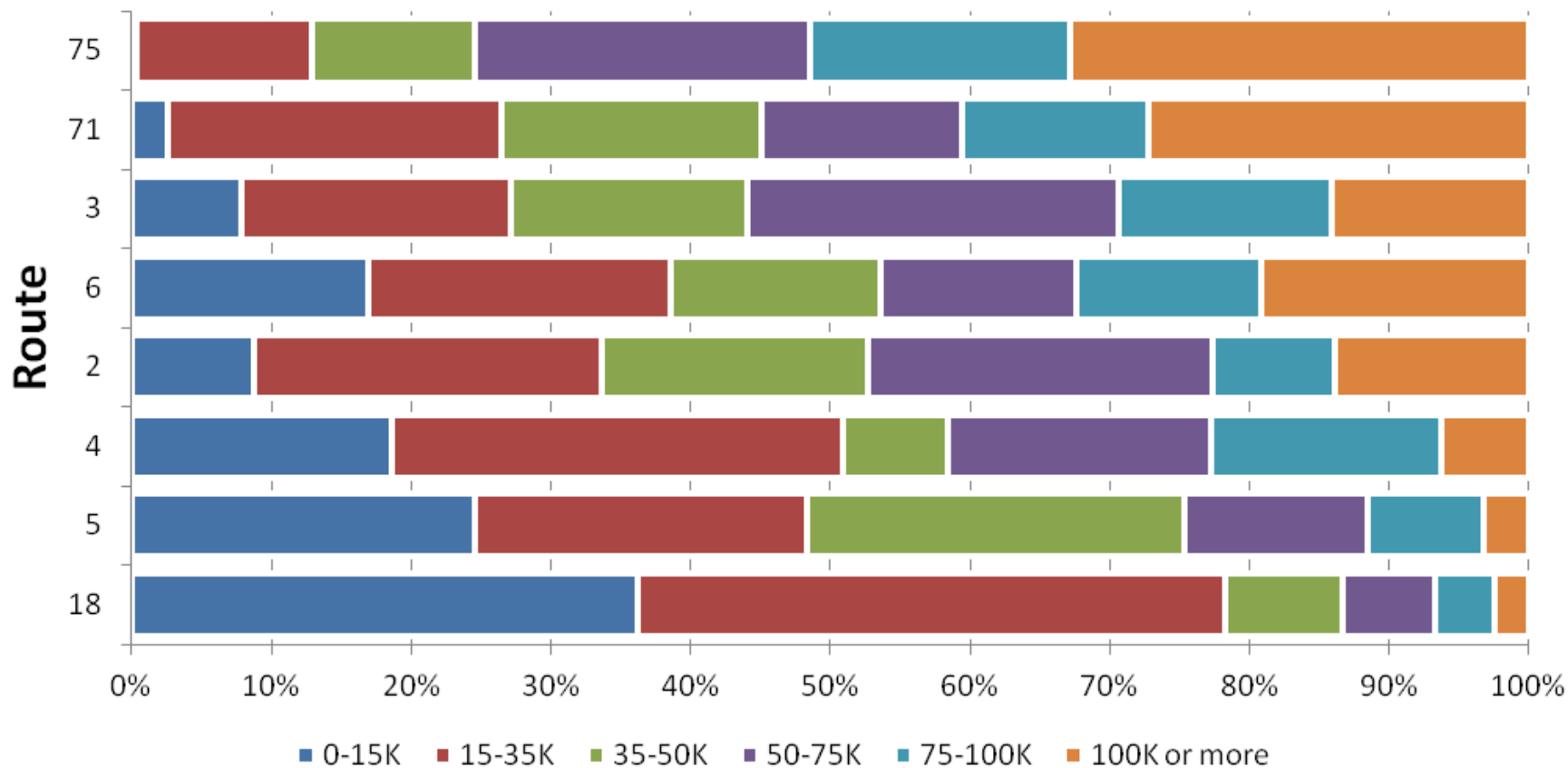


Boarding weighted estimates

*Not including college/university students

Draft Data

Household Income by Selected Routes *



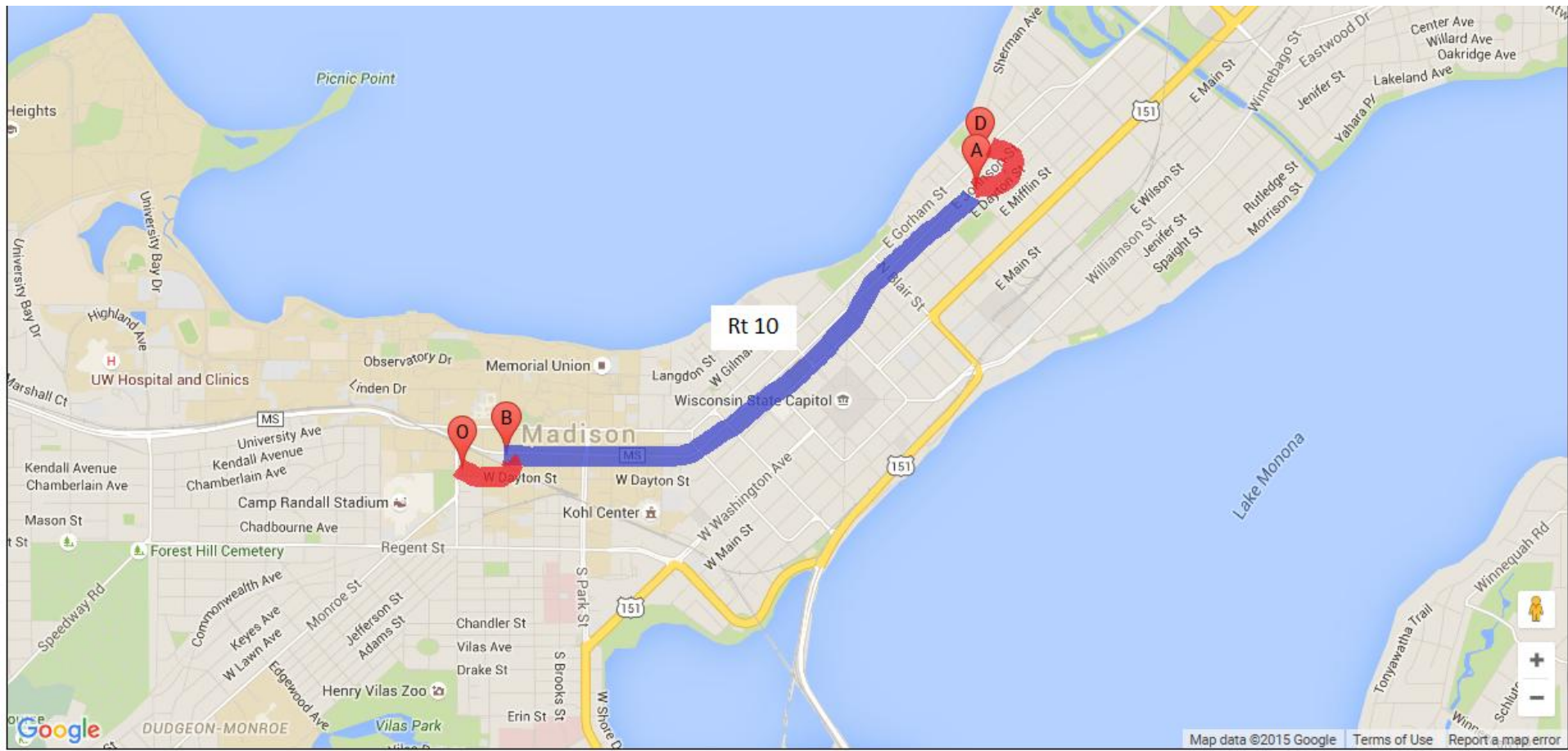
Boarding weighted estimates
*Not including college/university students
or no-answers for HH income

Draft Data

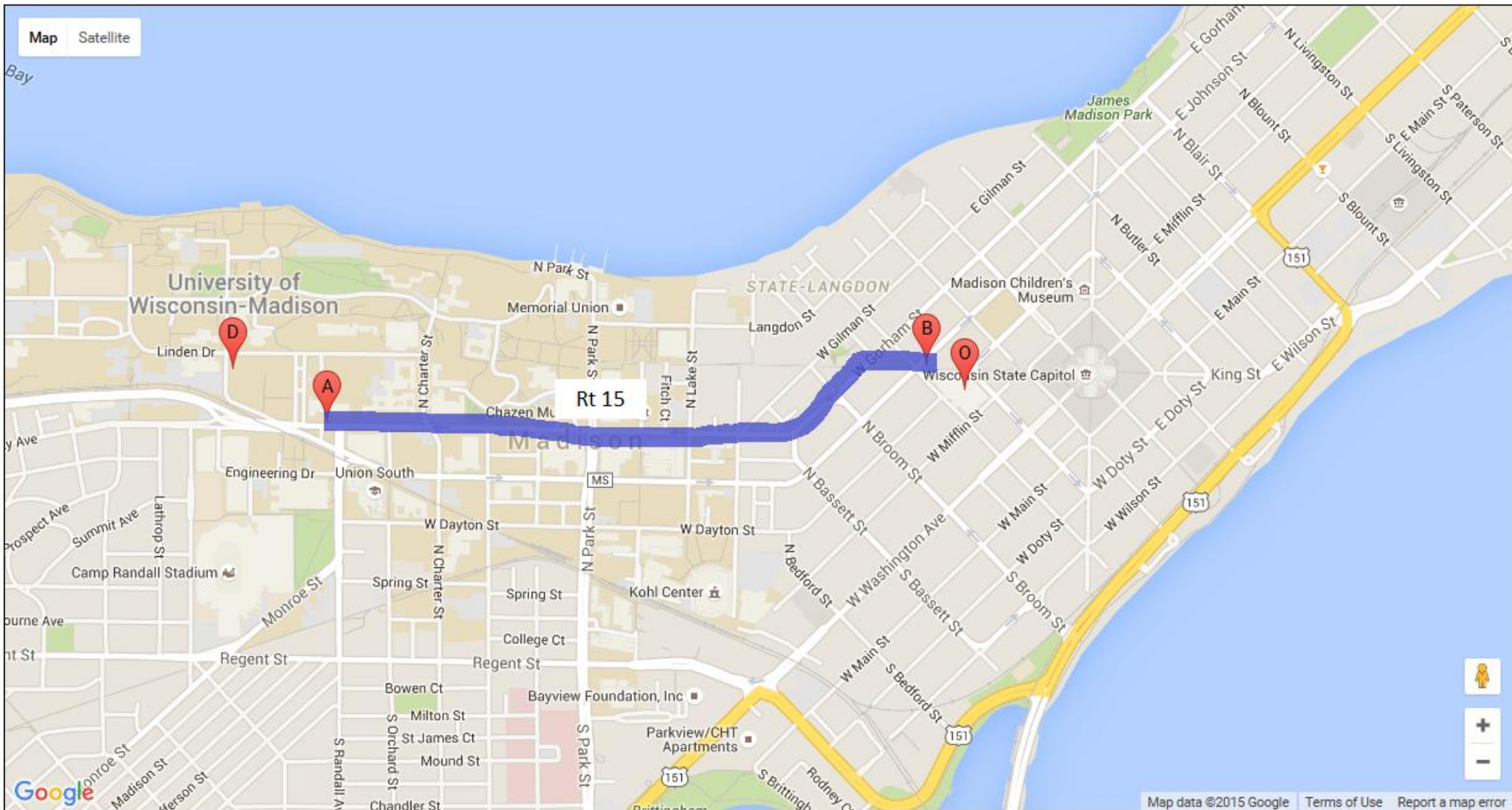


Typical Trip

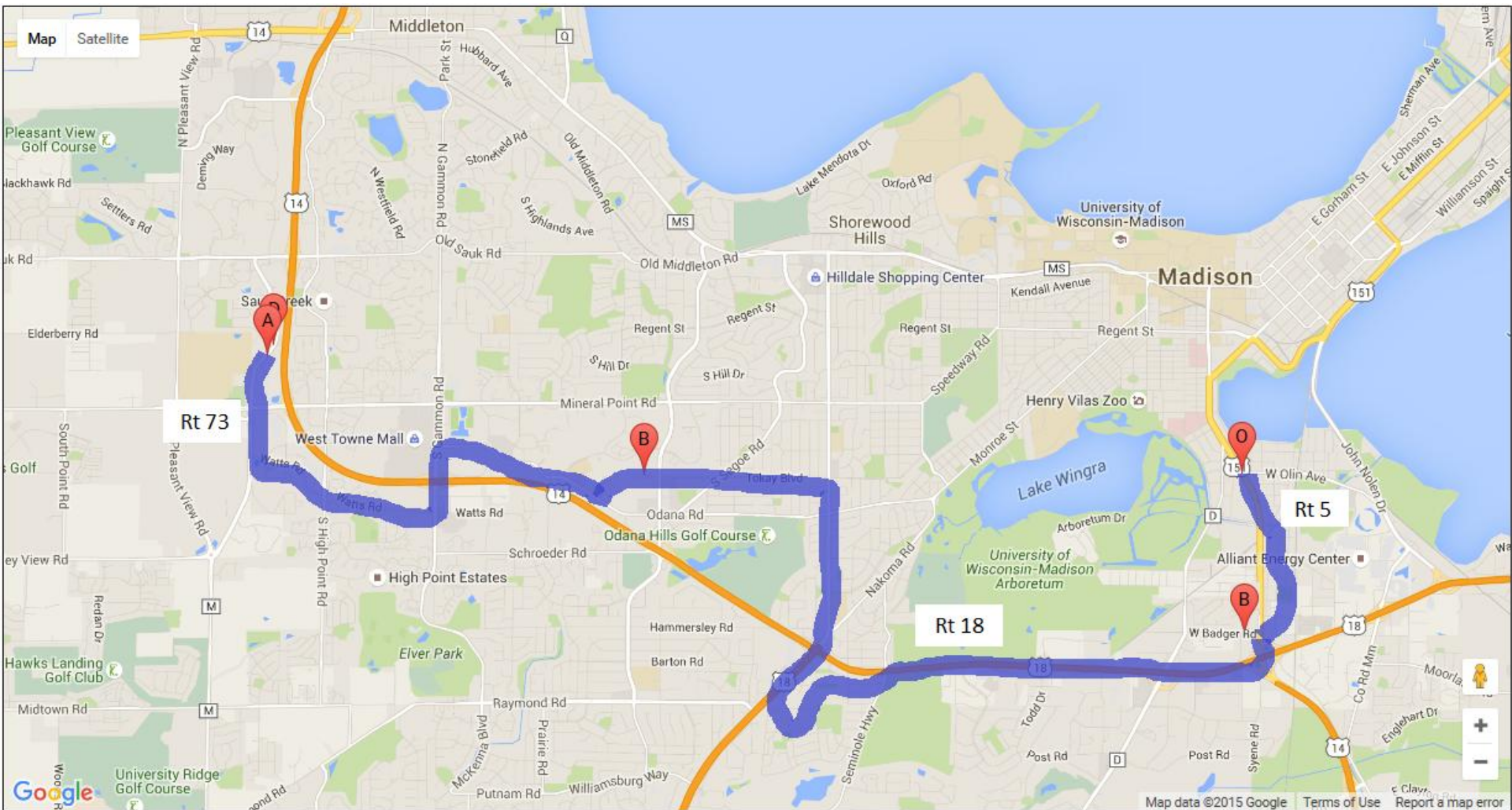
■ O rigin – B oarding – A lighting – D estination



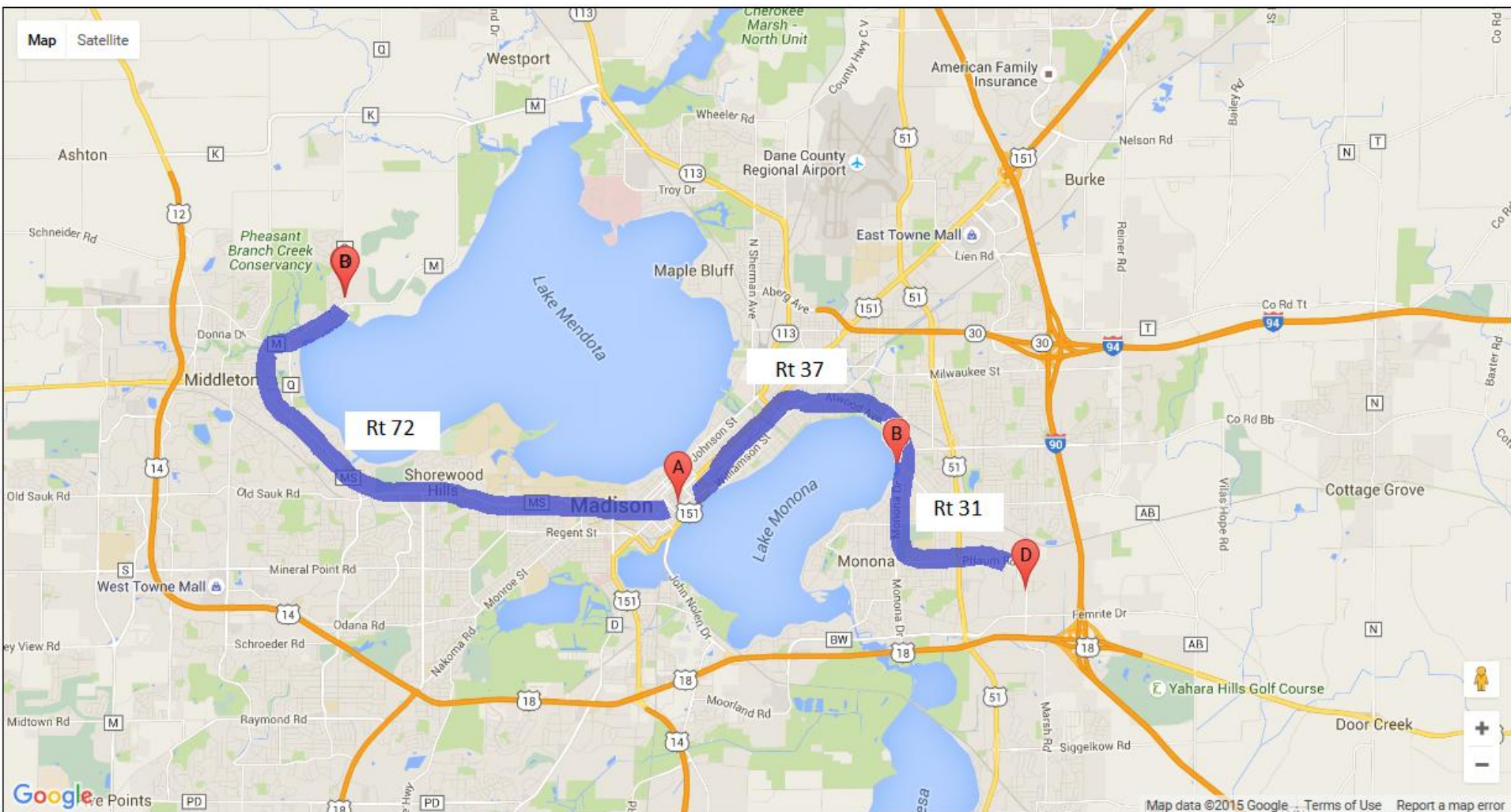
Short Trip



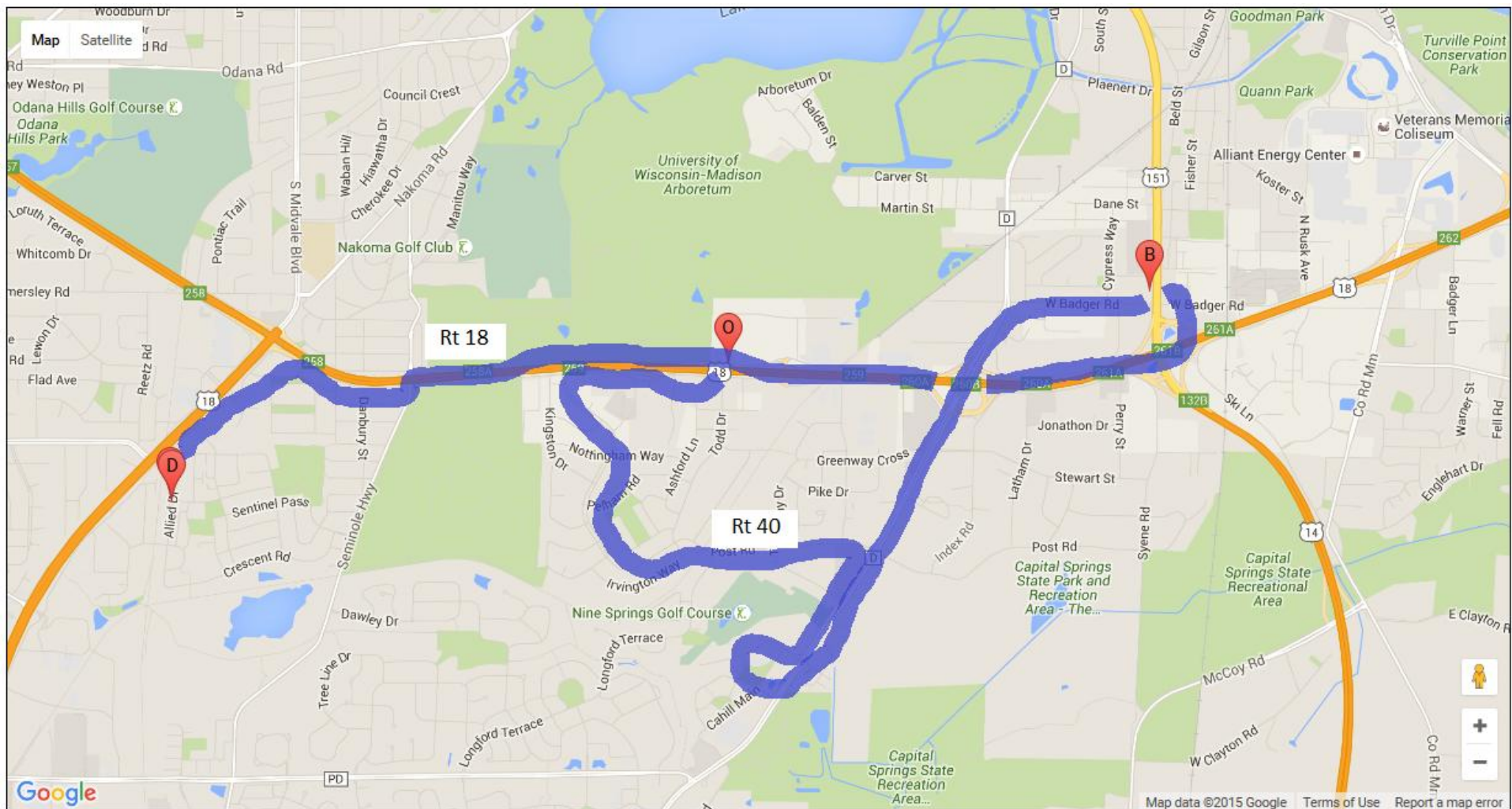
Multiple Transfer Trip



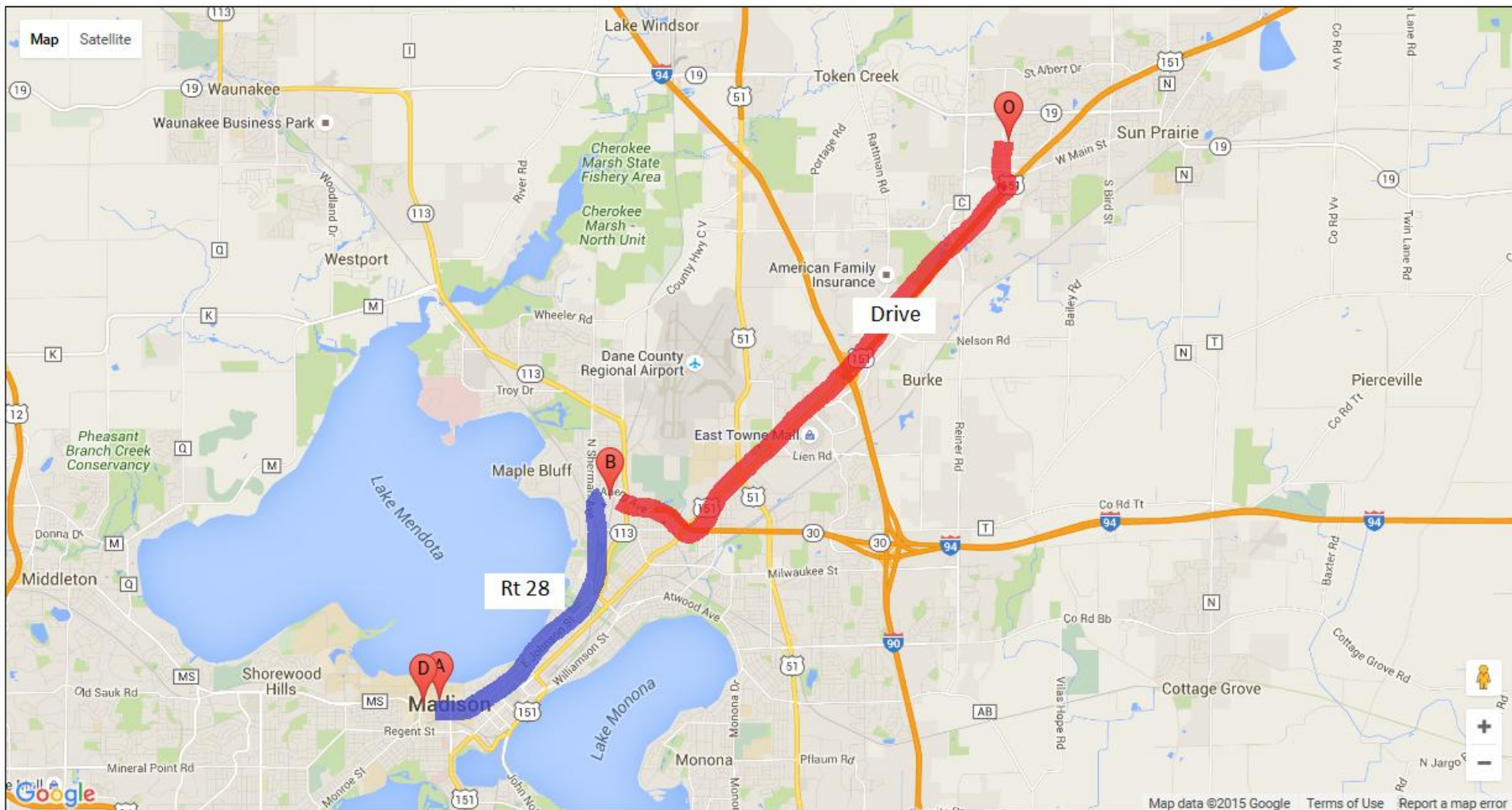
Extreme Trip



Extreme Example



A Regional System, We Have





Metro Transit On-Board Survey

Mike Cechvala
mcechvala@cityofmadison.com
608 266-4518