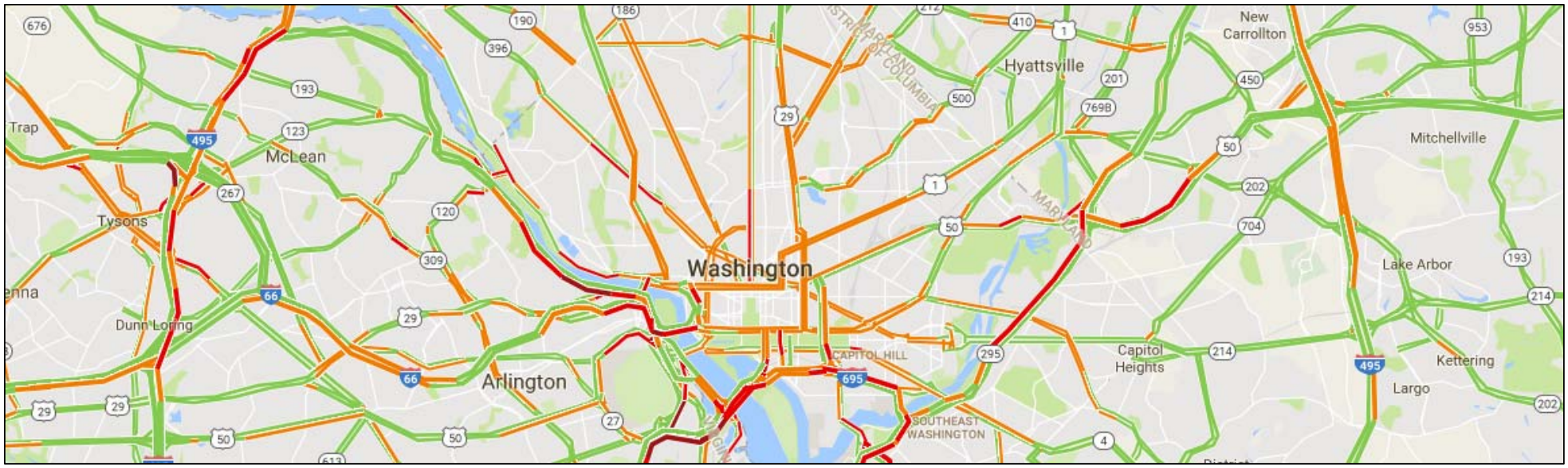
EXAMINATION AND IMPLEMENTATION OF A FLEXTIME INCENTIVE APPLICATION

A NEW FINANCIAL INCENTIVE PROGRAM FOR COMMUTERS IN THE METROPOLITAN WASHINGTON AREA



INTRODUCTION

- Commuter Connections has explored the implementation of a flextime-incentive pilot program for the Washington D.C. metropolitan region
- This program would offer a financial benefit to commuters who are able and willing to commute during off-peak hours to avoid congestion along major corridors in the region, specifically, during a major incident or significantly higher-than-average traffic volume days
- This program will reward commuters and reinforce the importance of mitigating traffic during the peak period

OVERVIEW

- Literature Review
  - Brief overview of three scholarly works and data from the 2016 State of the Commute Survey
- Corridors of Interest
  - Includes a table of the 2015 Top-10 Bottlenecks for the metropolitan area
- Implementation
  - Theories for pilot-program implementation are reviewed

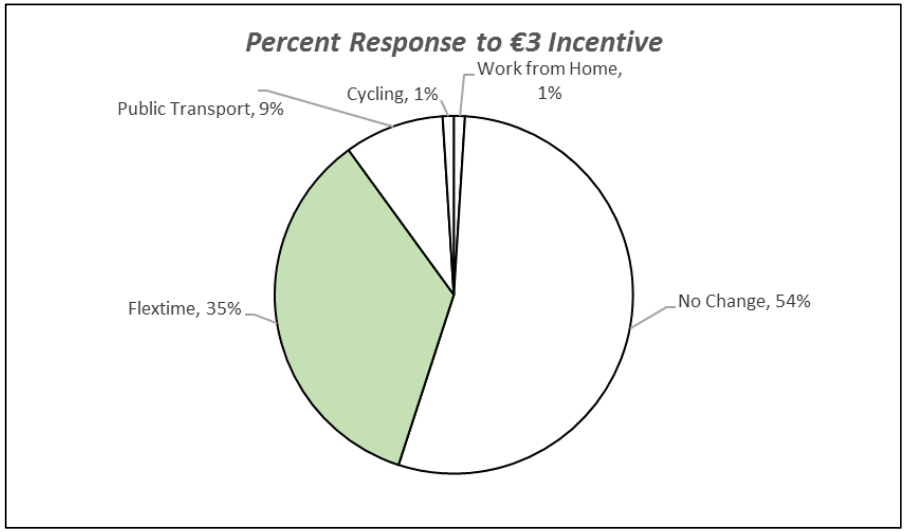
LITERATURE REVIEW

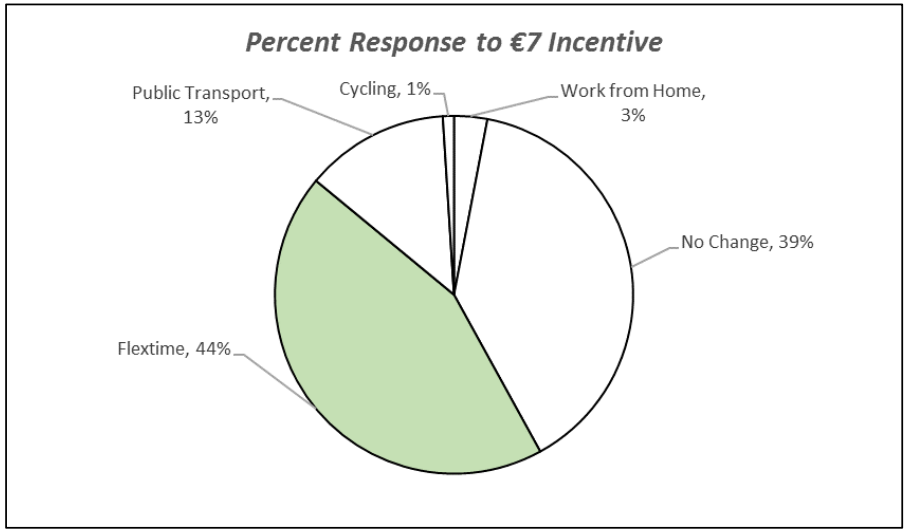
- A literary review is performed to learn about scholarly research regarding flextime incentive programs. An analysis of past incentive programs is included to learn and understand best practices, financial implications and positive impacts of flextime on corridors and commuters
- This includes three scholarly works and a review of relevant data from the 2016 State of the Commute Survey

1: "REWARDING FOR AVOIDING THE PEAK PERIOD: A SYNTHESIS OF THREE STUDIES IN THE NETHERLANDS"

- In 2006, a series of three experiments being conducted in the Netherlands began to assess the effects of monetary rewards given to travelers who avoided the peak period

NETHERLANDS CONT'D: EXPERIMENT ONE

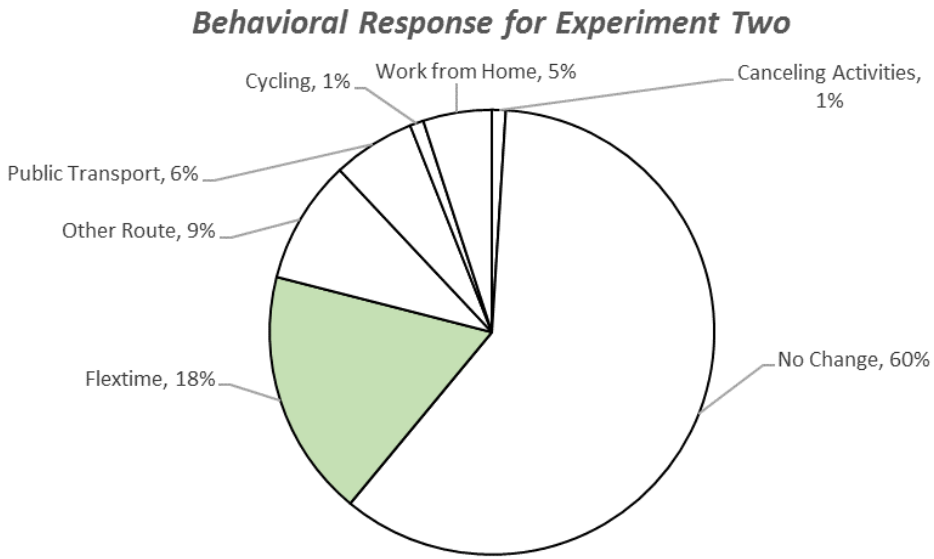




As shown, most commuters who changed their travel behavior decided to travel during off-peak hours. The percentage of flextime used sees a relatively modest rise when commuters are offered a 133% increase from €3 to €7 per day. The third reward scheme where participants who earned €3, with an increase to €7, saw an almost identical percentage as the flat €7 reward scheme. Experiment one concluded that a relatively low reward sufficed for most participants to be affected.

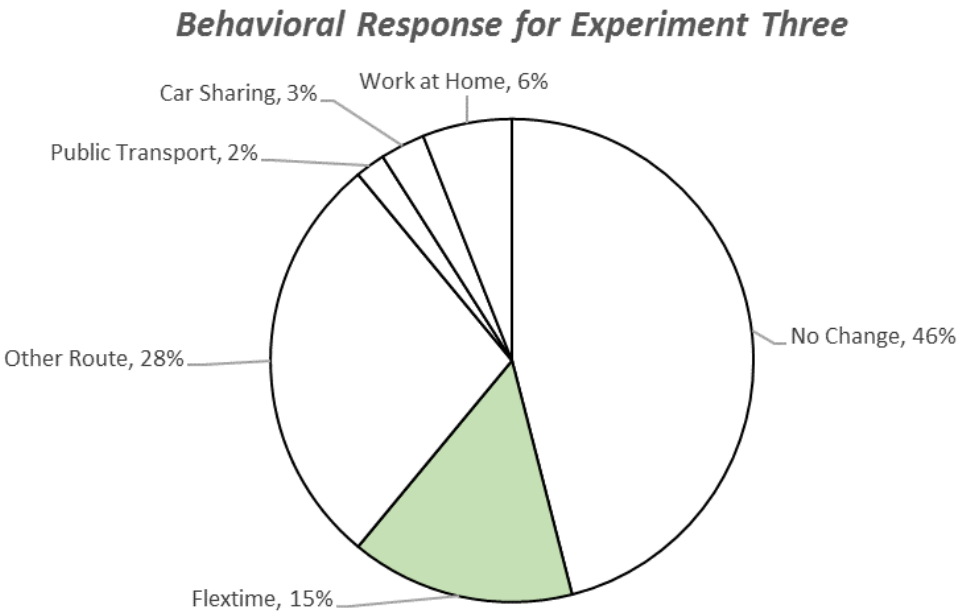
NETHERLANDS CONT'D: EXPERIMENT TWO

- Experiment two yielded a behavioral change response of 40%, with the largest change (18%) belonging to those who chose to travel outside of the peak hours
- The 18% of commuter choosing to use their flextime made up about 425 cars, or, 2.6% of the total traffic flow along the bridge



NETHERLANDS CONT'D: EXPERIMENT THREE

- Analyzing data from experiment three showed that the total number of bridge passengers decreased by about 920 vehicles per evening peak, or, 4.6% of the total traffic flow along the bridge.



NETHERLANDS CONT'D

- The experiments proved to be so effective for their region, the Netherlands continued to implement flextime incentive programs for future construction projects along major corridors throughout the country

2: "REDUCING ROAD CONGESTION THROUGH INCENTIVES: A CASE STUDY"

- This paper also studied the use of incentives to increase the willingness of commuters at Stanford University to travel outside of the peak period
- Stanford University first designed and implemented their incentive program, called CAPRI (Congestion and Parking Relief Incentives), in 2012
- A total of 3,082 registered to participate in the program. The study lasted for approximately two and a half years

STANFORD CONT'D

- Those who enrolled were given passive RFID (Radio-Frequency Identification) tags to be placed on the windshield of their vehicle
- The CAPRI program had a "gamified" rewards scheme: for each vehicle detected by the sensors during the off-peak hour, the participant was awarded 10 points. They were given a random "boost" day, which allowed them to earn 30 points instead of their usual 10
- Participants could then redeem 100 points for $1, or, spend their points on a lottery-type game to receive anywhere from $1-$50

STANFORD CONT'D

- To summarize their main findings: compared to the general Stanford population, CAPRI participants are 21.2% less likely to commute during the morning peak hours of 8-9 a.m., and 13.1% less likely to commute during the evening peak hours of 5-6 p.m.

BEHAVIORAL ECONOMICS AND PSYCHOLOGY OF INCENTIVES

- A research paper published in 2012 by the University of Chicago's Booth School of Business offers some insight on the psychology of structuring a successful incentive
- The author recognizes two broad patterns that can lead to a successful incentive structure: less money and fewer options
  - Applying this idea to a flex-time incentive program would mean offering a modest reward for those flexing time and not offering other options, such as rerouting or teleworking

2016 STATE OF THE COMMUTE SURVEY

- This report defines the morning peak period for the region as being from 6:30 a.m. to 9:30 a.m.
- Of the total individuals who have responded to the survey:
  - 50% use the flextime they have available
  - 13% have flextime available but do not use it
  - 37% do not have flextime available

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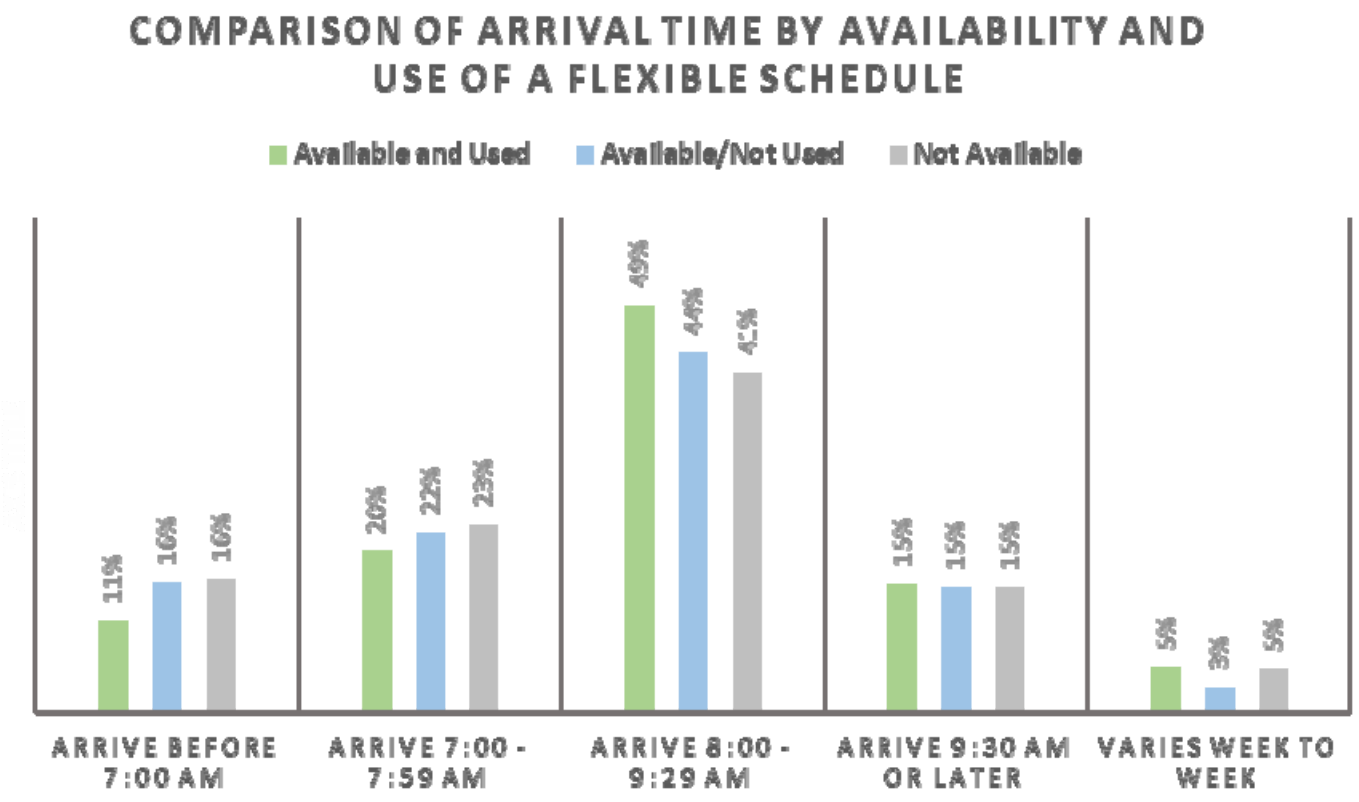
2016 STATE OF THE COMMUTE CONT'D



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2016 STATE OF THE COMMUTE CONT'D

- The State of the Commute Report also gauged respondents on their receptiveness to accepting a small monetary reward for using the flextime they have available
- The report asked, "*If you could receive $3 per day for each day that you arrive at work before 7:00 am or at 10:00 am or later, how likely would you be to make this change in your work schedule?*"
- The question implied a repeated or ongoing incentive, rather than a one-time or occasional incentive. So the percentages of commuters who would be interested in a one-time reward might be higher or lower than estimated in the SOC survey

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2016 STATE OF THE COMMUTE CONT'D

Jurisdiction	% Flexible by 31 or more minutes	% *Very likely* to accept a small reward	% *Somewhat likely* to accept a small reward
Alexandria	85%	18%	42%
Arlington County	72%	27%	24%
D.C.	70%	22%	28%
Fairfax County	71%	30%	21%
Montgomery County	69%	30%	24%
Prince William County	34%	36%	27%
Prince George's County	52%	42%	21%

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CORRIDORS OF INTEREST

- Corridors from the region are examined to determine which would most benefit from instituting a flextime incentive program. Criteria for selecting corridors are based off the State of the Commute Report produced by Commuter Connections and by observing data on the top-10 traffic bottlenecks in the region. The top-10 bottlenecks in the region are published as part of COG/TPB's 2016 "Congestion Management Process Technical Report."

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CORRIDORS OF INTEREST CONT'D

This table provides a list of top bottlenecks in the Washington region for peak periods only, i.e., non-holiday weekday 6:00-9:00 a.m. and 4:00-7:00 p.m. The bottlenecks are ranked by either the combination of Travel Time Index (TTI) and length or the multiplication of TTI, length and Annual Average Daily Traffic volume (AADT). The Travel Time Index is the ratio of the peak-period travel time as compared to the free-flow travel time. Smaller numbers indicate freer flowing traffic patterns.

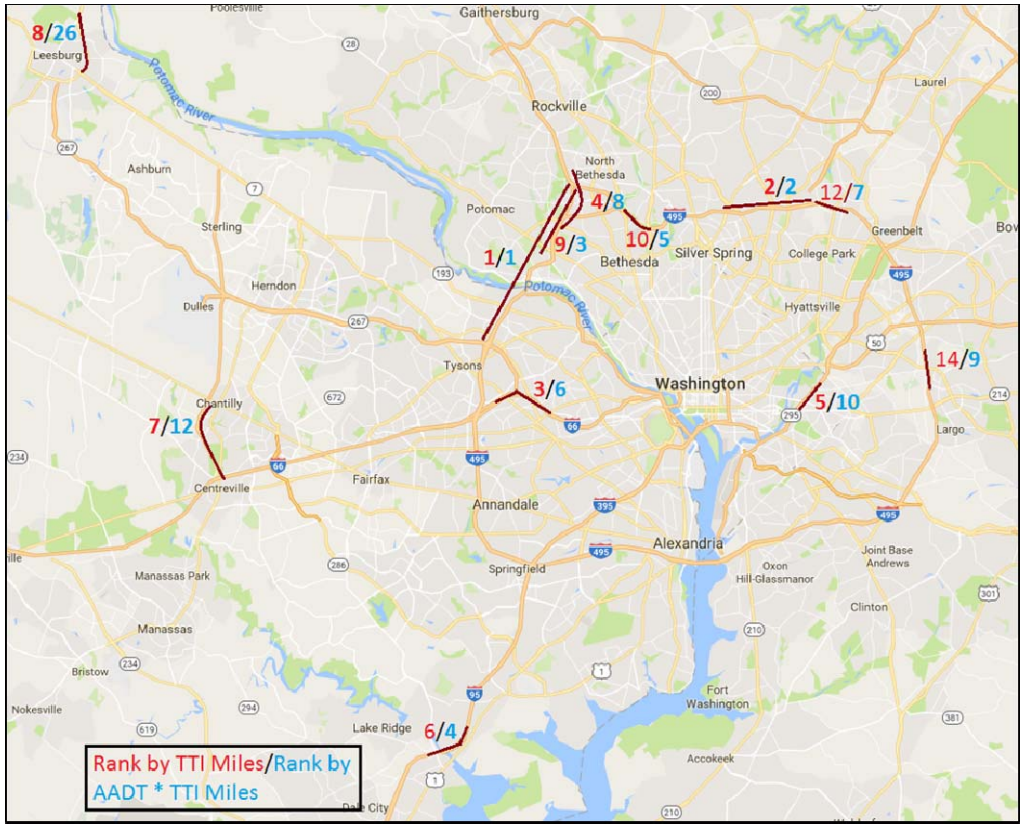
2015 Top Bottlenecks - Peak Periods

Location	State	Ave. TTI	Length (miles)	TTI Miles	Rank by TTI Miles	AADT	AADT × TTI Miles	Rank by AADT × TTI Miles
I-495 IL between VA-267 and I270 Spur	VA, MD	2.69	8.36	22.47	1	110,376	2,480,129	1
I-495 OL between I-95 and MD-193	**MD**	**2.57**	**4.35**	**11.17**	**2**	**104,670**	**1,168,848**	**2**
I-66 EB at VA-267	VA, MD	2.47	2.83	6.99	3	65,500	548,043	6
I-270 SPUR SB	**MD**	**3.21**	**2.04**	**6.56**	**4**	**65,405**	**429,242**	**8**
DC-295 SB at Benning Rd.	DC	2.59	2.28	5.89	5	59,376	349,827	10
I-95 SB at VA-123	**VA, MD**	**2.34**	**2.46**	**5.75**	**6**	**104,000**	**597,810**	**4**
VA-28 SB between VA-7 and N. King St.	VA, MD	2.32	2.3	5.33	7	50,000	266,469	12
US-15 NB between VA-7 and N. King St.	**VA, MD**	**2.56**	**2.02**	**5.19**	**8**	**8,800**	**45,656**	**26**
I-495 OL between I-270 and MD-190	MD	2.26	2.22	5.01	9	122,010	611,335	3
I-495 IL between MD-355 and MD-185	**MD**	**2.23**	**1.96**	**4.38**	**10**	**110,876**	**485,635**	**5**
I-495 IL between I-95 and US-1	MD	2.32	1.68	3.91	12	111,740	437,336	7
I-495 OL at MD-202 / Landover Rd.	**MD**	**2.09**	**1.54**	**3.22**	**14**	**113,390**	**364,755**	**9**

CORRIDORS OF INTEREST CONT'D

Four of the region's top-10 bottlenecked segments have been chosen for a Flextime Incentive pilot:

- I-270 spur down past the American Legion Bridge – Inner Loop (1/1)
- Along the Beltway between I-95 and MD-193 – Outer Loop(2/2)
- I-66 EB at VA 267 (3/6)
- D.C. 295 SB at Benning Rd. (5/10)



IMPLEMENTATION CONT'D

- While the Flextime White Paper concentrates on a handful of specific corridors in the Washington region, these selected corridors of interest are not the only possible in which to implement a flextime incentive program
- The corridors selected for observation were purposely chosen in the event that a pilot program is initially launched

IMPLEMENTATION CONT'D

- Draft program requirements were recently established in consultation with our flextime incentive work group. This includes:
  - Rules of Eligibility
  - Participation Guidelines
  - Terms of Use

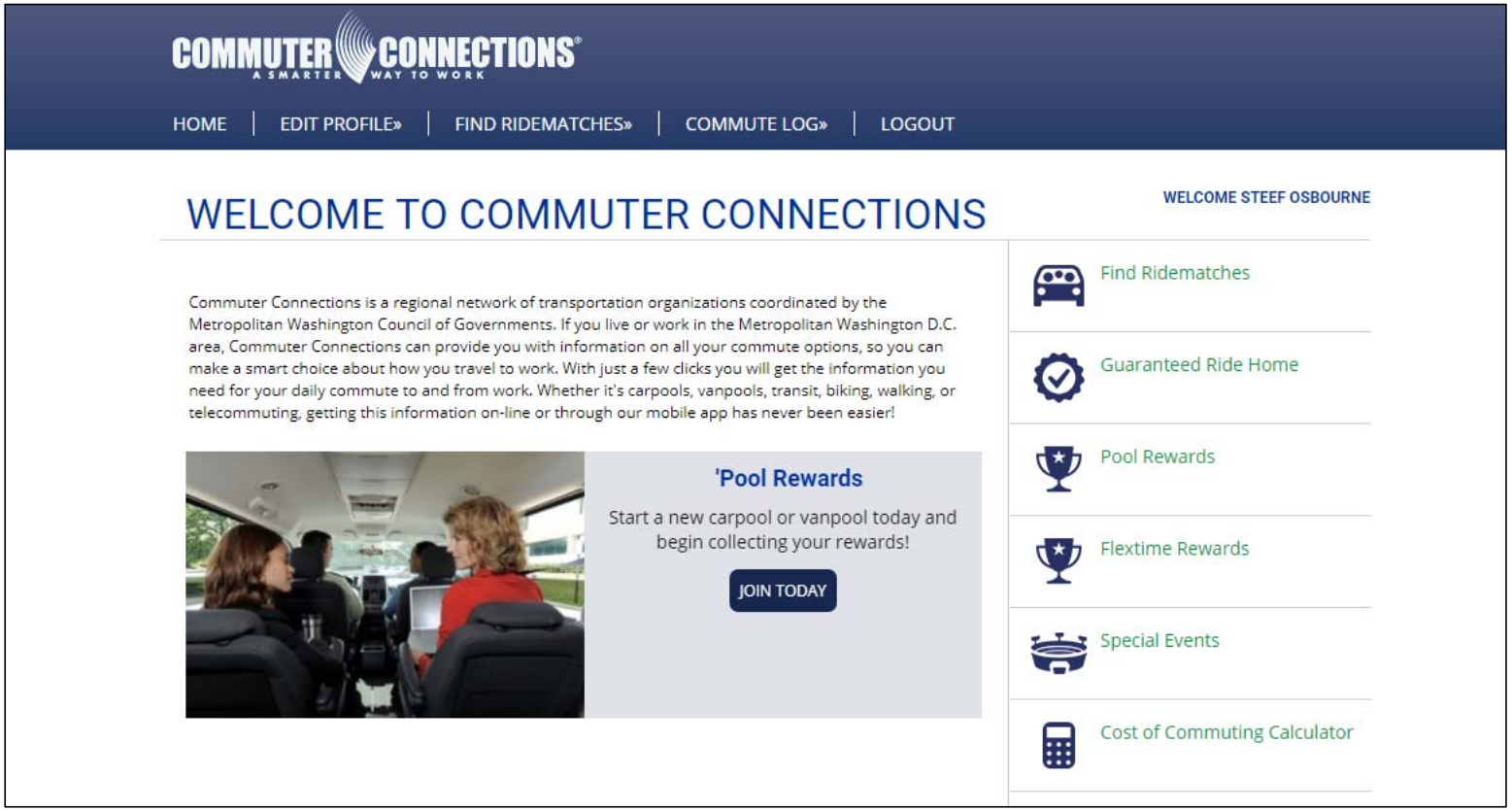
IMPLEMENTATION CONT'D

- This incentive program will have a registration process modeled after Commuter Connection's current benefit and incentive programs applications
- The applications received from individuals traveling along select corridors will be reviewed and either approved or denied by COG/TPB staff. Careful attention is given during this process to determine eligibility associated with implementing an incentive program of this type.

IMPLEMENTATION CONT'D

- Within a Commuter Connections app, the user must receive and accept a notification pushed to their phone. They must turn on their location services so Commuter Connections can verify that the trip was taken outside their regularly scheduled work hours.
- Individuals already registered with Commuter Connections have elected to provide their home address, work address, contact information and schedule flexibility
- The user will indicate when their trip has begun and when they have reached their destination
- Commuter Connections will have to verify some of the information provided, such as schedule flexibility, with the user's employer. Commuter Connections may also have to restrict the user's ability to edit certain information after it has been confirmed, i.e., locking a user's work schedule and/or employer address to prevent individuals from changing this information before or after accepting a notification.

IMPLEMENTATION CONT'D



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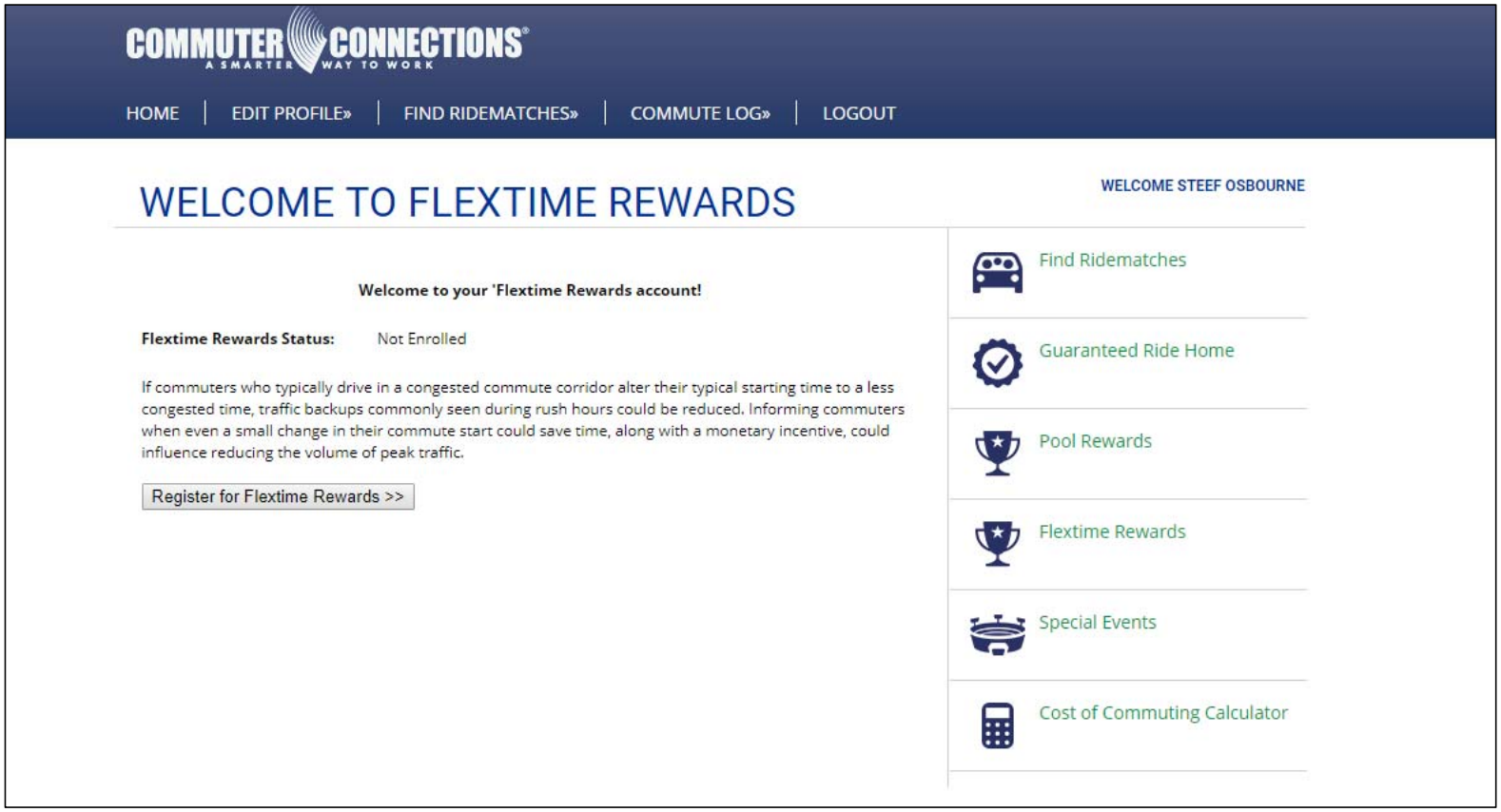

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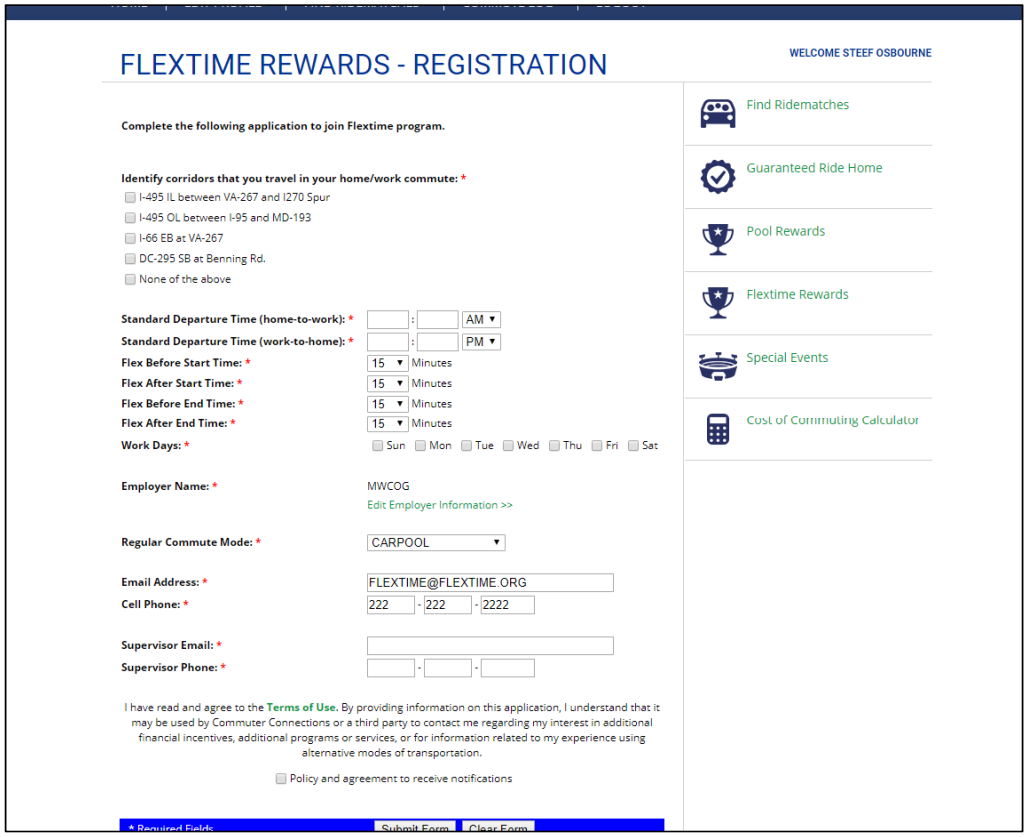


FLEXTIME REWARDS - REGISTRATION

WELCOME STEEF OSBOURNE

Complete the following application to join Flextime program.

Identify corridors that you travel in your home/work commute: *
- I-495 IL between VA-267 and I270 Spur
- I-495 OL between I-95 and MD-193
- I-66 EB at VA-267
- DC-295 SB at Benning Rd.
- None of the above

Standard Departure Time (home-to-work): * : AM
Standard Departure Time (work-to-home): * : PM
Flex Before Start Time: * 15 Minutes
Flex After Start Time: * 15 Minutes
Flex Before End Time: * 15 Minutes
Flex After End Time: * 15 Minutes
Work Days: * Sun Mon Tue Wed Thu Fri Sat

Employer Name: * MWCOG
Edit Employer Information >>

Regular Commute Mode: * CARPOOL

Email Address: * FLEXTIME@FLEXTIME.ORG
Cell Phone: * 222 - 222 - 2222

Supervisor Email: *
Supervisor Phone: * - -

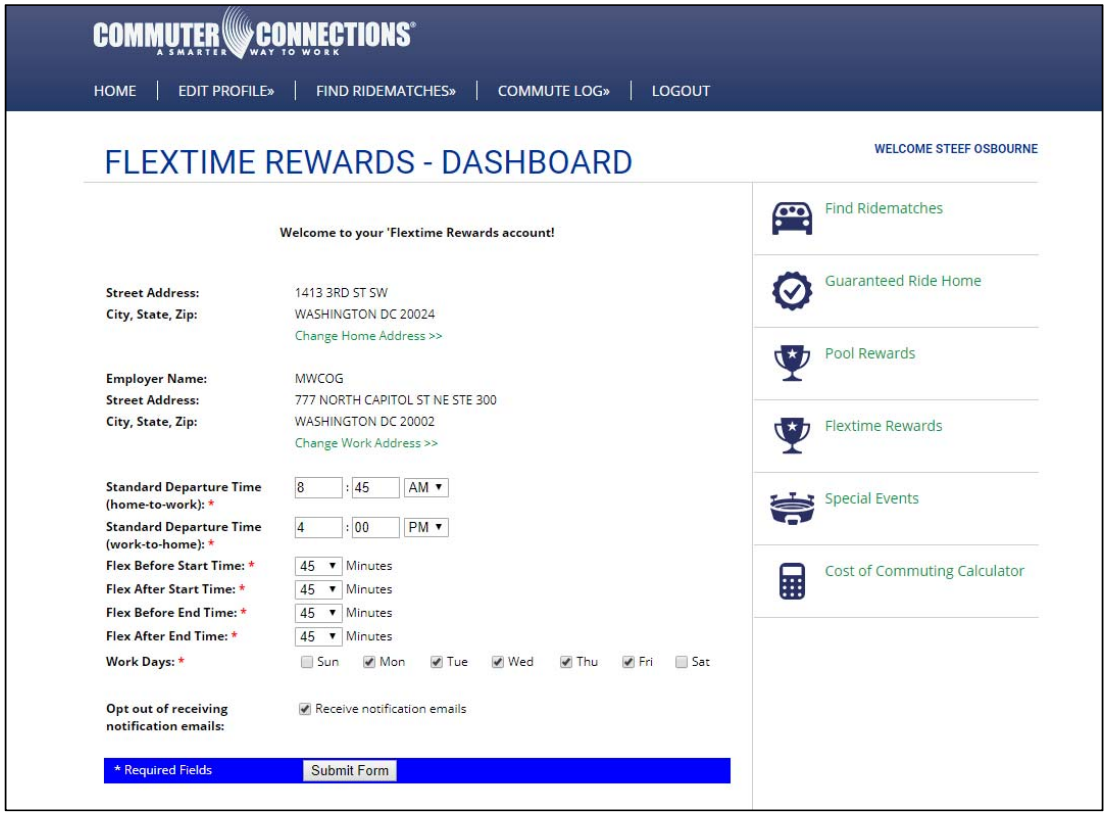
I have read and agree to the **Terms of Use.** By providing information on this application, I understand that it may be used by Commuter Connections or a third party to contact me regarding my interest in additional financial incentives, additional programs or services, or for information related to my experience using alternative modes of transportation.

Policy and agreement to receive notifications

* Required Fields Submit Form Clear Form

Find Ridematches
Guaranteed Ride Home
Pool Rewards
Flextime Rewards
Special Events
Cost of Commuting Calculator

IMPLEMENTATION CONT'D



QUESTIONS OR CONCERNS?

Any questions or concerns can be directed to:

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