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P&TS
Parking & Transportation Services

Building Your TDM Operating Plan

*IPI Annual Conference
ACT TDM Program
June 13, 2012*



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TDM

Transportation Demand Management is the application of strategies and policies to reduce travel demand (specifically of single-occupancy private vehicles), or to redistribute this demand in space or in time.



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Building an Operating Plan

- *Why TDM for your organization*
- *Goals*
- *Challenges*
- *Support from administration*
- *Program elements/resources*
- *Partnerships (Caltrain, AC Transit, Capri, 511, students)*
- *Marketing/outreach plan*
- *Budget and funding*
- *Surveys: baseline data, trends and more*
- *Metrics/Toolkit impacts*



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Why TDM at Stanford

- *Community Relations*
 - Traffic and neighborhood parking - **GUP**
 - Public service (Marguerite shuttle)
- *Environmental Sustainability*
 - Climate change
 - Air quality
 - Resource conservation
- *Employee Well Being*
 - Stress reduction
 - Increased exercise
 - Financial rewards
- *Reduce Investment in Parking*



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TDM Challenges

- *Daily population of 35,000*
- *Campus growth*
- *Increases in local transit fares and decrease in service levels*
- *Perceived ease of driving alone*
- *General Use Permit*
 - ✓ *No net new peak-hour trip goal*
 - ✓ *Limited to 2,300 net new parking spaces (20,000 spaces now)*



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TDM Program Elements/Toolkit

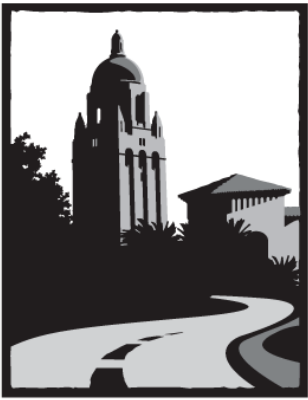
- *Parking fee program*
- *Extensive shuttle*
- *Emergency ride home*
- *Freshman "no cars"*
- *Transit information*
- *Rideshare matching*
- *Commuter Club*
- *Bicycle program*
- *Pre-tax transit pass + commuter checks*
- *Eco Pass/Go Pass*
- *Charter services*
- *Commuter planning*
- *Car rental: hourly—half-day*
- *Carsharing*
- *East Bay Express*
- *Work shift mgt.*
- *Personal outreach*
- *Promotions / events*
- *Extensive website*



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Commute Club Program

- *Clean Air Cash (\$300/year) and other incentives*
- *Carpool permit*
- *Vanpool subsidies*
- *Reserved parking spaces for carpools/vanpools*
- *Complimentary daily parking passes for carpoolers*
- *Rewards for recruiting members*
- *12 free hours of car rental*
- *Transit subsidy*
- *Purchase eight daily permits per month*
- *Entries into regular prize drawings*
- *Members only gifts*
- *“Love Stories,” Commute Heroes, “Picture My Commute,” “Pain at the Pump”*



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Promote: Campaigns

- ✓ *Bi-annual e-postcard and poster campaigns*

Postcard





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Promote: Campaigns

Posters

carpool
 bicycle
 train
 bus
 walk
 vanpool

Caltrain just makes more sense for us than driving. The Caltrain GO Pass and higher gas prices finally changed our minds and our commute. Instead of five days in the car, now we ride the train every day with headphones, books, laptops, conversation, and most importantly relaxation.

IRT Lane Medical Library's EdTech Group

Join the Stanford University Commute Club Today.
<http://transportation.stanford.edu>
 (650) 723-9362

Spin the Transportation Wheel of Fortune* and get great tips on how to make an impact for the university, for your financial and physical health, and for the environment.

There are so many incentives for those who use alternative transportation, both at the university and at the Office of Development. It helps motivate you to find alternative ways to get to work, rather than driving alone.

Stanford Office of Development staff

Join the Stanford University Commute Club Today.
<http://transportation.stanford.edu>
 (650) 723-9362

*Fig. 1. Don't drive alone on Spine the A4 Drive. Cars cause 20-40% of air-polluting pollutants, which are particularly dangerous for children when pollution is at its worst.
 Fig. 2. Avoid driving 20 miles a week. Save 20 lbs. in CO2 emissions a week. The equivalent of 3.2 trees of CO2 per year.
 Fig. 3. Refuel when it's cool. Getting gas during cooler hours can truly prevent gas expenses from heating up and melting snow.



Photo credit from bottom right: Mary Ann, Melissa Watkins, Drew Tully, Tim Worley, Roger Whitehead

Photo in 100% recycled paper, 100% post-consumer, with 50% recycled ink

Photo credit from left to right: David Hines, Daniel Austin, Francesca Chatterbox, Kelly Reynolds, David Rosenfield, Chris Yano, Jennifer Sargent
 *Information on costs and incentives for the data contained in this transportation wheel can be found on our website at <http://transportation.stanford.edu>.

Photo in 100% recycled paper, 100% post-consumer, with 50% recycled ink

Photo: © Steve Delaney



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Promote: Campaigns

Postcards

46,800 calories burned
and increased life span

- every trip counts
- carpool
- bicycle
- train
- bus
- walk
- vanpool

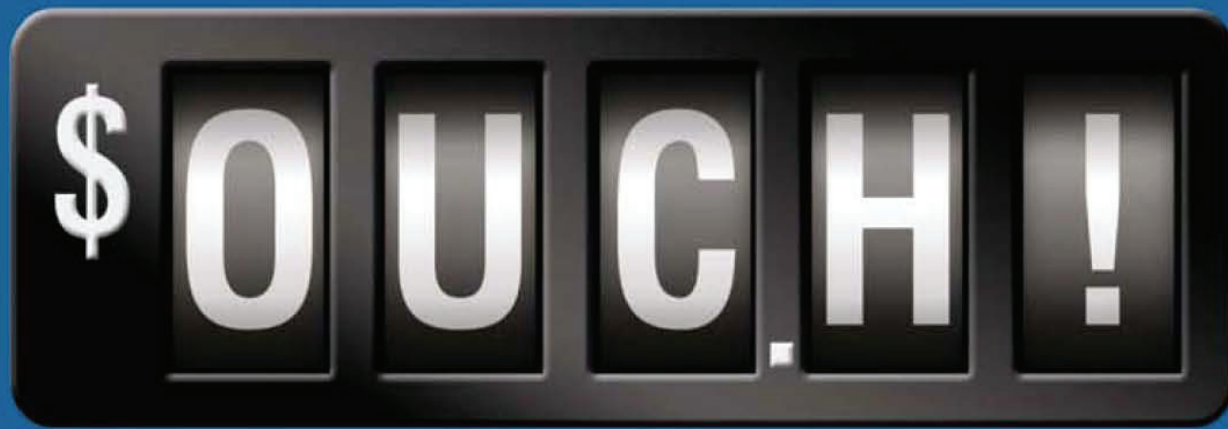
Calculations will vary depending on individual commute.

\$1,465 a year saved
or a dream vacation

- every trip counts
- carpool
- bicycle
- train
- bus
- walk
- vanpool

Calculations will vary depending on individual commute.

Promote: Campaigns



Dump the Pump. Rideshare.

commuteclub.stanford.edu



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Promote

✓ *Bus advertisements (outside and in)*



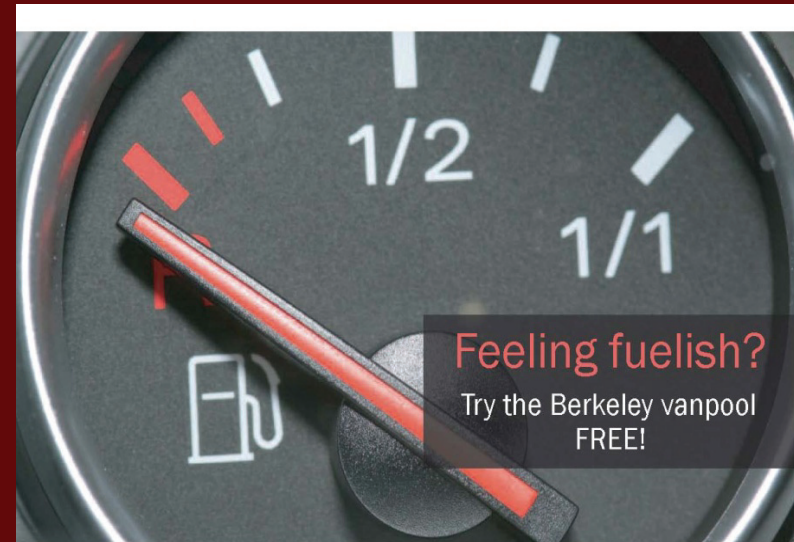


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Promote

- *Targeted direct mail campaigns*
- *Peak Trip Task Force*
- *Local media*
- *One on one outreach*
- *University champions*
- *Videos*
- *eUpdates*
- *Social media*

Postcard



Promote: Campaigns

Poster



6,188 lbs.
of CO₂ not released

Amount of CO₂ a person could keep out of the atmosphere annually, if that person used alternative transportation for a standard 30-mile roundtrip commute instead of driving alone.

every
trip
counts

carpool
bicycle
train
bus
walk
vanpool

Join the Stanford University
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Information on sources and assumptions for the data calculations can be found on our website. Calculations will vary depending on individual commutes.

Printed on 50% recycled paper, 20% post-consumer, with soy-based ink.

Spring 2008 Banner

A scenic landscape of a glacier with icebergs floating in a lake. The sky is a deep blue, and the water is calm, reflecting the surrounding ice and sky. The icebergs are of various shapes and sizes, some with jagged edges and others more rounded. The glacier in the background is a massive wall of white and blue ice, with some snow on top. The overall scene is serene and majestic.

got glaciers?

EVERY TRIP COUNTS

carpool bicycle train bus walk vanpool

transportation.stanford.edu

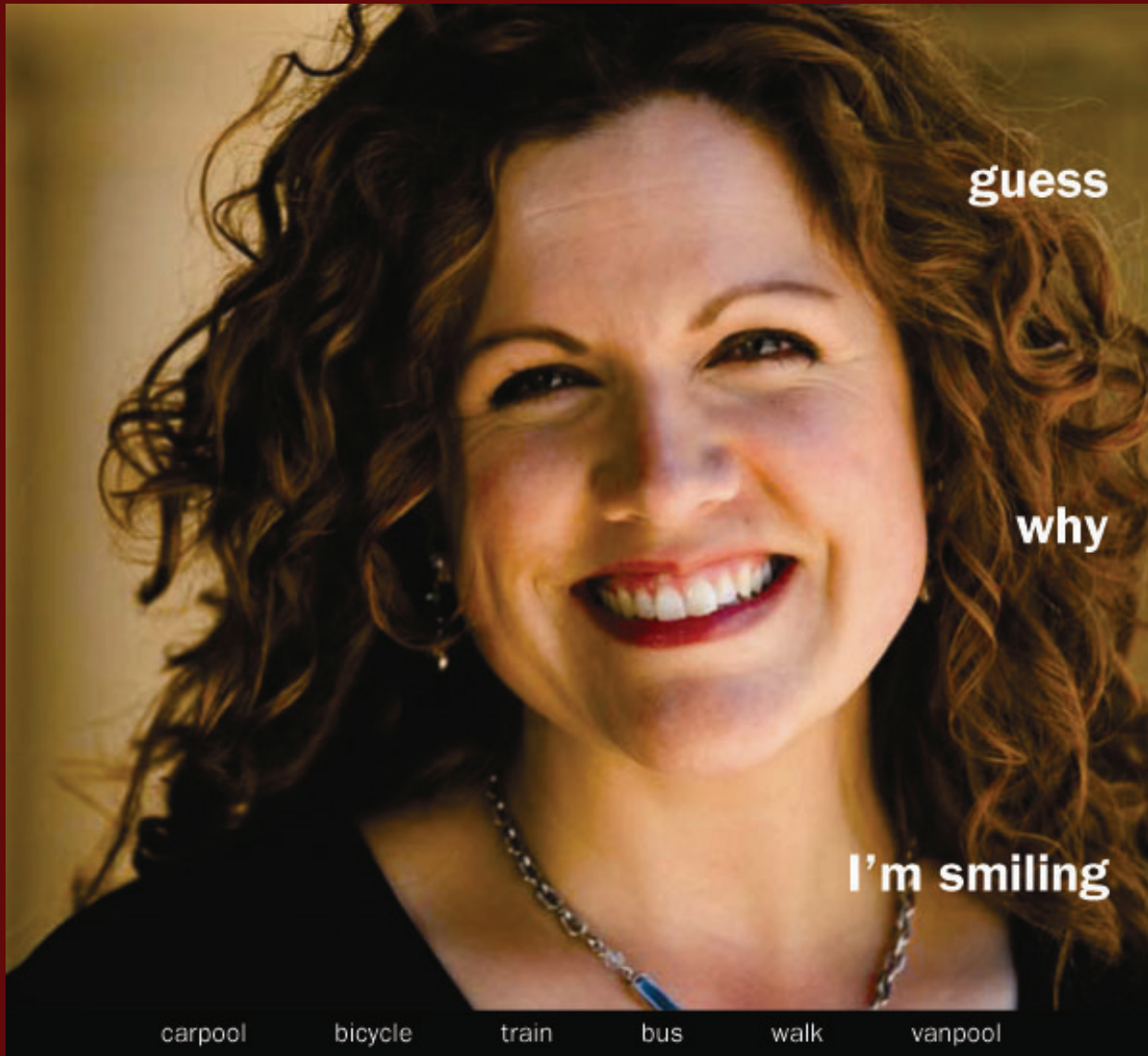
Spring 2008 Postcard



got sea ice?

EVERY TRIP COUNTS | carpool bicycle train bus walk vanpool

Fall 2008 Postcard



Spring 2009 Email

You replied on 5/6/2009 2:20 PM.

From: commuteclub-bounces@fac-mailgate.stanford.edu on behalf of Parking & Transportation Services [transportation@stanford.edu]
To: commuteclub@fac-mailgate.stanford.edu
Cc:
Subject: spring 2009 email test May 6, 12:00pm



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Commute Club 2009 Spring Outreach



Rob Dunbar is the W.M. Keck Professor of Earth Sciences, Stanford University; the Victoria P. and Roger W. Sant Director of the Earth Systems Program; Senior Fellow, Freeman Spogli Institute for International Studies; Senior Fellow, Woods Institute for the Environment

What do coral reefs have to do with your commute?

More than you may realize. As a Commute Club member, you are helping to save the coral reefs.

At least one third of the carbon dioxide released into the atmosphere is absorbed by the oceans. As carbon dioxide increases – in part, from burning fossil fuels – the ocean's waters become more acidic, impeding production of calcium carbonate skeletons in marine life and constraining their growth and viability.

The result? Rubble, algae, or seagrass are displacing once healthy, vibrant coral reefs and the biologically diverse habitat they provide.

"It's happening," says Rob Dunbar, the W. M. Keck Professor in the School of Earth Sciences. "Changing ocean pH, acidification, is the culprit."

The clues to climate change are found in the chemistry of coral bands, similar to tree rings. Dunbar's research includes analyzing coral core samples. "We are seeing that corals are ailing, with overall declines in growth at sites worldwide." The loss of corals negatively impacts the entire reef community.



"That's one reason I'm a Commute Club member. It's a sure thing given

Spring 2009 Poster

one more reason to drive less

Learn more at transportation.stanford.edu/CoralReefs

EVERY TRIP COUNTS | carpool bicycle train bus walk vanpool



Spring 2010 Poster

spring into a new commute

bicycle bus carpool train transit vanpool walk

EVERY TRIP COUNTS
transportation.stanford.edu

Fall 2011 Poster

**How does a
clean air commute
make you feel?**

Healthy
Great!
Relaxed
Happy
Awesome!
Stress-Free
Virtuous
Energized
Independent

EVERY TRIP COUNTS


bicycle bus carpool train vanpool walk

transportation.stanford.edu

Fall 2011 Poster

What's
an IPI?

**A better commute
isn't a tough nut to crack.**



We can help
free commute assistance and
exciting new incentives.

EVERY TRIP COUNTS

bicycle bus carpool train vanpool walk

transportation.stanford.edu

Ridesharing is a natural thing....











Stanford Commute Club



**8,000
members.**

**Greater
rewards.**

Learn more >>



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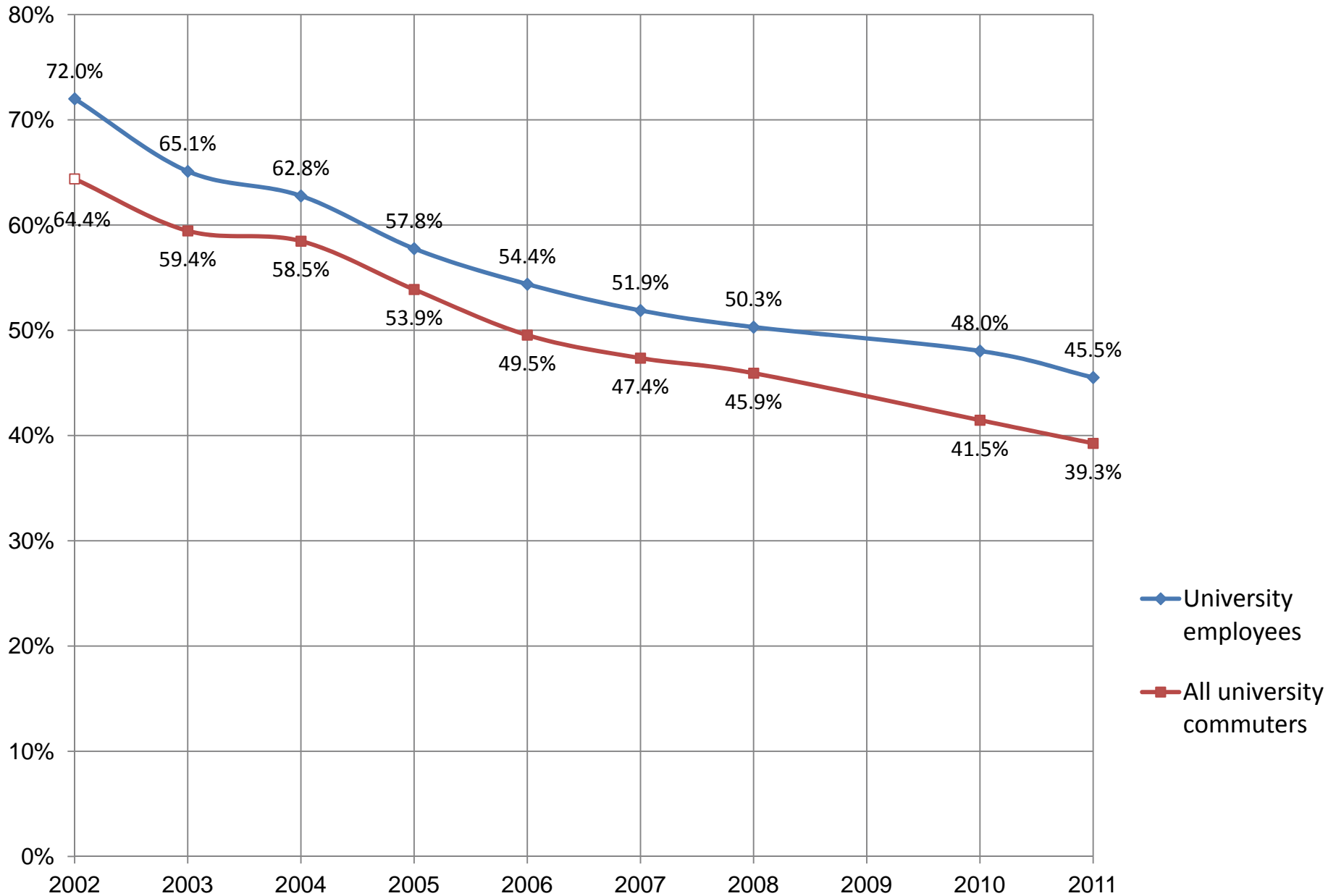
Metrics—Impact of toolkit

- ✓ *Campus commute mode survey*
- ✓ *Annual trip counts*
- ✓ *Commute Club/carpool participation*
- ✓ *Parking permit sales*
- ✓ *Campus parking demand*
- ✓ *Marguerite shuttle ridership*
- ✓ *Commuter VMT/carbon footprint*
- ✓ *Program costs*
- ✓ *Parking construction costs avoided*

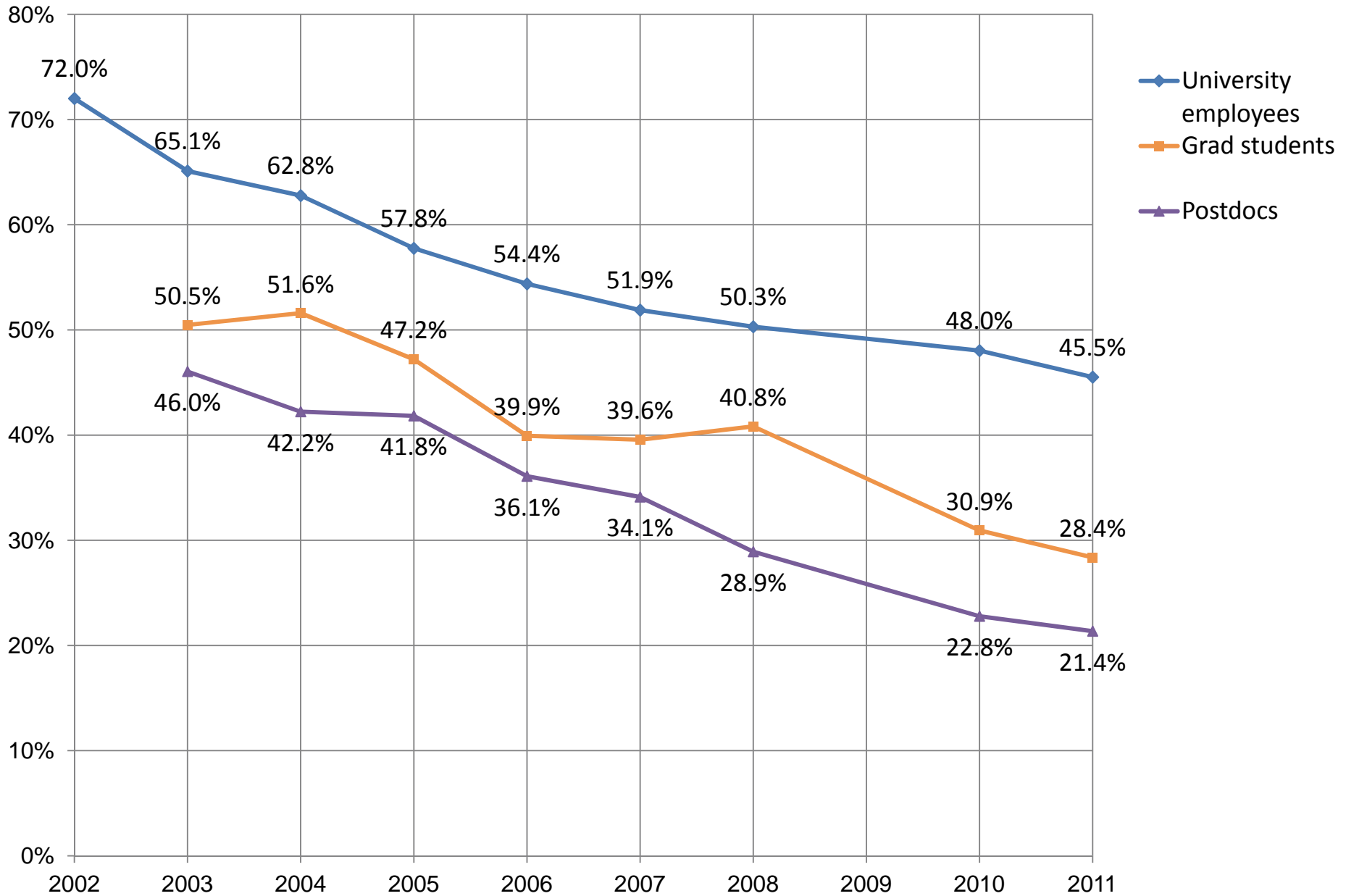
University Employee Mode Splits (%)

<i>Primary Mode</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2010</i>	<i>2011</i>
<i>Bicycle</i>	<i>7.0</i>	<i>9.2</i>	<i>9.5</i>	<i>9.9</i>	<i>10.3</i>	<i>11.8</i>	<i>11.2</i>	<i>12.8</i>	<i>12.7</i>
<i>Caltrain</i>	<i>4.0</i>	<i>9.7</i>	<i>11.5</i>	<i>14.3</i>	<i>15.8</i>	<i>17.7</i>	<i>19.9</i>	<i>19.1</i>	<i>20.9</i>
<i>Carpool</i>	<i>10.0</i>	<i>9.1</i>	<i>9.6</i>	<i>9.7</i>	<i>10.0</i>	<i>9.4</i>	<i>9.3</i>	<i>10.2</i>	<i>9.8</i>
<i>Drive Alone</i>	<i>72.0</i>	<i>65.1</i>	<i>62.8</i>	<i>57.8</i>	<i>54.4</i>	<i>51.9</i>	<i>50.3</i>	<i>48.0</i>	<i>45.5</i> <small><i>39.3</i></small>
<i>Shuttle/ Bus</i>	<i>4.0</i>	<i>2.8</i>	<i>2.9</i>	<i>4.2</i>	<i>4.8</i>	<i>4.9</i>	<i>5.1</i>	<i>5.9</i>	<i>7.3</i>
<i>Other</i>	<i>-</i>	<i>1.2</i>	<i>1.3</i>	<i>1.3</i>	<i>1.4</i>	<i>1.2</i>	<i>1.1</i>	<i>1.0</i>	<i>0.7</i>
<i>Vanpool</i>	<i>1.0</i>	<i>0.6</i>	<i>0.6</i>	<i>0.5</i>	<i>0.4</i>	<i>0.3</i>	<i>0.4</i>	<i>0.3</i>	<i>0.2</i>
<i>Walk</i>	<i>2.0</i>	<i>2.3</i>	<i>1.8</i>	<i>2.2</i>	<i>2.8</i>	<i>2.9</i>	<i>2.7</i>	<i>2.6</i>	<i>2.7</i>

Drive-Along Rates



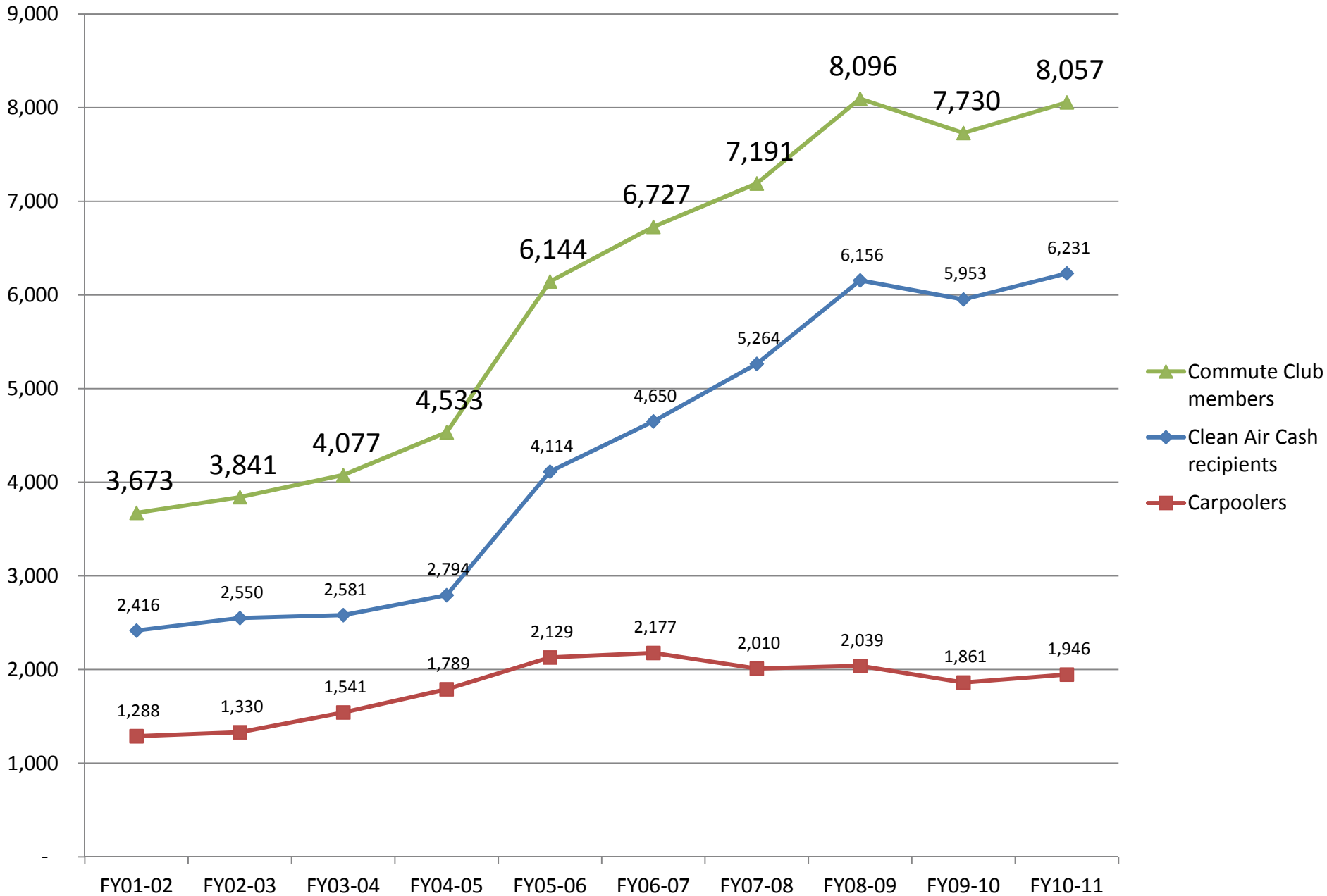
Drive-Along Rates



Peak Hour Commute Trips

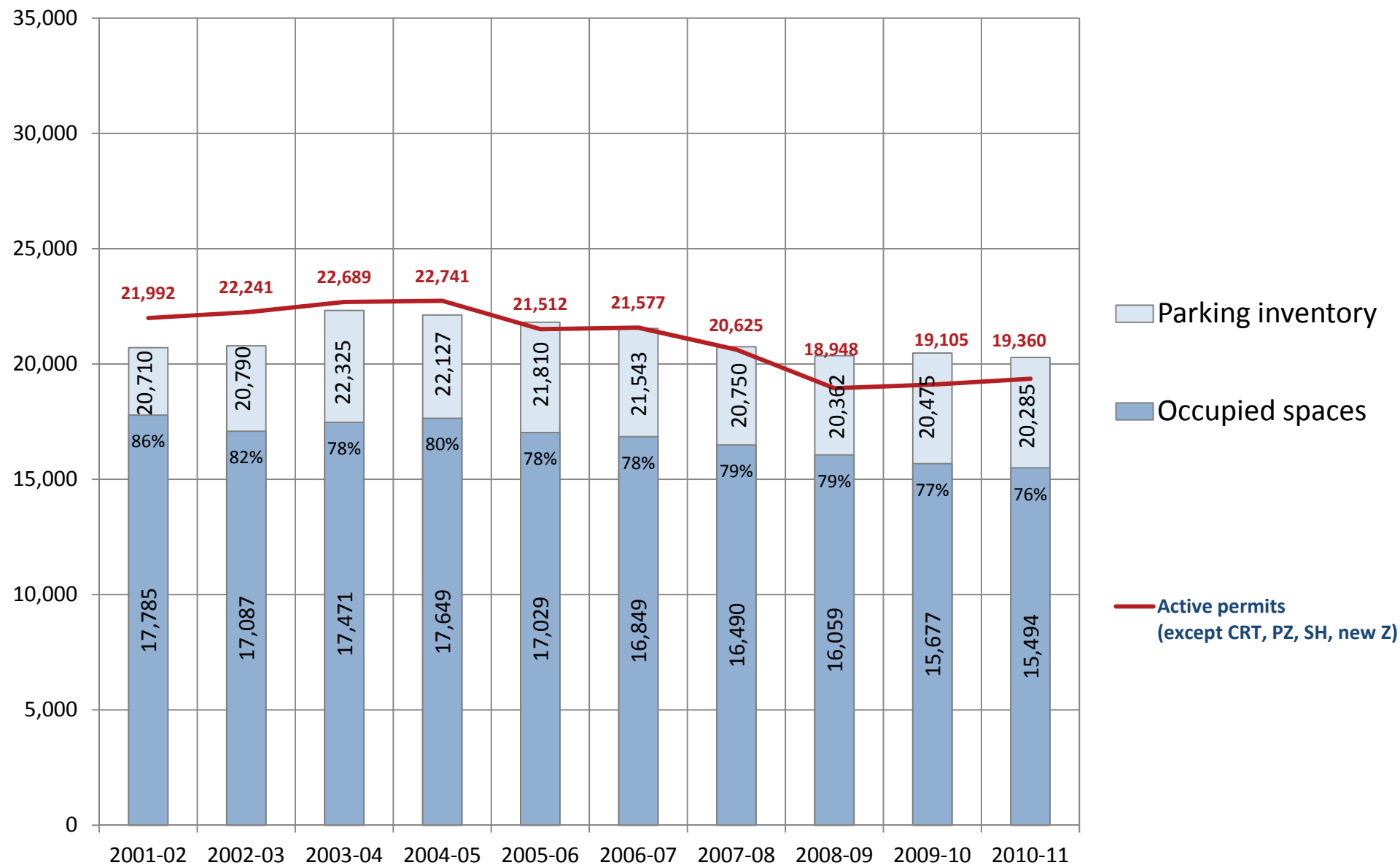
<i>Year</i>	<i>AM Trips</i>	<i>PM Trips</i>
<i>2001 (baseline)</i>	<i>3,474</i>	<i>3,591</i>
<i>2002</i>	<i>3,275</i>	<i>3,586</i>
<i>2003</i>	<i>3,413</i>	<i>3,476</i>
<i>2004</i>	<i>3,176</i>	<i>3,576</i>
<i>2005</i>	<i>3,383</i>	<i>3,561</i>
<i>2006</i>	<i>3,048</i>	<i>3,427</i>
<i>2007</i>	<i>3,058</i>	<i>3,494</i>
<i>2008</i>	<i>3,020</i>	<i>3,460</i>
<i>2009</i>	<i>2,840</i>	<i>3,227</i>
<i>2010</i>	<i>2,931</i>	<i>3,459</i>

Commute Club membership

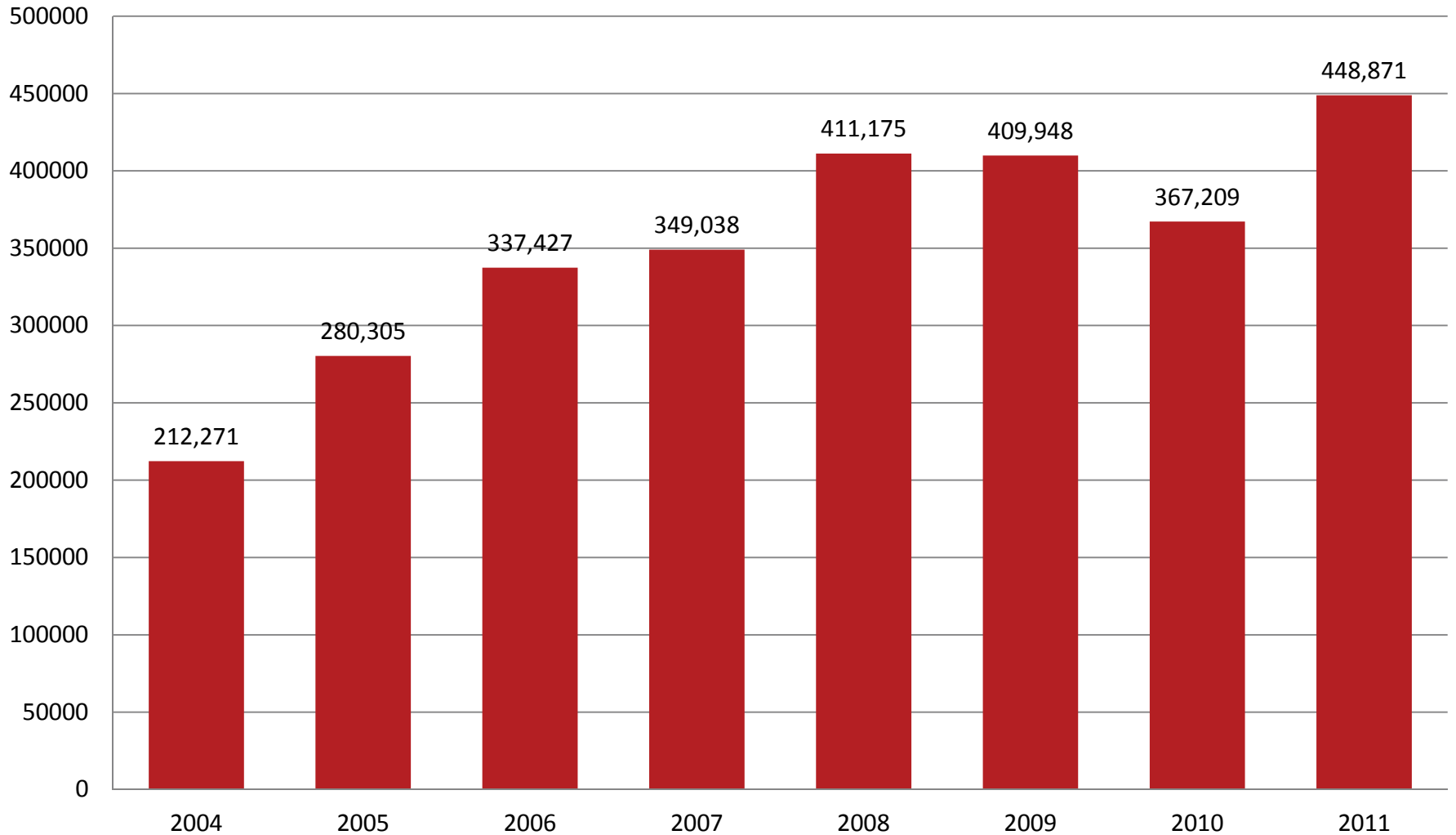


University Population, Parking Inventory

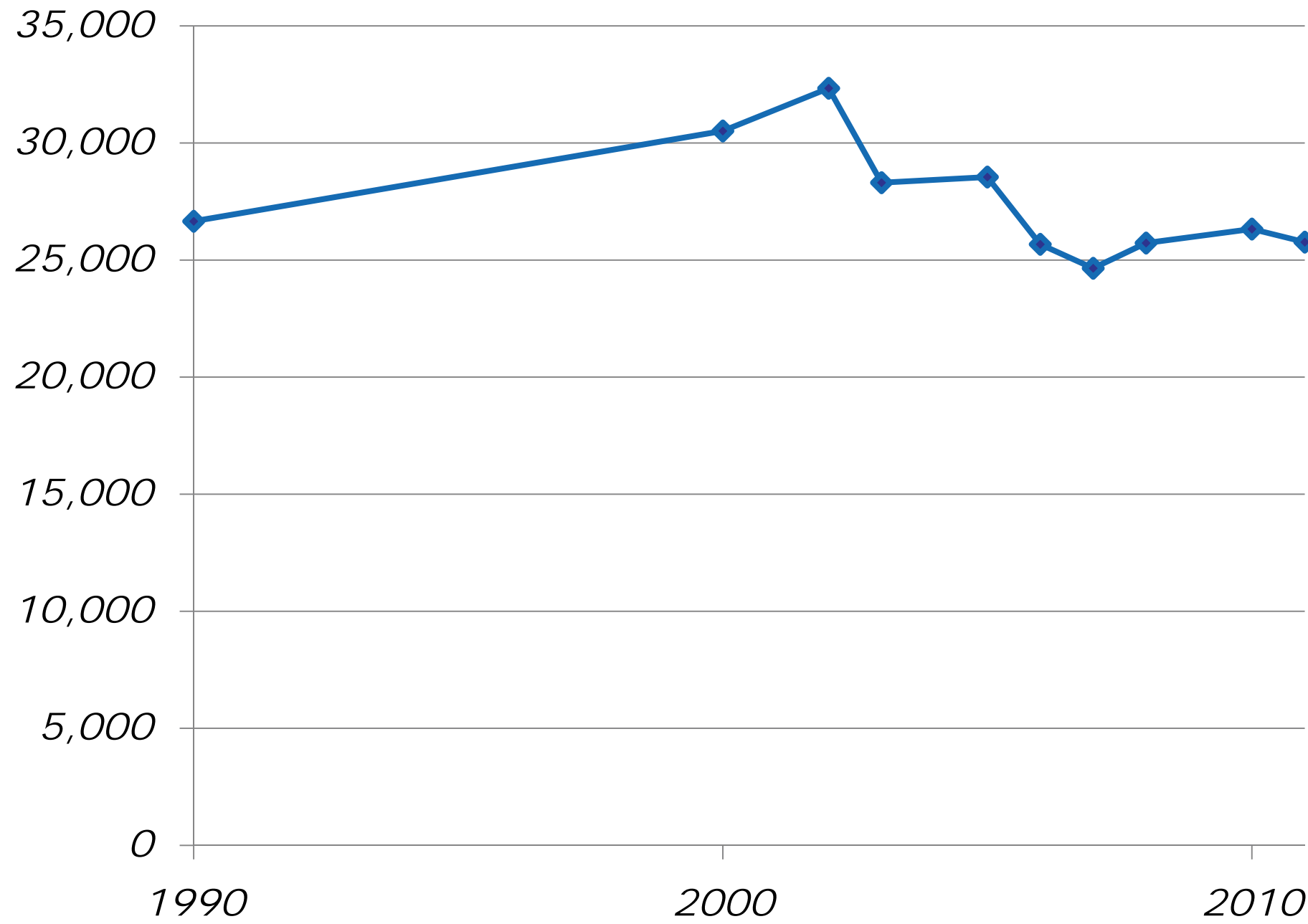
Feb. 15 parking permit snapshot



Annual Marguerite Caltrain Boardings



Commuter CO₂ Emissions (tonnes)





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Parking Construction Avoided

Group

Drive alone rates

Employees

2002 = 72%

2011 = 45.5%

Grad Students

2004 = 51.6%

2011 = 28%

Postdocs

2003 = 46%

2011 = 21%



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Parking Construction Avoided

Group

Drive alone rates

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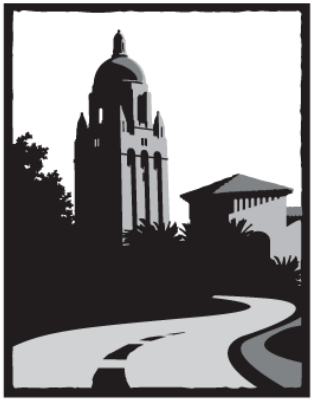
Postdocs 2003 = 46% 2011 = 21%

Parking spaces not constructed due to drop in parking demand:

3,172

Construction cost avoided: $3,172 \times \$34,000/\text{space} =$

\$107,848,000



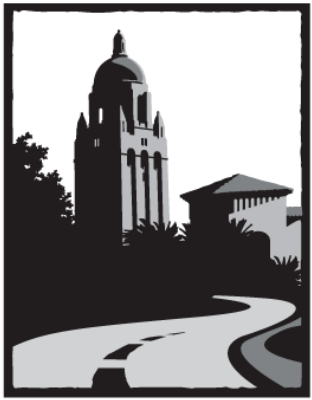
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Selecting the Right TDM Tools

- ✓ *Existing onsite resources*
- ✓ *Local/regional resources*
- ✓ *Leverage partnerships*
- ✓ *Student/faculty resources*
- ✓ *Biggest bang for the buck*
- ✓ *Synergistic effects*
- ✓ *What works best for your worksite*
- ✓ *Benchmarking*
- ✓ *Zoomerang/Surveymonkey*



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Defending Against Trendy Solutions

- ✓ *Thoughtful pushback*
- ✓ *Budget—managing limited resources*
- ✓ *Ability to manage over the long haul*
- ✓ *Potential impact on goals*
- ✓ *Maintaining consistency in program*
- ✓ *Unproven approaches*
- ✓ *Channeling student energy*
- ✓ *Alumni and their ideas*



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<http://transportation.stanford.edu>

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transportation.stanford.edu/2012ACTIPI/TDM