

The logo graphic consists of several overlapping, slanted rectangular shapes in shades of green, blue, and purple, arranged in a dynamic, forward-pointing pattern.

CAMBRIDGE
SYSTEMATICS

Think  Forward

SERPM 8 Model Update Progress

presented to
RTTAC-MS

presented by
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November 14, 2018

Outline

- Status overview
- Summary of latest model delivery
- Validation status
- Sensitivity Tests

Project status

- Input data complete
- Model development complete
- Model updated and delivered for use in LRTP development
- Model sensitivity testing in progress
- Next steps
 - » Model documentation and application support
 - » TNC scenario experiments

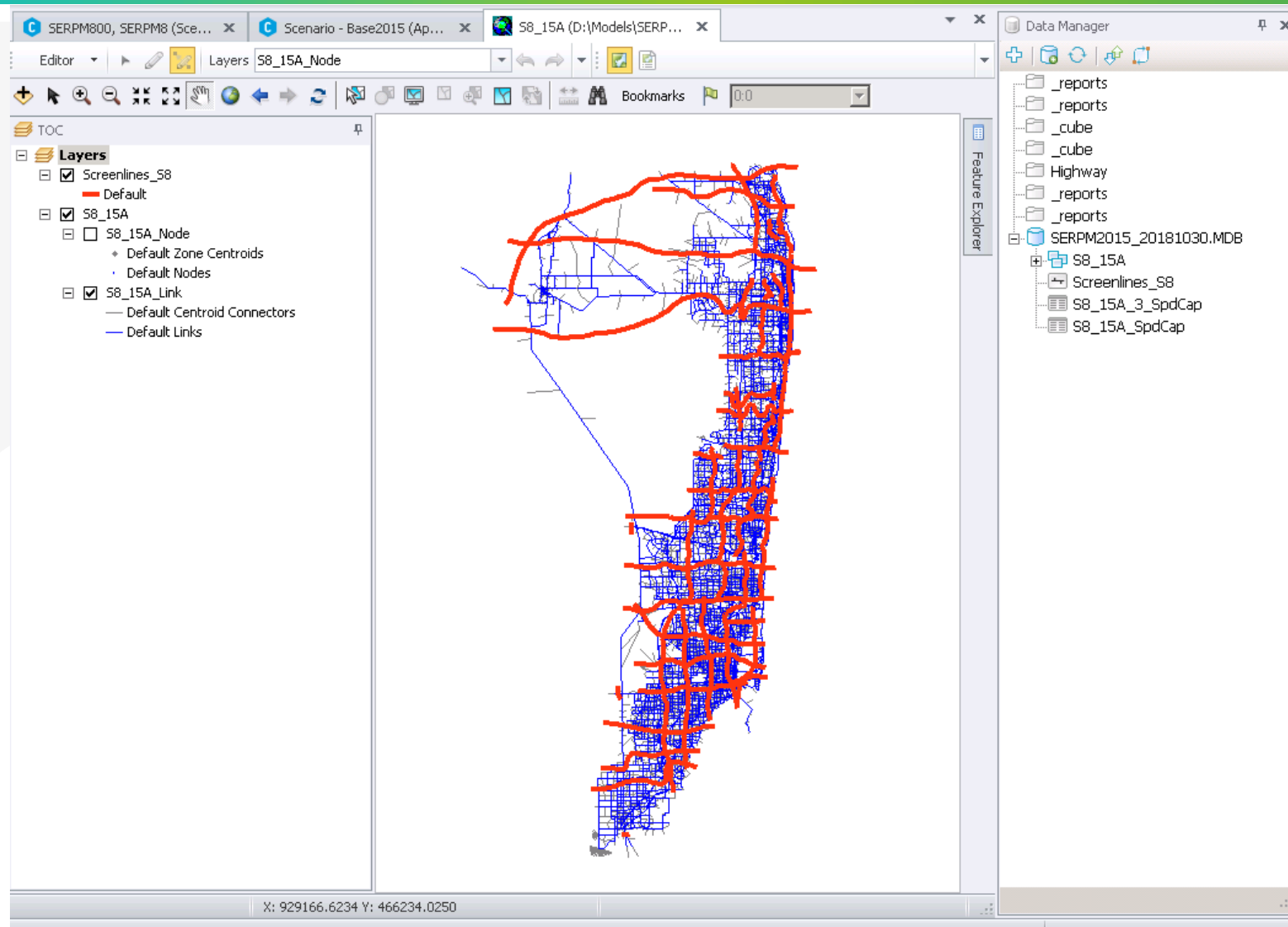
Task delivery timeline

- Sensitivity tests complete – November 2018
- TNC Experiments – November 2018
- Documentation
 - » Application and Maintenance Guide – November 2018
 - » Development and Validation tech report – December 2018
 - » Parameters and Structure Guide – January 2018
 - » Executive Summary – December 2018
- Draft Model User's Guide
 - » Online documentation (<https://sites.google.com/site/serpm8reference/>)

Latest model delivery (11/5)

- ABM component recalibration
- Highway network updates
- Transit recalibration

Screenline shape file



Validation Status

Highway assignment statistics

<i>VMT Ratio</i>	Base2015/Observed Traffic Count VMT Ratio								
	CBD	Fringe	Urban	Suburban	Rural	Total	Miami-Dade	Broward	Palm Beach
All Groups	1.04	1.01	1.02	1.00	1.08	1.01	1.03	0.98	1.02

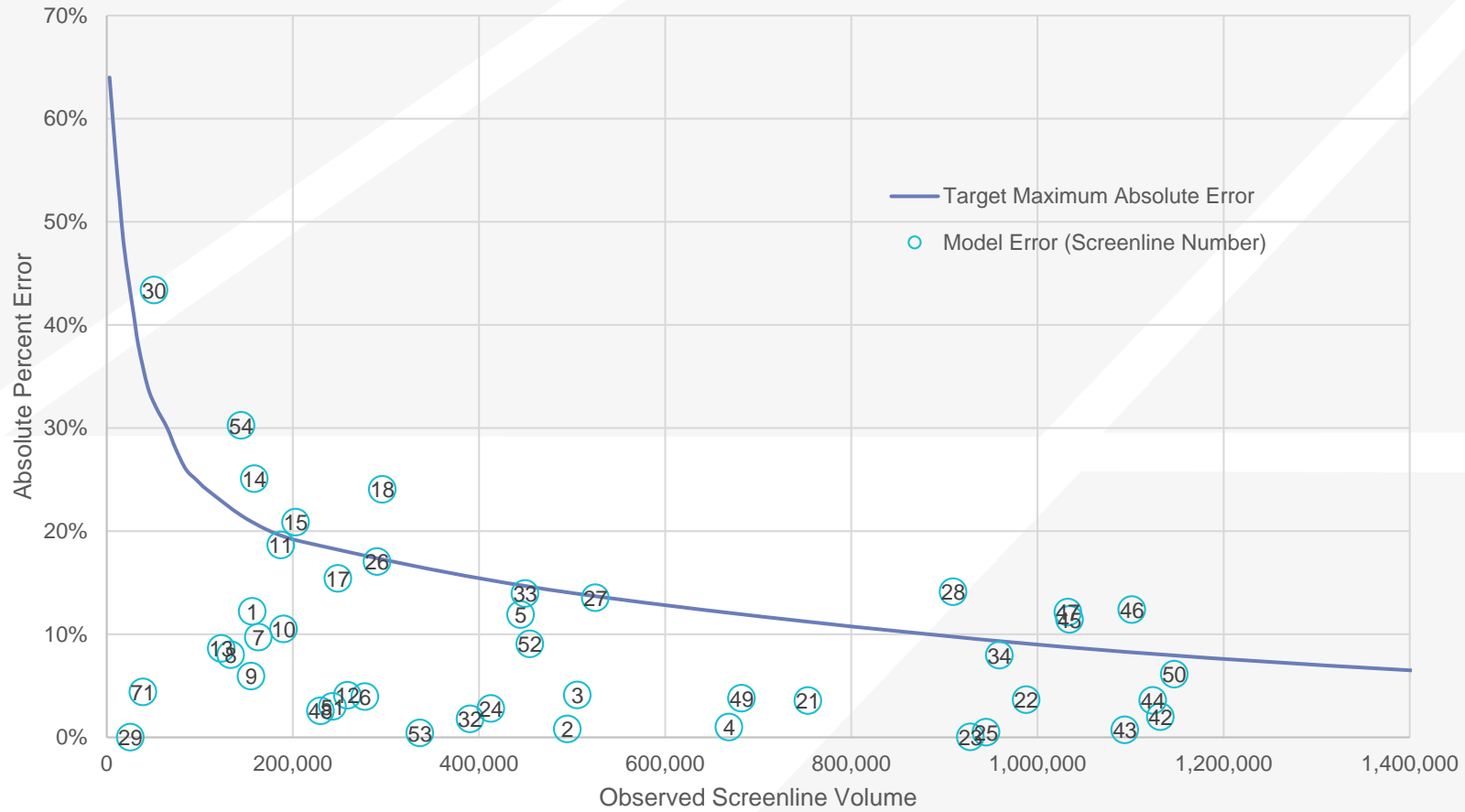
<i>VMT Ratio</i>	Base2015/Observed Traffic Count VMT Ratio							
	County	EA	AM	MD	PM	EV	TRK	Total
All Groups		0.75	1.01	1.01	1.05	1.02	0.98	1.01

Highway assignment statistics

<i>VMT Ratio</i>	Base2015/Observed Traffic Count VMT Ratio
Facility Type	Total
Freeways	1.05
Uninterrupted Roadways	1.21
High Speed Arterials	1.01
Low Speed Collectors	0.88
Ramps	1.03
HOV Lanes	1.01
Toll Roads	0.99
All Groups	1.01

Volume Group	Volume/ Count	%RMSE
1-5,000	1.22	103%
5,000-10,000	1.02	59%
10,000-20,000	1.01	37%
20,000-30,000	0.95	28%
30,000-40,000	0.95	22%
40,000-50,000	0.97	24%
50,000-60,000	0.92	22%
60,000-70,000	1.01	17%
70,000-80,000	1.03	17%
80,000-90,000	1.09	17%
90,000-100,000	1.08	20%
100,000-500,000	1.03	10%
All Groups	1.01	39%

Screenline fit



Transit assignment

	Observed	RTTAC - 9/12		LATEST		S7.071
		Estimated	Delta	Estimated	Delta	
Tri-Rail	13,750	14,750	1,000	13,250	-500	14,260
Tri-Rail Shuttles	3,250	3,750	500	3,750	500	3,414
Metrorail	76,750	77,750	1,000	81,750	5,000	66,036
Metromover (Downtown Miami)	34,500	30,000	-4,500	27,500	-7,000	23,744
BCT Inter-County I-95/I-595 Express	2,500	3,000	500	2,250	-250	2,741
MDT 95E (Inter-County I-95 Express)	1,250	2,250	1,000	1,750	500	1,976
MDT 95X (Golden Glades I-95 Express)	2,000	3,500	1,500	3,000	1,000	2,523
Palm Tran	39,250	43,750	4,500	41,500	2,250	68,625
BCT	124,000	97,000	-27,000	119,500	-4,500	144,561
MDT buses	219,000	209,750	-9,250	217,000	-2,000	298,220
Total	516,000	485,500	-30,500	511,250	-4,750	626,100

Sensitivity Tests

Sensitivity test summary

- Regionwide transportation cost change
 - » Both direct and indirect impacts on travel
- Socioeconomic and demographic change
 - » Impacts entire modeling process from PopSyn through Assignment
- Location specific socioeconomic or transportation supply change
 - » “Dynamic” sensitivity testing
 - » Localized impacts

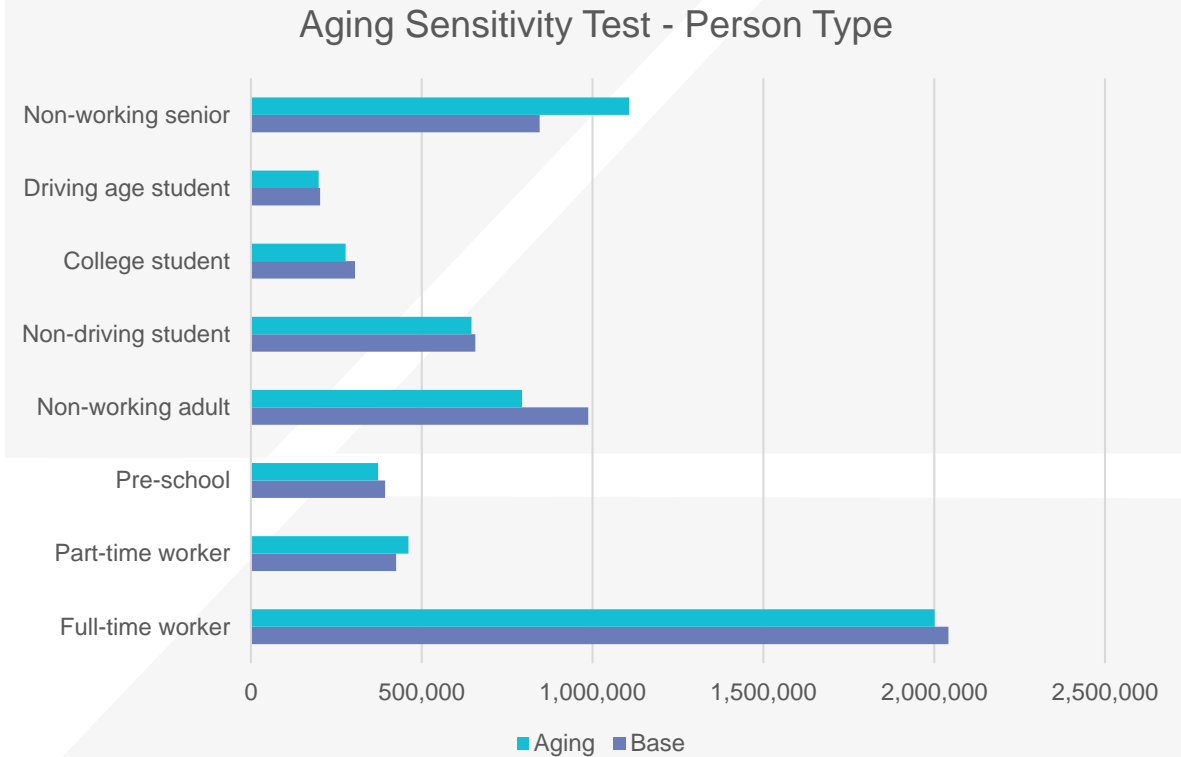
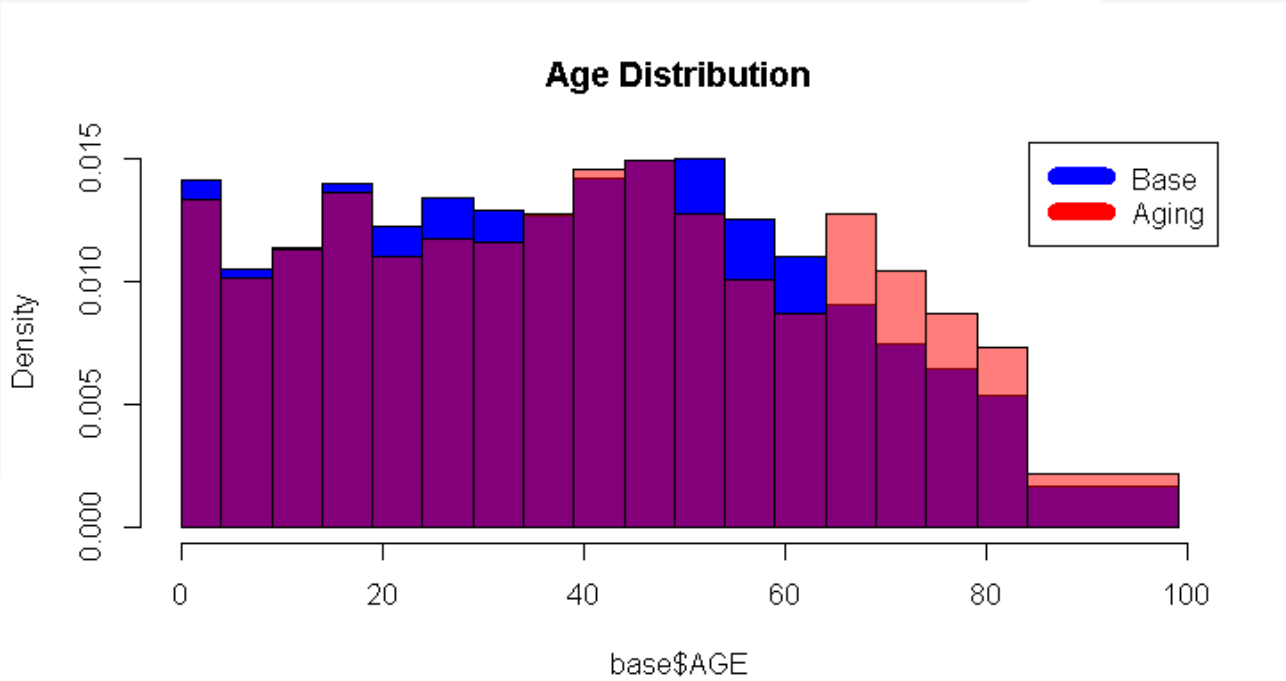
Transit sensitivity

- Reduce transit fare by 50%
- 20% increase in transit trips – elasticity around -0.4
- Small (-.23%) change in overall VMT

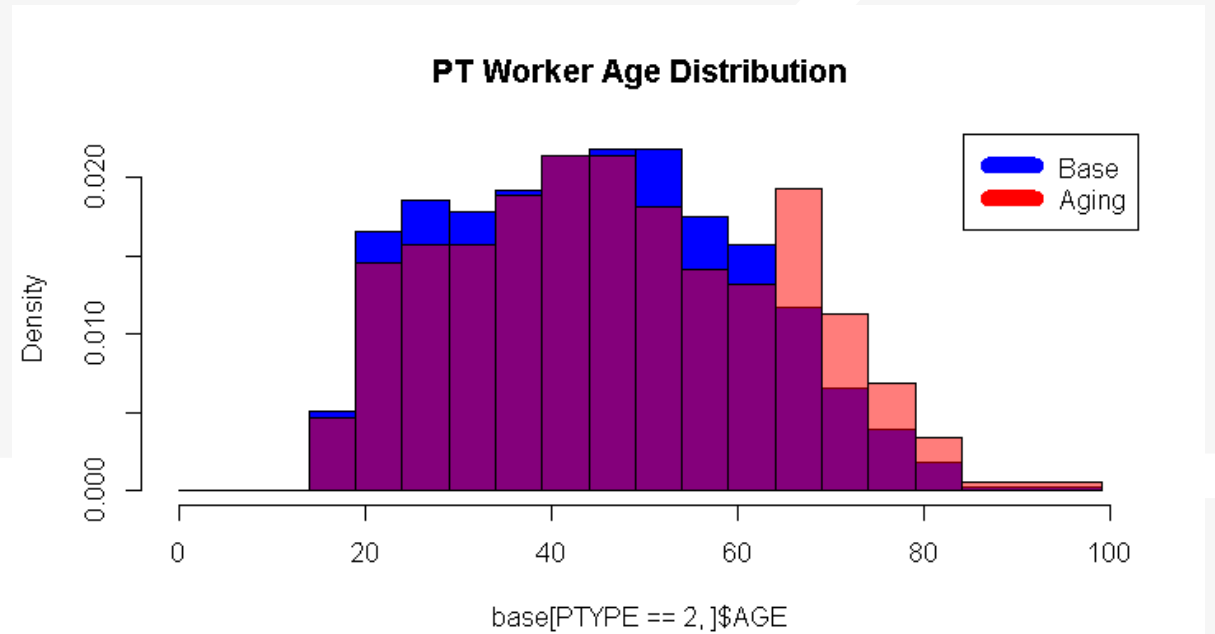
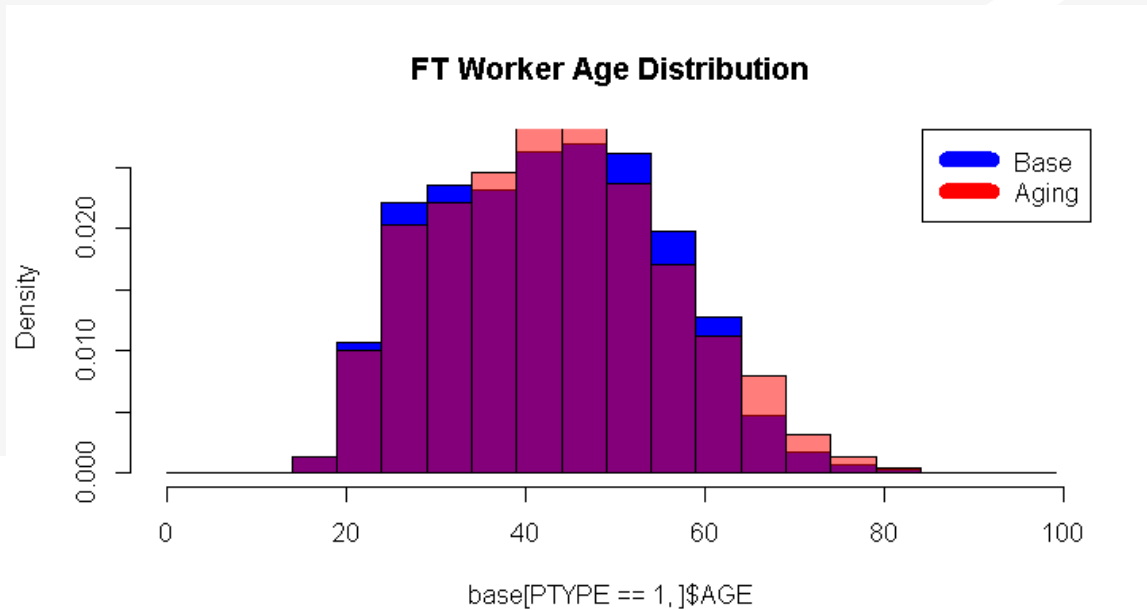
	VMT Change
Miami-Dade	-0.441%
Broward	-0.194%
Palm Beach	-0.042%

Tour Purpose	Percent Difference [(TransitFare - Baseline) / Baseline]
Work	
Auto	-0.7%
Transit	20.2%
Non-Motorized	-3.3%
University	
Auto	-0.9%
Transit	10.2%
Non-Motorized	-2.2%
School	
Auto	-0.5%
School Bus	-0.1%
Transit	25.3%
Non-Motorized	-1.4%
Home-Based Non-Mandatory	
Auto	-0.2%
Transit	14.2%
Non-Motorized	-0.5%
AT_WORK	
Auto	-0.5%
Transit	22.9%
Non-Motorized	1.0%
Visitors	
Private Auto	-0.5%
TNC	-0.8%
Transit	29.9%
Non-Motorized	0.0%

Aging demographic



Aging demographic



Average Age	Base	Aging
Full-time worker	43.10	43.70
Part-time worker	45.13	47.65

Questions
