

# ATRI's Truck Parking Research Initiatives

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# ATRI

Trucking industry's NFP research organization

- Safety
- Mobility
- Economic Analysis
- Technology
- Environment

[www.atri-online.org](http://www.atri-online.org)





# Board of Directors



# Research Advisory Committee





# 2016 Top Industry Issues

1. ELD Mandate
2. Hours-of-Service
3. Cumulative Economic Impact of Trucking Regulations
4. Truck Parking
5. Economy
6. CSA
7. Driver Shortage
8. Driver Retention
9. Transportation Infrastructure/ Congestion/ Funding
10. Driver Distraction

## CRITICAL ISSUES IN THE TRUCKING INDUSTRY – 2016



Presented to the  
American Trucking Associations

Prepared by  
The American Transportation Research Institute  
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# Top Issues Drivers vs. Carriers

## Commercial Drivers

1. ELD Mandate
2. Hours-of-Service
3. Truck Parking
4. Cumulative Economic Impact of Trucking Regulations
5. Economy
6. CSA
7. Driver Retention
8. Sleep Apnea Rulemaking
9. FMCSA Mission
10. Driver Health/Wellness

## Motor Carrier Execs

1. Driver Shortage
2. ELD Mandate
3. Cumulative Economic Impact of Trucking Regulations
4. Economy
5. Hours-of-Service
6. Driver Retention
7. CSA
8. Transportation Infrastructure/ Congestion/ Funding
9. Federal Preemption of State Regulation of Interstate Trucking (F4A)
10. Driver Distraction



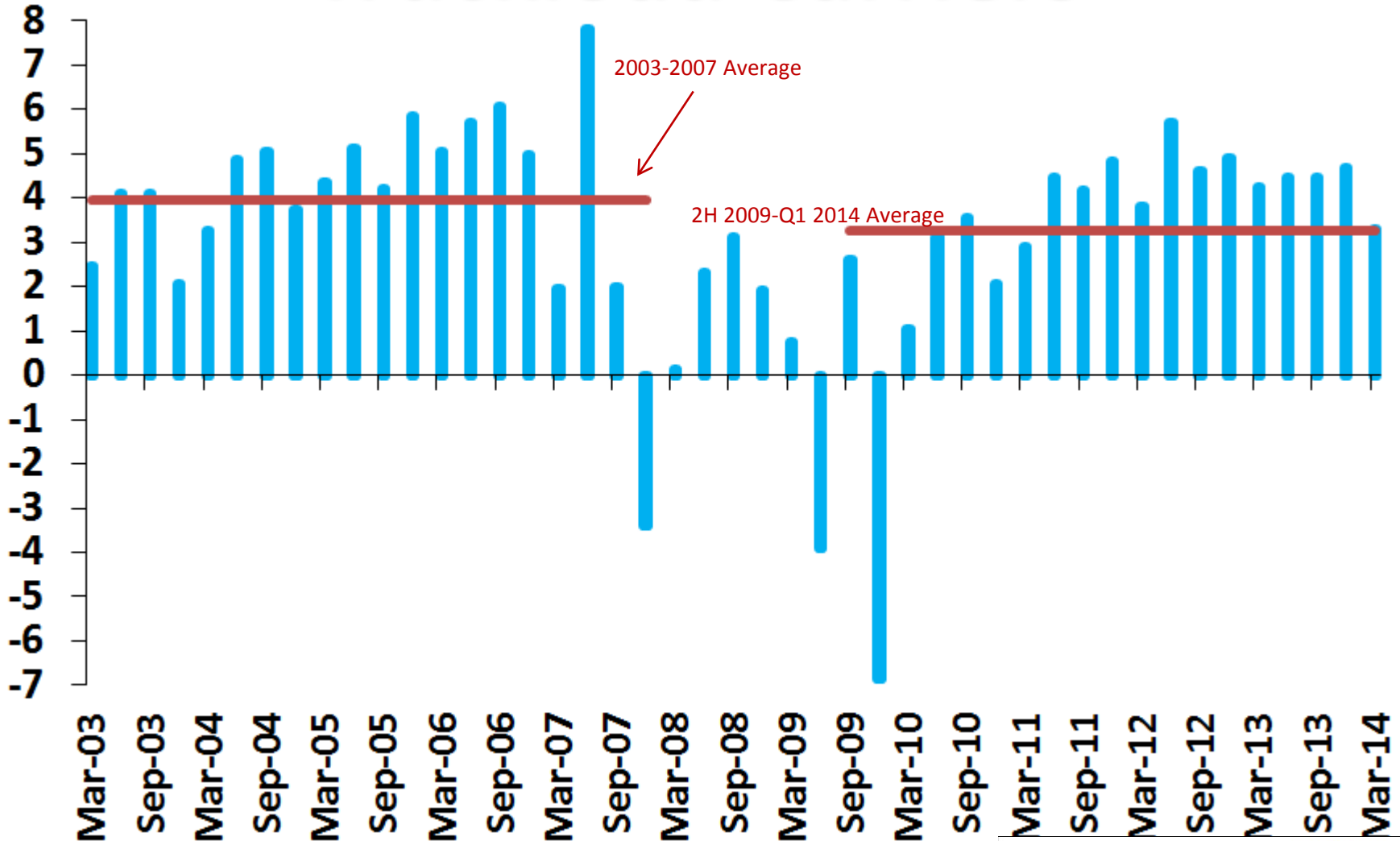
# Operational Costs of Trucking

## Average Carrier Costs per Mile

Motor Carrier Costs	2009	2010	2011	2012	2013	2014	2015
<b>Vehicle-based</b>							
Fuel Costs	\$0.405	\$0.486	\$0.590	\$0.641	\$0.645	\$0.583	\$0.403
Truck/Trailer Lease or Purchase Payments	\$0.257	\$0.184	\$0.189	\$0.174	\$0.163	\$0.215	\$0.230
Repair & Maintenance	\$0.123	\$0.124	\$0.152	\$0.138	\$0.148	\$0.158	\$0.156
Truck Insurance Premiums	\$0.054	\$0.059	\$0.067	\$0.063	\$0.064	\$0.071	\$0.092
Permits and Licenses	\$0.029	\$0.040	\$0.038	\$0.022	\$0.026	\$0.019	\$0.019
Tires	\$0.029	\$0.035	\$0.042	\$0.044	\$0.041	\$0.044	\$0.043
Tolls	\$0.024	\$0.012	\$0.017	\$0.019	\$0.019	\$0.023	\$0.020
<b>Driver-based</b>							
Driver Wages	\$0.403	\$0.446	\$0.460	\$0.417	\$0.440	\$0.462	\$0.499
Driver Benefits	\$0.128	\$0.162	\$0.151	\$0.116	\$0.129	\$0.129	\$0.131
<b>TOTAL</b>	<b>\$1.451</b>	<b>\$1.548</b>	<b>\$1.706</b>	<b>\$1.633</b>	<b>\$1.676</b>	<b>\$1.703</b>	<b>\$1.593</b>

# Profit Margins of Publicly Traded Truckload Carriers

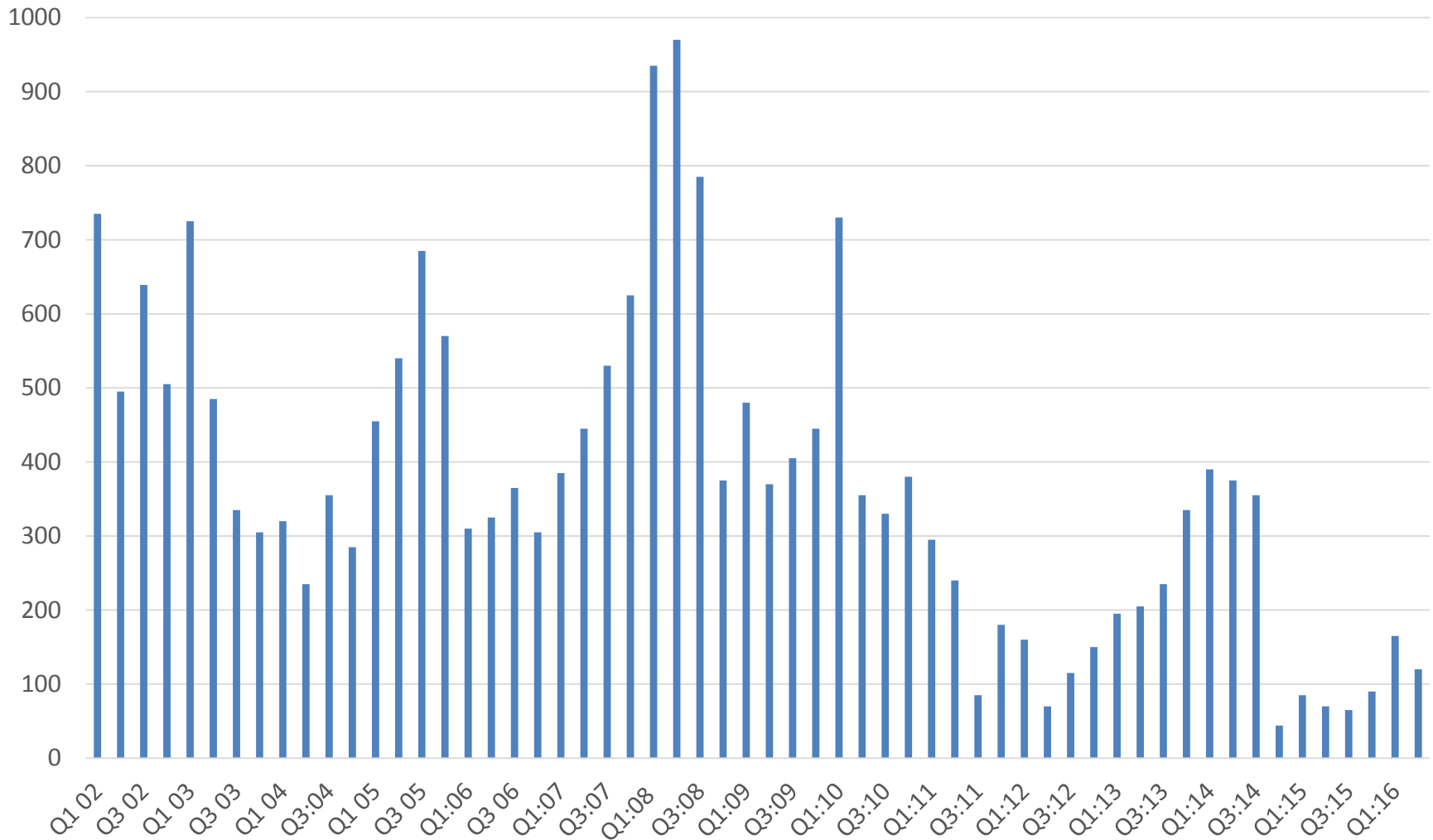
Percent



Source: ACT Research



# Trucking Failures Per Quarter

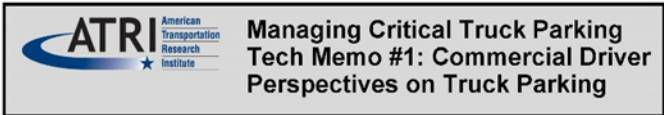


Source: Avondale Partners



# Managing Critical Truck Parking

- Top RAC priority for 2015
- Research tasks include:
  - ◆ Driver data collection – yielded over 1,400 driver surveys
  - ◆ Utilizing truck GPS data to assess parking supply and demand
  - ◆ Benefit-cost analysis of truck parking reservation systems – impacts on productivity and safety
  - ◆ Truck Driver Diaries



September 2015

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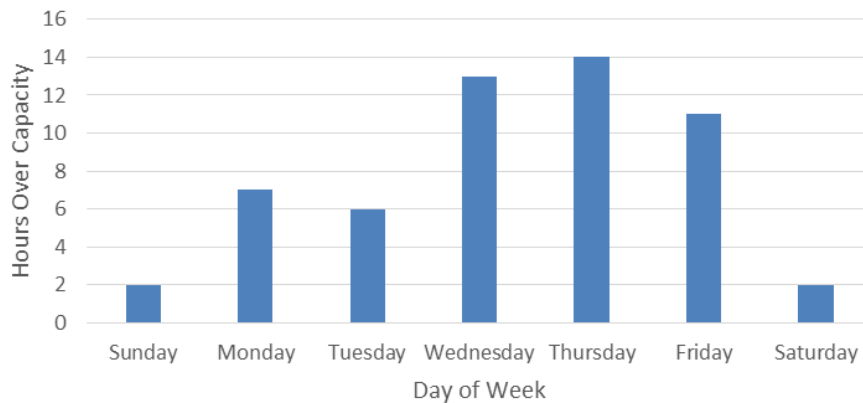


# Assessing Truck Parking Supply/Demand

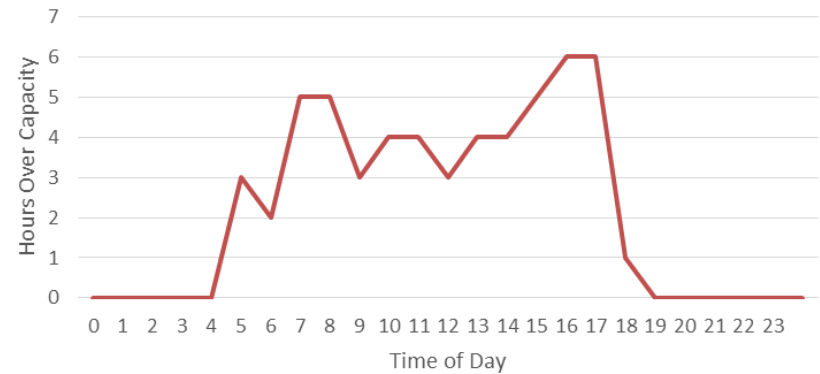
- Assess supply/demand utilizing ATRI truck GPS data
- Proof of concept with MnDOT
  - ◆ Analysis to include 5 rest areas
  - ◆ Goose Creek Rest Area analysis complete
- Created methodology to examine truck parking demand at public rest stops
- Findings can inform investment decisions

# Managing Critical Truck Parking

Overcapacity by Day of Week  
(October 2015)



Overcapacity by Time of Day  
(October 2015)





# Truck Parking Diary Report...

- Truck Parking Diaries – launched March 21<sup>st</sup>
- Drivers kept 14 days of parking activity
- Includes when, where, how long to find a spot, how many spots occupied by non-CMV's, lost productivity, etc
- 148 completed diaries were returned between June and September 2016, representing 2,035 days of truck parking activity and 4,763 unique stops.

## Managing Critical Truck Parking Case Study – Real World Insights from Truck Parking Diaries

December 2016



Prepared by the American Transportation Research Institute



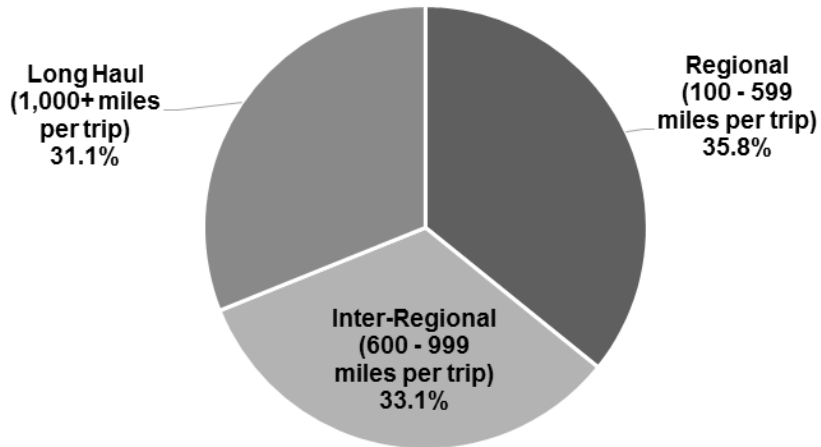
# Key Findings

- 72.3 percent Employee Drivers;
- 25.7 percent Independent Contractors leased to a motor carrier; and
- 2.0 percent Owner-Operators with their own authority.

Industry Sector	Percent of Diary Participants
Truckload	56.1%
Less-than-Truckload	4.1%
Flatbed	20.9%
Tanker	4.1%
Intermodal Drayage	0.7%
Other	5.4%
Express / Parcel Service	0.0%
No Response	8.8%

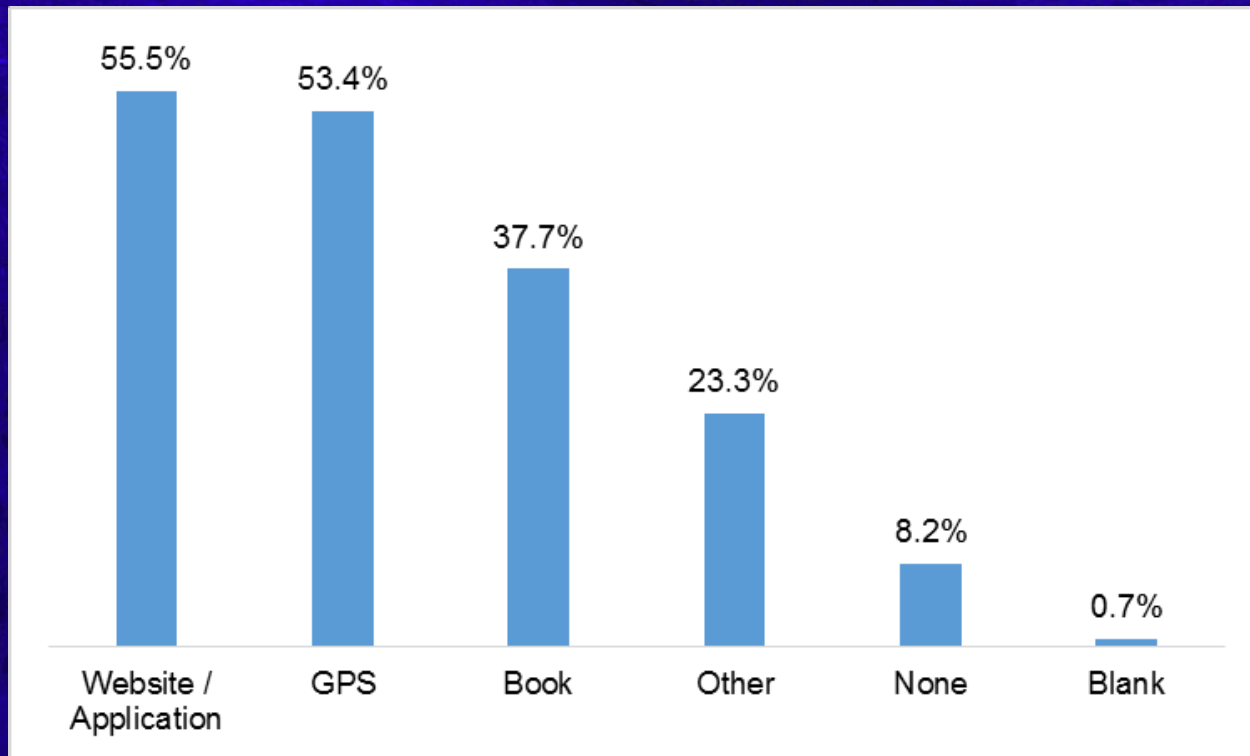


# Truck Parking Diary Report: Key Findings



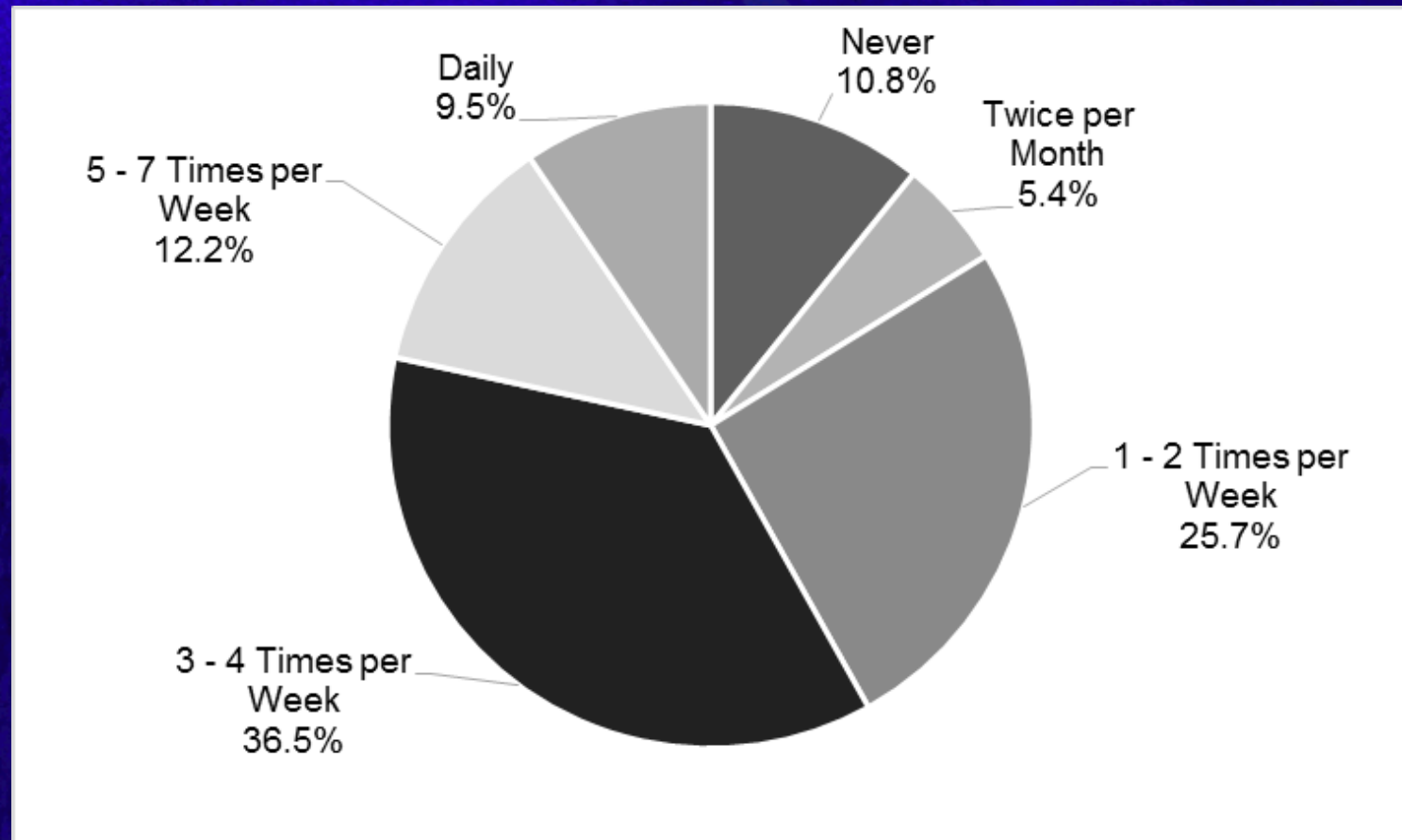
Region	Average Percent of Operating Miles	Percent of Diary Stops
Midwest	35.5%	34.5%
Northeast	18.6%	11.3%
Southeast	28.9%	32.7%
Southwest	19.2%	9.3%
West Coast	18.7%	10.4%
Canada	4.3%	1.7%

# Tools Used to Find Parking...

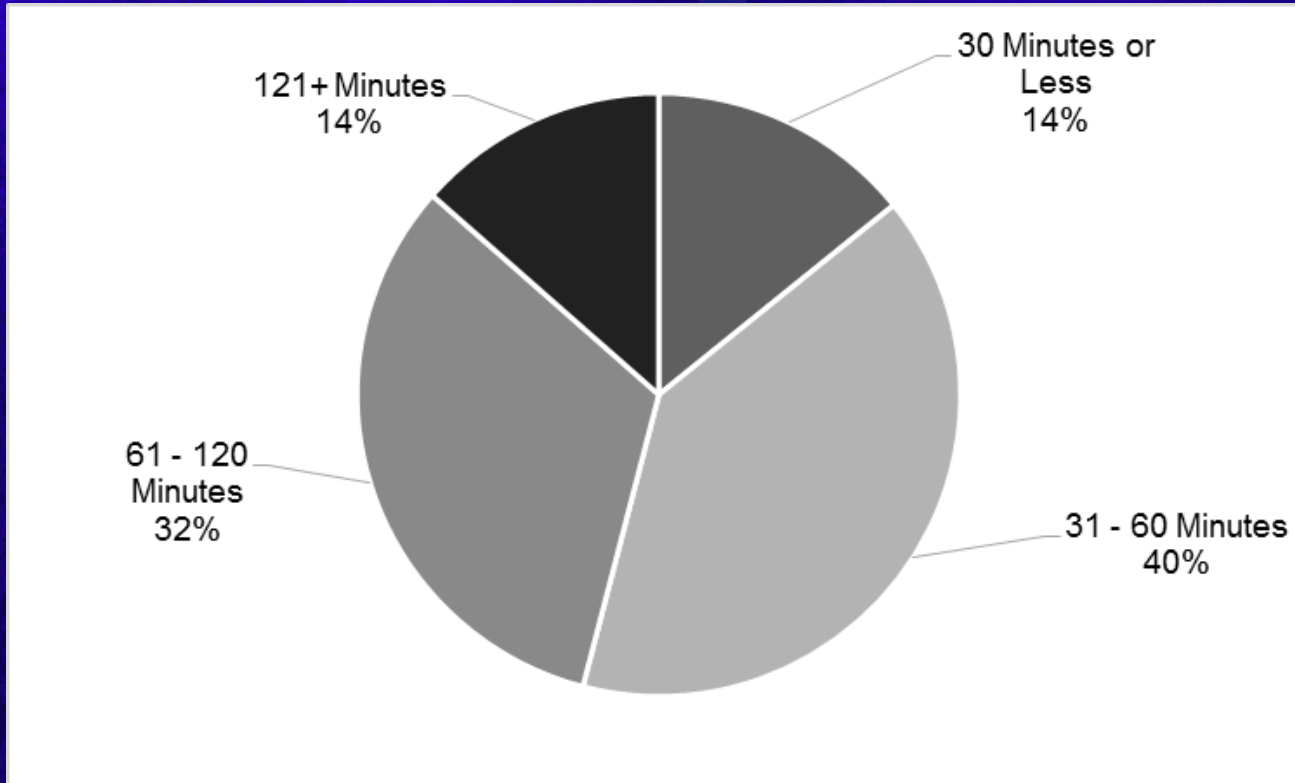




# Frequency of Unauthorized/Undesignated Parking...



# Key Findings: Average Remaining Drive Time...



\$4,600 down the drain.....?



# The Real Reason for Location Selection...

Important Factor	Percent of Responses
Proximity to Route / Destination	96.5%
Restroom / Showers	79.8%
Expected Parking Availability	75.5%
Width of Parking Space / Ease of Access	31.9%
Restaurant	30.5%
Security	20.3%
Company Policy / Loyalty Program	18.1%
Internet	6.9%
Laundry	4.0%
Maintenance / Service Center	3.7%
Weather Conditions	3.6%

Location Type	Percent
Private Truck Stop	71.4%
Public Rest Area	9.6%
Customer	8.9%
Business	4.3%
Terminal	4.1%

# Exceptions to Private Truck Stops?

- *“I am reluctant to eat by myself in a sit down restaurant. The women I know would rather think ahead, go grocery shopping and prepare a healthy, quiet meal in the truck while watching our favorite program on DVD. We would also rather use our own porta-potty instead of public facilities, especially at night. So since we have everything we need in our micro homes, all we need is a legal parking space. Rest areas also have more RV dumps and are much quieter at night.”*
- 
- ***Female Truckload Driver from Missouri***



# Truck Parking Diary Report: Key Findings

*“I’ve been kicked out of truck stops due to overcrowding. I’ve been kicked out of rest areas wondering if I will have a safe haven for my 10-hour break. It is the most stressful aspect of the job.”*

**Flatbed Driver from  
Alabama**

*“The first thing states do when they cut budgets is to close rest areas. So we cannot depend on them to be open when we need them. Some states are ‘no trucks allowed’ in some rest areas or restricted to 2 hrs. And if we use them, we risk having our break interrupted by a DOT inspection.”*

**Truckload Driver from  
Oklahoma**



# Truck Parking Diary Report: Key Findings

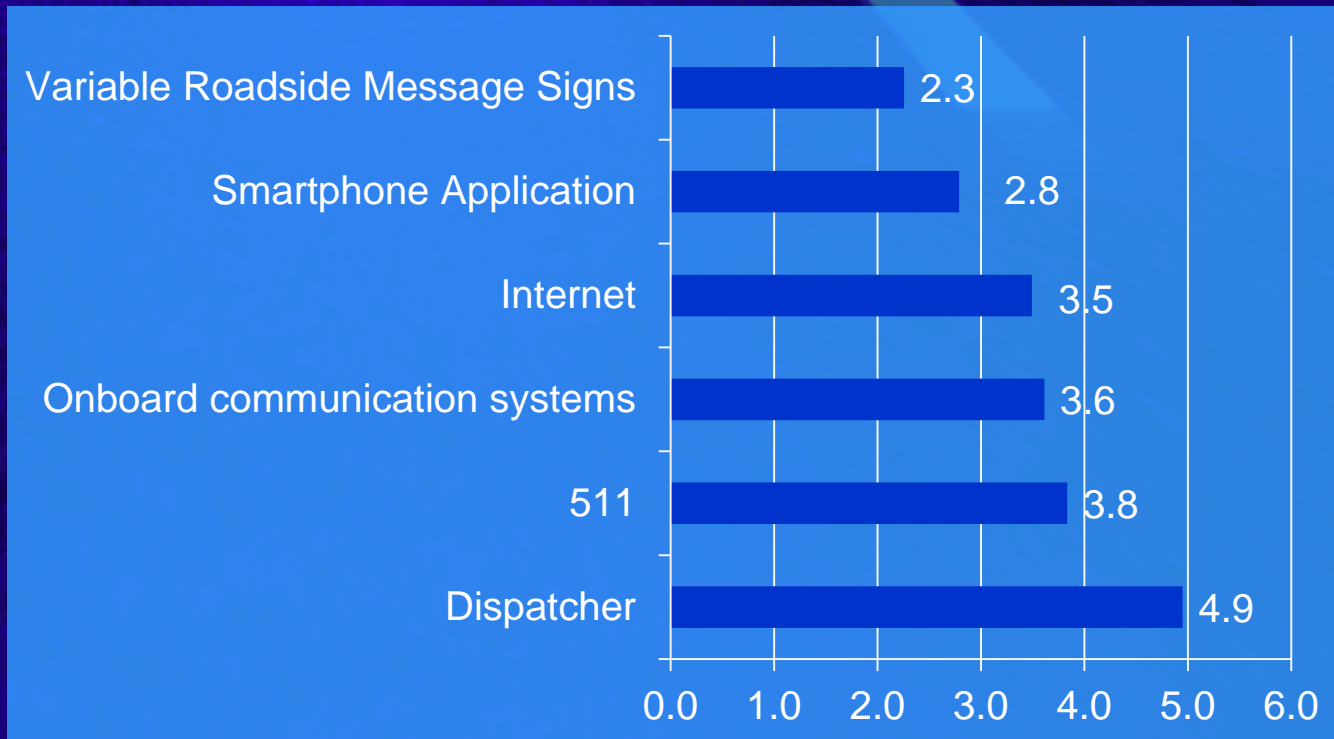
*“Parking is a huge problem. I start early and end my day early to help my chances of finding a parking space. The routes I travel are mostly out west, and parking is not as hard to find, with the exception of urban areas. I have found that east of the Mississippi River, you need to be parked way before you are out of drive time, or you won’t find a legal place to park.”*

***Truckload Driver from Wisconsin***



# ATRI Truck Parking Survey Analysis

How would you like to receive truck parking information?



# PARK MY TRUCK!










# Home Screen

The screenshot shows the 'Park My Truck' app interface. At the top, there is a green header with the app name and a menu icon. Below the header is a blue filter bar set to 'Within 50 miles'. The main content is a list of parking locations, each with its name, address, distance, and available spaces.




Location	Distance	Total Spaces	Open Spaces
H&J BP Gambrills, MD H&J BP	26.52 mi	15	N/A
TA Baltimore South Jessup, MD I-95, Exit 41 A (Rt. 175)	28.25 mi	436	40
New Transit Truck Stop Millersville, MD New Transit Truck Stop	30.22 mi	60	N/A
One Stop Travel Plaza Newburg, MD One Stop Travel Plaza	31.39 mi	150	Open Spaces:

# Location Details

TestFl... ●●○○○ LTE 11:07 AM    

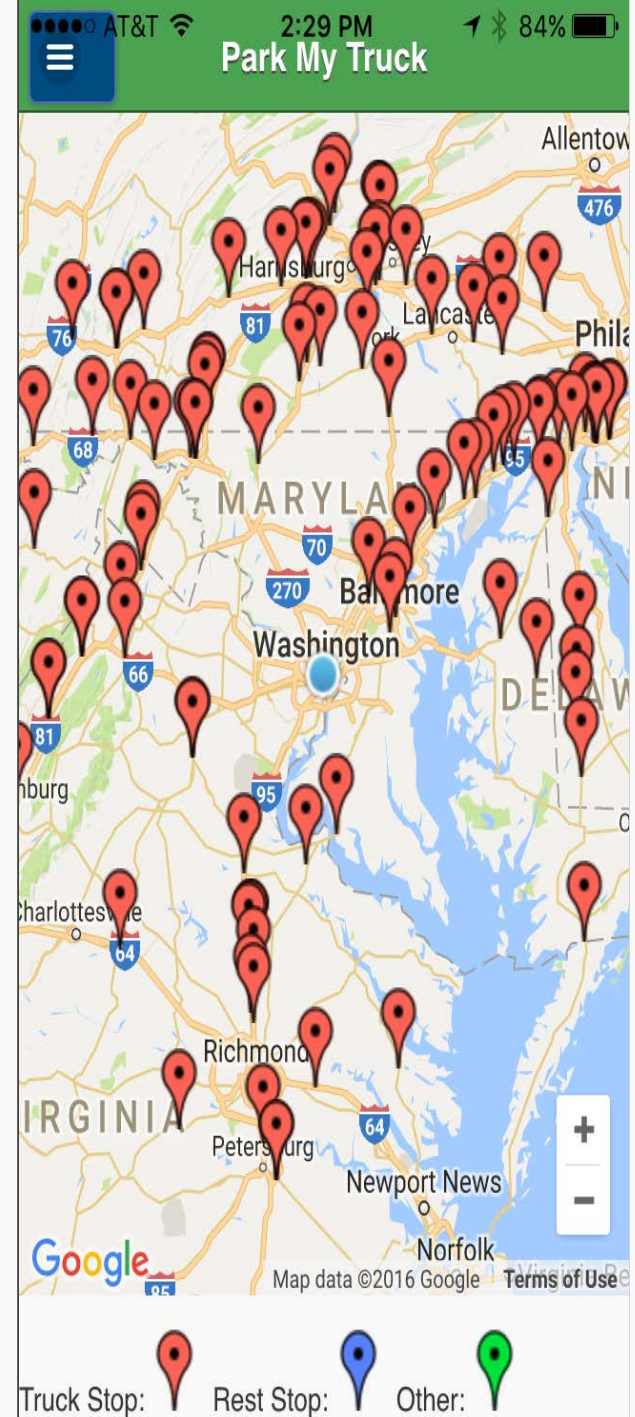
 Park My Truck

Facility Name:	TA Baltimore South
Facility Type:	Truck Stop
Network:	TA/Petro
Facility #:	151
Description:	I-95, Exit 41 A (Rt. 175)
Street Address:	7401 Assateague Drive
City, State Zip:	Jessup, MD 20794
Phone:	855-847-7275
Hours of Service:	24/7
Distance:	28.24
Total Number of Spaces:	436
Number of Available Spaces:	73
Last Updated:	Fri Sep 09 2016 09:12:27 GMT-0400 (EDT)

 Back  Navigate  Call



# Map



# Questions?

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