REPORT

Winning the diesel corridor: Commercial vehicle data for truck stop operators

Commercial movement intelligence for the I-80/I-90 trucking refuel network

Altitude by GEOTAB

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Introduction

This analysis was developed using Altitude by Geotab's commercial vehicle movement intelligence, applied to the diesel refueling network along the I-80/I-90 corridor in Indiana and surrounding states. All insights are derived from aggregated, anonymized and privacy-compliant commercial vehicle observations.

1.1M+

heavy-duty diesel truck passes observed.

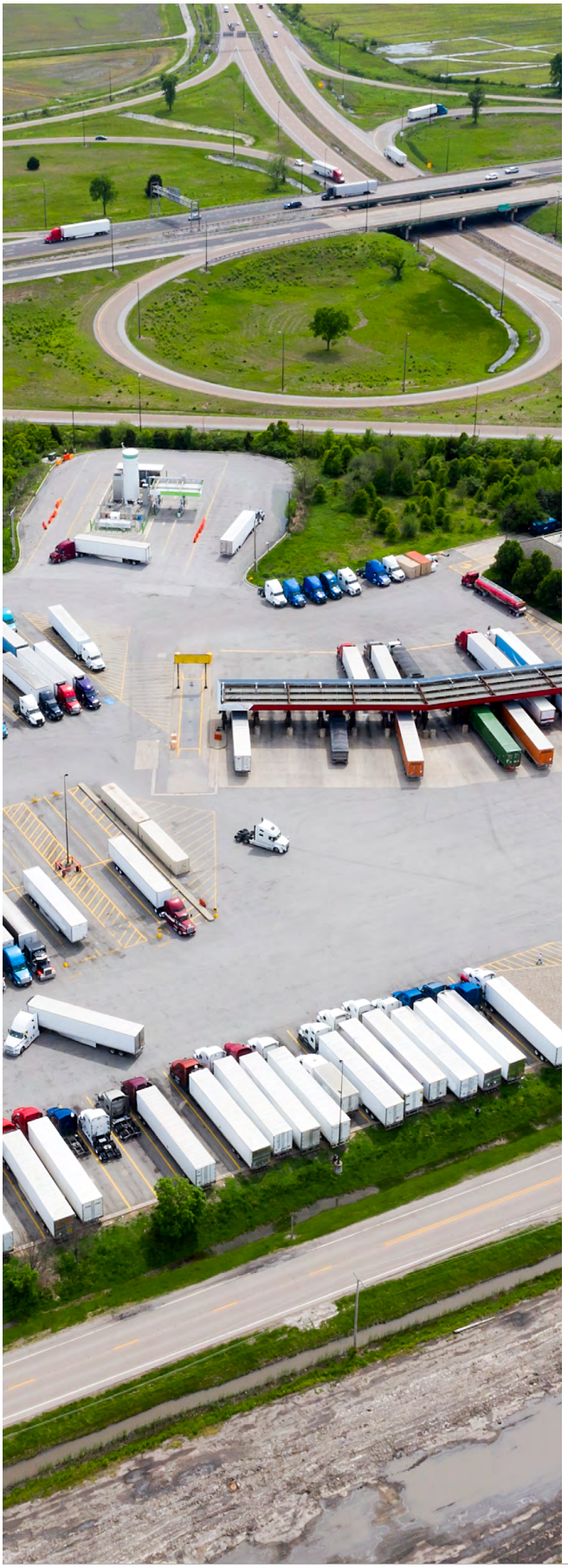
20,261

stops tracked at a single location.

1.72%

captured.

What does the other 98.28% look like?



Applying Altitude freight analytics to the I-80/I-90 Corridor

The strategic mandate: Precise freight intelligence

Large-scale fuel retail networks are currently navigating a period of profound structural realignment. The strategic mandate for operators is clear: Modernize existing assets, deliver significant margin expansion through heavy-duty diesel truck insights, and build compelling growth narratives for investors.

As the industry rationalizes underperforming assets, every remaining location must justify its place in the portfolio. For **real estate teams** evaluating new sites, **operations teams** optimizing site-level efficiency, and **commercial services** defending high-volume fleet accounts, the stakes have never been higher.

The analytical blind spot: Freight vs. commuter traffic

Historically, fuel retailers have relied on generalized demographic data and standard municipal traffic counts (AADT) to guide expansion and modeling. However, these conventional data streams suffer from a critical "blind spot": They fail to differentiate between low-margin passenger commuters and high-margin commercial fleet traffic.

The strategic priority must shift from "total traffic" to **Heavy Duty (HD) and Medium Duty (MD) AADT**. In a high-stakes environment like the I-80/I-90 corridor, this level of precision is the difference between a high-performing hub and an underutilized asset. MD and HD AADT data allow owners to quantify the specific "total addressable market" at any given interchange, ensuring that fuel inventory, lane capacity, and high-margin food services are built to match the actual volume of heavy freight, rather than an inflated count of passenger vehicles.

Leveraging commercial movement intelligence

The gap between general traffic data and commercial reality is the difference between building truck stops where traffic "looks good" and building them where commercial demand is proven.

By integrating commercial movement intelligence, operators can analyze their network and competitors through the lens of actual heavy-duty diesel truck patterns. This technology strips away "commuter noise" to reveal:

Corridor potential:

Mapping specific truck classes (Classes 1–8) along major freight arteries to identify geographic mismatches between vehicle density and available refueling infrastructure.

Interchange dynamics:

Tracing the exact Origin-Destination (O&D) flows of vehicles to understand competitive capture and identify where drivers bypass one site in favor of another.

Journey context:

Determining whether a site serves the beginning, middle, or end of a trip to dictate the exact food and amenity assortment needed to maximize driver "basket size".

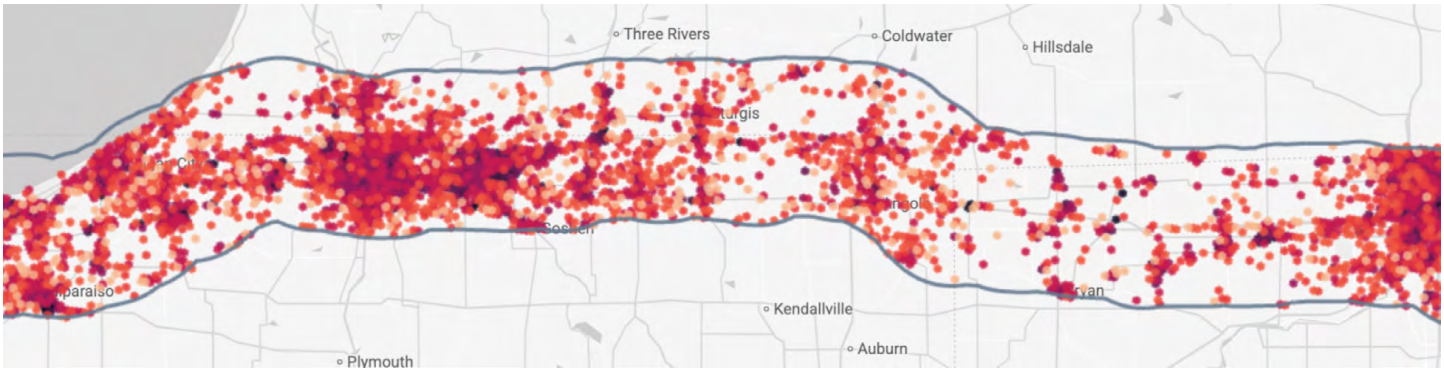


Fig. 1 — The I-80/I-90 corridor has frequent heavy-duty truck stop "hotspots."
A density map reveals where these trucks congregate, highlighting high-activity areas versus zones with fewer stops.

Mapping the commercial corridor: Chicago to Toledo

The macro view — Corridor market capture

The I-80/I-90 corridor between Chicago and Toledo is one of the busiest freight arteries in the Midwest. The map below shows the number of Class 6, 7 and 8 diesel trucks observed along this corridor — alongside the location of every diesel refueling site.

What stands out immediately is a geographic mismatch. The highest concentration of heavy-duty truck activity is on the western section of the corridor. But the majority of diesel refueling infrastructure is clustered in the central portion of the highway.

This is not a coincidence — it is an opportunity. Where trucks choose to refuel or stop is shaped by their journey context: Origin, destination, hours-of-service requirements and the availability of suitable infrastructure along the way. The sections that follow explore these dynamics in detail — examining how traffic flows through specific interchanges, which sites are capturing demand efficiently and where untapped commercial volume is passing through without stopping.

For real estate and network planning teams, this corridor-level view is the starting point. It reveals where the commercial market exists — not where you assume it is.

Fig. 2 — Class 6, 7 and 8 diesel truck volumes along the I-80/I-90 corridor between Chicago and Toledo, with diesel refuel site locations marked. All counts represent observed commercial vehicles.

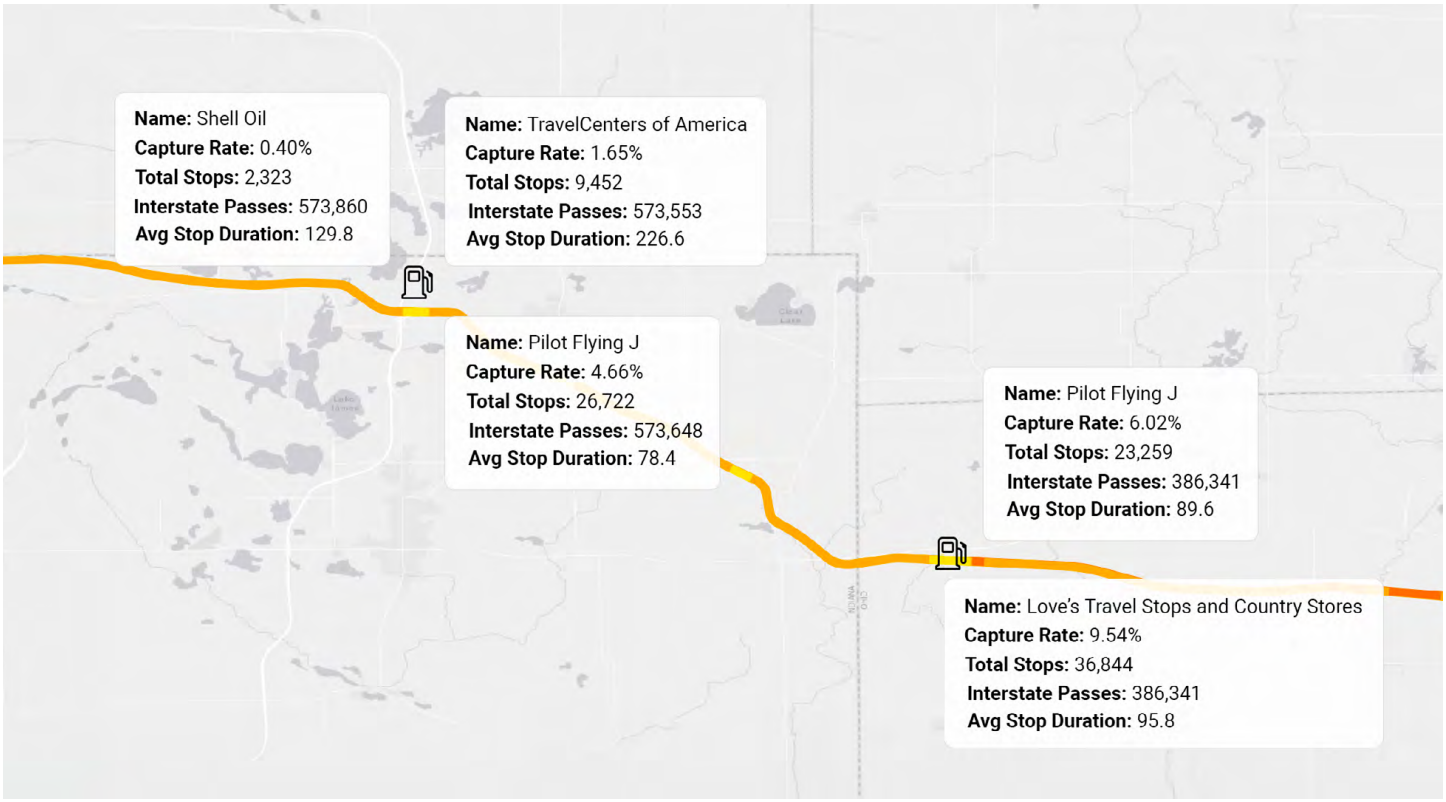


Fig. 3 — Corridor-level view of diesel refueling infrastructure density relative to heavy-duty truck activity concentration along the I-80/I-90 corridor.

Beyond standard traffic counts: Freight-specific AADT

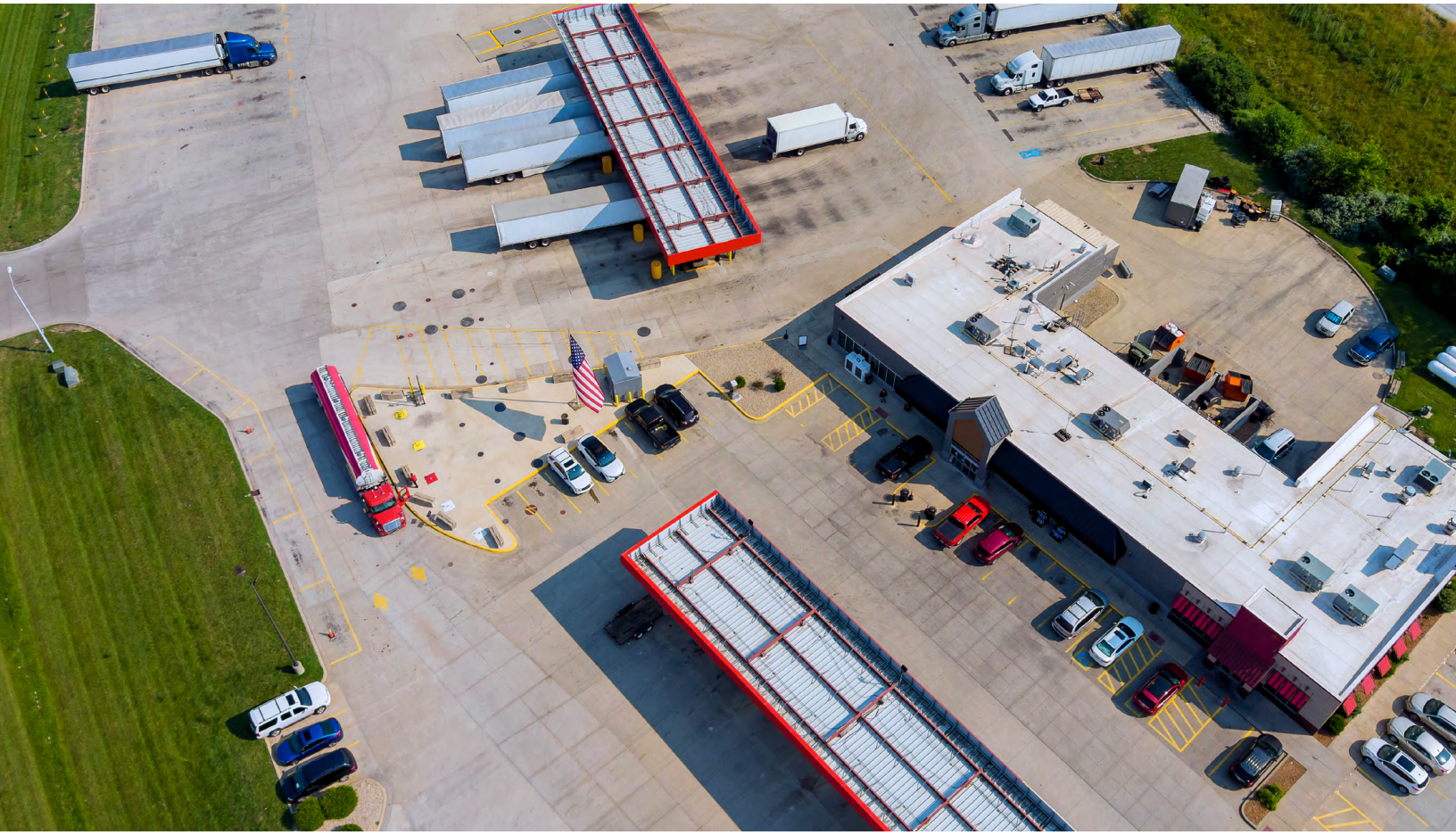
The macro view — AADT and corridor performance

Standard Annual Average Daily Traffic counts treat every vehicle the same. A commuter sedan and a Class 8 freight truck are both just "one vehicle" in traditional models. For a fuel retailer whose commercial diesel customers represent the highest-volume, highest-margin segment, that lack of distinction is a planning liability.

Altitude provides freight-specific AADT at the road segment level. Rather than estimating diesel demand from general traffic, you can see the actual daily volume of heavy-duty and medium-duty trucks passing any point on the network — classified using FHWA vehicle weight categories.

At the Portage, IN truck stop on the Indiana Toll Road, Altitude's segment-level data reveals 1,511 heavy-duty trucks passing the site daily in the eastbound direction and 1,386 in the westbound direction. This level of precision allows network planners to quantify the addressable market at every site — not in abstract traffic units, but in the specific vehicle classes that drive diesel revenue.

When you can see the freight, you can size the opportunity.



1,511

heavy-duty trucks/day eastbound at the Portage, IN site on the Indiana Toll Road.

1,386

heavy-duty trucks/day westbound at the Portage, IN site on the Indiana Toll Road.

Fig. 4 — Modeled Annual Average Daily Traffic (AADT) at the Portage, IN truck stop on the Indiana Toll Road, with heavy-duty and medium-duty truck AADT breakout using FHWA vehicle weight classifications.

The battle for the interchange: Winning the decision point

Mapping how traffic flows from the Indiana Toll Road and Borman Expressway to capture market share

Highway interchanges are decision points. When a driver approaches the intersection of two major corridors, the choice of where to stop — your site or a competitor's — is shaped by the direction they are traveling, where they are in their journey and the accessibility of each option.

The interchange between the Indiana Toll Road and the Frank Borman Expressway is one of these critical decision nodes. Two major truck stop operations compete for the same traffic at this junction: A 7-Eleven travel center and a Pilot Flying J location.

Altitude's Origin & Destination analysis traces the actual flow of commercial vehicles through this interchange — revealing not just total volume, but directional behavior. Where are trucks coming from? Which highway feeds more traffic to which site? And at what point in their journey do drivers make the decision to stop?

The flow data on this page maps the number of vehicles arriving from each section of both highways and shows exactly where they ultimately stop. This level of movement intelligence transforms competitive analysis from anecdotal observation into measurable, defensible insight.

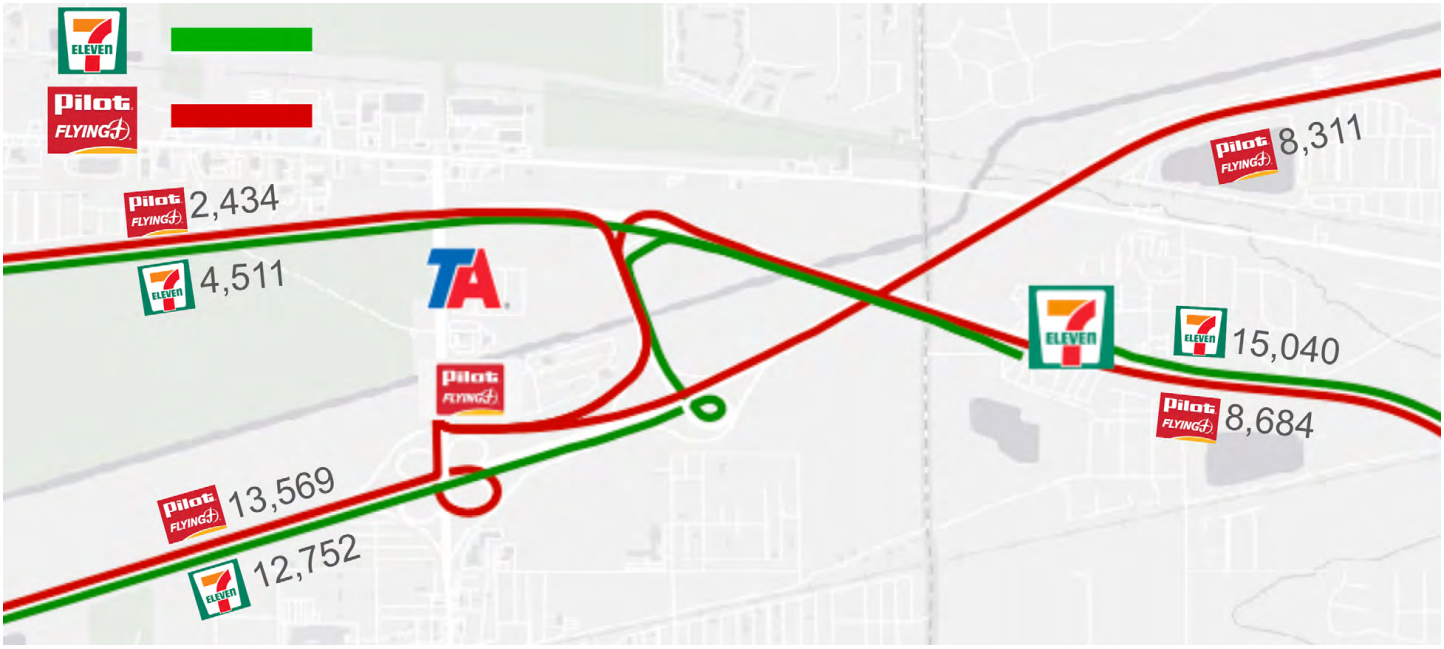


Fig. 5 — Movement flow analysis at the Indiana Toll Road and Frank Borman Expressway interchange, showing directional vehicle volumes from each highway section to the 7-Eleven and Pilot Flying J truck stops.

The interchange scorecard: 7-Eleven vs. Pilot Flying J

The competitive lens — Competitive capture

At the Indiana Toll Road and Frank Borman Expressway interchange, the competitive picture comes into sharp focus.

Total trip stops are nearly even — 32,426 to 7-Eleven versus 32,996 to Pilot Flying J. But the directional breakdown reveals where each operator holds an advantage and where opportunities exist.

The data shows that Pilot Flying J is the clear winner for traffic coming from the Borman Expressway, grabbing 8,311 stops while 7-Eleven gets only 123. However, the real surprise is on the Indiana Toll Road. Even though Pilot is the very first truck stop drivers see when arriving from the West, 7-Eleven manages to keep the competition almost a dead heat—capturing 12,752 stops compared to Pilot's 13,569. This nearly even split is impressive because it proves 7-Eleven is perfectly positioned to "intercept" nearly half the business by catching the specific flow of trucks just as they transition from the Toll Road over to the Borman Expressway

For the commercial services team managing fleet card programs, this is actionable competitive intelligence. For the real estate team evaluating new sites, it is the blueprint for placing locations that actively redirect traffic from competitors.

Truck origin	7-Eleven Travel Centers	Pilot Flying J	TA Travel Center
Indiana Toll Road West	12,752	13,569	452
Borman Expy West	4,511	2,434	2,066
Indiana Toll Road East	15,040	8,684	1,182
Borman Expy East	**123**	**8,311**	1,520
Total trip stops	**32,426**	**32,996**	**5,220**

Fig. 6 — Interchange stop capture attribution: Trip stops by truck origin direction at the Indiana Toll Road/Frank Borman Expressway interchange.

Truck origin/ destination	Indiana Toll Road West	Borman Expy West	Indiana Toll Road East	Borman Expy East	Total originating trips
Indiana Toll Road West	/	1,824	29,268	20,918	52,101
Borman Expy West	557	/	104,405	254,635	359,597
Indiana Toll Road East	38,934	109,477	/	907	149,318
Borman Expy East	23,181	247,094	989	/	271,264
Total destination trips	**62,672**	**358,395**	**134,622**	**276,460**	**832,189**

Fig. 7 — Interchange directional flow analysis showing total originating and destination trips between the Indiana Toll Road and Frank Borman Expressway.

Site intelligence:
7-Eleven Portage on the Indiana Toll Road

The micro view — Site deep dive: Portage, IN

Every data point shown at the corridor and interchange level can be applied to any individual site in your network — or any competitor's. The following pages demonstrate this site-level intelligence using a 7-Eleven location in Portage, Indiana as a working example.

This site recorded 20,261 tracked stops from heavy-duty diesel trucks, out of nearly 1.2M total diesel truck passes in the surrounding market over 2025. That translates to a market capture rate of 1.72%.

That number is not a failure metric — it is a measure of addressable opportunity. In one of the busiest stretches of the I-90 corridor, 98% of the commercial diesel traffic in this market is available to be captured through better positioning, better amenities, better awareness or better fleet card outreach.

The average stop duration at this location is 108 minutes — indicating a mix of quick refueling stops and longer parking events such as meal breaks and overnight rest. This behavioral signal directly informs operational decisions about staffing, food service scheduling and parking capacity allocation.

20,261

tracked stops out of ~1.2M diesel truck passes.

1.72%

market capture rate.

108 MIN

average stop duration.

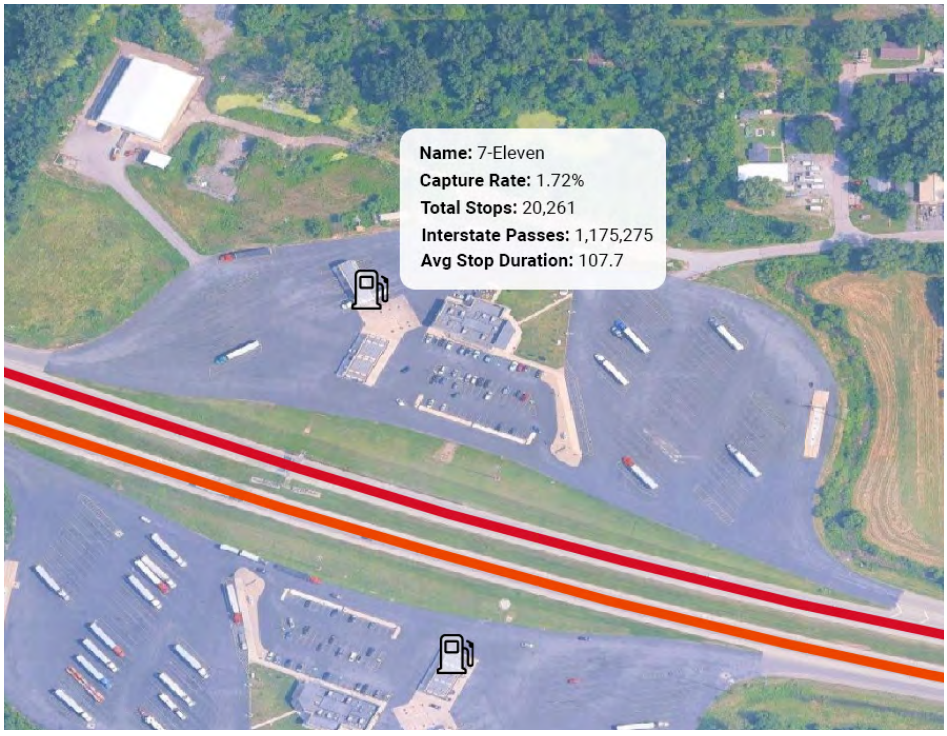


Fig. 8 — 7-Eleven Portage, IN site overview on the Indiana Toll Road, one of the highest-volume sections of the I-90 corridor. Volumes are Altitude's observed class 6, 7 and 8 diesel trucks through 2025.

Who stops here — and where are they in their journey?

The micro view — Customer intelligence and journey context

Understanding the customer profile of a specific site goes beyond vehicle counts. At the Portage location, 88.1% of stopped trucks are Class 8 heavy-duty vehicles, and 79.2% are on long-haul trips. The top three industries represented are transportation and warehousing, manufacturing and real estate/construction.

For the commercial services team, this industry breakdown is a targeting tool. Knowing which sectors frequent a specific corridor allows your B2B sales force to build highly targeted outreach — identifying regional carriers and fleet operators whose vehicles already route past your locations. That is a warm lead list built from movement intelligence, not cold prospecting.

Journey context adds another layer. At the Portage site, the average pre-stop distance is shorter than the post-stop distance. Drivers are more likely stopping at the beginning or middle of their journey — refueling and provisioning before a longer next leg. This behavioral pattern has direct implications for in-store merchandising. If these stops skew toward early-morning departures, the opportunity is in hot breakfast, premium coffee and grab-and-go meal items designed for the road ahead.

Altitude does not just tell you how many trucks stop. It tells you who they are, what industry they serve, where they are in their journey and what they are likely to need when they walk through the door.

79.2%

of stopped vehicles are on long-haul trips.

The top industries — represent the core of your fleet card addressable market:

- Transportation and warehousing
- Manufacturing
- Construction

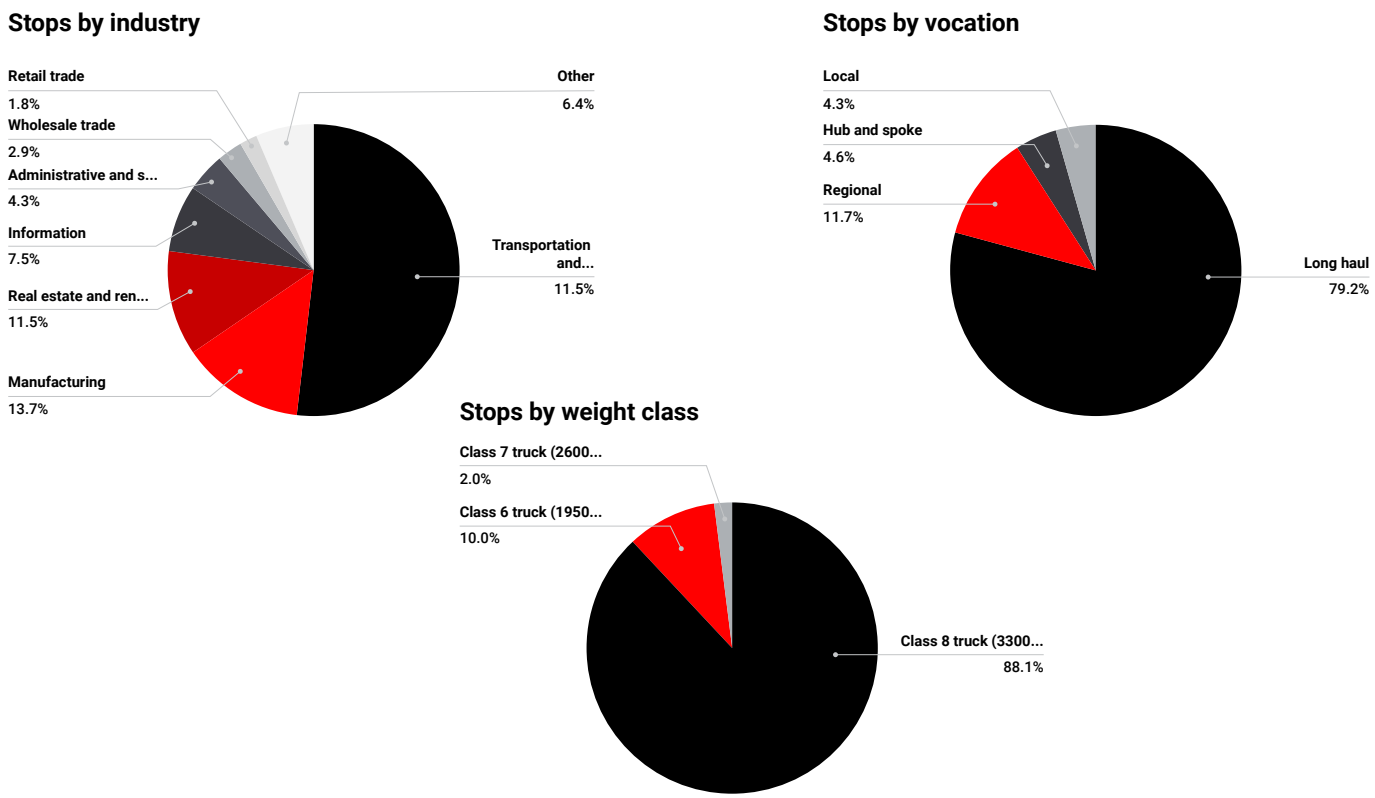


Fig. 9 — Customer profile breakdown at the Portage site: Vehicle class distribution (88.1% Class 8), trip type (79.2% long-haul) and top industries served (Transportation & warehousing, manufacturing, real estate/construction).

Fig. 10 — Customer journey context at the Portage site showing pre-stop and post-stop trip distance distributions. Average pre-stop distance is shorter than post-stop, indicating drivers are refueling at journey start or mid-trip.

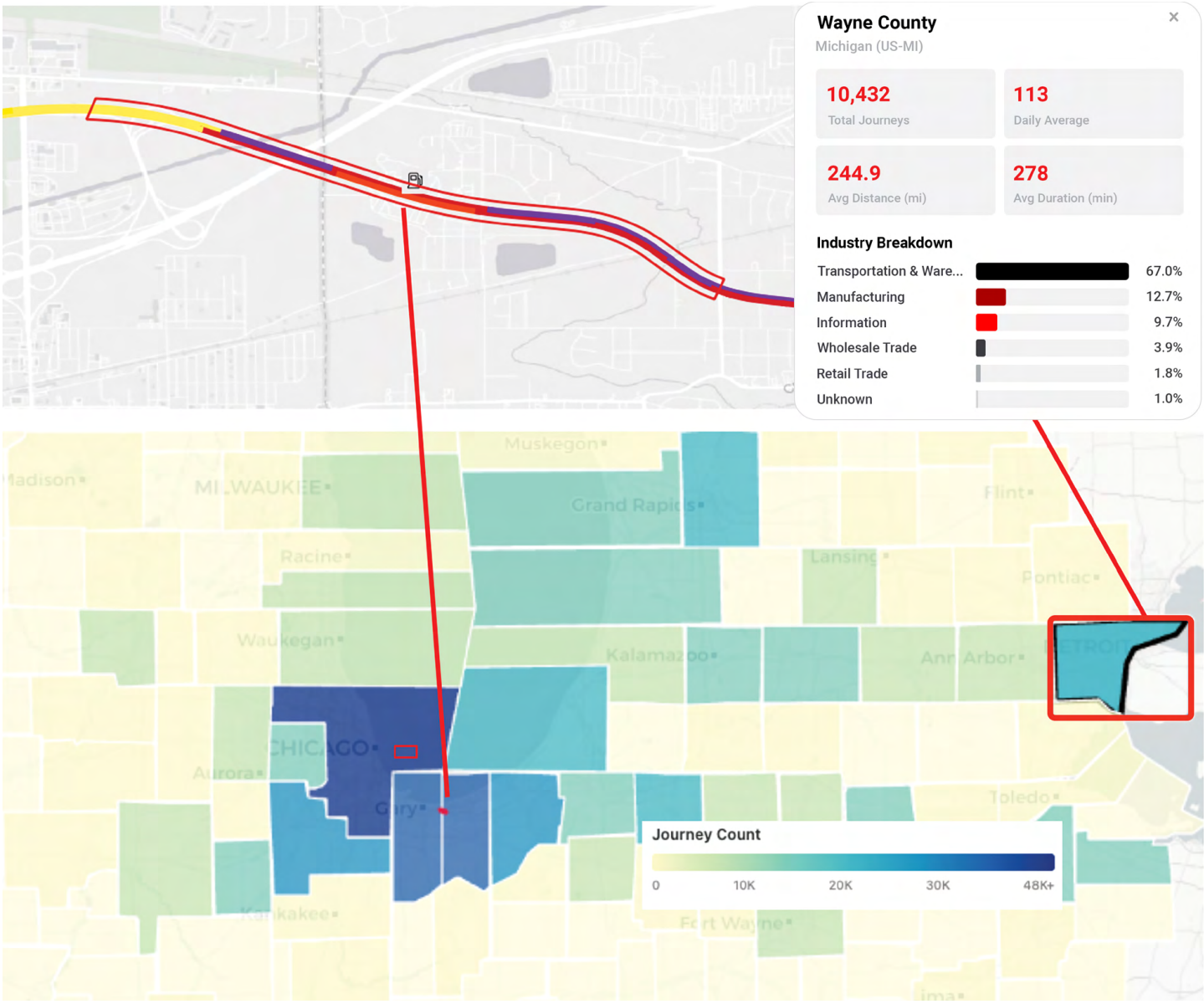


Fig. 11 — Local traffic insights: County-level origins and industry breakdown of diesel trucks (Class 6-8) driving on the highway segment in front of the Portage location, showing concentration of local traffic from surrounding counties and significant volume from Wayne County.

When they arrive, how long they stay and what it means for operations

The micro view — Operational velocity

Two metrics define the operational rhythm of a truck stop: When vehicles arrive and how long they stay.

At the Portage site, the dwell time distribution tells a clear story. The majority of stops are short — consistent with quick refueling or brief rest breaks. There is a secondary cluster around the one-hour mark, indicating meal and extended rest stops. And roughly 14% of all stop events — about 2,000 — exceed three hours, representing overnight parking.

The hourly demand pattern adds operational precision. New parking events peak at 10:00 AM, which coincides with the lowest total occupancy of the day — by that hour, overnight parkers have departed and new arrivals are primarily there to refuel. During off-peak hours (9:00 PM to 4:00 AM), very few new vehicles arrive, but total occupancy climbs as trucks settle in for overnight rest.

This demand chronology is operational intelligence. It tells the site manager exactly when to staff the fuel desk for maximum throughput, when to ramp up food service production for the morning rush, when to expect the lot to fill with overnight parkers and when to schedule maintenance without disrupting peak revenue hours.

For network planners designing the larger "new standard" format stores, this data also answers a critical capacity question: How many truck parking bays does this site actually need — and at what hours is demand highest?

10:00 AM

peak refueling hour (highest new park events, lowest total lot occupancy).

~2,000

stop events exceed 3 hours (~14% of all stops — overnight parking demand).

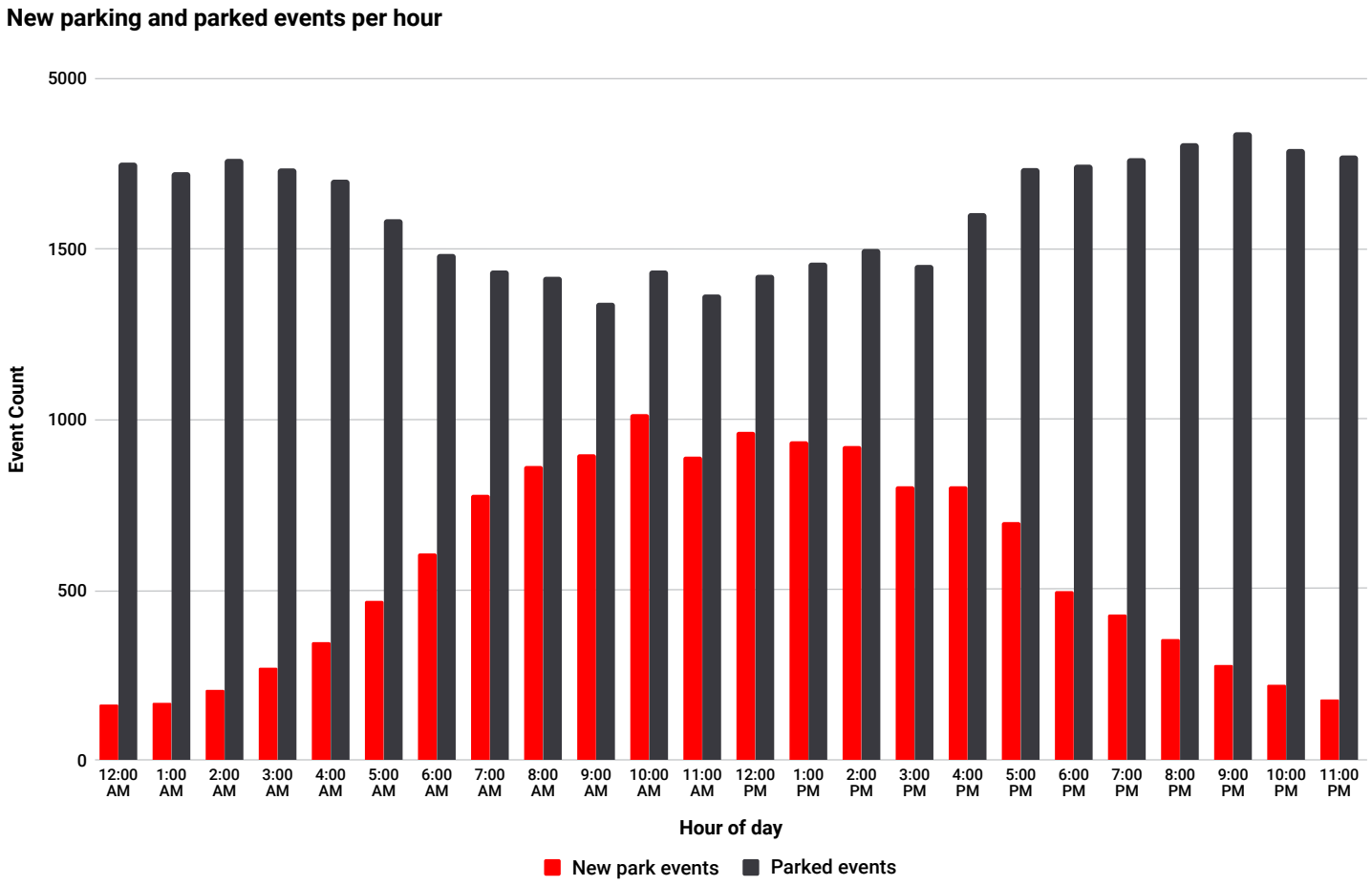


Fig. 12 — Dwell time distribution at the 7-Eleven Portage site showing the frequency of stop durations.
Majority of stops are short refueling events, with secondary clusters at 1 hour (meals/rest) and 3+ hours (overnight parking).

Your network. Your competitors. Your market. One platform.

The pitch — Next steps

This report analyzed a single corridor using diesel refuel sites along it as examples. The full potential of Altitude extends to your entire diesel site network, every competitor site in North America and every freight corridor connecting them.

We are prepared to deliver four immediate next steps:

1. **Full corridor analysis for priority "new standard" expansion markets**

   Identify the corridors with the highest untapped commercial demand and pinpoint exactly where new locations should be placed to capture long-haul and regional freight traffic — without cannibalizing existing sites.

2. **Competitive benchmark report**

   Quantify competitive capture and traffic flow between your sites, competitor and independent operators across your most strategic corridors. Identify where you are winning, where you are losing and exactly why.

3. **Custom portfolio scoring for M&A defense and IPO valuation**

   Score every location in your network using commercial market potential, capture rate and competitive position — delivering defensible, data-backed evidence for portfolio valuation.

4. **Site-level performance and stop insights**

   Deep-dive into the specific performance of your locations versus direct competitors by measuring site-level capture rates and the conversion of passing corridor traffic. By analyzing customer behavior — including dwell time distributions, peak refueling windows, and journey origins—we can identify why drivers choose a competitor over your site. This allows you to optimize site layouts and amenities to increase the volume and efficiency of every stop.

The commercial diesel segment is the highest-yield customer in your network.
Altitude helps you find them, understand them and build the infrastructure to capture them.

Let's start with the corridors that matter most to you.

Tom Tylek

Business Development Manager, Altitude by Geotab
tomtylek@geotab.com | M: 702-319-2663 | **altitude.geotab.com**

About Altitude by Geotab

Altitude by Geotab is a leading provider of advanced mobility insights and solutions for public and commercial sectors across North America. Headquartered in Oakville, Ontario and Atlanta, Georgia, Altitude analyzes the movement of over 5 million commercial vehicles to deliver aggregated historical insights that are anonymized and privacy-protected — showing what is really happening on your roads and at your sites.

The Altitude platform goes beyond simple counts. It delivers stop duration, vehicle class, fuel type, origin and destination, dwell behavior and journey context — providing the analytical depth required for defensible, scenario-ready decision-making.

Platform highlights:

- Coverage across 99.9% of primary roads in North America.
- Vehicle classification spanning Classes 1 through 8, segmented by fuel type.
- Privacy by design architecture with aggregated, anonymized data processing.
- Planner-ready visuals, metrics and API access for corridors, zones and points of interest.
- Expansion factors modeled on FHWA ground truth data for defensible, scaled estimates.

Trusted by state departments of transportation, metropolitan planning organizations, fuel retailers, utilities and infrastructure investors across the United States and Canada.

Learn more at **altitude.geotab.com**
or email us at **altitude@geotab.com**

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