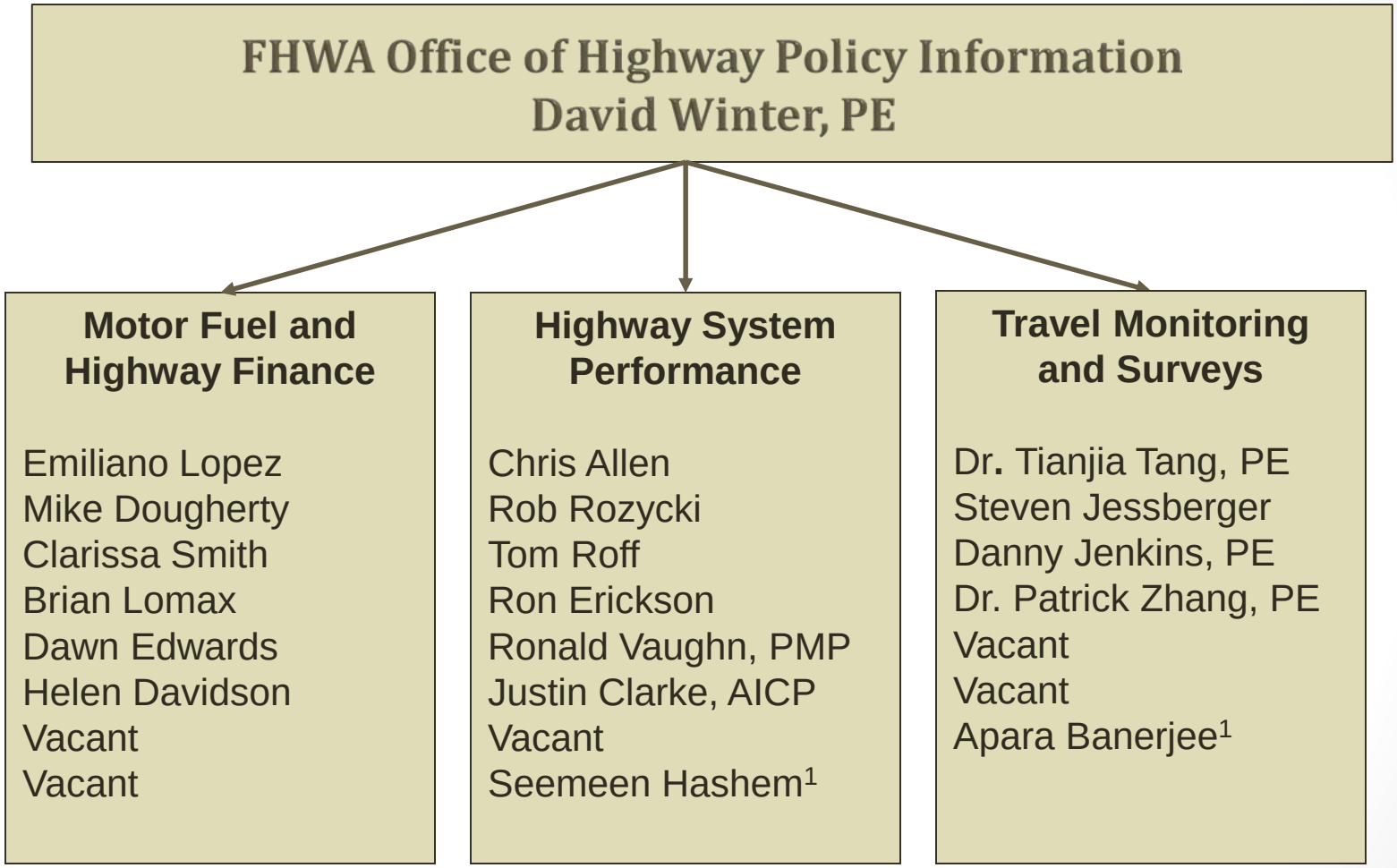
The Office of Highway Policy Information

Highway Information Seminar

September 2018

Office Organizational Chart



1 – Indicates contractor

Our Mission

1) To serve as the national source of surface transportation data.
2) Provide the U.S. DOT, Congress, and transportation community with accurate information products in a timely manner.
3) To inform the development and implementation of, and serve as the foundation for decisions, policies, legislation, programs, and performance goals.
4) Constantly strive to improve the quality, efficiency, and effectiveness of highway data collection and analysis on travelers and the physical, operational and financial condition of our transportation system.

Our Data Programs

- National Performance Management Research Data System
- Highway Performance Monitoring System
- National Household Travel Survey
- Certified Public Road Mileage
- Motor Vehicle Registration
- Heavy Vehicle Use Tax
- Traffic Monitoring
- Weigh-in-Motion
- Highway Finance
- Licensed Drivers
- Recovery Act
- Toll Facilities
- Tax Evasion
- Motor Fuel

Our Data Systems

- Fuels and Financial Analysis System-Highways (Fuels and FASH)
- Integrated Transportation Information System (ITIP)
- Highway Performance Monitoring System (HPMS)
- Travel Monitoring and Analysis System (TMAS)
- Vehicle Travel Information System (VTRIS)
- National Household Travel Survey (NHTS)
- Policy Information Data Portal (PIDP)
- Recovery Act Data System (RADS)

Key FHWA Business Uses

- Apportionment of Federal-aid Funds
- Performance Measurement
- FHWA Reports
- Development of new programs and initiatives
- Wide variety of information products

Apportionment

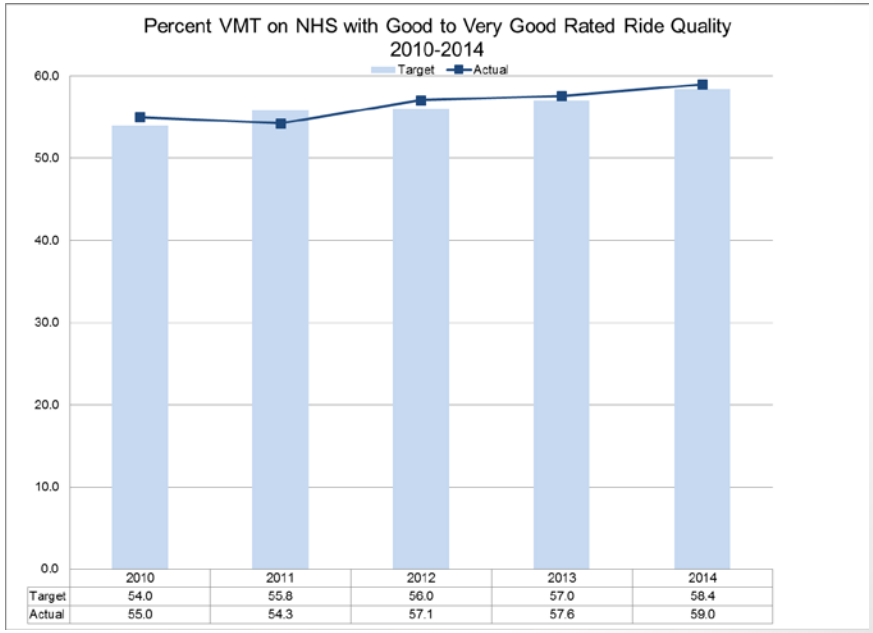
- Process for Distributing Highway Trust Fund (HTF) dollars to States
- Legislated by formula
- Driven by data submitted by State data providers, specifically:
  - Lane-miles
  - Annual VMT
  - Highway Trust Fund contributions

Performance Measures

- FHWA program offices are the “goal champions” responsible for determining performance measures
- OHPI role is to help determine availability, quality, and suitability of existing data for use
- For some measures OHPI analyzes the data
- Want to avoid multiple data collections of same data
- Our emphasis is “collect once, use often”

Agency Performance Measures

- Highway-Related Fatalities per 100 Million VMT
- Highway-Related Injuries per 100 Million VMT
- % of VMT on NHS with IRI ≤ 170
- % of STRAHNET Miles with IRI ≤ 170
- Annual Hours of Delay
- Congested Travel



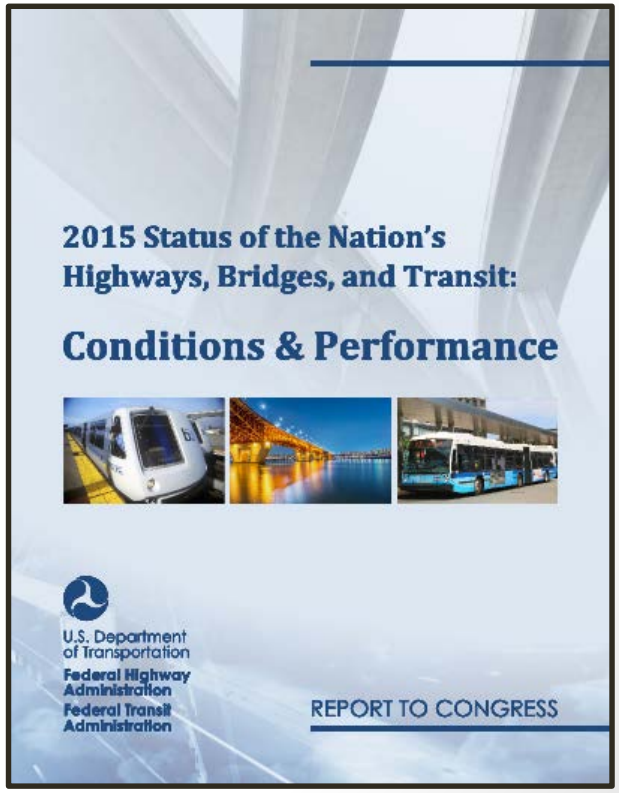
FHWA Reports

- To Congress
- To U.S. DOT
- Office publications
- Monthly trend reports
- Special reports, briefs, and analysis

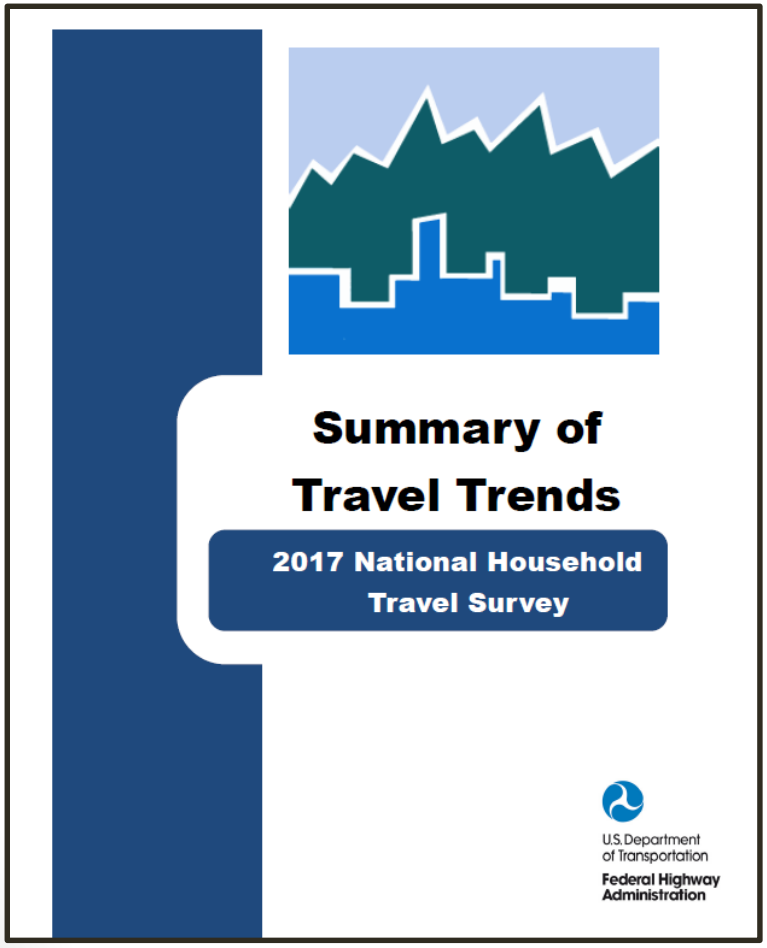
Reports to Congress

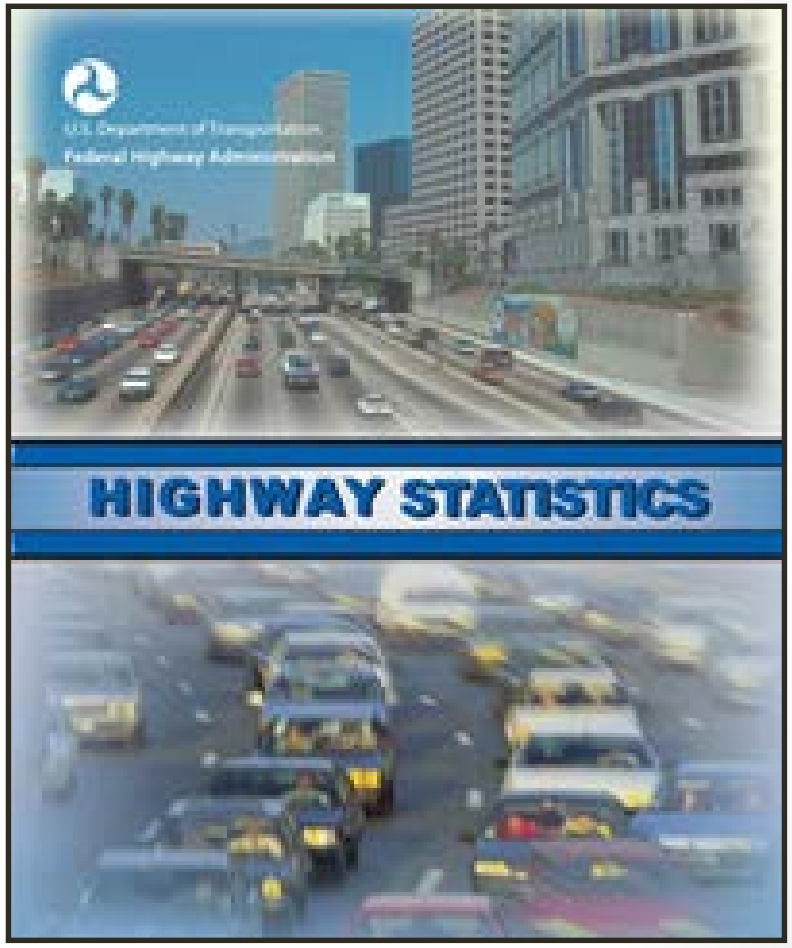
Conditions & Performance Report

- Extent of System
- Roadway Condition
- System Performance
- Funding Sources
  - Federal, State, Local, Other
- Expenditures by:
  - Improvement Type & Funding Source

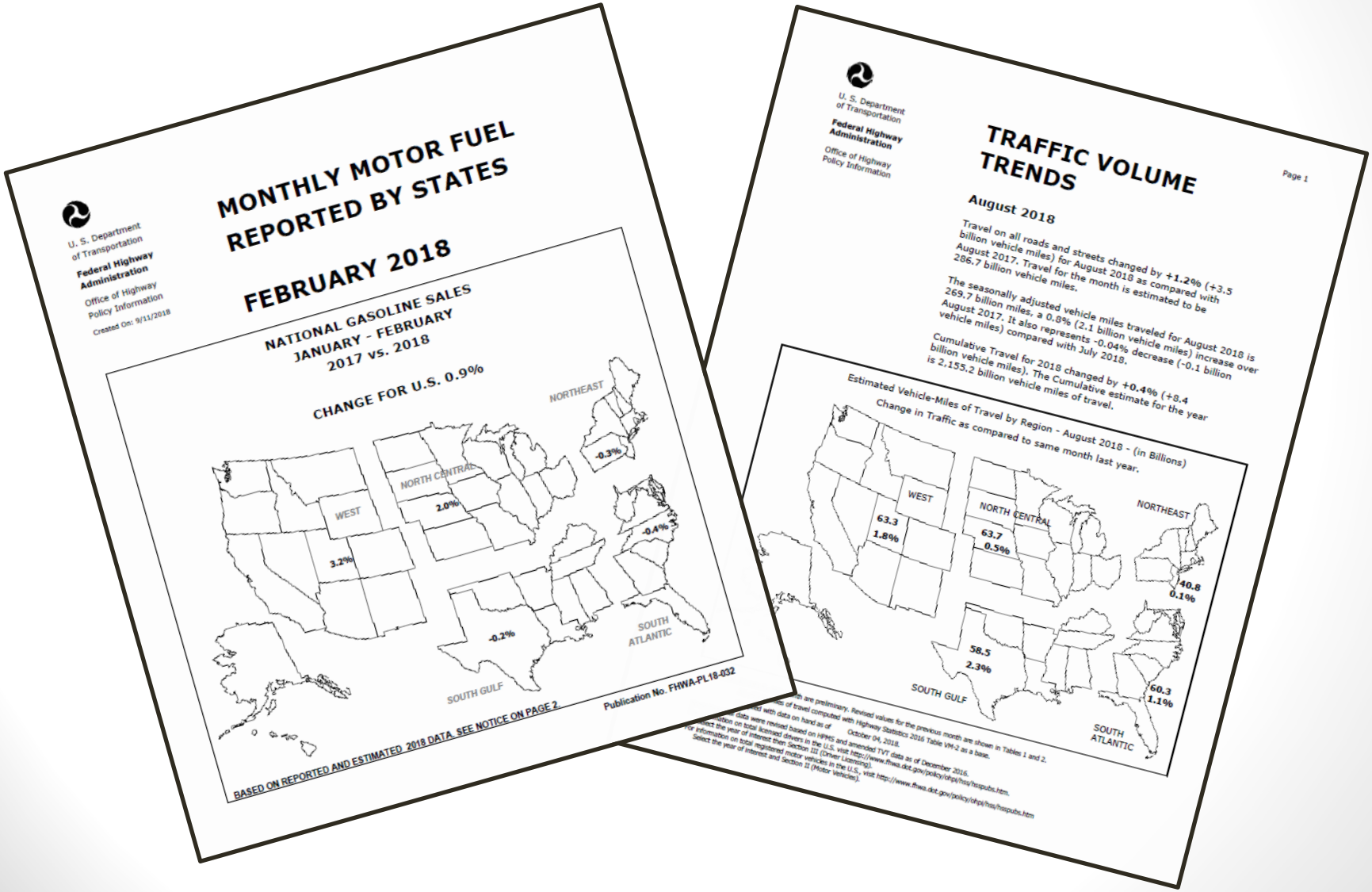


Office Publications





Monthly Reports



U. S. Department of Transportation
Federal Highway Administration
Office of Highway Policy Information
Created On: 9/11/2018

MONTHLY MOTOR FUEL REPORTED BY STATES

FEBRUARY 2018

NATIONAL GASOLINE SALES
JANUARY - FEBRUARY
2017 vs. 2018

CHANGE FOR U.S. 0.9%

BASED ON REPORTED AND ESTIMATED 2018 DATA. SEE NOTICE ON PAGE 2.

Publication No. FHWA-PL18-032

U. S. Department of Transportation
Federal Highway Administration
Office of Highway Policy Information

TRAFFIC VOLUME TRENDS

Page 1

August 2018

Travel on all roads and streets changed by **+1.2%** (+3.5 billion vehicle miles) for August 2018 as compared with August 2017. Travel for the month is estimated to be 286.7 billion vehicle miles.

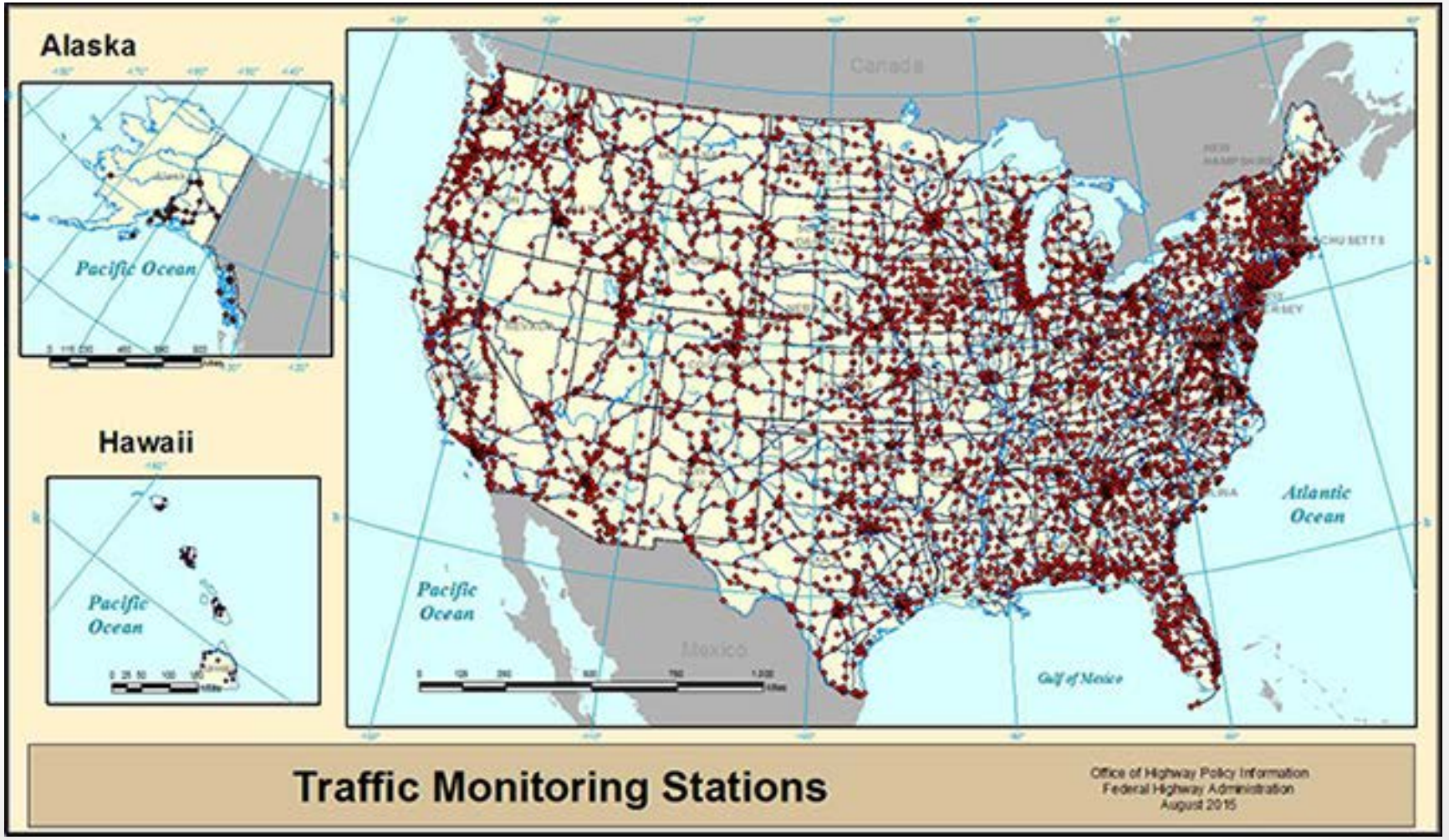
The seasonally adjusted vehicle miles traveled for August 2018 is 269.7 billion miles, a 0.8% (2.1 billion vehicle miles) increase over August 2017. It also represents -0.04% decrease (-0.1 billion vehicle miles) compared with July 2018.

Cumulative Travel for 2018 changed by **+0.4%** (+8.4 billion vehicle miles). The Cumulative estimate for the year is 2,155.2 billion vehicle miles of travel.

Estimated Vehicle-Miles of Travel by Region - August 2018 - (in Billions)
Change in Traffic as compared to same month last year.

...are preliminary. Revised values for the previous month are shown in Tables 1 and 2.
...of travel computed with Highway Statistics 2016 Table VM-2 as a base.
...with data on hand as of October 04, 2018.
...data were revised based on HPMS and amended TVT data as of December 2016.
...tion on total licensed drivers in the U.S. visit http://www.fhwa.dot.gov/policyohpi/hss/hsspubs.htm.
...ect the year of interest then Section III (Driver Licensing).
...or information on total registered motor vehicles in the U.S., visit http://www.fhwa.dot.gov/policyohpi/hss/hsspubs.htm
...Select the year of interest and Section II (Motor Vehicles).

Traffic Volume Trends (TVT) Report



TVT Report

- Routinely covers over 6,500 counting sites around the US.
- Thanks to more states reporting on time and states continuing to add locations.
- Over 2,800 people that have subscribed to the TVT page in GovDelivery.
- All subscribers automatically get an e-mail once a new report has been posted.
- In August 2018
  - 2nd highest number of hits (over 52,700)
  - 7th highest number of visitors (over 6,300)

  Of all FHWA web pages, not including FHWA home page.
- 2016 Highway Statistics 62nd w/ 1,840 visitors and 1,400 hits

Focus on Data…

- Data Quality
- Open Data
  - https://data.transportation.gov/
  - Data Dictionary
  - Data Visualizations
- National initiatives
  - Performance Measures
  - Safety Data
  - Data Quality
  - Data Integration
- National Data Groups
  - Federal Geographic Data Committee
  - DOT Open Data Working Group
  - AASHTO/SCOP Data Subcommittee
  - TRB Data Section
- FHWA Data Governance: https://www.fhwa.dot.gov/datagov/

Characteristics of Quality Data

- Accurate
- Timely
- Complete
- Meets expectations
- Consistent across States

Why is Timeliness Important?

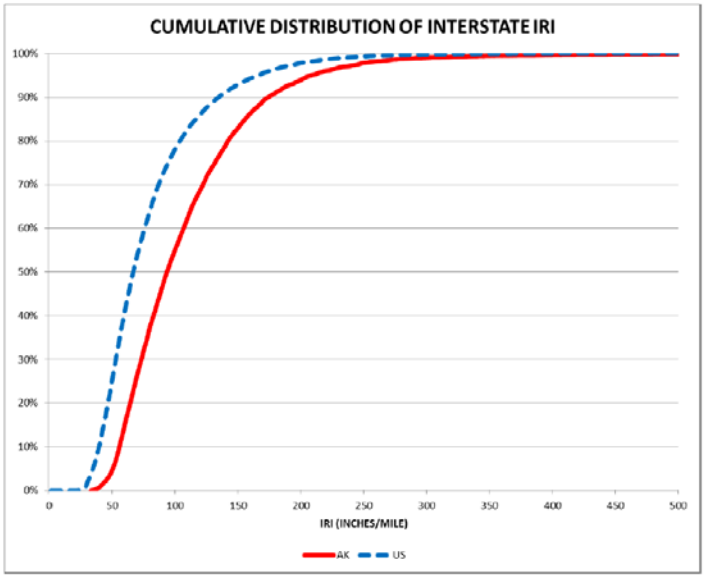
- Data users require timely data
- Earlier is better
- Commitments to release data and data products:
- August 15
  - Driver License tables
  - Motor Fuel data (MF-21)
  - Travel data (VM-3)
  - HPMS GIS files
- October 1
  - ARNOLD network for FMIS
  - Travel data for Safety and NHTSA
  - Remaining tables

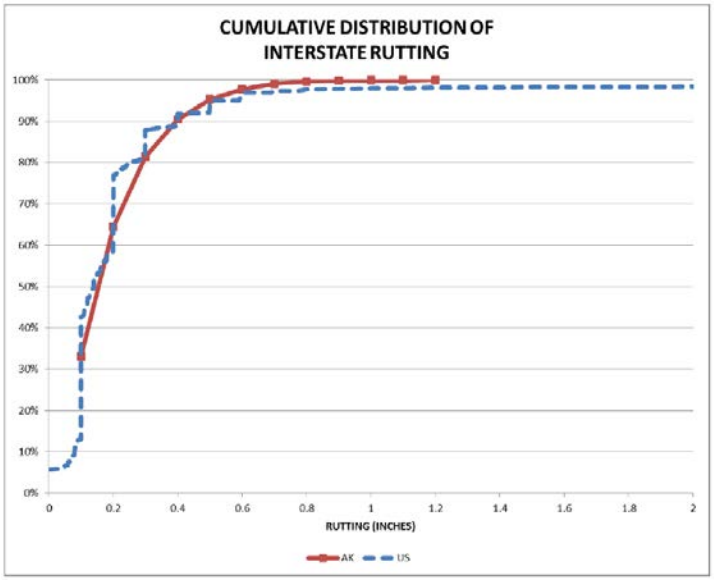
How do we improve data quality?

- Provide reporting guidance
  - Guide to Reporting Highway Statistics
  - Traffic Monitoring Guide
  - HPMS Field Manual
  - Federal Register
  - Notice of Proposed Rule Making
- Provide training and technical support
  - Onsite
  - Regional workshops
  - Remote
  - NHI Courses
- National Data QA Team
- New tools and resources

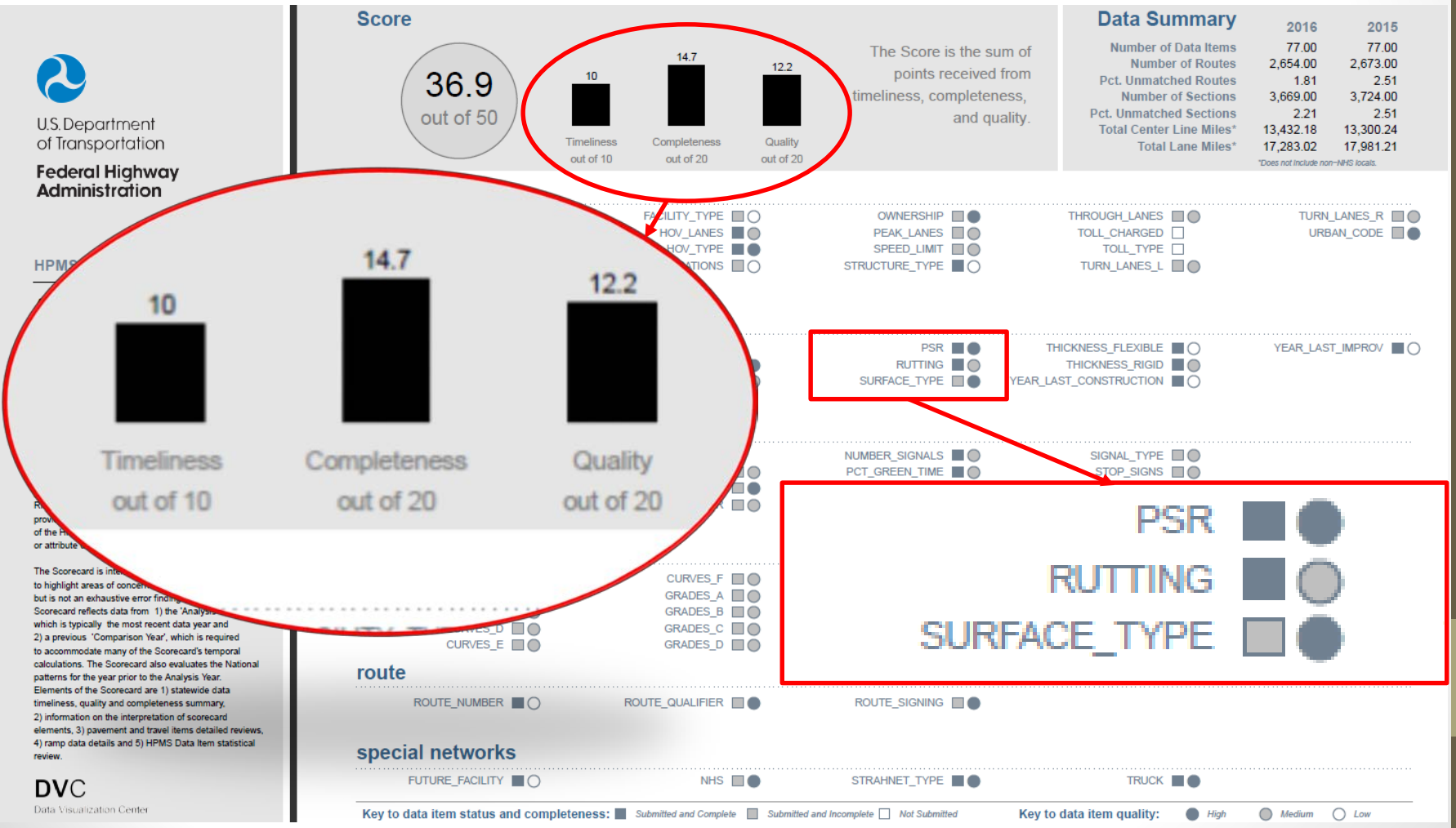
Data Quality - HPMS Pavement Report Cards

FIPS CODE	
STATE	
DFS	W
HPMS DATA QUANTITY - PAVEMENT	
HM-60 TOTAL INTERSTATE LANE MILES	2192.382
TOTAL INTERSTATE LANE MILES BASED ON EXPANDED SAMPLES MISSING CRACKING PERCENT DATA	2176.374
TOTAL INTERSTATE LANE MILES BASED ON EXPANDED SAMPLES MISSING FAULTING DATA	0.000
TOTAL INTERSTATE LANE MILES BASED ON EXPANDED SAMPLES MISSING IRI DATA	0.000
TOTAL INTERSTATE LANE MILES BASED ON FULL EXTENT MISSING IRI DATA	0.442
TOTAL INTERSTATE LANE MILES BASED ON EXPANDED SAMPLES MISSING RUTTING DATA	27.892
TOTAL INTERSTATE LANE MILES BASED ON EXPANDED SAMPLES WHERE SURFACE TYPE IS NOT PROPERLY CODED. A CODING OF 1 FOR UNSURFACED OR BLANK IS NOT ACCEPTABLE ON THE INTERSTATE.	0.000
TOTAL INTERSTATE LANE MILES WHERE THROUGH LANES IS CODED AS A 1, 2, OR 3. ALTHOUGH THIS IS POSSIBLE AT INTERSTATE TERMINAL SECTION OR SOME INTERCHANGES THESE SECTIONS SHOULD BE VERIFIED.	0.000



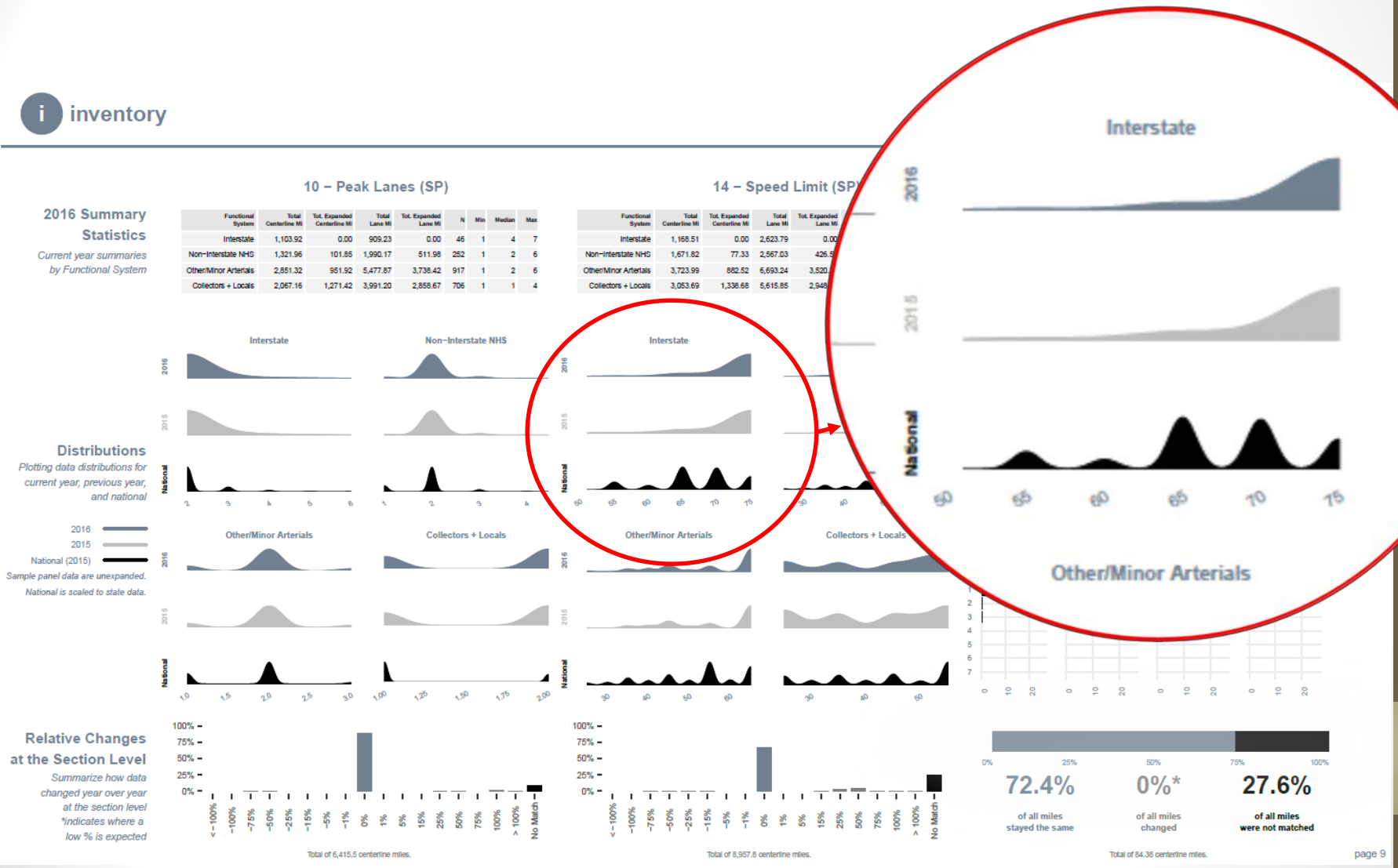


Data Quality - HPMS Scorecard



Focus Areas

Data Quality - HPMS Scorecard



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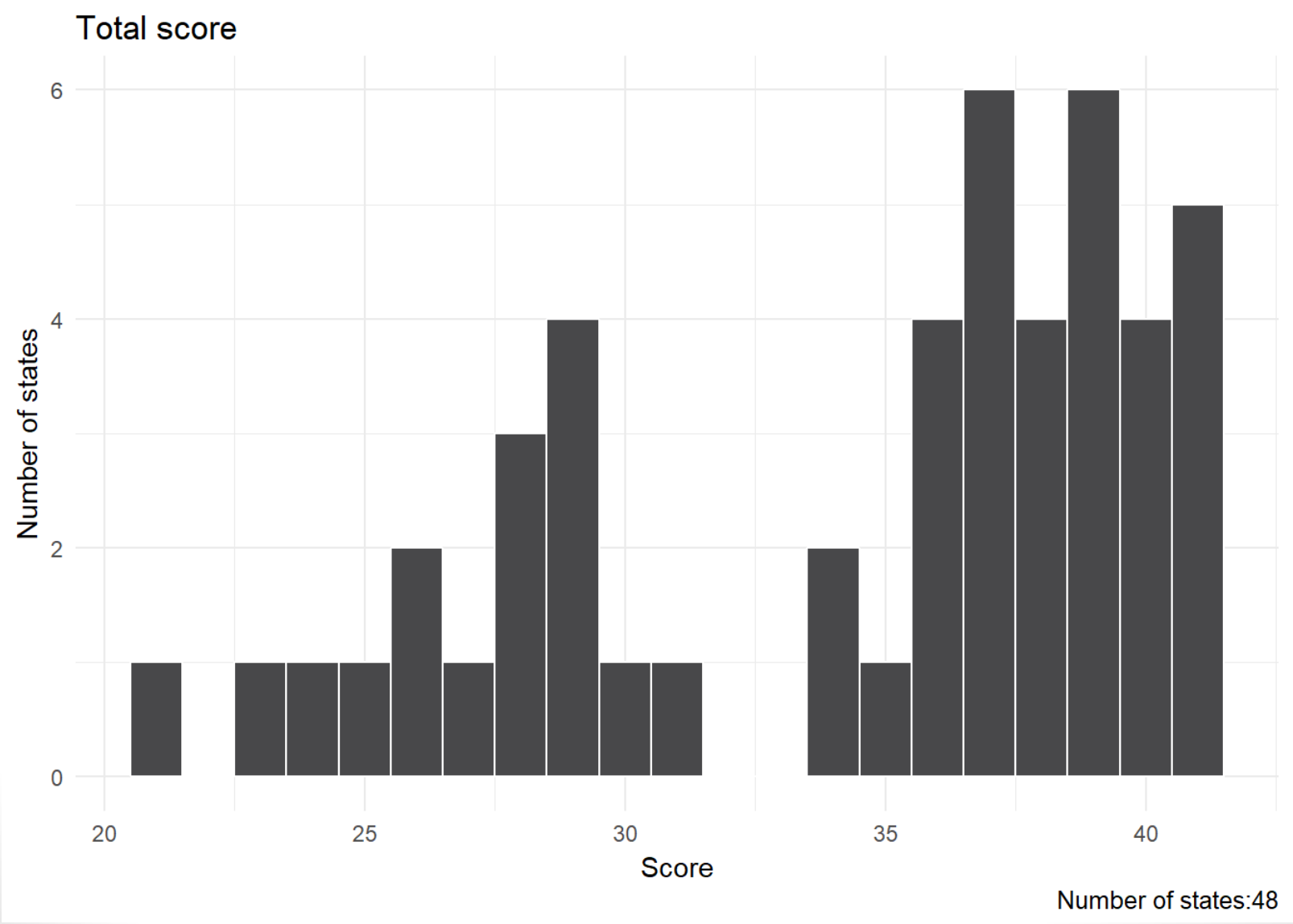

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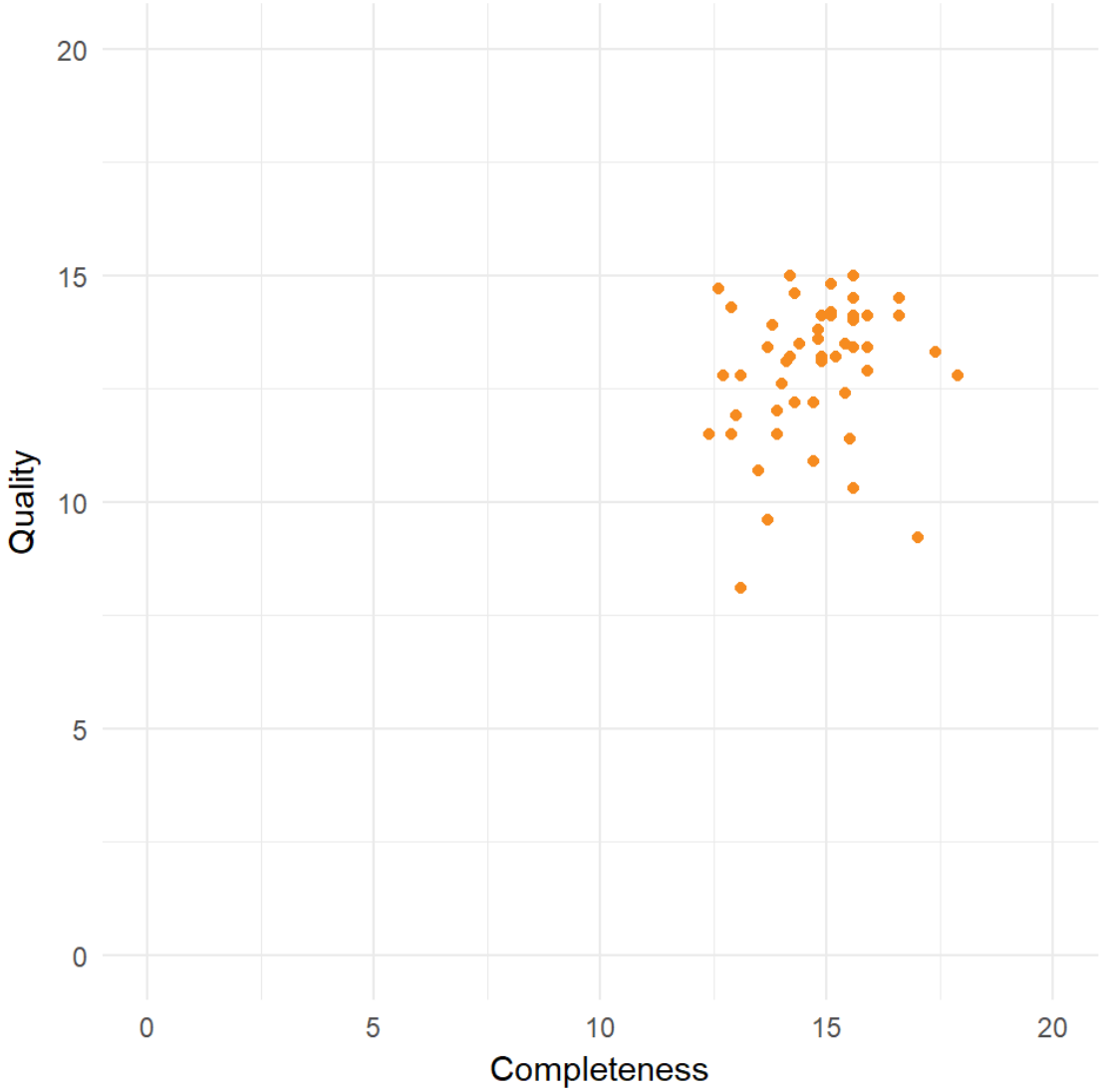
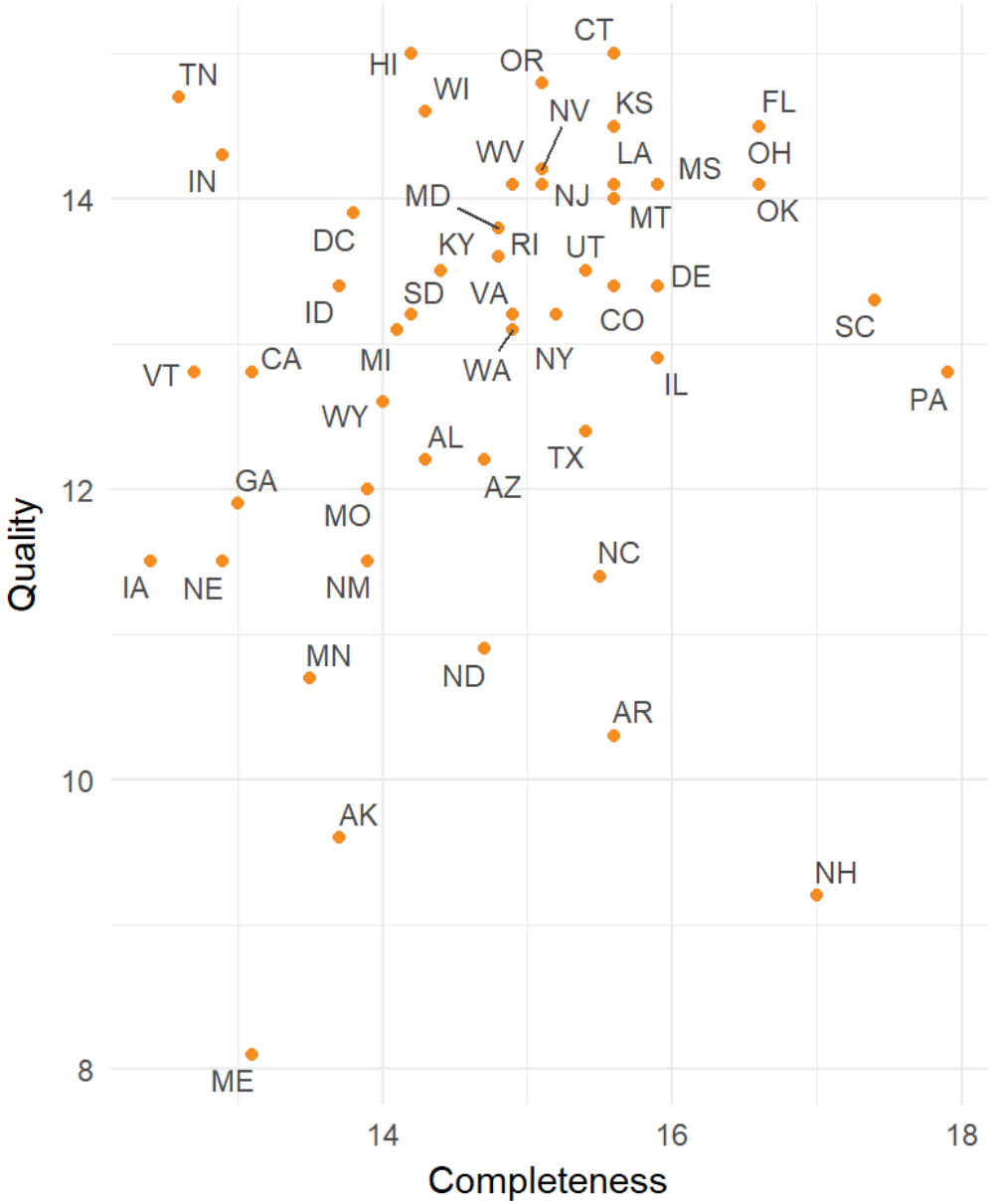


Focus Areas

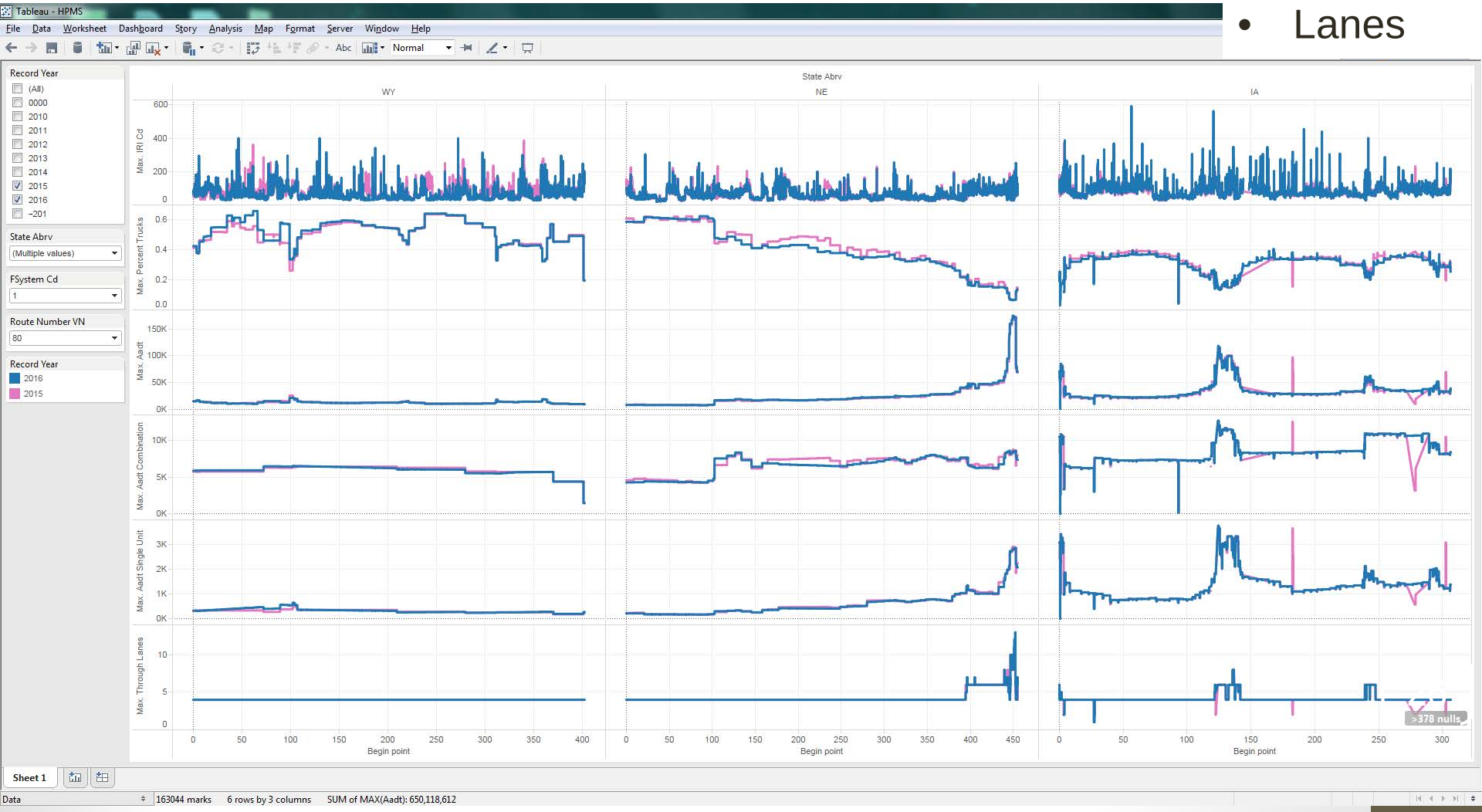
Data Quality - HPMS Scorecard



Focus Areas

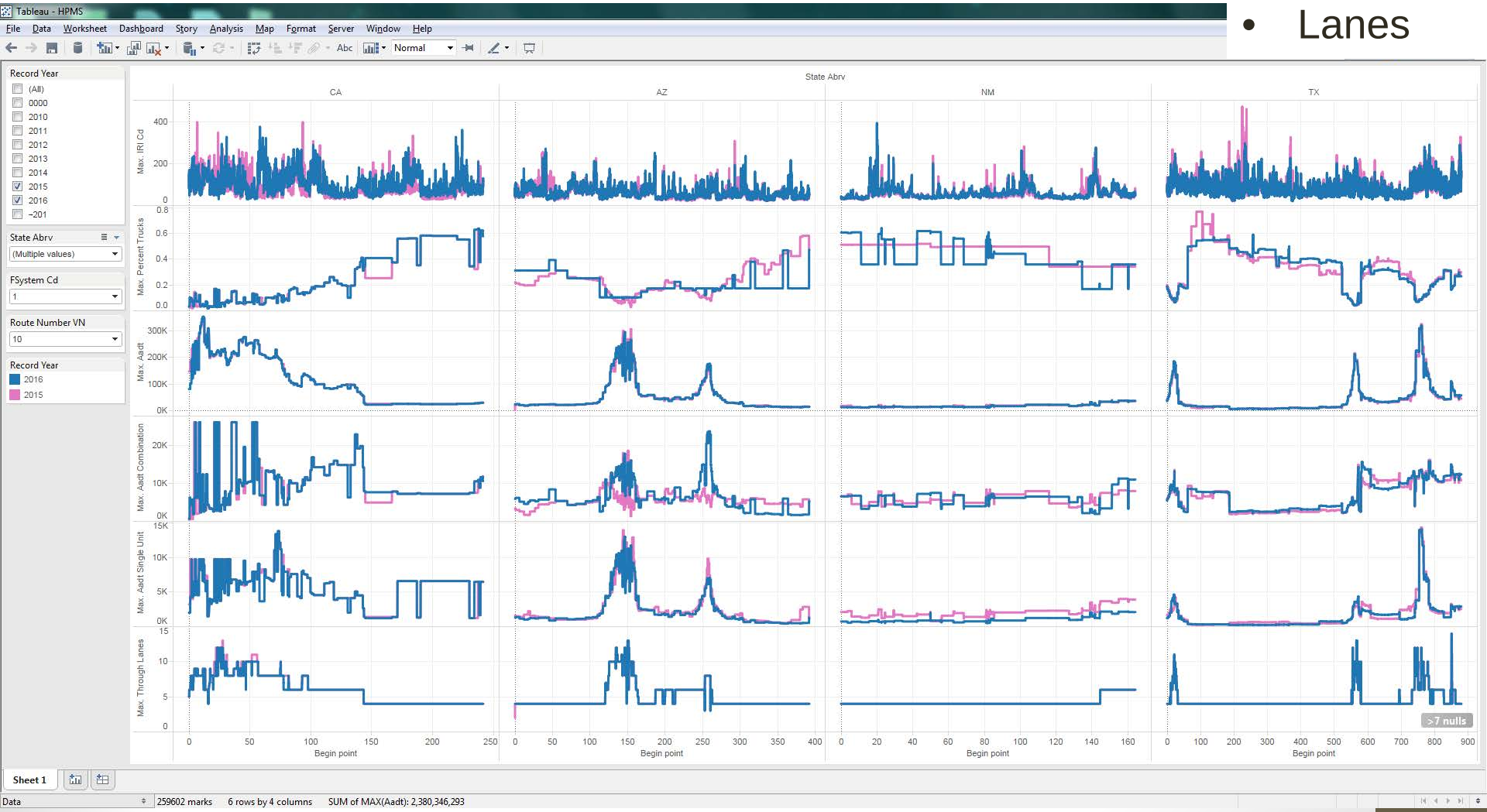
I-80 (WY-NE-IA)

- IRI
- % Trucks
- AADT
- Combo.
- Single
- Lanes



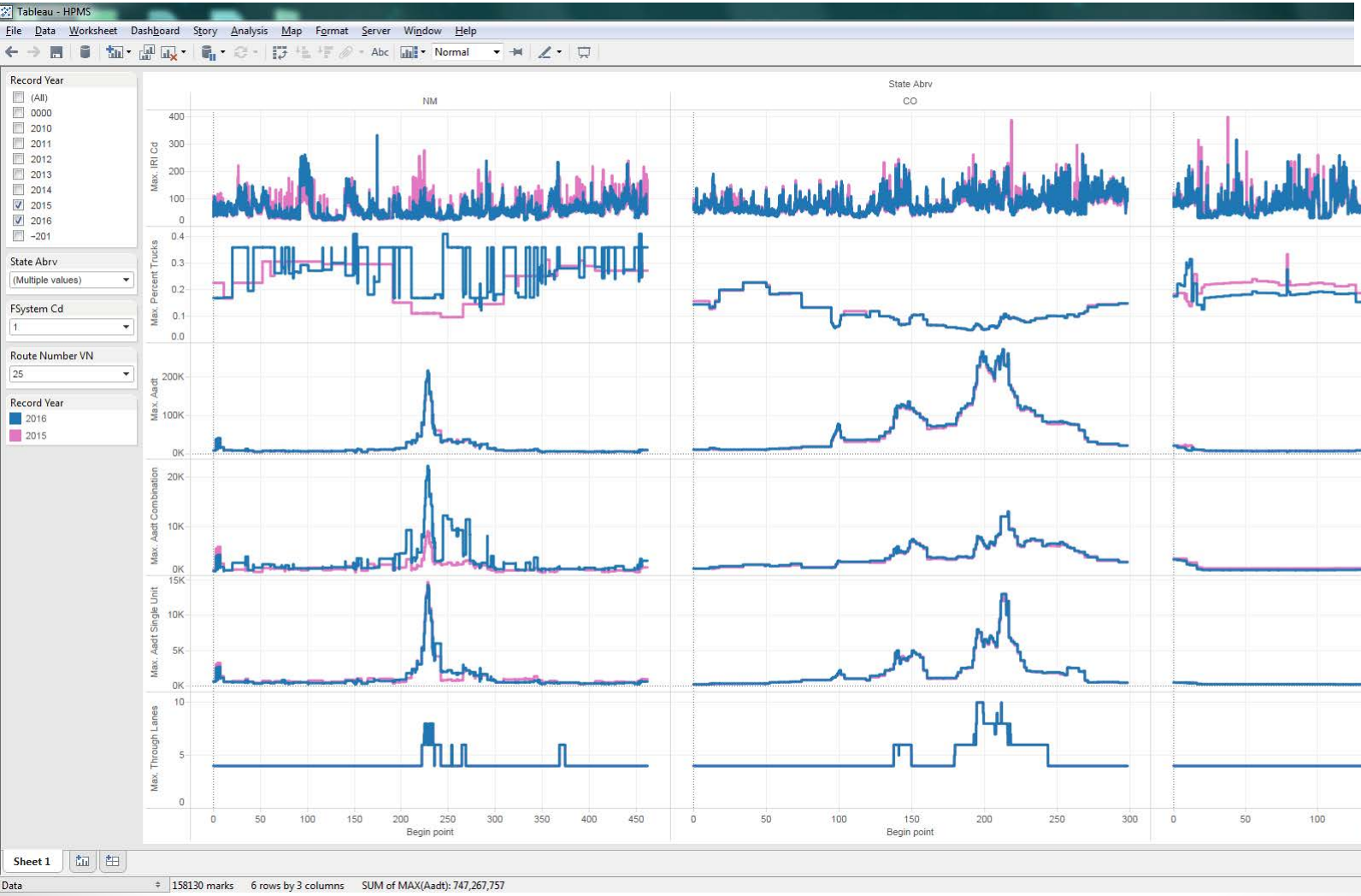
I-10 (CA-AZ-NM-TX)

- IRI
- % Trucks
- AADT
- Combo.
- Single
- Lanes



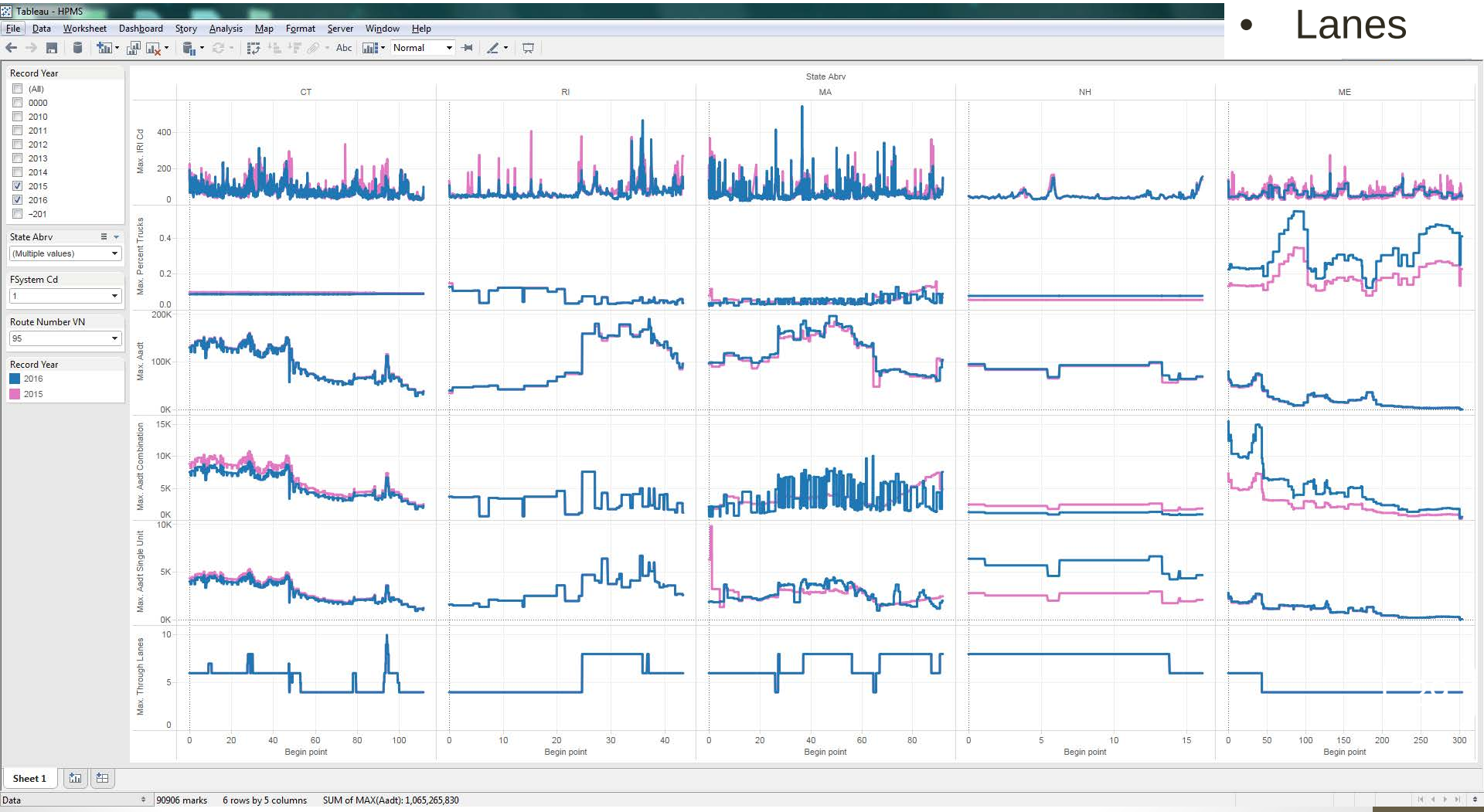
I-25 (NM-CO-WY)

- IRI
- % Trucks
- AADT
- Combo.
- Single
- Lanes



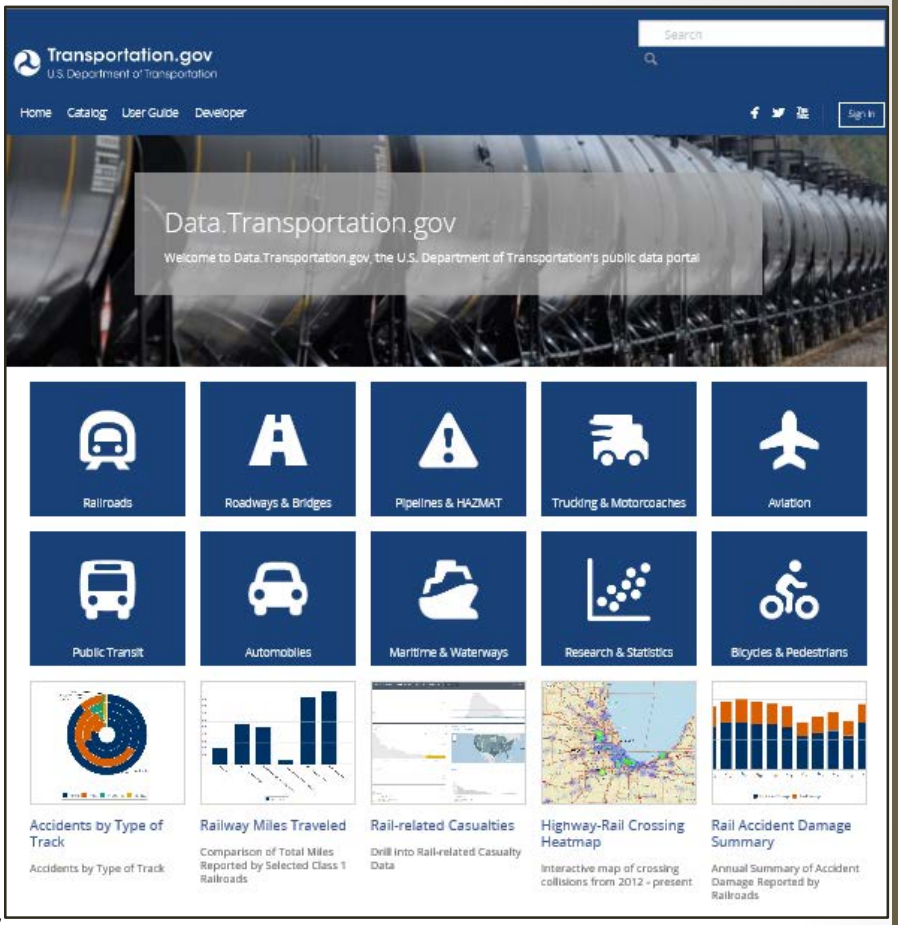
I-95(CT-RI-MA-NH-ME)

- IRI
- % Trucks
- AADT
- Combo.
- Single
- Lanes

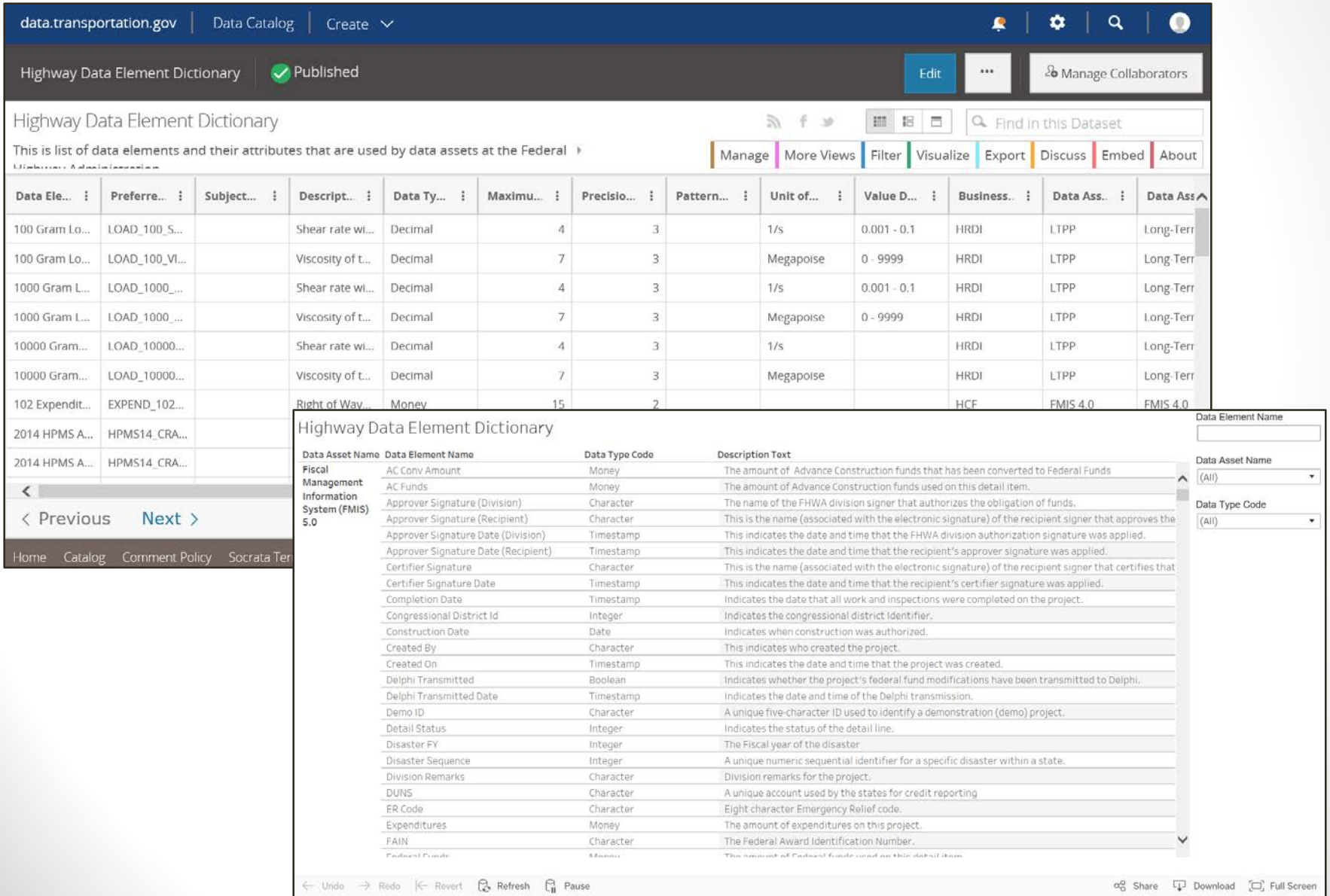


Open Data

- Access to:
  - Data systems
  - Documentation
  - Visualizations/Analysis
  - Resources
- Coming soon:
  - Online FHWA Data Dictionary
  - Select data
  - Data visualizations



Data Dictionary



Online Data

What's in this Dataset?

Rows	Columns	Each row is a
572	5	Year, Rural/Urban, Ownership, State, Length

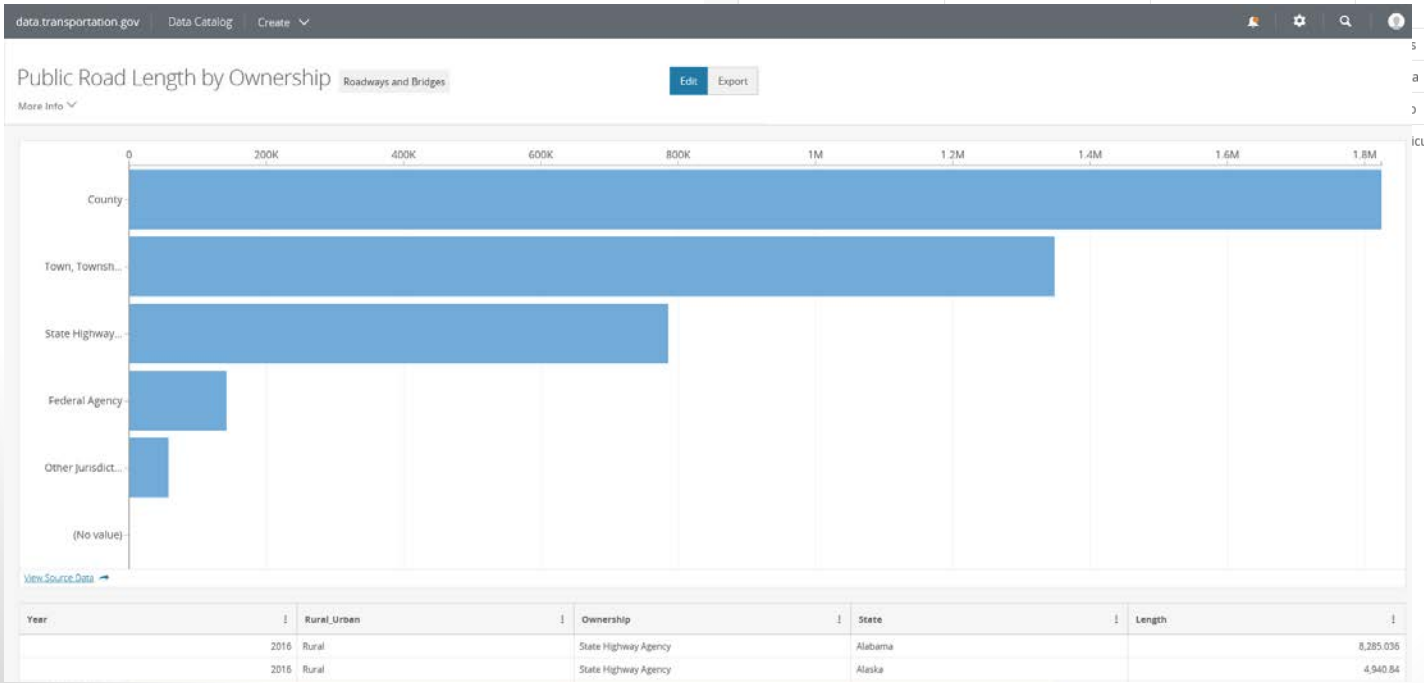
Columns in this Dataset

Column Name	Description	Type
Year		Number #
Rural_Urban		Plain Text T
Ownership		Plain Text T
State		Plain Text T
Length		Number #

Table Preview

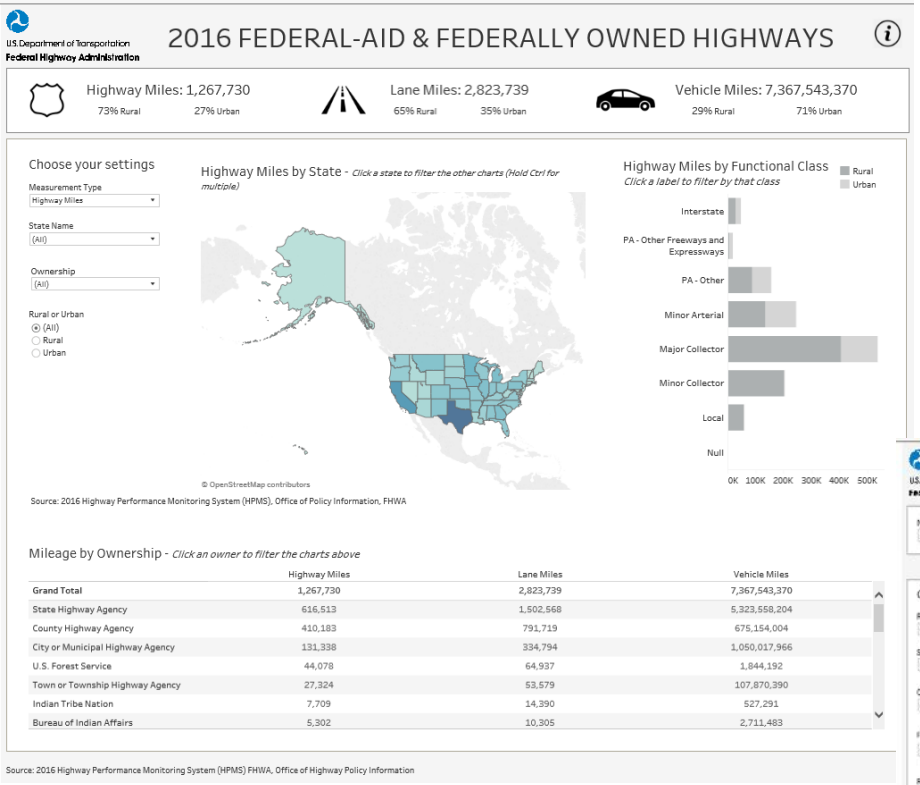
View Data | Create Visualization

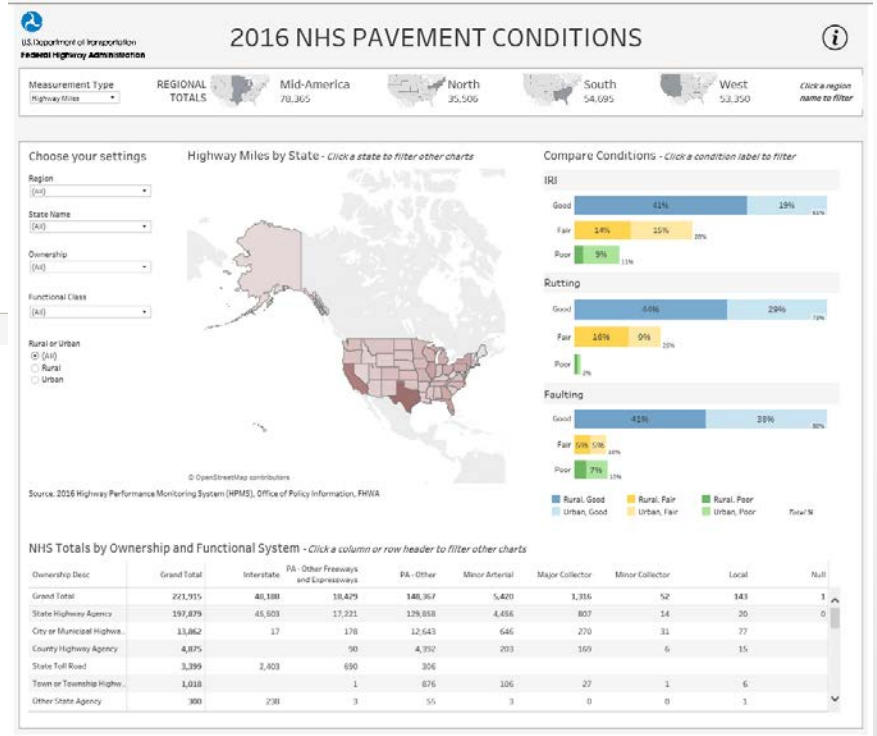
Year	Rural_Urban	Ownership	State	Length
2016	Rural	State Highway Agency	Alabama	8,285.036
2016	Rural	State Highway Agency	Alaska	4,940.84
				5,530.07
				14,087.449
				10,258.829
				7,535.321
			icut	1,169.5



Focus Areas

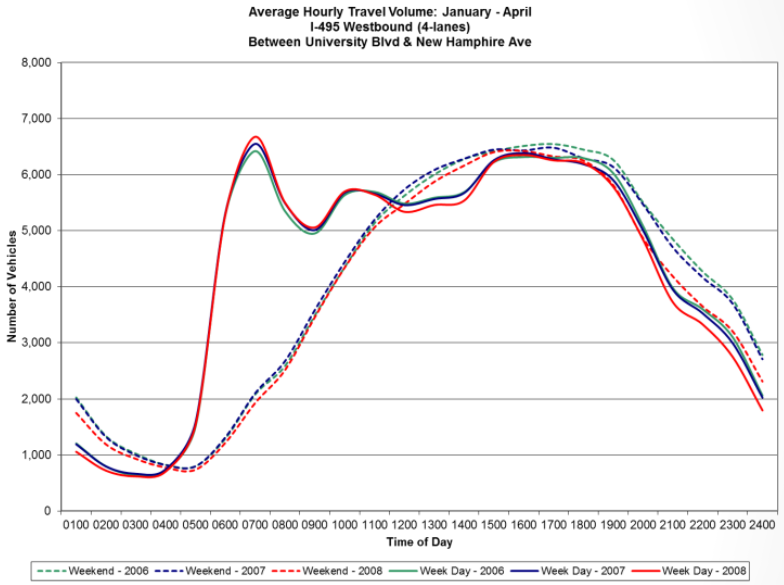
Visualizations & Dashboards



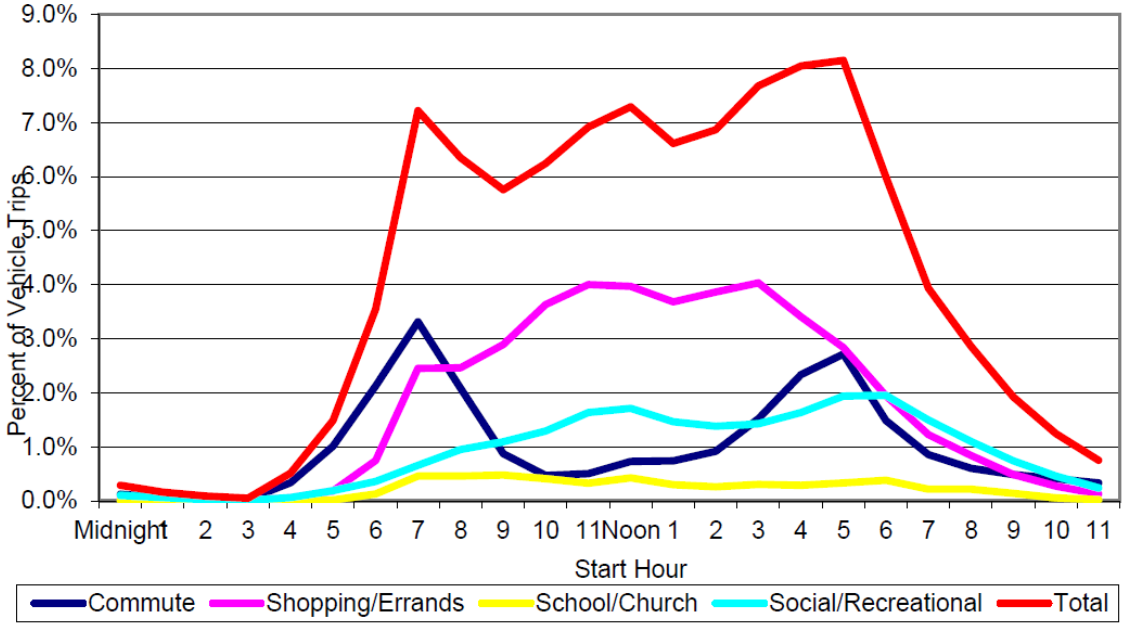


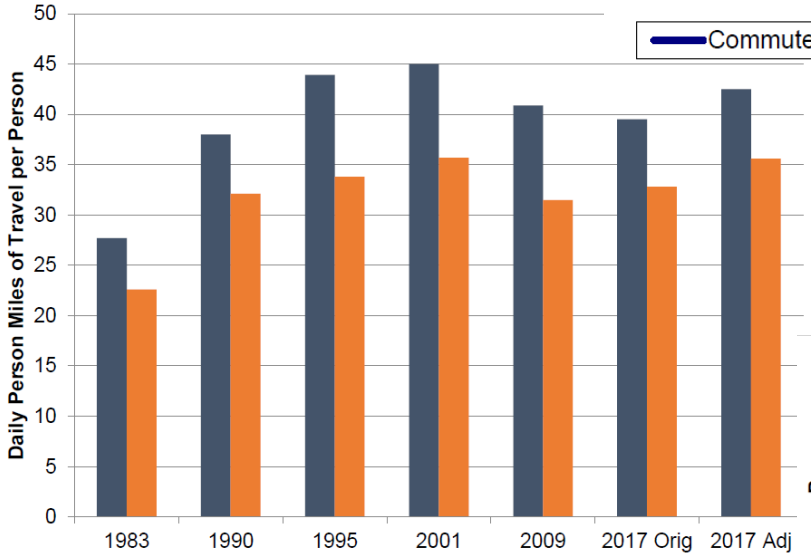
Major Initiatives

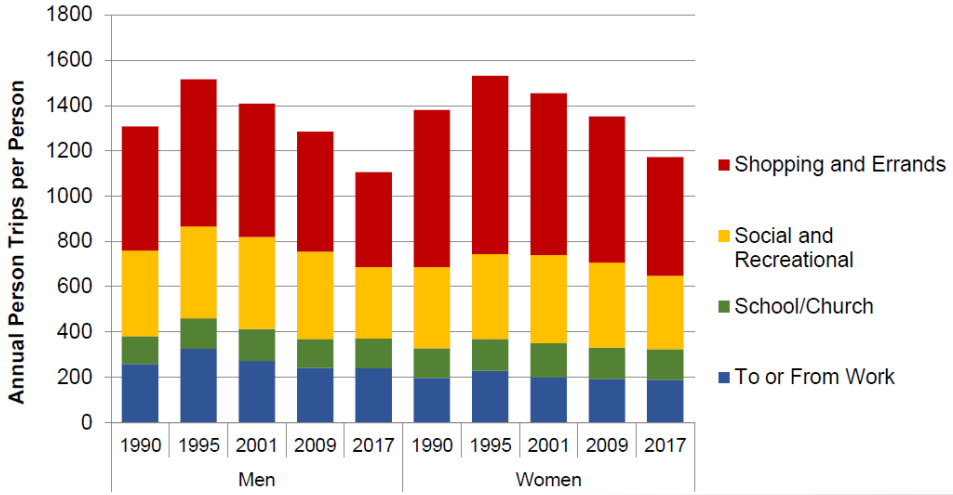
- National Household Travel Survey (NHTS)
- HPMS Reassessment
- Highway Finance Reassessment
- Performance Management (TPM)
- Safety Data Initiative (SDI)
- NPMRDS
- Special Tabulations
  - VMT Forecasts
  - Transportation Analysis Framework
  - TMAS Data
  - Performance Network
- Integrated Transportation Information System (ITIP)
- Policy Information Data Portal (PIDP)
- Data Visualization Center (DVC)
- Factoids
- Knowledge Center



NHTS

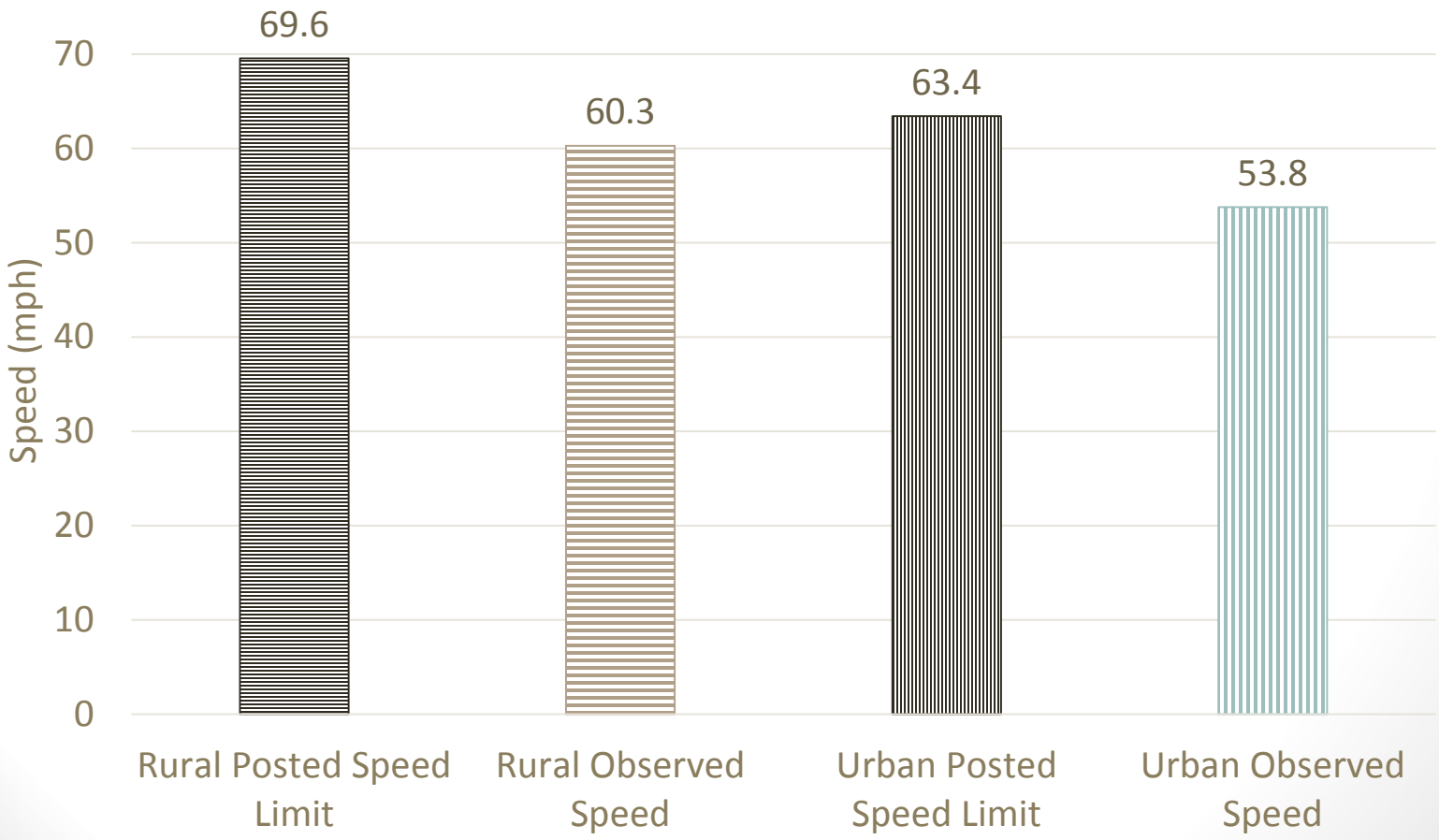




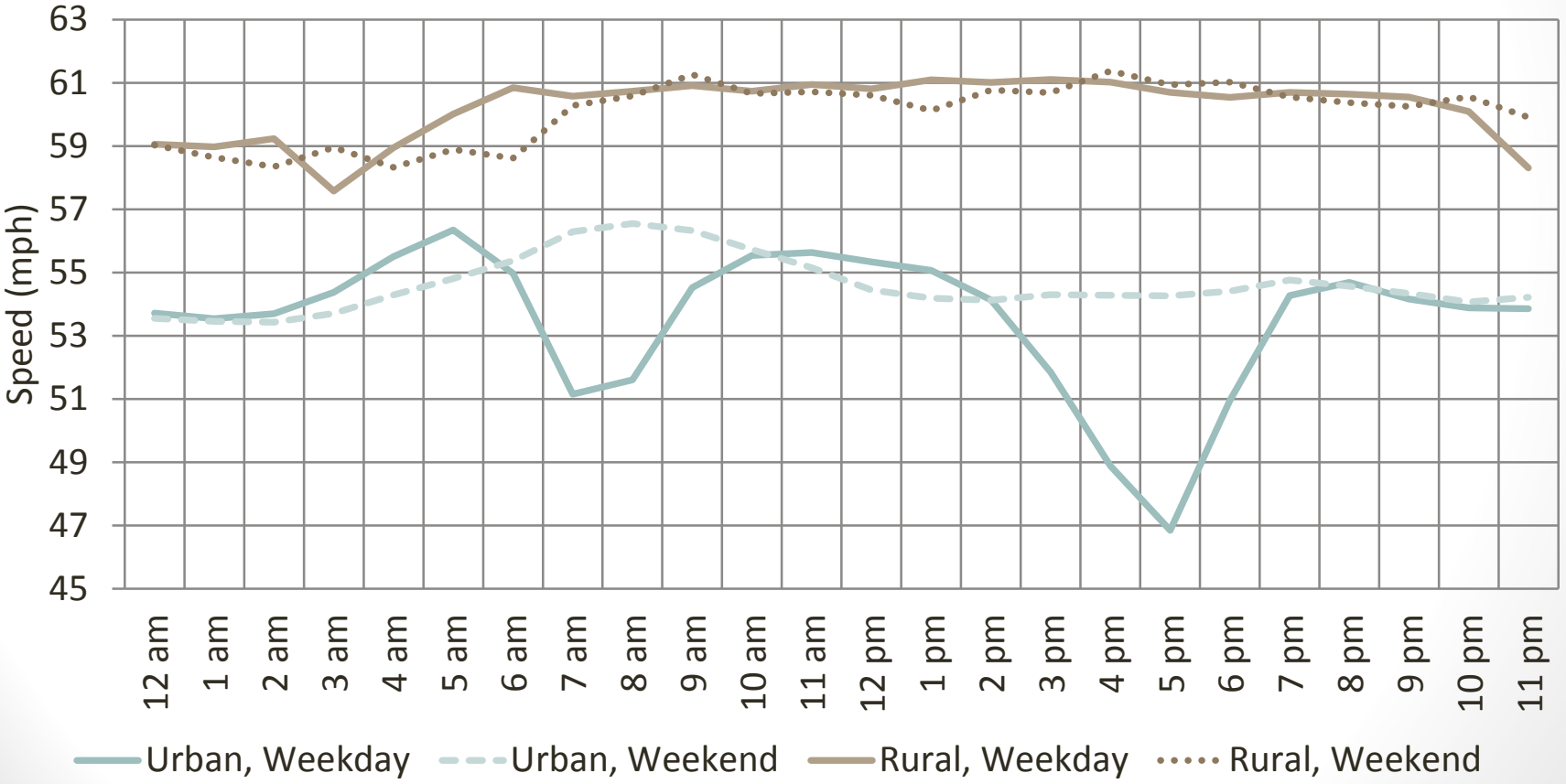


Focus Areas

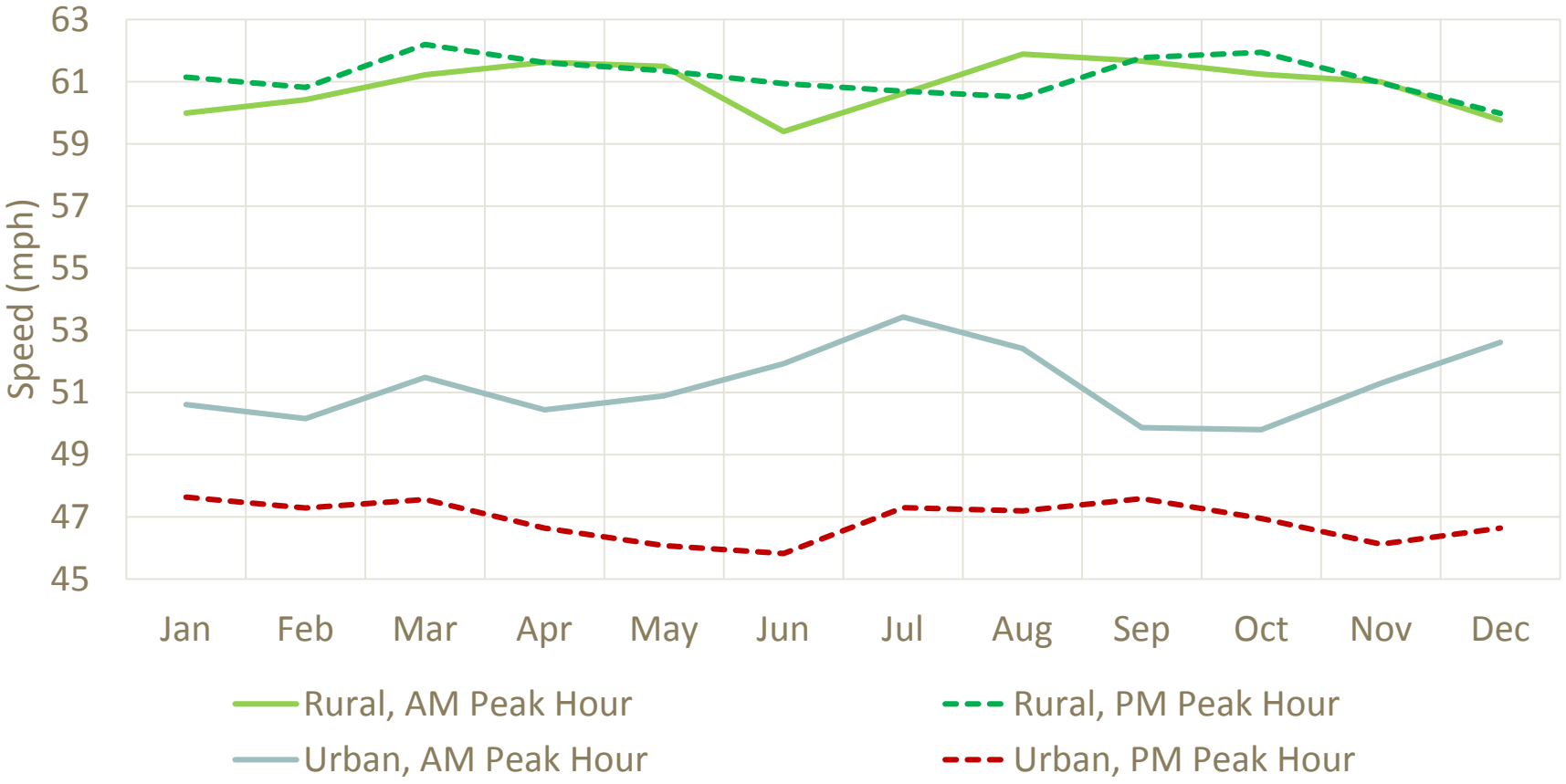
Observed Speed – National Average on Rural and Urban Interstate System



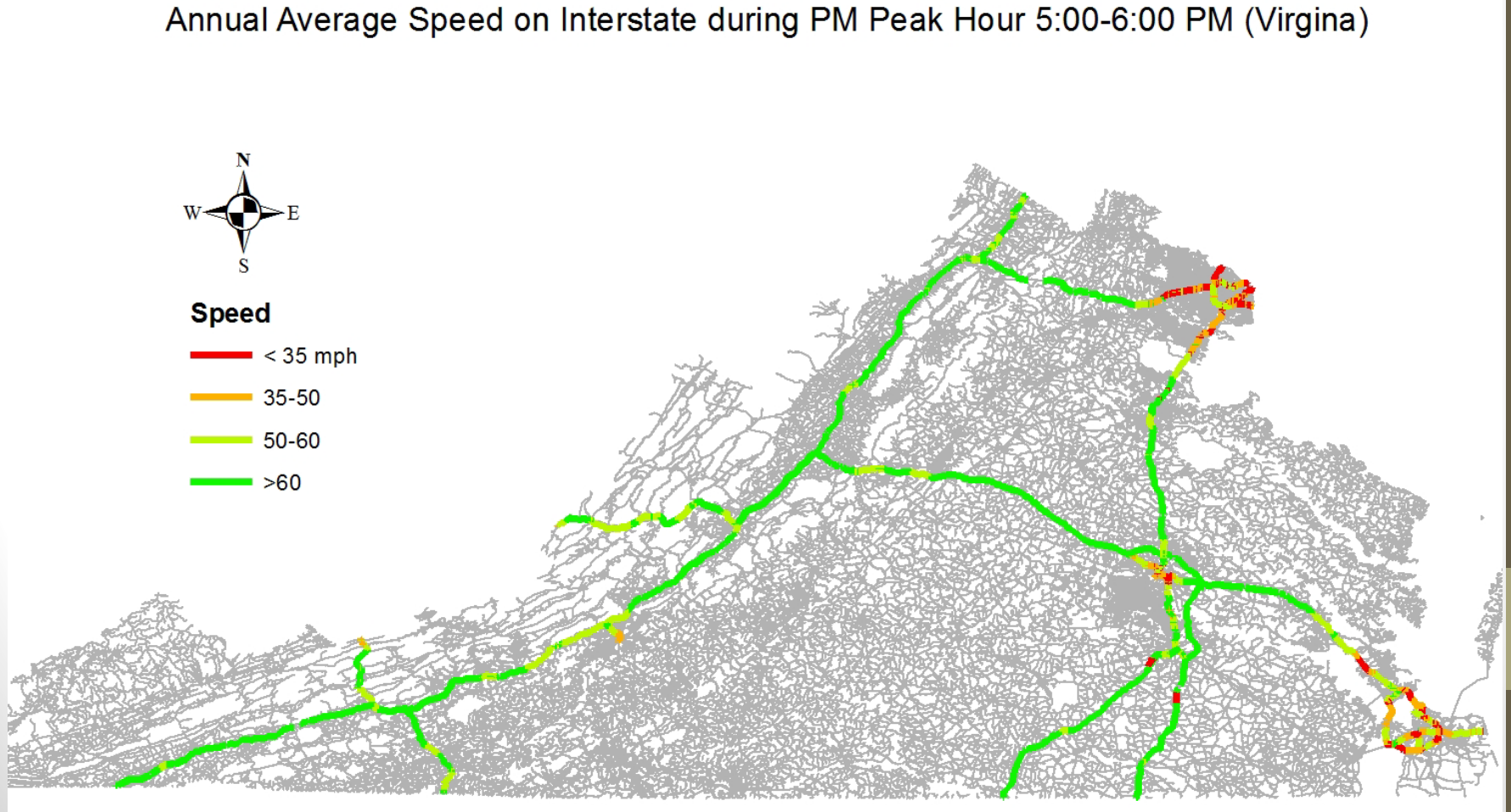
Observed Speed by Hour of the Day



Observed Peak Hour Speed by Month

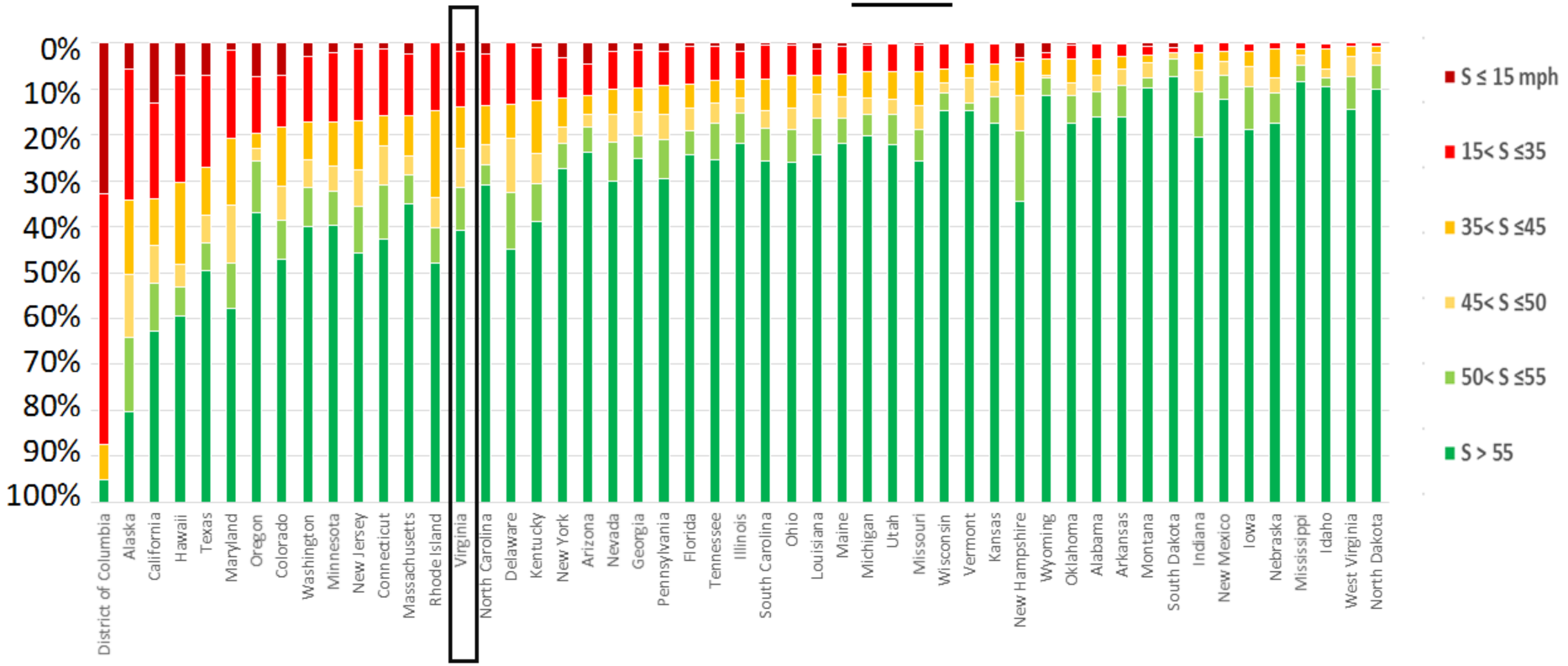


Annual Average Speed on Interstate during PM Peak Hour 5:00 pm – 6:00 pm



Percent of Interstate **Miles within Various** Speed Bins

Urban Interstate in PM Peak Hour



12

VMT Forecasts

- Updated earlier this year

http://www.fhwa.dot.gov/policyinformation/tables/vmt/vmt_forecast_sum.cfm

Table 1. Projected Growth in Vehicle Miles Traveled (VMT): Spring 2018

Vehicle Class	Compound Annual Growth Rates					
	Low Economic Growth Outlook*		Baseline Economic Growth Outlook*		High Economic Growth Outlook*	
	2016 - 2036 (20 Year)	2016 - 2046 (30 Year)	2016 - 2036 (20 Year)	2016 - 2046 (30 Year)	2016 - 2036 (20 Year)	2016 - 2046 (30 Year)
Light-Duty Vehicles	0.9%	0.7%	1.1%	0.8%	1.3%	1.0%
Single-Unit Trucks	1.4%	1.5%	1.8%	1.9%	2.3%	2.4%
Combination Trucks	1.2%	1.2%	1.6%	1.6%	1.9%	1.9%
Total	0.9%	0.8%	1.2%	0.9%	1.3%	1.1%

Long Distance Travel

http://www.fhwa.dot.gov/policyinformation/analysisframework/

Website includes:

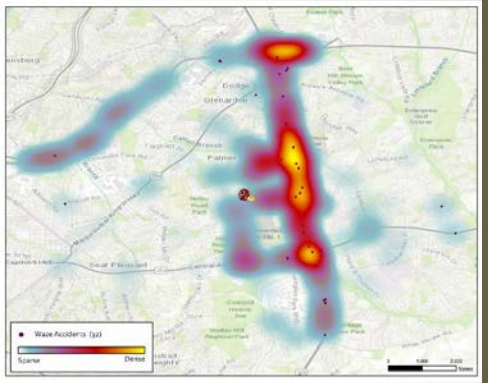
- Traffic Analysis Framework – Final Report
- 2008 and 2040 Trip Tables for:
  - Bus
  - Rail
  - Air
  - Auto (business)
  - Auto (non-business)
- Trips greater than 100 miles
- County (or equivalent) to county level

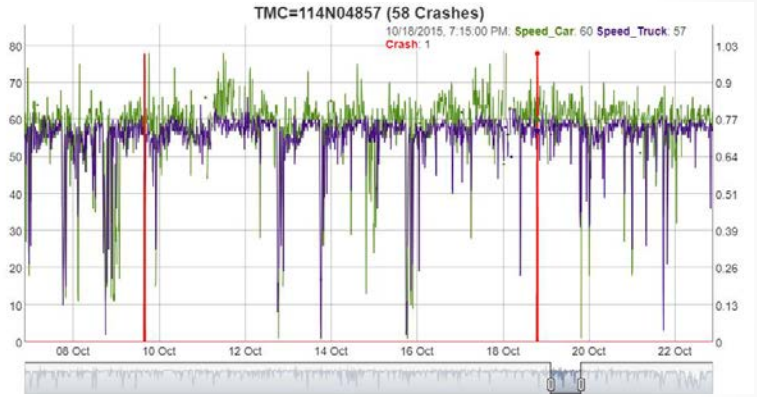
Data Integration

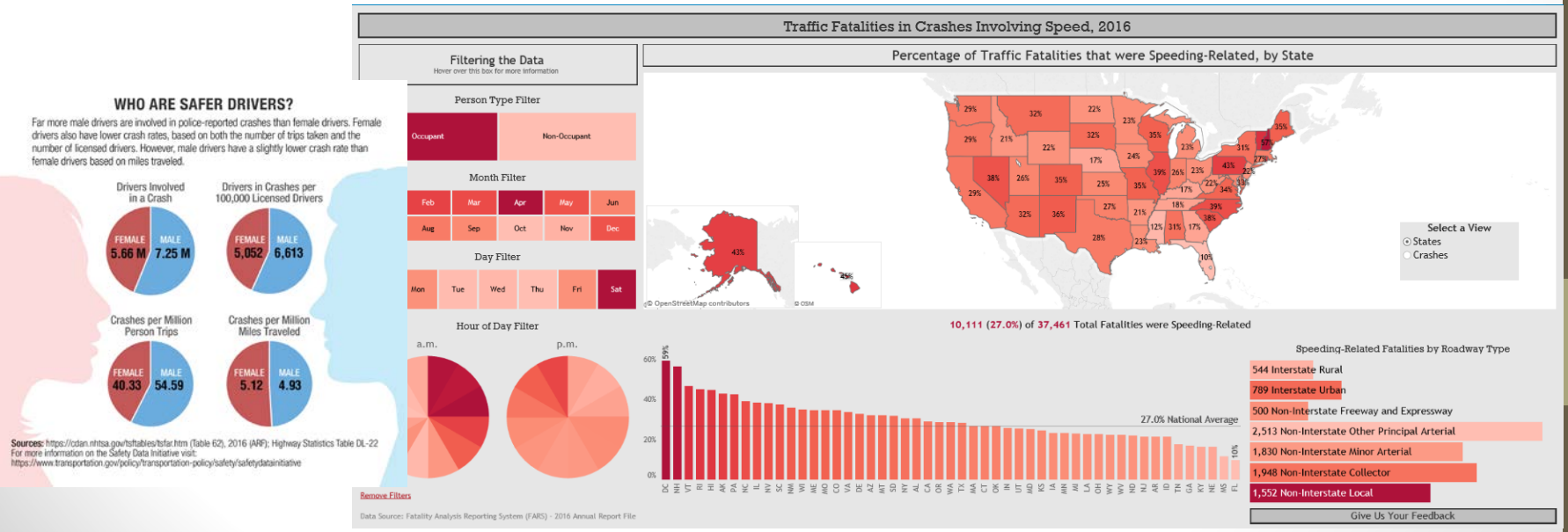
- Most FHWA data systems are moving to the MS Azure cloud
- Including the FHWA data warehouse (ITIP)
- Expanding integration with other FHWA and US DOT data systems
- SQL Server based, includes :
  - Informatica
  - 1Spatial
  - ArcGIS
  - Alteryx
  - Power BI
  - Tableau
  - R
  - SQL
- Forthcoming web portal for accessing, analyzing, and visualizing data
- Possibly use Socrata to make data available through data.transportation.gov website

Safety Data Initiative

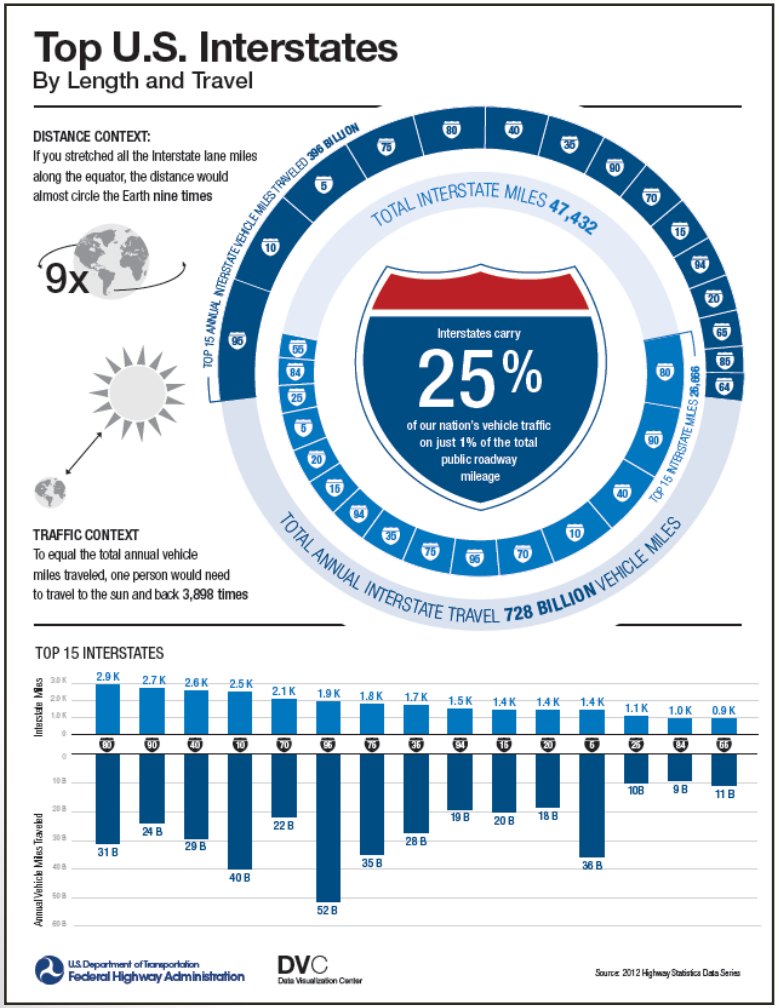
- Solving for Safety Data Visualization Challenge
- Rural Speed Pilot Project
- Waze Data Pilot
- FARS Visualization
- SDI Social Media Factoids
- Rural Non-Occupants Pilot

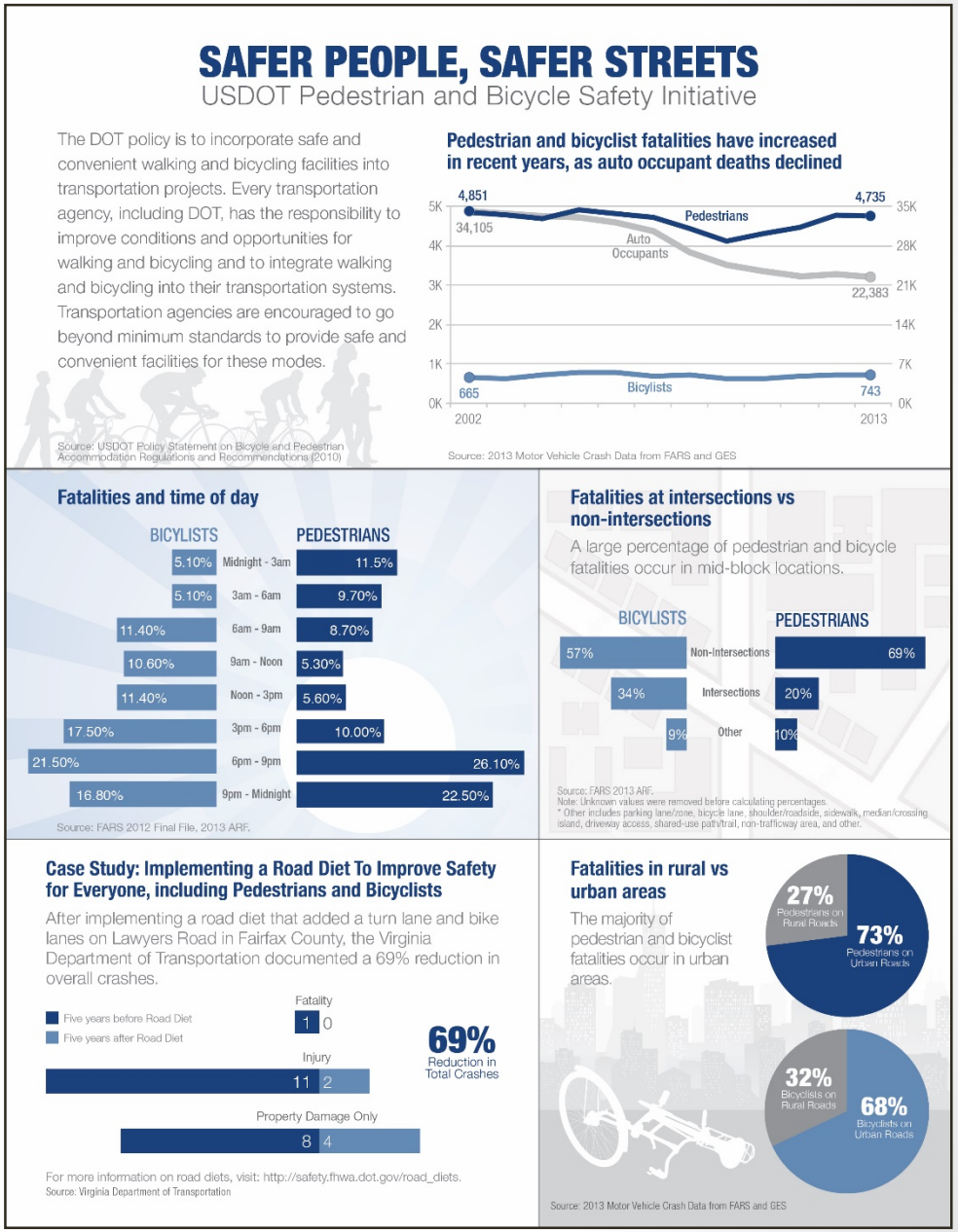




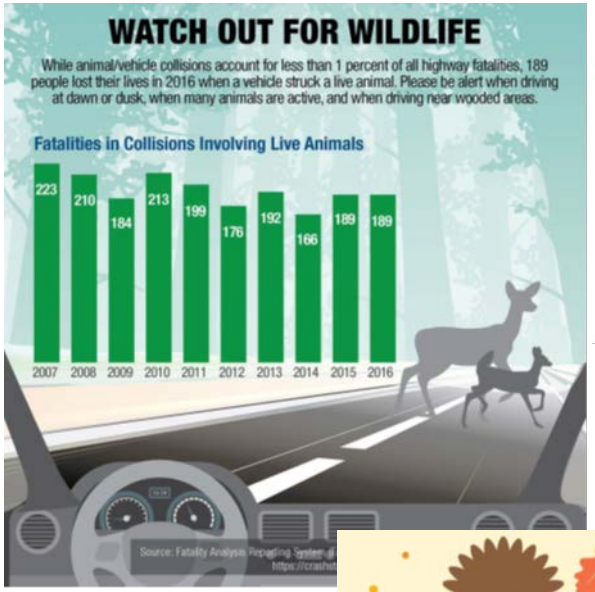


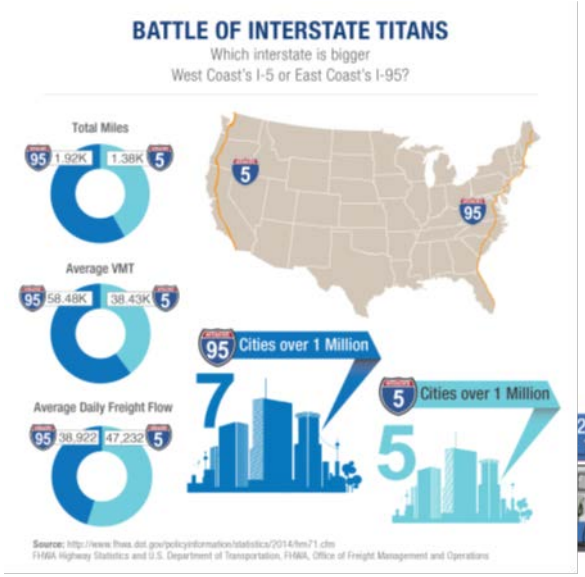
Data Visualization Center (DVC)

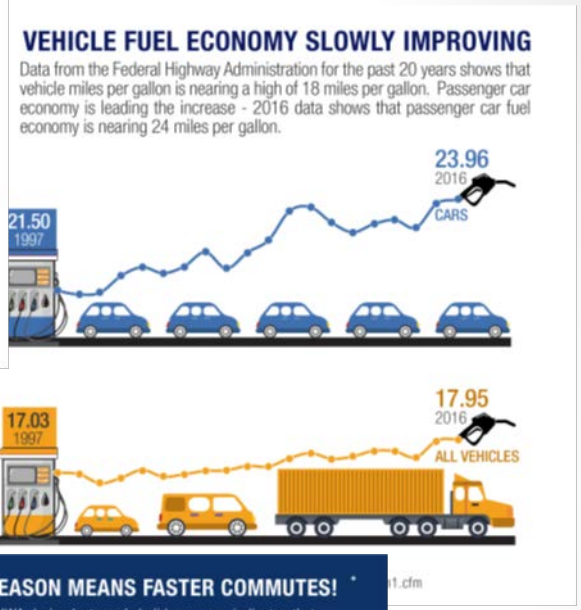




Factoids







https://www.flickr.com/photos/fhwa/albums/72157649163936650

Knowledge Center

http://www.fhwa.dot.gov/policyinformation/knowledgecenter/

- Staff created reference and training videos
  - Motor Fuel Reporting (1)
  - Vehicle Registrations (3)
  - Highway Travel (6)
  - Heavy Vehicle Use Tax (1)
- Coming Soon
  - Highway Finance
  - Driver Registration
  - HPMS
  - Talking Traffic

Office Website

http://www.fhwa.dot.gov/policyinformation/

Thank You!