HIGHLIGHTS

Chapter 2 **Highlights**:
Data Sources for Oklahoma Freight Transportation Plan

The Oklahoma Freight Transportation Plan (OFTP) is a data-driven plan. It is based on the collection, analysis, and utilization of several different public and commercial data sources, representing "state of the practice" information. Many references were utilized for the development of the Plan; the sources that were used most intensively are listed below:

- **Freight Analysis Framework (FAF) –** FAF is a public data product of the Federal Highway Administration. It has less geographic and commodity specificity than Transearch, but has other useful features such as tonnage, origin and destination, and mode data. Two versions of FAF—historic (version 3) and most recent (version 4)—were used in combination with Transearch to create current and future freight volume estimates for the OFTP.
- **National Performance Management Research Data Set (NPMRDS)** – NPMRDS is a data product developed by the Federal Highway Administration and obtained under license for use. NPMRDS provides actual data on average truck travel speeds over selected national highways, at 15-minute increments, continuously. Data for the most recent available 12-month period was downloaded and analyzed.
- **Oklahoma Long Range Transportation Plan: 2015–2040 (LRTP)** – The LRTP provides critical information on Oklahoma's economy, demographics, multimodal transportation system, as well as transportation goals, policies and strategies.
- **Oklahoma Statewide Passenger and Freight Rail Plan, 2012** – The Rail Plan provides critical information on Oklahoma's rail transportation system and related goals, policies and strategies.
- **State Freight Plan Guidance** – The Federal Register, Docket DOT OST 2012-0168, provides guidance on State Freight Plans, and Freight Advisory Committees provide information on the required elements for State Freight Plans, and suggestions for establishing state Freight Advisory Committees.
- **Transportation Network, Facility, and Travel Data** – The Oklahoma Department of Transportation (ODOT) provided geographic and tabular data related to the state transportation network, facilities, and traffic flows.
- **Transearch Multimodal Data** – Transearch is a subscription based commercial product including truck, rail, water, and air tonnage and value data, by commodity and direction of flow (in, out, within, through Oklahoma), for current and future forecast years. Transearch was used in combination with FAF to create current and future freight volume estimates for the OFTP.
- **US Army Corps of Engineers Waterborne Commerce Data (USACE)** – The USACE data and current work program provides information about system condition and planned projects on Oklahoma waterways.

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2.0 DATA ASSEMBLY

2.1 USE OF DATA IN THE OKLAHOMA FREIGHT TRANSPORTATION PLAN

The Oklahoma Freight Transportation Plan (OFTP) is a data-driven plan. It is based on the collection, analysis, and utilization of many different public and commercial data sources, representing "state of the practice" information.

Within the OFTP work plan, the tasks that rely most heavily on data include the following:

- Task 2: Data Assembly. This task was designed to organize and prepare data resources utilized in subsequent tasks.
- Task 3: Outreach and Plan Coordination. This task was designed to engage public and private stakeholders and state agencies for two-way sharing of information, guidance of plan development, and appropriate coordination of effort.
- Task 4: Facility Profiles, Trends, Opportunities & Needs. This task was designed to characterize modal system, usage, and forecast growth; discuss market outlook on trends, challenges, and opportunities; and incorporate stakeholder views.
- Task 5: Goals and Performance Measures, Policies and Strategies. This task was designed to establish goals, policies, and strategies, with data-driven measures of achievement.
- Task 6: Network Designation. This task was designed to meet Fixing America's Surface Transportation (FAST) Act requirements for National Highway Freight Network and National Multimodal Freight Network designations and identify heavy haul routes based on collected data.
- Task 7: Bottleneck Analysis and Facility Conditions. This task was designed to analyze performance, conditions and risks related to growth, meet FAST Act requirements, and provide focus for the Task 10 Investment Element, based on collected data.
- Task 8: Improvement Options. This task was designed to develop project screening and prioritization criteria, considering facility improvement options and operational and intelligent transportation system (ITS) alternatives, based on collected data.
- Task 9: Freight Investment Element Cost and Revenue Estimates. This task was designed to understand resources and resource demands to guide investment plans.
- Task 10: Five-Year Fiscally Constrained Investment Element. This task was designed to prioritize projects to determine application of freight formula funds, meeting FAST Act requirements within overall context of establishing statewide direction for freight.

2.2 DESCRIPTION OF OKLAHOMA FREIGHT TRANSPORTATION PLAN DATA SOURCES AND USES

Table 2-1 summarizes the data sources used in developing the OFTP. Each data source is named and described, and the tasks in which it was used are identified.

Table 2-1: Oklahoma Freight Transportation Plan Data Sources and Uses

Tasks Utilized	Data Source	Data Description and Comments
4, 5	Oklahoma Long Range Transportation Plan, 2015–2040 (LRTP)	The LRTP provides critical information on Oklahoma's economy, demographics, multimodal transportation system, and goals/policies/strategies.
4	U.S. Energy Information Administration (EIA)	EIA data was obtained for historic and projected U.S. crude oil production and for the location of Oklahoma wind power plants.
4	RBN Energy	RBN data on Bakken formation crude oil production was utilized.
4	US Bureau of Labor Statistics (US BLS) Oklahoma Employment Security Commission (OESC)	Quarterly Census of Employment and Wages data was obtained from the U.S. Bureau of Labor Statistics and Oklahoma Employment Security Commission. Employment forecasts were obtained from the OESC.
4	The Conference Board	Data from the Conference Board was used to depict projected growth in global GDP.
4	AlixPartners and Tompkins International	Results of consumer surveys (AlixParters) and industry surveys (Tompkins) were used to characterize key trends in consumption and supply chain logistics.
4	American Transportation Research Institute (ATRI)	ATRI information was used to characterize trucking information and key trends.
4	US Bureau of the Census (Census Bureau)	Population and demographic data was obtained from the US Bureau of the Census.
4, 5, 7	Oklahoma Statewide Freight and Passenger Rail Plan, 2012 and Oklahoma State Rail Plan 2018-2021 (current draft update)	The Rail Plan provides critical information on Oklahoma's rail transportation system and goals/policies/strategies.
4	US Army Corps of Engineers Waterborne Commerce Data (USACE), US Army Corps of Engineers – Tulsa District	Ports and waterways data was obtained through Oklahoma Department of Transportation (ODOT) Waterways Branch and the USACE Tulsa office to depict current and historic waterway traffic on the Oklahoma portion of the McClellan-Kerr Arkansas River Navigation System.
4	Bureau of Transportation Statistics (BTS) T-100 Data	T-100 data provides information on air freight handled through Oklahoma's airports.
4	National Transportation Atlas Database	The National Transportation Atlas was used to clarify location of various transportation assets.
4, 6, 7	Transearch Multimodal Data (including Surface Transportation Board (STB) Rail Waybill data)	Transearch is a commercial data product including truck, rail, water, and air modal tonnage and value, by commodity and origin-destination pair, for current and future forecast years. Transearch was used in combination with Freight Analysis Framework to create current and future freight volume estimates for the OFTP. Transearch includes STB Rail Waybill data.

Table 2-1: Oklahoma Freight Transportation Plan Data Sources and Uses (continued)

Tasks Utilized	Data Source	Data Description and Comments
4, 6, 7	Freight Analysis Framework (FAF)	FAF is a public data product of the Federal Highway Administration and the Bureau of Transportation Statistics. It has less geographic and commodity specificity than Transearch, but has several useful features such as tonnage, origin and destination, and mode data. Two versions of FAF—historic (version 3) and most recent (version 4)—were used in combination with Transearch to create current and future freight volume estimates for the OFTP. Version 3—based primarily on data from the 2007 Economic Census—includes estimates of domestic ton-miles. FAF 3 was updated to include estimates through 2015 and forecasts to the year 2040. Version 4 is the recent version of the FAF and integrates data from a variety of sources to create a comprehensive picture of freight movement among states and major metropolitan areas by all modes of transportation. It is based on data from the 2012 Commodity Flow Survey and incorporates data from agriculture, extraction, utility, construction, service, and other sectors. Data are available for the base year of 2012, the recent years of 2013–2015, and forecasts from 2020 through 2045 in 5-year intervals.
4, 5, 6, 7, 8	Transportation Network (highway, rail, waterway) and Facility (port, airport, terminal) Data and Maps, ODOT GIS Branch	GIS maps and associated data attributes were provided by ODOT and used throughout the development of the plan.
4, 5, 6, 7, 8	National Performance Management Research Data Set (NPMRDS)	NPMRDS is a data product developed by the Federal Highway Administration and obtained under license for use. NPMRDS provides actual data on average truck travel speeds over selected national highways, at 15 minute increments, continuously. Data for the most recent available 12-month period was downloaded and analyzed. (See https://www.fhwa.dot.gov/tpm/links_fhwa.cfm for a complete list of currently available performance data. Note that as of this date, NPMRDS is not available for downloading, as Federal Highway Administration is currently updating its process for providing the data.)
4, 5, 6, 7, 8	Highway Performance Monitoring System (HPMS) Truck AADT by Highway Segment, ODOT GIS Branch	ODOT provided recent estimates of Truck AADT by highway segment from its HPMS data, along with projections of future Truck AADT growth.
5, 7, 8	Highway and Rail Grade Crossing Safety, ODOT Collision Analysis & Safety Analysis Branch	ODOT provided current information on safety to support performance measurement and project prioritization.
5, 7, 8	Pavement Condition Ratings and Paved Shoulder Assessments, ODOT Pavement Management Branch	ODOT provided current information on pavement condition (International Roughness Index) to support performance measurement and project prioritization.
5, 8	Bridge Deck Condition Ratings, ODOT Bridge Division	ODOT provided current information on bridge Conditions to support performance measurement and project prioritization.

Table 2-1: Oklahoma Freight Transportation Plan Data Sources and Uses (continued)

Tasks Utilized	Data Source	Data Description and Comments
5, 8	Locations of Alternative Fueling Stations, ODOT GIS Branch	ODOT provided current information on the locations of Alternative Fueling Stations to support performance measurement and project prioritization.
6, 7, 8	OSOW and Truck Routes, ODOT Bridge Division	ODOT provided current information on Truck Routes including Oversize/Overweight handling to support network designation and project prioritization.
7, 8	US Army Corps of Engineers Work Program	Current work program information was provided by the Corps to support project prioritization.
8	County Business Patterns	Federal County Business Patterns data was obtained from the U.S. Census Bureau and analyzed to identify freight-dependent locations and area clusters within Oklahoma to support project prioritization.
4, 5, 6, 7, 8, 9, 10	Stakeholder feedback, Freight Advisory Committee(FAC)	The study FAC provided input, review and feedback to all study investigations and findings.
7, 8	Stakeholder feedback, Freight Surveys	Stakeholders provided general information on surveys regarding their use of the system.
7, 8	Stakeholder feedback, Freight Stakeholder Interviews	Stakeholder interviews provided detailed information on system utilization, issues and needs, and project concepts.
7, 8	Stakeholder feedback, Community Open House Meetings	Three open house events provided important feedback on bottleneck locations and project concepts.
8, 9, 10	ODOT 8Year Construction Work Plan, ODOT State and Metropolitan Area Transportation Improvement Programs (STIP and TIP)	Information was obtained on planned/programmed projects and their associated schedules and costs.