Why is NDDOT developing a strategic state freight plan?
Today, unlike any time in our state’s history, North Dakota is uniquely positioned. We are experiencing unparalleled growth in several key sectors of our economy: agriculture, energy and manufacturing. Our population is growing as people are coming to our state seeking a brighter, more prosperous future.
As a result of this growth, people and businesses are expecting more from our transportation system; both infrastructure and services. They want more four-lane highways, wider roads, greater load carrying capacity, expanded hours of snow removal and above all, they want safe, secure and reliable transportation.
Why is NDDOT developing a strategic state freight plan?

Moving freight safely, securely and efficiently

ND’s Highway System was built in the 1950s & 60s
1/3 of the state’s rail lines have been abandoned
Why is NDDOT developing a strategic state freight plan?

ND’s economy is growing and more diversified
Economic growth is resulting in more freight
Freight Plan - vehicle to enhance communication
Why is NDDOT developing a strategic state freight plan?

A multimodal, strategically developed transportation system is necessary for North Dakota businesses to participate in the global economy.
17.1 Billion Pounds
1980 CROP PRODUCTION

30.3 Billion Pounds

Source: United States Department of Agriculture

NDDOT
North Dakota Department of Transportation
2014
89.4 Billion Pounds
Oil Development
Oil Production 2007 – 2013 Change
Barrels Per Day

- 2007: 122,470 barrels per day
- 2013: 933,130 barrels per day

Change: 933,130 - 122,470 = 810,660 barrels per day
BAKKEN OIL EXPRESS
RAIL TERMINAL
DICKINSON

Barrels Per Day

- Rail: 865,000
- Pipeline: 783,000

2007: Barrels Per Day
- Rail: 230,000
- Pipeline: 865,000

2013: Barrels Per Day
- Rail: 865,000
- Pipeline: 783,000

2007: Barrels Per Day
- Rail: 230,000
- Pipeline: 865,000

2013: Barrels Per Day
- Rail: 865,000
- Pipeline: 783,000
Waybill Data 2000 - 2011
Rail Traffic Originating in North Dakota
More than doubled
2000 – 2011  BNSF Glasgow Sub
20 to 38 Trains Per Day
2008 to 2014  Trains Volumes Fargo 68 to 100
Air Freight
Daily Truck VMT: 1.78M - 2000, 4.1M - 2012

Truck VMT: 14.7% - 2000, 22.4% - 2012
North Dakota State Freight Plan
NORTH DAKOTA FREIGHT PLAN – PURPOSE

Promote safe, secure, sustainable, and reliable freight mobility to enhance a diversified and vibrant economy.
NORTH DAKOTA FREIGHT PLAN – SCOPE

Multimodal – “Last Mile Connections”

Comprehensive
Immediate and Long-Term
Local, Tribal, State, Federal & Private Sector
Neighboring States & Provinces
NORTH DAKOTA FREIGHT PLAN - USE

- Promote dialogue
- Provide a decision-making framework
- Promote public/private partnerships
- Identify freight trends, issues, bottlenecks
- Identify critical freight facilities
- Identify State’s Strategic Freight System
- Identify studies, potential freight projects, operational changes, innovative applications
- Qualify ND for federal freight funding
Stakeholder Input

Trends/Issues

Needs

Conditions Creating Bottlenecks/Delays
Trend 1  Additional freight system capacity will be necessary
Trend 2  ND oil by rail increase; rail’s share will be lower
Trend 3  Consumer freight will primarily be transported by trucks
Trend 4  Increased agricultural production will result in higher volumes of freight
Trend 5  The number elevators will decline, storage and throughput will increase
Trend 6  Growth of spin-off industries will increase freight volumes
Trend 7  Reaching customers will require a globally integrated freight system
Trend 8  Air freight will play an ever increasing role meeting these demands
Trend 9  ND’s AG producers and manufacturers require intermodal rail service
Trend 10 Truck S/W differences hamper the region’s economic competitiveness
Stakeholder Input

Needs
Need 1  Access to competitively-priced intermodal container rail service

Need 2  Additional pipeline capacity to export North Dakota crude oil

Need 3  Expansion of the pipeline gathering system

Need 4  First/Last mile connections State’s Strategic Freight System

Need 5  Highway improvements eliminating freight impediments (e.g. load restrictions)

Need 6  Additional railroad capacity and safety enhancements.

Need 7  Upgrading some railroad branchlines to 286,000 lb. capacity.

Need 8  An access management program for the State Highway System

Need 9  A statewide, coordinated permitting system for routing OS/OW vehicles.

Need 10 Improved harmonization of truck S/W regulations with states and provinces
Conditions Creating Freight Bottlenecks

1. **Deficient Highway Infrastructure** (load, height/width, speed restricted; bridge restrictions, capacity congested, non-friendly truck geometrics, safety issues, weather-related)

2. **Inadequate Modal Connections**

3. **Lacking “First and Last Mile Connections”** (Different Standards – State/Local Systems, traffic generators built on inadequate roads)

4. **Lacking Access to Dedicated Intermodal Container Service**
Conditions that Cause Freight Delays

1. **High Truck Volume Segments** (Safety issues, slower traffic speeds & longer/unreliable trip times, truck/automobile conflicts)
2. **At-Grade Rail Crossings**
3. **Construction Work Zones**
4. **Inadequate Inter-Jurisdictional Coordination**
5. **Inadequate Incident/Emergency Response**
Critical Rural Freight Corridors
FIGURE 15

PRINCIPAL ARTERIALS 25% or GREATER TAADT

25% TAADT  Principal Arterial

2014

North Dakota Department of Transportation
SALTWATER DISPOSAL SITES

FIGURE 25

WELLS AS OF 2-25-2014

RAILROAD MAIN LINES

LEVEL 1 FREIGHT CORRIDOR

Source: North Dakota Oil & Gas Division

2014
Critical Rural Freight Corridors
<table>
<thead>
<tr>
<th>Freight Mode</th>
<th>Level One</th>
<th>Level Two</th>
<th>Level Three</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roads</td>
<td>Critical Rural Freight Corridors International/Interstate</td>
<td>Regional/Intrastate Corridors</td>
<td>Local Corridors</td>
</tr>
<tr>
<td></td>
<td>Interstate &amp; Interregional Highways Congressional Designated High Priority Corridors STRA HNET National Truck Network Energy/Agricultural Access Corridors High Truck Volume Segments Principal Arterials</td>
<td>State Corridors District Corridors Limited County Major Collectors City Principal Arterials</td>
<td>District Collectors Some County, City, Township and Tribal Roads</td>
</tr>
<tr>
<td>Rail</td>
<td>Class 1 Mainlines STRACNET</td>
<td>Class 1, Regional Railroad branchlines capable of carrying 286K cars</td>
<td>Class 1, Regional Railroad branchlines capable of carrying 268K cars</td>
</tr>
<tr>
<td>Air</td>
<td>Commercial Airports Air Force Bases</td>
<td>General Aviation Airports</td>
<td>Public Use Airports Private Airports</td>
</tr>
<tr>
<td>Pipeline</td>
<td>Interstate Pipelines</td>
<td>Gathering Pipelines</td>
<td>Distribution Pipelines</td>
</tr>
</tbody>
</table>
Freight Plan Implementation
Planning/Feasibility Studies
Freight Plan Implementation

Projects
Figure 9
NDDOT Decision-Making Process

TransAction III
Statewide Strategic Transportation Plan
Provides strategic direction for developing North Dakota’s transportation system

Internal Strategic Business Plan
Provides strategic direction for the department’s major functions

Modal Plans
Bicycle & Pedestrian
Highway Transit Rail
Provide policy direction and investment strategies within a mode. Identify system and service deficiencies and improvements needed to achieve desired performance and service levels

Functional Plans
Freight Plan
Intelligent Transportation System (ITS)
Strategic Highway Safety Plan (SHSP), etc.
Provides specific direction for program or project development and

Statewide Transportation Improvement Program (STIP)
Project selection and allocation of funding

Transportation Program Implementation

Formal Input - Every 3-5 Years
Informal Input - Continuously

General Public
State & Federal Agencies
Special Interest Groups
Cities
Counties
Tribal Governments

Metropolitan Planning Organizations (MPOs)

MPO Transportation Improvement Programs (TIPs)
Tribal TIPs Incorporated into STIP
Project Development

- Formal Stakeholder Input
- Strategic Transportation Vision
- Monitor and Evaluate
- Project Implementation: NEPA, Design, Maintenance, and Construction
- Programming Division: Develop STIP to preserve and enhance system-wide performance
- Districts: Identify preservation and enhancement priorities

Customer Stakeholder Input

3-5 year cycle
Annually
Freight Plan Implementation

Operational Strategies
Freight Plan Implementation

Innovative Technologies
Questions/Comments

http://www.dot.nd.gov/divisions/planning/freight/