Countywide Freight Transportation & Freight Dependent Land Use Study

Frederick County, MD

July 7, 2011

MWCOG TPB Transportation & Land Use Connections Program-
Presented to: MWCOG TPB Freight Subcommittee

Overview

Overview

Methodology

Findings

Toolbox and Implementation

- MWCOG Transportation and Land Use Connections Program and Frederick County
- Methodology
- Freight Supply and Demand
  - Existing Conditions
  - Public Outreach
  - Industrial Land Demand
- Identification of Opportunities and Constraints
- Recommendations

Methodology

Overview

Methodology

Findings

Toolbox and Implementation

- Explore the relationship between goods movement and existing and proposed land uses in Frederick County
  - Data Analysis
  - Public Outreach
- Evaluate short- and long-term land use and freight transportation improvement programs
- Identify national best practices for accommodating freight movement
- Recommendations for implementation and incorporation of study findings into Community and Corridor plans and local, state and regional transportation plans

Freight Supply

Overview

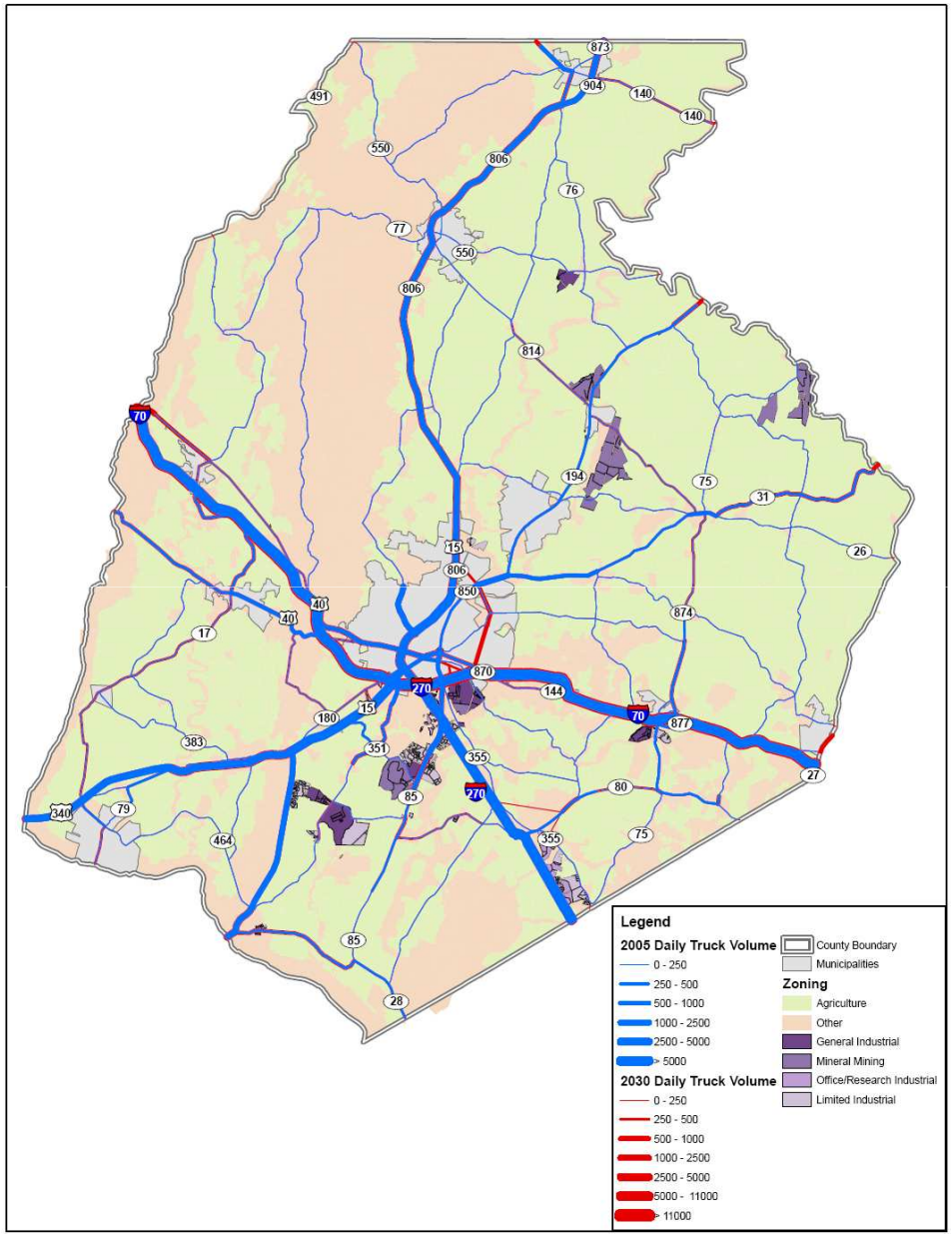
Methodology

Findings

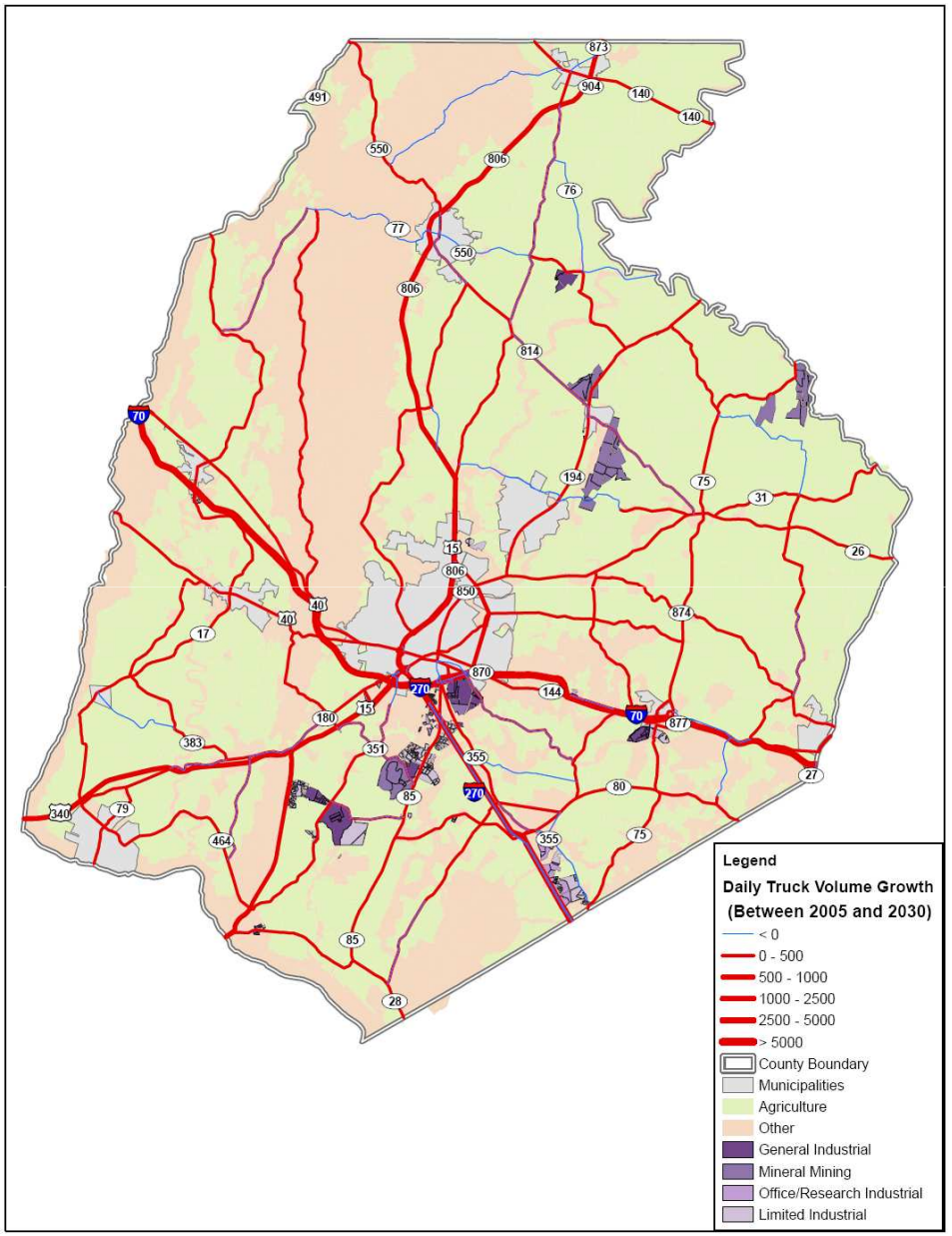
Toolbox and Implementation

- Major Freight Corridors
  - Truck Routes
  - Truck Support Facilities
  - Rail Corridors
- Existing Industrial Land
  - Available Supply
  - Clusters of Freight Businesses
- Conflict Areas
  - Access challenges
  - Safety, Bottlenecks

Existing and Future Truck Flows in Frederick County, 2005 and 2030

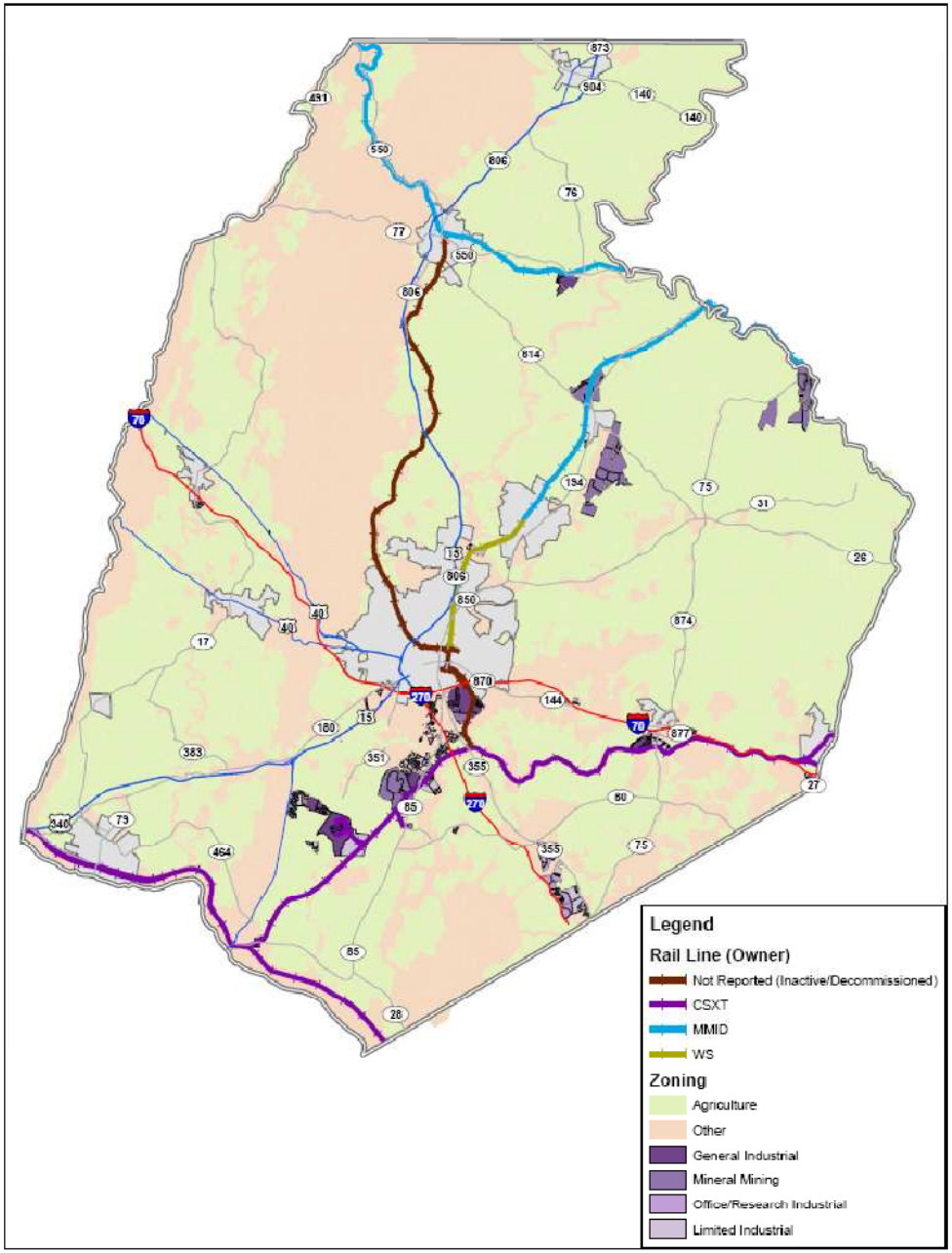


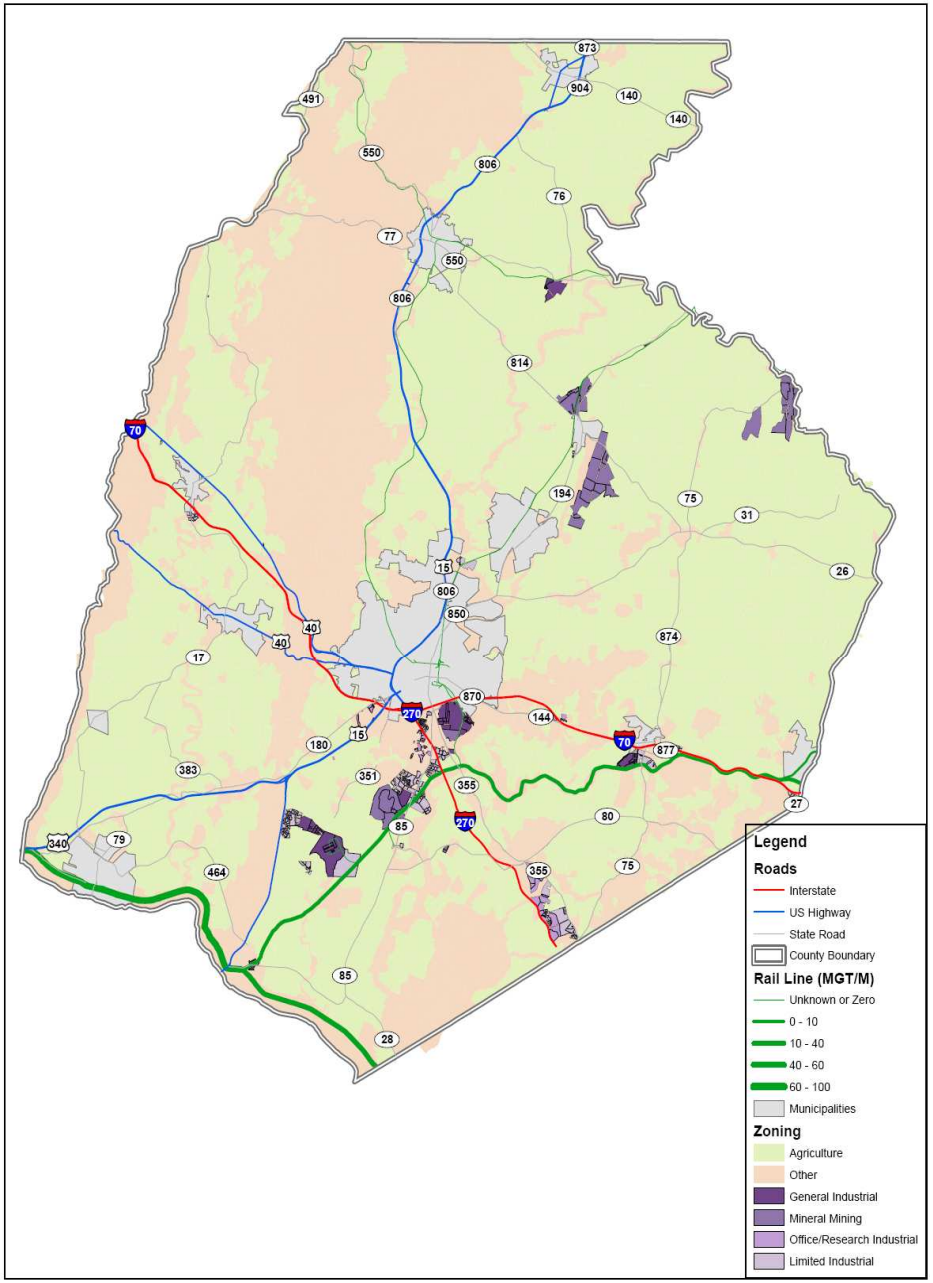
Daily Truck Volume Growth in Frederick County, 2005 and 2030



Source: MWCOG Traffic Model

Frederick County Existing Rail Network and Flows





Source: National Transportation Atlas Database (NTAD)

Freight Demand

Overview

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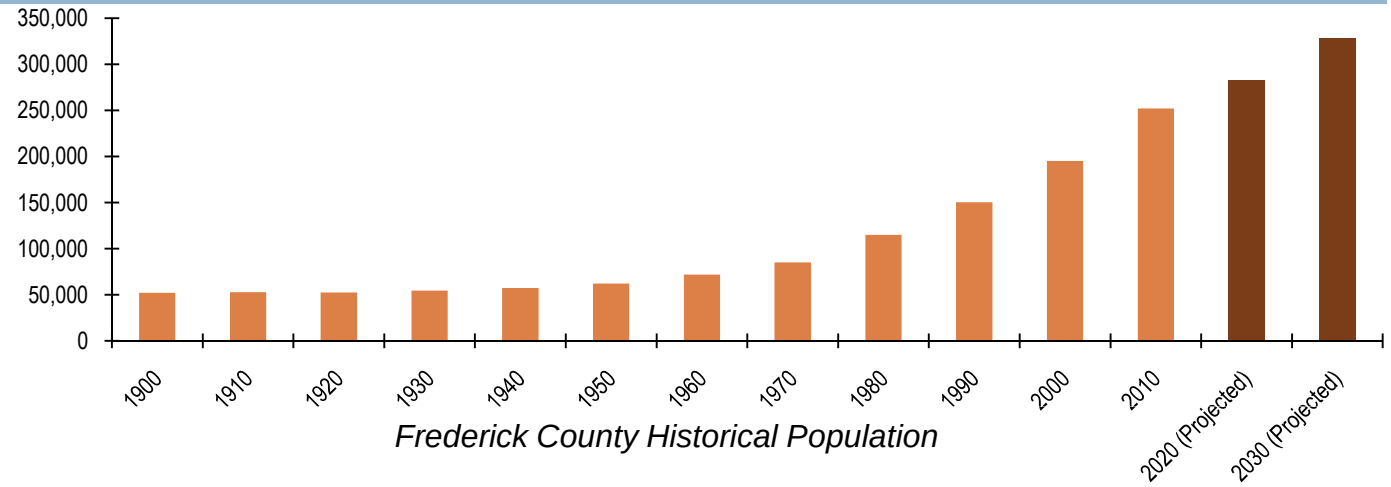
Findings

Toolbox and Implementation

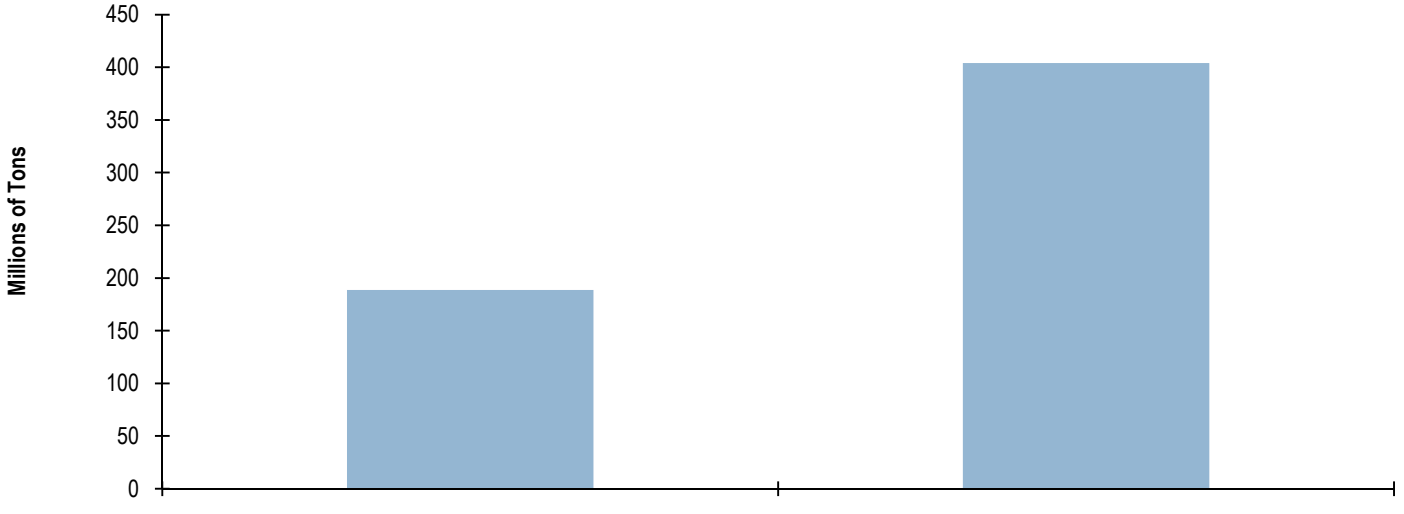
- Influences of freight demand
  - Population, Employment, Geography
- Industrial Growth Corridors
  - Major corridors
- Existing and Future Demand for Industrial Land
  - Trends
  - Available Supply

Freight Demand, Continued

- Overview
- Methodology
- Findings
- Toolbox and Implementation



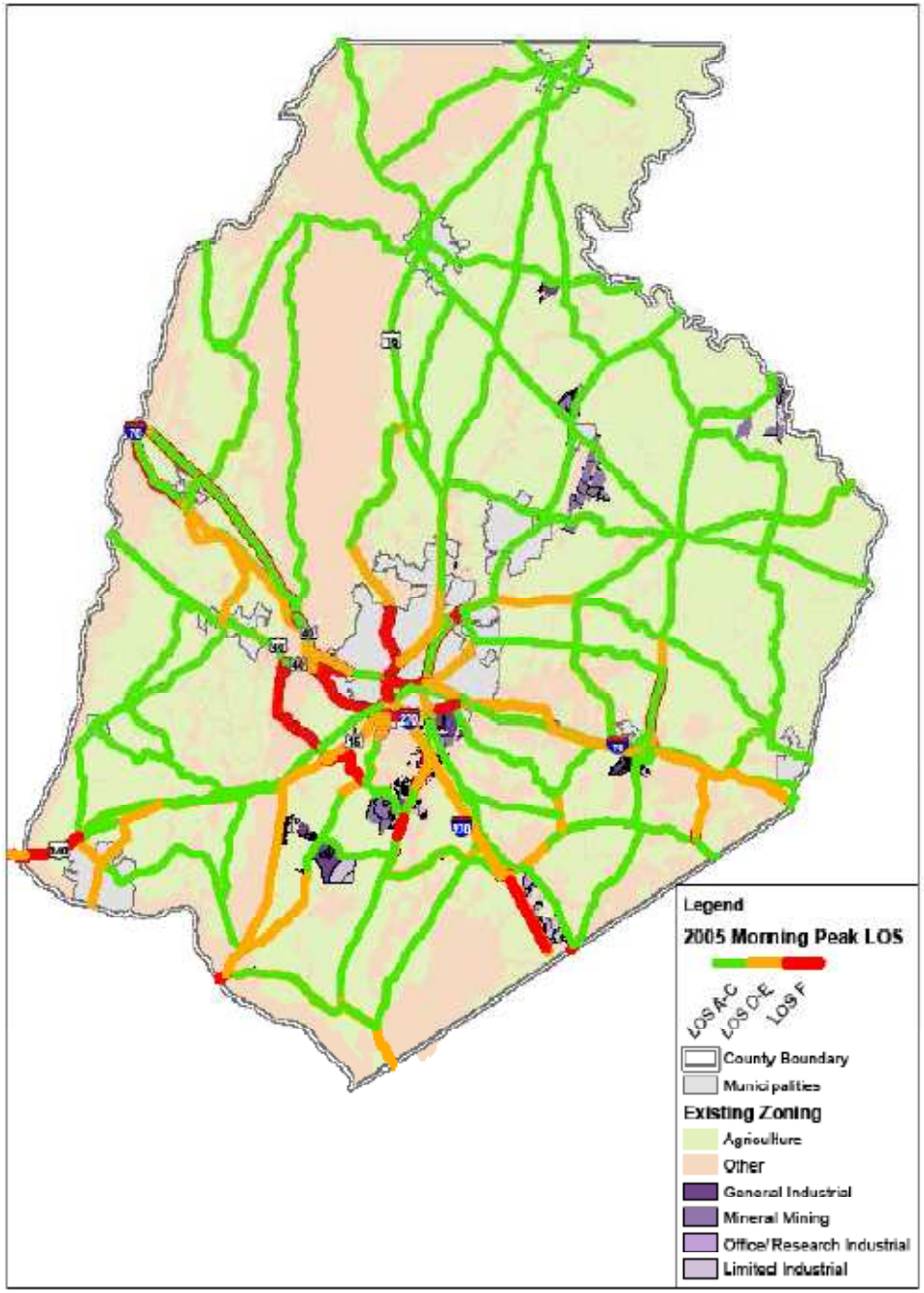
Frederick County Historical Population

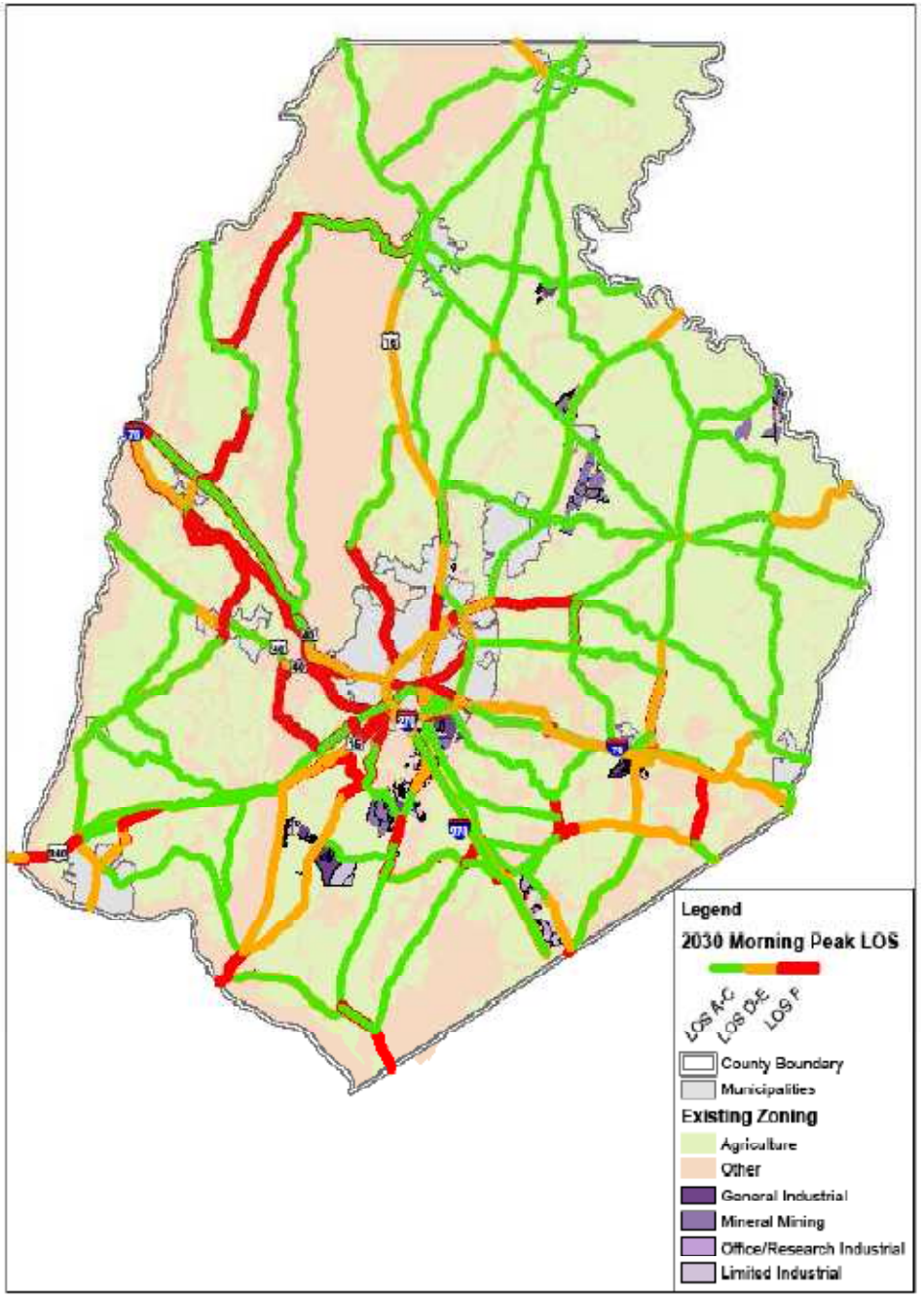


Increase in Total Truck and Rail Flows in Frederick County, 2006-2035

Sources: US Census, TRANSEARCH

AM Peak Hour Traffic Flows, 2005 and 2030





Source: MWCOG Traffic Model

Industrial Land Demand

Overview

Methodology

Findings

Toolbox and Implementation

- Future industrial land demand
  - Industrial Growth Corridors
  - Developable acreage
  - Parcel level evaluation
  - Other existing clusters of industrial land
- Other considerations
  - Rail access
  - Mobility
  - Safety

Industrial Land Demand, Continued

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Toolbox and Implementation

Developable Acreage Calculations by Industrial Growth Corridor							
Industrial Growth Corridor	Total Existing Acres	Estimated Undeveloped/Non-Resource Conservation Area Acreage					Acreage Needed to Support Employment Growth
		Total Acres Undeveloped	Undeveloped Industrial Zoning				
			Acres Zoned General Industrial	Acres Zoned Limited Industrial	Acres Zoned Office/ Research/ Industrial	Total Acres with Industrial Zoning	
I-270 Corridor	8,940	880	0	100	160	260	60
I-70 Corridor	3,950	390	350	0	0	350	30
Route 15N (North of City)	5,350	1,050	0	0	0	0	20
Walkersville	4,470	3,060	0	0	0	30[a]	80
Southwest Corridor	8,050	1,260	130	100	0	230	10
Total Growth	30,760	6,640	480	200	160	840	200

Industrial Land Demand, Continued

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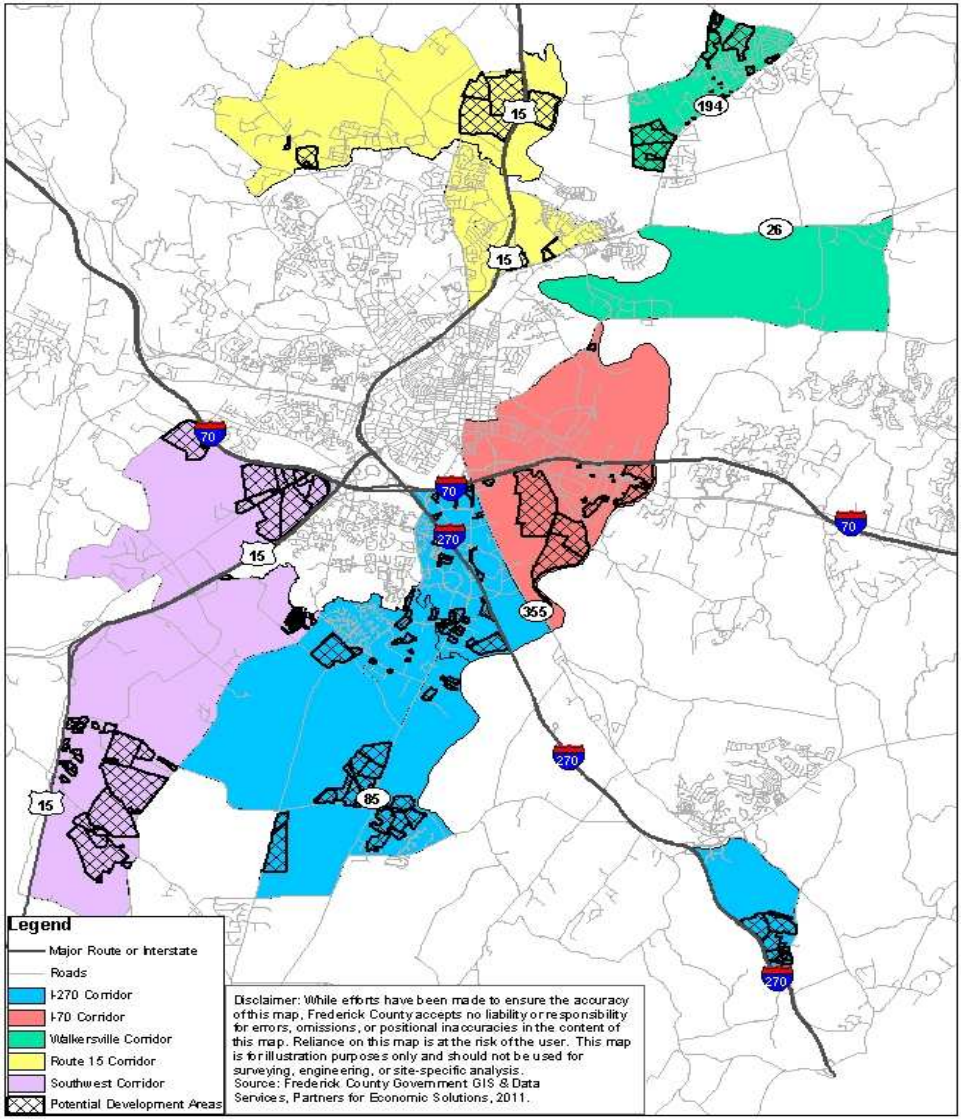

Opportunities and Constraints

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Toolbox and Implementation

- 5 Major Opportunities Identified
  - Existing core of highway and rail infrastructure
  - Existing industrial land will accommodate future demand
  - Useful & flexible planning tools (i.e. Community Plans, Comprehensive Plan)
  - Current infrastructure plans/programs to accommodate long range traffic demand
  - Location advantage for accessing Baltimore-Washington areas

CONSTRAINT #1: Infrastructure Limitations and Lack of Truck Parking
EXAMPLE: Truck parking, drop lot, and staging activity at MD-355 / I-70

CONSTRAINT #2: Industrial Rail Access
EXAMPLE: Grain elevators for Frederick Grain without rail access

CONSTRAINT #3: Industrial Land Use Challenges
EXAMPLE: Residential neighborhood abuts Canam Steel near Point of Rocks

CONSTRAINT #4: Access to Industrial Facilities
EXAMPLE: Warning Sign Approaching CSXT on MD-75

CONSTRAINT #5: Industrial Property Demand
EXAMPLE: Empty Flex Space near MD-85

Accommodating Freight Demand

Overview

Methodology

Findings

Toolbox and Implementation

- Transportation Programs
  - Highway and rail initiatives
- Project prioritization
  - Top priority freight projects, secondary, support
  - Strategies for Frederick County
  - Funding
- Land Use Planning Process
  - Comprehensive Plan update
  - Community and Corridor Plans

Freight and Land Use Tools, Toolbox

Overview

Methodology

Findings

Toolbox and Implementation

- National Best Practices
  - Literature reviewed across a range of jurisdictions (County, region, state)
  - Planning documents from FHWA
- Implementation
  - "Cost" of Implementation: Low, Medium, High
  - Responsibility for Implementation
  - Funding
    - Excise tax
    - Special benefit districts
    - Economic development opportunities fund (PFA)

Freight and Land Use Tools, Sample Tools

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Toolbox and Implementation

Best Practices for Mitigating Constraint #1: Infrastructure Limitations and Lack of Truck Parking

Implementation Effort	Description of Tool	Organization/Agency Responsible
Low	Off-peak truck delivery: Research off-peak delivery among freight stakeholders to better understand challenges.	Private, Local Regulation
	Shared use truck parking facilities: Promote shared use truck parking facilities between neighbors to maximize available space.	Local/Private
Medium	Signage and enforcement for truck parking: Enhanced signage and enforcement for truck parking in non-designated zones (i.e., side of highway near major freight generators).	Local/State
	Truck parking minimum requirements: Study truck parking minimum requirements or incentives for certain types of facilities (based on square footage, expected truck trips, etc.). Develop implementation plan for changes in minimum parking requirements	MPO/County
High	Construction of new truck parking facilities: Designation or construction of new truck parking facilities.	State/MPO/County/ Private
	Land bank for truck parking: Work with state and private industry to set aside land for future truck parking near industrial facilities/clusters, freeway interchanges, or intermodal facilities.	Shippers and businesses/State

Freight "Action Plan"

Overview

Methodology

Findings

Toolbox and Implementation

- Implement "low cost" tools
- Form Freight Task force
  - Recommend medium/higher "cost" tools
- Integrate findings into planning process
  - Update of Study findings over time—3-5 years
  - Comprehensive Plan, Community/area plans
- Coordinate programs with stakeholders
  - Freight Advisory Committee
  - Work with State, MWCOG to prioritize freight-friendly projects for the County
  - Knowledge sharing with other jurisdictions

Questions?

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