E-Commerce and Our Streets

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AGENDA

Freight in the U.S.
Modes of Transport
Freight in the City
E-Commerce on our Streets
FREIGHT IN THE UNITED STATES

Air, air & truck
Other & unknown
Water
Multiple modes & mail
Rail
Pipeline
Truck

Millions of Tons

Billions of 2012 Dollars

Weight (millions of tons)
Value (billions of 2012 dollars)
MODES OF TRANSPORT
AIR FREIGHT

- High cost
- Fast
WATER FREIGHT

• Low cost
• Slow
• Limited by geography
• Bulk goods
  o Coal
  o Gravel
  o Agricultural
RAIL FREIGHT

- Low cost
- Moderate speed
- Limited by geography
- Goods in quantity
  - Containers
  - Bulk goods
TRUCK FREIGHT

- Moderate cost
- Moderate speed
- Nearly universal access
- Any quantity of goods
URBAN FREIGHT

• Not containerized or palletized
• Labor intensive
NEW AND OLD MODES

• Fewer geometric restrictions
• Potentially reduced greenhouse gas emissions
DENSIFICATION

- Many North American cities are pursuing density as a growth strategy
- More people
- More jobs
- Same amount of space
CURB SPACE CONFLICT

• Curb space is limited
• Freight vehicles are traditionally larger than personal vehicles
RIGHT-OF-WAY CONFLICTS

• Freight vehicles:
  o Stop often
  o Limited visibility
  o Geometric limitations

• Public transit:
  o Many North American cities are pursuing transit-only right-of-way as a congestion reduction and climate change mitigation strategy
SAFETY

• Most U.S. right-of-way is designed to mix vulnerable road users with heavy trucks

• Large vehicles:
  o Have large blind spots
  o Can kill people more easily
E-Commerce Growth

E-Commerce Sales (millions of dollars)
Non-E-Commerce Sales (millions of dollars)
E-Commerce Sales as a Percent of Total Sales
E-COMMERCE LAST-MILE

- Vans or personal vehicles
- Likely increase in VMT
- Frequent stops
- High-pressure ‘gig economy’ jobs
OTHER CONSIDERATIONS

- Climate impacts
- Labor impacts

RECOMMENDED READING

- Alana Samuels, “I Delivered Packages for Amazon…”, The Atlantic
- Marc Levinson, The Box
THANK YOU

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