Truck Parking Projects

I-81 Truck Parking Roundtable

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HIGHWAY FREIGHT SAFETY AND EFFICIENCY

CHARACTERIZING TRUCK PARKING DEMAND USING HOURS OF SERVICE AND LOCATION DATA

- Sponsor(s) *National Surface Transportation Safety Center for Excellence (NSTSCE)*

- Objective(s): Use ELD and GNSS (e.g., GPS) data to determine where and when trucking parking in needed

- Data purchased from telematics provider

- Work with a trusted intermediary for data reduction

- Update of prior truck parking inventory

- Mixed results

HIGHWAY FREIGHT SAFETY AND EFFICIENCY

CONNECTED VEHICLE INFORMATION FOR IMPROVING SAFETY RELATED TO UNKNOWN OR INADEQUATE TRUCK PARKING

- Sponsor(s): Safe-D UTC

- Partner(s): TTI (lead)

- Objective(s):
  - Assessing truck parking demand using Origin-Destination trip data (e.g., INRIX) and other data
  - Develop methods for identification and characterization of prospective truck parking areas

Process for Identifying Parcels for Prospective Truck Parking

Step 1

Step 1

•Use parking demand analysis to define parcels of interest

Step 2

Step 2

•Identify and acquire relevant GIS data and other data for those areas

Step 3

Step 3

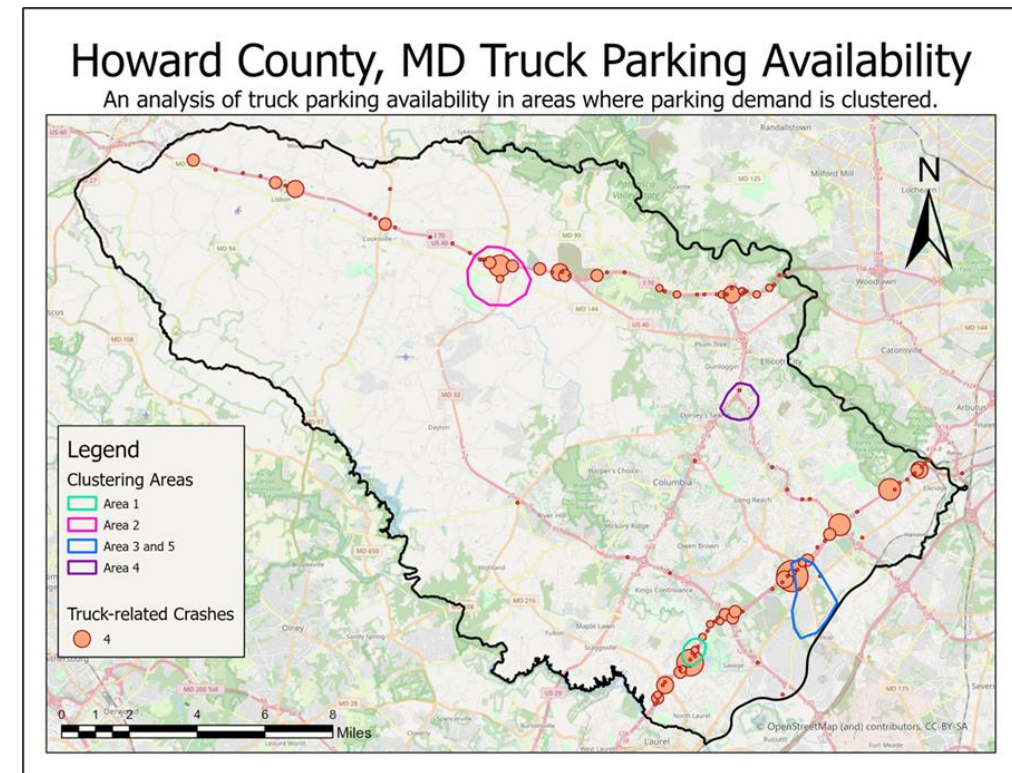•Use weighted quantitative data for initial screening

Step 4

Step 4

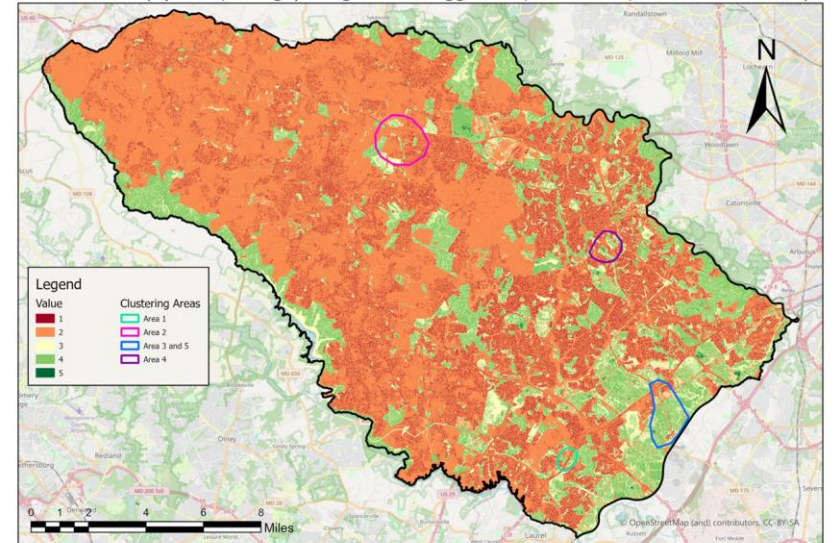•Use qualitative data for additional, manual screening

Step 5

Step 5

•Finalize list of potential parcels

Howard County, MD Truck Parking Availability

An analysis of truck parking availability in areas where parking demand is clustered.

Legend

Clustering Areas
- Area 1
- Area 2
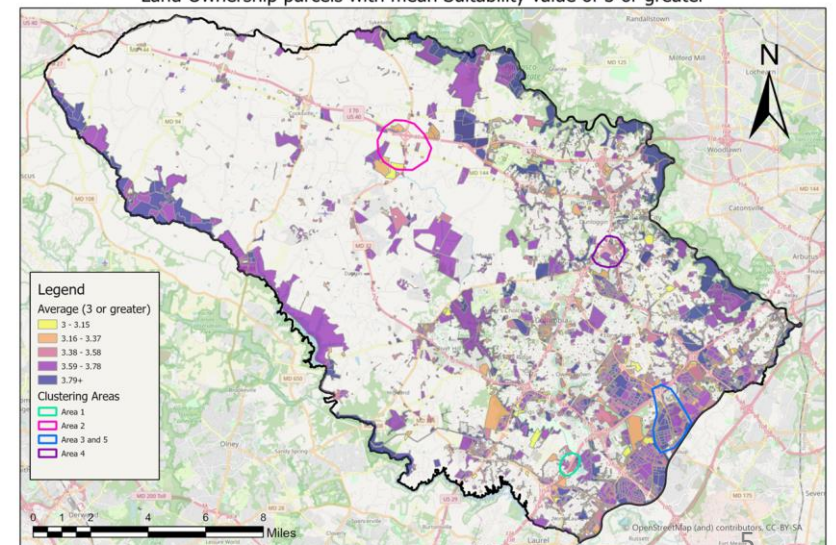- Area 3 and 5
- Area 4

Truck-related Crashes
- 4

Characterization Using Quantitative Data

- Land Use / Land Cover

- Parcel Data (boundaries, ownership)

- Elevation (for terrain ruggedness and flood zone info)

- Travel time/distance (Drive Time Area tool)

- Equity Issues
  - Air pollution (e.g., asthma rates)
  - Demographic (low income, disadvantaged, etc.)

Howard County, MD Truck Parking Availability
Land Suitability (1=low, 5=high) using Terrain Ruggedness, Land Cover, and Land Ownership

Howard County, MD Truck Parking Availability
Land Ownership parcels with mean Suitability value of 3 or greater

Characterization Using Qualitative Data
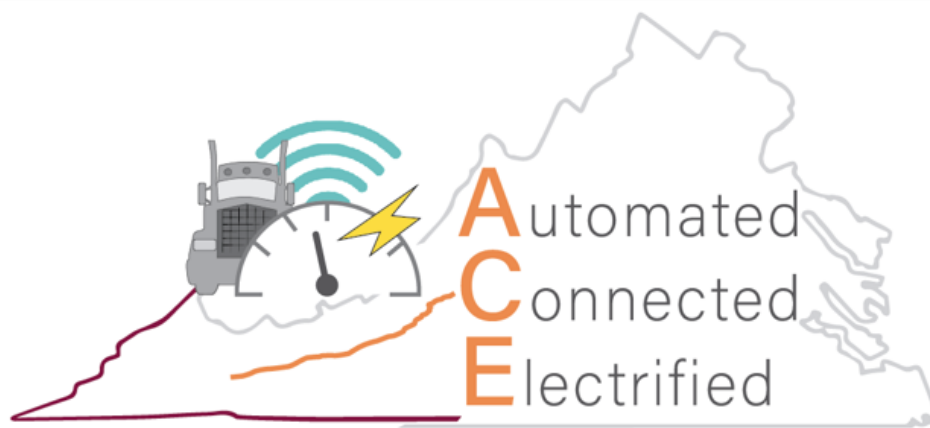
- Nearby sensitive receptors
  - Human
  - Natural
- Surface characteristics
  - Graded
  - Paved
- Site improvements existing
- Access to utilities and services
  - Power
  - Water
  - Sewer
- Road access and traffic issues

American Rescue Plan Act (ARPA) Regional Challenge Grant - The Future of Transportation and Logistics

- Phase I Award
  - 529 applicants
  - 60 finalists
  - Planning award: $500k

- Phase II Proposal (awards pending)
  - 20-30 awards
  - Max award: $100M (our ask: $55M)
  - Cluster sectors: Advanced Manufacturing, Transportation, and Logistics
  - Submitted March 15, 2022, revised submission: May 15, 2022
  - September awards?

The Virginia ACE Development Corridor

Virginia Smart Roads Test Facilities
- Highway - Rural - Urban

Torc Robotics (Daimler Truck)
- Advanced engineering R&D facility
- Automated freight hub

Volvo Truck
- Advanced manufacturing
- Continuous test track

Mack Truck
- Roanoke, VA operations

H **Multi-Functional, Automated Freight Hubs**
- Standard & automated freight transfer
- Ground-to-ground-to-air transfer
- Commercial AV/EV inspection
- UAS operations base
- Emergency response staging

ACE Corridor
- Full cellular coverage (4G)
- Digital Twin virtual modeling
- Real time road hazard reporting
- Vehicle-based road weather data
- HEV charging locations
- Optical fiber traffic sensing network
- Standardized road markings & signage

Advanced Capability Segment of the ACE Corridor
- Enhanced situational awareness
- Real time object tracking ground truth
- 5G cellular coverage
- Full environmental monitoring
- Optical fiber traffic tracking

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Regional Innovation Engines

View image credit

🏠 Regional Innovation Engines

Funding and Regions of Interest

Funding Opportunity and Deadlines

Events, Resources and Contact Information

Facing global competition for talent and leadership in science, technology, engineering, and mathematics research and education[1], the U.S. must expand its innovation capacity by leveraging the resources, creativity, and ingenuity that exists across all geographic regions of the country.

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