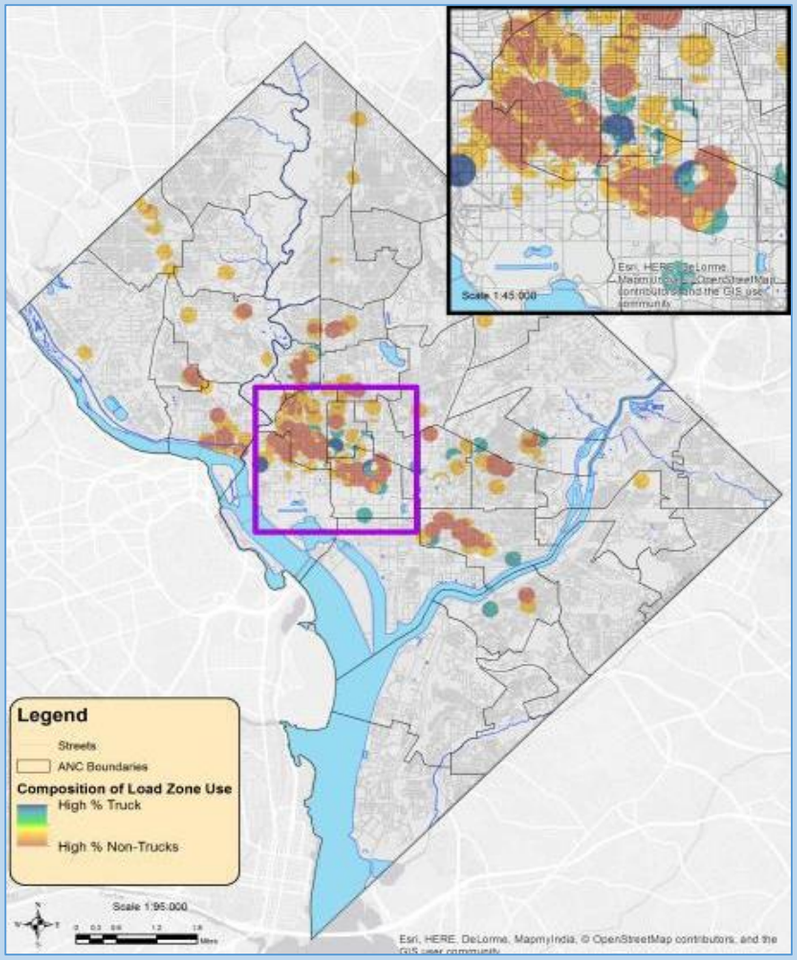
Washington D.C. Truck Loading Zones

CASE STUDY

Developing the Commercial Loading Zone Management Program (CLZMP) for the District of Columbia.

Freight Challenges	Congestion, Last Mile Access, Final 50-Feet Access
Data Sources Used	Administrative Records
Analytical Approaches	Identification, Location



Loading Zone Usage Map
Source: FHWA, Commercial Loading Zone Management Program: Washington, D.C., March 2017 | FHWA-HOP-17-022.

WHAT ARE THE FREIGHT CHALLENGES?

Limited loading spaces and inconsistent availability of on-site loading/unloading berths prompt the trucks to park illegally, leading to safety and traffic congestion problems in dense urban neighborhoods. The District of Columbia is a perfect example of an employment center that is only a consumer of goods. With no port or functioning railyard, the only mode of shipment in the District is truck service. In Washington D.C., truck access has become a challenge affecting livability and business operations in many parts of the city.

WHAT WAS THE GOAL OF THE PROJECT?

In early 2015, District Department of Transportation (DDOT) launched a loading zone improvement management program to accommodate an increase in truck traffic and deliveries associated with the District's population and economic growth. This program included:

- Compiling an inventory of existing commercial loading zones;
- Acquiring freight data to evaluate demand for loading zones;
- Adjusting supporting regulations based on program needs;
- Collaborating with freight community throughout the process.

WHAT DATA SOURCES WERE USED?

Assisted by Metropolitan Washington Council of Governments (MWCOG), DDOT collected and inventoried administrative data related to existing loading zones in D.C. such as occupancy rates, dimensions, signage, and time restrictions. Loading zone occupancy rate data included detailed information on the type of business using the loading zone, truck type, number of deliveries, the average length of stay, number of businesses per block, and number of observed conflicts. In addition, two data sources were used to better understand the overall curbside usage pattern:

- Pay by cell (PBC) data which determined demographic information of the trucks and stopping duration;
- Parking violation data from the District's Department of Motor Vehicles, which determined truck double parking, truck payment violations, and parking in loading zones by non-trucks.

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Example of Commercial Permits
Source: FHWA, Commercial Loading Zone Management Program: Washington, D.C., March 2017 | FHWA-HOP-17-022.

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WHAT ANALYTICAL APPROACHES WERE APPLIED?

To implement the Commercial Loading Zone Management Program (CLZMP), DDOT engaged freight stakeholders such as private enterprises, local, regional, and national freight carriers, national and state trucking associations, and local business development districts. DDOT also worked with the Department of Public Works and the Metropolitan Police Department to clarify regulations on curbside design and placement of permit decals. DDOT filtered the parking violation data from DMV to identify top ten loading zones that were subject to the most unauthorized vehicle usage and shared the information with enforcement agencies. This led to establishment of targeted loading zone enforcement program and performance based pricing system. Analysis of PBC data provided an insight into curbside use to further inform potential faults in enforcement strategies. Launching the CLZMP not only helped DDOT to improve the commercial loading zone condition within the District, but also provided detailed and visualized data of metered loading zone usage patterns.

WHAT WERE THE RESULTS?

Using the administrative data collected from multiple sources, DDOT established a curbside loading zone evaluation process to facilitate loading zone designation for different blocks. Implementation of CLZMP also improved:

- The use of existing truck loading zones;
- The partnerships between DDOT and freight stakeholders;
- The permitting procedures and payment system of commercial loading zones.

Within three months of implementing parking zone changes, more than 12,000 truck parking transactions occurred at the curbside meters and within six months of implementation, more than 70 businesses acquired annual loading zone permits. DDOT plans to gather stakeholder feedbacks and compare before/after data of double-parking tickets and travel time on key corridors to assess the program after implementation.

HOW WERE THE RESULTS VISUALIZED OR COMMUNICATED?

Results of this program were communicated via a written report. DDOT also created an interactive map using ArcGIS Collector application which is available at www.godcgo.com/dc-truck-and-bus-map. This online routing tool is part of DDOT's permit plan for oversized/overweight vehicles. General trucking industry can also use this tool.