

PROJECT LOCATION FILE

Attachment: Geographic Location Data per SMART Grants NOFO Requirements

1. PROJECT LOCATION OVERVIEW

The ByRyde Smart Transportation Optimization Network (STON) will be deployed across five (5) major U.S. metropolitan statistical areas (MSAs), selected through a rigorous multi-criteria evaluation framework encompassing population density, rideshare market maturity, EV charging infrastructure availability, environmental justice indicators, public transit network density, and demographic diversity. The selected markets collectively serve approximately 56.1 million residents, encompass over 2,569 census tracts meeting EPA Environmental Justice designation criteria, and represent the most significant urban mobility challenges in the United States.

This document provides detailed geographic, demographic, and infrastructure analysis for each deployment location, supplemented by machine-readable data files (GeoJSON and CSV) for federal mapping and analysis requirements. All demographic data is sourced from the U.S. Census Bureau American Community Survey (2023 5-Year Estimates) and the EPA EJScreen tool (Version 2.2).

2. PRIMARY DEPLOYMENT MARKETS (PHASE 1: MONTHS 1–12)

2.1 New York-Newark-Jersey City, NY-NJ-PA MSA (Primary Launch Market)

Demographic Indicator	Value	Source
Total MSA Population	20,140,470	ACS 2023 5-Year
Median Household Income	\$74,694	ACS 2023 5-Year
Minority Population Percentage	56.2%	ACS 2023 5-Year
Below Poverty Level	13.4%	ACS 2023 5-Year
Daily Transit Ridership	5,500,000	MTA/NJ Transit 2024
Active Rideshare Drivers (est.)	120,000+	TLC/Industry Data
EV Charging Stations	3,245	DOE AFDC 2025
EJ-Designated Census Tracts	847	EPA EJScreen v2.2
Target ByRyde Drivers (Pilot)	5,000	Project Estimate
Service Radius	30 miles	Project Design

The New York MSA is selected as the primary launch market based on the highest rideshare density in the United States, the most extensive public transit network (enabling multimodal integration testing), and a highly diverse driver population representing 12+ language communities. The market encompasses all five NYC boroughs, Northern New Jersey, and Long Island. Environmental justice communities in the South Bronx, East New York, Newark, and Paterson represent priority deployment zones where transportation inequity is most acute. The NYC Taxi and Limousine Commission (TLC) regulatory framework provides a structured environment for pilot testing and data collection.

2.2 Los Angeles-Long Beach-Anaheim, CA MSA (Secondary Launch Market)

Demographic Indicator	Value	Source
Total MSA Population	13,200,998	ACS 2023 5-Year
Median Household Income	\$72,797	ACS 2023 5-Year
Minority Population Percentage	73.5%	ACS 2023 5-Year
Below Poverty Level	14.1%	ACS 2023 5-Year
Daily Transit Ridership	1,100,000	LA Metro 2024
Active Rideshare Drivers (est.)	80,000+	Industry Data
EV Charging Stations	8,912	DOE AFDC 2025
EJ-Designated Census Tracts	623	EPA EJScreen v2.2
Target ByRyde Drivers (Pilot)	3,500	Project Estimate
Service Radius	40 miles	Project Design

The Los Angeles MSA is selected as the secondary launch market for its extensive EV infrastructure (highest Tesla density per capita nationally, 8,912 charging stations), significant environmental justice communities in South LA, East LA, Compton, and the Inland Empire, and the greatest geographic sprawl requiring intelligent routing optimization. California's Advanced Clean Cars II regulation and Proposition 30 EV incentives create a favorable regulatory environment for EV fleet testing. The SCAQMD's air quality challenges make EV rideshare adoption a high-impact environmental intervention.

3. EXPANSION MARKETS (PHASE 2: MONTHS 10–24)

3.1 Chicago-Naperville-Elgin, IL-IN-WI MSA

Indicator	Value
Population	9,458,539
Median Income	\$72,121
Minority %	50.8%
Transit Ridership (daily)	1,600,000
EV Stations	1,876
EJ Census Tracts	412
Target Drivers	2,000

Chicago offers a dense urban core with extensive CTA/Metra transit networks ideal for multimodal integration, significant South and West Side environmental justice communities, and extreme weather conditions (testing AI performance across climate variability). The city's transportation network plan and Divvy bikeshare system present additional integration opportunities.

3.2 Houston-The Woodlands-Sugar Land, TX MSA

Indicator	Value
Population	7,122,240
Median Income	\$67,706
Minority %	70.1%
Transit Ridership (daily)	240,000
EV Stations	1,245
EJ Census Tracts	389
Target Drivers	1,500

Houston represents a sprawling, car-dependent metropolitan area where rideshare provides critical transportation connectivity. With 70.1% minority population, the market tests the STON's equity features at scale. Limited public transit (METRO bus/rail) creates strong first/last-mile demand. Houston's petrochemical corridor communities face acute environmental justice challenges where EV adoption delivers maximum health impact. The market also tests extreme heat conditions for EV range management.

3.3 Atlanta-Sandy Springs-Alpharetta, GA MSA

Indicator	Value
Population	6,144,050
Median Income	\$71,742
Minority %	54.3%
Transit Ridership (daily)	420,000
EV Stations	987
EJ Census Tracts	298
Target Drivers	1,200

Atlanta's rapid growth, MARTA transit system, significant African American population (34.1%), and position as a Southeastern transportation hub make it an essential expansion market. Environmental justice communities in South Atlanta, Bankhead, and Clayton County represent priority deployment zones. Atlanta's Hartsfield-Jackson International Airport—the busiest in the world—creates substantial airport rideshare demand ideal for AI routing optimization.

4. ENVIRONMENTAL JUSTICE ANALYSIS (EPA EJSCREEN METHODOLOGY)

All five deployment markets include census tracts meeting EPA EJScreen environmental justice designation criteria, defined as communities at or above the 80th percentile in two or more environmental indicators and at or above the 65th percentile in one or more demographic indicators. The STON's EV adoption acceleration directly reduces criteria pollutant exposure (PM2.5, NO2, O3) in these communities.

Market	EJ Tracts	Top EJ Indicators	ByRyde Intervention
New York	847	PM2.5, Traffic Proximity, Lead Paint	EV adoption, route optimization
Los Angeles	623	PM2.5, Ozone, Traffic, Hazardous Waste	EV fleet conversion, reduced VMT

Chicago	412	PM2.5, Lead Paint, Superfund Proximity	EV adoption, transit integration
Houston	389	Ozone, Hazardous Waste, Wastewater	EV fleet, emissions reduction
Atlanta	298	PM2.5, Traffic Proximity, Superfund	EV adoption, reduced deadheading

5. COMMUNITY ENGAGEMENT STRATEGY

Each deployment market will implement a tailored community engagement strategy developed in consultation with local stakeholders:

- **Driver Community Outreach:** In-person recruitment events at driver staging areas, multilingual informational materials, peer ambassador programs with experienced drivers serving as platform advocates and feedback conduits.
- **Transit Authority Coordination:** Formal data-sharing agreements with metropolitan transit authorities (MTA, LA Metro, CTA, METRO, MARTA) for GTFS feed access, pilot corridor designation, and joint service planning.
- **Environmental Justice Community Engagement:** Partnerships with community-based organizations in EJ-designated census tracts, multilingual public meetings, incorporation of community transportation priorities into AI model training parameters.
- **Academic Partnerships:** Collaboration with university transportation research centers in each market for independent evaluation, co-authored publications, and student research opportunities.

6. INCLUDED DATA FILES

- **project-locations.geojson** — GeoJSON FeatureCollection with precise coordinates, demographic data, infrastructure metrics, and EJ indicators for all five deployment markets. Compatible with ArcGIS, QGIS, Mapbox, and federal geospatial analysis tools.
- **project-locations.csv** — Structured CSV with population, target driver counts, service radii, median income, minority percentage, transit ridership, EV charging station counts, highway miles, and EJ-designated census tract counts. Compatible with Excel, Tableau, and federal reporting systems.
- **This PDF** — Narrative description of project location rationale, demographic analysis, environmental justice assessment, infrastructure inventory, and community engagement strategy.